THE LOST CHORD

HARMONISATION ON KEYBOARD INSTRUMENTS

II

STEPHEN TAYLOR

The Lost Chord

Seated one day at the organ,
I was weary and ill at ease,
And my fingers wander'd idly
Over the noisy keys;

I know not what I was playing,
Or what I was dreaming then,
But I struck one chord of music,
Like the sound of a great Amen.

It flooded the crimson twilight,
Like the close of an Angel's Psalm,
And it lay on my fever'd spirit
With a touch of infinite calm.

It quieted pain and sorrow,
Like love overcoming strife,
It seem'd the harmonious echo
From our discordant life.

(Poem by Adelaide Proctor, set to music in 1877 by Arthur Sullivan)

PART II

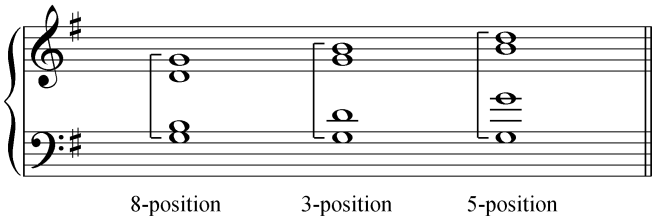
CONTENTS

Instructions for use

Readers are advised to consult the Preface to *The Lost Chord* elsewhere on this site.

The degrees of the scale are indicated by the Roman numerals I, II, III, IV, V, VI, VII.

Triads with the root in the bass can be played in three positions, named after the interval between the soprano and the bass:



The above chords are in closed spacing: the distance between the soprano and tenor is less than an octave; between the three upper parts there is no space to add a note belonging to the chord in question. Unless stated otherwise, all exercises in Part II of *The Lost Chord* are to be played in closed spacing, with the upper three parts in the right hand (r.h.) and the bass in the left hand (l.h.). See further Part I ch.12, Part II p.45 and Part III ch.13.

In Part II several new techniques are discussed. In order to learn how to harmonise a given melody it is important to be able to harmonise a given bass as well. In the end, all such aspects of harmonisation are interconnected. Short melodic improvisations on a given bass scheme are introduced from ch.5, and from ch.6 four-part harmonisations of a figured bass are included. Transposition is also an important aspect of our keyboard skills.

The 1st inversion of the triad is referred to as the 6-chord in view of the interval of a sixth, distinguishing it from the triad in root position. It is not to be confused with the Roman number VI, indicating the sixth degree of the scale. From ch.8 the 6-chord is also played in mixed spacing - see p.45.

Where four-part harmonisation is required from one or two given parts, the player should generally avoid writing out the additional parts, though it may occasionally be of use in order to examine progressions and part writing more closely. Where necessary, the layout provides sufficient space to add parts and figured bass.

Many hymn tunes, and particularly those composed before the 19th century, have rich written and oral histories. This accounts for the fact that they are often transmitted in different versions, in variant keys, and even with divergent titles. Many date from a period when barlines were employed irregularly; indeed, many tunes were not written in regular time at all but have a charmingly irregular rhythmic structure. Frequent alternation of duple and triple time, for example, was still widespread in the 17th century. In such cases, the addition of bar lines and time signatures often only muddles the score. Where clarification is desirable I have added vertical lines between the staves.

For practical reasons, all hymns and chorales are named after the melody rather than the first line of the text (though in German chorales this is usually one and the same thing). In order to encourage historical awareness, I have mentioned the dates of melodies and settings in as far as they are known, though a certain caution is required, since these are often dates of publication rather than composition. An index of hymns and chorales used as exercise material in *The Lost Chord* is provided in a separate document.

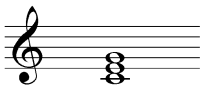
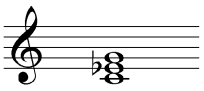
A continuing anxiety of the author of a tutor is that the reader will be even more methodical than he has tried to be himself. It takes most of us years to learn to harmonise, and there can never be enough practice material. There is a danger, however, that some readers will become discouraged by the quantity or difficulty of the exercises, while others may feel curbed by the methodical inclinations of the author. In ch.5, for example, the player whose aural ability and playing technique are at an early stage of development may have to think hard about each triad, while the more advanced student may do more with these two-part exercises than envisaged (by adding passing and auxiliary notes, for example, which are not discussed until Part III). In both cases, the guidance of an experienced teacher will achieve more than the written words of the author. Where additional material is desired, the dedicated teacher will know what is best for the individual pupil.

1

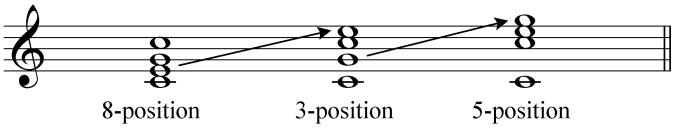
SCALES AND INTERVALS

The intervals 6th, 4th and 9th
Major, minor, perfect, augmented and diminished

In Part I of *The Lost Chord* our harmonic 'vocabulary' consisted of the triad with the fundamental note or root in the bass:

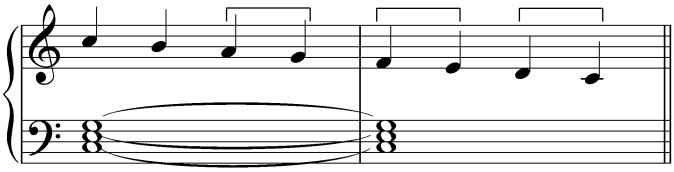
the triad of C major:  the triad of C minor: 

By doubling the root we obtained a four-part chord, which we used in three different positions:



In Part II of *The Lost Chord* we will enlarge our harmonic vocabulary. But first we must learn about other intervals.

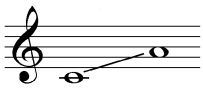
Let us return to the scale of C major, in combination with the triad of C major:



If we play this descending scale with a good sense of pulse (stressing the first beat and to some extent the third, with weaker second and fourth beats), we hear that A 'falls' to G, F to E, and D to C. The scale is pulled towards the notes of the triad, as if towards a magnet: the 6th (A) to the 5th, the 4th (F) to the 3rd and the 2nd (D) to the 1st. (We always count upwards from the bass, and include the bass note in our counting.)

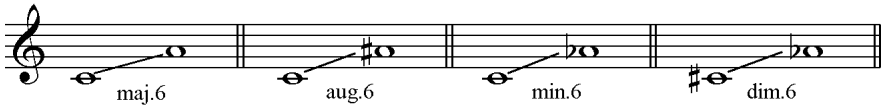
Let us look more closely at these 6th, 4th and 2nd notes.

The 6th, 4th and 9th



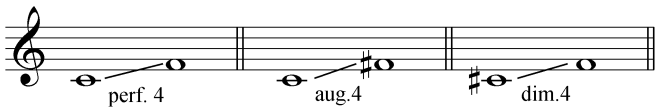
In the scale of C major, A is the sixth note. The Latin word for 'sixth' is *sextus*. We call the distance between C-A an interval of a **sixth** (6th), in this case a **major 6th**.

The 6th can be major, augmented, minor and diminished:



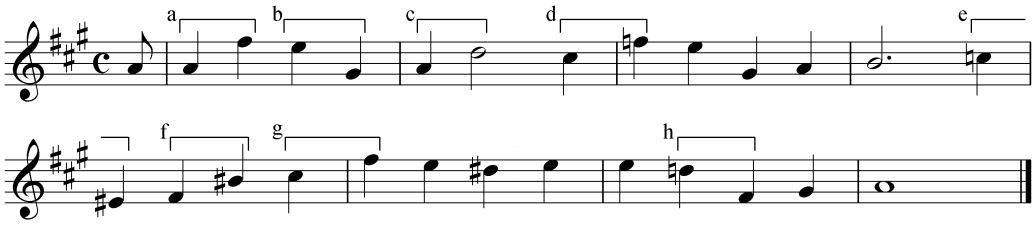
In the scale of C major, F is the fourth note. After the Latin word *quartus* (fourth), the interval C-F is called a **fourth** (4th), in this case a **perfect 4th**.

The 4th can be perfect, augmented and diminished:



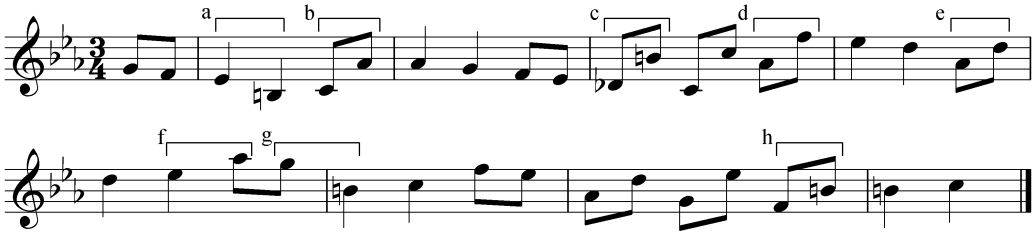
EXERCISE:

1. Distinguish the intervals of the 4th and 6th in the following melodies. To identify the different types of 6th and 4th, the perfect 5th may help us. The major 6th is a whole tone larger than the perfect 5th, the perfect 4th is a whole tone smaller, etc. Further help on identifying intervals was given in Part I p.15.



a = b = c = d =

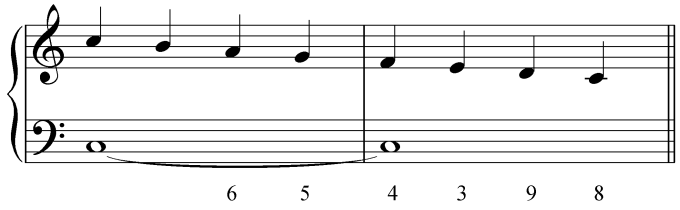
e = f = g = h =



a = b = c = d =

e = f = g = h =

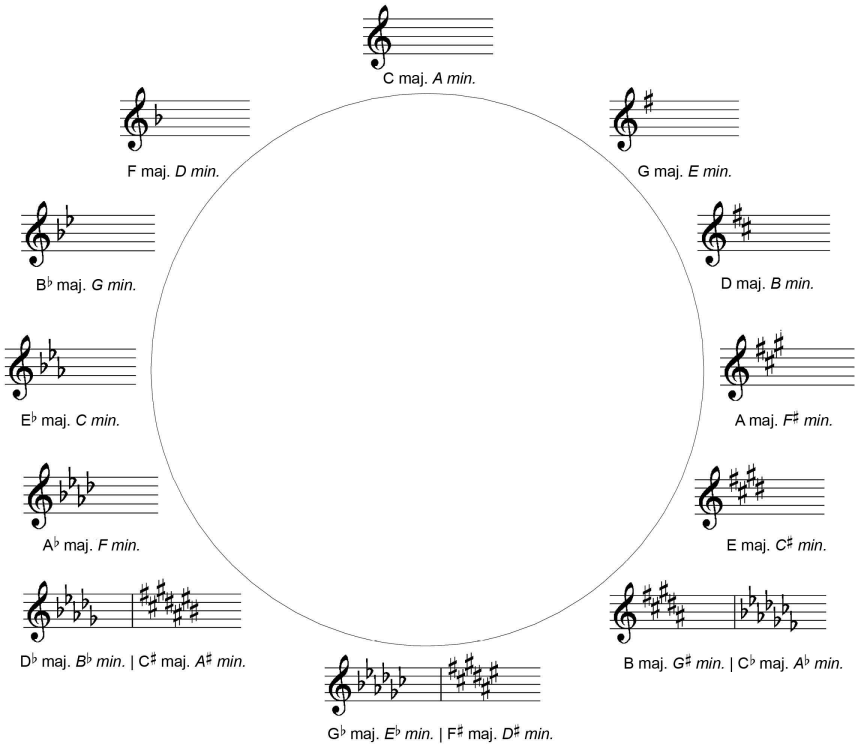
Play again the descending scale of C major in the r.h. above the triad of C in the l.h.; listen to the way in which the 6th above the bass falls to the 5th, the 4th to the 3rd, and the 2nd to the 8ve. All these intervals can be indicated with the help of figured bass (see Part I ch.14). In the given example, the 2nd is often notated as a **none** (*nonus* = 9th), thus indicating the literal distance from the bass:



EXERCISES:

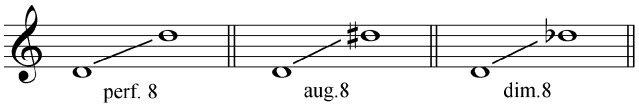
2. Play all the descending major scales with the r.h., while the l.h. plays the major triad on degree I. Pay attention to the pulse as described at the beginning of the chapter, and listen to the musical effect of the descending intervals. The circle of 5ths gives the correct order of the keys: we begin with C and proceed to G, etc. (This exercise also gives us the opportunity to revise our knowledge of the scales.)

3. Play all the descending melodic minor scales, with the minor triad on the tonic in the l.h.

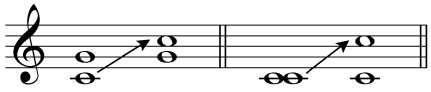


Major, minor, perfect, augmented and diminished

Why do we speak of a major or minor 3rd but a perfect 5th? It is a question of gradation, of the characteristic tension of each interval, and this tension is reflected in the name. The 8ve is the clearest example:



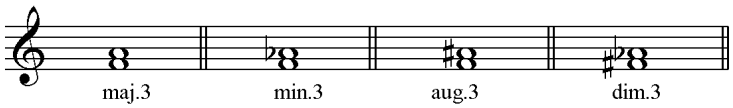
We are inclined to think that the 8ve, and therefore the **prime** (*primus* = first, i.e. a note and its repetition) sound well in only one way, because the augmented and diminished forms sound so tense, so different. To a lesser degree, the same is true of the 4th and 5th. It is important to bear in mind that the 4th is the inversion of the 5th, and that the 8ve is the 'inversion' of the prime:



The intervals 5th, 4th, prime and 8ve can be:

perfect - augmented - diminished

In the case of the 3rd, the differences in tension are less pronounced: the minor and major 3rd sound ‘harmonious’, but the augmented and diminished 3rds become more tense:

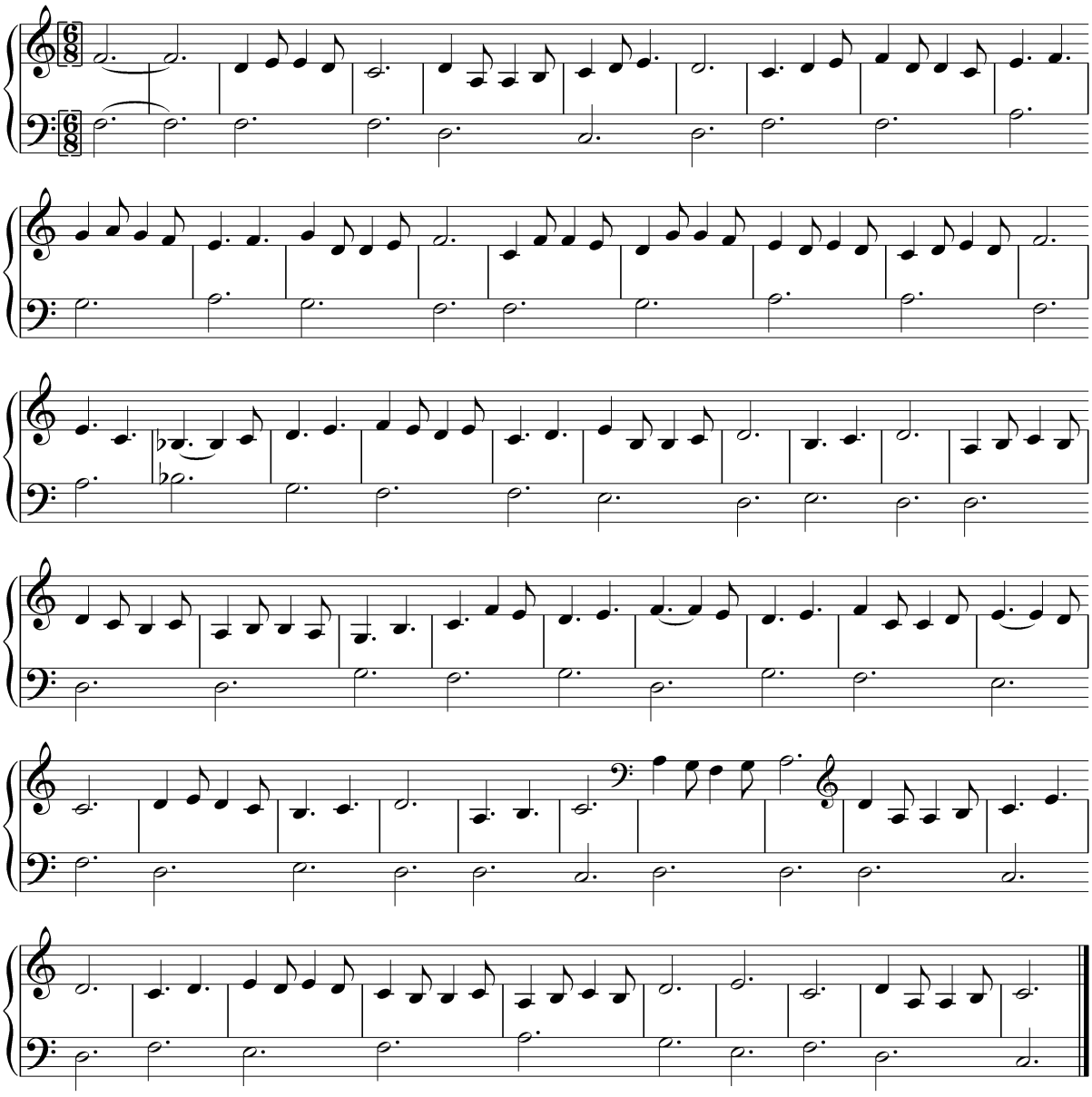


The same is true of the inversions, the major and minor 6th. It is likewise less easy to pick out one ‘good’ interval and other ‘bad’ ones in the case of the 2nd and **seventh** (7th; *septimus* = seventh). These intervals appear in four different forms, while the ‘perfect’ intervals appear in three.

The intervals 2nd, 3rd, 6th and 7th can be:

major - minor - augmented - diminished

To end this chapter, here is a composition based on perfect 8ves and 5ths. It is a *Felix namque* from the *Robertsbridge Codex*, a manuscript compiled in the second quarter of the 14th century.[+] Listen to the open, clear sound of the perfect intervals.



[+] It remains unclear whether this *Felix namque* (the title refers to the medieval chant in the l.h.) was really written for the keyboard. If that is the case, then it is the earliest known keyboard work. See *Corpus of Early Keyboard Music I* (1963) p.10.

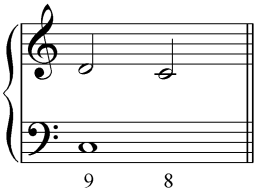
2

DISSONANCE AND CONSONANCE

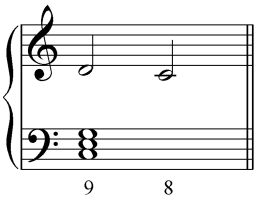
9-8 and 4-3 suspensions
Sequential exercises

When two voices collide, we speak of a discordant sound or **dissonance** (from the Latin *dissonus*). When the two parts resolve their difference, as it were, we speak of a concordant sound or **consonance** (from the Latin *consonus*).

On p.7 we heard the soprano move from the 9th to the 8ve at the end of the descending scale:

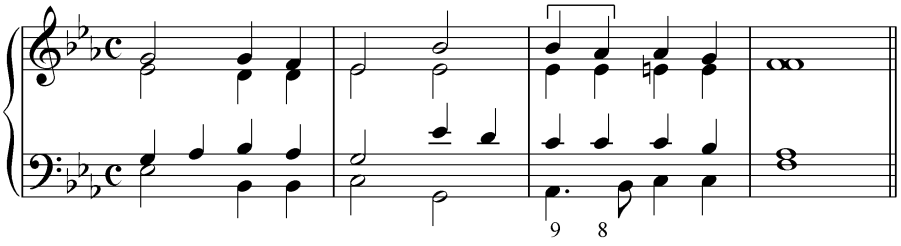


The D in the soprano is discordant with C in the bass. The move from D to C (from 9 to 8), from dissonance to consonance, is a transition from tension to relaxation, or, in terms of dynamics, from stronger to weaker (*diminuendo*). The two parts resolve their difference, and we call the C the **resolution** - the dissonance is resolved in a consonance.
If we play the entire triad of C major in the l.h., the dissonance becomes stronger:

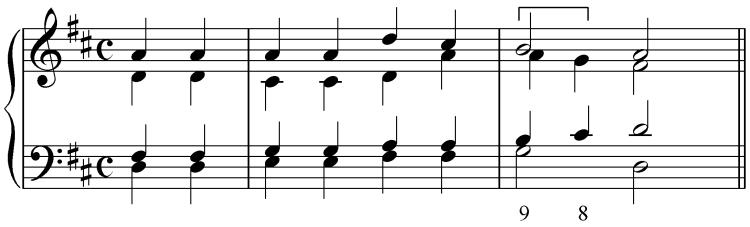


The 9th D collides not only with the root C, but also with the 3rd E.

