THE ROBERT AP HUW MANUSCRIPT

AN EXPLORATION OF ITS POSSIBLE SOLUTIONS

6

RHYTHM

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INTRODUCTION

This study aims to narrow down the range of possible solutions to the problems of rhythm, in order to produce transcriptions which will have as close a resemblance as possible to the original, authentic rhythms of the pieces in performance.

As is revealed in the following review of the literature on the rhythmic aspects of the MS, the situation has been that the range of possibilities has been almost infinitely broad. Some contributors have been frank about this, indeed some have been pessimistic about the chances of success for such a work,[1] and all this has contributed to the observation by writers that the musical interpretation of the tablature has been unsuccessful.[2]

Whilst we have been lacking any penetrating analysis of the problems of rhythm and any significant breakthrough in the theory of rhythm, interpreters and performers have in the main had to look to their own ingenuity and artistic judgement to arrive at any specific rhythmic treatment for each phrase of the music. I think it is fair to say that whilst the selection of any particular treatment for a phrase might be useful for illustrating an interpretation of the sequence of note-pitches involved, it does nothing to contribute towards our understanding of the authentic rhythms. Indeed where interpreters and performers have presented their personal choice as the authentic rhythm, without any '*caveat emptor*', the public has

been in danger of having its naivety exploited. Alert to this, it is now customary for interpreters to present transcriptions which are either non-committal as regards rhythm or accompanied by explanations of the current impossibility of certitude. It is surely to be hoped that performers will follow this responsible lead.

Of course this situation where rhythms are left open to personal interpretation is not really satisfactory. Even if it could be demonstrated that within the actual tradition there had been a great amount of rhythmic freedom, we have no reason to suppose that our own personal choices would even occasionally coincide with those of an authentic performance, whilst we remain so much in the dark as to the function and general expressive modes of the idiom's compositional genres. Even united as modern interpreters are by their common culture, it is very rare indeed that two suggested interpretations of any phrase coincide with one another. There is really no possibility of arriving at any consensus as long as this aspect of interpretation of the tablature has to rely on subjective musical judgements of what sounds best or most appropriate.

Another great shortcoming is the laboriousness of the exercise of applying subjective musical judgement to each phrase. Apart from those quite small areas of the text that contain clearly-identified measured units, it has been very rarely that any single interpreter has arrived at any consistency in his or her interpretation of the different phrases contained within a single piece; it is often evident that the interpreter has laboured over each individual phrase and failed to arrive at any concurrence with himself, with the inevitable result that the

interpreted piece lacks coherence.

In these circumstances it has surely been long overdue that the difficult task of fully analysing the text from the standpoint of rhythm be undertaken, and so this dissertation is an account of that analysis.

The amount of work has been enormous - far greater than a single run through each phrase of the text - since it has been necessary first to analyse the whole text to identify each of its distinctive rhythmic motifs, and then to bring each of these into relationship with all the other motifs to determine exactly which pairs of motifs were available to composers as alternatives to one another as occupants of defined metrical lengths. Only from this exercise is it possible to deduce what possibilities there can be in timing the contents of each motif, and all past proposals become excluded as the possible range is narrowed down to a very limited area.

It should be understood that the defining of metrical lengths is a necessary prerequisite to this whole exercise. Without some real bedrock to build upon, any analysis of the rhythmic motifs will fail to produce any real detail of rhythm. With no understanding of the metre of many of the pieces and a wrong understanding of some others, past transcribers would have had only a poor foundation from which to begin the exercise. No doubt this accounts for the pessimistic outlook of some contributors.

But here, a firm basis is supplied in Part 5 of this work: METRE by the detailed and largely successful allocation of 'digits' - the 1's

and O's of mensural notation akin to bars - and the explanation that there were (normally) four components to each digit - akin to a dictum of four beats to the bar. A firm knowledge of the details of the fingering derived from Part 4: TECHNIQUE also yields essential information about what is and is not possible in timing the notes.

The result is that it is possible to be actually highly specific about the timing of most motifs where the metre is understood (actually comprising the bulk of the text); and it is possible to confirm many of these specifics by comparison with other musical material, and by testing to what extent it is possible to use similar rhythms to successfully deliver the texts of poems from the sister art of *cerdd dafod*.

These confirmations are dramatic in their immediacy, for the specifics of rhythm here turn out to be very simple and familiar. This may surprise the reader who is accustomed to those former interpretations which have commonly been extraordinarily complex and esoteric, so I will point out here Thurston Dart's conclusion on rhythm:

> ... the principal handicap is the almost total absence of indications of rhythm, metre or duration. The conclusion to be drawn from comparable omissions in certain early manuscripts of lute music is that the missing rhythms were relatively straightforward and could easily be committed to memory.[3]

This is a view which is confirmed by the following examination of

rhythm, and the reader would do well to bear it in mind as we go through the many steps necessary to determine the missing rhythms.

The first step should be to review the literature of contributions to rhythm, particularly because in some cases these have been quite specific in their detail, although it should be understood that much of what is concluded here about contributors' views is obtained from their practice in interpreting rather than from discussion of the topic. Usually contributors have provided little explanation, discussion or analysis to justify or explain their interpretations, although the situation has been improving in recent decades. The review will concentrate on the later contributions.

Notes

[1] 'It is doubtful whether it will ever be possible to pronounce any transcription of this music to be final ... the rhythmical configurations of the melodies sometimes present great problems.' - Peter Crossley-Holland: *Music in Wales* (London, 1948), p. 15; 'Indeed, its (the tablature's) inadequacies in respect of rhythm and metre probably mean that we shall never be able to transcribe it exactly' - Thurston Dart: 'Robert ap Huw's Manuscript of Welsh Harp Music (c. 1613)', *The Galpin Society Journal*, Vol. XXI, (London, 1968) p. 53; 'No absolute indication of rhythm, duration and metre can be understood with certainty' - Osian Ellis: *The Story of the Harp in Wales* (Cardiff, 1991), p. 27.

[2] For example, recent observations include: 'It (the MS) has been the subject of intense study and curiosity since the mid-eighteenth century but all attempts to transcribe the music into modern notation have so far been thwarted.' - M. Stephens: *The New Companion to the Literature of Wales*; (Cardiff, 1998), p. 643; 'Unfortunately, it does not seem possible, at present anyway, to decipher the musical notation satisfactorily.' - Glanmor Williams: *History of Wales*, III, (Cardiff, 1987), p. 164. The status of interpretation is examined in detail in Part 1 of this work.

[3] Dart, p. 61.

I. REVIEW OF THE LITERATURE

Lewis Morris

Lewis Morris ascribed mensural values to the triangular notes on p. 35 of the MS., with the comment 'These modern notes are only my guesses'.

The succession of early transcribers from Charles Burney down to Arnold Dolmetsch followed Morris's early lead and ascribed complex rhythmic values to the notes in their transcriptions, without comment or explanation.

Peter Crossley-Holland[1]

Peter Crossley-Holland states:

> It is to be regretted that the words associated with these pieces cannot be known, for ... in them would lie the ultimate secret of the melodic rhythm.[2]

He does make several suggestions: that the first note of *taked y fawd* is an accented appoggiatura giving a rhythmic effect the same as the Scots Snap, and, implicit in his four transcriptions of short extracts, that barring should follow the digital units and be equal in length within a piece, in this one 4/4, in that one 3/4. He notes that his tempi, bar-divisions, etc. are only suggestions; that no direct indications are given in the original MS. He states that the rhythmical basis is

regular and is associated with the harmonic framework,[3] and that 'the rhythmical configurations of the melodies sometimes present great problems'.[4]

Robert Dowd[5]

Robert Dowd presents a sound report on the rhythmic notation - the 'fencing' - which sporadically occurs in the text. He concludes that it does not belong to the tablature, that it is a later notation, employed by someone unfamiliar with the manuscript notation, whom he identifies as, probably, Robert ap Huw.

In a detailed discussion of the fingering figures, he points out that transcribers have chosen to stress the first note of the figure, a practice that he considers would be disastrous if universally applied, and that in the case of *krafiad dwbl* Crossley-Holland puts even the first note after the stress (as does Dolmetsch for some figures also). Dowd feels that all solid notes (those blocked in the triangular notation) took the form of up-beat gracenotes.

W. S. Gwynn Williams[6]

In transcriptions of brief extracts from three pieces, W. S. Gwynn Williams is evidently decided that measure has rhythmic significance, and he bars individual digits or pairs of digits to create measured duple times, consistent throughout a piece, with frequent use of triplets. He measures the short notes of the *plethiadau* as semiquavers, placing them on the beat, interpreting

the *plethiadau* and *crychiadau* as involving many notes and using triplet figures to maintain measure where the figures become crowded.

James Travis[7]

James Travis criticizes Dolmetsch's transcriptions[8] as occasionally involving arbitrary renderings of the rhythms. He declares:

> Decipherment and analysis of the previously baffling tablature that preserves the music now permits of close comparison between the rhythms of its phrases and the rhythms of Old Irish and Old Welsh verse lines.[9]

He reports that the rhythm of the music is accentual; that chords mark the strongly accented beats; and that he can discern melodic phrases made up of 2 to 11 beats per phrase, with the phrase divided into rhythmic phrases of 2 beats in some instances and 3 beats in others. These rhythmic phrases are used in composition in two different ways:

1) Regular rhythm. Very few whole compositions and some passages in others contain a single beat-pattern, which is either in duple rhythm to form 2- or 4-beat phrases, or in triple rhythm to form 3- or 6-beat phrases, with the first beat stressed.

2) Fluid rhythm. Most parts of most compositions contain melodic phrases built up from freely combining both duple and triple rhythmic phrases to form 5-, and 7- to 11-beat phrases.

Extra complications here are that in both duple- and triple-rhythm phrases, either one or two beats can be stressed; if one, then it can be any of the beats; if two, then they will be separated by one or two beats of weak stress.

The relationship of melody to rhythm is that typically there is 1 note per beat, often 2 and 4, and uncommonly 3 and 6.

The short notes of the fingering figures are considered too short and imprecise in duration to qualify the rhythmic units (i.e. they are to be crushed in, on the beat).

His transcriptions illustrate the products. In the case of the 'fluid' pieces they present a truly daunting prospect to the performer: a bewildering array of bars of different time signatures (everything from 3/4 to 10/4 within a single piece) with no apparent logic to the order in which they are combined, overlaid by triplets in duple time, heavy use of gracenotes often contradicting chordal accent, and a wide range of note values interspersed with sporadic rests.

Only the opening bars of Gosteg yr Halen amongst the 'regular' pieces are transcribed. Here the barring, in 4/4, bears a relationship to the digital units of the measure, although he fails to follow the instructions for the sequence of playing the segments of text, so the transcription does not follow the actual measure of the piece.

Travis does not give any account of the methods and procedures whereby he is able to obtain such precise detail about such extraordinary rhythms, but his confidence and the degree of detail he gives suggests that it is not the product of arbitrary

whimsy. A comparison of his transcriptions with the text reveals that, broadly, he must have adopted as a simple principle an idea that columns of text each have the duration of a crotchet (unless an ostinato bass offers a stronger guide, as in Gosteg yr Halen). The result stretches artistic credulity and cuts across measure, in that usually the digital units are given widely-varying time-values. Even if in performance of these transcriptions one attempts to give some equality to the digits by playing the crotchets with strong *rubato*, for example to play a 6/4 bar in the time of an adjacent 2/4 bar, extraordinarily large and sudden changes of pace at the start of most bars result.

Summing up, we do need at least some reason for considering adopting such a strange principle. In fact there is no indication that the columns of text delineate equal time-values. They were written to be clear and to be as economical as possible in terms of space.

Osian Ellis[10]

Osian Ellis reports that pieces in the text have the appearance of containing changes in rhythm, for example from 4/2 to 12/4.[11] In transcribing, he follows the pre-Dowd transcribers in accenting the first note of the fingering figures, and is prepared to cut across a relationship of rhythm to measure by expanding a densely-occupied digit to twice the length of other digits, commenting that he has to stretch the bar to accommodate the notes.[12]

André Schaefer[13]

André Schaefer is tentative in hazarding that the measures do not correspond solely to successions of chords but that they have a direct relationship with musical rhythm, and that this is confirmed perhaps by the absence of rhythmic notation throughout most of the text,[14] (as if the tablature and an understanding of measure would have been sufficient for the performer). But he does not explore the possibility, concluding that it is actually impossible to define with exactitude the rhythmic principle which governs this music. In transcriptions his barrings and note values bear little relationship to the digital units of the measures.

Concerning the fingering figures, he does not assign rhythmic values and will go no further than to distinguish the blocked notes in the triangular notation as short. It appears that he does consider the stress to fall on the first note of the *plethiadau*, since he considers some of these first notes should be played staccato.

Paul Whittaker[15]

Paul Whittaker provides a detailed account of the affiliations of the rhythmic notation. Whilst he accepts the inconsistencies between it and the tablature as the product of Robert's own manner of playing, he does not doubt Robert's competence. Instead he concludes that the music was not strict in respect of rhythm; that it did not have 'absolute and immutable rhythmic values':

> ... any modern performance of this music should combine accuracy in the reproduction of the notes themselves with a flexible treatment of rhythm within the known metrical framework, for the spirit of indeterminacy so essential to this musical style would be lost if any two performances were identical in this respect.[16]

This conclusion leads him to criticize Morris's mensural interpretation of the triangular notes on p. 35, and instead he proposes:

> The best musical solution to the problem of rhythm within the scope of the ornaments, appears to be to make all the ornamental notes of our first group [i.e. the *plethiadau*] completely free as regards rhythm, but preferably played and stopped as quickly as possible.[17]

He is unconvinced that the measures have rhythmic significance, and uses note values and barring in his transcriptions to indicate metrical significance only.

Claire Polin[18]

Claire Polin speculates:

> What is the clue to rhythm here? The structure of

> the music is so tightly bound up with chord alternation that basic metres must be naturally derived from the chordal patterns. This is not difficult to imagine if one derives each diesis, or beat, from a chord, and allows the flowing melodic pattern, or non-chordal parts, to act as anacrusis.[19]

She evidently does not consider this to be conclusive however, as later on she writes:

> Solving the rhythm remains one of the critical problems today. The accompanying volume of transcriptions makes no attempt at such a solution, but assigns ap Huw's pitches to a pattern of chord-groupings which conform to the *mesur* concept of chord-alternation ...[20]

This procedure is obviously dependent on the accuracy with which the components of measures are identified in the text.

In her transcriptions the short notes of the fingering figures are sometimes rendered with rhythmic values ranging from demisemiquavers to quavers, but more usually by gracenotes marked like the acciaccatura (although in her table of the figures she interprets most of them as appoggiaturas). Whether or not she believes they are to be crushed in, in both types of case the first note bears the accent in her transcriptions.

A broad summary is useful here. Crossley-Holland, Gwynn Williams,

Schaefer and Polin believe that the measures have at least some rhythmic significance. Opinion differs over the four basic possibilities concerning the disposition of the *plethiadau*, according to whether their short notes are measured or not, and whether they are begun before or on the beat. Dowd believes they are unmeasured beginning before the beat. Crossley-Holland, Travis, Schaefer, Whittaker and Polin believe they are unmeasured beginning on the beat. None suggest they are measured beginning before the beat, although no argument is made against this. Gwynn Williams and Ellis, along with the early transcribers, believe that they are measured beginning on the beat. Only Travis offers a fully-detailed model of rhythm.

Notes

[1] Peter Crossley-Holland: 'Secular Homophonic Music in Wales in the Middle Ages', *Music and Letters*, 23 (Cambridge, 1942), pp. 144-5, 149-53; *Music in Wales* (London, 1948); 'Welsh Folk Music', E. Blom (ed.), *The Grove Dictionary of Music and Musicians*, 5th edn. (London, 1954).

[2] Crossley-Holland: 'Homophonic Music', p. 149.

[3] Crossley-Holland: 'Welsh Folk Music', p. 393.

[4] Crossley-Holland: 'Music in Wales', p. 15.

[5] Robert E. Dowd: ‘British Museum Additional Manuscript 14905’, M.A. Dissertation (New York University) 1950, pp. 62-84.

[6] W.S. Gwynn Williams: *Ceinciau Telyn Cymru* (Penygroes, 1962), pp. 2-8.

[7] James Travis: *Miscellanea Musica Celtica* (New York, 1968), pp. 7-22; *Early Celtic Versecraft* (Shannon, 1973), p. 4ff.

[8] Arnold Dolmetsch: *Translations from the Penllyn Manuscript of Ancient Harp Music* (Llangefni, 1937); 'Concerning my Recent Discoveries', *The Consort* (Haslemere, 1934).

[9] Travis: 'Early Celtic Versecraft', p. 16.

[10] Osian Ellis: 'Welsh Music: History and Fancy', *Transactions of the Honourable Society of Cymmrodorian* (London, 1973), pp. 73-94; *The Story of the Harp in Wales* (Cardiff, 1991).

[11] Ellis: 'History and Fancy', pp. 85-6.

[12] Ellis: 'Story of the Harp', p. 19.

[13] André Schaefer: ‘Le Musica neu beroriaeth de Robert ap Huw’, M.A. Dissertation (University of Paris) 1973.

[14] Schaefer: p. 60.

[15] Paul D. Whittaker: ‘British Museum Additional Manuscript 14905: an interpretation and re-examination of the music and text’, M.A. Dissertation (University of Wales) 1974.

[16] Whittaker: Pt. 1, p. 7.

[17] Whittaker: Pt. 1, p. 89.

[18] Claire Polin: *The ap Huw Manuscript* (Henryville, 1982).

[19] Polin: p. 32.

[20] Polin: p. 61.

II. THE MEASUREMENT OF RHYTHM

As can be seen from the foregoing review, the first and most fundamental issue that needs resolving is whether this music was performed in any kind of measured rhythm. Was there a regularly recurring measured pulse in at least part of the repertory? What degree of freedom was available to the performer in the timing of notes and phrases? To what extent was the music free and to what extent was it measured?

It might be immediately supposed that because the harmonic measures governed the music then it would have been rhythmically measured. However, Travis, Whittaker and Polin have doubted this and have advocated various degrees of rhythmic freedom. Polin has gone furthest in criticising the mensural approach normally adopted by transcribers in the statement:

> Rhythms are found in many of these transcriptions to be forcibly compressed into phrases or regular metrical barring instead of flowing naturally, as much of it ought.[1]

The statement is unsupported, but it may well be that she was led to this opinion by the haphazard nature of the rhythmic notation, which she appears to accept as valid.[2] But in Part 5 of this work (pp. 28-32) the rhythmic notation is dismissed as an unsuccessful attempt to ascribe mensural values by an early contributor (probably Robert ap Huw), and it would be a mistake to base any arguments about rhythm on it.

We are in fact faced with a tablature that does not denote note values, yet there is plenty of evidence from many directions to allow a firm conclusion that the notes were measured. Because there has been some doubt over this issue in the past, I will go into some detail in examining the evidence.

1. The general context

In view of the general context of early traditional music, it would seem unlikely that *cerdd dant* would be in free rhythm. As far as we are in a position to judge, traditional music in medieval times was generally measured and it has been becoming increasingly clearer in this century that the slow and late development of mensural notation relative to that of pitch notation has distorted the picture by giving an impression that rhythmic freedom was more commonplace than it actually was.

All the indications are that in Andalusian music there were, as now, brief preludes, interludes and postludes in free rhythm to provide contrast and breaks in long programmes of 'suite' music comprising movements in different measured rhythms, but elsewhere in Europe there is a dearth of evidence for the use of free rhythm in instrumental music. Even the very free *rubato* used in the modern performance of *piobaireachd* is a recent development.[3]

In terms of vocal music, free rhythm remains a very controversial subject. For plainchant the mensuralist view has been gaining ground over those of the accentualists and the Solesmes school; the situation here is very complex. But it is not

clear how relevant to Wales the debate is anyway, for what is certain is that chant in Wales was discanted, in as many as four parts. As in English discant in general, measurement would have been required to co-ordinate the parts. Very significantly, the vernacular Welsh term for chant was '*y cân araf*'[4] - the slow song - and here the adjectival contrast would be with *cerdd dafod*, which must have been faster paced. As *cerdd dant* was closely allied to *cerdd dafod*, the implication here is that it was not generally slow nor unmeasured.

2. The use of the term *Mesur*

The metrical significance of this term is examined in detail in Part 5 of this work: METRE. However, 'measure' is understood to have been used in the context of medieval music in a way which often had relevance to rhythm as well as metre. It has been defined as: 'music based on rhythmic modes or mensurations; proportion, ratio; also, from the medieval idea that both vertical intervals and chronological duration of notes were a matter of musical proportion, synonymous with music, especially with the rhythm, beat, or metre of music'[5]

In Part 5 the principles of the implementation of measure are established, and from these it can be seen that the concept was used in *cerdd dant* as a means of bringing harmony into relationship with rhythm in the sense of isochronous metrical units which are harmonically differentiated from one another. In fact it is this use of measure which makes it clear that *cerdd dant* was quite distinct from the classical and court music of the

remainder of the Indo-European world, and this merits some discussion here.

From India to Spain, we know that fairly long metrical periods were achieved by creating complex rhythmic cycles. For example, Andalusian *nauba* uses the metre *btâyh-i*, a form of 16/8, subdivided 3/4 + 6/8 + 2/4. Longer periods could be achieved by combining several different rhythmic cycles. Thus Egyptian *nauba* uses concatenations of up to five or six different cycles to form a single period. And significantly it is the very length of these metrical periods which largely distinguishes a classical performance from an informal one.

In *cerdd dant* the same direction was evidently pursued, but by different means. Instead of using different kinds of stress accent - primarily different drum beats - to build long periods, *cerdd dant* used different kinds of harmonic accent: *cyweirdannau* and *tyniadau*. And although the means were different, the product was rather similar: a great variety of complex cycles, most of which require great concentration in scanning, which themselves were often concatenated into very long periods. Note that it is the great length of these periods which largely distinguishes *cerdd dant* from folk music such as the early hornpipes with their tiny 4-bar double-tonic grounds.

So what, then, is the rhythmic significance of the measures? Given that it appears a certain level of complexity in metrical periods is required for an early classical music to emerge, and that here it is the harmonic differentiation of the components of the period which enabled this to be achieved, is there any need

for complex rhythmic structures as well? After all, elsewhere rhythmic cycles have sufficed without the need to develop harmony at all, let alone into complex harmonic structures. It is, then, quite understandable that the uniformity of standard-length digits or bars emerges from the examination of the text in Part 5: METRE, pp. 79-91. Unquestionably, the metrical system entailed the strict measurement of bars containing regular numbers of evenly-timed beats, so at the outset it can be stated that it is most probable that the actual notes that occupied these bars would have been measured in simple values without irregular rhythmic groupings, and this expectation is confirmed by examination of the text.

3. Internal evidence of the music text

In Part 5: METRE, the ethos of symmetry of proportion is demonstrated at each of the various levels at which metre operated, including phrasing. We should expect, therefore, that the timing of the notes contained within each digital unit or bar would have been measured strictly, and many parts of the text actually demonstrate symmetry at this level. An extreme example of repetition, for instance, occurs in Cainc X of Gosteg Dafydd Athro, where the sequence of notes in the treble: F G occurs 49 times in succession. Every group of four notes is fingered in the same way, by *plethiad y pedwarbys*, and in the absence of any directions in the text concerning dynamics, it was obviously intended that the sequence was to be played repetitiously, not with a long F and a short G here and there, and a short F and a

long G elsewhere.

Indeed the whole text displays an angular, geometric and abstract quality in its melodic patterning, quite unlike the loose, meandering and melismatic quality that lends itself to free rhythm. The firmness implied here can be glimpsed at in the description of the piece 'Cainc Ruffydd ab Adda ap Dafydd' in the *cywydd*:

> Caingc Ruffudd, groyw-wŷdd ddi-gryn,
> Ab Adda, nis gŵyr bowddyn.[6]

- Cainc Ruffudd ab Adda, plain/firm as the untrembling trees, of which the uninitiated knows nothing. The 'trees' simile implies that the music was firmly rooted by measured rhythm, not free as the wind.

4. Percussion

The percussive element of both accompaniment and verse delivery is examined in detail in Part 8: VERSE, pp. 114-8. As an alternative to the beating of a staff, the strong percussive element in the stringed accompaniment to the delivery of verse is important since it would be unusually exotic, in our experience, to use percussive accompaniment in an unmeasured way. Here I will discuss the implications for measured rhythm.

A distinction was made between the delivery of verse with and without stringed accompaniment. The twenty-four *campau*, feats of excellence, included '*canu cywydd gan dant*': to deliver (not necessarily to sing) *cywyddau* with string music (certainly not

string song) and '*canu cywydd pedwar ac acenu*': to deliver the four varieties of the *cywydd* form (such as the *cywydd deuair hirion*) and to accentuate/stress them. The latter may refer to the accentuation or stressing which we know was provided by the beating of the *ffon* or *pastwn*, a staff or stick, perhaps originally a spear, on the floor or ground, rather than just to the vocal delivery.

There were, then, in total three components in the delivery of the verse: the vocal performance itself, and the staff and stringed accompaniment, these last two being options to one another. Each of these three must have had a strong percussive component.

The strength of the consonants in spoken Welsh was accentuated in versification by the heavy use of ornaments centering on consonants: *cynghanedd gytsain* and alliteration.

The use of staff accompaniment would of course be purely percussive. If the staff were actually quite heavy, which I suspect, then it would have to be that the beating would be of regular, measured and even beats. It is expressed that the verse was sung to the beating, which implies that the beating was the rhythmic basis of vocal performance. If the beating was conditioned by irregular or unmeasured stress of the verse, I think it would have been better expressed that the beating was performed to the verse, not the other way around.

We know that the horsehair harp was used to accompany vocal performance. This instrument was so designed as to allow the rapid release of energy from the strings, a consequence of the

twisted horsehair strings, the brays, leather as a vibrating medium for the soundbox, a low mass for the frame, the absence of forward-facing soundholes, and the back of the soundbox may have been quite open (to allow for stringing). The result would have been loud and staccato, which is to say unusually percussive for a European stringed instrument. As it was certainly an instrument of accompaniment, these considerations may have over-ridden those of timbre. The rapid damping for harmonic reasons that the *cerdd dant* technique involved would not have been necessary on the horsehair harp, but if the damping technique was used on this instrument, then certainly its inherent staccato properties would have been exaggerated. So it is probably appropriate to consider the impact of accompaniment on such an instrument as being primarily percussive rather than harmonic or melodic, and certainly it is necessary to consider accompaniment *cerdd dant* as largely a percussive effect.

A more general picture of musical performance is provided by several sources. There are notices of ticks, clicks and claps in poems in connection with vocal and instrumental music, suggesting not just percussion but mechanistic rhythm. Also the origins of music were ascribed to the accompaniment of the great hammers of Tubel Cain the smith,[7] and this is echoed in Ireland where the origin of the performance of poetry was ascribed to the sound of the smith's two hammers striking the anvil. These accounts may connect with the title in the text: Kaniad yr Efail: the playing of the smithy. The very strong implication is that music in general was underpinned by simple, repetitive beats.

More specific evidence of measured rhythm having been employed in *cerdd dant* is provided by the passage: '... terfyna y dosbarth a elwir, Llaw a throed a chlust cyfarwydd cerdd dant'[8]: and thus ends the class called the hand, the foot, and the ear knowledge of *cerdd dant*. It seems then that the string musician literally used his foot, presumably to beat the time. It is just possible that the concept of the metrical foot was being used here in a sense which was already divorced from its literal origin. But the existence of the title 'Y Ddigan y Droell' in the text suggests that a literal interpretation would not be a mistake (if by '*troell*' was meant the treadle-wheel rather than the spindle-whorl). The line in Marwnad Siôn Eos: 'torred mesur troed musig' may have been inspired by the practice of harpists beating the measure with their feet.

In this general context of strong percussive elements, the use of free rhythm in *cerdd dant* would be most odd.

5. The accompaniment of verse

Apart from the percussiveness discussed above, the fact that *cerdd dafod* was accompanied by the *telyn* and *crwth* enables the poetry itself, and what little is known of its performance, to be used as evidence to bear on the mensural question in *cerdd dant*.

Firstly, it should be noted that quite strict versification was applied to the 'free' poetry and there is no implication that its delivery was rhythmically free. Very strict versification was applied to the *canu caeth*, and to both forms of versification was applied the word '*mesur*', which, as we have seen with *cerdd dant*,

implies the use of measured rhythm. There is an almost total absence of temporal technical terms in the treatises on versification, but the one word '*llusg*' - a lingering, a dragging, a trailing - is significant. It strongly suggests a temporal contradiction to some form of regularity, probably to measured rhythm.[9]

The main argument for the measurement of rhythm in concerted performance arises from the practical considerations involved in the accompanied delivery of verse. The internal evidence of the verse and music text is of course compounded from a practical point of view when one considers the two in conjunction. Modern *cerdd dant* has been addressing a similar problem of coordination, and a degree of measurement in the rhythm of both words and accompaniment is of course a convenient practical resort.

The implication in the Clanricarde Memoirs (quoted below) that, in Ireland at least and at a late date, two or more vocalists simultaneously performed what was probably syllabic verse, with accompaniment, compounds the difficulties of coordination even further.

In the absence of any associations between particular poems and particular pieces of music, it is certain that each poem was not composed to be sung to a particular air, and that musical pieces were not composed to accompany particular poems, else we would have a record of the associations. So it would be a mistake to expect an exact note-to-syllable rhythmic correspondence. Nevertheless, the closer the correspondence the more feasible or effective the solution evolved would be in overcoming the

problems of coordinating delivery. From the practical point of view, only measured rhythm provides a realistically feasible solution.

The Clanricarde Memoirs includes the passage: 'The Bards ... pronounc'd it orderly, keeping even Pace with a Harp ...' (my emphasis). Despite being a late Irish description, this passage may well be relevant to the performance of *cerdd dant*. It may have meant that the speed of delivery was unvarying, but it is more likely that it meant the rhythm was measured; the word 'pace' is, in a literal sense, most appropriate to this interpretation.

It is interesting that the modern style of delivery of the Gaelic heroic ballads as recorded is neither orderly nor evenly-paced; it is a rather free recitative. Clearly the 'Clanricarde' description is of a different style.

6. The accompaniment to dance

It is established that there had been a folk tradition of dancing to the music of at least the pipes (both bagpipes and mouth pipes played by circular breathing), which co-existed alongside and also below the more elevated *cerdd dant* tradition. Thus we have piping ridiculed in verse, the reference to the non-participating musicians at the *eisteddfod* in the Statute, and Iolo Goch's line: 'pibau dawns a gawn pob dydd' etc.

It is of course hardly conceivable that the people in the *cerdd dant* stratum did not also dance. If they did dance, would they always have rustled up a piper to provide the music? - because it is difficult to conceive of a patron of *cerdd dant* patronising a piper in the fifteenth century, and perhaps before.

What changes this whole perspective is the following stanza attributed to Dafydd Bach ap Madawg Wladaidd (Sypyn Cyfeiliog?) fl.1350-1400, which makes it clear that dancing did penetrate the *cerdd dant* tradition, in the fourteenth century at least.

Yn llwyr degwch nef yn llawr bachelldref
y lle y byd dolef bob nydolic
A llu ogereint allynn tramedweint
allewychu breint bro hil meuric
A llawer kerdawr allawengrythawr
allewenyd mawr ywch llawr llithric
A llef gan danneu a llif gwirodeu
allauar gerdeu gordyfnedic

Here not only is there no mention of pipes, but the reference to a slippery floor (*llawer llithric*) is sandwiched inbetween *grythawr* and *danneu* - an unambiguously *cerdd dant* context. And this is no description of a folk context; everything about the stanza (*cyhydedd hir*) tells us this is an *uchelwyr* context.

So what does the fact that *cerdd dant* was danced to on occasion tell us about rhythm? It must be that the music was measured in the sense of containing isochronous beats, at least in part and probably throughout. Perhaps '*mesur*' may sometimes have carried the sense of measure as in 'to tread a measure'.

Can any of the forms of the music be identified as linked to

dance? It will become clear from internal stylistic evidence that Kaniad y Gwyn Bibydd, Y Ddigan y Droell and, rather curiously, section VI onwards of Kaniad Marwnad Ifan ab y Gof are dance-like and may have been danced to on occasion, and just possibly Kaniad Kadwgan also. But I do not think that the *caniad* form was primarily a dance form because most *caniadau* are far too complex and/or irregular to realistically accommodate dance. As discussed elsewhere, I am clear the form in general was the prime one used to produce a variety of mood affect in the attentive listener, and I suspect that in the pieces mentioned above, dance music was merely alluded to for joyful affect.

A case can be made out that the *cwlwm* (*ymryson*) form may have been so named from dance. The dancers would perhaps have been knotted together by the dance, so *cwlwm* would be an excellent word to use to denote dance. *Ymryson* perhaps from the evident rowdiness of some of the dancing, or a bit more likely from competitive elements in it. Against all this is the fact that we have *clymau* which were *marwnadau* (and the line '*galw Maelor i gwlm alaeth*'), but I think it would be a mistake to think of elegies in this context as having to be entirely sorrowful. Also we have the possibly consciously archaic directions in Johnson's 'The Irish Masque at Court' for a dance of gentlemen 'in Irish mantles, to a solemne musique of harpes'.

I think it most likely, as I argue in Part 7: REPERTORY, that the *cwlwm* form was so named from the knotting together of two instruments, but I think it has to remain a possibility that it took its name from dance. It certainly is odd that unless it

be '*cwlwm*' there seems to be no word that could be a contender for dance in the *cerdd dant* vocabulary; not even the borrowed word '*dawns*' occurs in it. I have examined my compilation of verse quotes on the word *cwlwm*, but have not come across a dance context as yet.

I am not aware of any argument that can be made for accompaniment to dance in respect of any of the other forms of *cerdd dant*, except that if the *clymau cytgerdd* were used as frameworks for improvisation, then they may have been suitable for dance, bearing in mind the close association between improvisation and dance in other cultures. In connection with this, it is important to note the structural affiliations of this music with extended ground bass forms of music, not only with sixteenth-century material (such as Hugh Aston's Hornpipe) with which there may be some historical link, but with jazz in our own century too; the point here being that there is an inherent link between this kind of form and dance, in our experience; it would be odd if that link did not also extend beyond our experience into this field.

Whatever, the principle is established that we should expect that part of the repertory accommodated dance. The terribly important implication for music reconstruction here is that some of the music should have vigorous rhythms strongly enough marked to allow dancing which on occasions such as Bachelldref was drunkenly rowdy. Of course this is not achievable in free rhythm.

Any reservations that the reader may have resulting from

experience of insipid or genteel rhythms within the British Isles should be dispelled by considering the very vigorous rhythms of many of the choral worksongs of the Western Isles of Scotland. This style of music is likely to be amongst the oldest that have come down to us, and I think it is true to say that it has more in common with our general experience of music from Africa than from Britain.

With so much evidence in support of measured rhythm, it is absolutely necessary to find ways of deducing the overall rhythmic scheme of the idiom and locating within it the particular notes in the text with their actual values. Although this is a large and complex task, it is well possible for all the parts of the text for which the metrical units have been delineated. The difficulties are not nearly so great as to force the interpreter into a conclusion that free rhythm was used in any part of the text, and where uncertainty remains a limited range of possibilities can be deduced.

Notes

[1] Polin, p. 63.

[2] Although Dowd had already dismissed the rhythmic notation, Polin does not cite Dowd.

[3] See Roderick D. Cannon: *The Highland Bagpipe and its Music* (Edinburgh, 1995), pp. 87-9.

[4] Given in Peniarth MS 147, p. 196; quoted in T. Gwynn Jones: 'Cerdd Dant', *Bulletin of the Board of Celtic Studies*, 1, no. 11 (Oxford, 1922), p. 155.

[5] Henry Carter: *A Dictionary of Middle English Musical Terms* (Bloomington, 1961), p. 267.

[6] The poem and the composer are discussed by Peter Crossley-Holland: *The Composers in the Robert ap Huw Manuscript* (Bangor, 1998), pp. 7-9.

[7] Peniarth MS. 147, quoted in Gwynn Jones, p. 155.

[8] Printed in *The Myvyrian Archaiology of Wales* (Denbigh, 1870), p. 1071.

[9] The practical possibilities concerning the meaning of *cynghanedd lusg* are examined in Part 8: VERSE, pp. 114-8.

III. THE PLACEMENT OF ACCENT

The other initial and fundamental issue which has been addressed but has remained unresolved in the literature is the means whereby the measured beats were realized by the accenting of particular notes and chords:- how were the beats marked in performance? In theory many possibilities exist because certainly the notes of the typical vertical column of tablature which contains a beat were not all played simultaneously - the notes have been compressed into a single column to save space. If the notes had been spread over several columns then it would be relatively easy to identify where the beat lies, but with the text compressed then the *plethiadau*, the *crychiadau* and the possibility of the spreading of chords complicate the task tremendously.

The lower-hand part provides the easier starting-point because in the main it offers full chords stolidly occupying columns containing beats, with no indication that they were spread. Usually the lower part appears rhythmically simple with a very simple relationship to metre. Were its chords spread or arpeggiated? The main arguments are examined in Part 4, pp. 116-9, and it appears fairly clear that they were not. Nevertheless several transcribers have taken this option for the fuller chords in the lower part, but only supplying transcriptions of short extracts. These do not give the flavour of the effect of addressing the whole text in this way, including the very long pieces, and in fact it would be extremely wearisome to the

listener if all chords were spread.

To enter such unusual musical territory some strong positive indication is surely required, and methodologically it would be the most complex option since some means of determining the length and direction of the spreading and the coordinating of the spreading with the *plethiadau* would be required. Something like a breakthrough in equating *cerdd dant* movements with the *a-mach* figures in *piobaireachd* would be necessary, and there seems to be no immediate prospect of such a breakthrough.

This is not to say that it is impossible to produce spread figures which are attractive, particularly if the text is transcribed in free rhythm. Peter Crossley-Holland offers measured transcriptions in which 2-note chords are spread ascending on the beat together with the first note of the upper part, 3-note chords are arpeggiated ascending as demisemiquavers before the beat with the first note of the upper part on the beat, and 4-note chords are also arpeggiated but with the highest note of the chord played on the beat and the first note of the upper part substantially delayed. This is musically effective over the very short range, but the choice as to which note is played on the beat appears arbitrary.

At this stage, then, methodology dictates that we opt for the chords being played plainly, with all the notes simultaneously on the beat, thereby providing a strong accentual base to the beat, so that the beat is strongly marked. Any residual doubt about the wisdom of adopting the simple option here should be allayed later on in this dissertation when a

strong affinity is uncovered between some pieces and early dance music, since strong beats suit dance music and spread chords do not.

Turning now to the upper part, in the case of single notes and chords written above the lower-part chords, all in one column, there is no need, as in Crossley-Holland's transcriptions, to delay the playing of the upper part. The problems here concern the *crychiadau* and the *plethiadau*.

Generally, *crychiadau* do not occupy main beats, but where they do, it will be the forward strike that occupies the beat position because forward strikes are much stronger than backstrikes and in all other upper-hand figures beats will be occupied by forward strikes. Adjacent *crychiad* backstrikes will occupy the adjacent note positions to the beat, either immediately before or after the beat, because the *crychiad* is a compact figure. If it is the case that the *crychiad* never involves more than two notes, it will probably be that the backstrike follows the beat as this would be most congruent with the balance of the positioning of the *plethiadau* in respect of the beat which emerges below. Where a *crychiad* symbol is written above a *plethiad* one it will be played after the beat as described below.

It is the accenting of the *plethiadau* which presents the greatest problem. Because they involve a series of notes, ranging from two to five, it is not immediately apparent which note is played on the beat or indeed what their rôle is:- are the short and usually damped notes functional - albeit decorative - melody

notes, in which case they would be mensural, or are they non-mensural percussive gracenotes, extraneous to the basic melody line? It is the latter which perhaps has been taken by some contributors as implied by the fact that the tablature is designed in such a way - with only one column per *plethiad* - that rhythmic notation is spatially prohibited from indicating the relative values of all the constituent notes of a *plethiad*. But as has been demonstrated[1] the layout of the tablature was designed to not allow for rhythmic notation anyway; the ambitions of the designer(s) simply did not reach to rhythmic notation. This tells us nothing about any rhythmic values whatsoever except that they must have been sufficiently conventional within the tradition that it was simply unneccessary to notate them. No argument can be made here that the short *plethiad* notes were insignificant mensurally.

Nevertheless several contributors who have touched on the problem have evidently been decided that the short notes were not functional melody notes, but that they were crushed in, in the manner of acciaccature. Thus Crossley-Holland (in some instances), Travis, Dowd, Whittaker and Polin (in most instances) transcribe the short notes as acciaccature. Only Whittaker offers an argument, based on the observation that often the difference between the successive *ceinciau* of a piece lies in variation of the short notes rather than the long ones.[2] This fact reveals that the short notes were of great compositional significance and might well be taken as evidence that they were of rhythmic and melodic significance also, but Whittaker oddly concludes that

they would disrupt the melody if so treated.

The early transcribers, Dolmetsch, Crossley-Holland (in most instances), Gwynn Williams, Dart, Ellis and Polin (in her table of ornaments and some transcriptions) ascribe mensural values to the short notes, either by using plain notes or appoggiature. The wide range of values chosen reflects the difficulty of selection when no means of addressing the problem has been found, and there has been little or no progress here since Lewis Morris wrote on p. 35 of the MS.:- 'These modern notes are only my guesses'.

In view of the darkness surrounding the issue, only Schaefer has taken the methodologically correct route in his transcriptions: he is expressly noncommittal,[3] transcribing the short notes in a way which distinguishes them from long notes but without ascribing any particular value to either.

Yet it should be possible to arrive at a conclusion. Playing the short notes as measured or crushed in makes a vast difference to how the music sounds. Returning to Whittaker's point that often the short notes distinguish between one *cainc* and another, it is unlikely that they were crushed in else the distinction between *ceinciau* would not be very clear. It is important here to note that *plethiad* movements, which usually involve just one or two short notes, are nothing like as long as the great, crushed-in (in theory that is) figures of *piobaireachd* which distinguish their sections. If it is proposed that the short notes of the *plethiadau* are to be crushed-in, then the comparison has to be with accacciature which are sufficiently short to be primarily accentual or percussive in function.

So is there a demonstrable need for percussive accentuation in *cerdd dant*? The idiom has no apparent connection with song airs or with wind instruments, yet it is these which usually give rise to accacciature. In contrast, as discussed before in connection with measured rhythm, the plucking of all early forms of harp with the fingernails is very percussive in effect; there is certainly no need to boost the inherent accentuation by introducing acciaccature, and any comparison with modern harps and techniques would be entirely misleading here. From what is known of medieval bowed instruments and bowing technique it is also unlikely that changes in bow-stroke by the *crythor* could have been anything like as smooth as those achieved nowadays.

Moreover, not only is the articulation of the instruments naturally heavy, but the beats are already heavily marked by virtue of their regular, measured spacing and by the fullness of the chords in the lower part, which of course would have created a much heavier accentual stress than existed in any other early music. We know from the alliteration and consonantal *cynghanedd gytsain* of poetry, and from its staff accompaniment, that there was a taste in the British Isles for a percussive approach to music, but there must have been limits.

The consequence of applying the accacciatura treatment on the beat is a spikiness which is really unprecedented, yet all the advocates of the unmeasured approach apart from Dowd have used it in this way. All other musical characteristics become submerged, almost eclipsed, by the unrelenting hammer of the beat wherever *plethiadau* are present, and the listener is left

asking:- **<u>Why</u>? Whatever could it be that the composers would want to express and convey by such extraordinary emphasis on the beat?** Without any parallel to draw from, it is difficult to imagine an answer.

Further problems arise from the unmeasured approach to the short notes. If they are not functional melody notes, then what quality of melody line remains if they are excluded from it? Any example from the text will illustrate the difficulty. The close at 82.6.13-83.1.4 would produce the melody line:

C E Bb D A C A G

with each of the notes except the first and last accented by a single rising or falling accacciatura, in a strange contradiction of the natural principles of phrasing whereby emphasis is normally placed on the first and last notes of a phrase. Now as a melody line this phrase is logical in its harmony, with the consecutive thirds between each pair of notes broken by the final G, but no matter how this phrase is treated with expressive timing, it remains too artificial, too contrived, to really constitute melody. It has no humanity in it, no soul. It looks exactly like the harmonic skeleton of a melody, too simple to qualify as musical melody. Played in this fashion, all the text has such a poor melodic component that the sophistication of the harmony alone is not enough to lift the music to the level of listeners' music, and one is left wondering if all this repertory was no more than études or accompaniments to missing vocal melodies.

But if the short notes of the *plethiadau* are accorded the

status of functional melody notes, then immediately this phrase becomes sufficiently complex to qualify as melody:

C CE DBb BbD CA AC BA G

This is because there is a threading together of two principles: the rising thirds between the pairs of long notes and the alternately rising and falling thirds in the pairing of short and long notes, until the patterns are broken in the last three notes to arrive at the final. There are of course many possible ways of timing and accenting this melody to arrive at viable music, but the short notes are essential components of the melody.

In view of this, it must be wrong to suppose that the short notes are the equivalent of the gracenotes of Baroque music. Some positive link needs to be identified in order for the acciaccatura to be adopted. We have seen how several contributors have adopted longer and more complex interpretations of the *crychiadau* and *plethiadau* than the evidence warrants, and it may be that a desire to produce sophisticated music has influenced the 'accacciatura' interpreters in their decision. Perhaps they have been working along the lines that a music with gracenotes is more interesting than one without, and have not taken into account the impoverishment of the melody that this entails.

The more common approach amongst interpreters has been the placement of the short notes as measured, commencing on the beat. This approach avoids the impoverishment of the melody although it does not produce lines which are of an immediately recognizable type. However, it does not avoid the over-heavy stressing of the

beats. This is partly because the short *plethiad* notes do indeed need to be short, else the fingering of them - particularly the covering-finger damping - would not need to be so particular, but more importantly because it is usual for them to be dissonant with the harmony of the lower-hand chords which support them. Playing the first of the short notes simultaneously with the accompanying chord usually produces a strong 'snap' effect, which is in some ways even more percussive than the crushed-in approach.

Now Crossley-Holland makes the interesting points that snap rhythms often occur in the folk tunes of the Gaelic-speaking regions, and that, although rare, they are not unknown amongst those of Wales.[4] He identifies those *plethiadau* with one short note as identical to the Scots Snap in rhythm. However, as is well-known, the Snap is always used as a contradiction to an already established rhythm: the occasional short-long in the context of long-short rhythm. It is a cultivated feature that arises from expediency in vocal delivery, not the product of a taste for short-long rhythm in general. In the text more than half the beats have a *plethiad*, so the proposal here is not the simple borrowing of a feature from elsewhere, but actually the adoption of a short-long taste for rhythm in general, in contradiction to the normal predilection for long-short rhythms in stress-timed music.

The result is every bit as peculiar as one would expect, with much of the music heavily punctuated with the staccato stabbing of the discordant snaps. The close we have been looking

at largely lacks the discords, but even so the melody becomes curiously jagged in every short-long rhythm one cares to try:

C C E D Bb BbD C A A C B A G

A G D G G
G C C
C

So common and widespread are the *plethiadau* that the adoption of a 'snap' approach, whatever the value of the short notes, really entails abandoning all hope of ever closely relating this music to any other. This is unnecessary. But before moving on, the point is well-made that *cerdd dant* might well have included a sprinkling of snap rhythms, but not with anything like the frequency of the *plethiadau*. We will have cause to return to the Snap later.

Dowd is not mistaken when he writes that to stress the first note of the *plethiadau* is to invite disaster.[5] Whether it be crushed-in or be treated as an appoggiatura or a plain note, there have surely been enough transcriptions, performances and recordings to date to make the point that *plethiadau* are too dominant in the text to permit these treatments without producing music which is too unbalanced in terms of stress. If any doubts remain in the reader, I suggest that experience of this treatment for the entire, huge text would dispel them.

So let us take a fresh look at the position, from the start. There are, logically, three possibilities concerning the placement of the *plethiadau*: they can be begun before the beat, on it or after it. It is highly unlikely that they were begun

after the beat else the originator of the tablature would have been tempted very strongly to place them in the column following the chord in the lower part, and not adjacent to the bar-lines that often precede the chords. This would have required using more space, but it would have been well-spent if indeed he was notating music that was sufficiently unusual to commonly have rests or pauses in the upper part on beats. Only Crossley-Holland has explored this possibility, as a means of accommodating 4-note ascending arpeggios of the lower hand so that the thumb of the lower hand serves as a substitute for the upper part which is usually produced by the upper hand. It appears that the technicalities of his interpretation dictate that he is forced into this exception rather than opting for it out of conviction.