We find a striking example of this 9-8 transition in the third line of Monk's *Abide with me*:



At the beginning of Goss's *Praise my soul*, the 9-8 transition is in the alto:

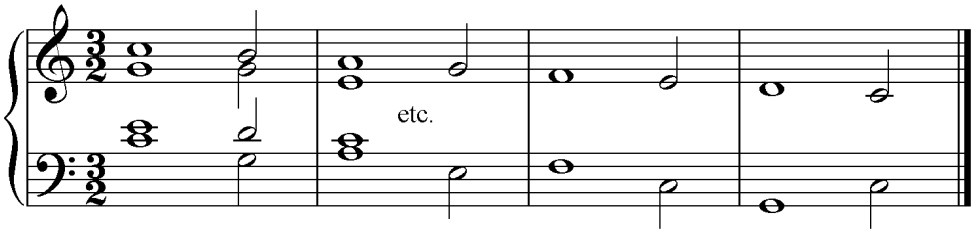


These are powerful dissonances. In the Renaissance, composers of polyphonic music handled them with care, and instead of striking or singing the dissonant note anew as in these hymns, the note in question was tied across from the previous beat, where it was first heard as a consonance. This tying of a consonance to a dissonance is called a **suspension**, and this will be discussed at more length below.

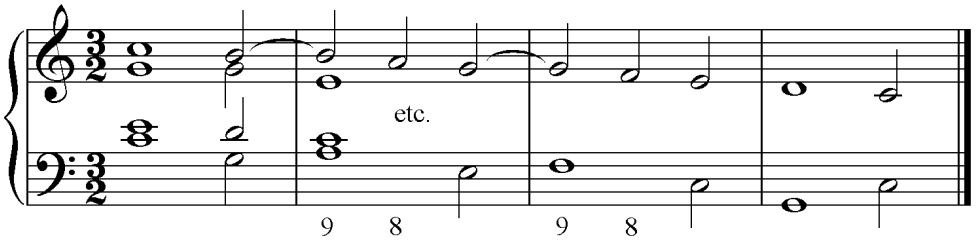
EXERCISES:

All the exercises in *The Lost Chord* are to be played in closed spacing (see *Instructions for use* at the beginning of this volume) unless specifically stated otherwise. In general, we play the three upper voices with the r.h. and the bass with the l.h.
Some exercises are based on sequences, in which a motif or phrase (and its harmony) is repeated identically several times at equidistant pitches (see also Part I ch.20).

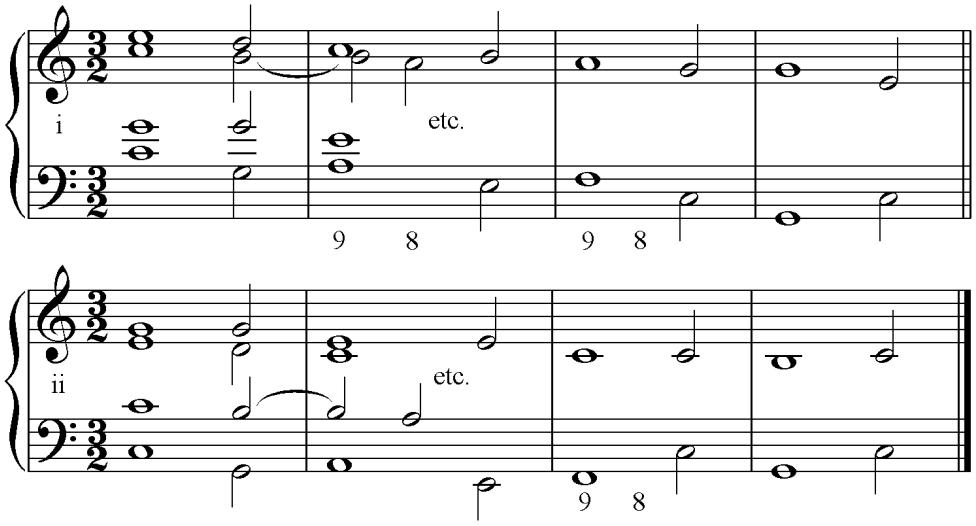
1. Practise the following exercise in four parts in the major keys of C, G, D, A, F, B flat and E flat. At the beginning of each bar we hear a doubling of the root in the soprano.



2. In the next exercise, the 9-8 suspension in the soprano causes the doubling of the root to be delayed until the second beat, where the suspension is followed by the resolution. Only the soprano is different: the alto and tenor parts are precisely as in the first exercise. Practise in four parts in the major keys of C, G, D, A, F, B flat and E flat.



3. In the following exercises the 9-8 suspension and its resolution have been moved first to the alto and then to the tenor. Practise in the major keys of C, G, D, A, F, B flat and E flat.

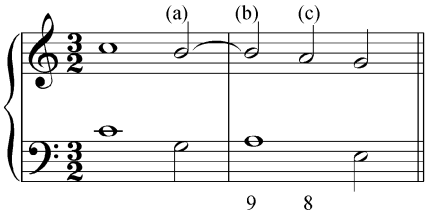


4*. Repeat ex.1-3 with a solo stop and pedals.[+]

[5.] Practise ex.1-3 in the major keys of E, B, F sharp minor, A flat and D flat.[++]

[+] The exercises with an asterisk offer extra practice for organists able to play the pedals - see Part I ch.5 ex.5.
[++] Exercises in brackets are in more remote keys. They may be skipped, or reserved for a 'second round'. Although some keys rarely occur in hymn tunes, figured basses and suchlike, they are of importance for keyboard playing in general.

In ex.2 and 3, the doubling of the root is delayed or ‘suspended’ by the tied note. That is why we call the dissonance thus caused - in this case a 9th - a suspension. The 9th does not come entirely unannounced: the note is already heard in the previous chord, in the same voice as the ensuing suspension. Neither does the 9th simply disappear again: the suspension is followed by the resolution, the soprano making a descending stepwise movement:



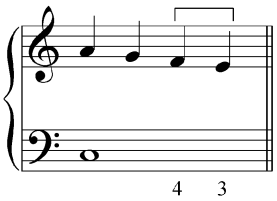
(a) = preparation: the note B - which will cause the dissonance - is first heard as a consonance;
(b) = dissonance: the suspension causes the soprano to collide with the bass;
(c) = resolution: the soprano moves down by step to resolve the dissonance into a consonance.

The descending stepwise movement from dissonance to resolution is another example of the refined awareness of tension and relaxation among composers of classical polyphony. In their treatment of dissonance, it was most unusual to depart from the following three steps, all manifest in one particular voice:

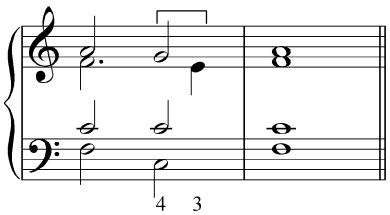
preparation	-	suspension	-	resolution
=		=		=
consonance	-	dissonance	-	consonance

The polyphonic composition technique of the Renaissance, in which each voice appears to go its own way, came to full maturity in the 16th century in the vocal works of such composers as Giovanni Pierluigi da Palestrina (ca.1525-1594). Listen to a Mass or motet by this composer and note how the many dissonances contribute to the expressive effect.

In Renaissance polyphony, the interval of a 4th between the bass and an upper part was considered to be a dissonance, and therefore in need of preparation and resolution. Although treatment of this interval as a dissonance may surprise us, we have already noted the ‘pull’ of the 4th to the 3rd in our descending scale:



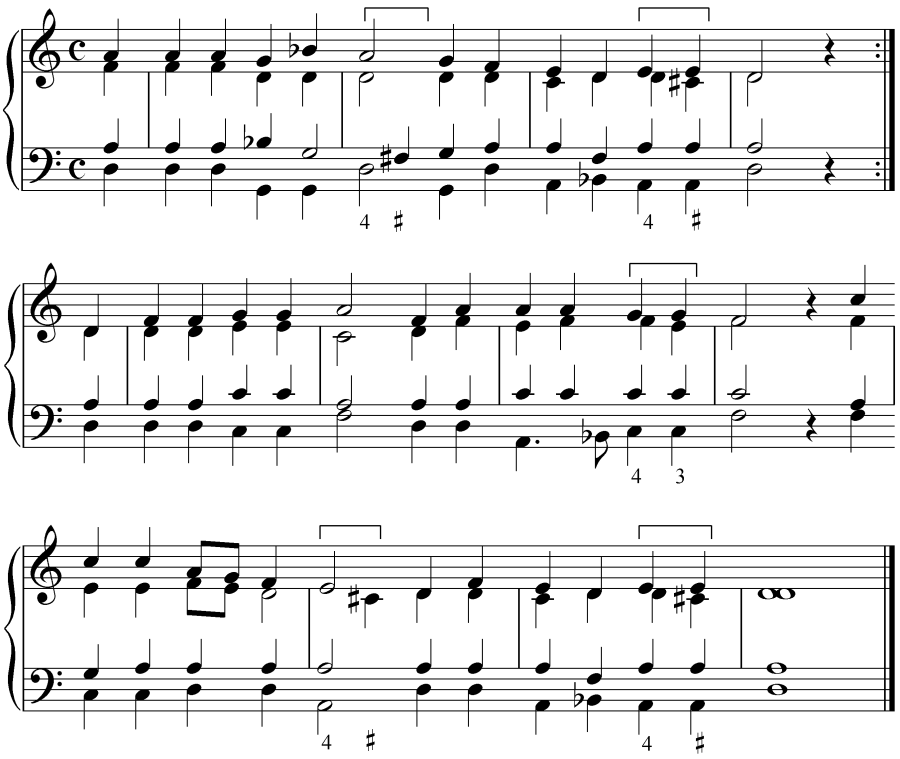
If we create a suspension by using the 4th to delay the 3rd, many of us will recognise a familiar cadence formula:



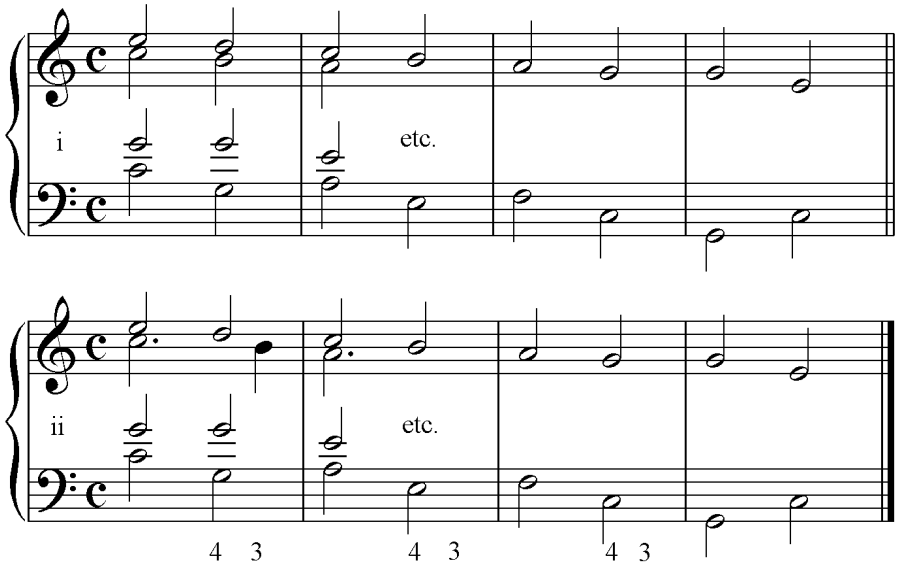
Through the suspension, tension rises between the alto and bass on the third beat, reinforced by the collision between the alto and soprano at the same point.