The graphic layout of the tablature, with all the notes in one column, does not favour either interpretation - commencing on or before the beat - and can equally support both. From the musical point of view, it is of course more common to have relatively short melody notes before the beat rather than on it. This obvious point is so important to this discussion that it is worth amplifying. Following is a quote on this point by Breandán Breathnach in respect of traditional Irish music, although it would serve well as a description of most if not all measured aural traditional music:

> A tune is played or a song sung, not bar by bar, but by the phrase, which very seldom is contained exactly between bar lines. The phrase, usually the equivalent of four bars, falls

> naturally into two halves, between which there is a sense of contrast. The groups making up these halves, the halves themselves, and the full phrases are knitted or woven together by linking notes. Usually this function is performed by the last note of the group, which is thrown forward with a degree of emphasis to the succeeding group. This forward thrust is such a characteristic of the music that a traditional player not familiar with musical notation will, if asked to call the notes of a tune, invariably attach the linking note to the group it introduces rather than to that to which it belongs grammatically.[6]

Note that the semantics dictate the use of 'linking', 'knitting' and 'weaving':- words that are so very close to '*plethiad*' in sense. We have seen how inadequate *cerdd dant* melody would be without notes performing this linking function, and how placing them on and following the beat creates music which appears mis-shapen, and in fact it only makes musical commonsense to commence the *plethiadau* before the beat.

This perspective is so extremely compelling in its normality and simplicity, that discomfort begins to arise over the now rather bizarre fact that the great majority of interpreters have been decided that the *plethiadau* should be begun on the beat. In the absence of any discussion or explanation by them as to why this option should be adopted, it has to be wondered if they have

been misled by their own musical literacy into overlooking the fact that a non-literate musician (as, in the modern sense, no doubt we would classify the originator of the tablature) would more readily attach preliminary notes to the beat than subsequent notes. In Psychology it is well-established that prior experience is a powerful determinant of interpretation in visual perception.

Some confirmation that the first note of *plethiadau* preceded the beat can be gleaned from their fingerings. The thumb and middle finger are naturally stronger than the forefinger, yet *plethiadau* never begin with the thumb, and more commonly begin with the forefinger than with the middle finger. In particular with the two common short *plethiadau* that both use the forefinger and middle finger to pluck, it is *taked y fawd* - begun with the forefinger - that is more commonly used than *y plethiad byr*, begun with the middle finger. This is to say that there is a detectable bias towards the second or third notes of *plethiadau* being generally more naturally amenable to strong attack than the first note. Probably this bias will be a reflection of the *plethiadau* commencing before the beat.

As mentioned before, Dowd places the short notes before the beat, actually crushed-in as upbeat gracenotes. This avoids the difficulties of commencing them on the beat, but does not really succeed in producing a viable melody line. In transcription his approach looks simple and straightforward, but in performance it is actually extraordinarily difficult to put into practice. This will be because it is unnatural to anticipate measured beats in an unmeasured way, the natural tendency being to allow a simple

timing relationship to develop between the short preliminary notes and the longer one on the beat.

Indeed most of what we have been able to learn about compositional form, harmony and *mesur* in this tradition clearly implies that there was a strong and strict taste for simple mathematical ratios and proportions. We should expect this to extend to note values, and so we need to query any suggestions of 'timeless' notes, anacruses, rhythmic freedom or interpretive discretion in respect of rhythm. Any argument for these would need to be strong enough to explain why the taste for rhythm should deviate from taste in other areas.

The remaining option is to accord the short notes melodic status as measured notes, commencing before the beat. Thus the close discussed above becomes:

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C    C E    D Bb   BbD    C A    A C    B A    G

A             G      D      G             G
G             C             C
C
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Whatsoever the precise details be of the long-short relationship, the melody line here is adequately complex and fluid to be classifiable as a genuine melodic phrase with no lingering doubts about whether something is missing. It is a fully-fledged phrase, not a skeleton. And it sits astride the measured chords in the lower part in a manner that is unskewed. In performance the thread of melody is not lost under a heavily marked stress of the beats. The harmony is adventurously close and dynamic (but comprehensible, opening out into the final 8ve),

adding propulsion to the melody. The whole phrase has life and movement, and all the other treatments of it appear sterile by comparison.

The difficulty with commencing the *plethiadau* before the beat with the short notes measured is that the number of short notes varies. Most commonly there is only one, as in the above close, but it is common to have two or more, and yet again a number of possibilities arise. Because all the fingerings of all the *plethiadau* are designed to be played rapidly, it is possible to rule out the playing of two or more short notes in the time of one:- this would involve playing the short note of those figures that contain only one at half the possible speed.

Also, it is very unlikely that the longer figures would be commenced earlier than the shorter figures. The longer ones usually begin with the exact fingering of shorter ones, using the shorter ones as initial components but extending the fingering and the number of notes by adding-on to the initial component. Thus for example *plethiad y bys bach*, *plethiad y pedwarbys* and *plethiad mawr* each begin with the fingering of the short *plethiad byr*. If the longer ones were commenced in an earlier position in the bar than the short ones, then the initial fingering would need to shift in position also. But it is much more likely that specific fingerings would occupy fixed positions in the bar. This is a difficult point to explain, but it arises largely out of the marked difference in strength between forward strikes and backstrikes, which dictates that there must be a pattern of

alternately strongly and weakly accented note positions, which in turn dictates that in general particular fingerings will suit certain positions and not others.

By far the most probable option is that all the *plethiadau* were commenced at the same position, immediately before the beat, and that the second note followed on immediately, on the beat. Where the *plethiad* is long, with four or five notes in total and usually spreading into the column following the beat, the level of saturation will be such that the melodic line clearly involves a short run of notes. In the great majority of instances of *plethiadau* in the text - 70% - only one short note is involved and this will give rise to the sort of long-short rhythm in the close discussed above. But where *plethiadau* involve two short notes a snap rhythm will result from placing the second one on the beat. This is the case in 20% of the instances of *plethiadau*, and overall concerns about 5% of the columns of text. This is just the sort of proportion that snap rhythms are used in, in the traditional music Crossley-Holland refers to.

It is, then, very credible that snap rhythms would have been used in this way, and as will be seen below in transcriptions, this interpretation of the *plethiadau* leads to a very relaxed style of timing in melodic figures and rhythms which are actually familiar to us. In particular the snaps do not dominate but provide simple rhythmic variety in contexts of even and long-short rhythmic motifs, and overall the *plethiadau* provide not just a full melody and rhythmic interest, but harmonic contrast as in practice each of the short notes - the first, the second -

can be either consonant or dissonant with the harmony of the lower hand. All these features are lost if the short notes are crushed in.

This is not to say that they were played slowly. They must be played fast if the special fingerings of them are to be exploited to full effect, but their values must have a simple relationship to those of the long notes so that they are perceived as functional melody notes.

It may well be that the inclusion of snap rhythm has significance for accentuation by the lower hand. The great majority of lower-hand chords are plainly written in a single column, but the existence of the expansions of lower-hand chords introduced in Part 4, pp. 120-4 complicates the picture. These movements involve the damping of notes struck by the ring finger by that finger, the notes being the lowest of their chords. The purpose is to avoid or restrict the dissonance created by the striking by the middle finger of the string above, indicated in a subsequent column (usually the next column). The symbols for both notes are connected by the diagonal line that elsewhere in the tablature always indicates damping.

The fact that the symbols for the expansion occasionally span more than two columns suggests that the damping is not always immediate. But in the majority of cases the two columns involved are adjacent, and here it may have been a short snap effect that was denoted rather than a change of sustained notes.

In practice a subtle and smooth snap can be effected by playing all the notes of the chord simultaneously and damping the

lowest string as quickly as possible, and this is the interpretation of the movement that I have come to prefer as it is less obtrusive than placing both the damping and the striking of the higher string on the position in the bar occupied by the upper-part content of the second column. Indeed there are circumstances where the second column follows on so quickly from the first that there is unlikely to be enough time to allow the lower hand to play the higher string separately from the lower, as discussed in Part 5, p. 91.

This snap treatment of the expansions imparts a lift to the lower part which it might be considered to be in need of. Indeed, I would not exclude the possibility that the ring finger often damped its notes in chords where no expansion is marked.

The issues raised by the expansions are not easily solved, but the snap interpretation of the *plethiadau* does at least raise the possibility that snaps were intended here for the lower part. Certainly the symbol complex denotes a same-finger damping which cannot have been very fast.

Having arrived at fairly firm conclusions on the fundamentals of measurement and accenting (apart from the treatment of the expansions), we can begin to address the detailed specifics of rhythm.

Notes

[1] In Part 5, pp. 28-32.

[2] Whittaker, pp. 89-90.

[3] Schaefer, p. 68.

[4] Crossley-Holland: 'Secular Homophonic Music', pp. 150-3.

[5] Dowd, p. 63.

[6] Breandán Breathnach: *Folk Music and Dances of Ireland* (Dublin, 1971), p. 89.

IV. THE DETERMINATION OF BAR LENGTH

In Part 5: Metre, pp. 79-91, it is established that the metrical or digital units corresponding to bars were of even length, and it is indicated that there were two divisions of them: into four regular beats and into two regular beats. At this point it is necessary to briefly consider the methodology of possible approaches to the problem of bar length. In theory at least, bars may have been extremely long, capable of containing many more notes than in fact they did, and if this was so then we would have no means of ascertaining their length from the text. But on the principle of Occam's Razor it is best here to work on the simplest basis, that bars were not longer than they needed to be to accommodate the notes that they actually contained, and so we need to look closely at the formatting of bars in relation to the notes contained within them.

Pieces constructed out of bars containing relatively few notes will be those most likely to use two-beat bars rather than four-beat bars. Our aim must be to identify in respect of both these lengths the instances of bars which are most saturated with notes, and the number of notes in these will indicate the bar lengths; which is to say that once the most saturated digits in a particular piece are identified, it becomes possible to specify the maximum number of melody notes that the bars of the piece have to be capable of containing, which is to say the bar length that the piece uses.

As it is immediately apparent that the number of melody

notes contained by different bars in most pieces varies a lot, so it will be that the degree of saturation of bars varies. This does not imply that the bar lengths vary, or the time signatures vary, within a piece; it will be only that the number of positions within the bar actually occupied by notes varies from bar-to-bar.

When it comes to establishing the position of notes within the bar, it is not sufficient to work loosely and fit in notes into any position available for them; account has to be taken of the ways in which individual notes are produced. The method of producing a note constrains the positioning of it. It is possible to play the notes within a *plethiad* figure very quickly, and also to repeat a note using an alternation of forward strike and backstrike very quickly. So these figures will contain somewhere within them the shortest division of time used. The repeating of a note that does not entail a backstrike can only be achieved at a much slower speed. This is also true of two successive notes where a shift in hand-position is involved, or where different notes are both produced by the same digit.

These constraints are related to evident formulaic patterns in the juxtapositioning of notes and sequences of notes, which indicate that the positioning of fingering figures is consistent from bar-to-bar within a piece, and across pieces also. Thus it is necessary to identify all the notes that are produced in a particular way that occur in similar contexts within the digits of the text, for these patterns will be rhythmic motifs.

This exercise is akin to that reported in Greenhill

concerning melodic formulas,[1] but here each note has to be categorized rather than each series of notes, according to its method of production and to its relationship with its neighbours and their method of production. This has been a vast exercise (actually spread over some twenty years of studying and playing the pieces) which I do not propose to detail here, but from the conclusions a picture emerges of strict consistency in the way in which bars are built up from combining particular fingerings in set sequences. Therefore it makes sense to speak of 'standard' bars, bar lengths, bar composition and rhythmic motifs.

And within the tradition, these normal standardizations would have been entirely familiar. For example a musician would be accustomed to the backstrike of the various *crychiadau* occupying the penultimate note position of a bar and never the antepenult. In fact if ever such a musician had been faced with the tablature, he would have placed these notes here even if he did not know the piece. A rhythmic notation additional to the tablature would not have been necessary, since the information provided by the tablature on the fingering together with the context - particularly the metrical context - should normally be adequate. So where a *crychiad* symbol is written in the last column of a digit, it would have been understood that a backstrike was to be played in the penult position.

This is unfortunate for us in that the existence of these conventions will have led to the development of this tablature without express rhythmic notation, but the sure knowledge of their existence does enable us to have a good try at deducing

their rules from the tablature.

Short measure

It is established in Part 5, p. 87, that Gosteg Dafydd Athro uses a shorter application of measure than does Yr Osteg Fawr. The piece provides us with a sure means of entry into short measure. The most important information we need is the actual number that a digit of short measure could be divided into - what is the bar length? If just a single digit of this piece can be shown to be fully saturated with notes then we have the answer.

Fortunately, the directions for section X of Gosteg Dafydd Athro, at the foot of p. 17, provide a whole series of what must be fully-saturated digits. Here each digit contains two *plethiad y pedwarbys* figures, whereas in section I each digit contains one *plethiad y pedwarbys* figure, and clearly the intention is for section X - the last section - to provide a climax to the piece in the sense of the divisions principle of variation formation. It would be a poor climax if it did not involve full saturation, rapidly played. It should be remembered here that *plethiad y pedwarbys* is unique amongst the fingering figures in that on completion of the figure the fingers are in the same position as at commencement,[2] and so it lends itself to the 'chaining' found here in sections I and X where the figure is repeated on the same strings many times. It provides an easy opportunity for saturation extended across many successive digits.

The figure contains four notes, so in section X where each digit contains two figures, the digit or bar contains eight notes, and this will be the maximum that short measure requires. An 8-note bar is exactly the sort of bar length that is

consistent with the preference in this music for metrical groupings of four and its multiples.[3]

The digit will be bisected by the G in the lower part, no doubt a beat, which completes the C-CC or the B-DD to create the simple ostinato. So the bar has two main beats, let us call them 1 and 2, and between each pair of main beats there must be three points for the melody notes of each *plethiad*, let us call them medial beats 1b, 1c, 1d and 2b, 2c, 2d. The scheme of each *cyweirdant* bar in section X is, then:

bar-division:	1	1b	1c	1d	2	2b	2c	2d
upper part:	G	F	G	F	G	F	G	F
lower part:	C CC				G			

The first note of each *plethiad y pedwarbys* occupies a medial beat d, and this will be true for all instances of all *plethiadau* which are written in main beat positions above chords in the lower part. Where *plethiadau* use more than two notes, as here, then because all the *plethiadau* are designed to be compact, the third note must occupy a b position, and if there is a fourth it must occupy a c position and so on. In this way all the *plethiad* melody-notes of this piece as an example are allocated.

The *crychiad* figures at 15.2.9 and following will have the forward strike on main beats 2, and must have a backstrike on 1d or 2b. Although we cannot say if the figure here involves more than two notes, there is room for seven. The *kefn ewin* figures (17.1.4 f) will be played with a backstrike on medial beat d probably, or less probably on b.

All single melody notes written above occupied columns in the lower part will occupy main beats, and those that are not (as at 16.5.11 f) will probably occupy medial beats c unless they occur in pairs (17.5.4-5 f) where they will occupy either b and c or c and d.

The two note chords in the upper part (16.5.8 f) will probably be played simply on main beats, but there is room for them to be spread with the upper note played on medial beat b.

By identifying the saturated digits and positioning the melody-notes according to the compactness principle of the fingering figures in this way, virtually all of the problems presented by the piece are solved apart from the relative durations of the notes of the 8-note bar. At this stage we can only say that they may have been even, or long-short etc., but whichever, the rhythms deduced here are straightforward and simple enough for us to have no concern about being led into unfamiliar rhythmic territory.

In all, this single piece provides a wealth of information about short measure. Although there are parts of other pieces which can be accommodated within 8-note short measure, it is Gosteg yr Halen, Gosteg Lwyteg and Kaniad y Gwyn Bibydd which can be wholly accommodated by it. Evidently this was normal for *gostegion*, which are relatively simple, regular pieces, and all this is consistent with the *gosteg* form being used as background music as indicated by the note to Gosteg yr Halen. The inclusion of Kaniad y Gwyn Bibydd in the short measure group is consistent with an interpretation of the piece as representing

characteristics of a pipe-music which was a lighter companion of *cerdd dant*, which would have included (and was probably entirely composed of) dance music. All the pieces are placed towards the beginning of the MS (as bound) suggesting that the binding of folios was more-or-less in the correct order here and that the logic to the order included a progression from short measure to longer measure (short measure first since it is easier to track measures across a short application).

In Gosteg yr Halen, again the most saturated bars are found at the end of the piece. Taking the first two *cyweirdannau* here (19.6.1-9) the positioning will be:

bar-division:	1	1b	1c	1d	2	2b	2c	2d	1	1b	1c	1d	2	2b	2c	2d
upper part:	F	E	F		A		A	F	A		A	F	A			
lower part:	F C A				FF				F C A				FF			

The A's in position 2c and 1c must be so positioned since if played at b they would have to have been marked as backstrikes, and if played at d there would be no room for the following F notes. The E and F at 1b and 1c, produced by *y plethiad byr*, has to be in that position in order to match the fingering in relation to accent of the *plethiad y bys bach* figures in Gosteg Dafydd Athro.

There is no threat of overflowing the 8-note bar scheme of Gosteg Dafydd Athro here, and rhythmically the two pieces are very similar in motifs and development - quite simple and straightforward with a reliance on incremental division through

successive sections.

The beginning of Gosteg Lwyteg - all we have of it - is very unsaturated. Taking the first two *cyweirdannau* (22.4.1-3) the positioning will be:

```
bar-division: 1  1b 1c 1d 2  2b 2c 2d 1  1b 1c 1d 2  2b 2c 2d

upper part:   E  F                 E  D                 D  D

lower part:   A                       A
              C                       C
              A                       A
              FF                      FF
```

The initial D of the *plethiad y pedwarbys* will occupy 2d of the preceding bar. The D at 2c is produced by *plethiad y wahynen*, which is functionally a *crychiad* movement,[4] and here introduces the principle that *crychiadau* which precede *plethiadau* must occupy medial beat c to form a compact concatenation where the backstrike of the *crychiad* immediately precedes the commencement of the *plethiad*.

As the first section of this piece is so sparse, we can presume that the later sections would not overflow the 8-note bar scheme. No doubt incremental division was used here also.

For clarity in comparison with the text, the repeats of the lower-part chords which are presumed to have occupied, here, alternate main beats at 2 and to have been abbreviated in the tablature are not restored throughout this chapter.[5]

Kaniad y Gwyn Bibydd achieves fairly high levels of saturation, but does not threaten to overflow the 8-note bar scheme. For example, the first *tyniad* of section X (36.6.7-10) must be:

```
bar-division: 1  1b 1c 1d 2  2b 2c 2d

upper part:   D  C  D  C  D  B  C
                                A

lower part:   C           C
              G
              E
```

The two-note chord at 2c could be spread so that the C is played at 2d, but this is actually rather tight in practice.

Elsewhere, short measure is precluded by pieces requiring a greater number of notes per digit. However, Kaniad Tro Tant is unique in displaying a phenomenon indicated as '*ystlysgaingk*' by a note at 67.6, and may involve a mixture of short measure with a longer measure. All of the digits of the *ceinciau* of this piece can be accommodated by the 8-note scheme; for example the opening *cyweirdant* (67.4.1-3) is:

```
bar-division: 1  1b 1c 1d 2  2b 2c 2d

upper part:   F     F  G  F        G

lower part:   D           D
              B           B
              FF          FF
```

Note that the *plethiad y wahynen* at 1c can comprise only a backstrike; a preceding forward strike at 1b could not be achieved swiftly because of the forward strike of the same string by the same finger (the middle finger) at 1. In fact the text is full of such evidence: that compactness excludes further strikes in most instances of

crychiadau.

Unlike the *cainc sections*, the *ystlysgaingk* - comprising the last two *cyweirdannau* of the measure (67.5.16-6.8) - overflows the 8-note scheme:

```
bar-division: 1  1b 1c 1d 2  2b 2c 2d ... 1  1b 1c 1d 2  2b 2c 2d

upper part:   B     C  C  D  B     A  ... B        C  D        G
                                        ... B           B

lower part:   FF                  G     ... FF          F
```

where five notes at the end of the first digit - F B G A F - cannot be accommodated. With strict method, therefore, the whole piece should be considered as having a longer application of measure, leaving the *cainc* sections as very stark. However, it may be that the special designation '*ystlysgaingk*', which is used uniquely here (as far as we know), means that this type of *diwedd bach* is distinguished from the normal *diwedd* in being set to a different application of measure from the normal practice of sharing the application used by *cainc* sections. In other words perhaps this piece involved a formulated 'trick', a 'catch' in the counting. It is unclear.

The identification of the above pieces as examples of short measure has provided us with an understanding of the basics of rhythm. We have gained insight not only into the composition of the standard short bar and its conventions, but into the formation of sections throughout a piece. There is a strong rhythmic component in section formation in addition to the basic melodic technique of incremental repetition, winding slowly up the scale:- incremental division. This relies on the exploitation of a preparedness to contrast bars which are sparsely-occupied by

notes with bars which are heavily-saturated with them, in a formal development through sections whereby the long notes of earlier sections are divided up into shorter notes in later sections.

There is nothing unfamiliar about this, as Dolmetsch points out: 'The improvised 'Divisions on a Ground' for which the English violists were so famous in Elizabethan times were not very different from these measures ...'.[6] How interesting it is that divisions have been so wedded to the harmonic ground bass technique.

The variability in degree of saturation involved here is high, and it is the breadth and spaciousness that this approach to rhythm allows which must be one of the most marked characteristics of the music's rhythm. It allows for not just divisions but for great variety in the composition of bars according note placement within the bar (irrespective of the pitch of the notes), thereby creating a musical environment with plenty of 'elbow-room' for the composers. Such was their appetite in this direction that in fact 8-note bars were not long enough.

We might expect that 16-note bars would emerge elsewhere in the repertory, on a base of four main beats rather than the two of short measure,[7] and indeed this does emerge, so widespread that it was clearly the standard application of measure used in the tradition.

Standard measure

It was through chained *plethiad y pedwarbys* figures that it was possible to ascertain the 8-note bar length of the short application of measure. The piece we know from its name to have been longer than the short-measure pieces in its application of measure - Yr Osteg Fawr - unfortunately does not contain these chains, so we must look elsewhere for them. There are several pieces in the text that contain them.

Kaniad Kynrhig Benkerdd. The chaining of successive *plethiad y bys bach* figures that enabled us in Gosteg Dafydd Athro to simply and confidently define the maximum number of notes per digit required by short measure occurs here also. But here instead of eight, sixteen notes are required. The figures occur throughout the first four digits of section X. In order to write the required scheme, two more main beats - let us call them 3 and 4 - need to be added to the bar-division to create the length required by what emerges as standard measure. The first digit (49.3.6-13) is:

bar-division:	1	1b	1c	1d	2	2b	2c	2d	3	3b	3c	3d	4	4b	4c	4d
upper part:	C	B	C	B	C	B	C	B	C	B	C	C	D	C	D	B
lower part:	F										F		E			
	C										C		C			
	A										A		G			
	FF										FF		CC			

The chord at 3c may be a registration error of lower part against upper in Robert's copying (the lower part being displaced one column to the right), as it would be more consistent with the

rest of the text if it were written below the preceding C at 3. The next digit has regular spacing of the chords below the figures. Whatsoever, the need for sixteen notes to be accommodated is clear, and this will be the maximum needed because this section is obviously intended to be a climax in terms of division, just like section X of Gosteg Dafydd Athro.

The adoption of 16-note bars does not leave other parts of this piece stark. The first *cyweirdant* of what was probably thought of as the *diwedd* (46.5.6-11) is quite saturated:

```
bar-division: 1  1b 1c 1d 2  2b 2c 2d 3  3b 3c 3d 4  4b 4c 4d

upper part:   F     F  F  G     G  G  A        A  G        G

lower part:   C           C           C           C
              A           G           A           G
              FF          DD(read CC) FF          DD(read CC)
```

Note that the *plethiad y wahynen* figures here must comprise just a single backstrike, on 1c and 2c, since earlier forward strikes at 1b and 2b are prohibited by the middle finger completing the *taked y fawd* figures on 1 and 2. Typically, in saturated digits, *crychiadau* do have to be restricted to one backstrike as here, and this implies that elsewhere they do not comprise extended tremolos either.

Kaniad Bach ar y Go Gower. The most saturated digit in this piece contains a short chain of two *plethiad y pedwarbys* figures within it: the first *cyweirdant* of section II (44.4.1-6), which again requires more than an 8-note bar:

bar-division:	1	1b	1c	1d	2	2b	2c	2d	3	3b	3c	3d	4	4b	4c	4d
upper part:	D	E		D	E	D	E	D	E	D	E	B	D			B
lower part:	A										A					
	G										G					
	C										C		D			

The chord at 3c may be a registration error and should have been placed in the preceding column below the E played at 3. But as the placing in the text is similar to that at 49.3.11 discussed above, perhaps a syncopation is indicated. My own opinion is that the repetitiveness of the upper part has led the scribe to misplace the lower part chords, since in the pieces discussed below *plethiad y pedwarbys* chains do not indicate a syncopation.

Kaniad Marwnad Ifan ab y Go. Here the most saturated digits, at 76.1.16 and following, include *plethiad y pedwarbys* chains which stretch across much of their digits. The *tyniad* at 76.1.16-2.2 would be set to the 16-note scheme as:

bar-division:	1	1b	1c	1d	2	2b	2c	2d	3	3b	3c	3d	4	4b	4c	4d
upper part:	F	E	F	E	F	E	F	E	F				G		E	E
	D												E			
lower part:	F								G							
	D								G							
	B															

Note that the first E can comfortably be played immediately after the same finger - the middle finger - has struck D, but that here at least the initial upper-hand chord (F D) cannot be spread or arpeggiated since there is no room for this.

Note that the last section of the piece contains figures comprising *y plethiad byr* preceded by a forward strike (by the thumb) of the string one above the highest of the *plethiad*. This figure is a common example of a type that extends to columns occupied to a single note,[8] and illustrates the important point that even single notes were formulaic in their fingering, their juxtapositions, and undoubtedly their positioning within the bar. This figure will be played compactly, just as the named movements where several notes occupy a single column are compact, because its fingering and string-relationships reveal that it is designed to be played rapidly. Thus the single note will occupy the position immediately before the *plethiad*, i.e. medial beat c always. The fourth digit of this section, a *cyweirdant* (76.3.16-20) will be:

bar-division:	1	1b	1c	1d	2	2b	2c	2d	3	3b	3c	3d	4	4b	4c	4d
upper part:	G				D		F	D	E				C			
lower part:	C				C				C				C			
	G								G							
	E								E							

Y Kaniad Krych ar y Bragod Gower. This piece also displays chains of *plethiad y pedwarbys* in its most saturated digits. The fourth digit of the opening section, a *cyweirdant* (76.5.16-6.1) will be:

bar-division:	1	1b	1c	1d	2	2b	2c	2d	3	3b	3c	3d	4	4b	4c	4d
upper part:	C	B	D	B	C	B	D	B	C						A	A
lower part:	A								G							
	G								G							
	C															

It is notable that the digits of all four of the above pieces, all of them large, can be comfortably accommodated within the 16-note scheme. Apart from the end of sections of Kaniad Bach ar y Go Gower and the beginning sections of Kaniad Marwnad Ifan ab y Go, where the measure and digits are obscure,[9] the measures and digits of these pieces are firmly established and thereby provide a firm basis for deducing the details of the long application of measure. Indeed so much of the text requires this application that it is appropriate to call it standard measure.

At this point it is now possible to turn to Yr Osteg Fawr - the piece known to have been longer in its application of measure than the short application - to see if indeed the 16-note bar scheme can accommodate it. Saturation is approached in some digits. For example, the first *tyniad* of section II (20.3.9-13) can be set to the long measure:

bar-division:	1	1b	1c	1d	2	2b	2c	2d	3	3b	3c	3d	4	4b	4c	4d
upper part:	D	C						F	G	A	G		A		G	G
lower part:	G C G								A C A FF							

Whereas short measure cannot accommodate such digits as these, it can be seen that the long application does so comfortably.

The *gwrthwynebiad* figure from 2d to 4 is another example of a figure which extends to columns occupied by single notes, like the extended *y plethiad byr* figure in Kaniad Marwnad Ifan ab y Go discussed before. '*Gwrthwynebiad*' will refer to the unusual feature of sounding two adjacent undamped strings in rapid succession, a

practice usually avoided.[10] Hence the A at 3b and the G at 3c will be played compactly and resolved onto the final A of the figure at 4 when the discord has made an impact but is starting to fade. The *crychiad* that the figure always occurs in association with, as here at 20.4.6 will presumably share this timing, with the first forward strike of the A at 3b, the backstrike at 3c, and a final forward strike at 4. We should expect this to be true of all instances of the concatenation *plethiad y bys bach + krychu y fawd*.

In this way it is possible to move out from the more saturated digits of pieces in standard measure, noting similarities in the fingerings between rhythmic motifs that saturate their digits and those that do not, to gain some insight into the positionings of notes in other areas of the text. Standard measure accommodates all the remaining pieces in the text that have their digits clearly identified and are metrically regular.

Irregular measure

It should not surprise us if some pieces display irregular use of rhythmic measure, since irregularity in harmonic measure was a common enough feature for it to be enshrined in the '*trwsgl*' measures, where the pattern of *cyweirdannau* and *tyniadau* is not strictly adhered to although the total of digits per measure is maintained through a piece.[11] Indeed some pieces include digits that cannot be accommodated by the 16-note scheme of standard measure. Nevertheless, the fact that some of these pieces include other digits which constitute melodic formulas in common with so many standard-measure pieces, dictates that most bars of these pieces need to be played as standard measure.

In Kaniad Ystafell, although the digits of the later part of each section are more-or-less obscure, the first part of each section is firmly identified as *korffiniwr*.[12] These digits are so stark in their note density in the earlier sections, that realistically they could not be played in a longer application than the 16-note scheme of standard measure. Yet the penultimate digit of each half-cycle of the measure is already fairly saturated by section IV (38.5.14-20):

bar-division:	1	1b	1c	1d	2	2b	2c	2d	3	3b	3c	3d	4	4b	4c	4d
upper part:	B		C	B	A		B	A	G		A	G	F			A
lower part:	G				F				E				A			
	G				A				G							

In section VII the digit is prefaced by the following (39.4.5-9):

bar-division:	c	d	a	b	c	d	a	b	c	d
upper part:	C	C	D		E	D	C		D	C
lower part:			B G				A A			

which is clearly an expansion of the existing motifs and not a 'division' increase in note density. As it happens these two 'extra' main beats could draw their time from the preceding *tyniad* which only requires two main beats, but these are likely to be 1 and 3, not 1 and 2. So it seems that the penultimate digit here requires six main beats, not the four of standard measure. If so then anyone scanning the measures of this piece would be thrown at this point unless they were prepared for this digit to be of extra length in sections VII-IX. I should stress that the incremental logic of the melodic development in successive sections of this piece dictates this expansion, and that it is not the result of faulty transmission. To pursue the gradual winding up the scale already embarked upon before section VII, the composer needed a 'bridge' of two main beats at this point, and clearly he had no scruples in breaking standard measure in this piece (which does not as a whole appear to be strongly wedded to strict metre in the first place) to create it.

Kaniad Kydwgan actually features the gradual and asymmetrical expansion of segments of few columns of text into many columns in subsequent sections. Thus the first half of the *cainc* in the first section has 11 columns, and this has become 32 by the last section. This piece is so dominated by expansion, deliberately, that the concept of an equality of metrical length

being maintained over the sections, even allowing for the divisions principle, is untenable. Here there is no trace of regular measure, recorded or otherwise, so if the piece was conceived of as containing digits we cannot identify them and say how many main beats or notes they may have stretched to.

Kaniad Suwsana, which is metrically irregular, contains what can firmly be identified as a digit in section V (55.1.5-16), which cannot be accommodated in a 16-note bar. Perhaps at this point the piece is launching into expansions of the scale of Kaniad Kydwgan, but the rest of the piece is unrecorded.

The beginning of Profiad Chwith Ifan ab y Go and the whole of Y Ddigan y Droell are composed on a metrical system that lies outside of the *cyweirdant*/*tyniad* system of harmony.[13] Both display metrical units composed of six written chords in the lower part, and the bar length required here is the same as that in the bridge in Kaniad Ystafell. Thus the last bar of Y Ddigan y Droell, at 57.1.9-17 would be:

```
bar-division: 1  1b 1c 1d 2  2b 2c 2d 3  3b 3c 3d 4  4b 4c 4d...

upper part:   C        B  G        G  F     F  G  F     F  G ...

lower part:   C           C           C           C          ...
              G           G           FF          FF
              CC          CC


bar-division:.5  5b 5c 5d 6  6b 6c 6d

upper part:...F     F  G  F

lower part:...C           C
              FF          FF
```

It appears, then, that a 6-beat bar structure with 24 note

positions existed as a category distinct from the short and standard applications of the *cyweirdant*/*tyniad* system, and that the *cyweirdant*/*tyniad* system very occasionally made use of its bar structure.

In addition to Kaniad Ystafell, Kaniad Pibau Morfydd contains a bridge (90.6.13-91.1.7 f) which cannot be accommodated by standard measure. Here two *cyweirdannau* each contain six rather than four columns of lower-part notes. The first phrase of the pair needs to be set:

```
bar-division: c  d  1  1b 1c 1d 2  2b 2c 2d 3  3b 3c 3d 4  4b ...
upper part:   C  C  D        D  C        C  D        D  C     ...
lower part:         C           D           E           D     ...

bar-division:.4c 4d 5  5b 5c 5d 6  6b
upper part:...   C  D        D  C
lower part:...      E           C
```

Unlike the short bridge in Kaniad Ystafell, this is a full bridge passage, using a common ostinato technique, which is quite distinct melodically from the *ceinciau* and the *diwedd* that it connects. There is no need from the compositional point of view for its phrases to be six main beats long rather than the four that this technique uses everywhere else, so it must have been a deliberate decision on the part of the composer to add variety by suspending the onset of the *diwedd*. There is no evidence to indicate that it is the product of corrupt transmission.

In Kaniad Ystafell and Kaniad Pibau Morfydd, then, we have rare contradictions of the principle of equal-length bars. And

variable-length bars, or variable numbers of bars per section, are the very essence of Kaniad Kydwgan. But these irregularities are sufficiently rare for us to be able to remain confident that the principle of equal-length bars was the rule, and that this rule evidently prompted rhythmic exceptions as did the measures prompt harmonic exceptions.

But the existence of these exceptions does create the difficulty that we cannot be entirely confident that short and standard measure were regularly used everywhere else. Fortunately most pieces are extremely homogeneous within themselves, and most pieces are tied together, either directly or indirectly, to most other pieces by melodic formulas. Thus it is possible to ultimately relate almost every identified digit in the text with the 'saturated' digits which reveal their own length (discussed before), and once one becomes familiar with the very standard syntax used to build up bars one becomes very confident that each piece does use bars which are equal-length.

However, the *clymau cytgerdd* do not share any formulas with the rest of the text (although they are extremely formulaic and extremely closely related to one another). They include a great variety in the number of notes per digit - is this variable saturation or indication of variable bar length? Most digits can easily be accommodated by short measure, but some require standard measure, so perhaps there is a switch from one to the other within a *cainc* (as it was suggested Kaniad Tro Tant may involve). If so, then the text would be indicating a close relative to the modern interpolated cadenza, since every instance

of a heavily-loaded digit is the penultimate digit of its *cainc*.

That these segments could be forerunners of the interpolated cadenza does seem strange, so probably it is safer to conclude that these pieces are all on standard metre and that most bars are very sparse. The pieces are already far too stark in melodic content to be interpretable as solo performance pieces anyway, and it may have been that they were no more than instruction pieces for the student performer/composer or illustrations for the reader of the tablature. Certainly these bars usefully illustrate how melodic content can in practice be superimposed onto the basic harmonic framework of the measures; that a digit has substantial horizontal, linear length in addition to the essentially perpendicular, vertical dimension of harmony.

As discussed in Part 7: REPERTORY, my own opinion is that *clymau cytgerdd* did exist as performed pieces; that they were improvisations on simple and regular harmonic grounds (very possibly including for the accompaniment of verse delivery); that the MS. provides a set of particular chordal examples, and the densely-packed digits provide examples of improvisation.[14] If this is correct, then in performance all the digits would be densely packed.

In summary, this study of the saturation of digits in the text has revealed three discrete applications of measure:- short, with two main beats per digit; standard, with four main beats; and long, with six main beats. It was not normal to mix these within a piece, so generally a piece has equal-length bars throughout,

and this makes the scanning of its measures a simple counting operation. Nevertheless, the three applications only differ from one another in length: the number of possible notes per main beat - four - is the same in each application. This basic homogeneity does make it possible to use more than one application in a piece without disturbing its continuity dramatically.

From the point of view of reconstruction, this homogeneity seems providential since it is a fairly simple matter to restore the bar lengths and the note positions where the measures and their digits are identified. But rather than being providential, the homogeneity will be the reason why the tablature does not include note values.

Notes

1 Peter Greenhill: 'Melodic Formulas in the Robert ap Huw Manuscript', *Welsh Music History/Hanes Cerddoriaeth Cymru*, 3 (Cardiff, awaiting publ. 1999).

2 See Part 4, pp. 81-9.

3 See Part 5, pp. 84-91.

4 See Part 4, pp. 18-9, 40.

5 See Part 5, pp. 88-91.

6 Dolmetsch: 'Recent Discoveries', p. 13.

7 See Part 5, pp. 84-91.

8 See Greenhill.

9 See Part 5, pp. 53, 69.

[10] A stronger effect is produced in another way in this piece (alone) at 21.6.3 f in two-note chords F E in the upper part:- a bold yet unambiguous diminished second. Were it not for the *gwrthwynebiad* figures which are uncommonly widespread in this piece we would be tempted to question if here the E was not a misreading of D. In fact this piece is light and not without humour.

[11] The exceptional digits of such pieces are marked by parentheses in the appendix to Part 5.

[12] See Part 5: pp. 67-8.

[13] See Part 5, pp. 76-8.

[14] This last point is indicated by the nature of the relationship between the different densely-packed digits, which is not compositionally structured but improvisatory in character.

V. NOTE POSITION

In the preceding chapter were identified those digits which are so saturated with notes that the positions of the notes are determined. Given that the ways in which notes were produced constrains their positioning, and that there was heavy reliance on standard patterns in the juxtapositioning of notes and sequences of notes, there is no methodological obstacle to extrapolating out from the saturated digits to all the other digits in the text which have been identified. This has been a huge operation, however, and there should be no need to detail it here. I will here give a brief overview of the products, and illustrate note positioning in some of the main melodic formulas. If the reader should choose to verify any particular positioning, he would need to relate it to one of the saturated bars through a chain of rhythmic formulas (not just those shown by the related segments detailed in Greenhill but short 'transposable' ones as well) taking into account the constraints of bar length and note production throughout both the particular chain and all digits that relate closely to each of its links, for the extrapolation has been a truly synthetic operation.

The action of the lower hand is essentially confined to main beats, which will reflect the accompanying and percussive character of the chords of the lower part. For the lower hand is occupied by chordality rather than the production of rapid successive notes and their damping, and it contributes little to rhythmic complexity. Exceptional are the movements of the lower

hand,[1] and it is unlikely that these would involve adjacent note positions apart from *krychu y fawd*, which must use medial beat d or b.

In the upper part, main beats are occupied by single notes, chords, the second note of *plethiadau*, and forward strikes of *crychiadau*, in fairly equal proportions. It is unusual for main beats to be unoccupied, but more common for main beat 4 than 2. 1 is always occupied. Chords are more often on 1, single notes on 2 and 4.

Medial beat b is commonly occupied, by the third note of *plethiadau* or the backstrike (only) of *crychiadau*.

Medial beat c is commonly occupied by a single note, a high note of a *plethiad y pedwarbys*, or the backstrike of a *plethiad y wahynen* or *ysgwyd y bys*.

Medial beat d is not occupied unless by the first note of a *plethiad* or, very rarely, by a single note. There is no indication that a backstrike of a *crychiad* would occupy this position.

These distributions occur in prevalent combinations; for example single notes on a and c with b and d empty, or a two-note *plethiad* repeated a main beat apart with a *plethiad y wahynen* on the intervening c. Thus a wide range of standard rhythmic motifs was used, each motif being capable of being fingered in different ways and on different sets of strings yet remaining still a single, recognizable motif.

In some cases the constraints of note production and saturation do not bind the notes of a segment to particular positions. The main case is where simple single notes are written

at the low density of four per standard digit, as in the first four digits of section VIII of Yr Osteg Fawr. The best solution may be to take account of the phrasing that can be inferred from the points where there are changes from *cyweirdant* to *tyniad* and *vice versa*.[2] In this example the final notes of the two phrases I I and O O, (A at 21.3.18 and G at 21.4.8) would presumably be held, on main beats, whilst other passing notes would not be held but placed on medial beats c. Thus the second *cyweirdant* (21.3.22-4) would be set:

```
bar-division: 1  1b 1c 1d 2  2b 2c 2d 3  3b 3c 3d 4  4b 4c 4d

upper part:   C                 D     C           A
lower part:   A                       A
              C                       C
              A                       A
              FF                      FF
```

To put the D on 2 not 2c would be to create a wooden rhythm for which there is no need.

Other interpretations of phrasing in this sort of passage are possible. At 81.2.10-3.17 I suspect the phrases are one not two digits long and that the last note of every digit should be held on a main beat.

Some illustrations of common closes give insight into phrasing.

Close I A3 (66.1.10-13 f):

```
bar-division: c  d  1  1b 1c 1d 2  2b 2c 2d 3  3b 3c 3d 4  4b

upper part:   B  B  C        C  B        B  C

lower part:         A           F           G
                    A           D           G
```

Close II A (54.6.22-25 f):

```
bar-division: c  d  1  1b 1c 1d 2  2b 2c 2d 3  3b 3c 3d 4  4b

upper part:      E  D  D  D  C  B        D  C

lower part:         A           G  ...D     G
                    G           C           G
                    C
```

Close V C (42.1.9-11 f):

```
bar-division: 2c 2d 3  3b 3c 3d 4  4b

upper part:      G  F     F  G  F

lower part:         C           C
                    A           A
                    FF          FF
```

Close V E (69.3.18-20):

```
bar-division: 2c 2d 3  3b 3c 3d 4  4b

upper part:      C  B     B  C  B

lower part:         F  F        F
                    B           B
```

Note that in all these settings and transcriptions I have observed the methodological requirement whereby the number of notes should be kept to the minimum necessary, as discussed in Part 4, pp. 33-5. Thus the number of *crychiad* notes used in each set of circumstances is: *plethiad y bys bach* + *krychu y fawd*, two; any of *krychu y fawd*, *ysgwyd y bys*, *plethiad y wahynen*, the 'Z' movement and

kefn ewin with no adjacent strike of the same string, two; otherwise one; *ysgwyd y bys* followed by *plethiad dwbl*, none. The details of these movements are examined in Part 4.

The adoption of this practice does not imply that there were not more *crychiad* strikes in these contexts. Often there is room for more, but this does not mean the space was filled. Unfortunately there are no conclusive arguments to be drawn here. Against the inclusion of extra notes is the fact that their inclusion unbalances the equality in note density between digits that contain *crychiadau* and neighbouring digits that do not. The same is true of the balance between passages and sections.

There again, this music as a whole is low in its note density in comparison to most of our modern experience of music, and the inclusion of extra *crychiad* notes helps to mitigate what could be thought of as a difficulty. However, what is clear is that medieval taste was different from ours (the product of a hurried world). As Whittaker - one of the most authoritative contributors - reminds us:

> From the listener's point of view, the music must be approached with caution: at first its static and repetitive nature may become tedious over the considerable time-span covered by many of the pieces. Full appreciation depends on an attitude of contemplation, for the musical process is one of discovery in the old sense of the gradual revelation of a complex and timeless pattern of inter-relationships.[4]

We should really be able to predict from the 'static and

repetitive' features that the general note density would tend to be low. It would be a shame if, in reconstruction, the profundity of the music was obscured by the inclusion of extra notes in an effort to make the music sound more familiar and mundanely virtuosic than perhaps it should sound.

However, an argument for inclusion can be made from a specific part of the text: section VIII of Y Kaniad Krych ar y Bragod Gower. The first seven digits of this section (80.5.5 f), and many following, contain nothing in the upper part but chords with the symbol for *krychu y fawd* written above (albeit written rather vestigially). This is a unique concentration of the figure in the text, and without doubt this section will have given rise to this particular title containing the word '*krych*'.[5] Since it is a long piece with twelve sections in all, the *crychiadau* in section VIII must have created something of an impression to give rise to the title, and although impressive as a string of two-note *crychiadau*, continuous *crychiadau* would be more impressive. Unusually there is here the opportunity for continuous *crychiadau* since all the chords include drone A as the uppermost note irrespective of whether the digits be *cyweirdannau* or *tyniadau*, so the thumb could strike the drone continuously without any interruption to change string. Thus each digit could be fully saturated and contain sixteen strikes of the thumb (the piece is in standard measure). 342 soundings of this note would result before the tension (the harmony here is also very tense) would be relieved by a *krychu y fawd* on the string above (81.1.5).

The setting of note positions is not restricted to the parts

of the text for which the metre is known, since it is possible to extrapolate out from these using rhythmic motifs which they have in common with parts of the text where the metre is obscure or non-existent. For example the piece which is most resistant to metrical reduction is Kaniad Kydwgan with its expanded bar lengths. The piece is largely built on the rhythmic motif of *y plethiad byr* followed by a series of single notes which falls into repeating transposed patterns of four notes to each written chord in the lower part (42.1.18-2.3 f). A very similar rhythmic motif occurs in Kaingk Dafydd Broffwyd (at 57.4.3-14) where the metre - although unrecorded - is clear (1 1 1 O 1 1 1 O 1 O O 1) enabling the note positions to be located in the bar: all the notes apart from the damped one must be played evenly using main beats and the medial c position. Whatever the bar lengths in Kaniad Kydwgan, the motif will be played evenly in this fashion.

There are, consequently, very few areas of text that cannot have their note positions unravelled. They are mainly within the *profiadau*, such as the beginning of Profiad yr Eos Brido (57.5.1-58.1.17) and that of Profiad Kyffredin (56.3.1-4.12). Here there are several possibilities at every point, and any selection would be very speculative.

Notes

[1] See Part 4, pp. 124-7.

[2] As discussed in Part 5, pp. 92 ff.

[3] As categorized by Greenhill: 'Melodic Formulas', appendix.

[4] Paul Whittaker: 'A New Look at the 'Penllyn' Manuscript', *Welsh Music*, 4, No. 6 (Denbigh, 1974) p. 56.

[5] It seems there were many such titles - see Part 4, p. 18.

VI. NOTE VALUE

The remaining obstacle to reconstruction of the music is the need to identify or ascribe note values. It is usually the case in the attempt to recover early music that the expressive and dynamic details of rhythm in performance remain unsettled and (rightly or wrongly) very much the domain of the individual performer on the night, and it may be that no greater precision is achievable with *cerdd dant*. But it would be unsatisfactory if for this music, known to be measured, the basic note values could not be recovered.

For even if specific evidence were lacking, so realizable are the other aspects of *cerdd dant* - the tonalities, the metres, the phrasing, methods of note production, compositional techniques, harmonic theory, even much concerning function and performance-context - that it should be possible to work backwards from everything that is already established to discern the intention of the composer here and there in the text and to judge which note values would best express this intention. Such an approach might be aptly described as intuitive, and we may not have the vocabulary to exactly describe the intention, but there is nothing inherent in such an approach that should dictate it be subjective or that should prohibit a consensus emerging eventually. Nevertheless, every possible specific indicator, no matter how tiny it may be, should be examined very carefully.

At the outset I will outline the range of possible contenders. It is clear from the chains of *plethiad y pedwarbys*

figures where they saturate bars that the note positions fall into pairs (and groups of four, eight and sixteen), not into triplets and multiples of three. The relationship between the two notes of each pair of note positions must have lain somewhere between even duration and a strong long-short relationship (as between dotted quaver and semi-quaver). A double-dotted rhythm can be ruled out because a double-dotted note would not require the covering-finger damping that the first note of a pair was normally treated with. Given that the tradition had a fondness for theory in general and measurement in particular, it is very likely that the relationship would be conceived of as a mathematically simple one, whether or not the concept was overlain by *rubato* in practice. There are, then, three possibilities:- even timing, 2:1 as between crotchet and quaver, and 3:1 - dotted rhythm.

Before looking into specific arguments, it will be helpful to take an overview of the broad context. This may be a speculative generalization, but I hazard that the impact of the writing of music on performance and composition over the centuries includes an increase in the proportion of music in even rhythm, and if so then we would do well to initially make an adjustment in our expectations of the rhythms of this music. Even if this is not appropriate, it remains a fact that our experience of the actual performance of truly traditional, non-literate music in general includes a high proportion of long-short rhythms. Such music has often been transcribed using equal note values, and whether or not the transcriber has intended that they

represent *notes inégales*, often they have been taken literally with the result that the formality of even timing has been imposed where it does not belong.

Through the history of notation nothing can be as misleading as the mensural aspect of notation, so we would do well to pay little attention initially to the recorded music which may have been contemporary with *cerdd dant* and instead briefly consider those current aural traditions which may have preserved something of the taste for rhythm in the British Isles from medieval times. There are many possible contenders, but probably the strongest are the older forms of music in the Gaelic West of Scotland, insulated from more recent developments by its remoteness. As is well-known, rhythm in this region is extraordinarily diverse and usually very fluid, but from labour songs, from early records of *piobaireachd* and especially from pibroch songs it is possible to extract some sort of general indication that the taste for long-short rhythms (with short-long snaps embedded) is strong and will have been so for a very long time. A generality is that the long-short rhythm is very commonly not heavily marked but inbetween 2:1 and 3:1, with a tendency for a closer proximity to the former so that the clearest interpretation is a preference for accentuated 2:1 rather than softened 3:1. It may well be that 6/8 clan marches evolved from this 2:1 base by filling in the leading crotchet with a quaver in many places, where none might have existed in any older songs which may have provided melodic models, and it seems that in turn these marches provided melodic models for early *piobaireachd* composition.

The relevance of these tendencies in note pairings may be limited since they are drawn from fields where the note values tend to be long and few to the bar, and the tempo slow. As we are looking here with *cerdd dant* at rapidly-played note pairings, with up to 24 note positions to the bar, a different taste in their timing may have prevailed. The great difficulty here of course is that musical notation has always tended to use equal note values to indicate strings of short notes such as semiquavers, rather than caring to accurately discern and convey the reality of timing in performance. When we read the notation of a semiquaver passage in early music we cannot tell if each pair of notes was accented by holding the first note and clipping the second. Yet early hornpipes may be the closest relatives to *cerdd dant* that exist amongst conventionally-notated music, and the semiquaver level must be about the right one to equate with the *cerdd dant* note positions, since there were 16 of these to the standard digit.

Fortunately, even from Ancient Greek times[1] writers have very sensibly used vocables rather than musical notation to communicate rhythms. Of relevance here are two passages that employ vocables (related to but different from Lowland Scottish 'diddling') in this way in connection with early Northern English hornpipes. The syllables used are subtly but significantly different from 'diddle' in their timing, and reveal that here the second note in each pair of semiquavers is half the length of the first.

One passage is explicitly a description of the Lancashire

hornpipe and illustrates how a call of the steps could be sung in the rhythm of the form:

> There is a Lancashire Horne-pipe in my throat.
> hark! how it tickles, with doodle, doodle, doodle.
> Hands, hands; hold hands, and dance a-round,
> a-round, a-round.[2]

This is identifiable as a single 3/2 hornpipe bar employing semiquavers, or three bars of a 4/4 hornpipe using quavers. Whichever was intended, the call illustrates the exact timing relationship between the two notes of pairs of short notes. Thus for our convenience, the precise timing here can be illustrated spatially with a header marked out with semiquaver note positions (for the 3/2 interpretation), but as we know from the 'doodle' vocables and the 'a-round a-round' syllables that in practice each pair is long-short in the ratio 2:1 then we need to use only half the width in the header for the second note of each pair. The setting of the rhythms will be:

```
|                 |                   = main beats
|        |        |        |          = pairs of semiquavers
|     |  |     |  |     |  |     |     = semiquavers

doo - dledoo - dledoo - dle
hands    hands    hold     hands and
dance a -round a -round a –round
```

The 'doodle' vocable was evidently sufficiently widespread to connect with or give rise to some of the Central European names of the bagpipe: *dudelsack*, *duda*, *dudy*, and to give rise to the

English verb 'to doodle': to play (the bagpipe).[3]

The other passage is:

> Now play us a horn pype, Jockey can say;
> Then todle lowdle the pyper dyd playe.[4]

There is, however, a use of the vocable 'diddle' in conjunction with a notice of the hornpipe in Lancashire:

> Tired out the bagpipe and fiddle
> With dancing the hornpipe and diddle[5]

but here instead of a musical extract we are provided with what is a generic term for performance with vocables. Although the implication is that 'diddle' was the prevalent vocable, its convenience as a rhyming partner to 'fiddle' may actually be the reason for its selection, and indeed 'diddle' is generally used in connection with fiddle tunes.

Because the significance of these passages is potentially so great for the reconstruction of *cerdd dant* rhythm it is important to stress the proximity of the hornpipe and *cerdd dant* traditions to one another. Not only do they share musical characteristics - measurement, double-tonic metre, the use of four and its multiples in metre, frequency of triads - but almost certainly they coexisted together. The sixteenth-century heartland was Lancashire, and there was a wide dispersal including Cheshire and Shropshire. The earliest mention of the hornpipe as a musical form rather than a dance, probably as an art form in its own

right independent of dance-music, is in 1474 - a Calais harper taught a piece.[6] The tune Dargason/Sidanen/Mwynen Cynwyd, associated with Wales, is a 4-bar double-tonic structure closely related to the hornpipe but in duple time, and therefore stands along with many English and Scottish pieces around midway between *cerdd dant* and the 3/2 hornpipe in structure.[7]

We can well imagine that pipe music in Wales took the 4-bar double-tonic form, perhaps in both duple and triple time, and that there would have been correspondences in rhythm between the pipe-music and *cerdd dant*, especially with the rhythms of Kaniad y Gwyn Bibydd in particular. We should expect the dance music of the pipes to have been more heavily saturated than *cerdd dant*, as indeed the English pipe-music is.

Turning now to the text, we should expect from the broad context to find indicators that the flowing rhythm of long-short in the ratio 2:1 existed between the notes of each pair of note positions. Indeed this timing is very comfortable on the fingers throughout the text - the fingering figures slip so suavely off the fingers that it feels as if the figures must have been designed for this timing.

The even option is actually prohibited by the fingering of the figures. In Kaniad Kynrhig Benkerdd the chaining of successive *plethiad y bys bach* figures is demanding since it include shifts of hand-position in a fully-saturated context. For example the *cyweirdant* at 49.3.14-20 is:

bar-division:	1	1b	1c	1d	2	2b	2c	2d	3	3b	3c	3d	4	4b	4c	4d
upper part:	C	B	C	C	D	C	D	B	C	B	C	C	D	C	D	B
lower part:	F				E				F				F			
	C				C				C				C			
	A				G				A				A			
	FF				CC				FF				FF			

and involves three shifts of hand-position, between 1c and 1d, 2c and 2d, and 4c and 4d. These cannot be played at the maximum speed at which notes within *plethiadau* can be played. It is not feasible that the whole of this bar would be played at a speed slow enough for all the notes to be played with an even timing, limited by these shifts, since the *cainc* is clearly a climax section in terms of divisions. The shifts prohibit even timing.

The same difficulty is found in a few other parts of the text, including a shift in the final close of, significantly, Kaniad y Gwyn Bibydd, between 37.6.11-12, where two consecutive *taked y fawd* movements involve a slightly awkward shift down.

In addition to these juxtapostionings of *plethiadau*, there are indications that even note values were not used within some individual types of *plethiad*. *Tafliad y bys*[8] is indicated by the triangular notation on p. 35 as involving two consecutive strikes by a single finger on the same string. If this were not achieved by employing a backstrike (it is not entirely clear that it was) then it would not be possible to perform these two notes in rapid succession. What is certain about this figure is that the need for the forefinger to pluck two strings, even though the plucks are not consecutive, imposes a limit on the speed at which it can be played. Since the figure is densely-saturated with notes, and

is frequently used in many pieces, then the tempo of all these pieces would have to be much slower if even timing was used than would be necessary otherwise. If the second note of the figure - the one on the beat - is played long, and the third short the limitation on tempo is removed.

A similar limitation on tempo would be imposed if the 'thumb' variants of *plethiad y bys bach* were played with even note values.[9] These types of *plethiad* entail the thumb plucking twice in one compressed movement; its notes are usually either on a single string or on adjacent strings but can be two strings apart. Again the difficulty is eliminated by long-short timing. The 4-string variants of *plethiad y bys bach* also entail two thumb plucks, but here the second column usually includes a note in the lower part and therefore does not follow on immediately after the first column, so the figure as a whole is not highly saturated. For example 77.3.10-13:

bar-division:	c	d	1	1b	1c	1d	2	2b	2c	2d	3	3b	3c	3d	4	4b
upper part:	C	C	D	F		C	G			C	D					
Lower part:			F				G				F					
			D								D					
			B								B					

Long-short timing in a ratio 3:1 is not precluded by any specific indications in the text. However, its adoption would necessitate a slower tempo than that resulting from 2:1 throughout. The result would be strangely sparse for those extensive areas of the text with low saturation. It would take us into realms of spaciousness unexplored even by the modern style

of *piobaireachd* playing; it would really be quite unprecedented. It would produce martial music throughout, which surely cannot be appropriate. Also the benefits of the covering-finger damping of the long notes would be reduced.

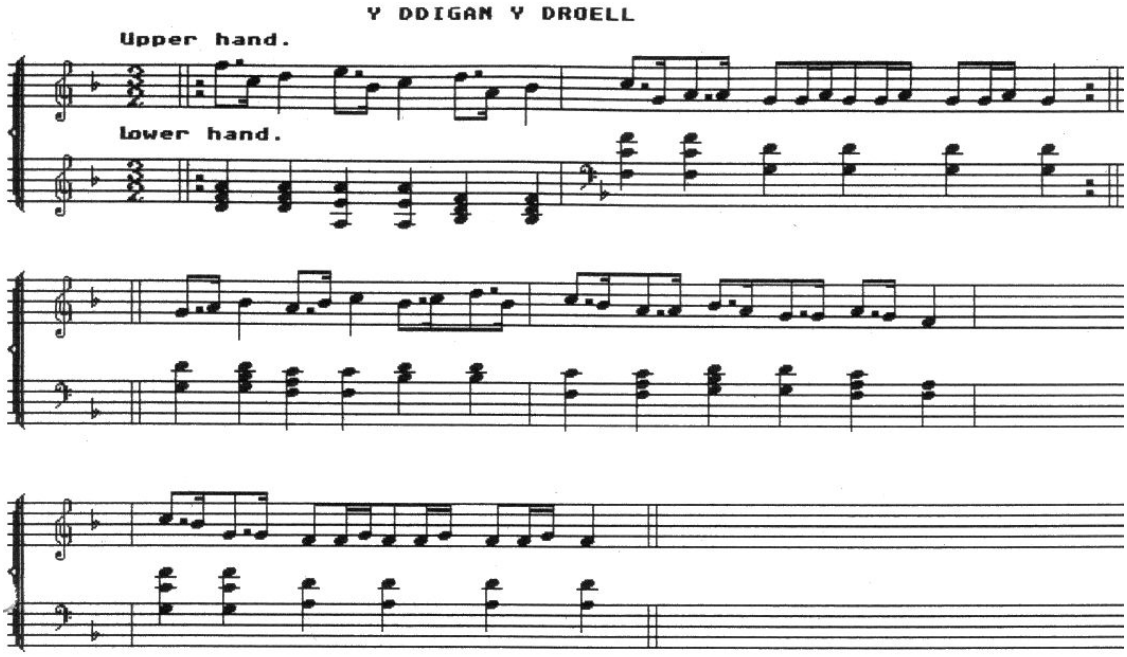
Unless and until some specific contra-indications can be gleaned from some source, the above points have to be taken as conclusive that 2:1 long-short pairs of note positions universally prevailed. This does not preclude the use of overlying *rubato*.

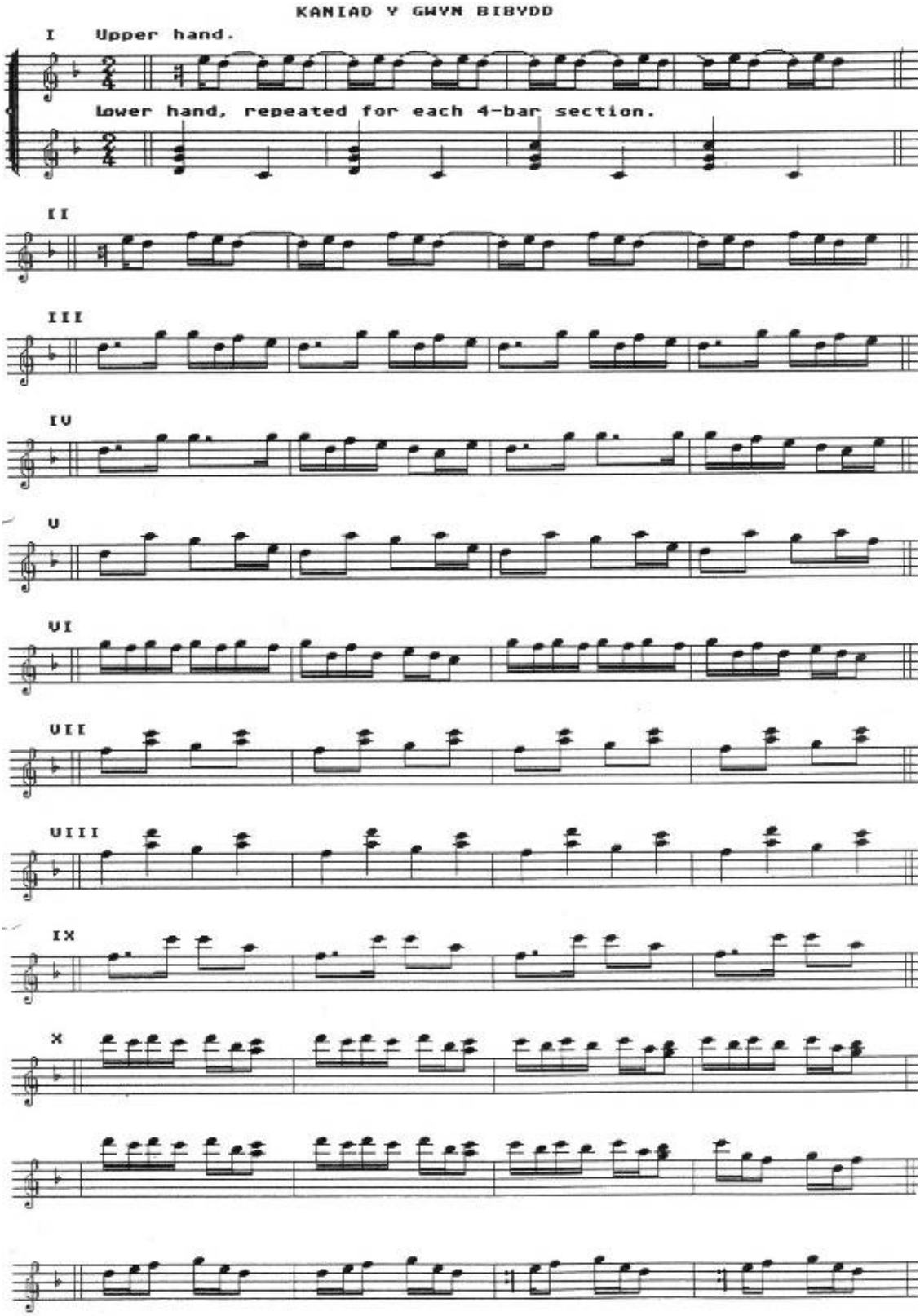
With the adoption of the 2:1 long-short ratio in the interpretation of the MS. text it then becomes possible to compare *cerdd dant* with pipe-music. Two-and-a-half pieces emerge as quite dance-like in character, and fortunately each is in a different application of measure. Kaniad y Gwyn Bibydd, a short piece, is on short measure and as such may be compared with dance pieces in 2/4 time. From its title it is not surprising that the piece is dance-like in character. Y Ddigan y Droell, also a short piece, is on long measure and may be compared with the 3/2 hornpipes. From its title we know that Kaniad Marwnad Ifan y Go is elegiac, yet only the first half of the text is in lament style; the remainder (sections VI-XVII) is dance-like and quite substantial in length: 128 bars of standard measure, common time.

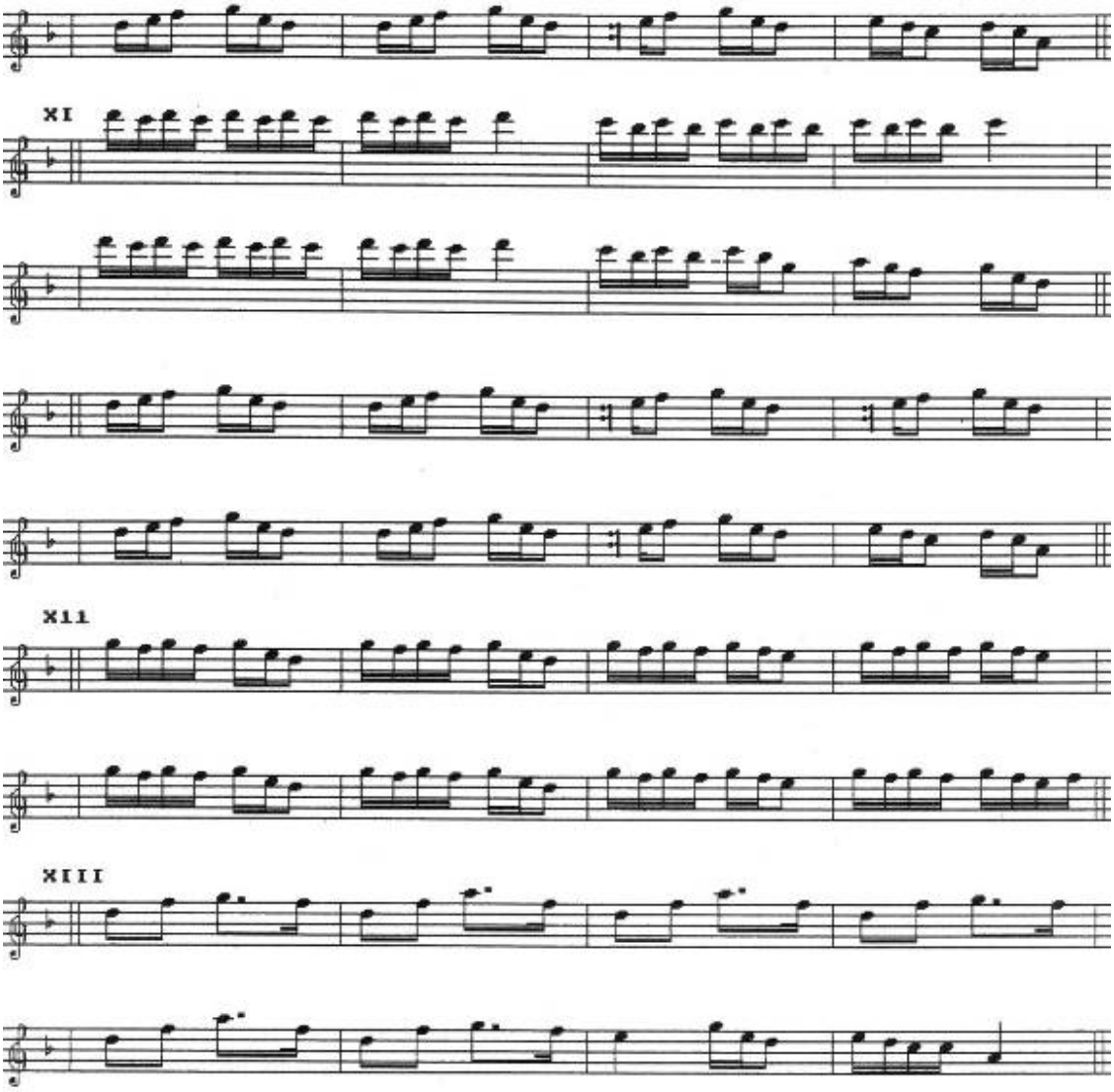
Taken together, these pieces provide ample opportunity for comparison with extant notated dance pieces, thereby serving as a test of the solutions to interpretation derived here in respect of rhythm, and of metre, tonality and note order as well. And if Y Ddigan y Droell in particular has a close relationship to the

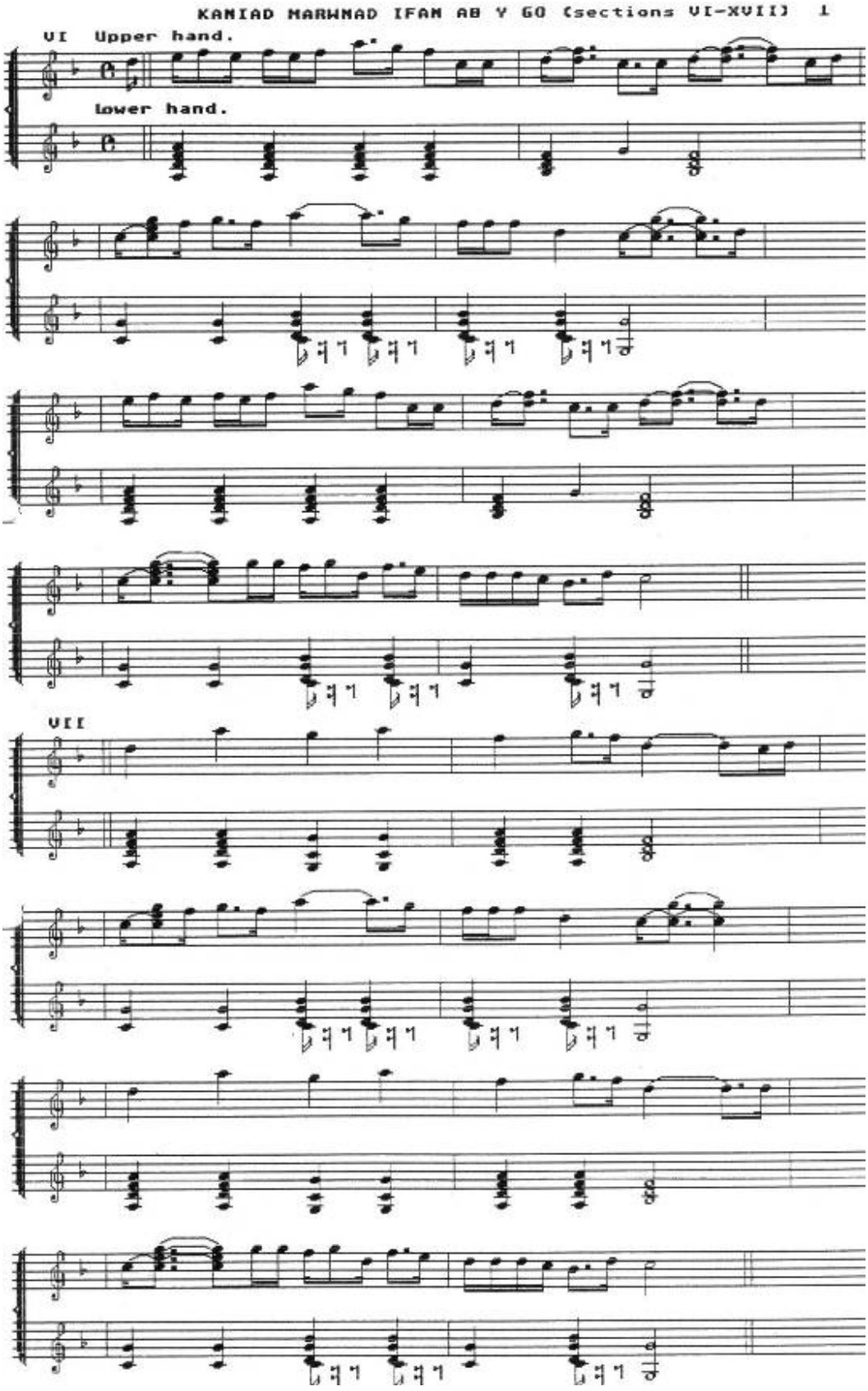
hornpipes then the 2:1 long-short pairing of note positions has to be adopted as the universal note-value scheme of the text. For if it is not possible to link the interpreted text with the records of the dance music that was such a close neighbour to *cerdd dant*, then either we must accept that *cerdd dant* was unrelated to the folk stratum - a strange proposition - or that its interpretation is fundamentally flawed.

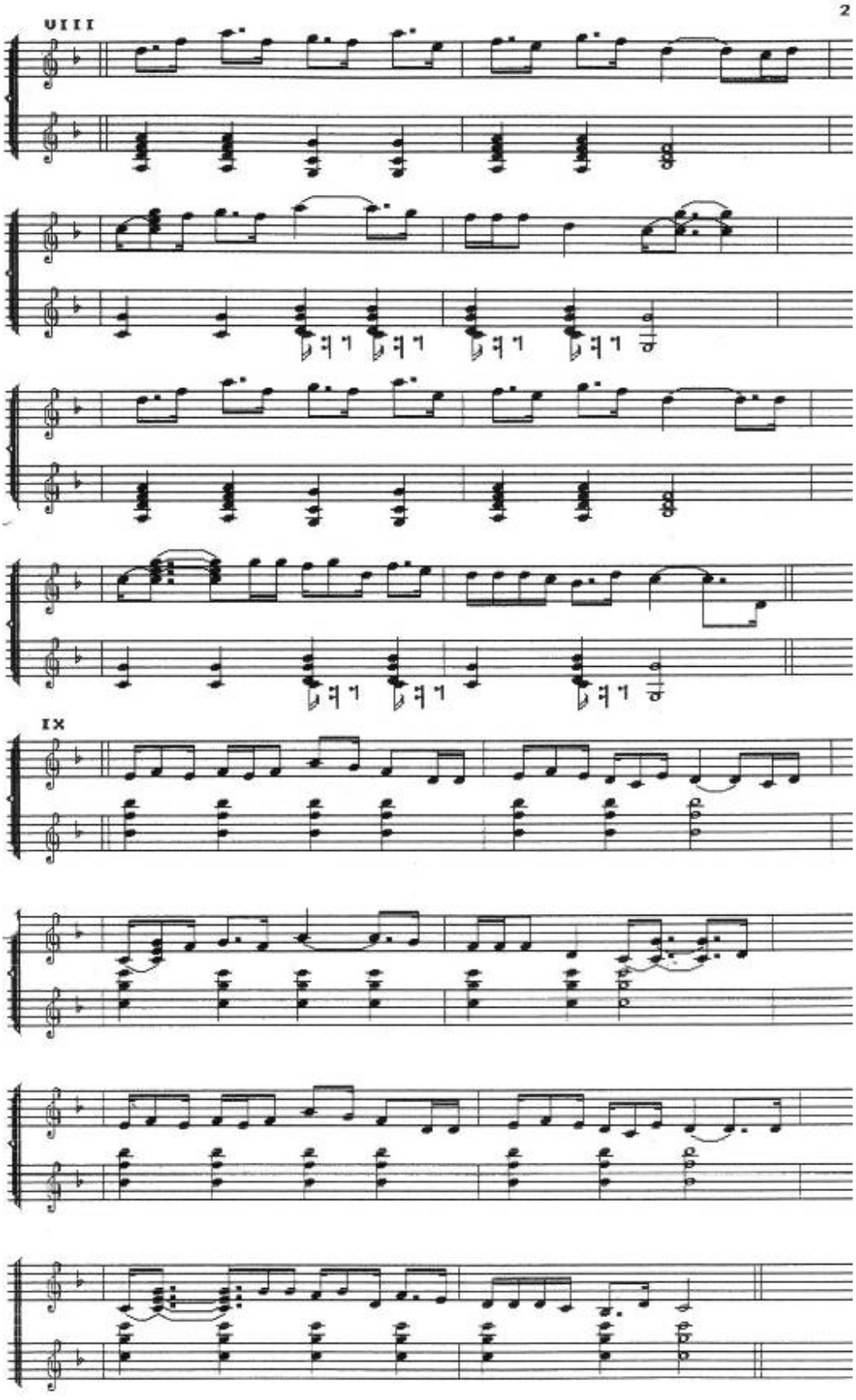
These are such important steps that it is necessary at this point to realize the interpretation in scores of these two-and-a-half pieces. The following are transcriptions of the interpreted pieces as they would appear in modern conventional notation so that they can be compared to notated dance tunes. It should be understood that before the early eighteenth century (broadly-speaking) it had been common in notation in the British Isles to use double these note values.

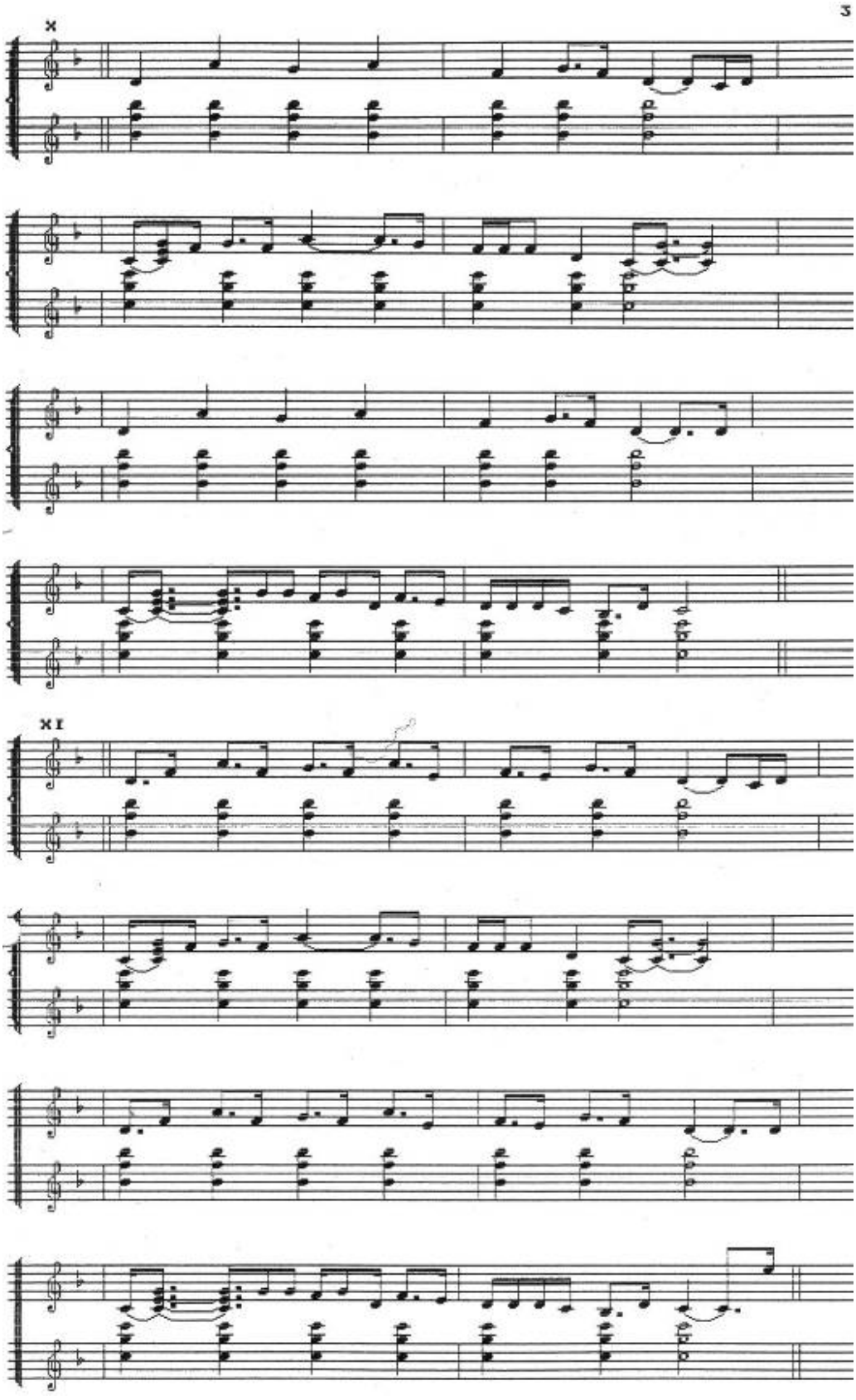

Y DDIGAN Y DROELL
Upper hand.
Lower hand.

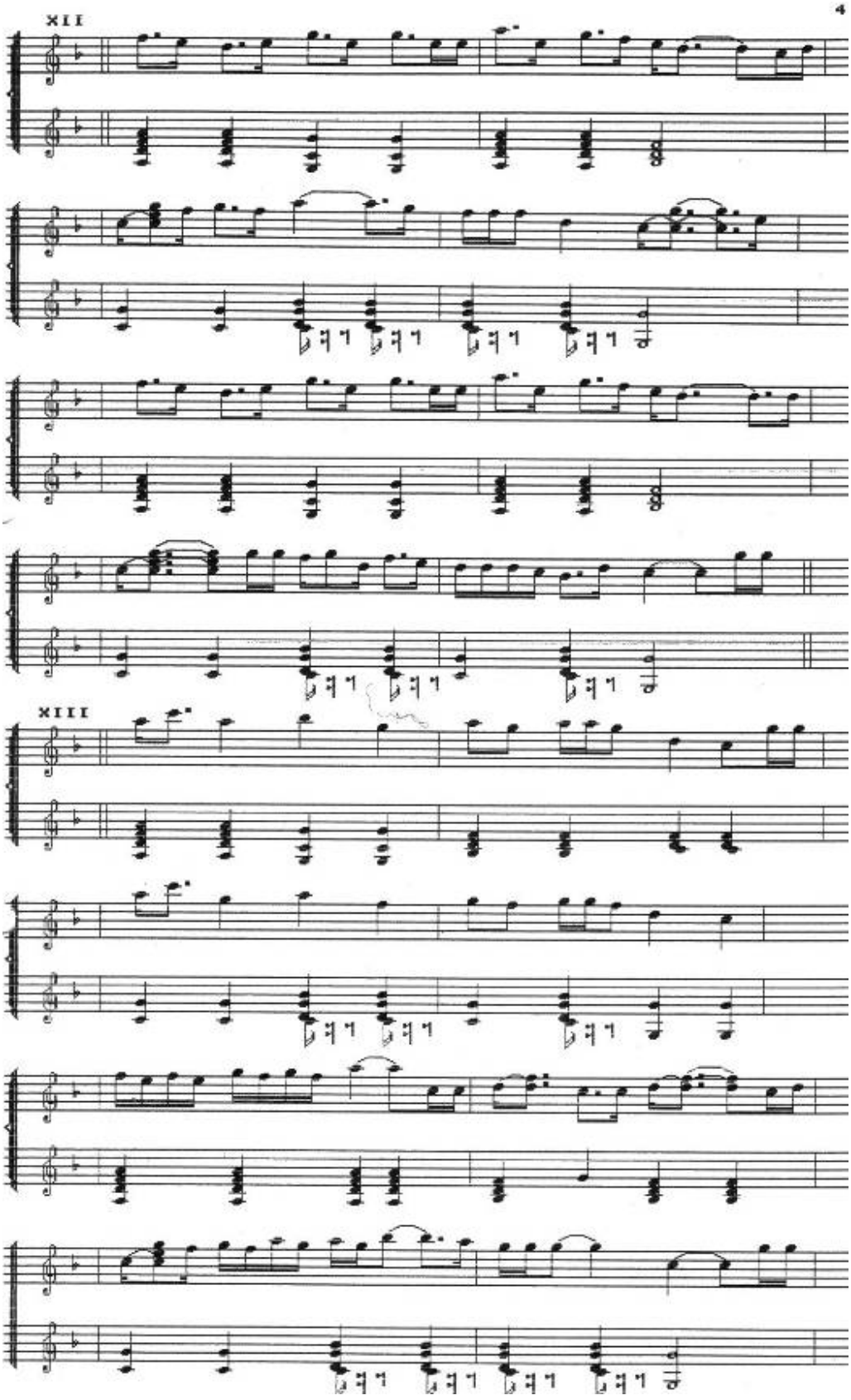

KANIAD Y GWYN BIBYDD
I Upper hand.
Lower hand, repeated for each 4-bar section.
II
III
IV
V
VI
VII
VIII
IX
X

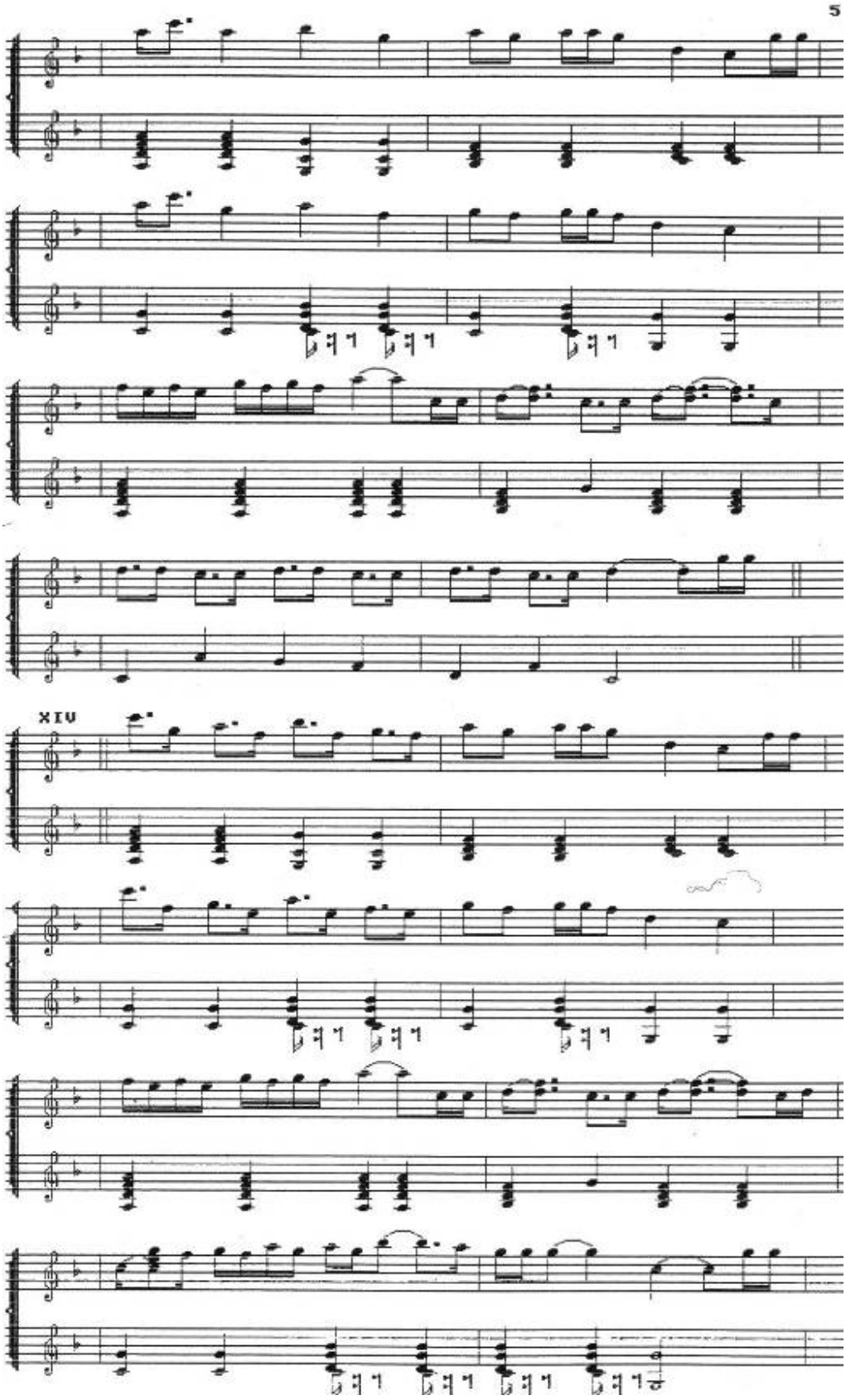

XI
XII
XIII

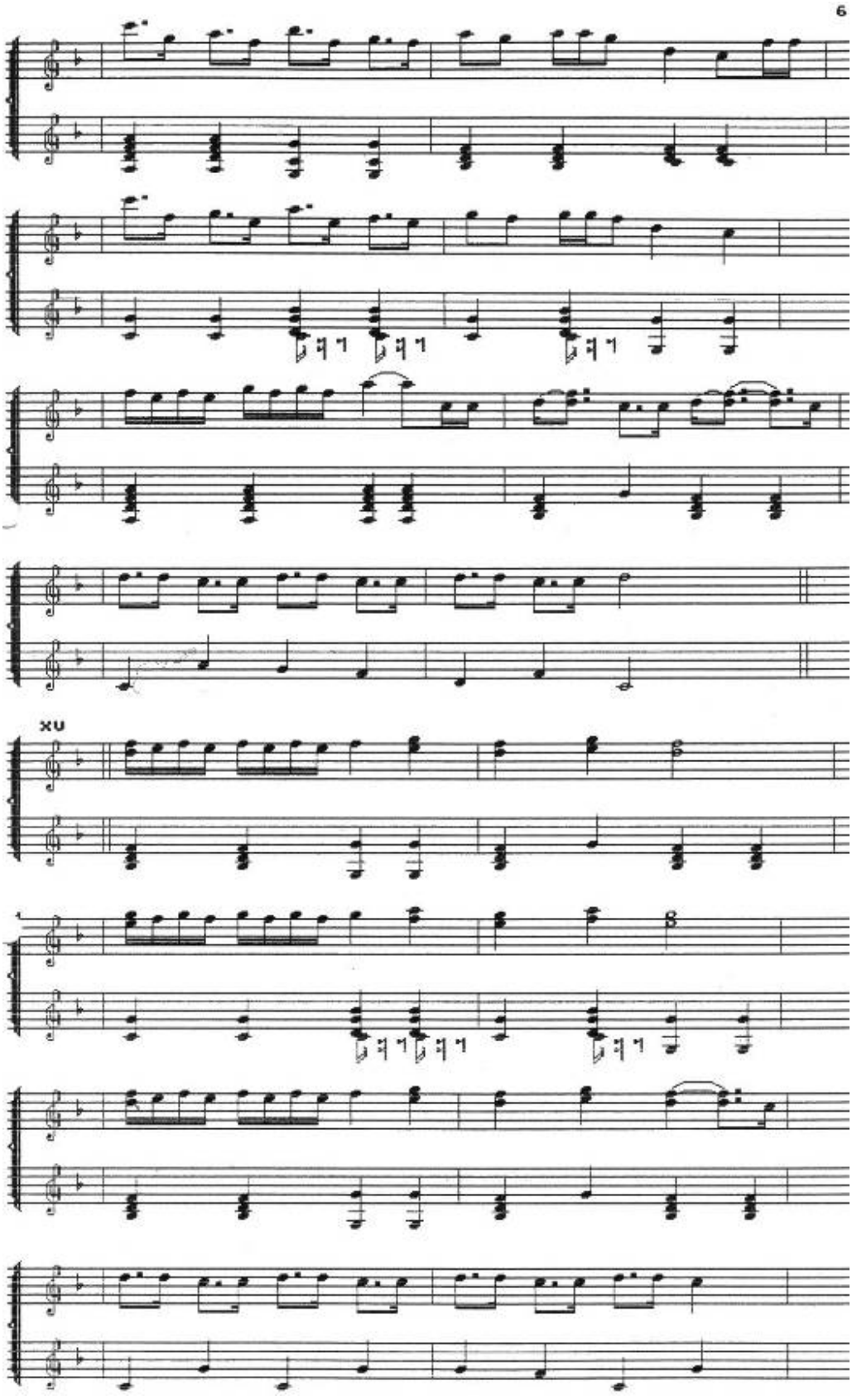

KANIAD MARWNAD IFAN AB Y GO (sections VI-XVII) 1
VI Upper hand.
Lower hand.
VII

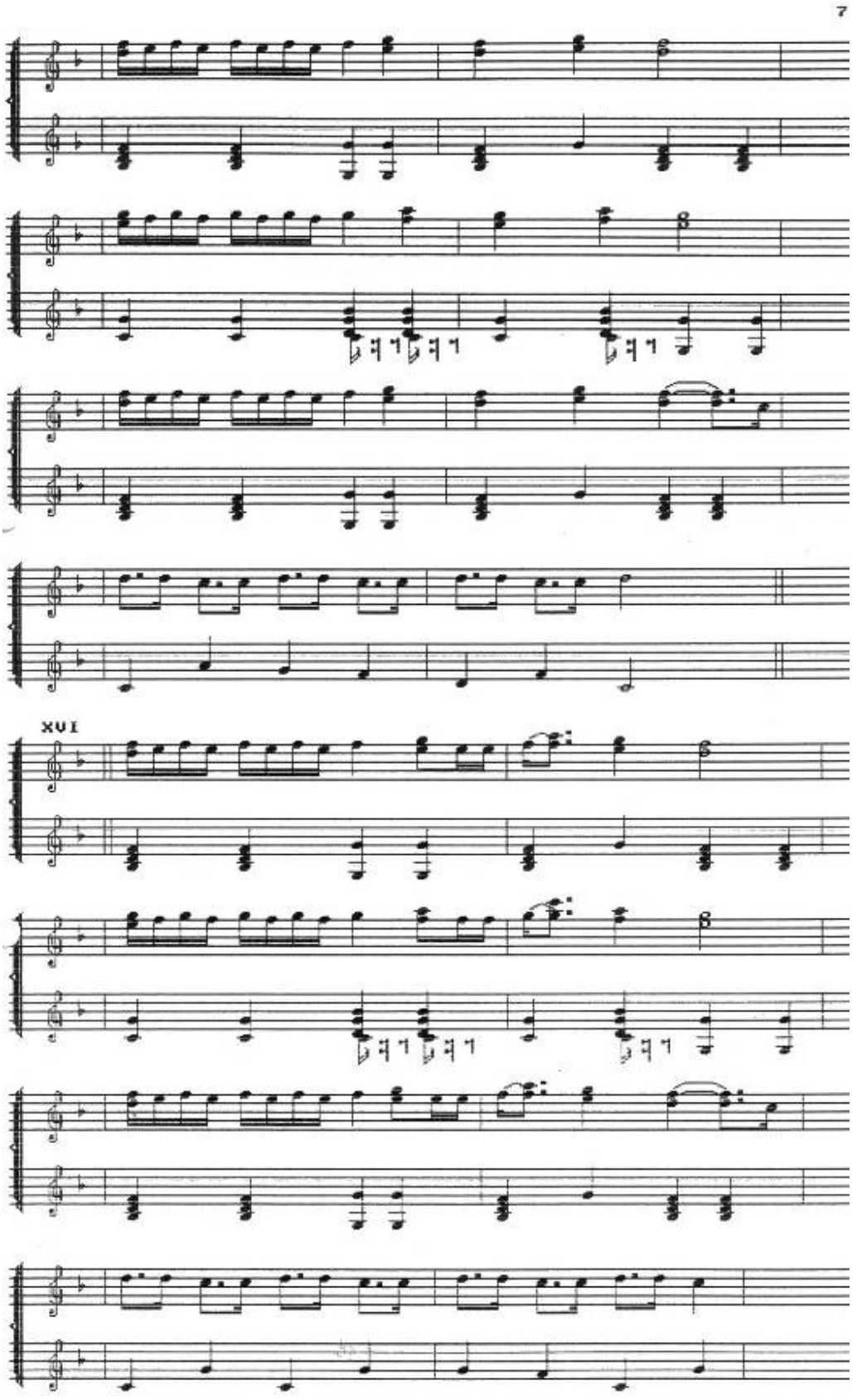

VIII
2
IX

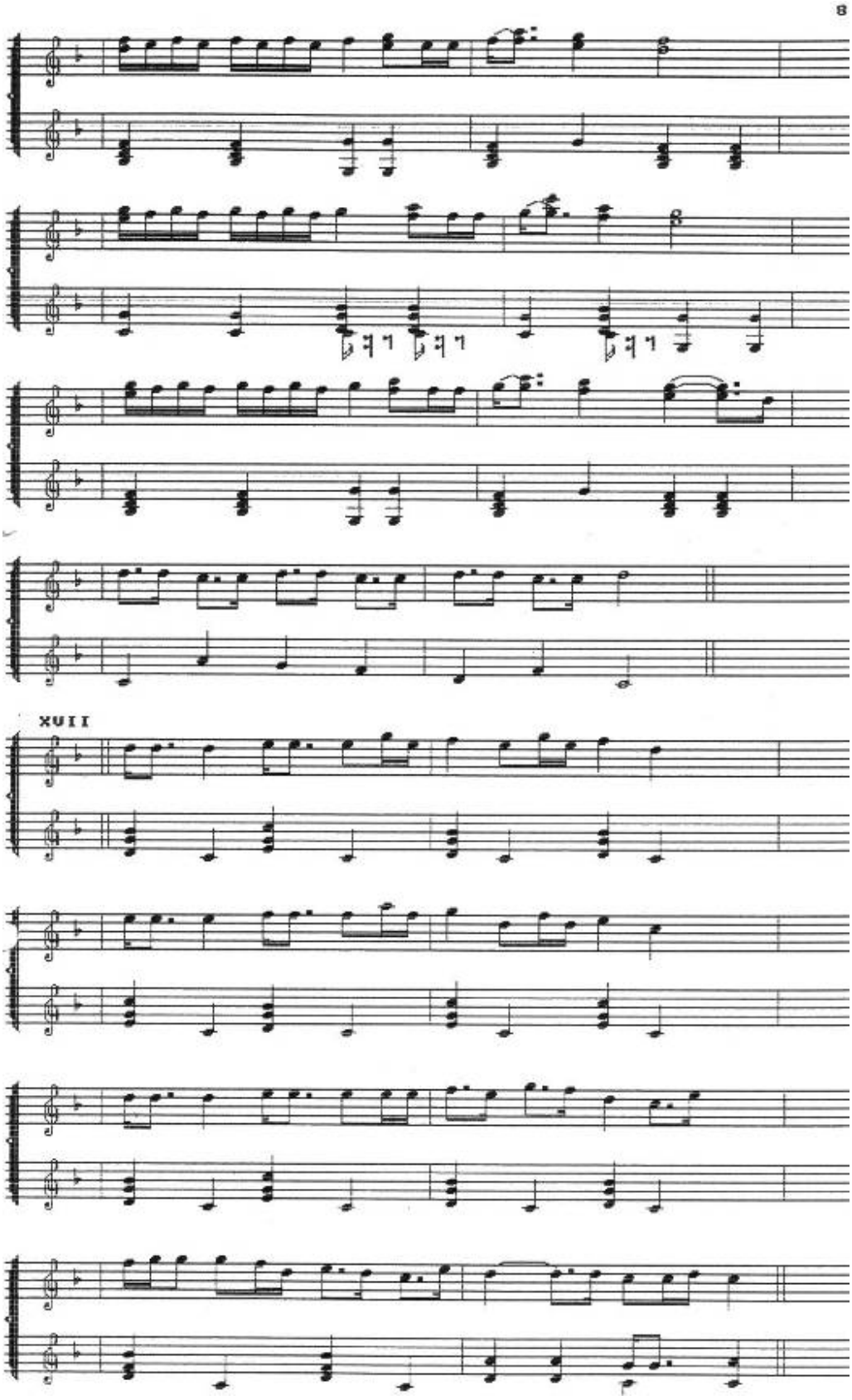

X
3
XI


XII
4
XIII


5
XIV


6
XU


7
XVI


8
XVII

It should be immediately apparent to the reader that this music is very familiar in most respects. Whereas there may be some turns and phrases which are a little obscure, most of this music is coherent, with the composers' intentions transparent. That opacity that pervades all extant interpretations and forces the listener towards concluding that *cerdd dant* was comprised of obscurely exotic and experimental études is absolutely vanquished.