EXERCISES:

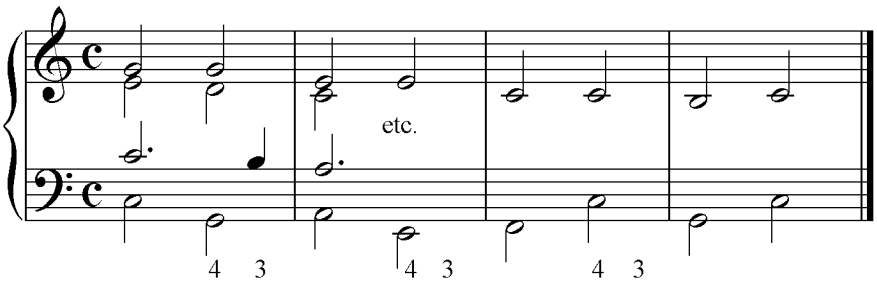
6. Play the following setting of *Ic wil mi gaen vertroesten* (Antwerp 1539, setting by Jan van Biezen) and listen to the effect of the 4-3 suspensions at the cadences:



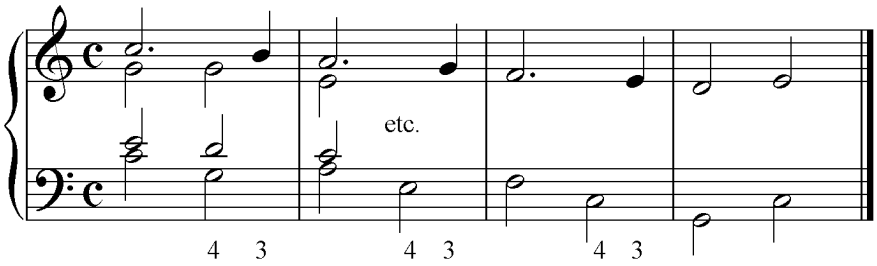
7. Practise 7.i in four parts in the key of C major, then 7.ii in the keys of C, G, D, A, F, B flat and E flat major.



8. In the next exercise, the suspensions are in the tenor. Practise in four parts in the major keys of C, G, D, A, F, B flat and E flat.



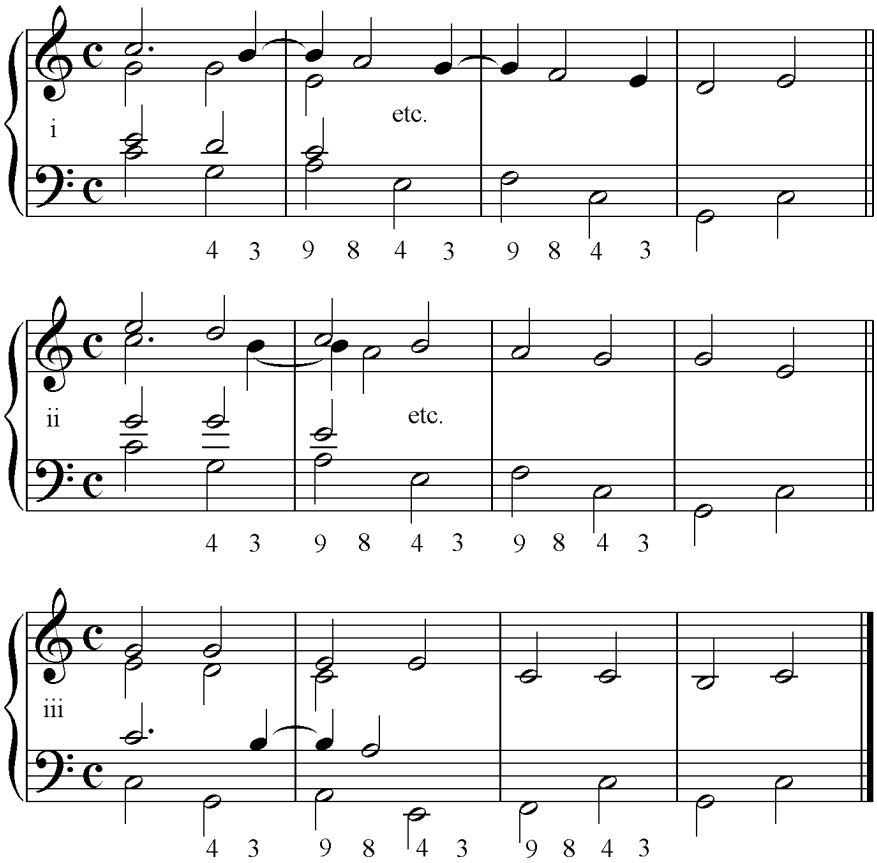
9. In the following exercise, the suspensions are in the soprano. Practise in four parts in the major keys of C, G, D, A, F, B flat and E flat.



10.* Repeat ex.7-9 with a solo stop and pedal in the major keys of C, G, D, A, F, B flat and E flat.

[11.] Practise ex.7-9 in the major keys of E, B, F sharp, A flat and D flat.

12. Practise the following exercises in the major keys of C, G, D, A, F, B flat and E flat.



13.* Repeat ex.12 with a solo stop and pedals.

[14.] Practise ex.12 in the keys of E, B, F sharp, A flat and D flat major.

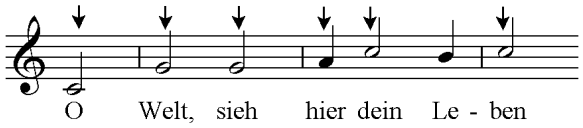
3

SYNCOPATION

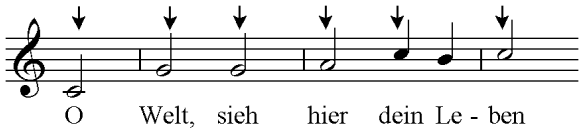
Rhythmic and harmonic accents
Parallel 5ths and 8ves

Chords and rhythm are the ingredients of our harmonisations. Chords gain extra flavour from 9-8 and 4-3 suspensions. Rhythm gains extra vitality from shifts of accent in the individual voices.

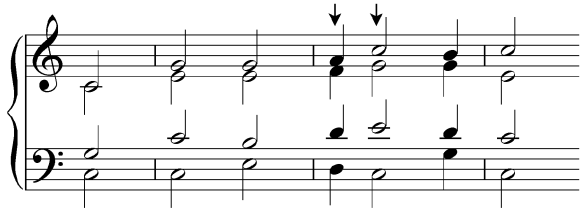
Play the opening of Johann Crüger's melody (1653) to *O Welt, sieh hier dein Leben*:



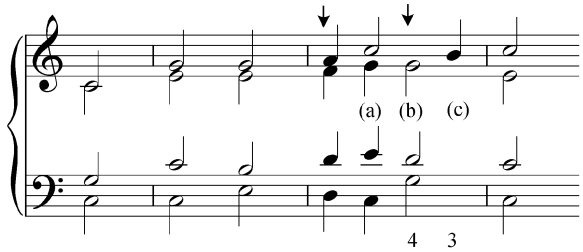
The pulse is in minims. At the word 'dein', however, the melody interrupts the natural flow by shifting the accent on 'dein' forward to the weak beat and 'suspending' it over the strong beat. This word is now more pronounced than it would have been if the original movement had been retained:



This type of accent, in which a note shifts forward at the expense of the preceding note, as it were, is called a **syncopation**. (Linguists use the same term to denote the omission of an unaccentuated vowel between consonants, so that the second consonant shifts forward: for example, the Latin *dextra* instead of *dextera*.)
The syncopation on 'dein', which has a strong rhythmic effect, could be supported harmonically if the other voices were to move in the same rhythm:

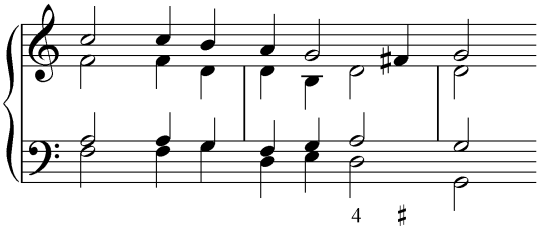


But in the setting by Jan van Biezen we hear a different solution:

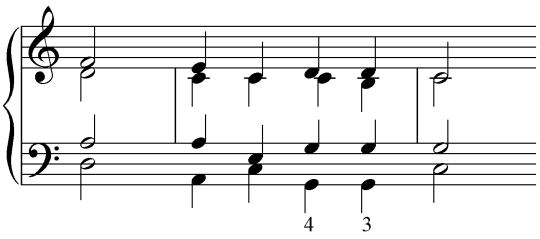


The harmonic tension on the strong beat (b) is so powerful that we almost forget the effect of the rhythmic and melodic accent in the soprano (a), where a suspension is followed by a descending 2nd. Here once again is the classical pattern: (a) preparation, (b) suspension, (c) resolution. Because the dissonance falls on the strong beat, the original pulse of the bar wins, as it were, from the syncopation. It is a fascinating contest between rhythmic and harmonic forces, a contest that contributed to the decline of Renaissance polyphony and the emergence of the Baroque style.