The ramifications of this for interpretation are enormous, and they will be discussed in the following conclusion, but for the present purpose we should note that any substantial change to the accenting, the barring or the rhythms would seriously disturb the closeness of this relationship to early dance music - only small changes in the positioning of a few notes could be made. The significance for note value is that the 2:1 long-short relationship between what are written here as semiquavers needs to be adopted since it is not feasible that *cerdd dant* would be performed in a 3:1 relationship different from that used in music to which it is so closely related in so many ways.

The 2:1 long-short relationship derived here opens up the possibility of the measured spreading by the upper hand of three-note chords (such as that at the beginning of bar 3 in Kaniad Marwnad Ifan ab y Go) in even timing, dropping in the middle note between the upper and the lower. If upper-part chords were spread it would be natural to take the opportunity, and if in performance spreading is to be adopted then it should be done evenly.

Notes

[1] The vocables used for stringed instruments (including strumming the *kithara*, possibly in combination with plucking and damping) are: 'phlatto-thratto-phlatto-thrat', 'threttanelo', 'tenella' and 'blityri' (M. L. West: *Ancient Greek Music* (Oxford 1991), p. 67).

[2] Rowley et al.: *The Witch of Edmonton* (1621), Act IV; quoted in John M. Ward: 'The Lancashire Hornpipe', *Essays in musicology*, ed. L. Lockwood & E. Roesner (1990), p. 140n.

[3] This vocable and 'a-round' are still used in the same long-short timing in square-dance calling in the USA :- '... all a-round the kitchen:- 'cock-a-doodle-doodle doo!'', and in the English song: 'Cock-a-doodle doo, my dame has lost her shoe'. The same long-short relationship is indicated by the use of the word 'tweedler' for a (union) bagpiper in a nineteenth-century Lancashire dialectal dictionary: Ben Briarley: *Abb O't Yates' Dictionary* (information from Roderick Cannon).

[4] Wallys ca. 1550; quoted in Ward, p. 155n.

[5] Blundell of Crosby, 1641; quoted in Ward, p. 140n.

[6] See Ward, p. 159. It is also interesting that the Irish harper Carolan is credited (in the Pigot MSS.) as having played 'Cock up your Beaver', which is related to the hornpipe 'Flat Cap'. Collinson suggests that the fact that this piece and another from Carolan's repertoire are in variation form and Scottish in origin (re Playford 1685, no. 23: 'Johnny, cock up

thy beaver') may be significant as indicators of the lost Scottish counterpart to *cerdd dant* - see Francis Collinson: *The Traditional and National Music of Scotland* (London, 1966), pp. 243-4. The variations, whilst satisfyingly systematic and operating on the divisions principle and the double-tonic (in a pattern the same as *tityr bach*), do not actually lend themselves to the fingerings used in *cerdd dant*. Disappointingly, the same is true of the stereotyped variations to 'Rory Dall's Port' in James Oswald: *The Caledonian Pocket Companion* (c. 1756), vol. VIII, p .24, and of all the other suggested candidates for the 'missing' harp music: the other published ports and early Scottish harp pieces with variations, and the contents of the Angus Fraser MS. at Edinburgh University.

[7] See the catalogue of four-bar grounds in Ward pp. 160-73. Most of these are on tonic-dominant harmony, but some are double-tonic and these are the closest relatives to *cerdd dant* that I am aware of to date.

[8] The fingering of this figure is examined in Part 4, pp. 62-4.

[9] The typology, locations and fingerings of these various relatives of *plethiad y bys bach* are examined in Part 4, pp. 86-9.

VII. TRANSCRIPTION INTO MODERN NOTATION

For the purposes of comparison, the transcriptions in the last chapter are adequate. However, as a means of communicating the music they are dependent on the reader being aware of several conventions: the long-short ratio between the notes of each pair of semiquavers, the even spreading of three-note chords by the upper hand, the absolute pitch of the notes, the method of fingering, uncertainties concerning the number of repeats of some notes and chords. Each of these is discussed in detail in this work, but music texts have a habit of becoming divorced from their commentaries, explanatory notes and general contexts, and having come this far with the interpretation it would be a certain tragedy if the above transcriptions were played literally, ignoring the conventions. There is too much at stake here to risk the loss or distortion of what has been achieved - after all, most of this epic study has been concerned with undoing the damage to the music caused by our ignorance and misconception of the conventions used by the original notation - the tablature.

Some attempt should be made to stop history repeating itself, so I think it is wise to take the trouble to offer performance transcriptions which are as literal as possible, so that there is no need to take account of the notational conventions of dance-like music. Provided first in the Appendix is a sample of the literal transcription of note-value relationships - a transcription of one quite long piece: Y Kaniad

Krych ar y Bragod Gower.

A literal method of transcribing should transpose the pitch throughout down to a pitch which in modern notation would more accurately reflect the reality of the tuning, probably about one-and-a-half tones, and have the fingerings marked, and the phrases. But in this example I concentrate on the literal transcription of note-value relationships only, so that comparison with the tablature is not too disrupted by the complexities of introducing transposition and fingerings.

The 2:1 relationship in value between adjacent semiquavers (that is, semiquavers in the conventions of early notation) is notated as crotchet-quaver. Any literal notation of the 2:1 relationship is extremely cumbersome to write and to read, but crotchet-quaver is slightly less cumbersome than quaver-semiquaver or semiquaver-demisemiquaver, and more open to a mathematically literal interpretation in reading, since shorter note values would tend to raise the issue of conventions again in the mind of the reader, with the danger of compounding the problems of communication. Thus a pair of semiquavers in the conventions of early notation is rendered here as crotchet-quaver, and all note values are rendered longer accordingly to make up half-bars of 12/8. This magnification of note values is of course broadly in keeping with the earlier approach to note values, and is a useful expedient when dealing with the minutiae of verbal delivery because, as proposed in Part 8, *cerdd dafod* was delivered in a faster tempo and in a much more compact way than we are accustomed to with verbal texts. But primarily it is

hoped that this style of transcription provides the least ambiguity possible concerning the long-short timing.

Following the transcription of Y Kaniad Krych ar y Bragod Gower is given a 'performing' edition, a transcription of Kaniad Marwnad Ifan ab y Go. The magnification of note values is reduced but the long-short relationship is retained with pairs of semiquavers rendered as quaver-semiquaver so that the values are more familiar to the modern reader, giving half-bars of 6/8. The pitch is transposed down one-and-a-half tones, and the *plethiad* and *crychiad* fingerings are marked thus:

+ = thumb

1 = forefinger

2 = middle finger

3 = ring finger

4 = little finger

with the plucking digit placed above the stave and backstrikes marked '/', and any damping digit placed below the stave, directly below the note damped.

Note that both pieces are on the standard application of measure, with four beats to the bar. Details of their metres are discussed in Part 5: pp. 52-3, 72, and the transcriptions should be read in conjunction with the copy of the text marked with the locations of the digits in the Appendix to Part 5. Y Kaniad Krych ar y Bragod Gower is metrically regular in terms of length but in terms of harmony it contains substitutions of *cyweirdannau* for *tyniadau* and *vice versa* (at 79.4.13-14, 80.3.14-4.3, 81.1.4, 81.1.7, 81.3.2-4.1, 81.5.2-17). Kaniad Marwnad Ifan ab y Go is

metrically regular in both respects apart from sections I-V, where the metre - and consequently the barring - is rather obscure, particularly towards the end of sections.

Also note that when comparing all the foregoing and following transcriptions with the text, it is essential to consult the list of emendations provided in the Appendix to Part 4 and the reconstruction of the order of reading the text provided in the Appendix to Part 5. Other emendations are involved, as discussed in Part 1, particularly registration errors in Kaniad Marwnad Ifan ab y Go. This piece is particularly prone to displacement and omission of lower-hand chords, as a comparison of the positioning of chords at 74.2.1-9 with 73.3.8-16, 74.3.8-14 with 73.5.1-7, 74.5.1-7 with 73.6.9-15, makes evident.

As full performing editions, these transcriptions do not use abbreviations for passages of text. To facilitate comparison with the tablature the sections are indicated by Roman numerals, bar numbers by ordinary numerals, and (in Kaniad Krych) passages are labelled by the section number, and 'line' numbers involved (where a line equals two digits - four half-bars), at which a passage first appears, shown in parentheses. Identified cadence points are marked in Kaniad Krych by 'c', and in Kaniad Marwnad the score is laid out with two digits to the line, so cadence points fall at the end of their lines in the score.

VIII. CONCLUSION

A brief review and an evaluation of what has been achieved here are required.

The initial steps have been the disposal of the confounding by the rhythmic notation and the identification of the digits of the measures throughout most of the text, described in full detail in Part 5. The greatest steps have been the discovery of the need to adopt fully-measured rhythm, the identification of the accenting of the beats in the text, the determination of the various lengths of bars and the specific locating of many of the notes within these bars. A brief general summary and analysis of the rhythms is provided in Part 8, pp. 21-23.

In combination with what has become understood of the tuning, the methods of fingering, the number and order of the notes used in each fingering figure, and the correct order in which the passages should be played, these advances enable transcription of the text. And the transcription is sufficiently tangible and unambiguous to produce a very clear impression of the music which results from the synthesis of all the methods and chains of argument employed.

Initially, the reconstructed music is no more than a complex logical deduction, based mainly on the text and other evidence intrinsic to the *cerdd dant* tradition. But at this point, for the first time in the four-hundred year history of reconstruction, the reconstruction is sufficiently crystallized to permit real scrutiny of its relationship to music outside the

tradition, music which is attested in conventional notation. We can do more than evaluate the reconstructed music with our intuition, we can make meaningful comparisons and identify parts of the text as bearing an affinity to early dance music. This point is of such great significance for all aspects of interpretation that it is worth amplifying in this evaluation.

At this time the study of early piped dance music is in a state of flux following the recent emergence of the earliest manuscript of pipe music yet to come to light: the William Dixon manuscript (1733-1738), from Fenwick, Northumberland.[1] Matt Seattle has published an edited transcription with excellent explanatory notes.[2] Most of the 40 pieces in the collection have other versions recorded elsewhere, with a wide dispersal, but are more fully and completely recorded here, so the collection provides new insight into the details of early dance music, including the 'hornpipe' tradition that had been neighbour to *cerdd dant* on the English border with Wales. Also the collection contains material of the reel and jig type but employing what would now be notated as semiquavers, comparable in fact to the style of many of the Welsh traditional harp airs in John Parry's collections.

For these reasons the Dixon collection is actually the closest indicator available (despite its remoteness) of the style of pipe music that co-existed with *cerdd dant* in Wales, and it is particularly with it that the dance-like pieces in the MS. should be compared, making allowance for the doubling of note values in Dixon. Minute inspection is not required to determine that the

two styles are very similar indeed, especially in their more unusual and distinctive characteristics: the way in which melody is governed by the strict double-tonic harmonic grounds operating in short and simple measured cycles, the unusual length of the pieces (apart from Y Ddigan y Droell), and the high level of saturation with so much use of semiquavers. Even the high level of organization in section formation that *cerdd dant* composition usually displays is relaxed in the dance-like pieces into the almost unsystematic style found in Dixon.

Here at last, then, a source is finally found that anchors parts of the MS. to a style of music which is largely understood in its performance detail, even though that style has been supplanted by a dance music at a faster tempo which lacks the semiquavers.[3] It was a style which was long-lived, widespread across the British Isles apart from the Scottish Highlands, and became played on an increasing number of instruments including the harp, apparently as early as 1474.

The discovery of the stylistic links here provides strong confirmation of all the conclusions arrived at in this work concerning metre and rhythm in the reconstruction of the music, and many of those concerning tonality and technique as well. The links are strong enough to consider the upper-hand part of most of the text as recovered, not merely reconstructed. The problems in reconstructing the lower-hand part can gain little clarification from extrapolation from a drone-based pipe idiom. I stress here that the conclusions that are confirmed here have been derived essentially from evidence intrinsic to the *cerdd*

dant tradition, principally textual evidence, and not from extrapolation from outside, and that therefore extrapolation from the double-tonic pipe idiom does indeed offer independent confirmation, methodologically.[4]

I should add that the relatedness does not imply that any of the dance-like pieces in the MS were used as accompaniment to dancing. Indeed the through-composed structuring of the development through the second half of Kaniad Marwnad Ifan ab y Go is a little more characteristic of composed listener's music than the relatively haphazard variations of early dance music.[5]

The dance-like pieces in the MS. are marked out from the remainder by being less tightly structured in their sectional development. Generally the pieces are highly organized, in particular in their use of incremental repetition.[6] Yet if one ignores for the moment that in *cerdd dant* the grounds (although they are rhythmically and melodically simple) stretch to lengths such as 40 bars, in structure many pieces are not much more complex than early English harmonic ground-bass compositions such as those of Hughe Aston, William Byrd and Anthony Holborne. It may have been that these early composers, who have been thought of in modern times as pioneers of a truly instrumental style, were actually groping after *cerdd dant* variation style in their expansion of dance forms into extended fine-art music. They or their predecessors must have had ample opportunity for exposure to *cerdd dant*,[7] which would have been very capable of providing an exemplar if not an inspiration for the direction they were taking.[8] A fundamental reappraisal of the origins of harmony in

instrumental music is required before the general history of early music in the British Isles can progress towards a more accurate perspective.

Whatever the detail of its relationship to *cerdd dant*, early ground-composition provides one illustration amongst many of how art music develops as an outgrowth of folk music, and it is really necessary that *cerdd dant* would have had a close relationship to the piped dance music of medieval times.

Most pieces in the text are not dance-like in character, and, as argued in Part 9: EXPRESSION, they are designed for soothing or sorrowful affect, not joyful affect. The difference manifests rhythmically in low note density: the two-and-a-half pieces transcribed above are amongst the pieces that are most densely-packed with notes. However, the very high level of cohesiveness between all the pieces in the text dictates that those rhythmic features which are confirmed here by the close links to dance-music do need to be applied to the whole text. It will be through expressive dynamics, tempo and low note density that the dignity lacking in the dance-like pieces will be achieved in most of the other pieces, not through differences in note position or note value or time signature.

The precise conclusions derived here concerning rhythm are capable of yet further verification, this time not from folk-dance music but from the music of the highly cultivated and esteemed *cerdd dafod*, for if the rhythmic scheme derived here is not capable of carrying the texts of the poems then the scheme will be the wrong one. In Part 8: VERSE it is demonstrated that

the scheme is very capable of carrying all the verse metres, with a result that is so artistically successful that the scheme has to be accepted as correct. On firm ground with the basic rhythmic scheme, it then becomes possible to consider the fine details of timing and tempo in Part 9: EXPRESSION.

Notes

[1] Atholl Collection, A K Bell Library, Perth, Scotland.

[2] Matt Seattle: *The Master Piper* (Newbiggin-by-the-Sea, 1995).

[3] Traditional performance of this antiquated style of playing dance music on the pipes at a tempo slow enough to permit semiquavers has actually survived in Northumbria, and also in Ireland for a few 6/8 pieces such as 'The Humours of Glyn' and 'Nora Criona', giving us access to the tempo which has been described by Breathnach (p. 33): as 'somewhat at waltz tempo'.

[4] Indeed the closeness of the links have only become apparent to me subsequent to all the work of critical analysis on the text.

[5] In fact Dixon's variations are a little more organized than is usual for early dance music and it is unclear whether these sets were for dancing or listening (see Seattle pp. 17-18).

[6] Discussed in Greenhill.

[7] Many of the sixteenth-century *cerdd dant* musicians, including the leading 'Edward Maelor' family, were located to the east of Offa's dyke. Hughe Aston may have been a native of Lancashire.

[8] In early ground-bass composition the absence of the '*cainc-diwedd*' form itself and the presence of tonic-dominant harmony (possibly derived from the 'dump' amongst dance forms) suggests that an influence from *cerdd dant* could not have been very direct or immediate, but the principle of highly organized variations must have come from somewhere, and apparently this was not from traditional dance music.

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APPENDIX

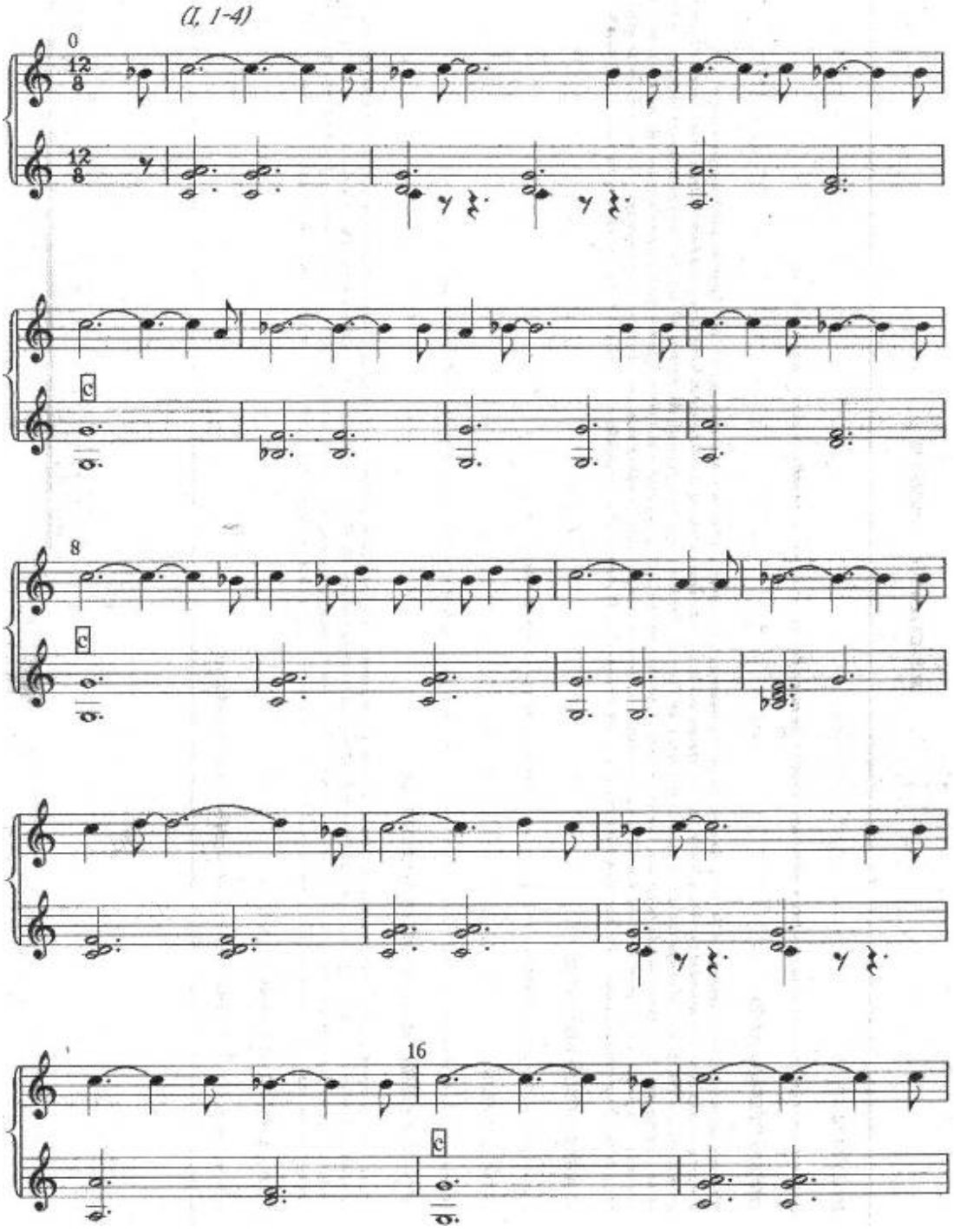
Here are provided a literal, as opposed to a conventional, transcription of rhythm for one piece:- Y Kaniad Krych ar y Bragod Gower, and a performing edition of the literal transcription of another piece:- Kaniad Marwnad Ifan ab y Go.

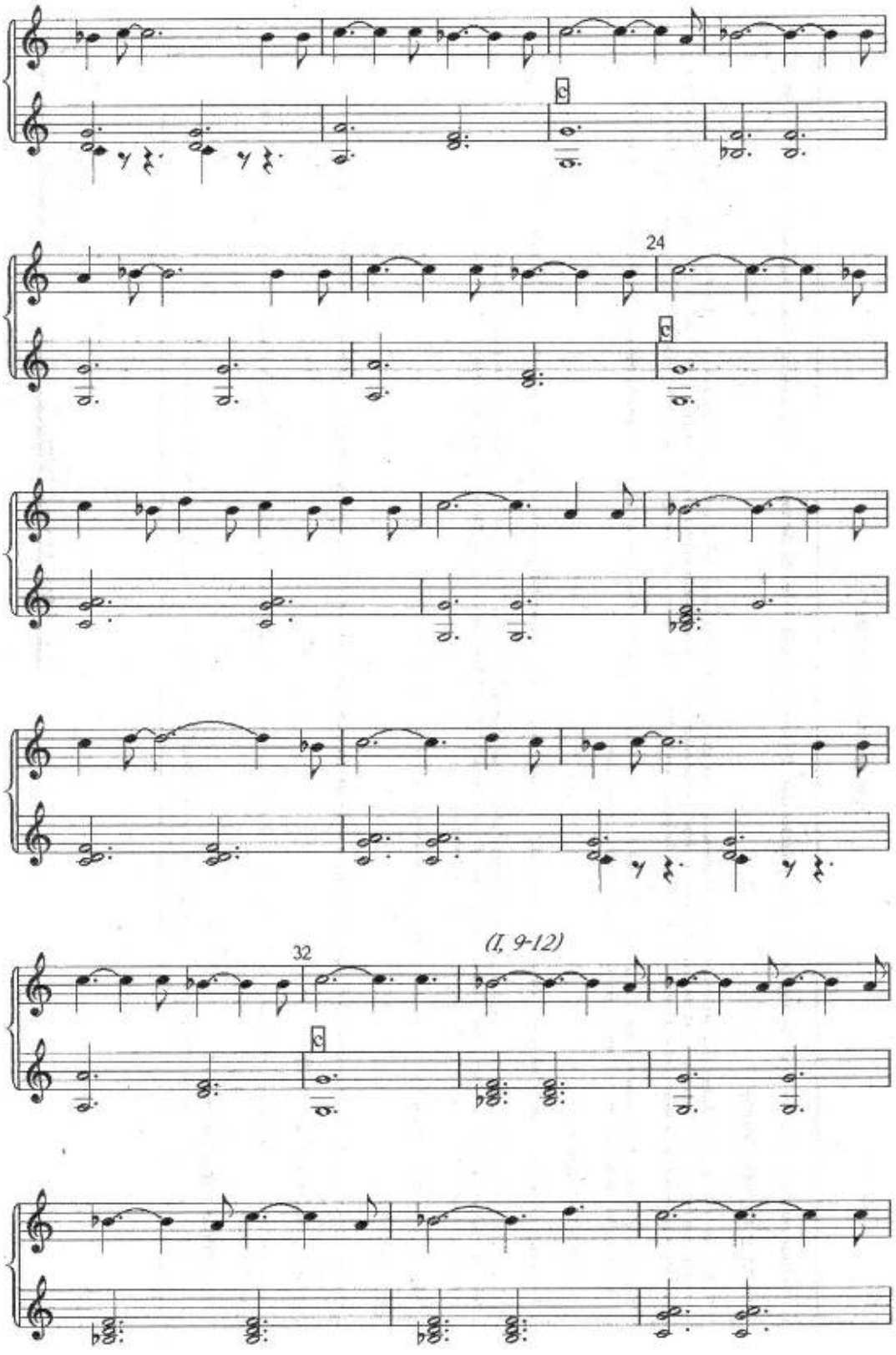
These transcriptions should only be read and used with reference to Chapter VII: Transcription into Modern Notation (pp. 111-4) where their derivations and notations are fully explained.

For conventional transcriptions see herein pp. 97-107.

Y CANIAD CRYCH AR Y BRAGOD GYWAIR

P. Greenhill

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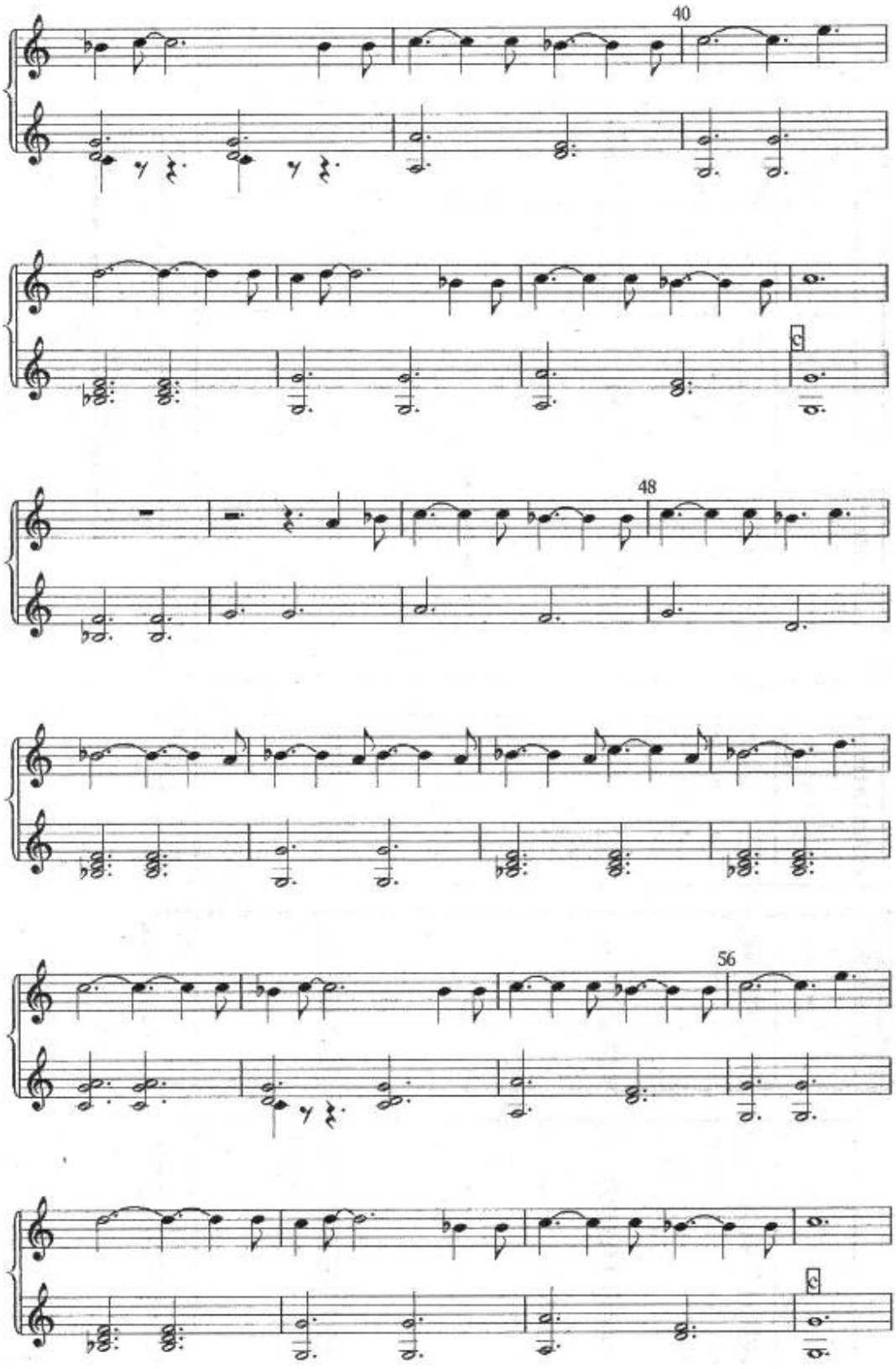
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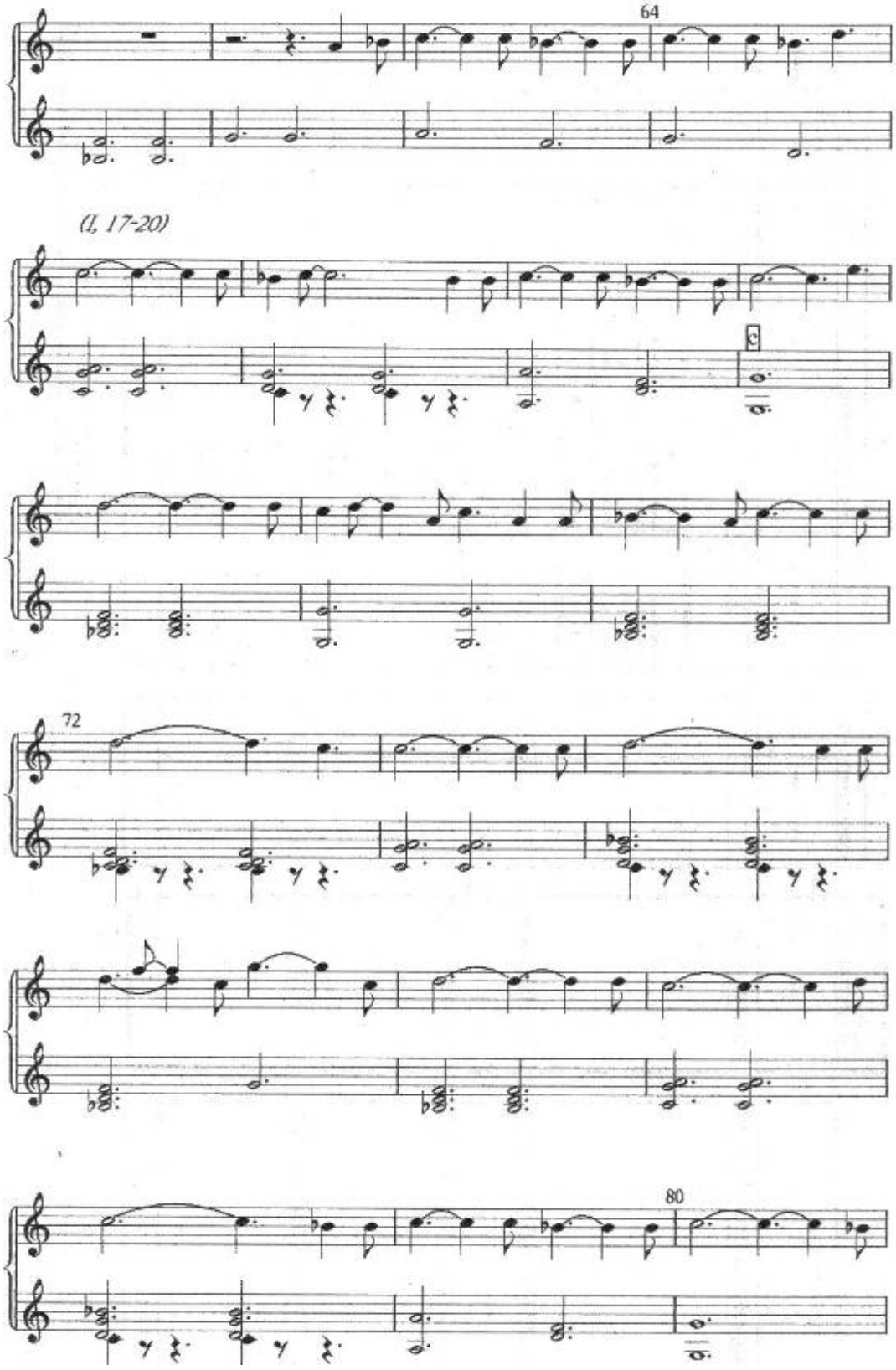
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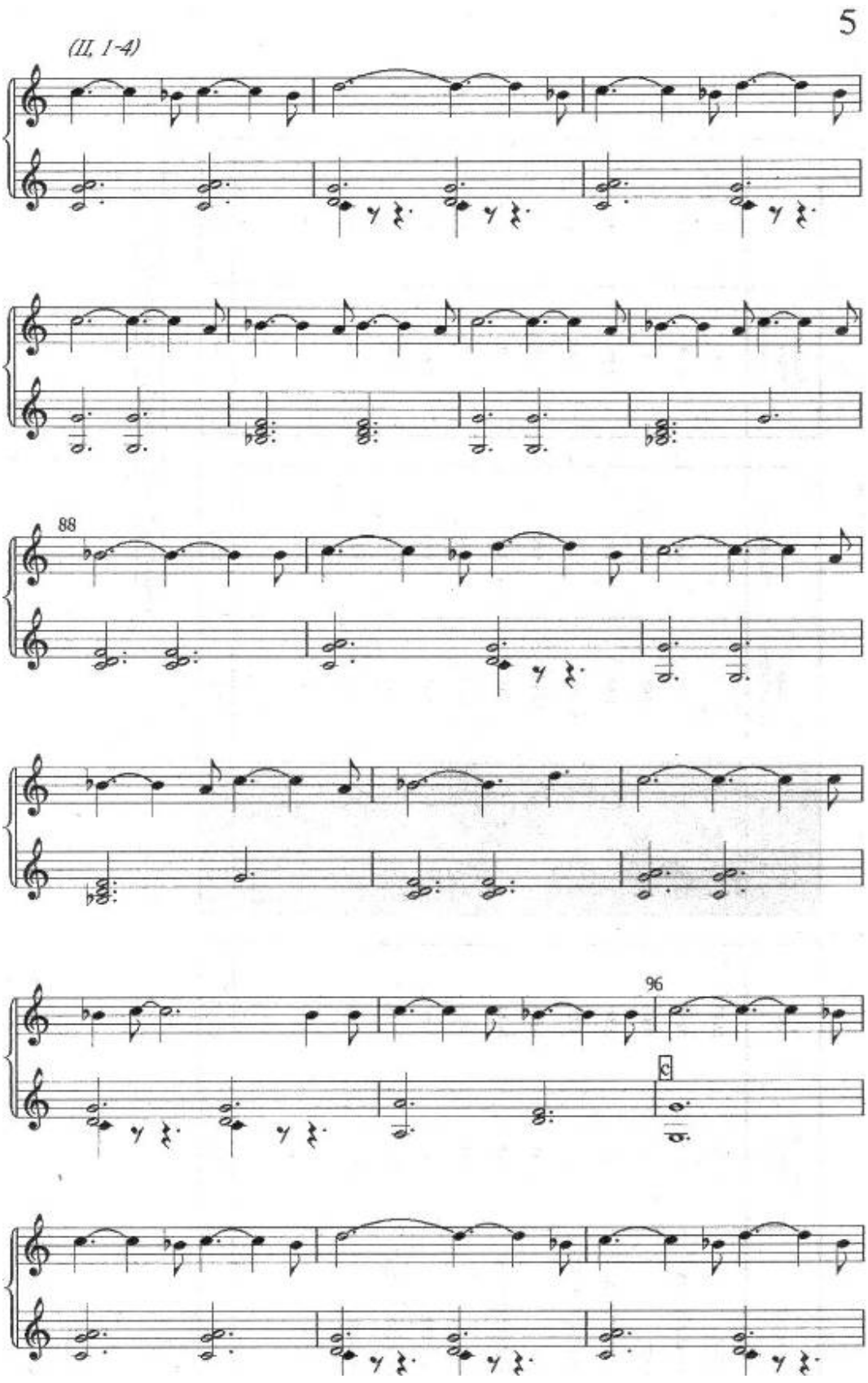
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96
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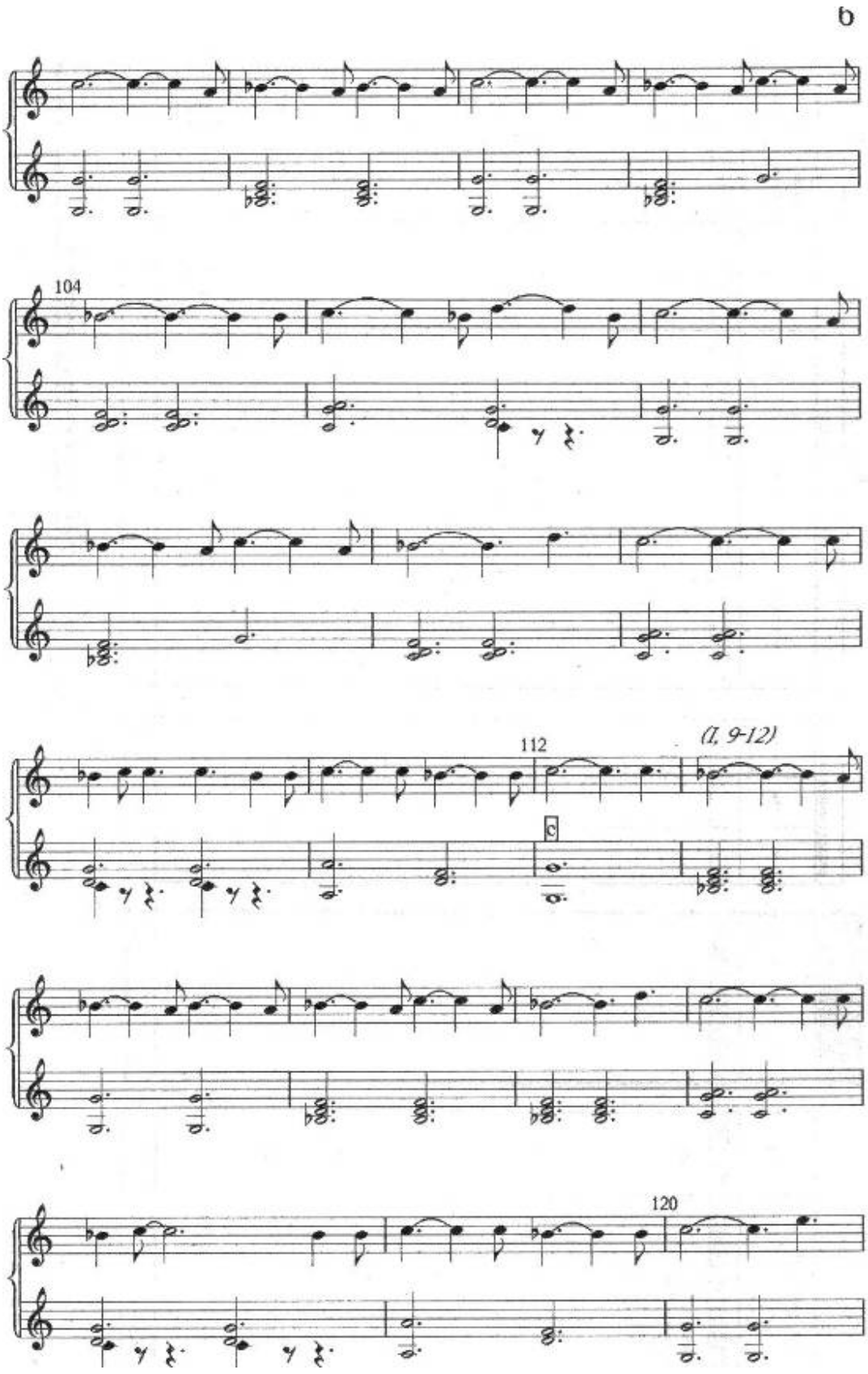
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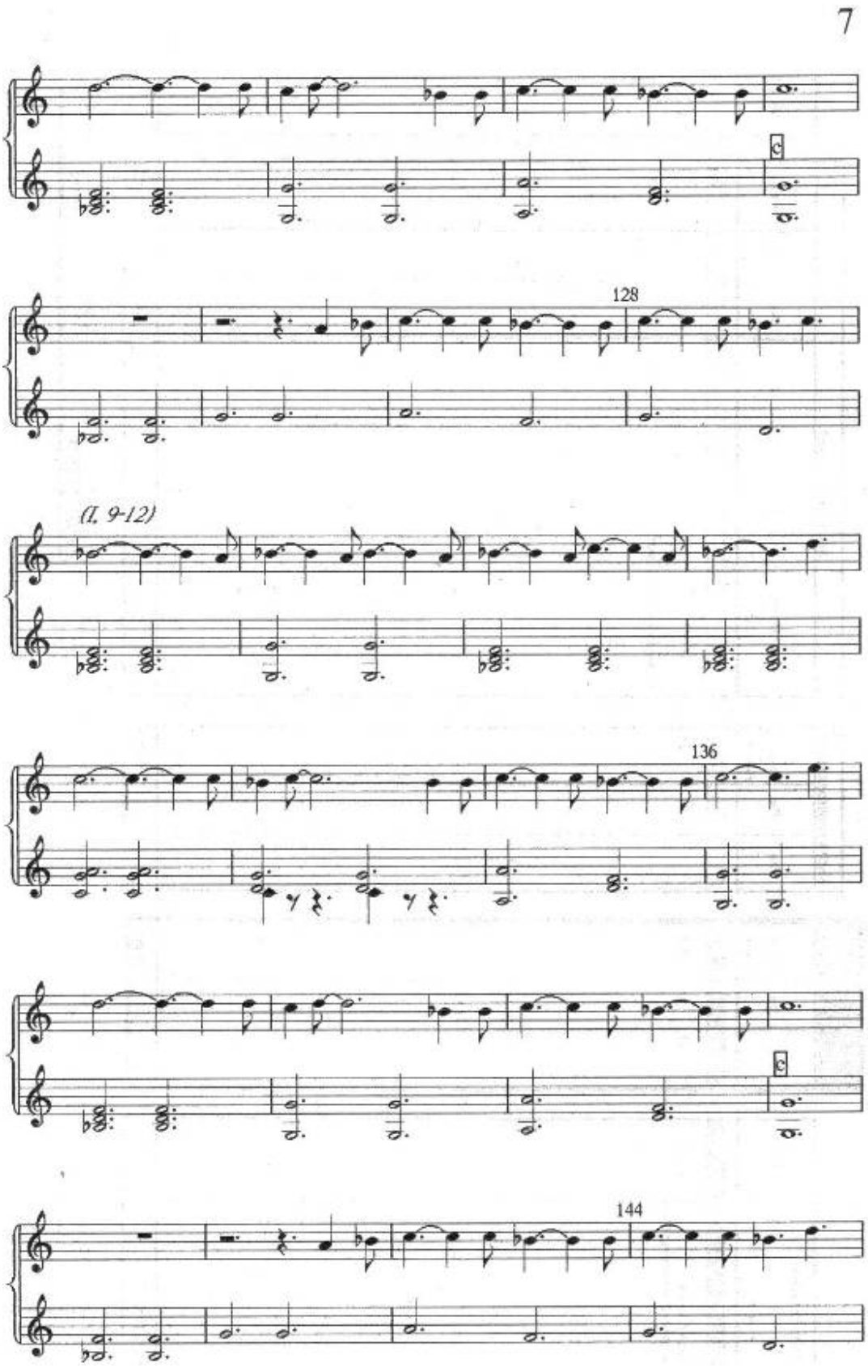
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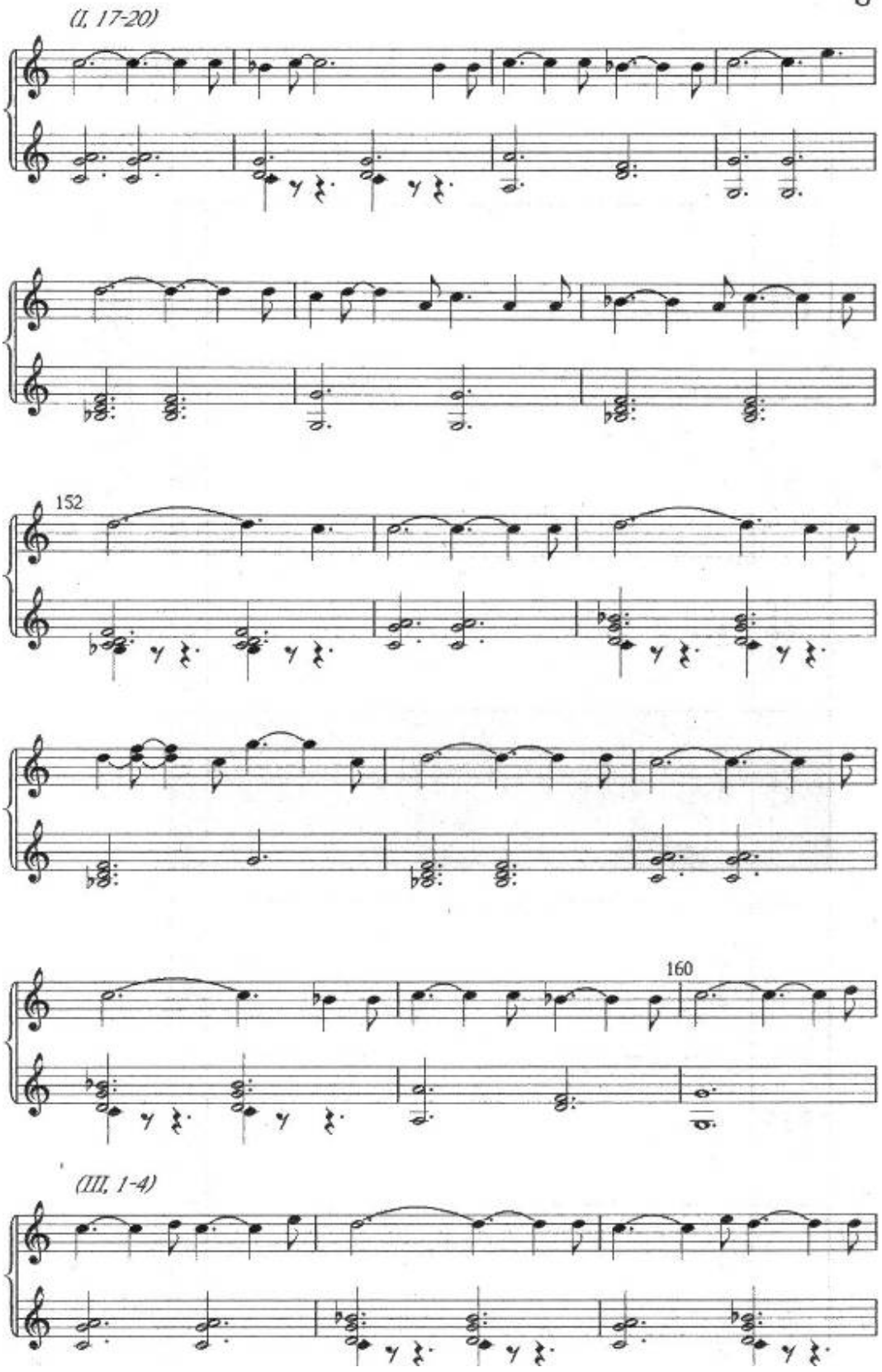
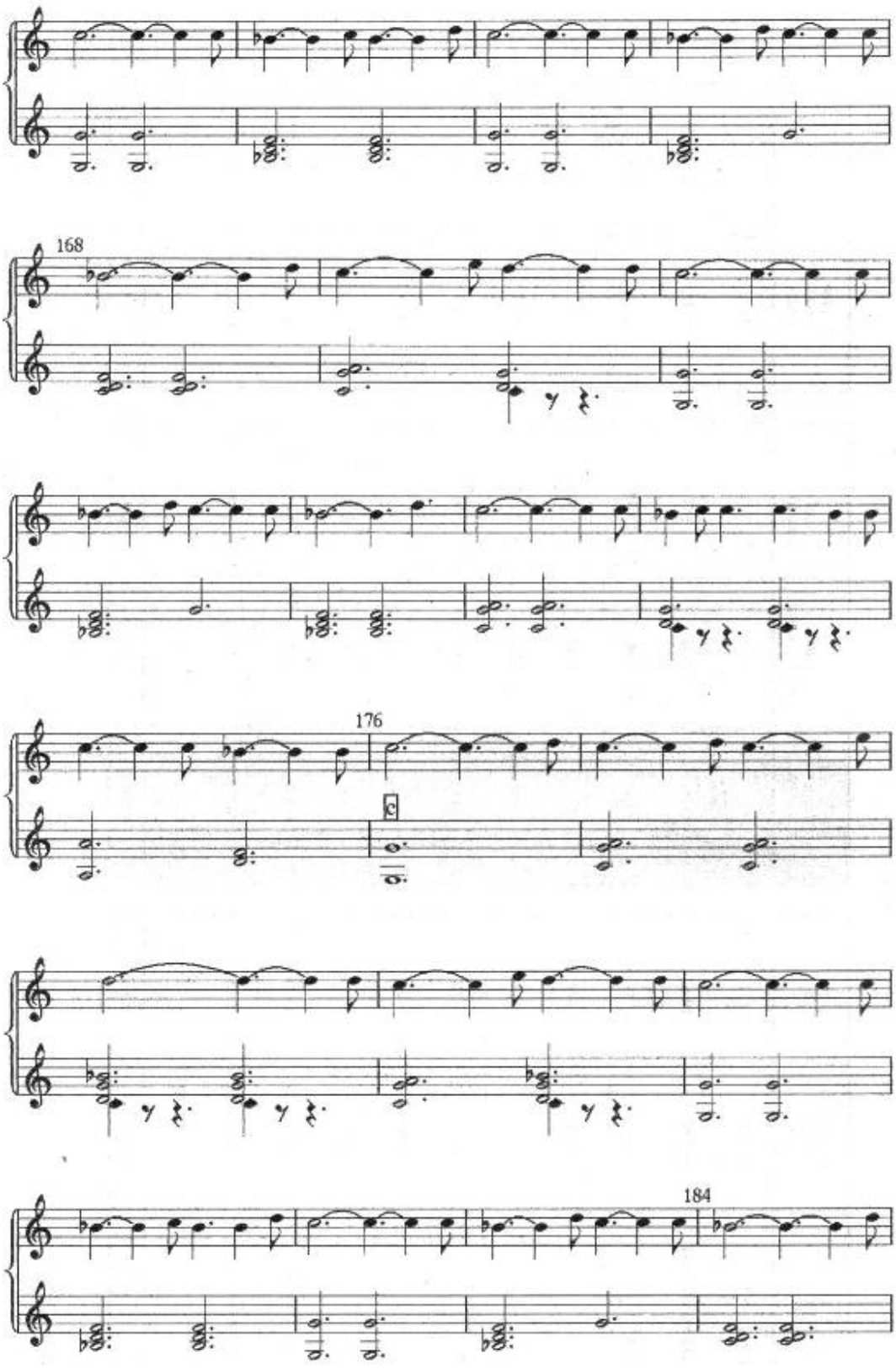
136
C
144