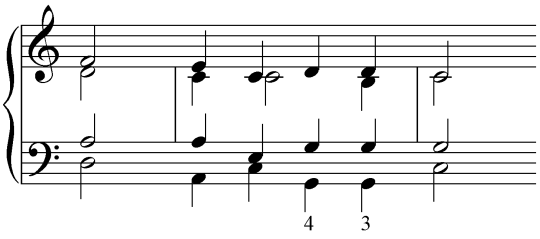
The second line of Crüger's melody reveals a similar situation, in the context of a modulation to G major:



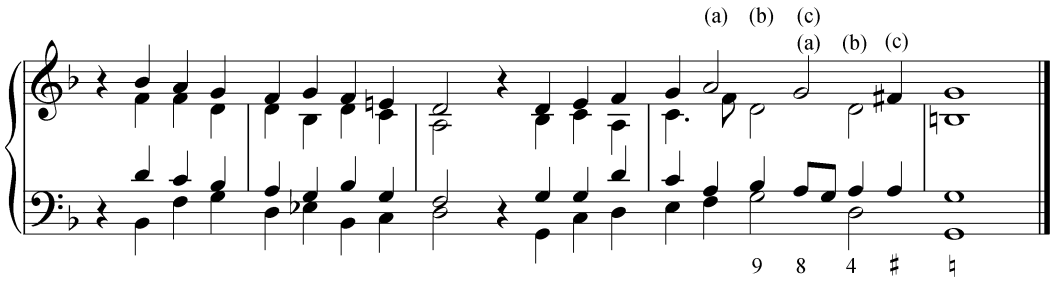
This combination of syncopation (rhythm) and suspension (harmony) does not need to depend on how the upper voice is written. The third line of the same setting is as follows:



If the alto is not sung (i.e. if the number of notes does not need to equal the number of syllables), we may play a syncopation in this part:



Finally, here is the end of a melody and setting by Bartholomäus Gesius (*Hier lieg ich armes Würmelein*), written in 1605:

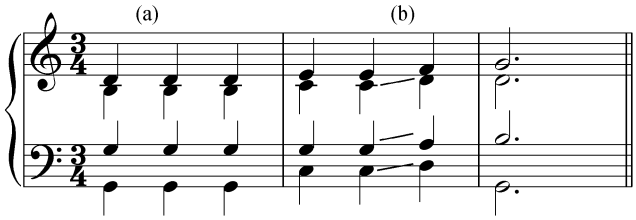


In the final phrase, the soprano has two successive syncopations, harmonised with the common combination of 9-8 and 4-3 suspensions: the resolution (c) of the first suspension is at the same time the preparation (a) of the second.

Our task is to learn to distinguish the specific characteristics and possibilities of a given part, and to harmonise accordingly!

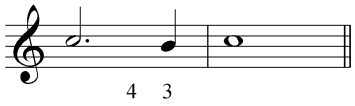
Parallel 5ths and 8ves

In our harmonisations we continue to make use only of the triad with the root in the bass. In Part I ch.18 we noted the parallel 5ths and 8ves which arise if, in ascending or descending motion, we play two consecutive 3-, 5- or 8-positions of the triads:

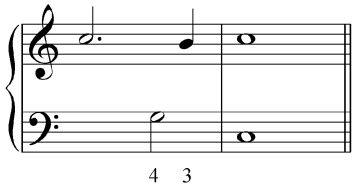


At (b) the alto and bass ascend in parallel 8ves, and the tenor and bass in parallel 5ths. At (a) there is no ascending or descending movement: if we repeat the same chord, there is no mention of incorrect parallel 5ths or 8ves. At (b) the parallel 5ths and 8ves are caused by consecutive 3-positions of two ascending triads, a problem that also occurs if we play consecutive 5- or 8-positions of the triads in ascending or descending movement. These parallel movements weaken our harmonisation and must therefore be avoided. In the classical theory of harmonisation, parallel movement in perfect 5ths and 8ves between the same two voices is forbidden.

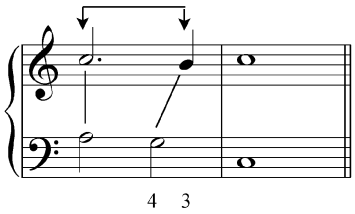
An extra warning against parallel 5ths and 8ves must be given with regard to two specific situations in which it is easy to overlook the chord positions.
The first situation concerns the use of suspensions. The following cadence in C major:



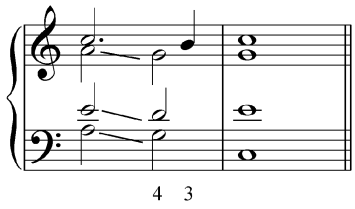
requires the following bass:



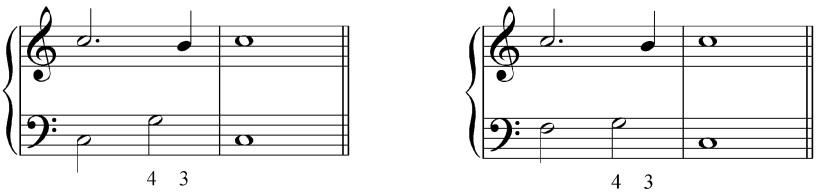
The 4-3 suspension slightly obscures the fact that we play a 3-position on the dominant (V). If we complete the bass in the following manner, we will in fact play two consecutive 3-positions:



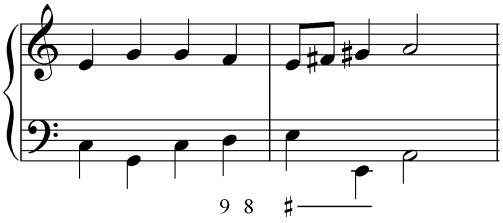
which will result in parallel 8ves and 5ths:



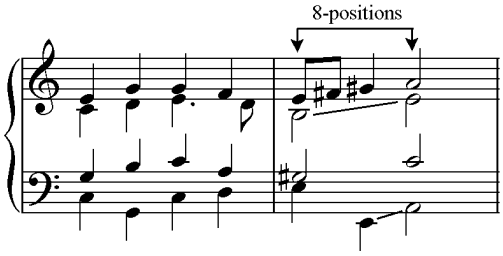
Within our present ‘vocabulary’ this soprano can be harmonised in only two ways:



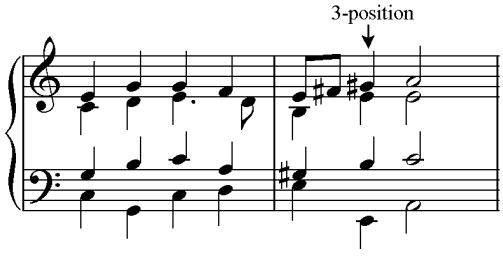
A second situation requiring particular care, is where the soprano moves on while the harmony does not change. In the next exercise (1.iv), the horizontal line in the figuring indicates that the harmony remains the same in the first half of the second bar:



If we interpret this too literally, the alto and tenor will stay put for two beats, taking no account of the fact that the soprano has moved up to the major 3rd. This gives rise to parallel 5ths between the alto and bass:

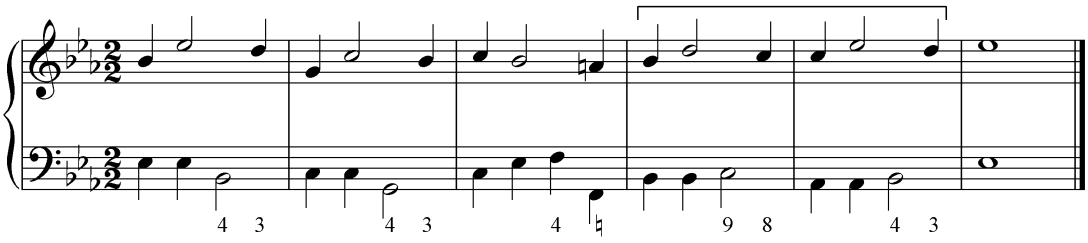


The fact that the harmony does not change, does not imply that the chord position may not change either. If we stay in <u>closed spacing</u>, allowing the alto and tenor to rise with the soprano, the two 8-positions of the triad are separated by a 3-position, causing the parallel 5ths to disappear:

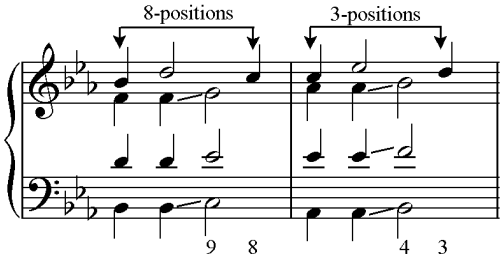


A horizontal line indicates that the harmony does not change. But in many cases it will prove desirable or necessary to alter the <u>position</u> of the chord in question.

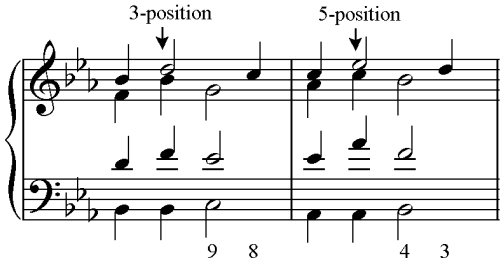
In the following exercise (1.viii) similar errors may arise in bars 4 and 5:



If we do not allow the alto and tenor to rise with the soprano, the inner parts will move as if from one 8-position to the next, and then as if from one 3-position to the next:



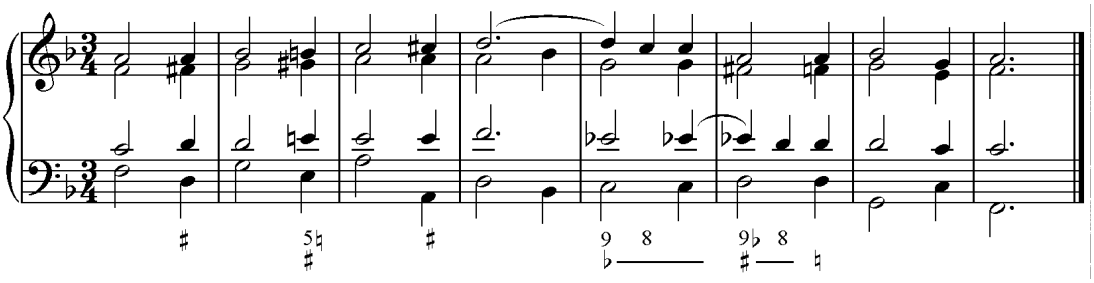
The alto and tenor move up with the <u>bass</u> and cause parallel 8ves and 5ths. The problem is solved by having the alto and tenor move up with the <u>soprano</u>:



Now the two 8-positions are separated by a 3-position, the two 3-positions by a 5-position. The incorrect parallel movement with the bass between the second and third beats of both bars is replaced by <u>contrary motion</u>, as the three upper voices move 'against' the bass (see Part I ch.18). Play both versions and note how much stronger the contrary motion sounds!