8

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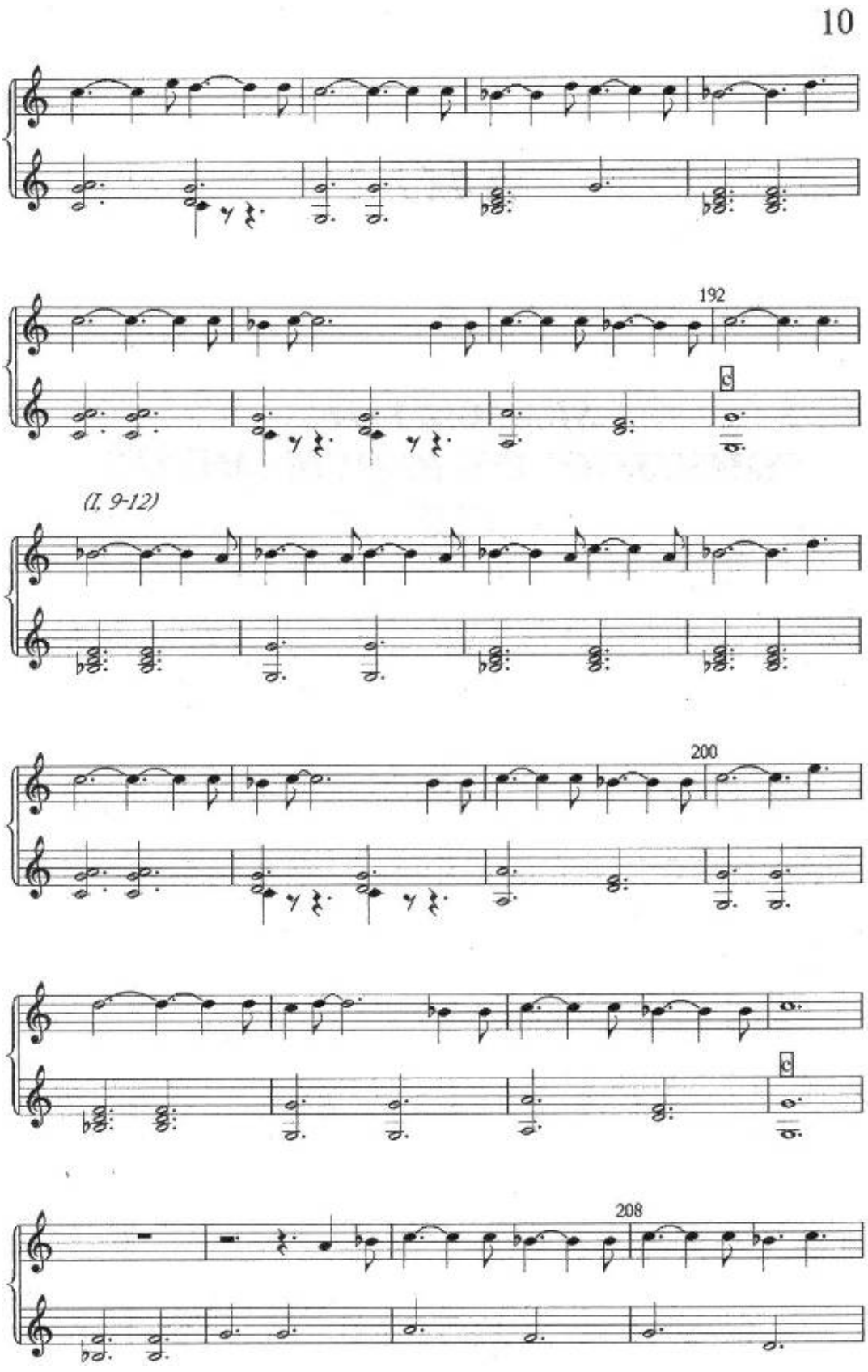
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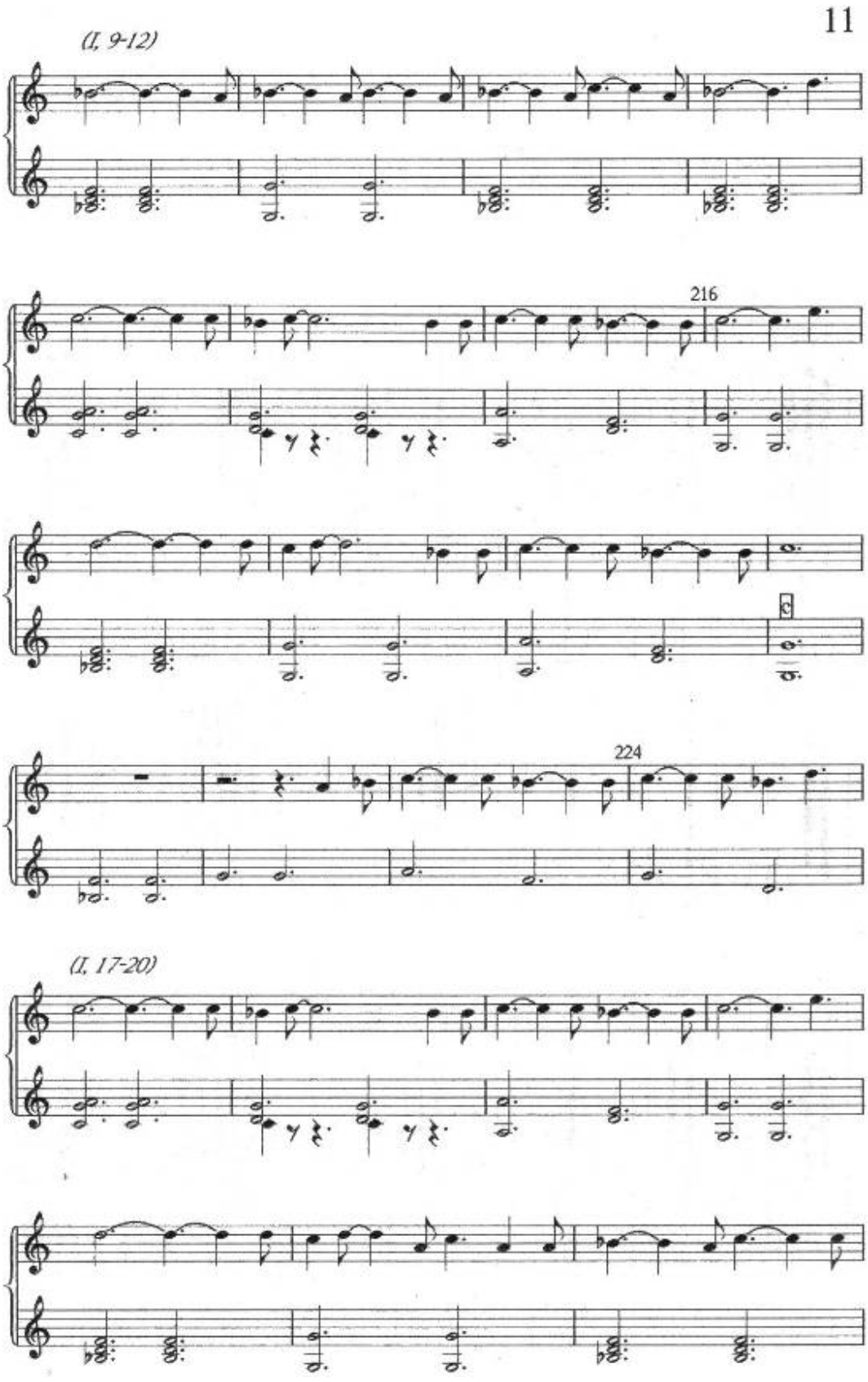
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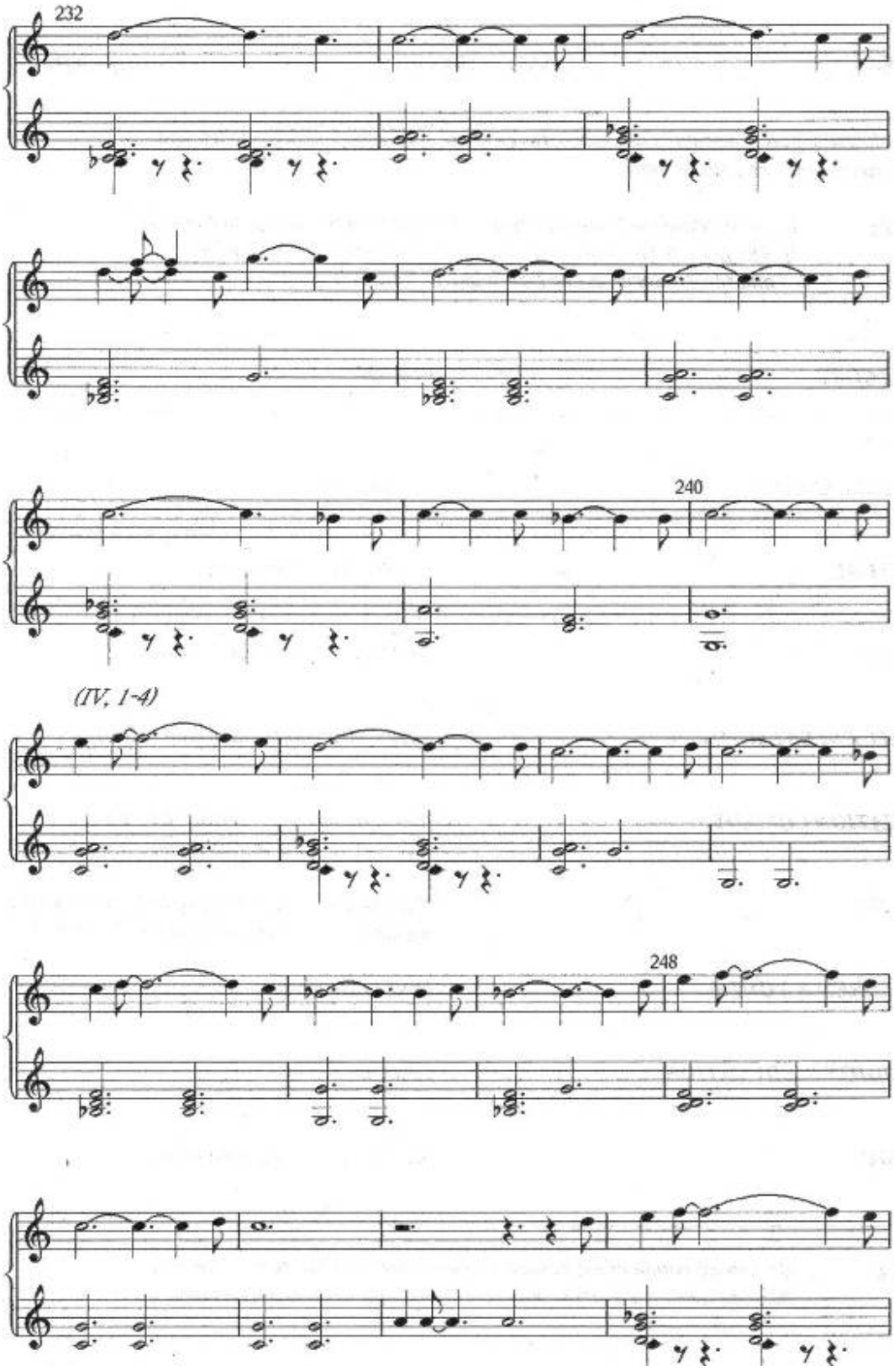
(I, 17-20)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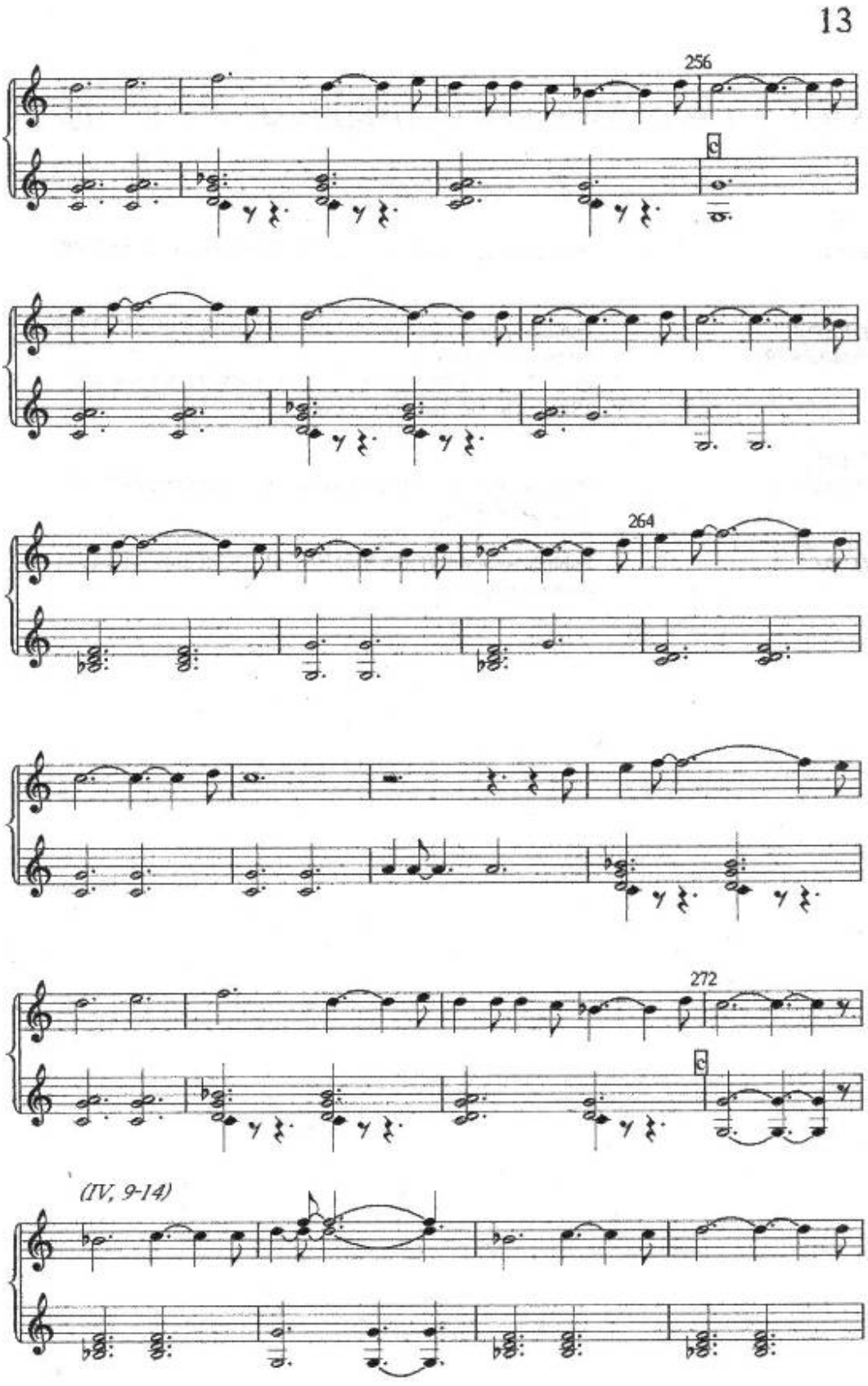
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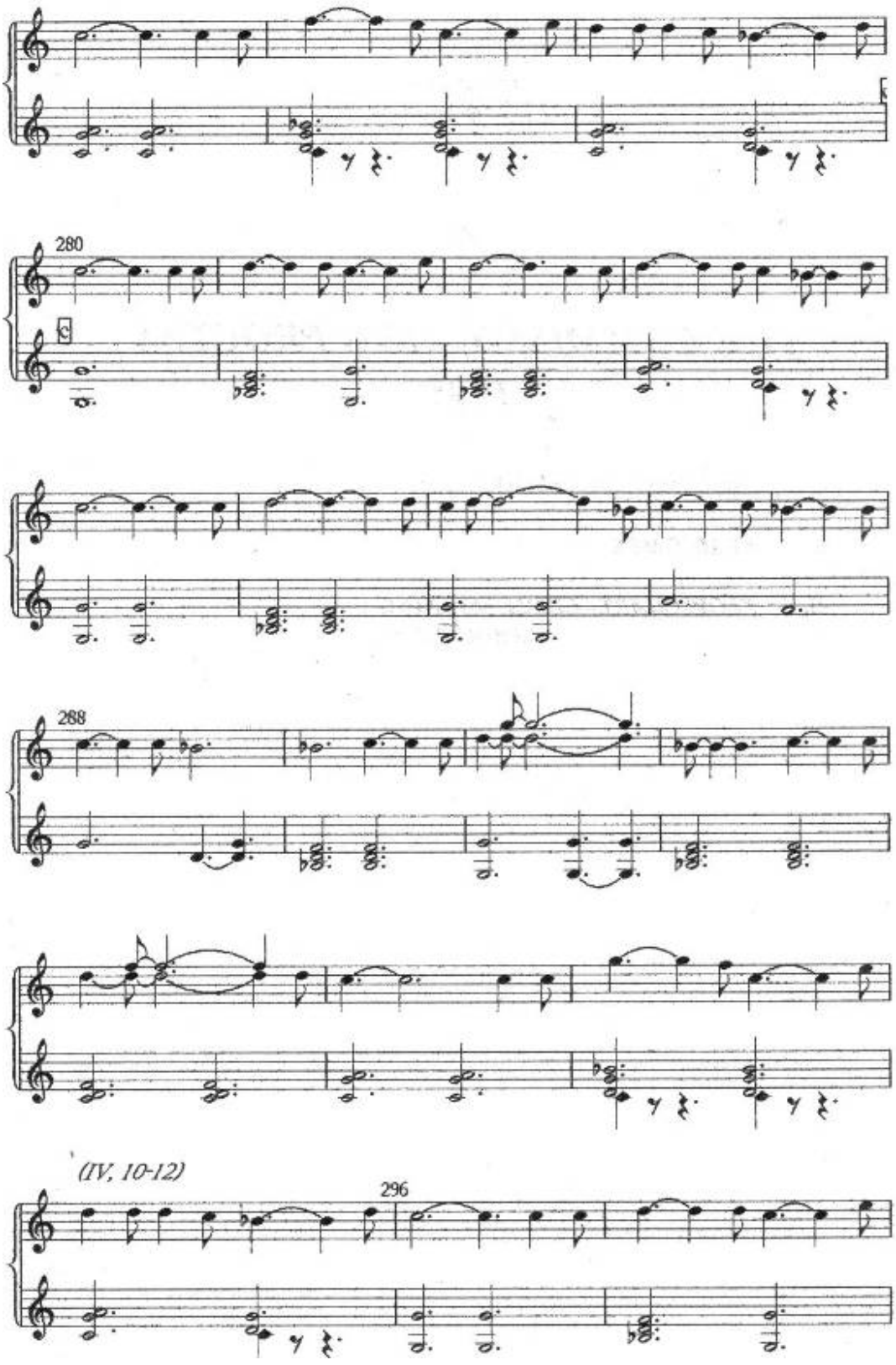
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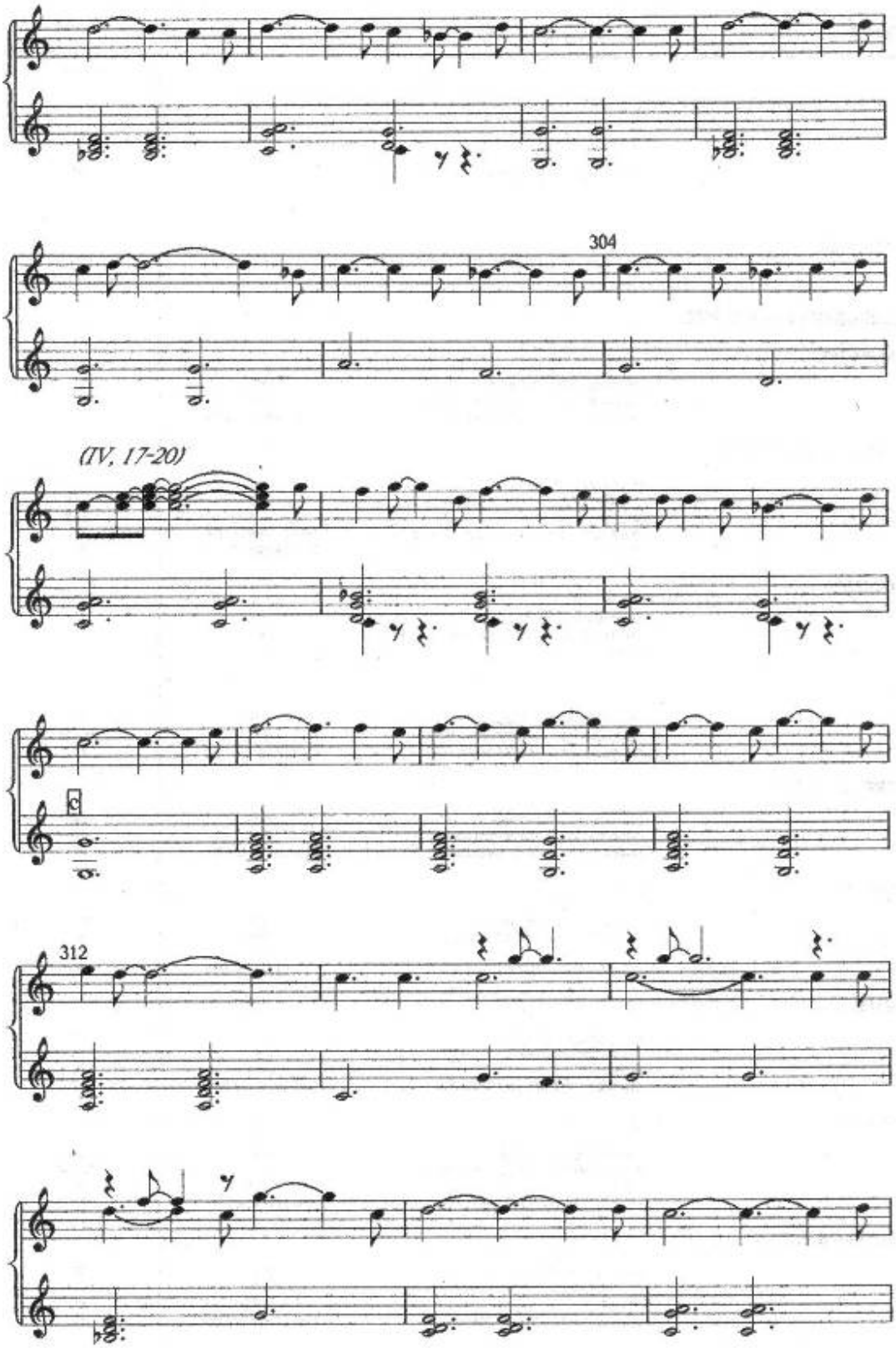
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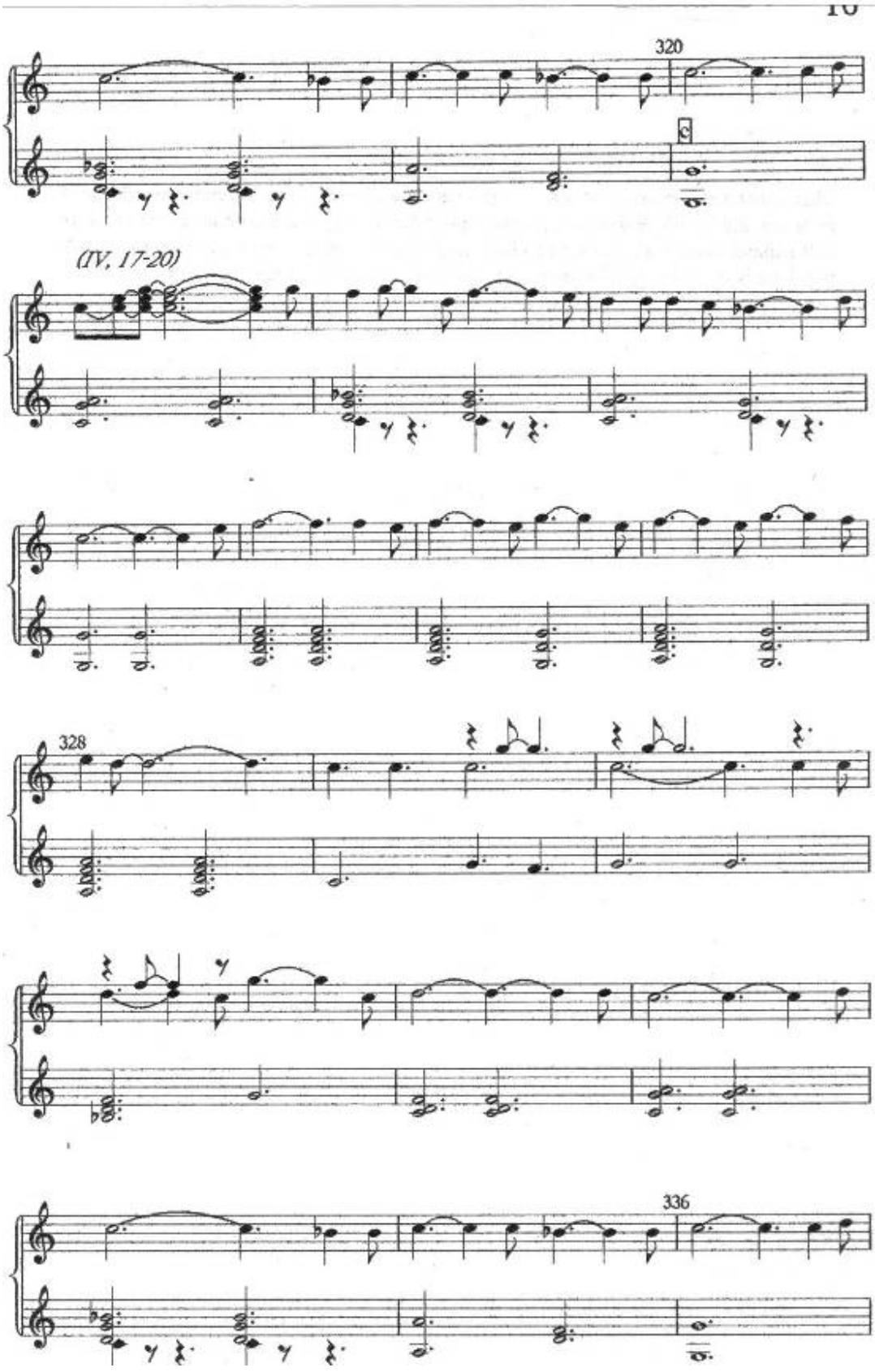
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328
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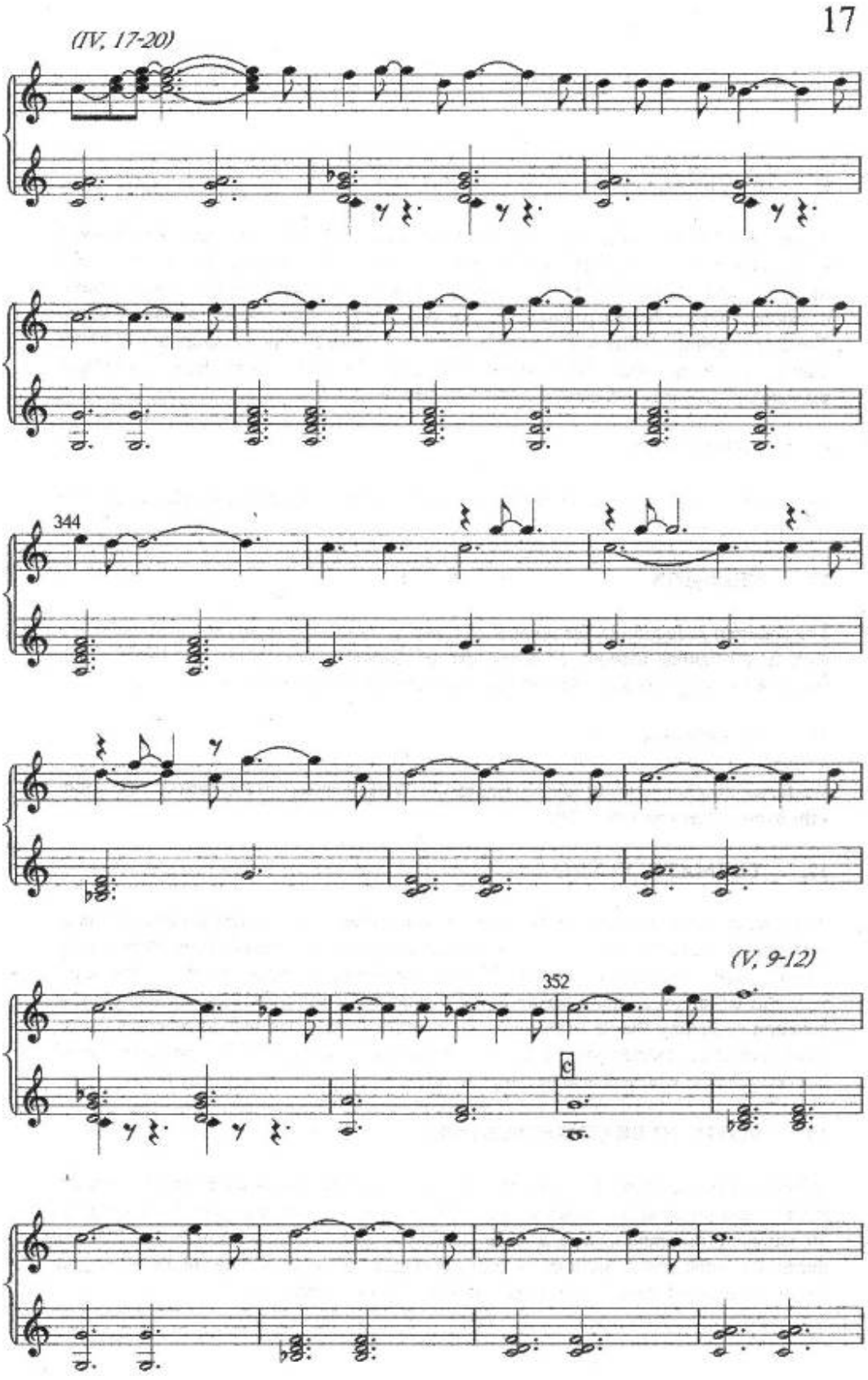
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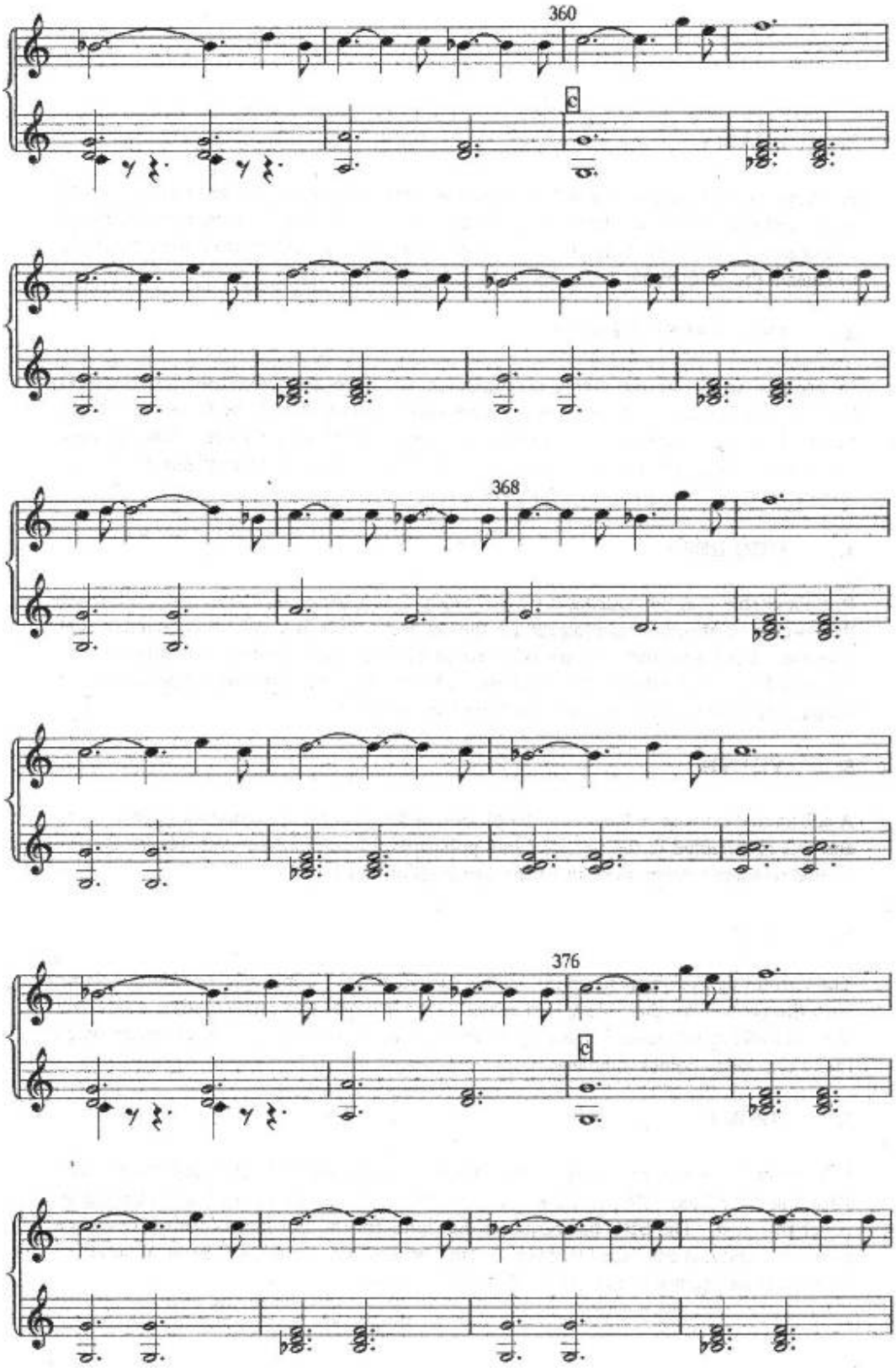
344
(V, 9-12)
352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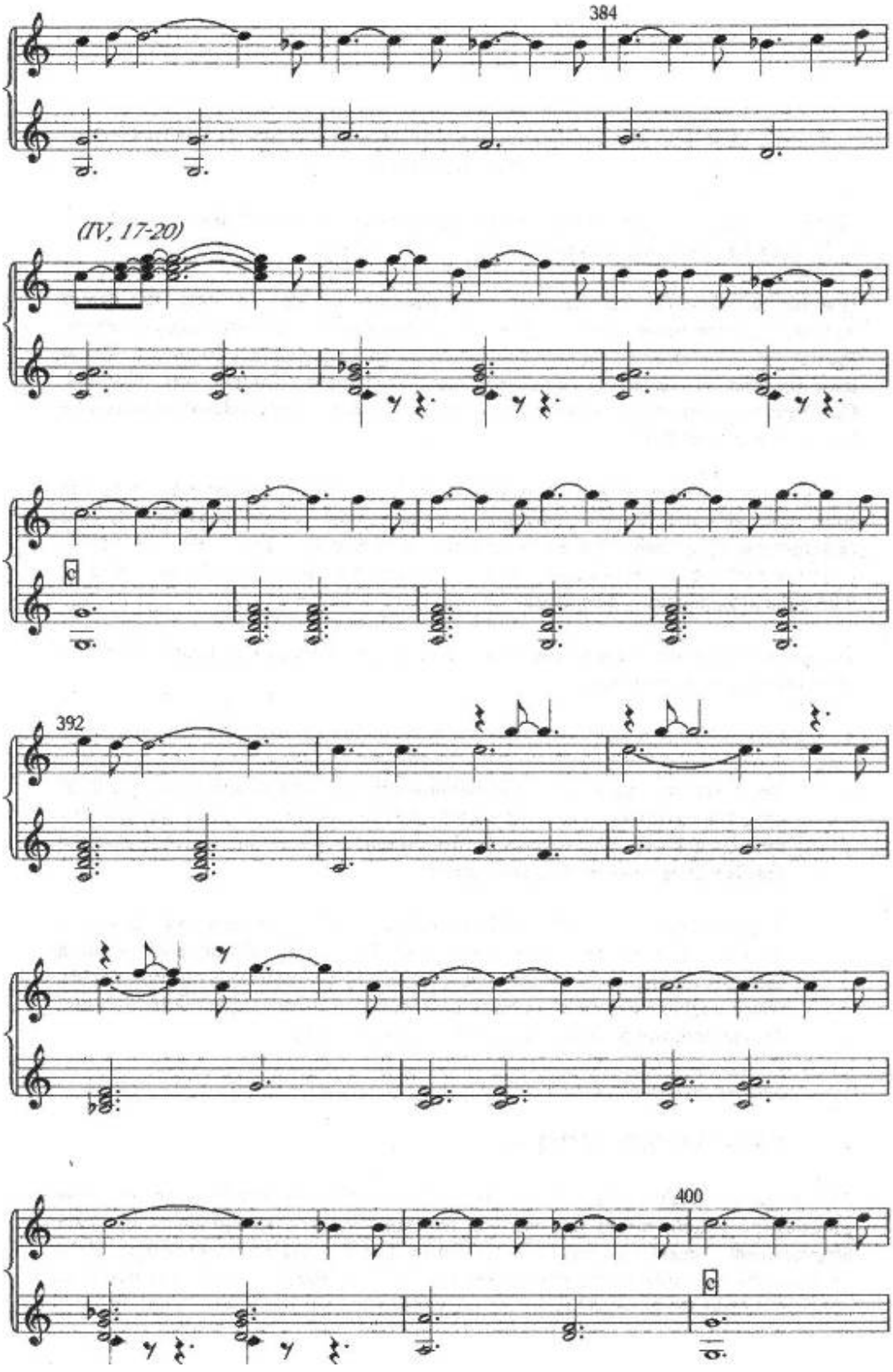
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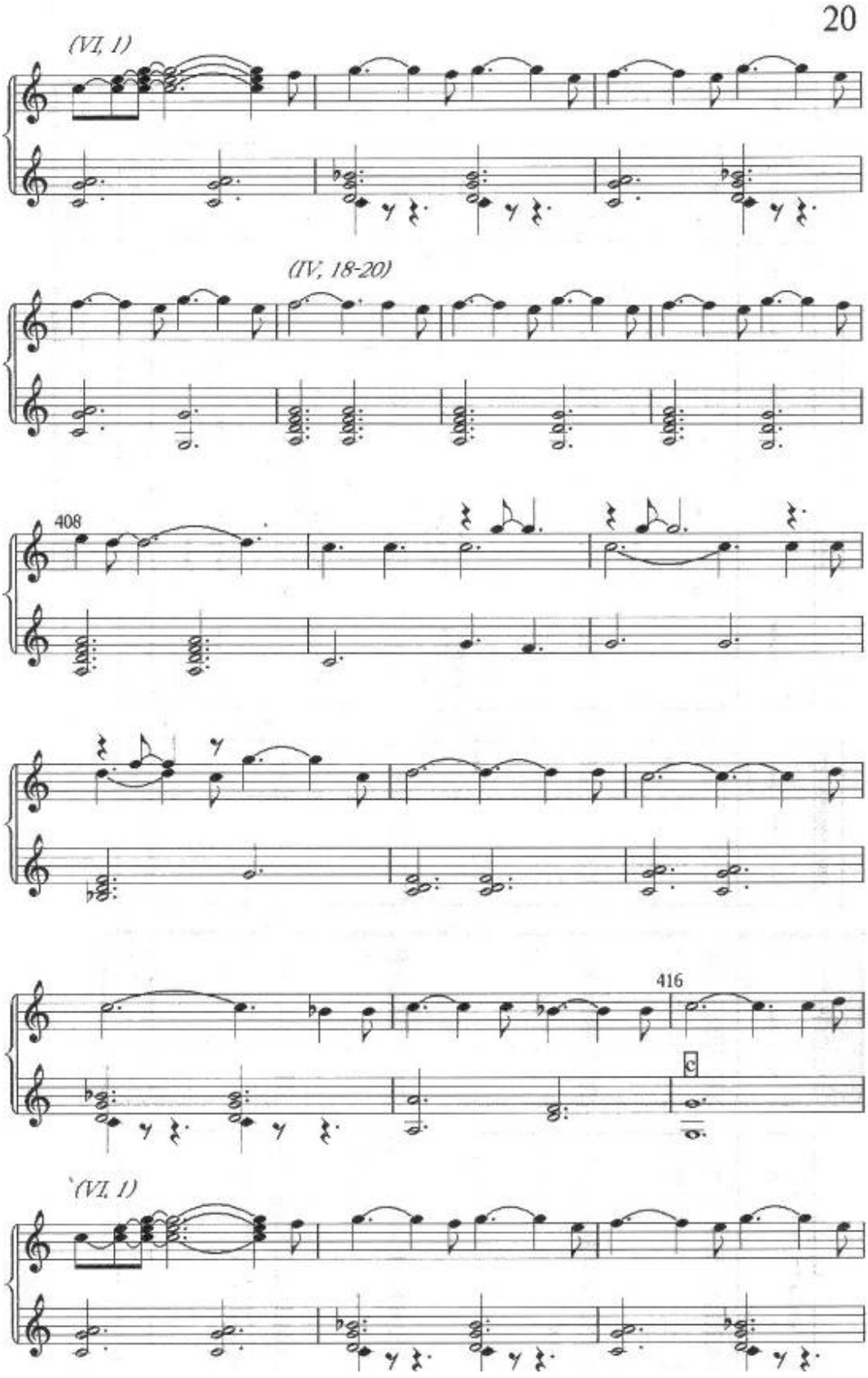
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(IV, 18-20)
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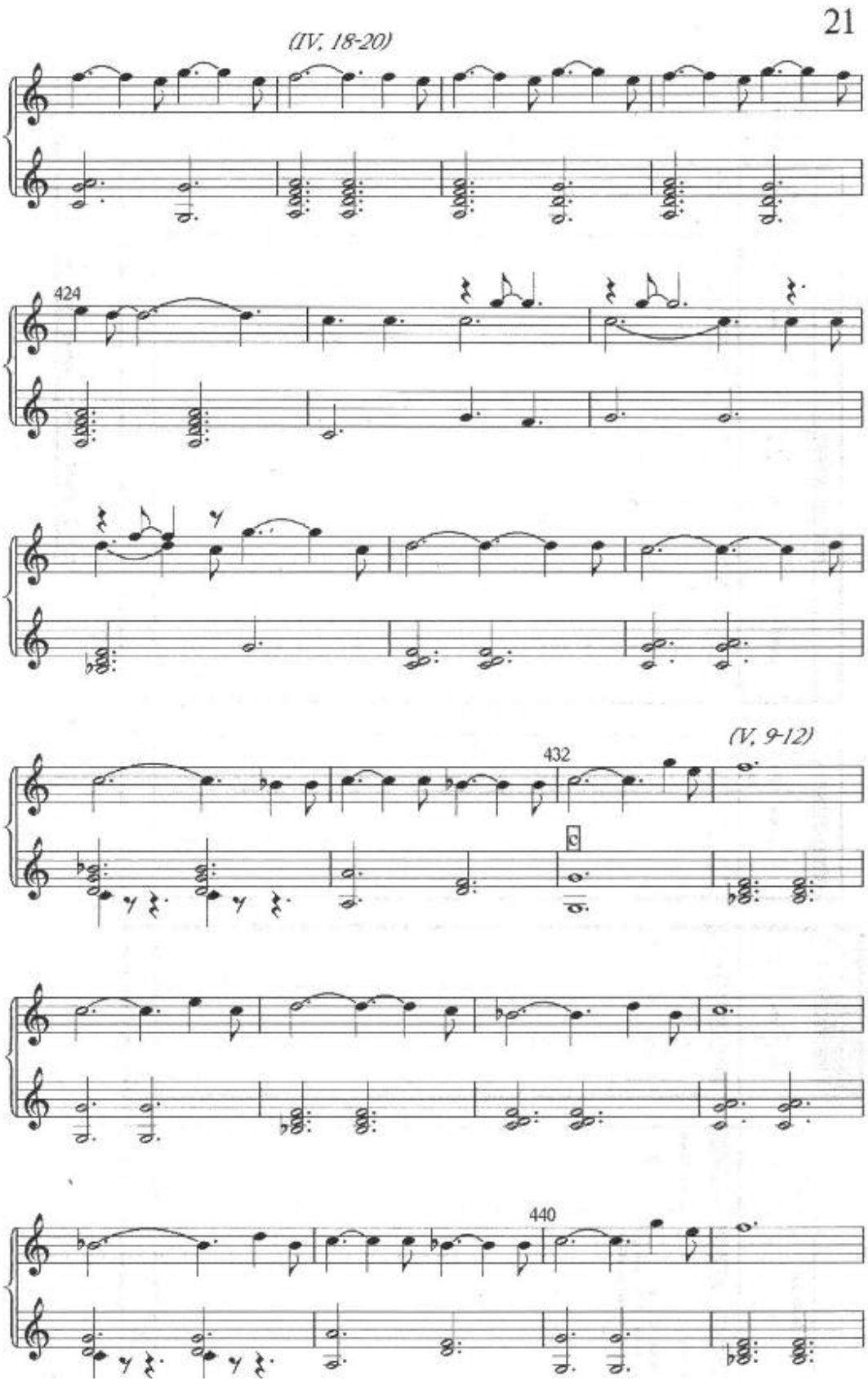
C
(VI, 1)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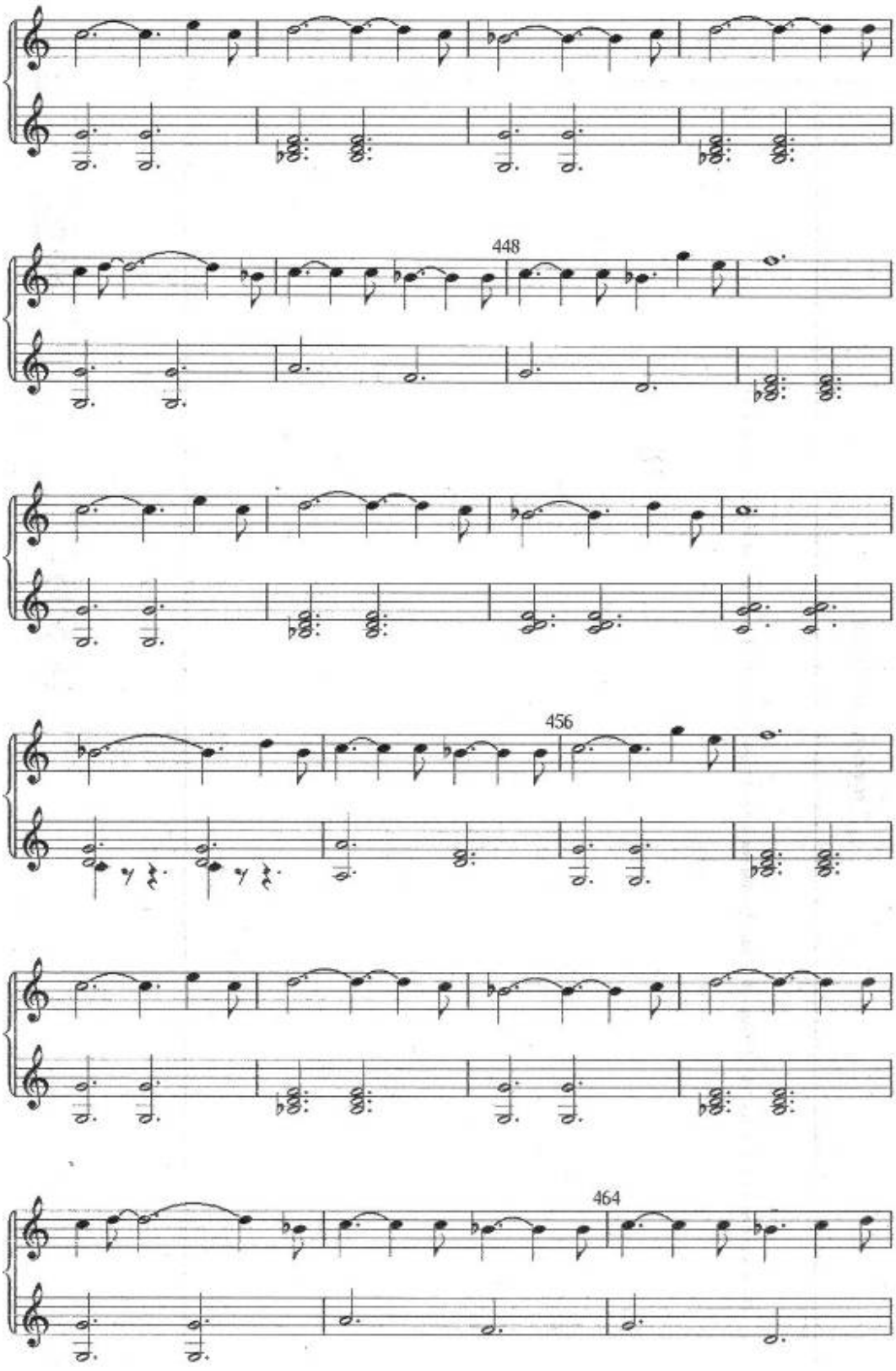
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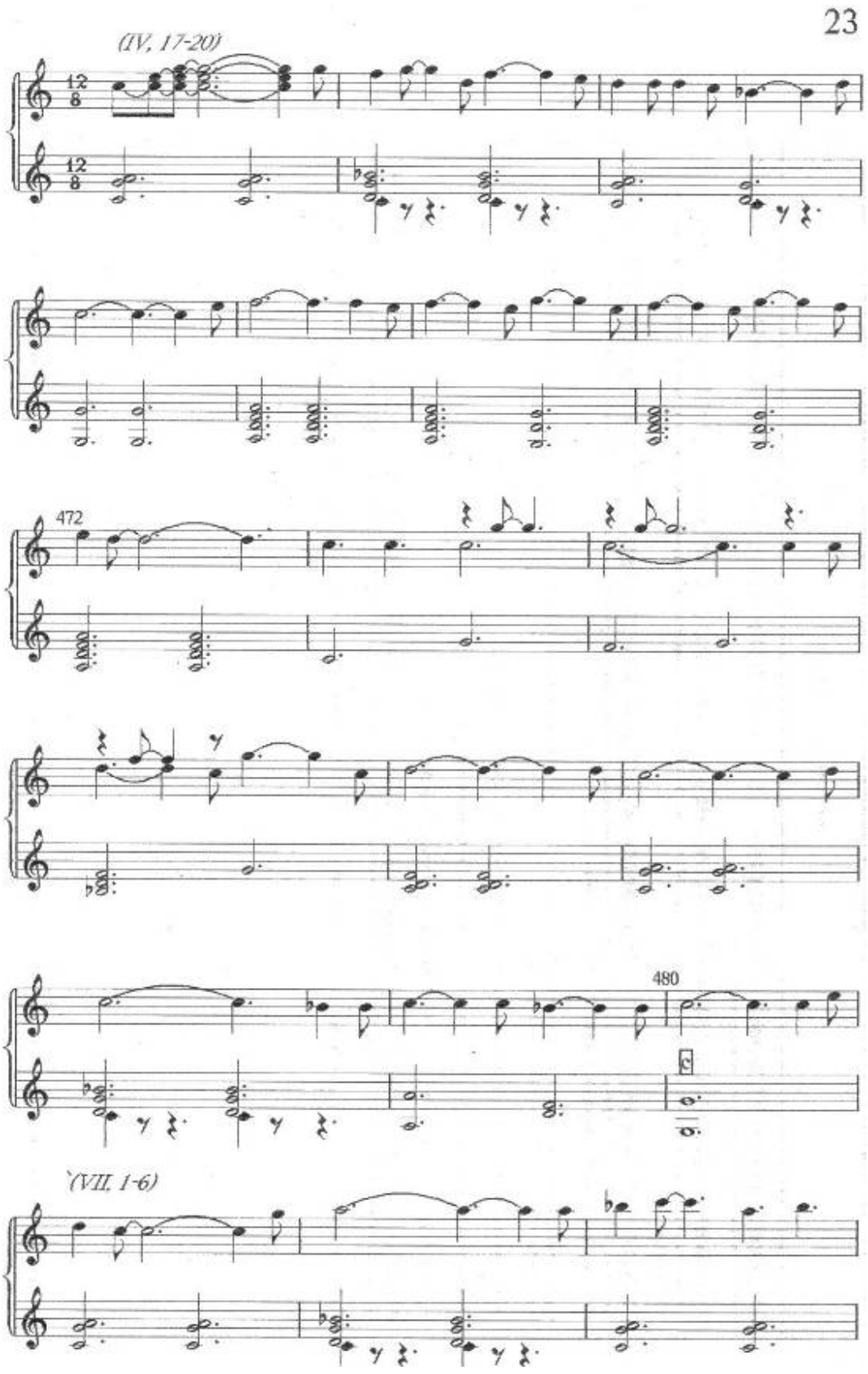
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12/8
12/8
472
480
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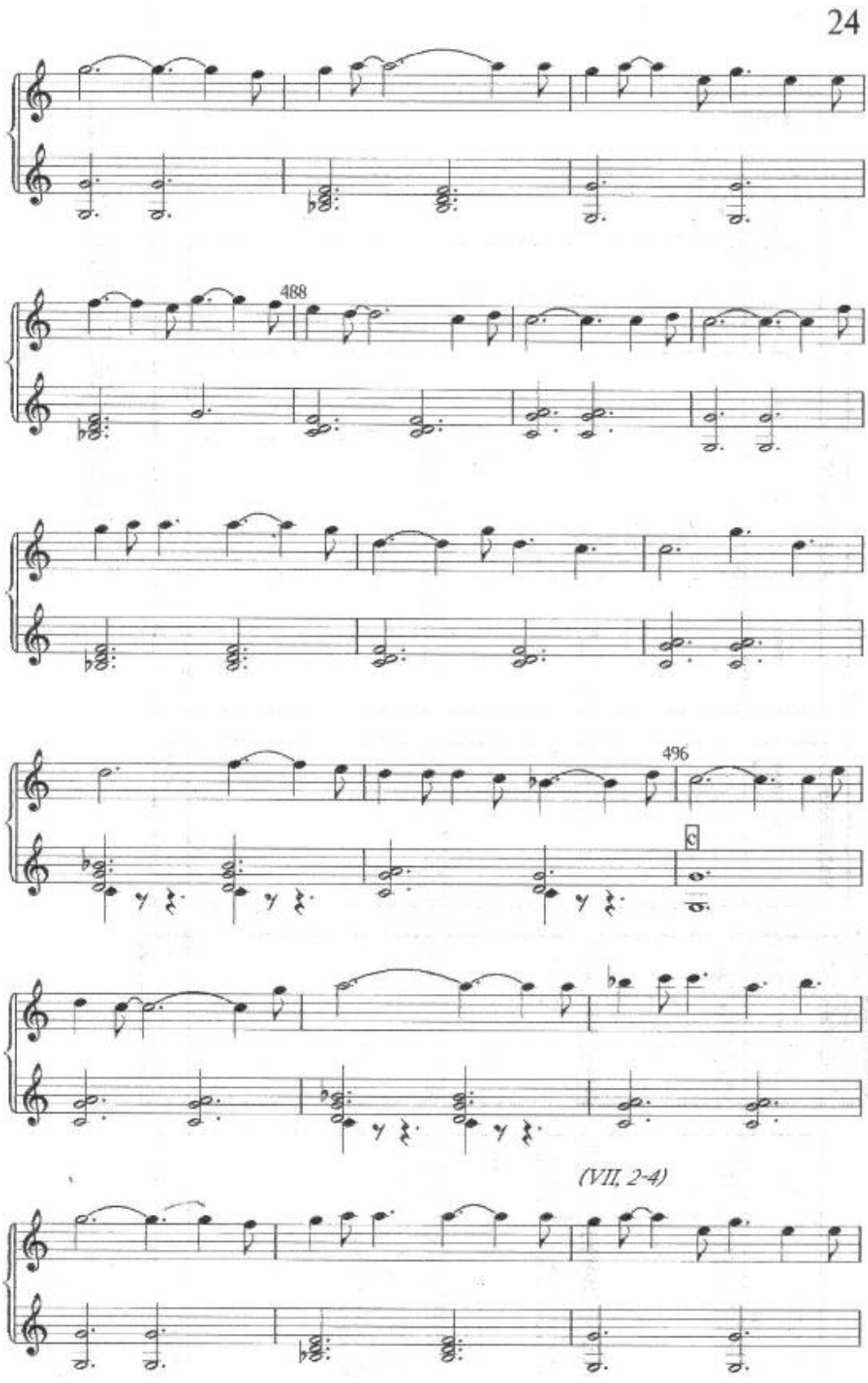
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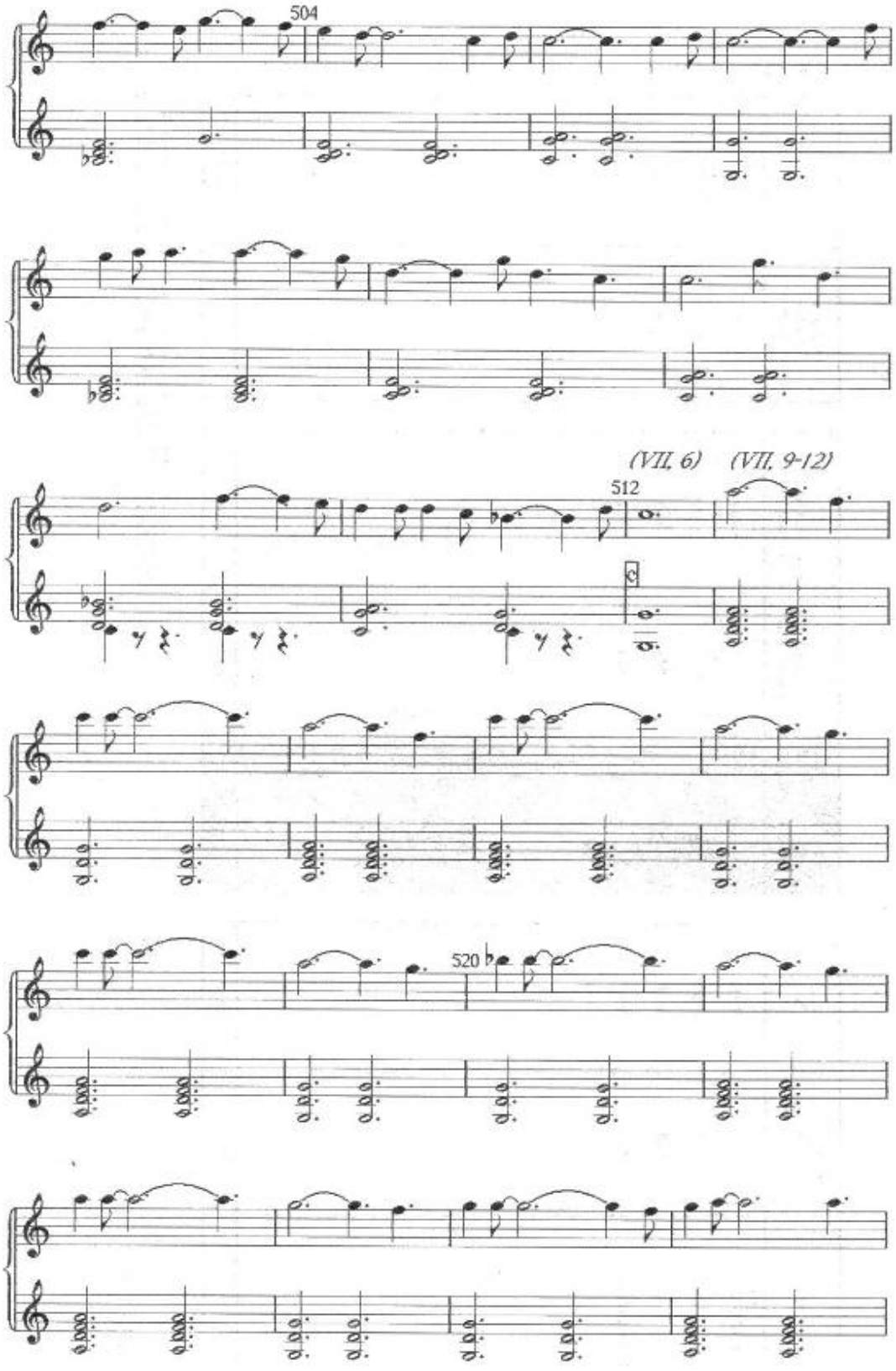
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(VII, 9-12)
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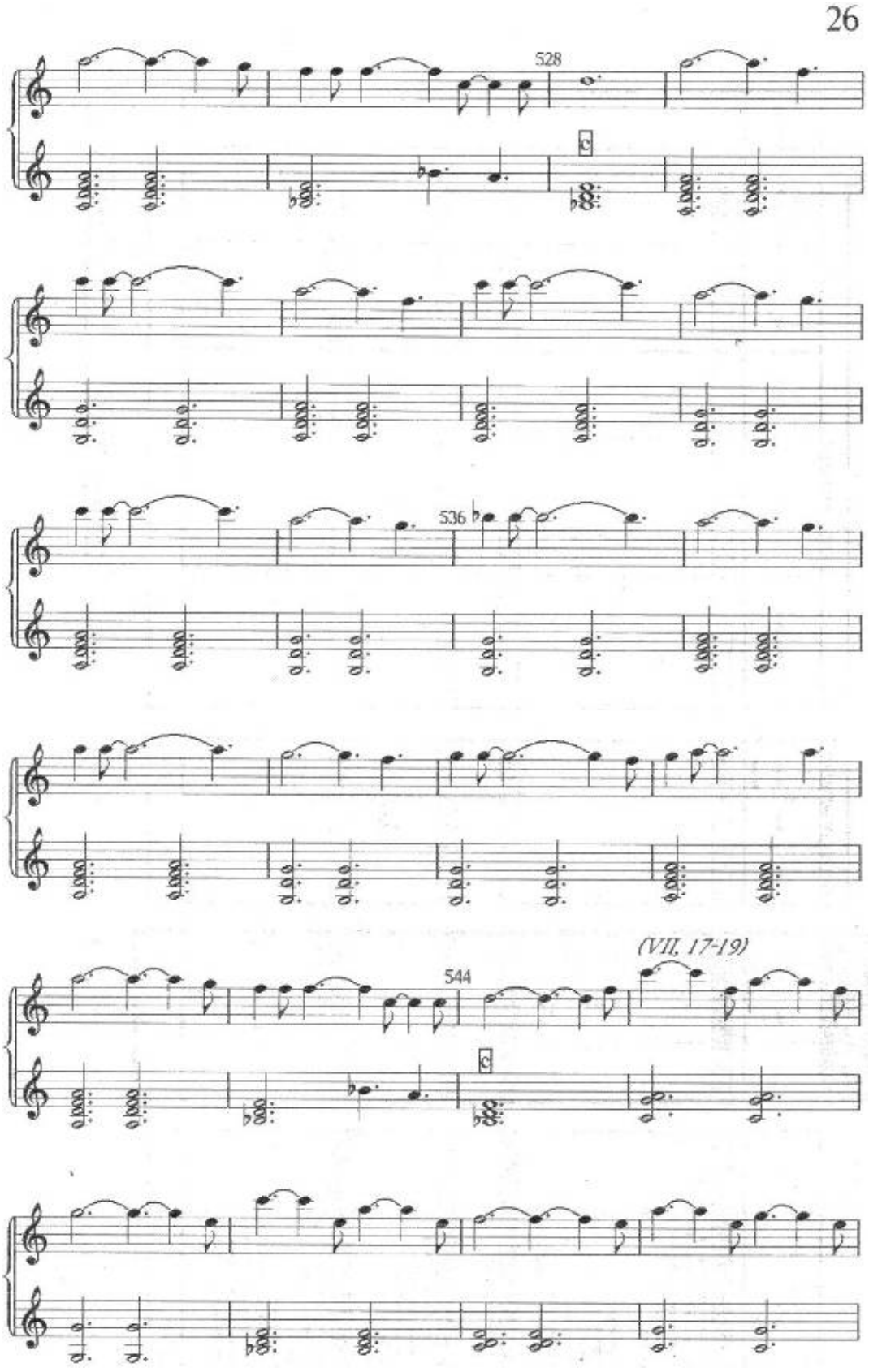