<u>Figured bass</u>

The first principles of figured bass have been explained in Part I ch.14. We noted that a sharp, flat or natural always refers to the 3rd above the bass, unless a different interval (counting up from and including the bass) is specifically stated <u>adjacent</u> to the accidental:



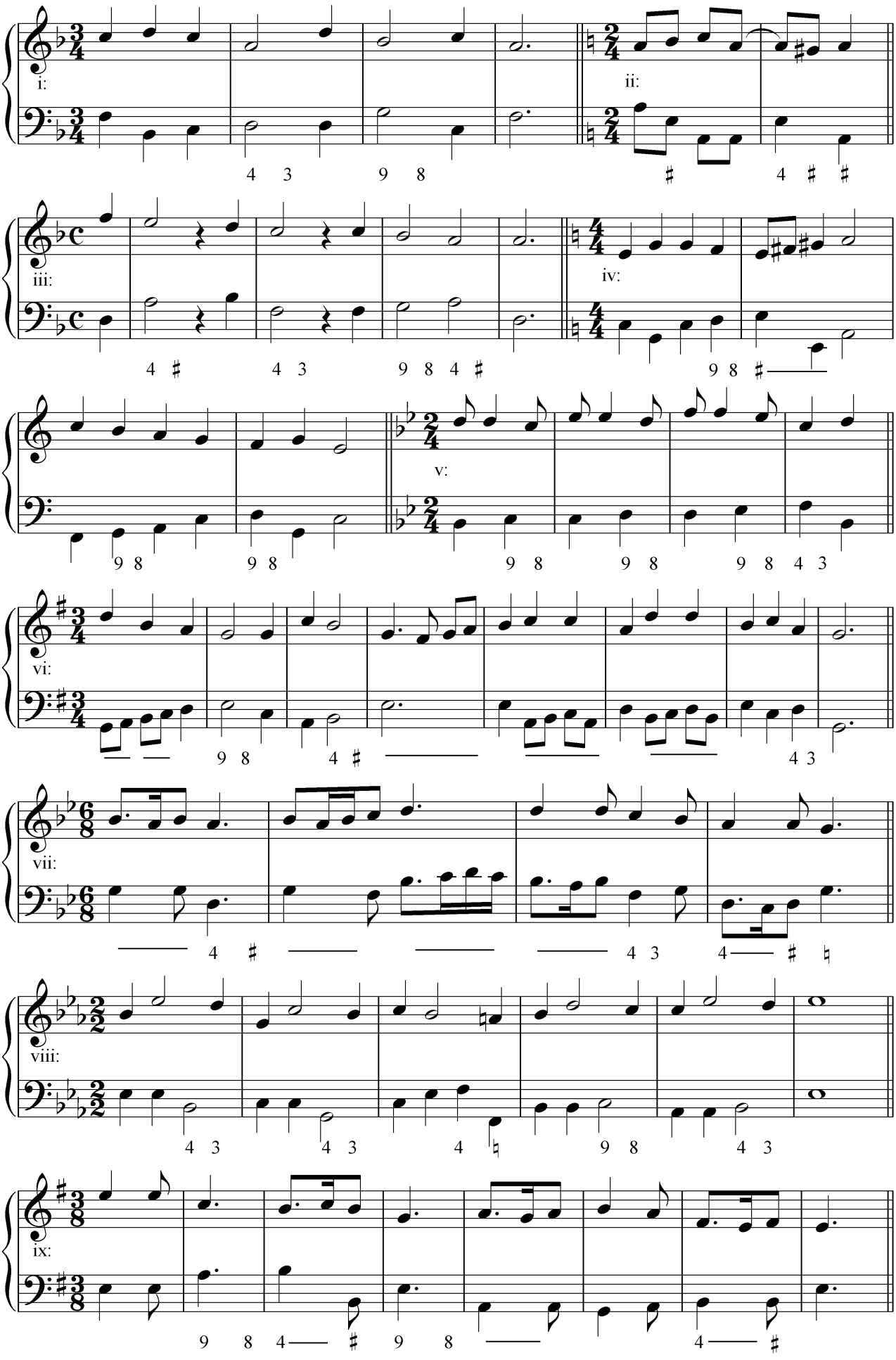
The figured basses in *The Lost Chord* aim to be complete; in some exercises, therefore, the figuring may already be realised in the given soprano (see below 1.ii, bar 2 beat 1).

EXERCISES:

The subdivisions of each exercise are numbered, and the number is followed by a colon. Make a habit of writing the key after each colon before practising in four parts. (Good readers have the unfortunate habit of starting to play before considering what key they are in!)

In general, we play the soprano, alto and tenor with the r.h. and only the bass with the l.h. In certain situations, however, the part writing may be such as to make it easier to play occasional tenor notes with the l.h. An example is found in 1.iv, where at the beginning of bar 2 the tenor G sharp could be played with the l.h.

1. Write down the key of each phrase before playing in four parts.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ii:
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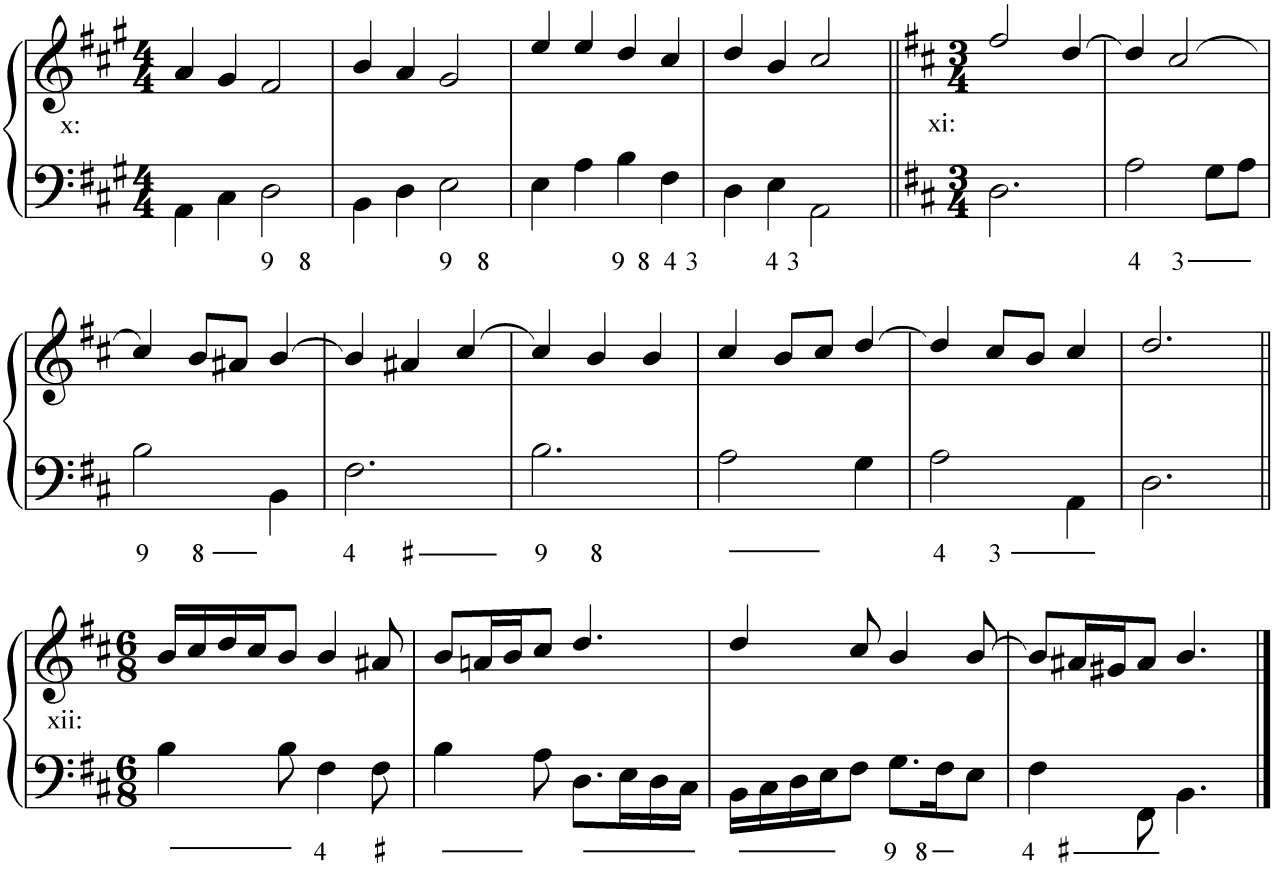
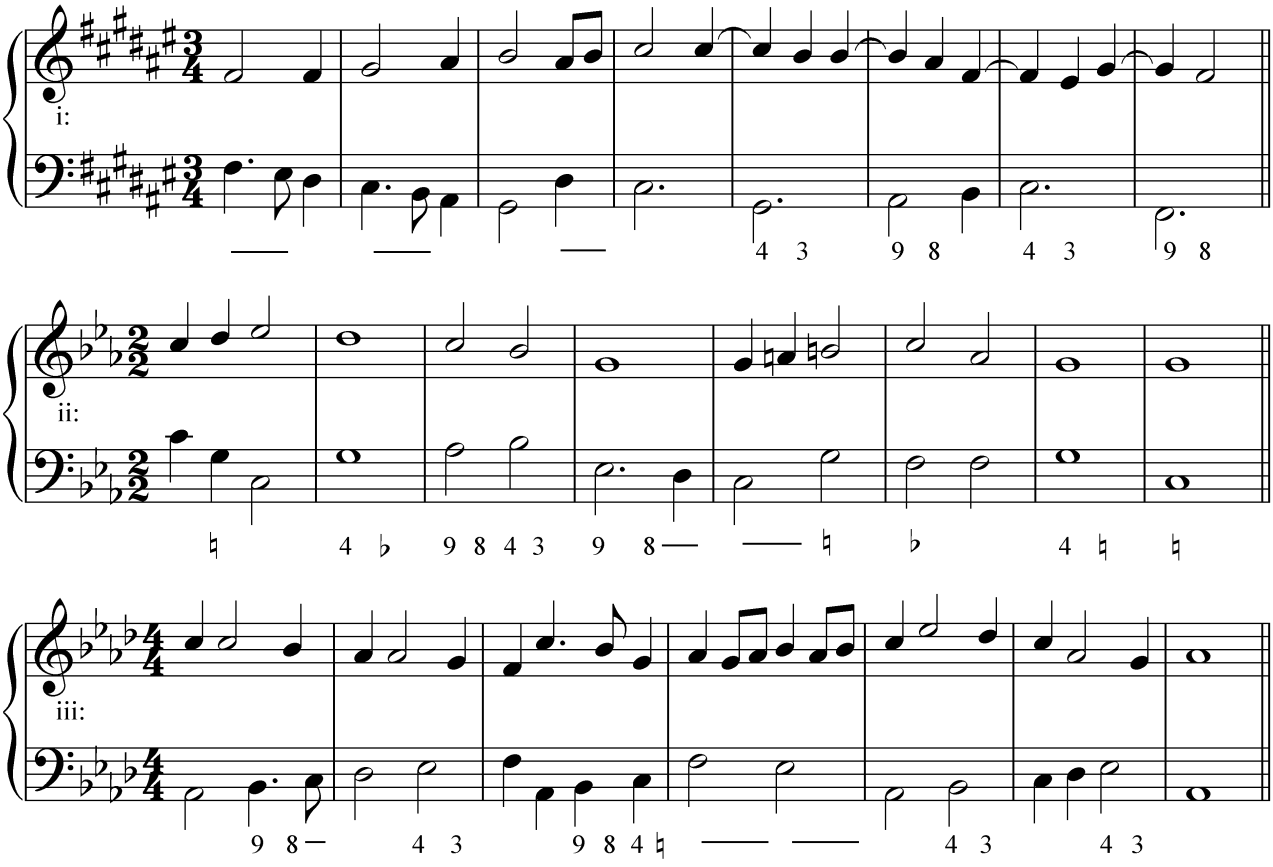
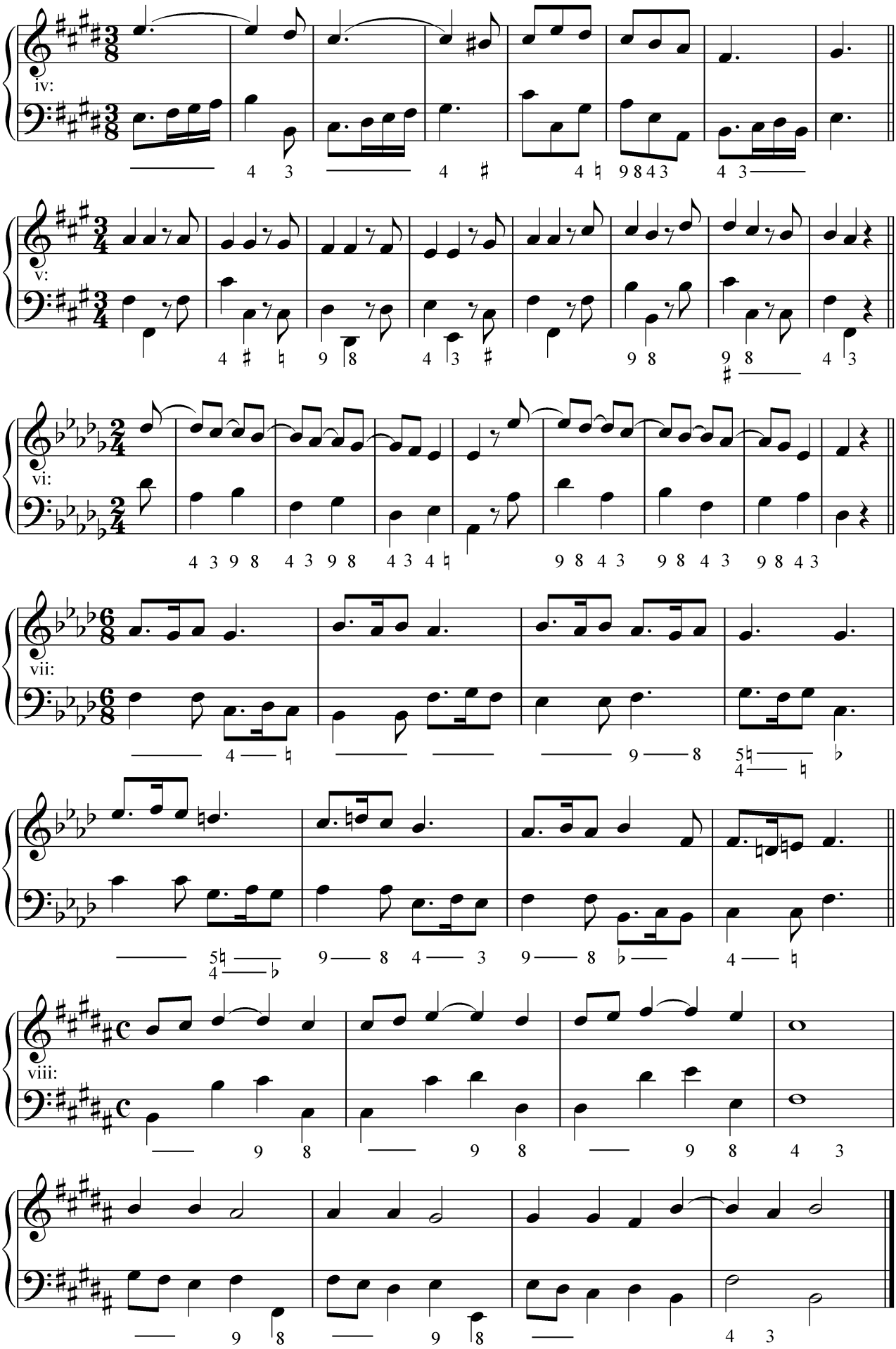