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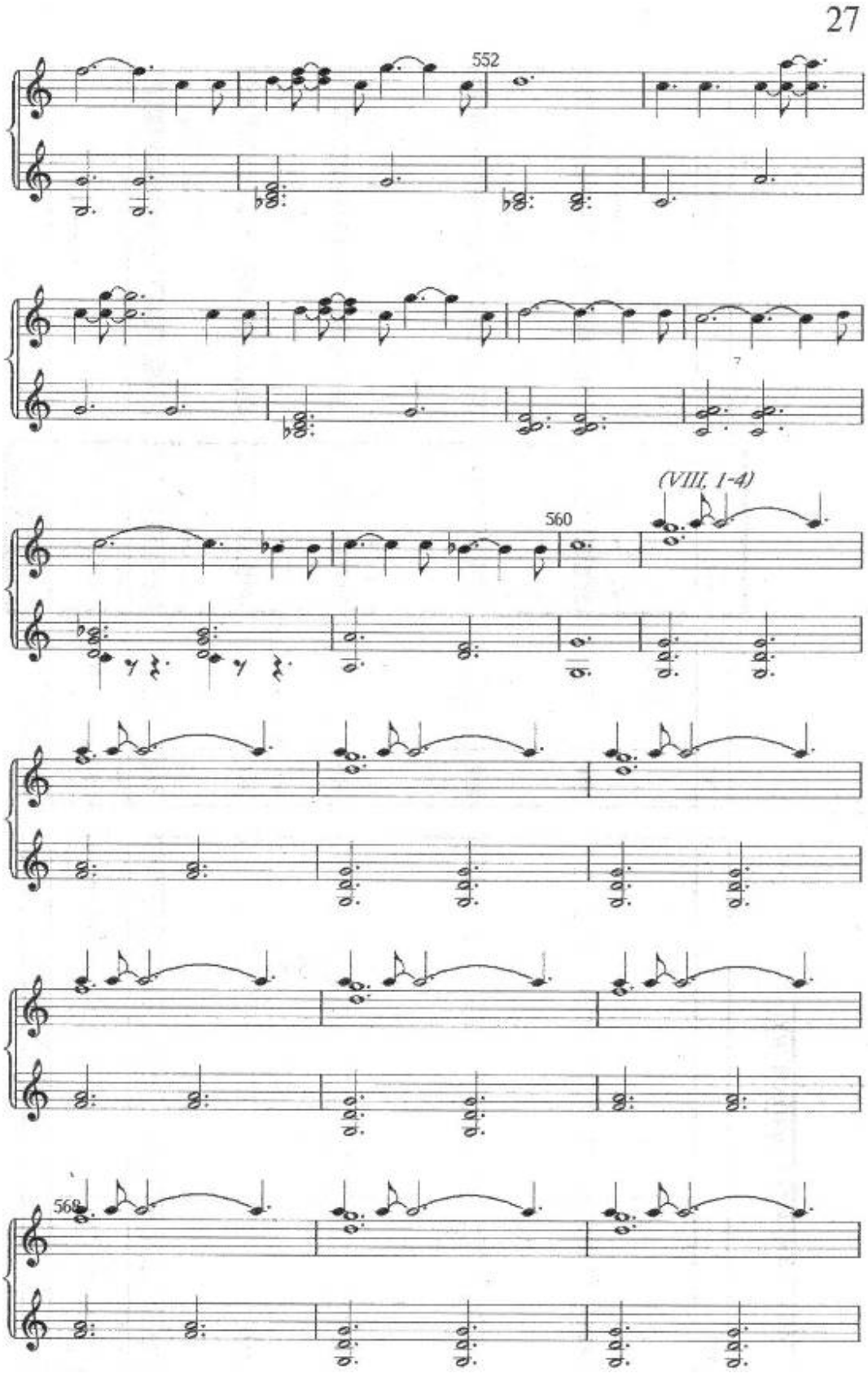
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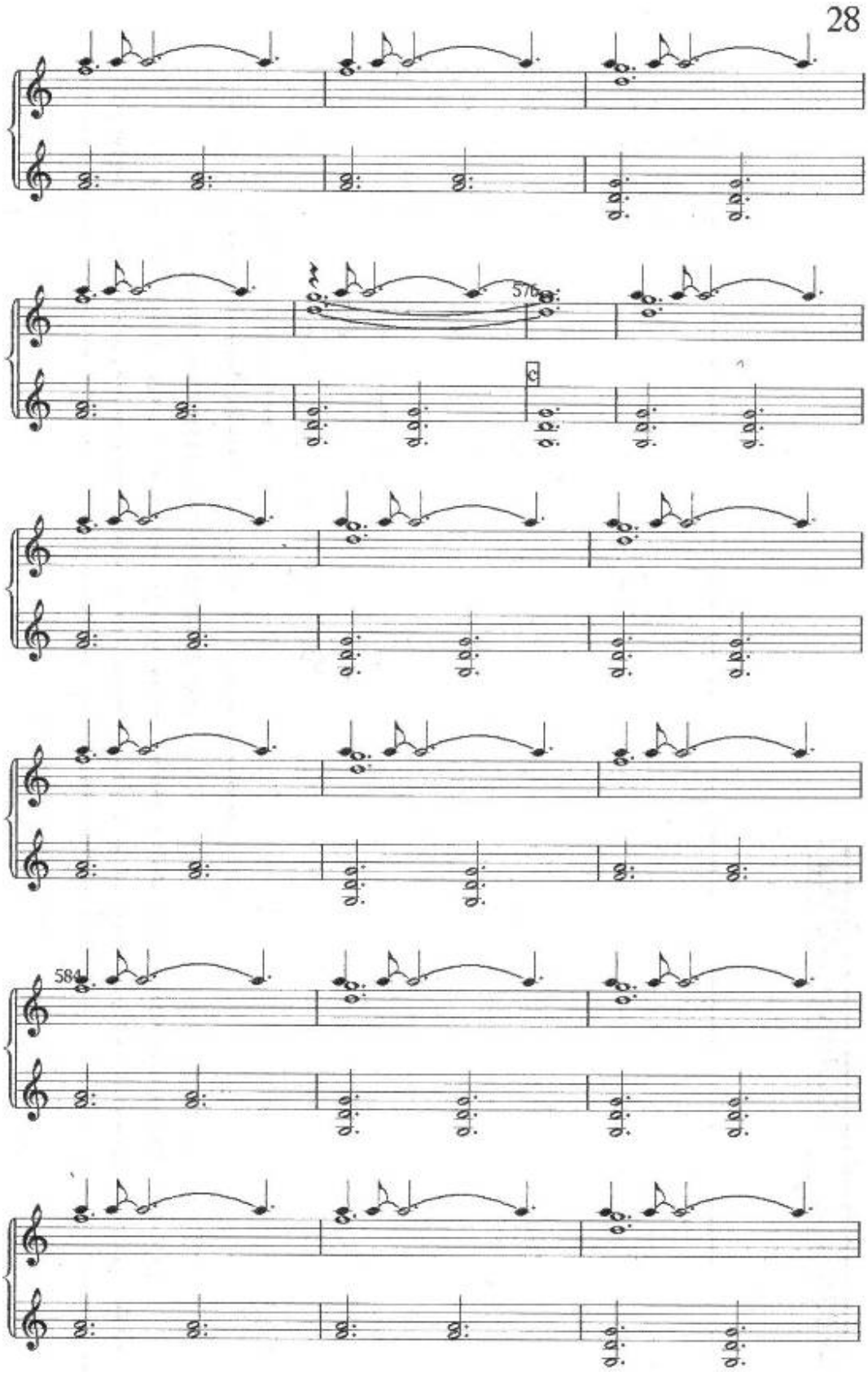
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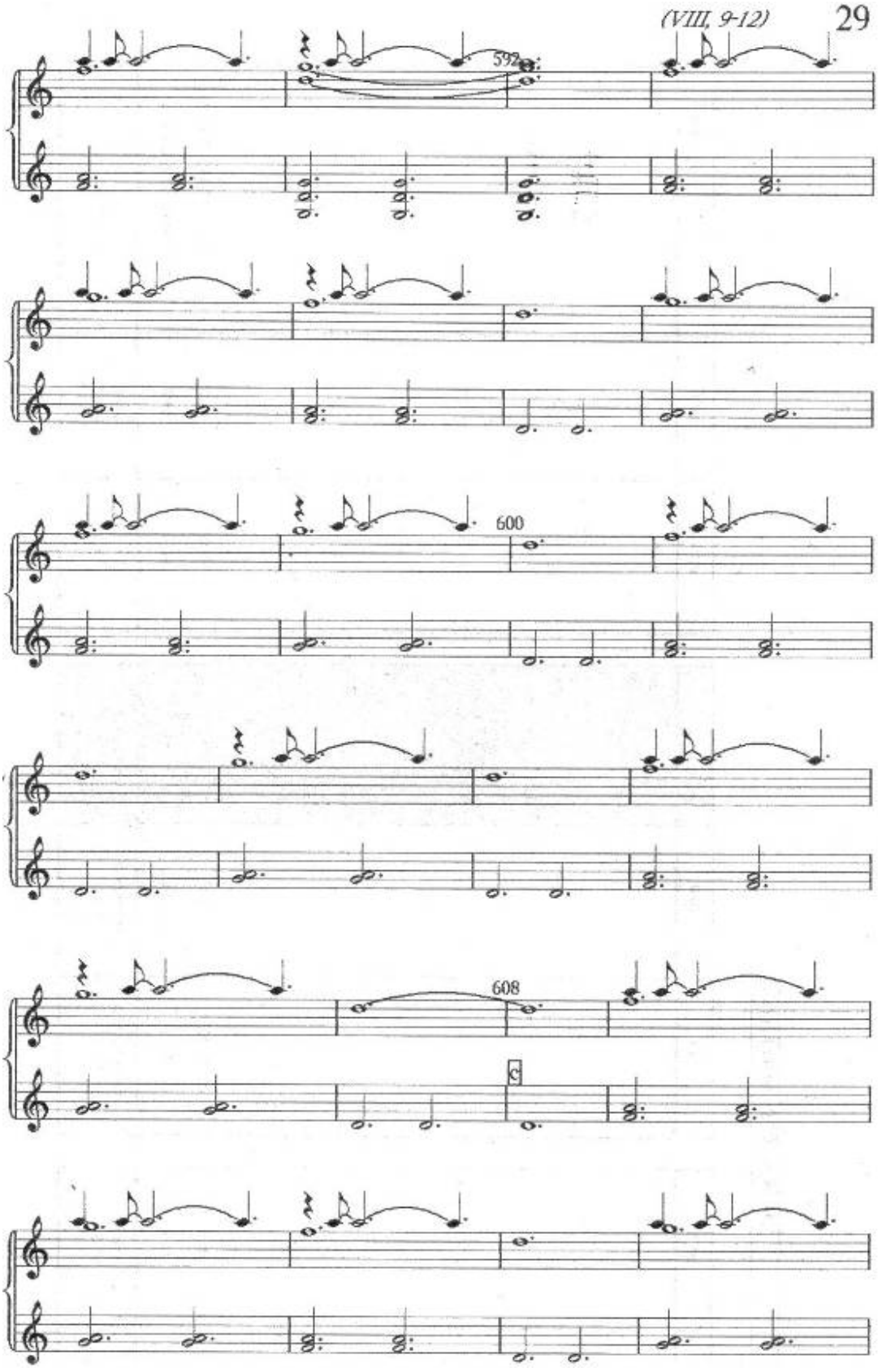
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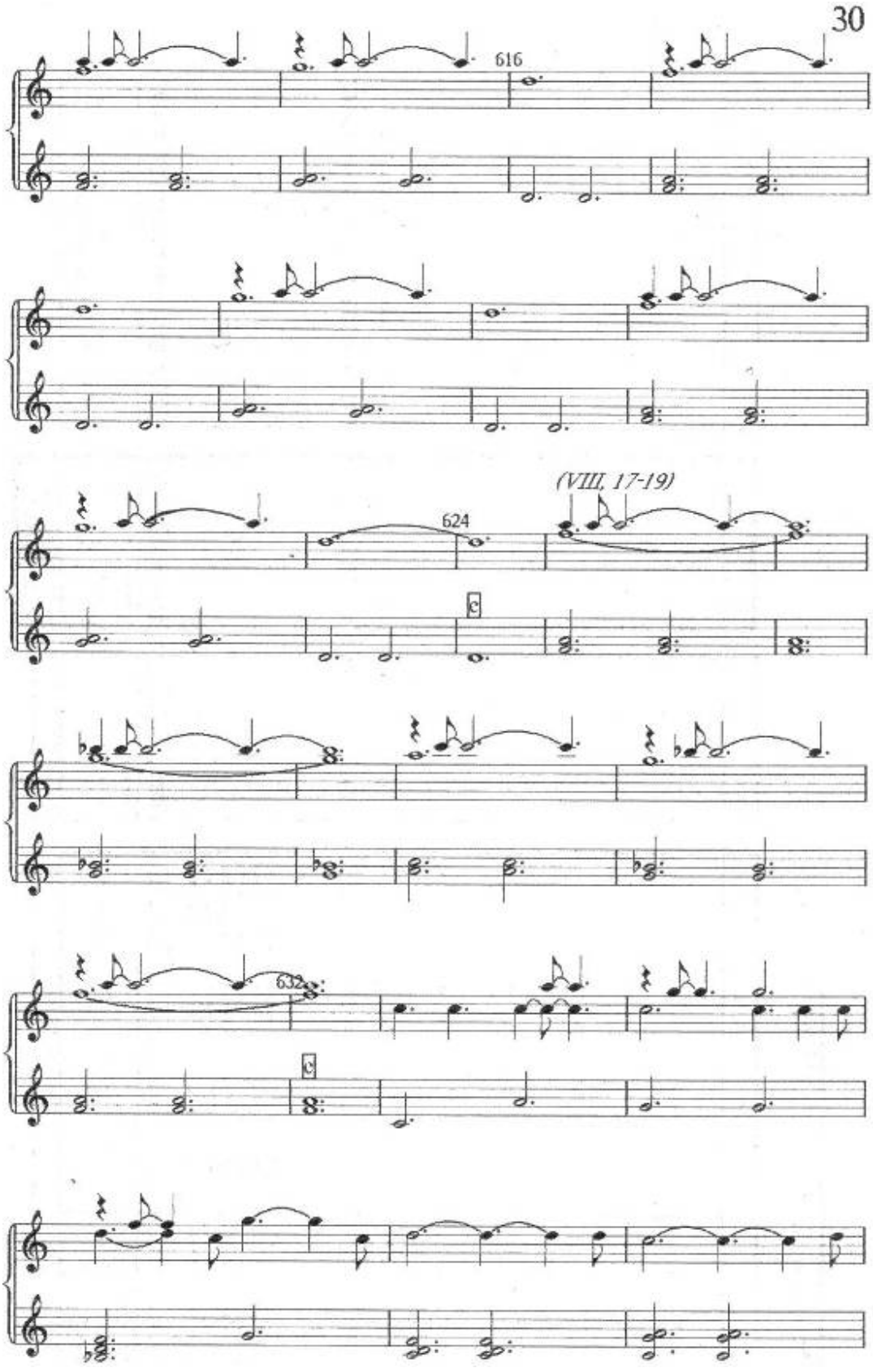
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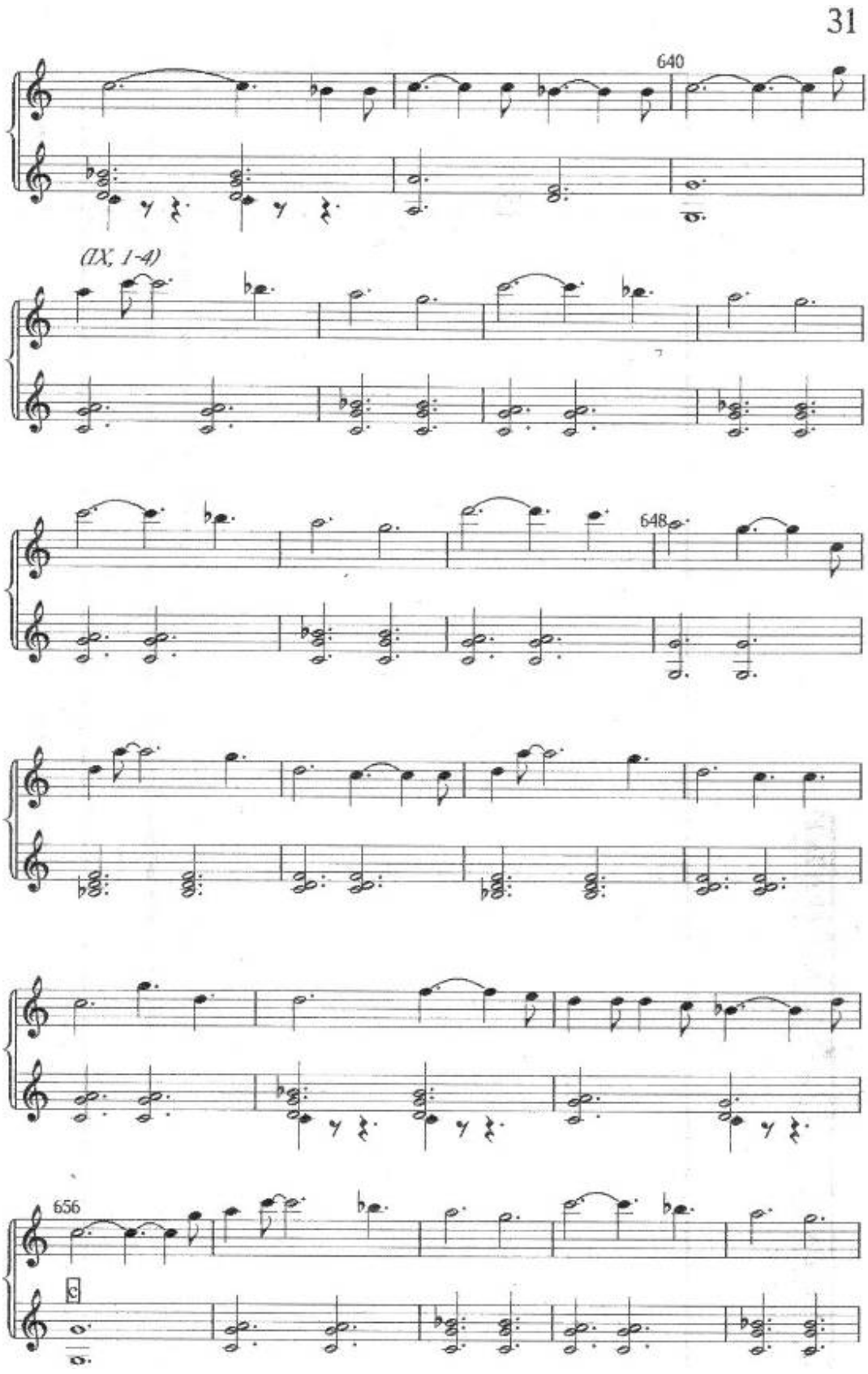
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648
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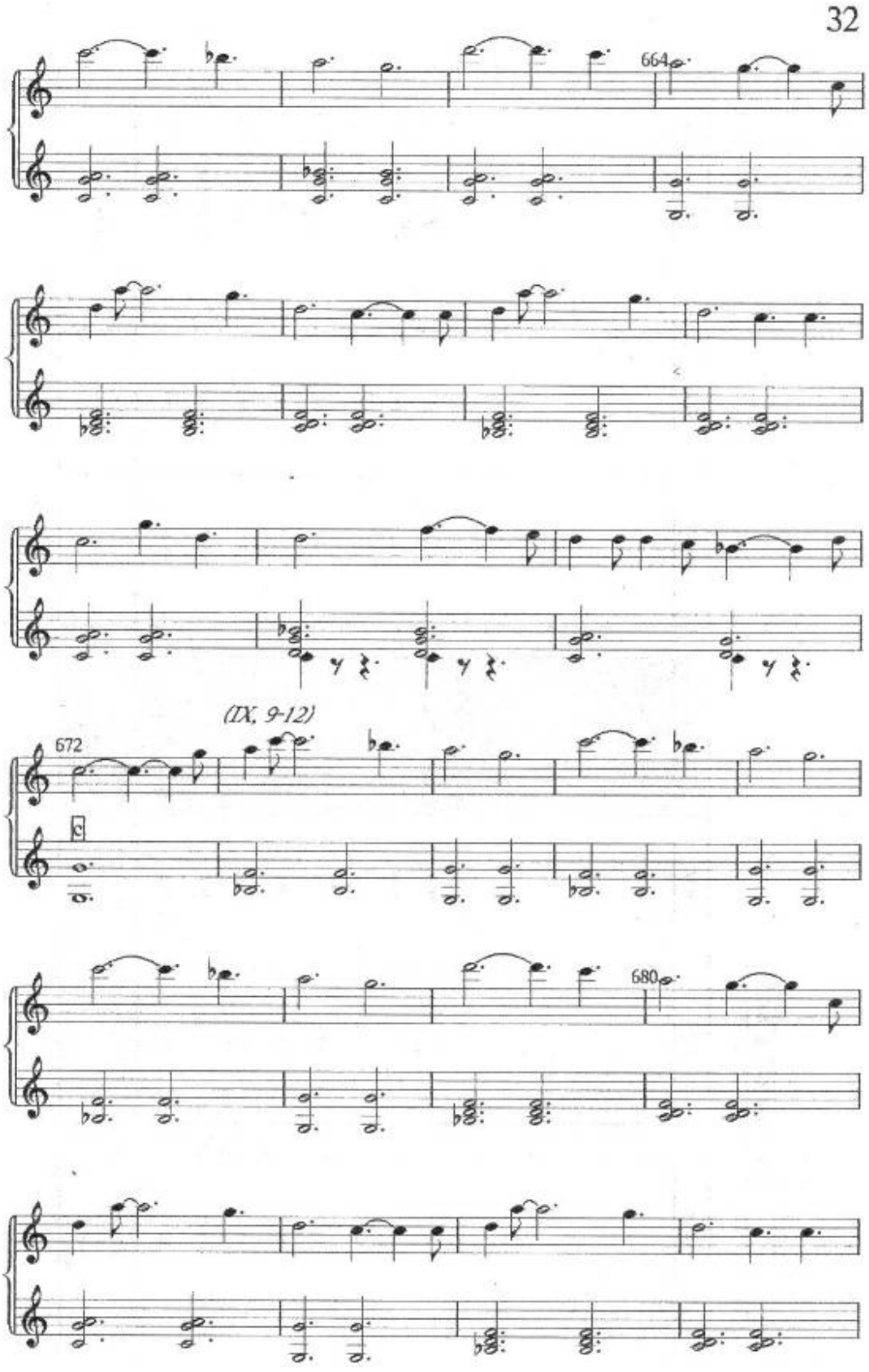
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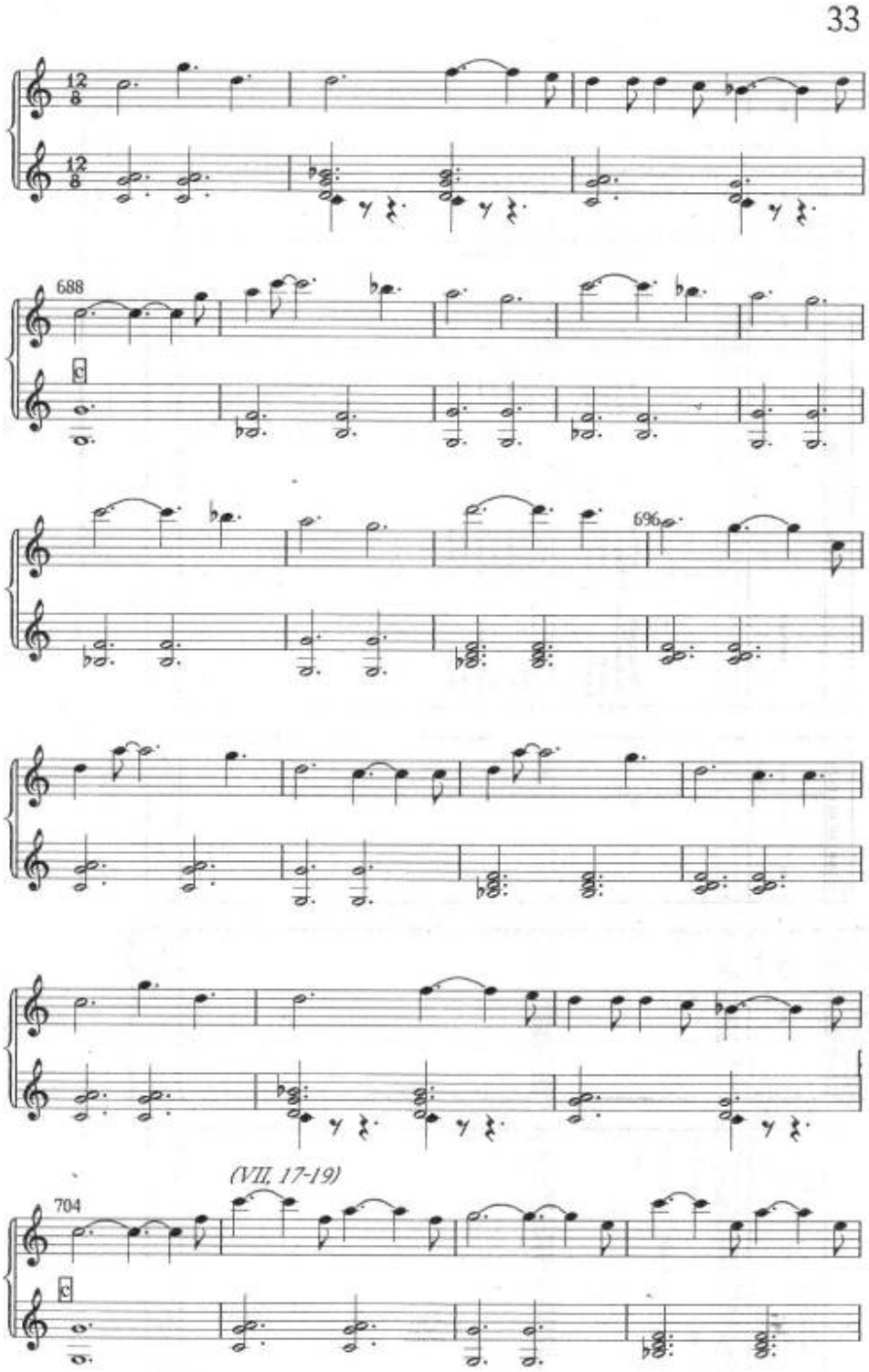
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12/8
12/8
688
696
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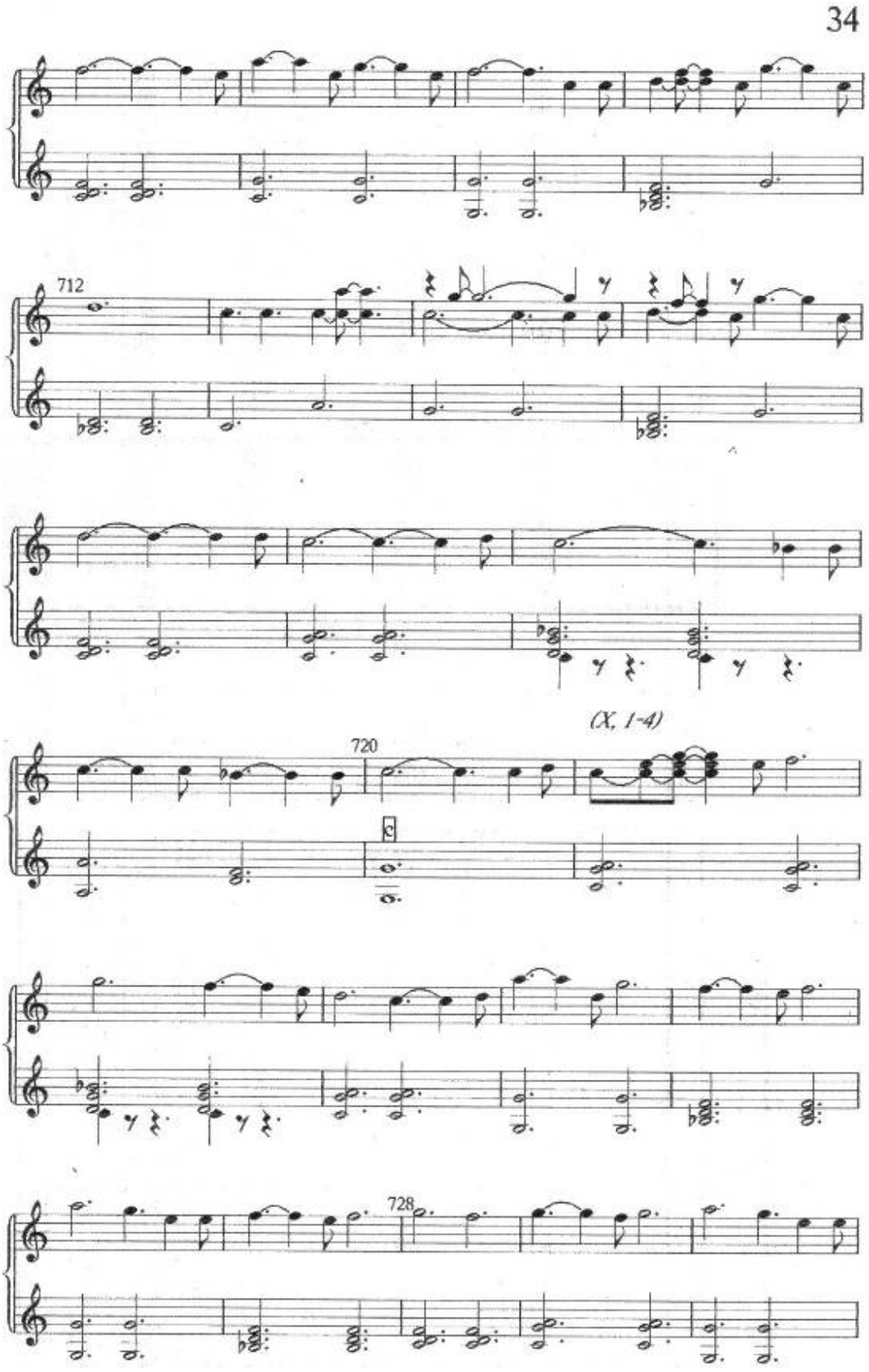
704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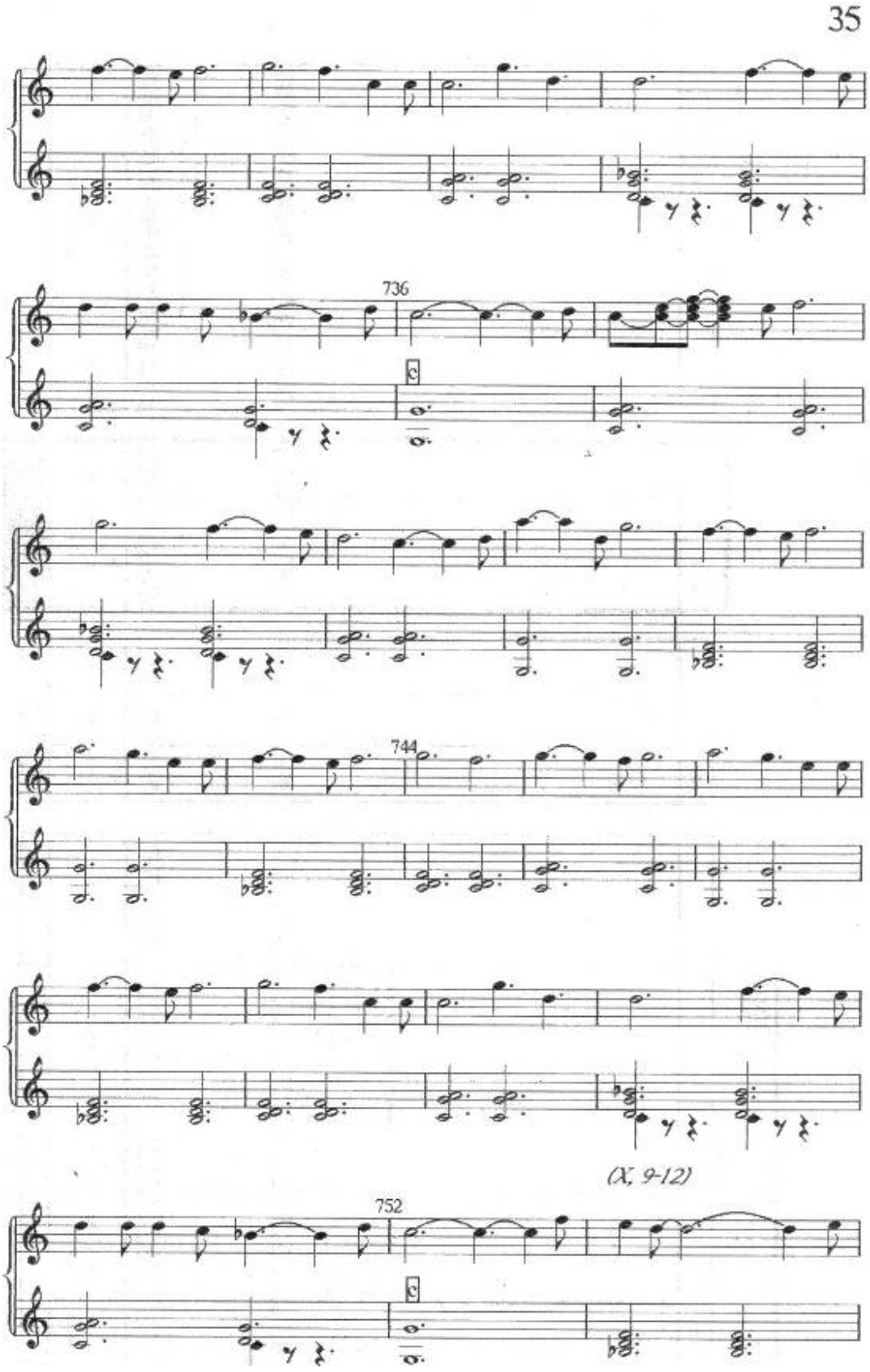
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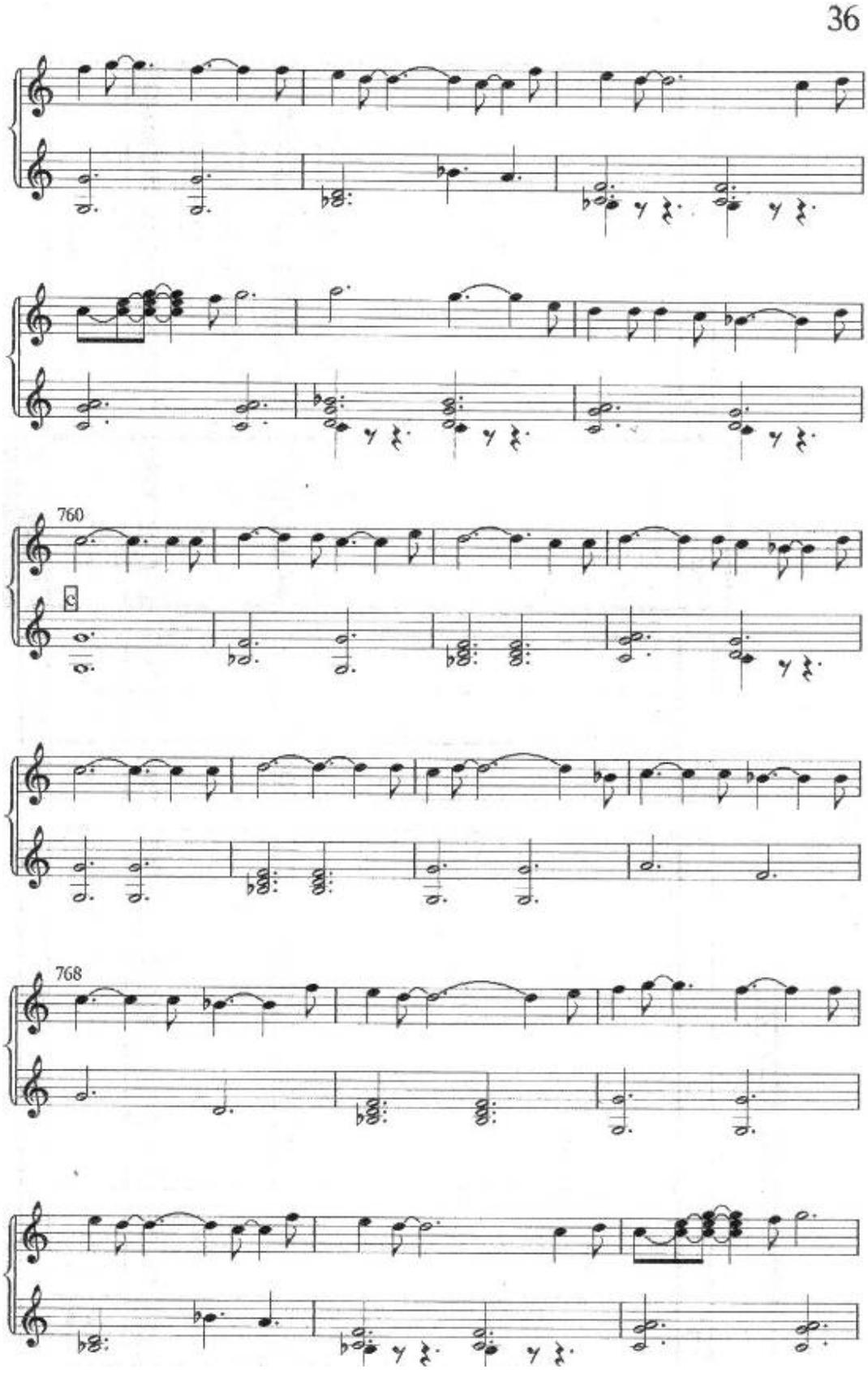
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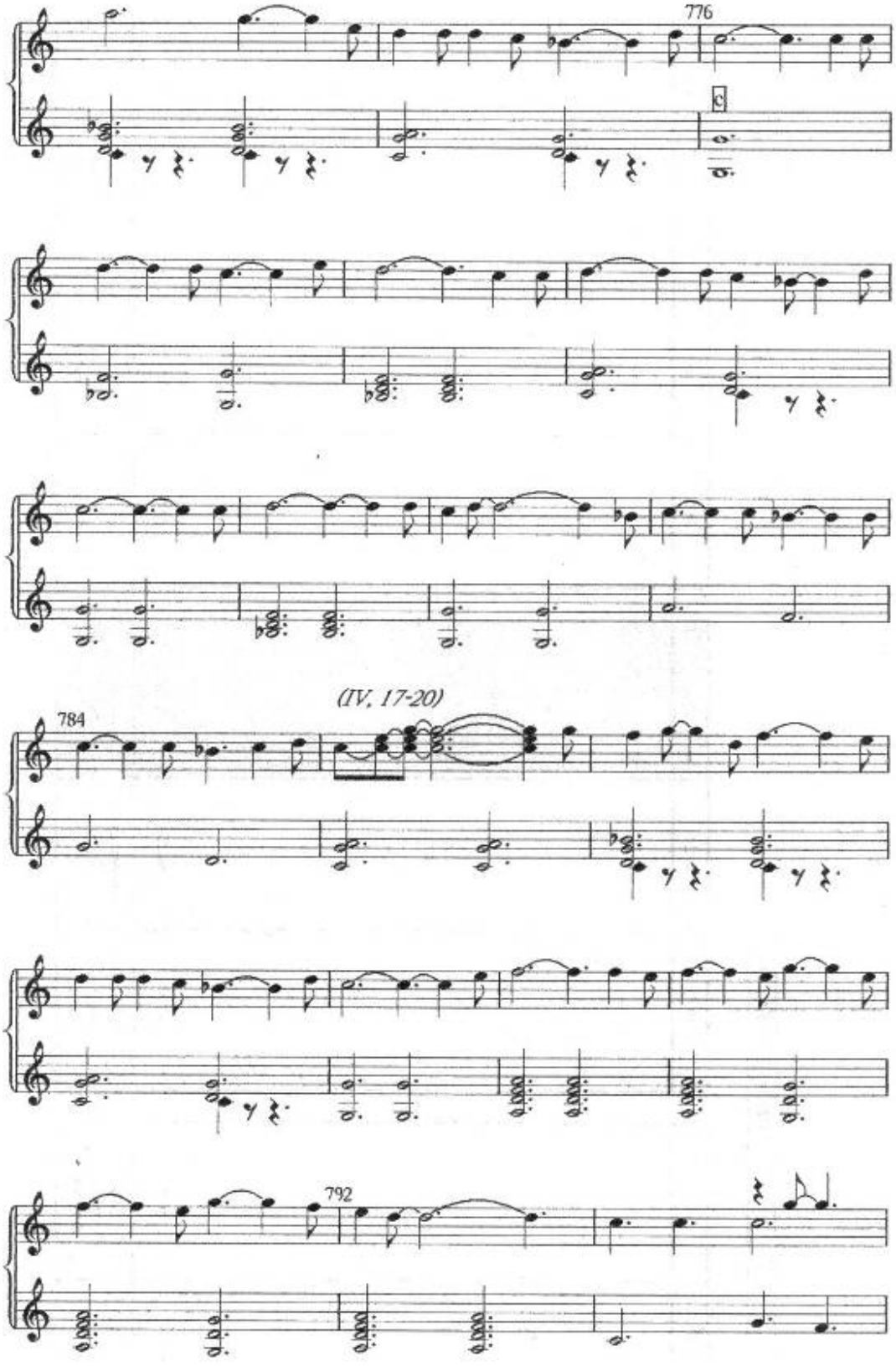
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784
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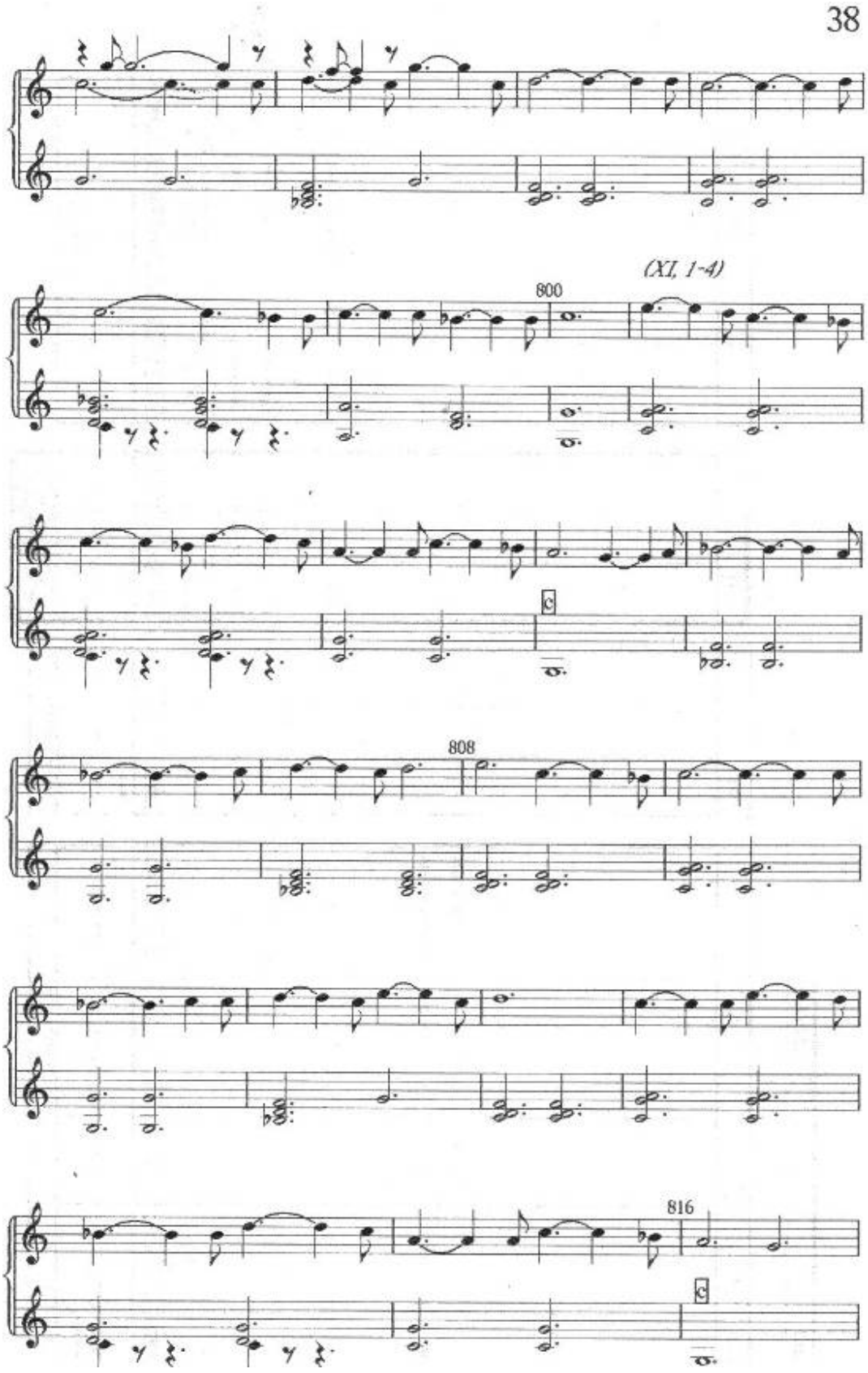
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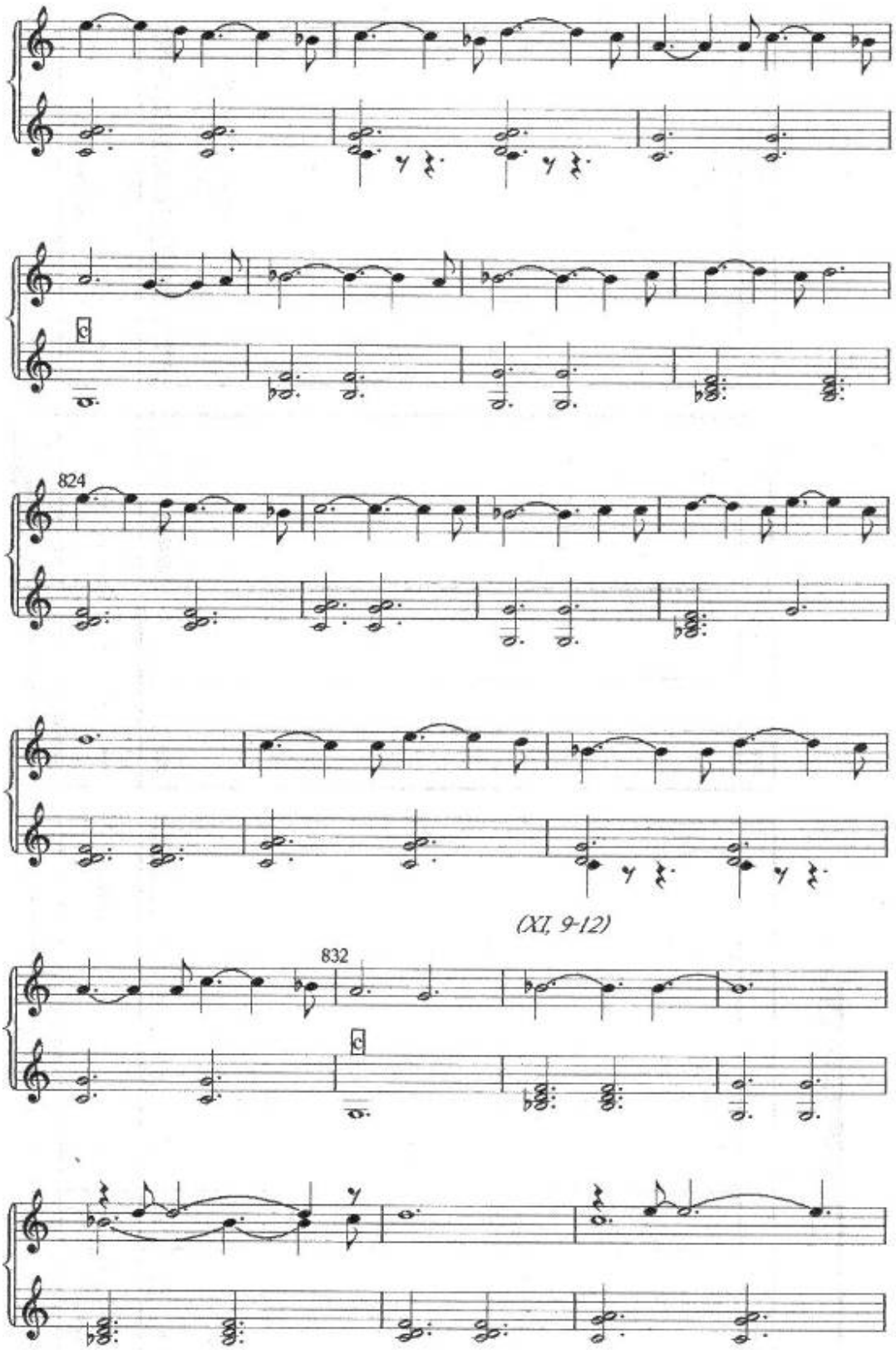
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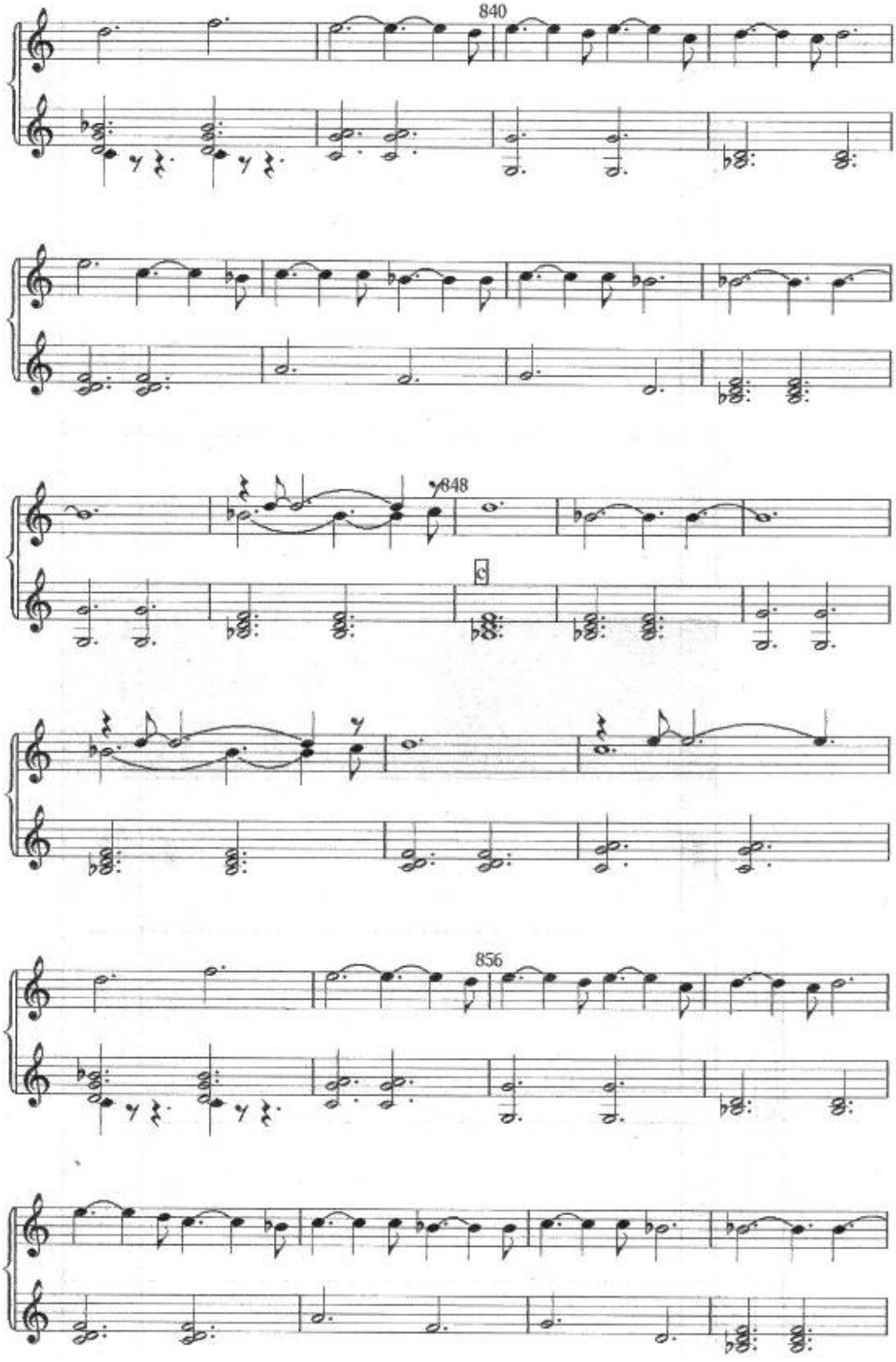
832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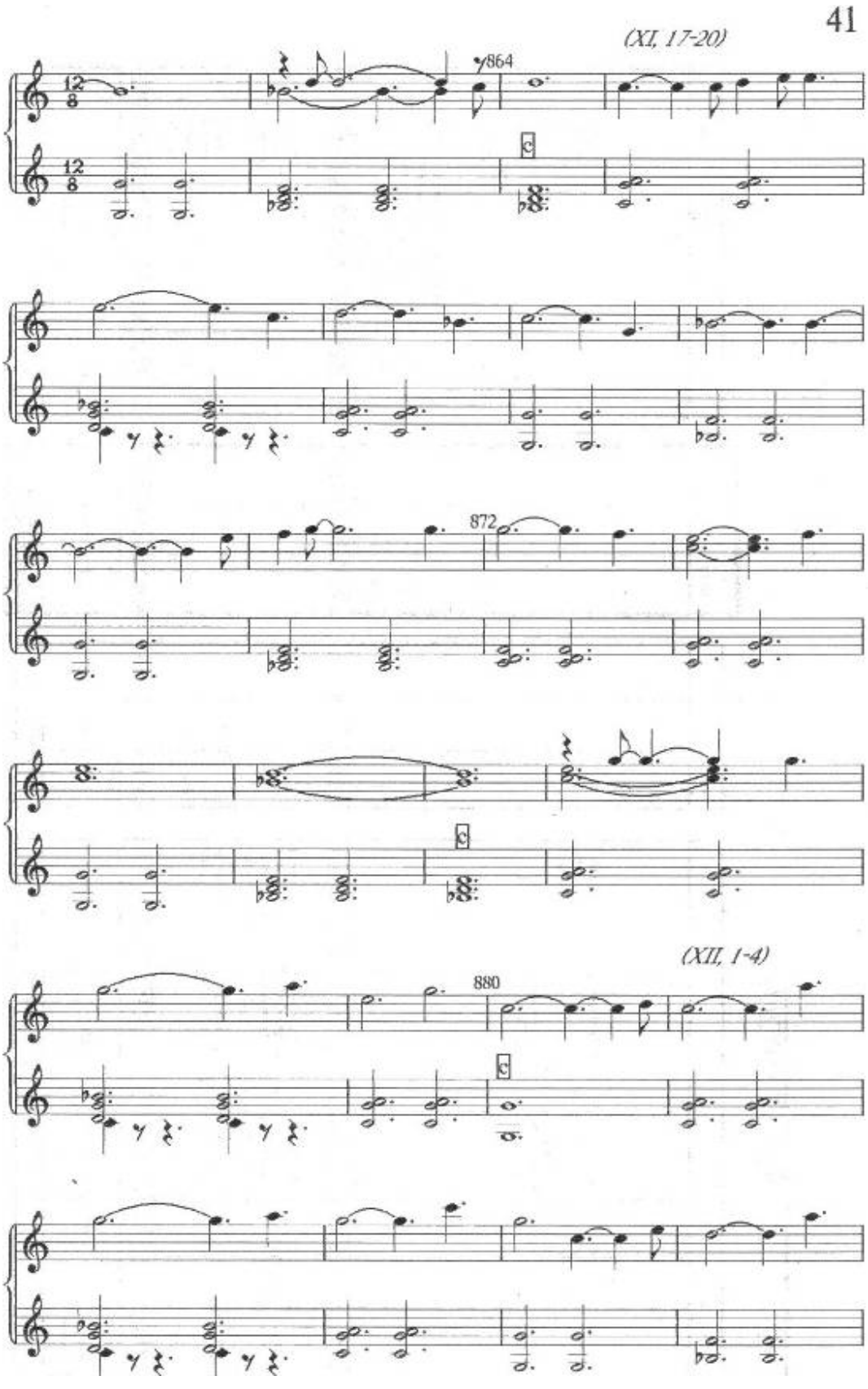
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(XII, 1-4)
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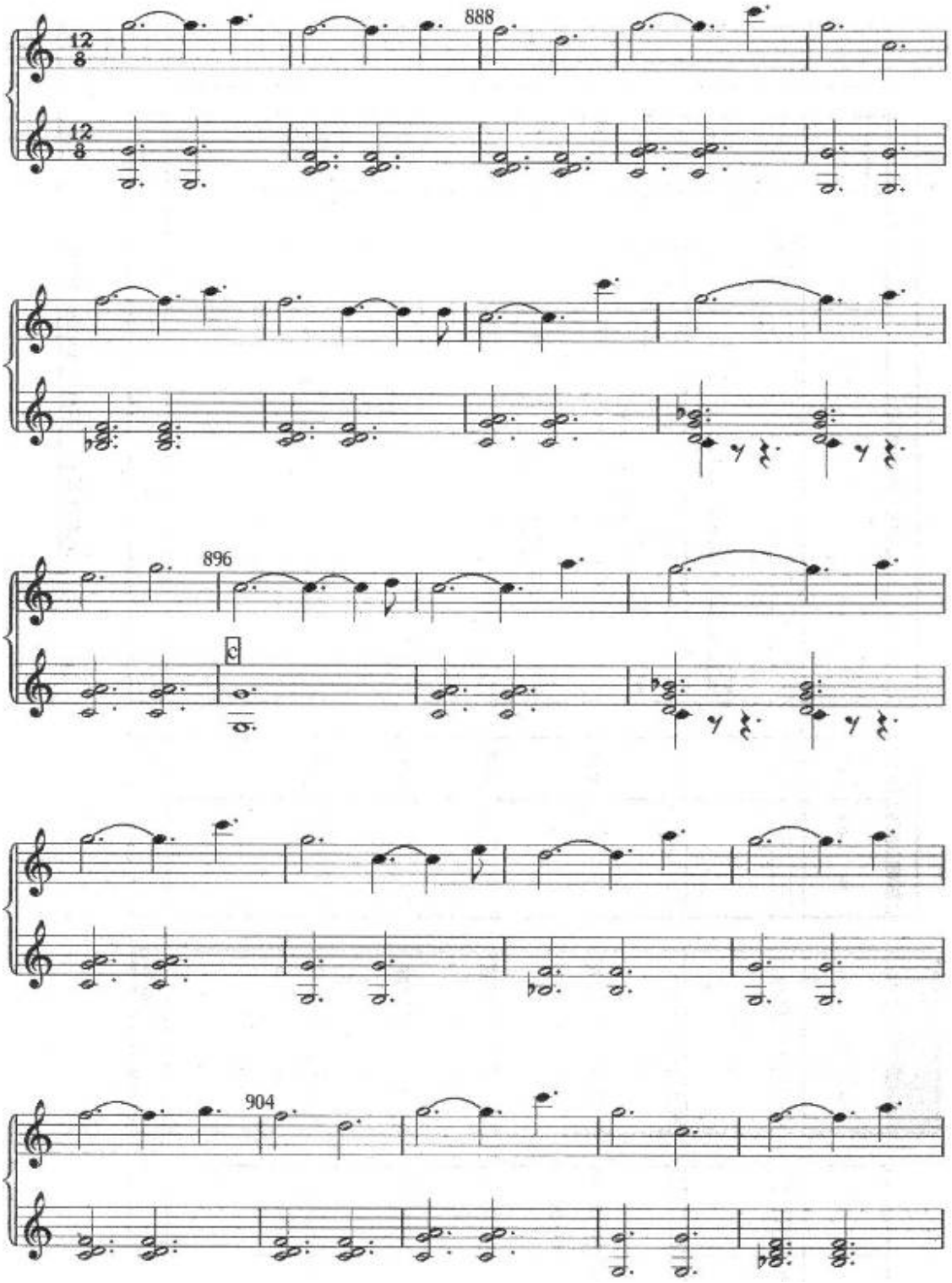
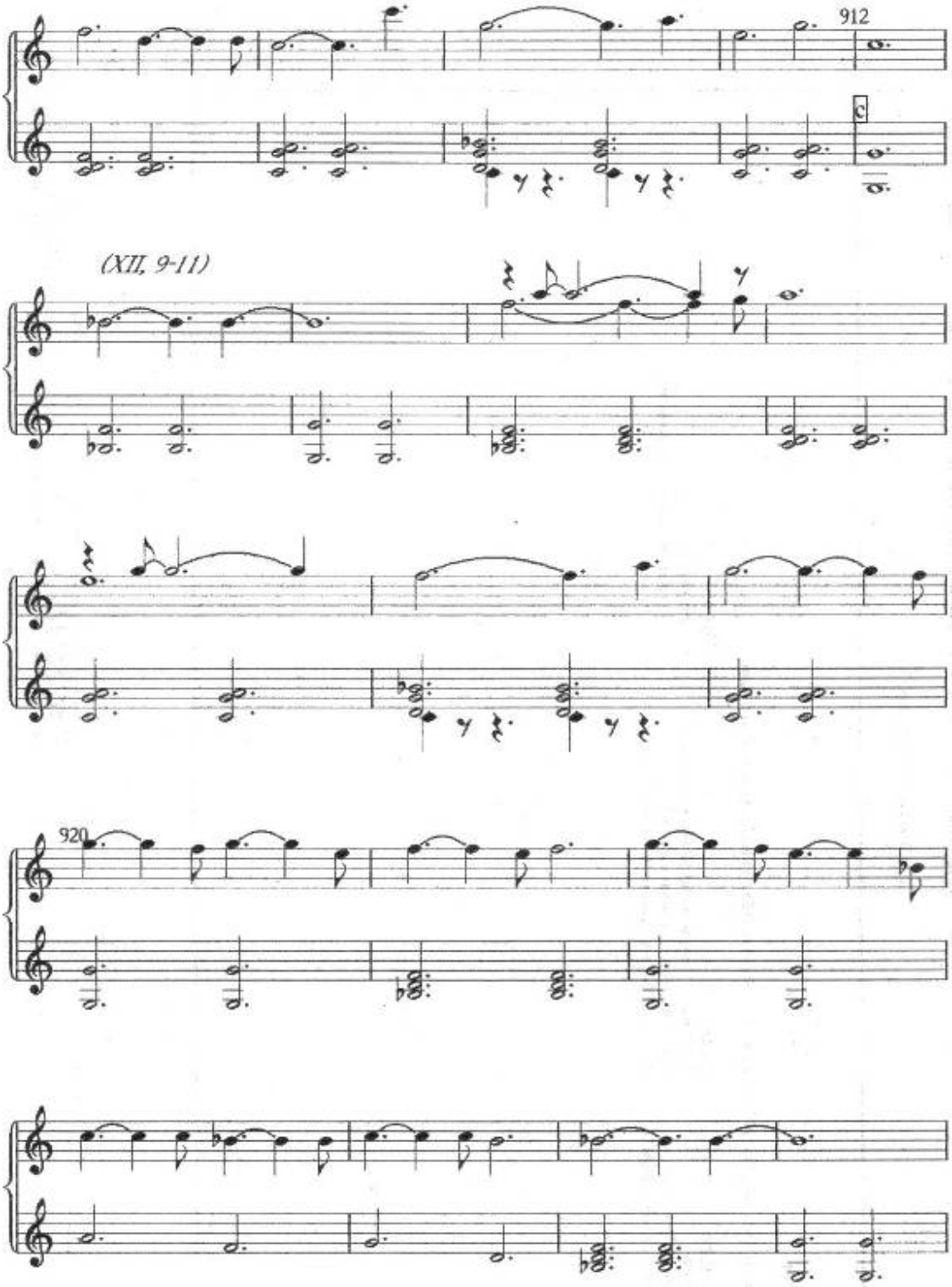
42

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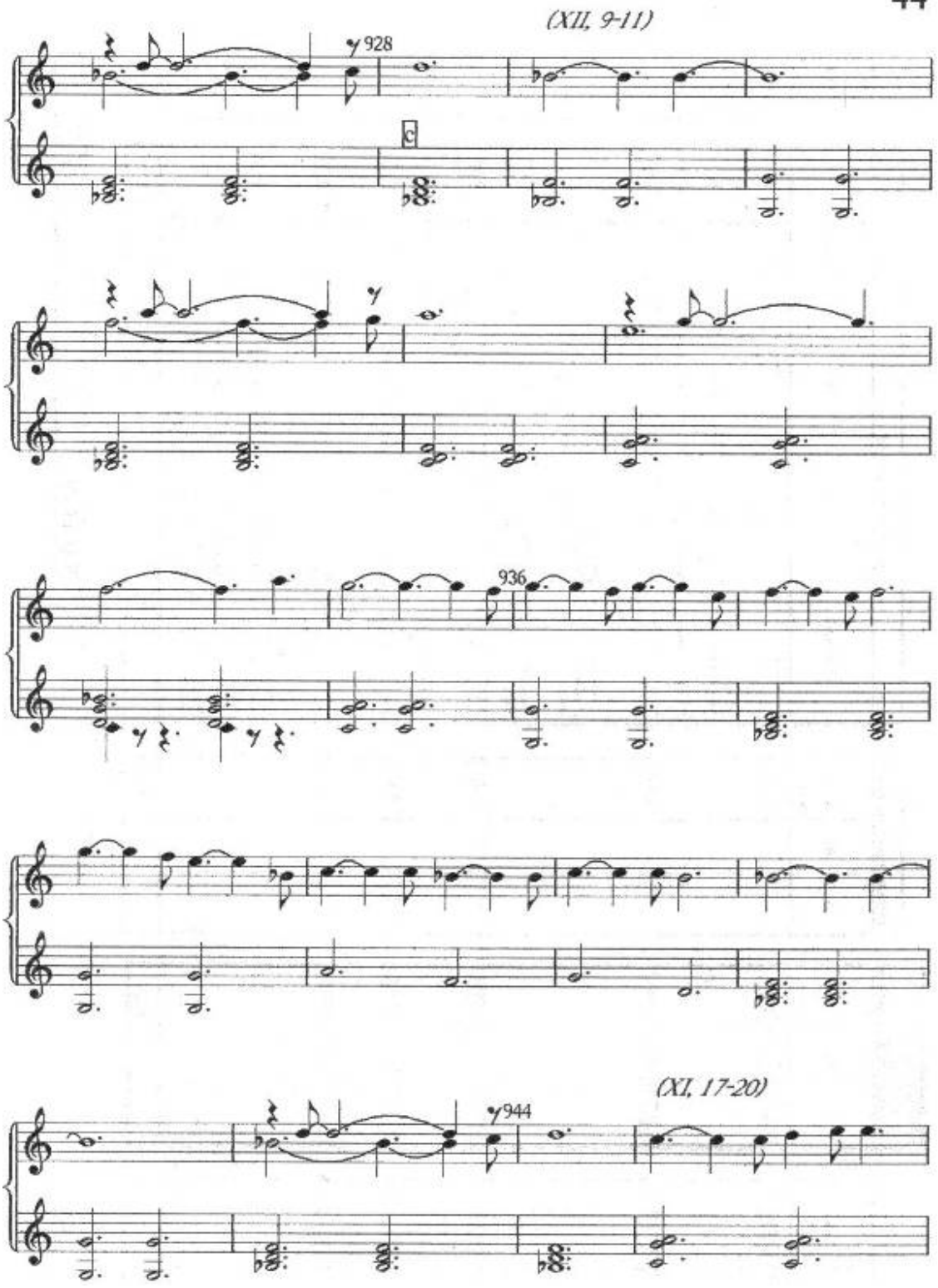
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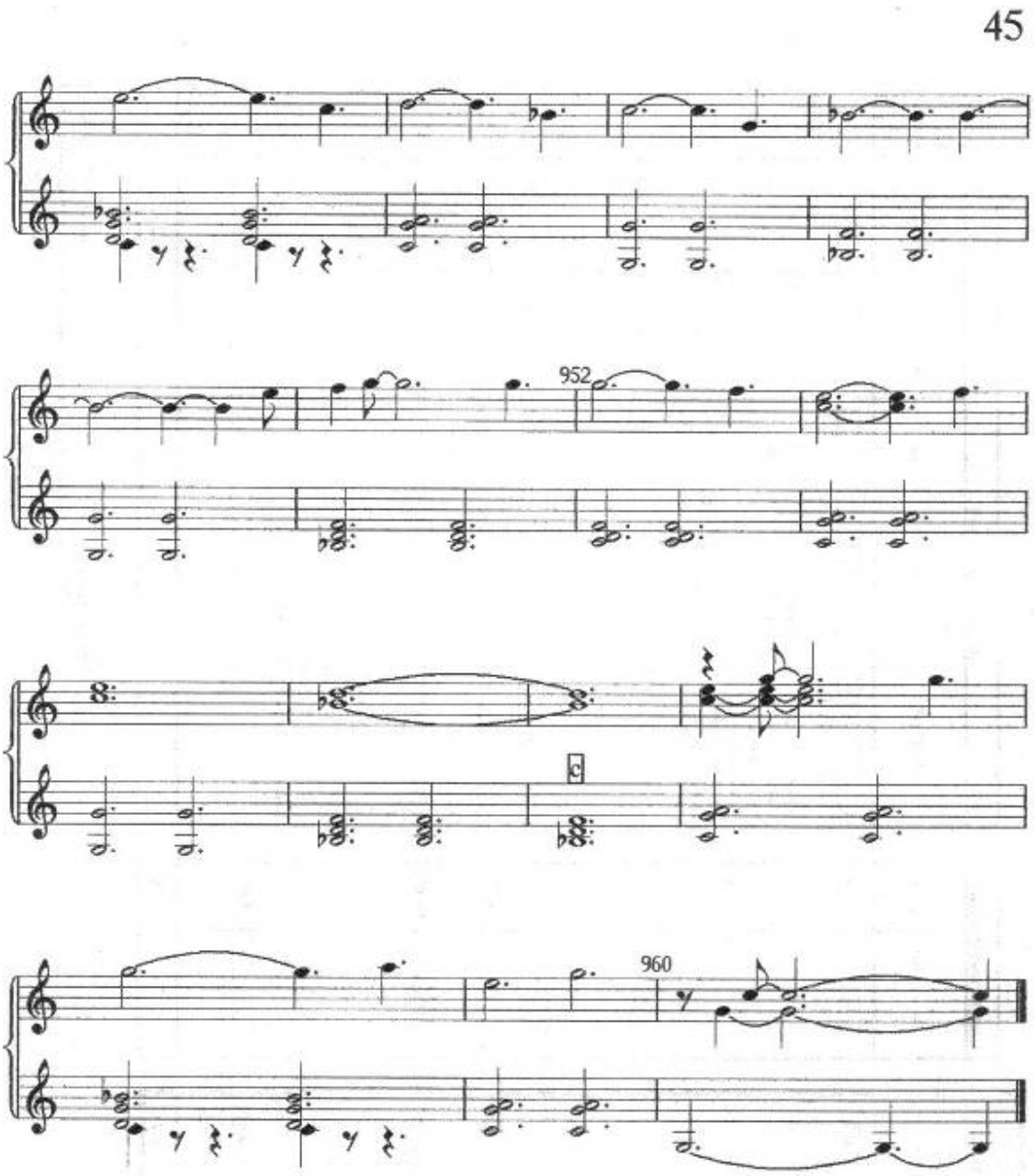
936
(XI, 17-20)
944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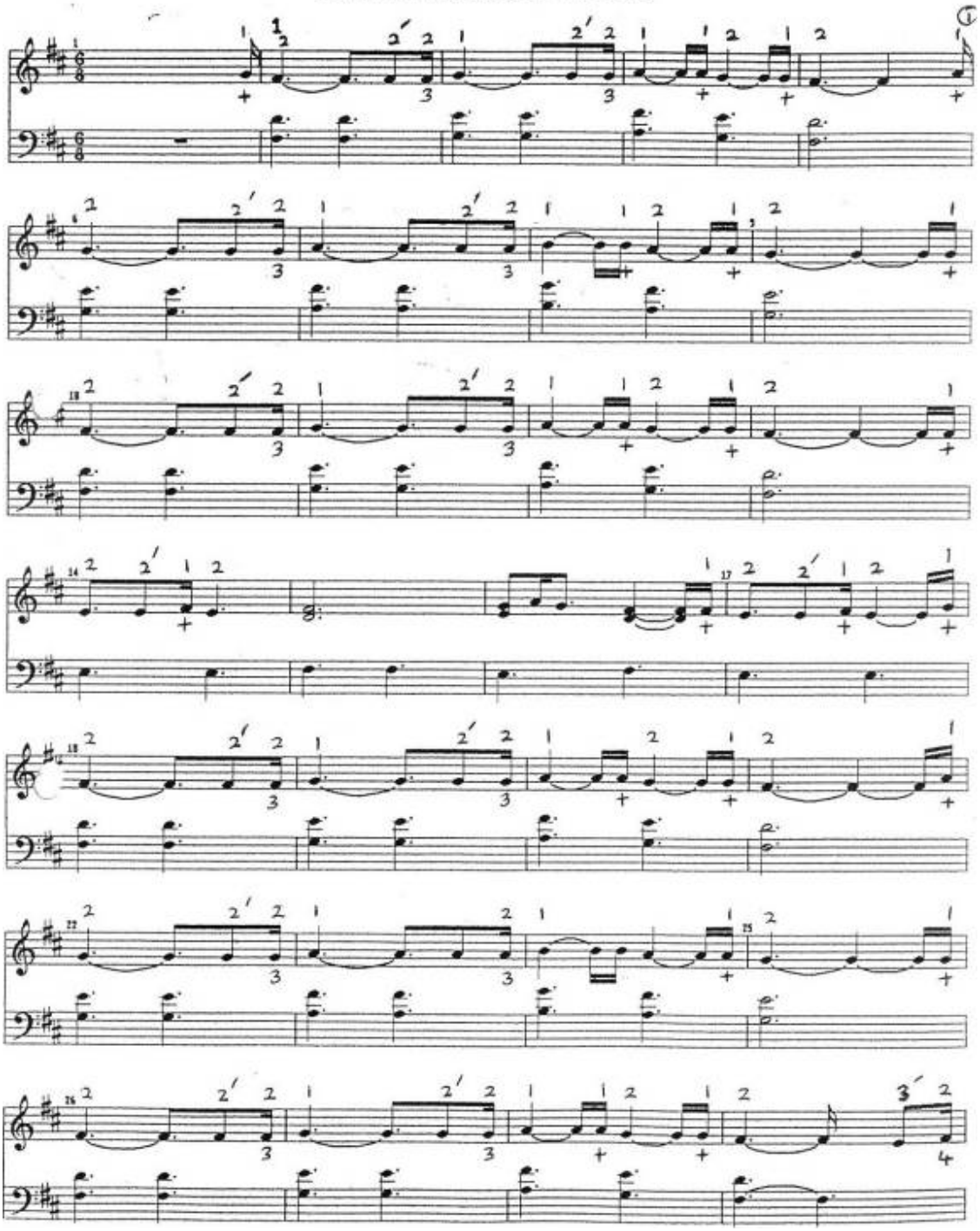
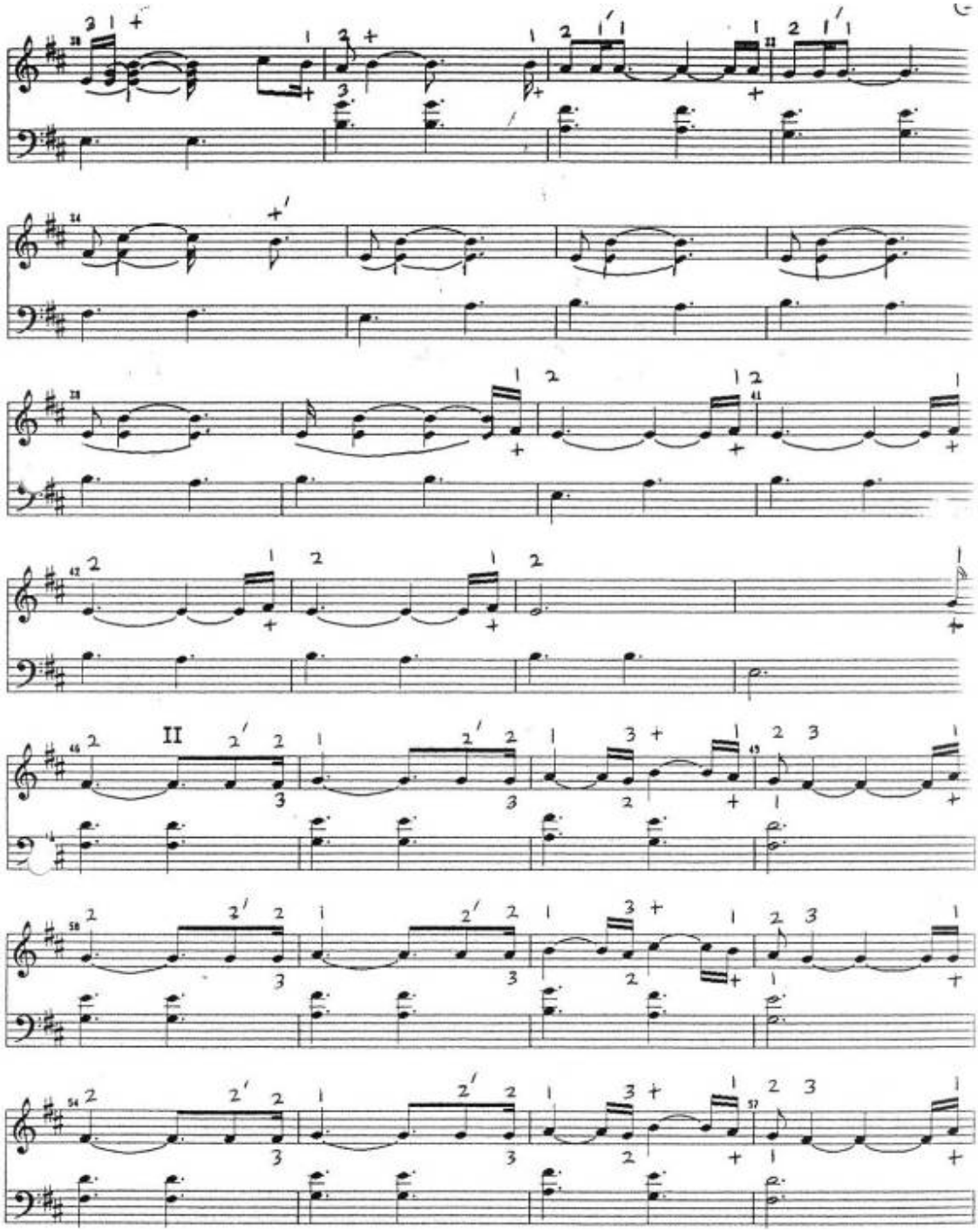
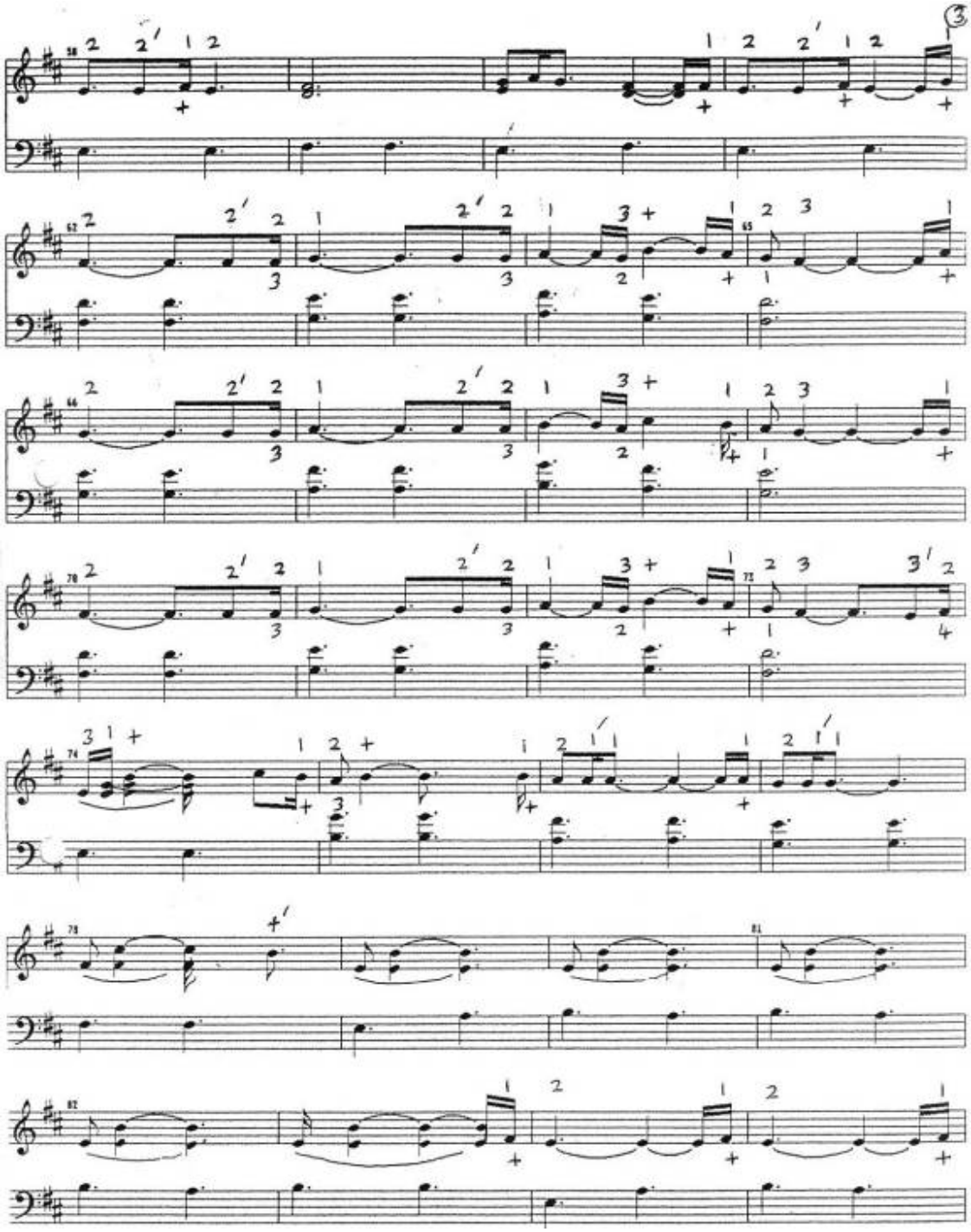
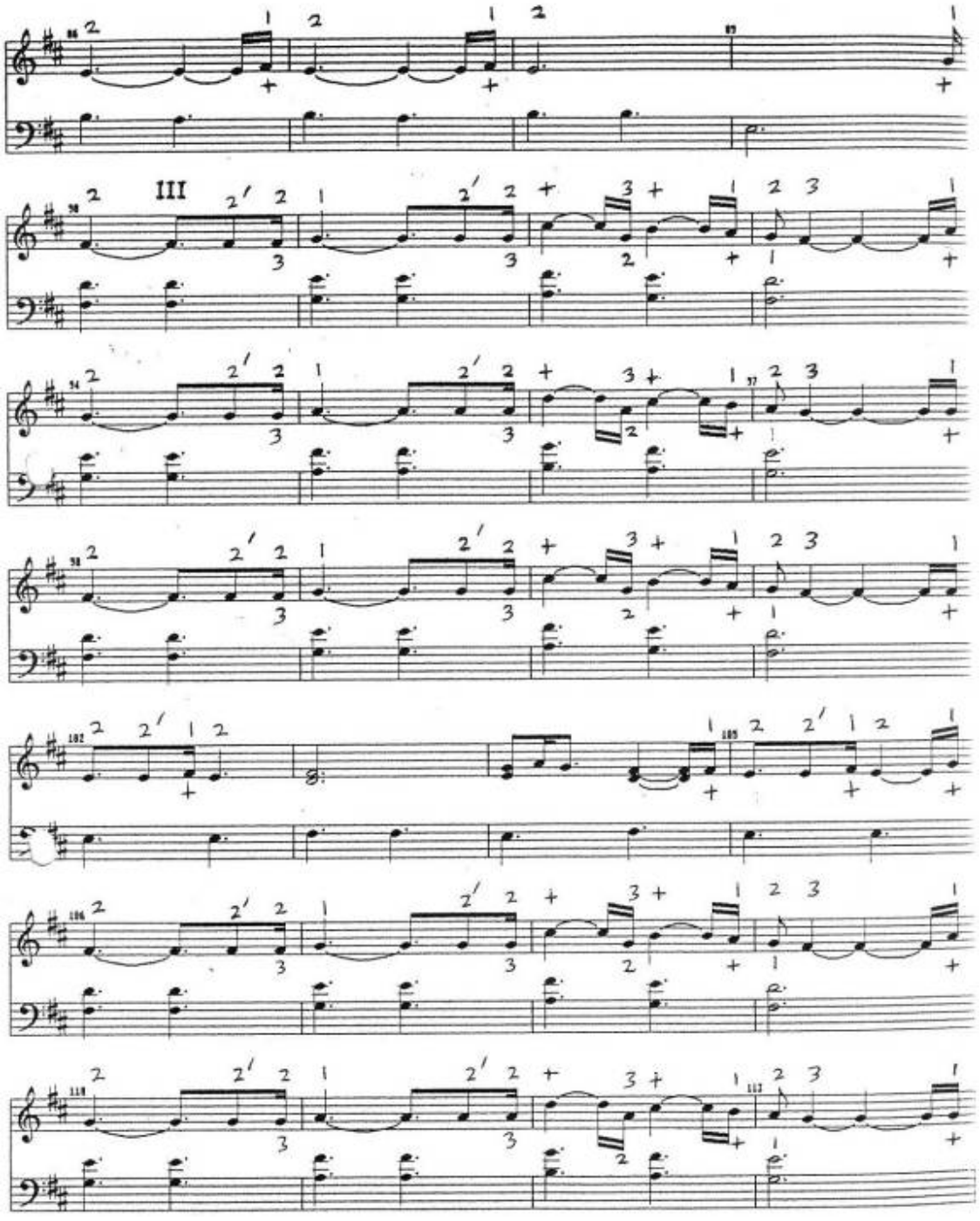
960

CANIAD MARWNAD IFAN AB Y GOF





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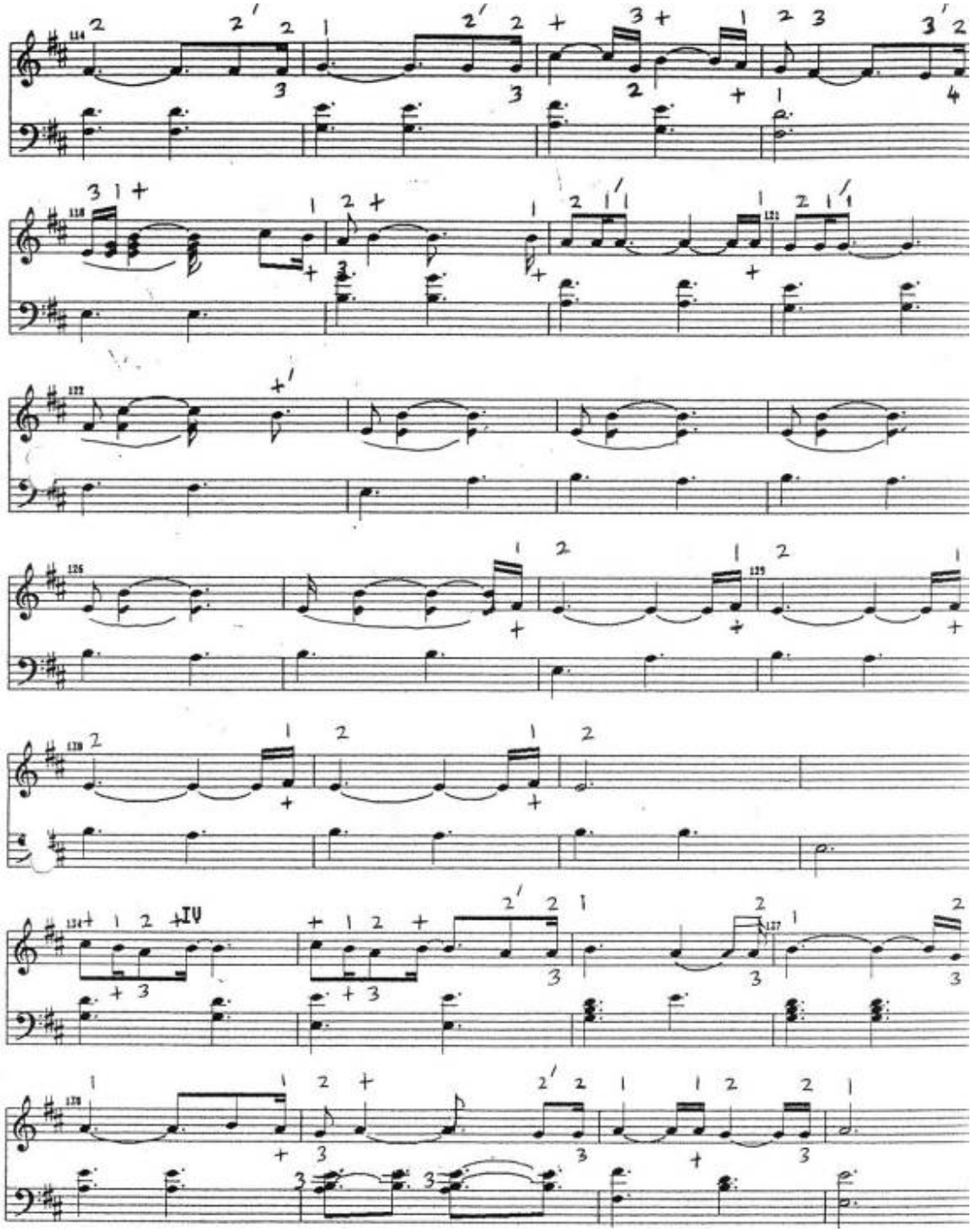
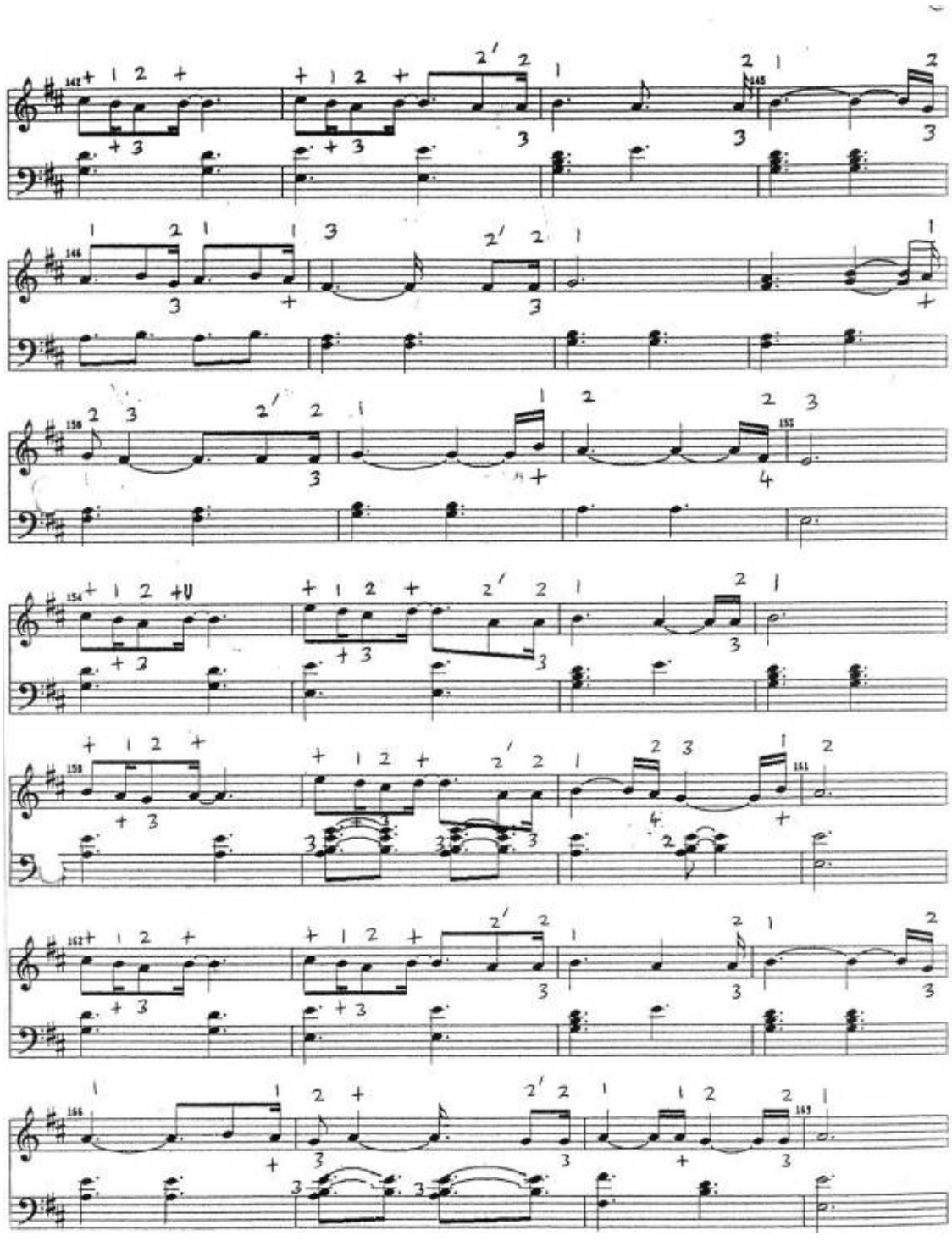
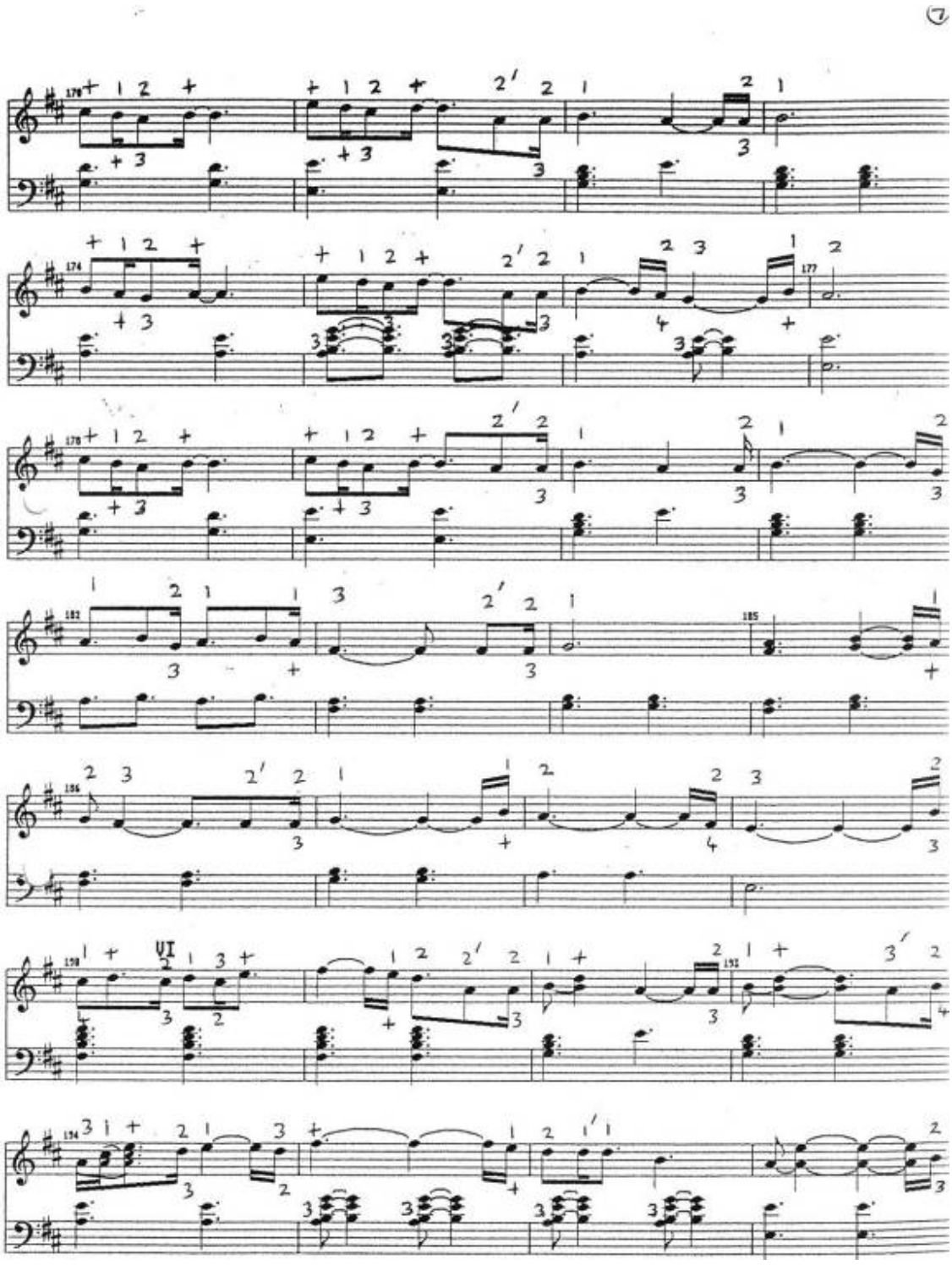
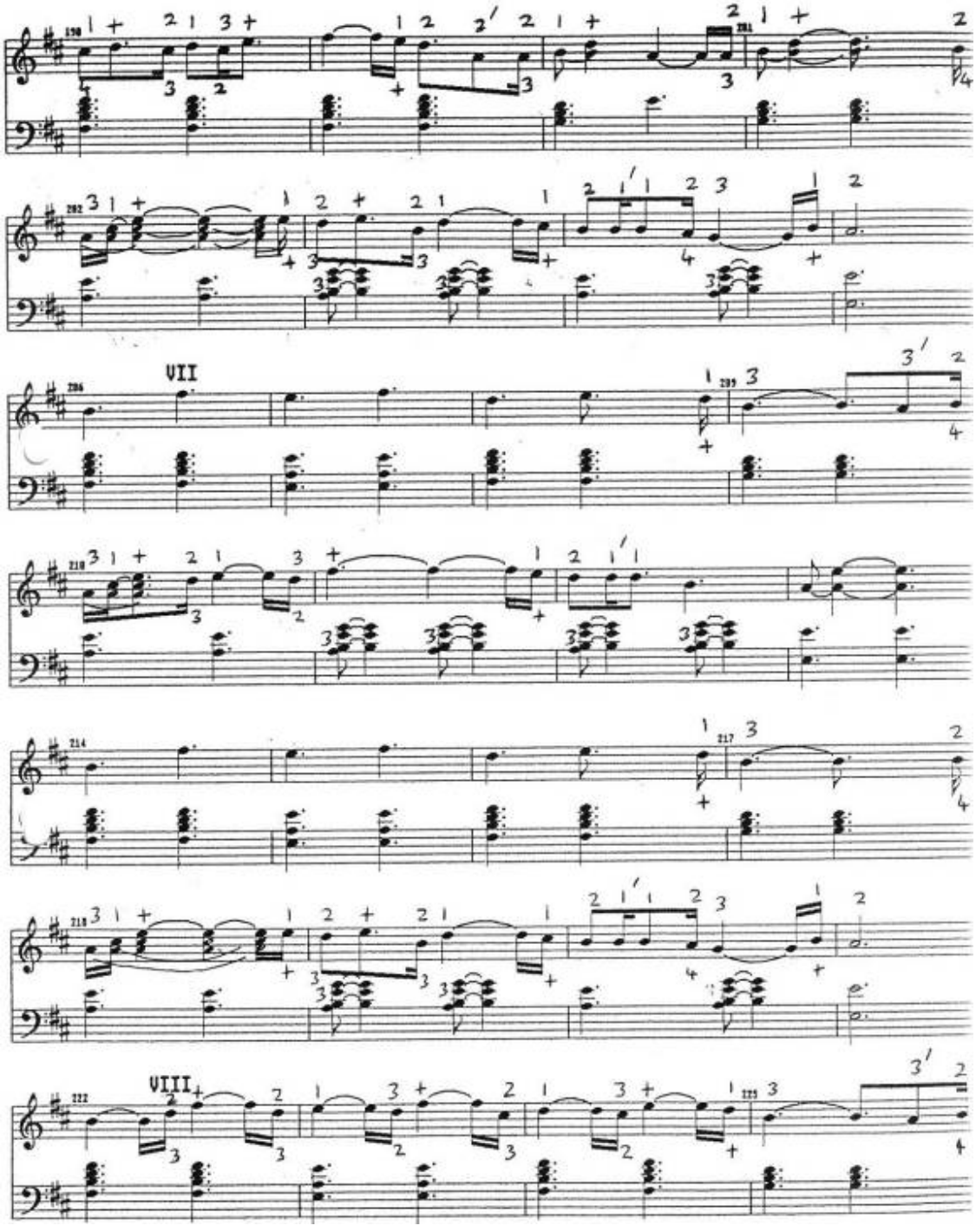
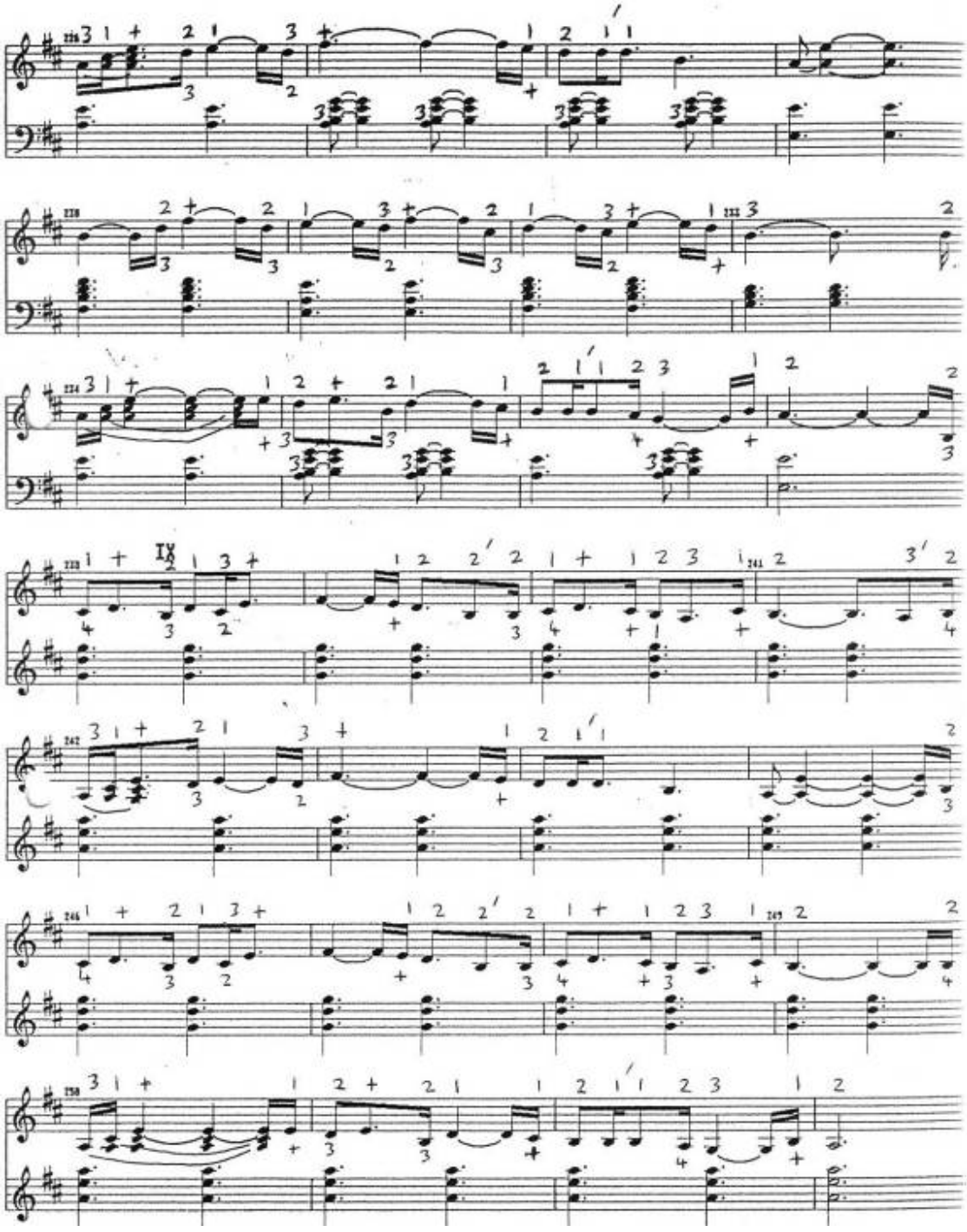
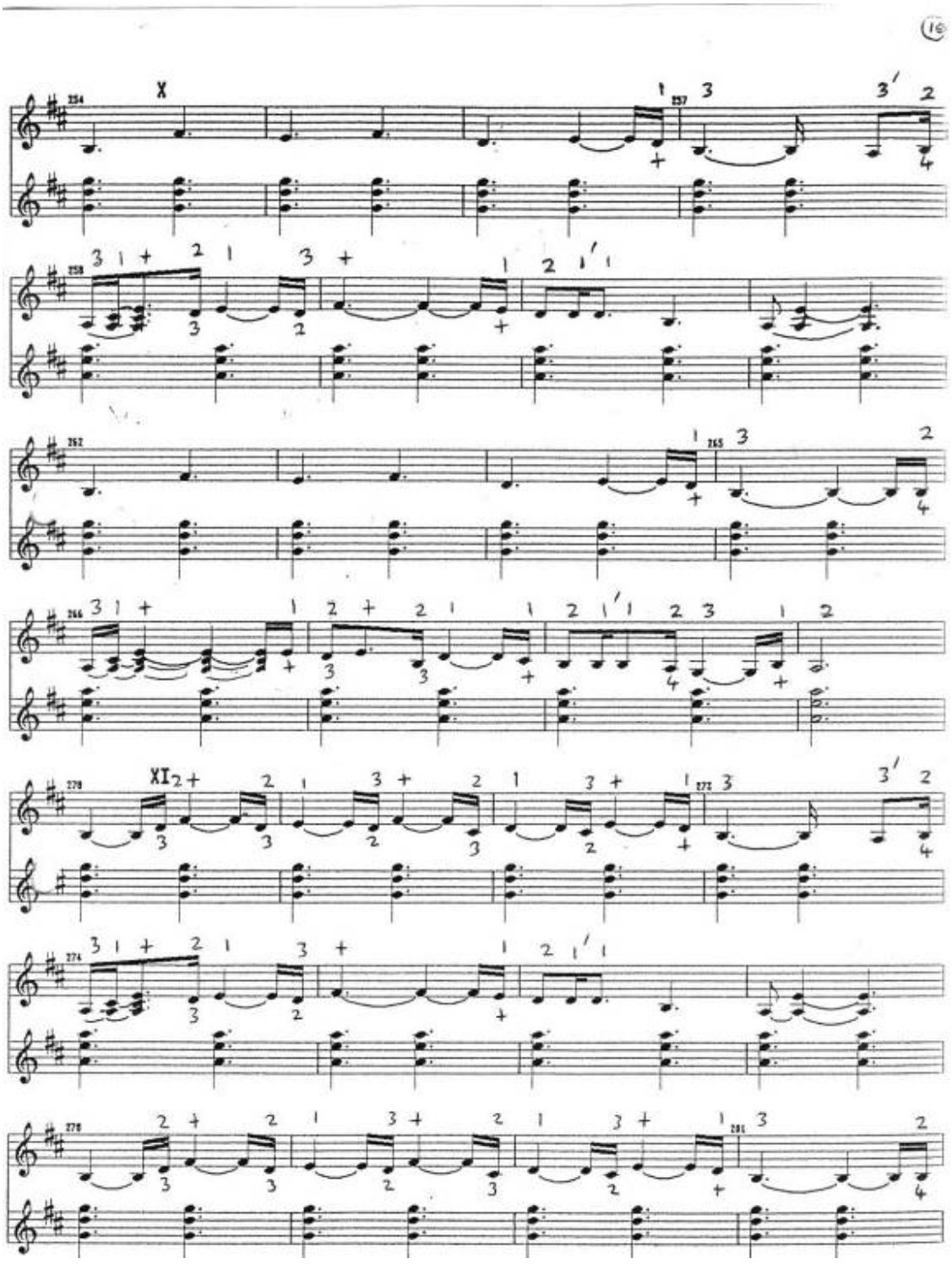







VII
VIII

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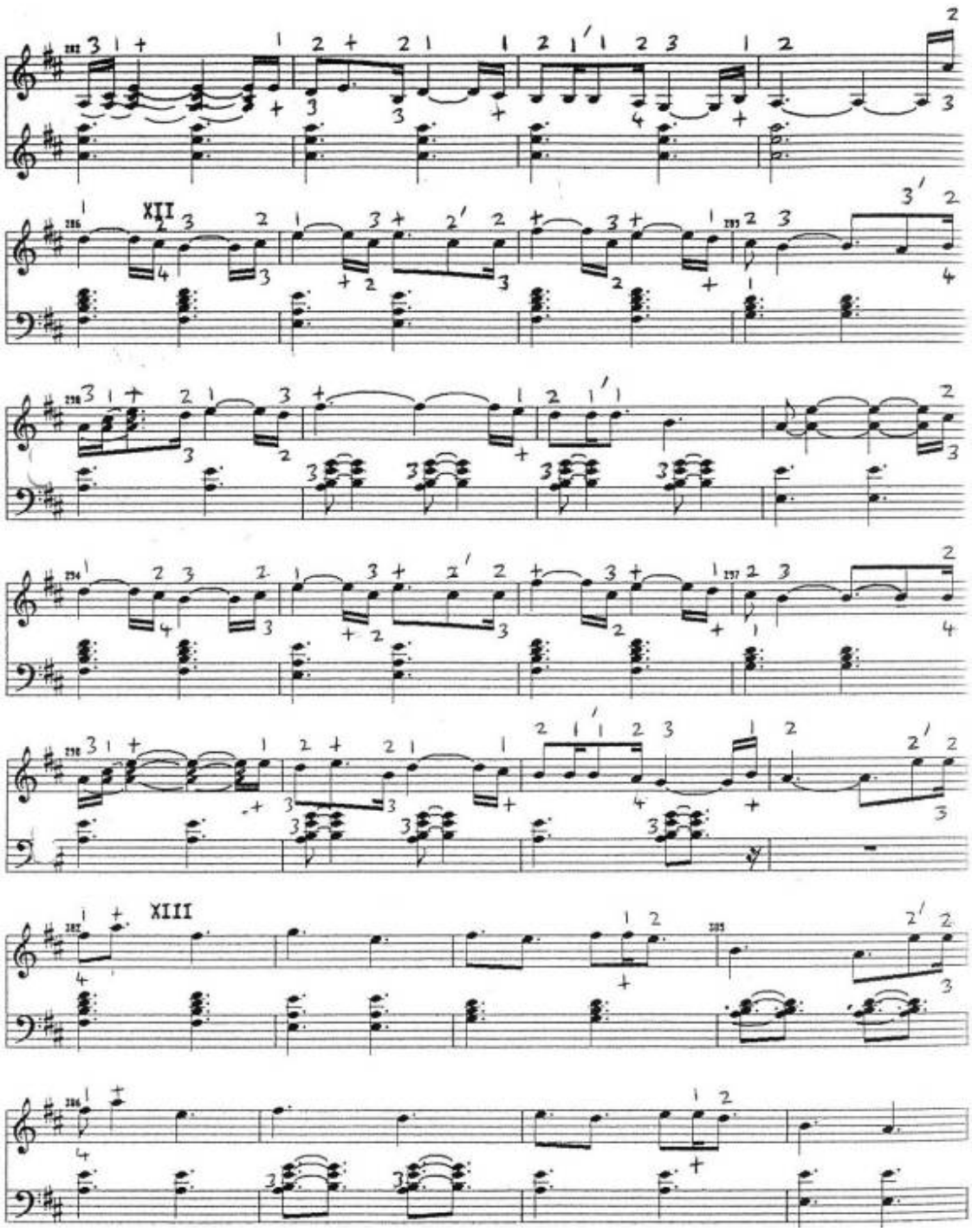
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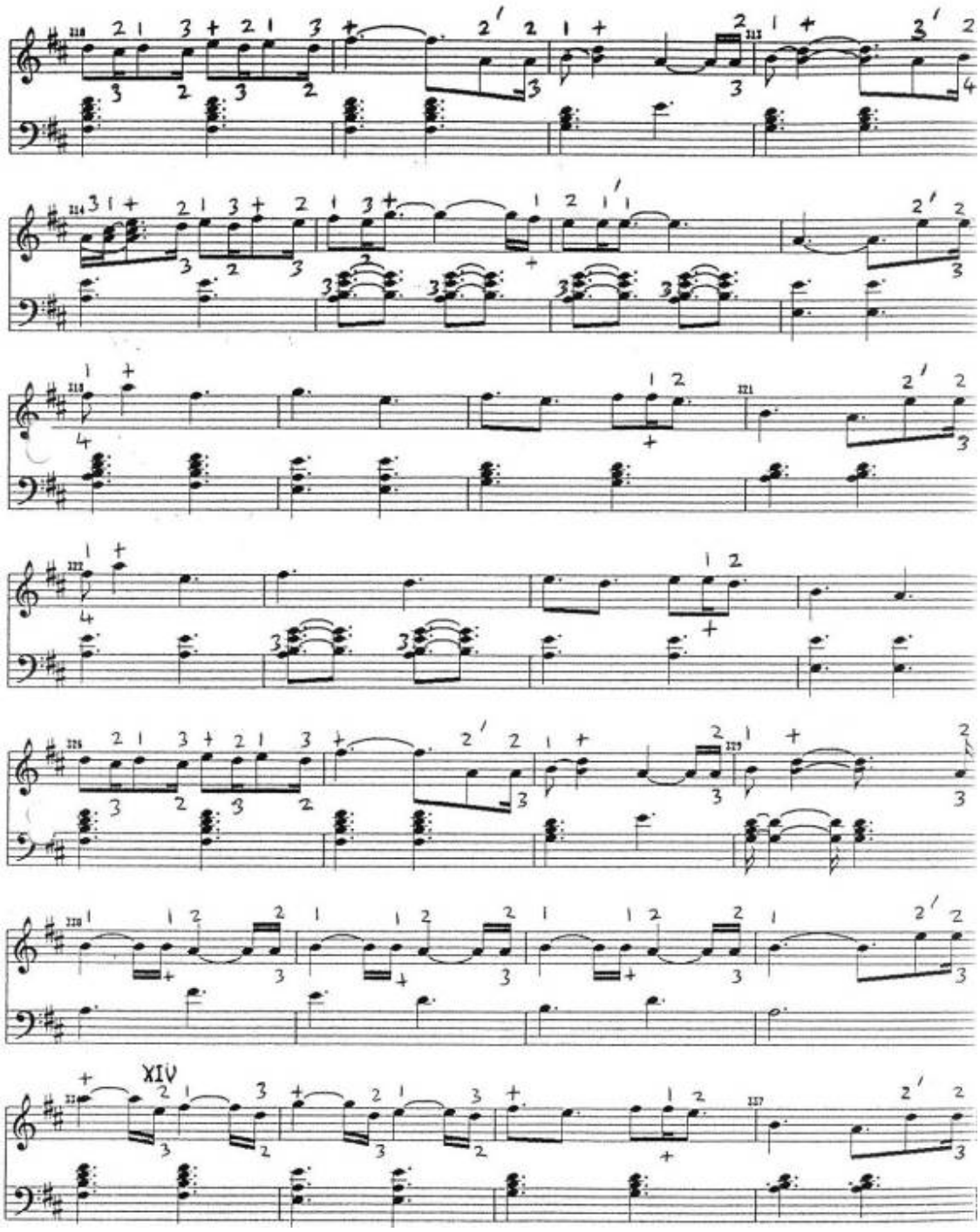
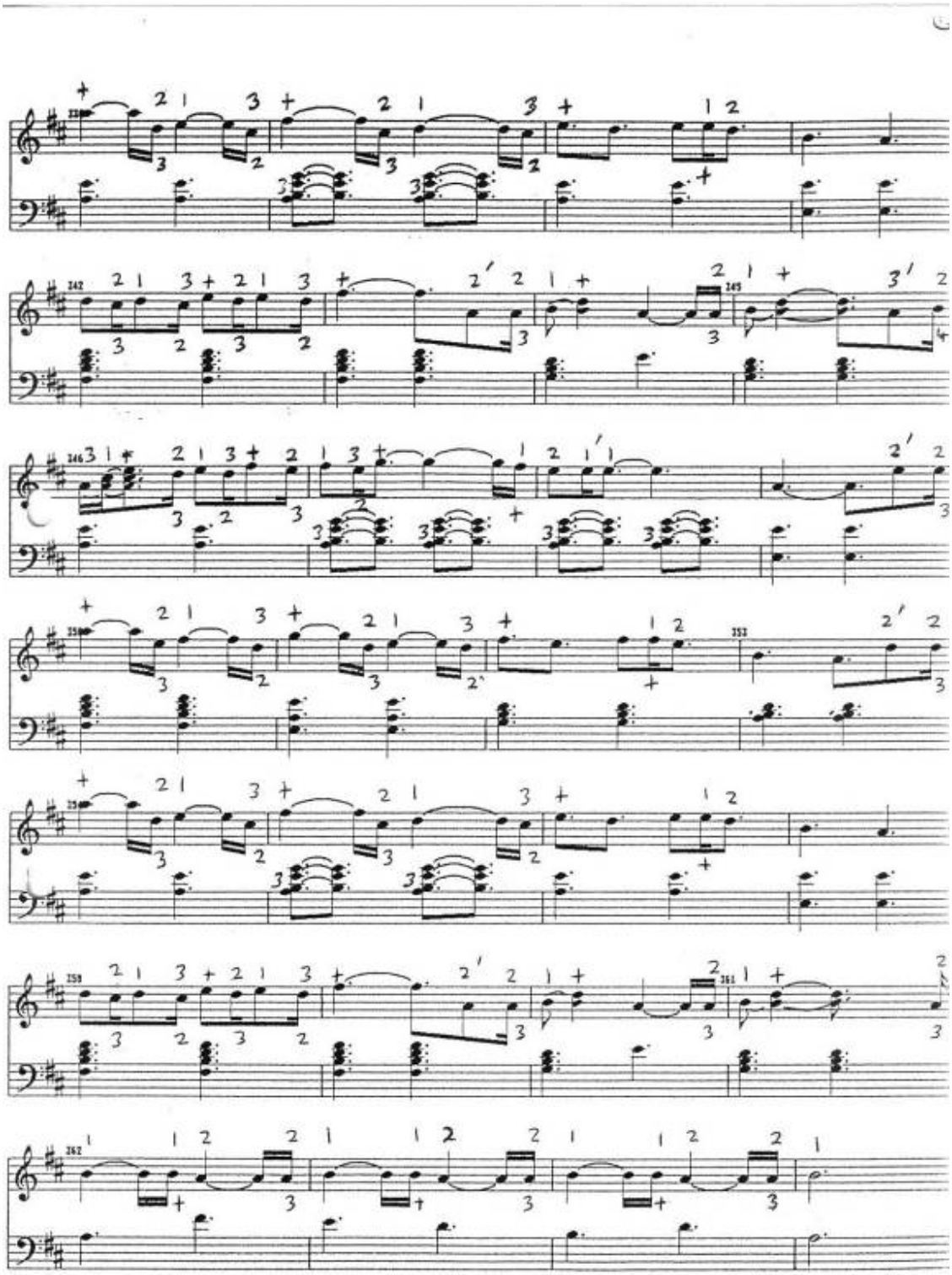
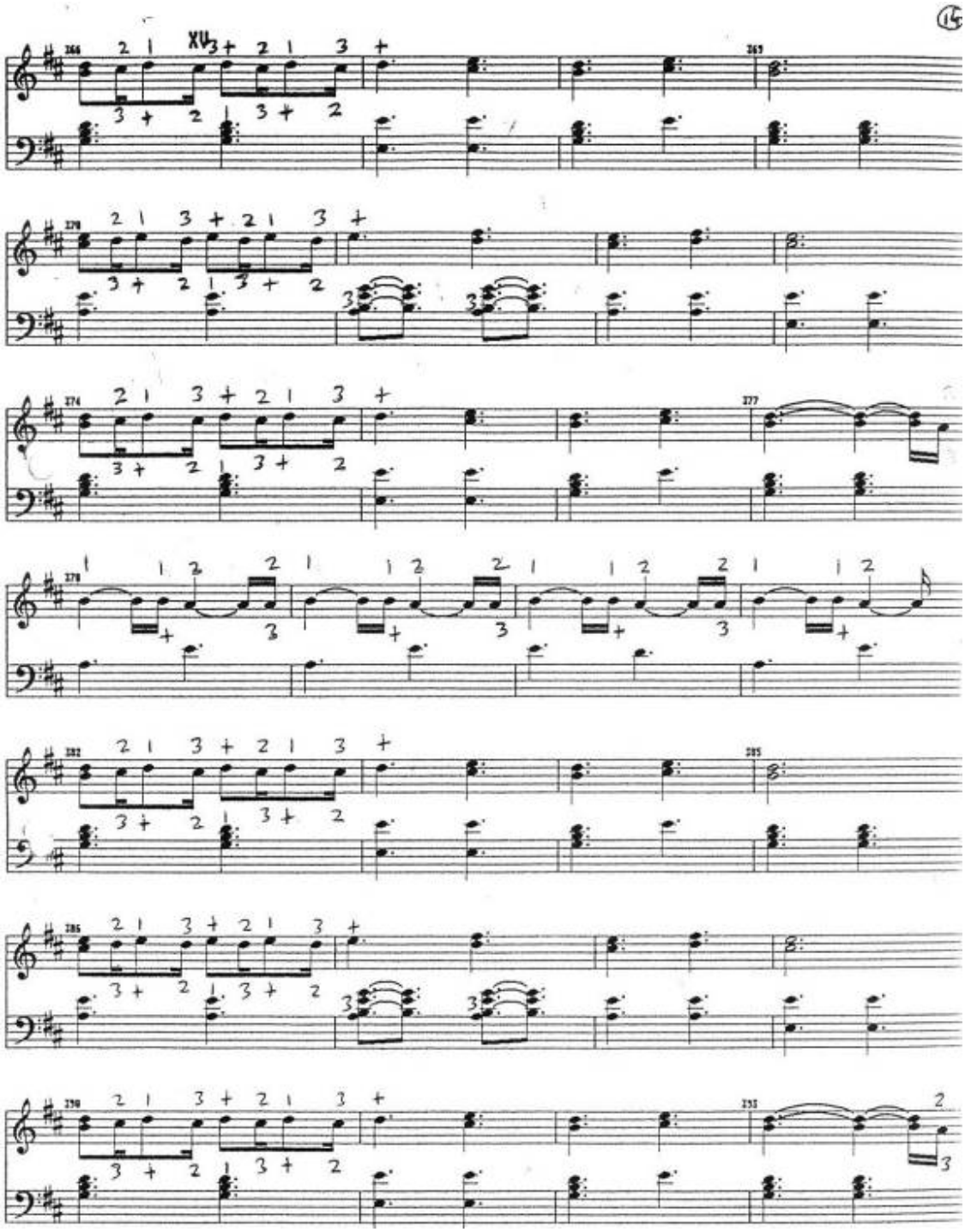
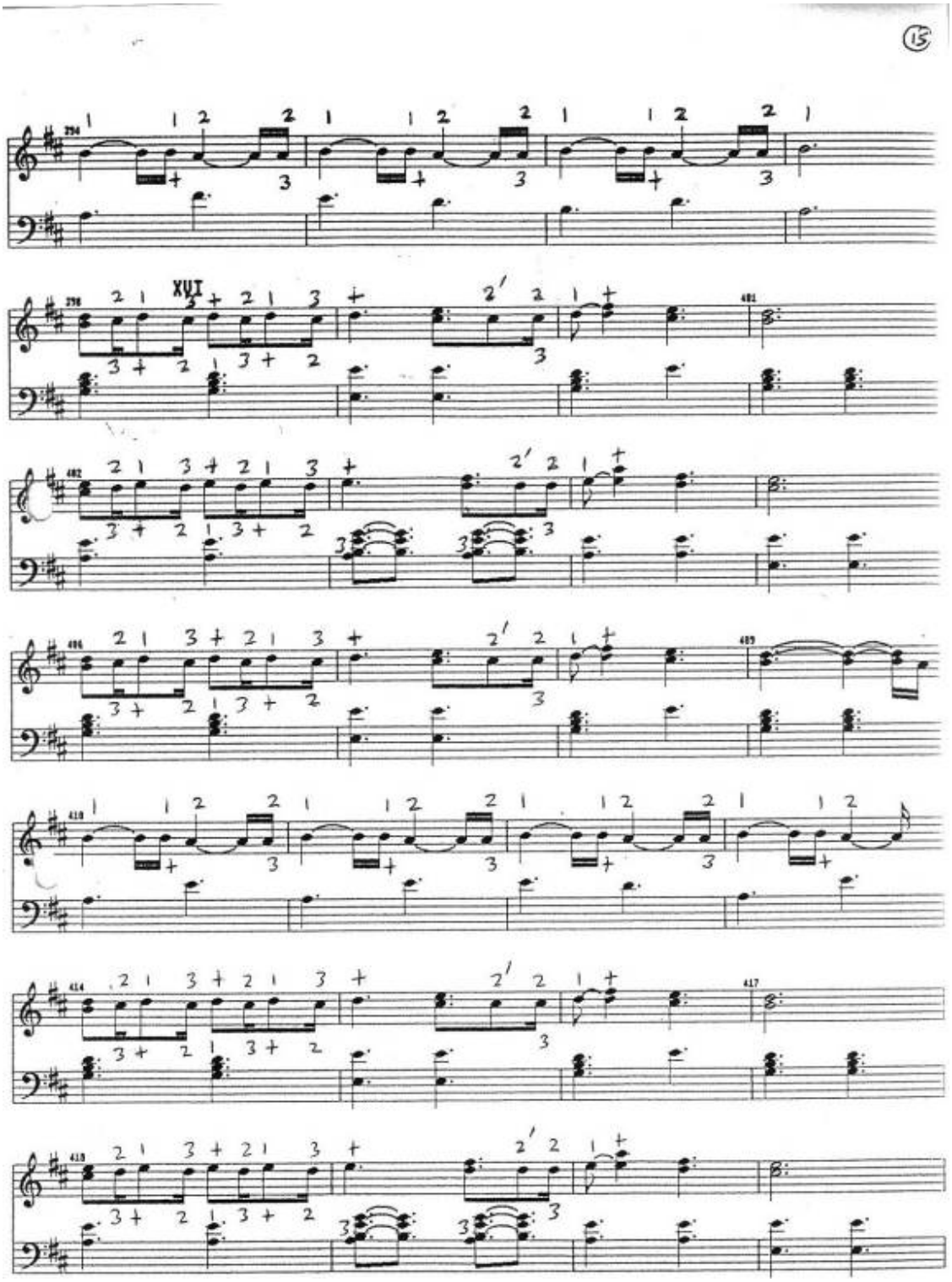
XIII


XIV






15
XVI