2.* Repeat ex.1 with a solo stop and pedals.

[3.] Write down the key and play in four parts.





[4.*] Repeat ex.3 with a solo stop and pedals.

4

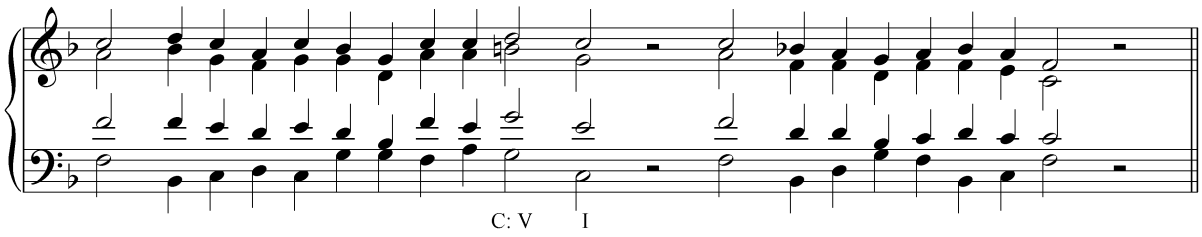
MODULATION

Optional modulation
Transposition

Our ability to detect the harmonic potential of a given part will be reflected in the quality of our settings.

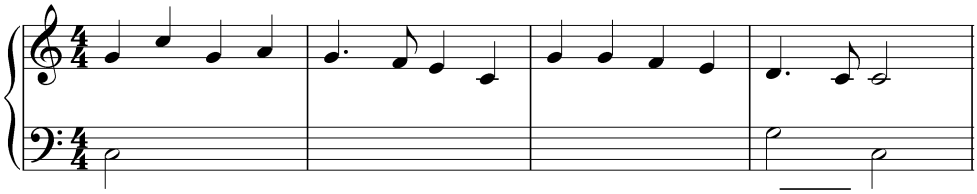
The first question with regard to a given part concerns the key: not only the key of the beginning and end, but also the destination of any modulations. Changes of key add colour and tension to our harmonisation.

In Part I ch.19 we created our first modulations. In harmonising the Flemish tune *Ik Hef, vol verlangst, van dag tot dag mijn ogen*, we modulated from the major key of F to that of C, and then returned to F:

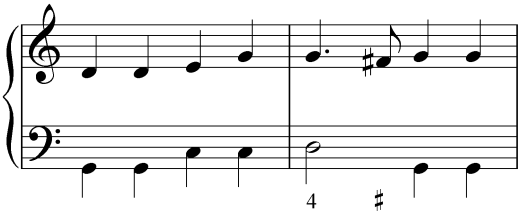


In order to achieve the modulation to C, B natural was introduced as the new leading note. As we saw, since B natural does not occur in the given melody, the modulation to C major is not mandatory, but one of several options. In other words: accidentals in a given part may indicate that a modulation is desirable or mandatory; but even where there are no accidentals (as above), the course of the given part may still suggest or require a modulation.

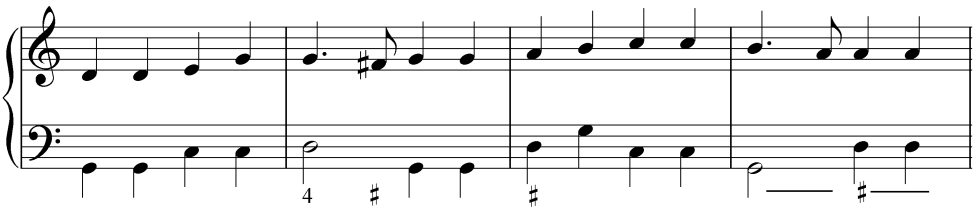
Let us make our own harmonisation of Jakob Hintze's melody to the chorale *Alle Menschen müssen sterben*. The entire tune is given on p.26.
The beginning and end of the chorale, and the absence of sharps or flats in the key signature, tell us that it is in the key of C major. Having ascertained this, the beginning of the bass and the cadence in bar 4 can be filled in:



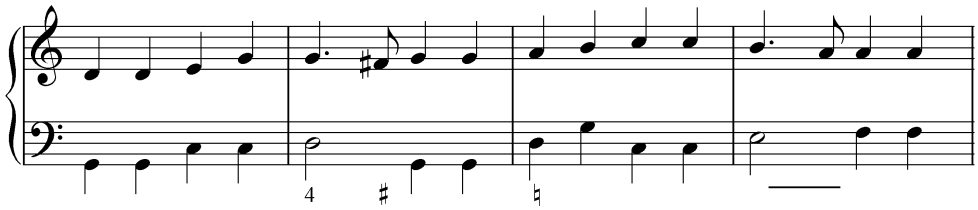
(The penultimate note of the melody, the quaver C, anticipates the final note and is therefore called an **anticipation**; it does not require its own chord - our ear accepts the dissonance against the triad on the dominant.)
The third and fourth lines of the melody are a repeat of the first and second. We make use of a repeat sign (time is sometimes short on Sunday morning!) and proceed to the fifth line. Here, F sharp is announced as the new leading note: in the circle of 5ths we move one 5th to the right and modulate from C to G major, making good use of the 4-3 suspension:



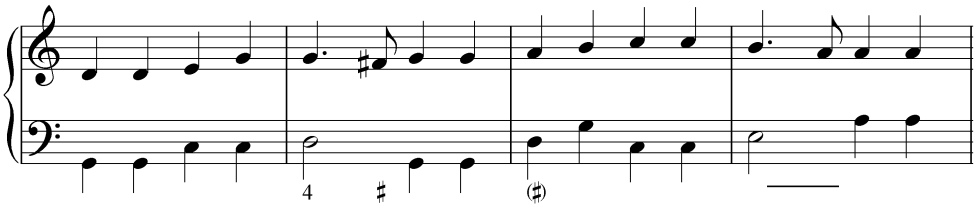
As we go on to the next line, we could retain F sharp and therefore continue in the new key of G major, possibly ending with a half cadence (on V):



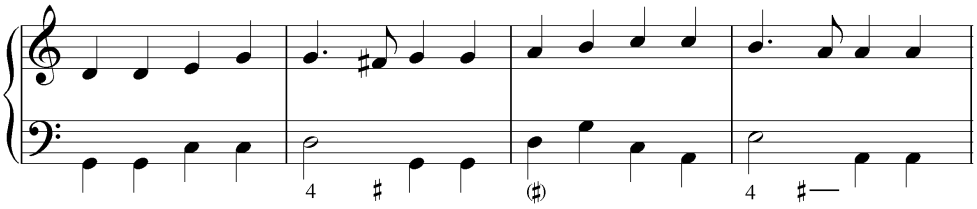
Not entirely convinced, we look for alternatives. We could dispose of F sharp and return to C major:



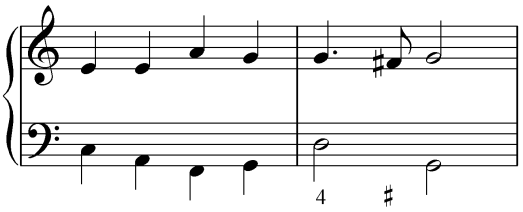
However, it does sound more plausible to have the bass ending on A:



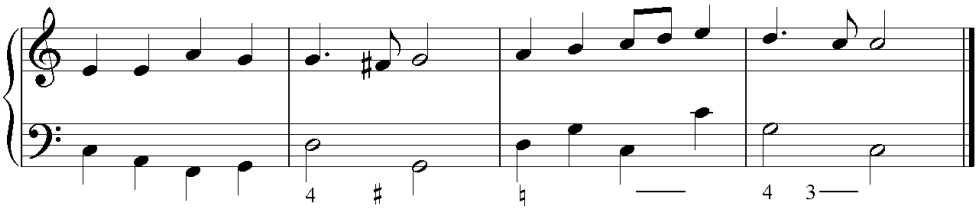
It sounds as if we have found a new tonic, on which the melody comes to rest. Indeed, a fully fledged modulation to the key of A minor proves to be quite possible:



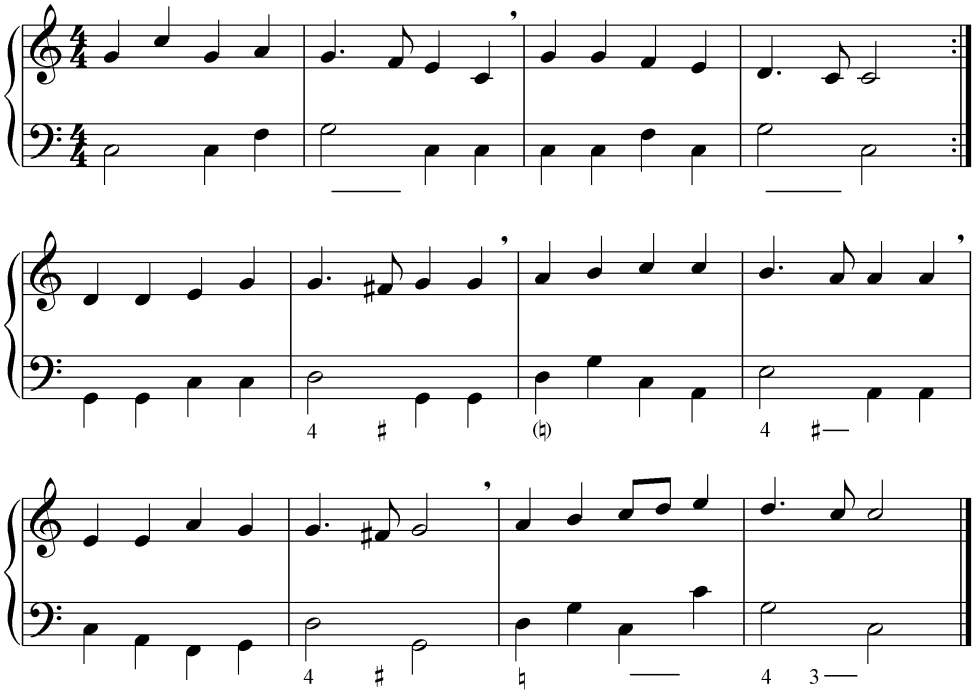
This modulation to A minor - the parallel minor key of C major - does not prevent us from simply commencing the next line in the key of C major, followed once again by a modulation to G:



Finally, we dispose of F sharp and confirm the original key of C major:

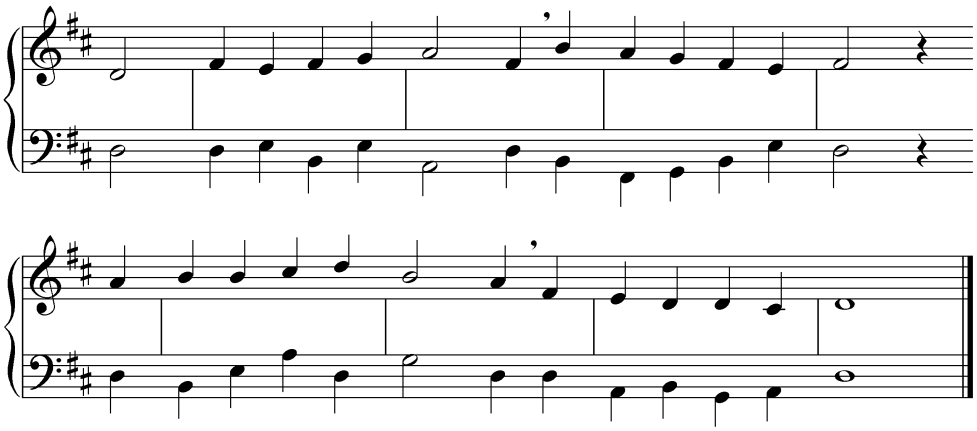


Our harmonisation is now complete:

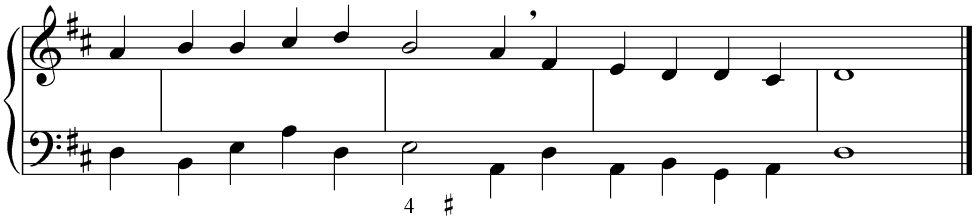


The F sharp in the given melody obliges us to modulate away from the original key. The modulation to A minor is less obligatory, but convincing in view of the course of the melody.

In Part I ch.20 we harmonised Vulpius's melody *Christus der ist mein Leben* without modulations:



The melody may not <u>compel</u> us to modulate, but it certainly <u>invites</u> us to do so:



By singing, playing and listening, we learn to discover the various ways in which a given part can be harmonised. Naturally, this is largely a question of experience, and it is this <u>listening</u> experience which is so vital to the development of our ear and taste. Certain harmonic progressions may well comply with the rules, but not necessarily appeal to the ear. And what appeals to one particular person, may not appeal to the other...

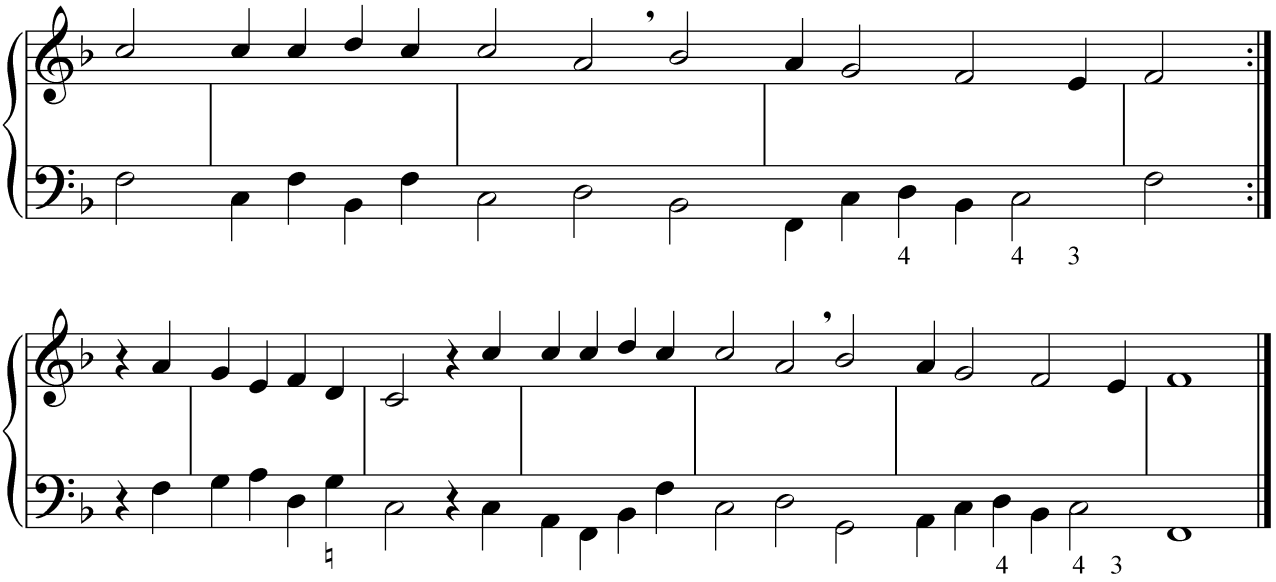
Transposition

When we **transpose** a piece of music, we play it in a different key to that in which it is written. If a setting is too high or low for a choir, for example, we can perform it in a more comfortable key. In some countries, transposition is a regular part of organists' exams. In practice, a choral conductor or singer will appreciate an accompanist who can switch with a certain ease from one key to another. But there are other benefits to this skill that lie closer to our subject, for transposition is an excellent way to train the ear, and it makes us more aware of the harmonic progressions we are playing.

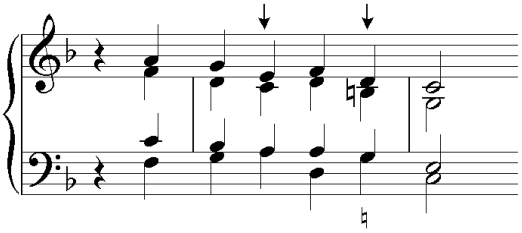
When transposing a four-part setting up a tone, we could make a mental effort to move up every note of every chord. However, this is a very roundabout and limited method. Moreover, it simply does not work if we have to transpose by larger intervals. What we really need to do is to make a mental leap from the degrees and progressions of one key to those of another. In this respect, four-part transposition from the soprano and bass is often easier than from all four parts: we follow the bass, and keep a good hold on the soprano (which helps us - especially in closed spacing - to fill in the middle voices). Transposition, however, is not purely a mental process: our ear plays an essential role, as we quickly hear if we make a mistake in transposing a familiar setting.

EXERCISES:

1. Play *Es ist ein Ros entsprungen* in four parts. In the penultimate bar, note the manner in which the first of the two successive 4-3 suspensions is resolved in the following chord.



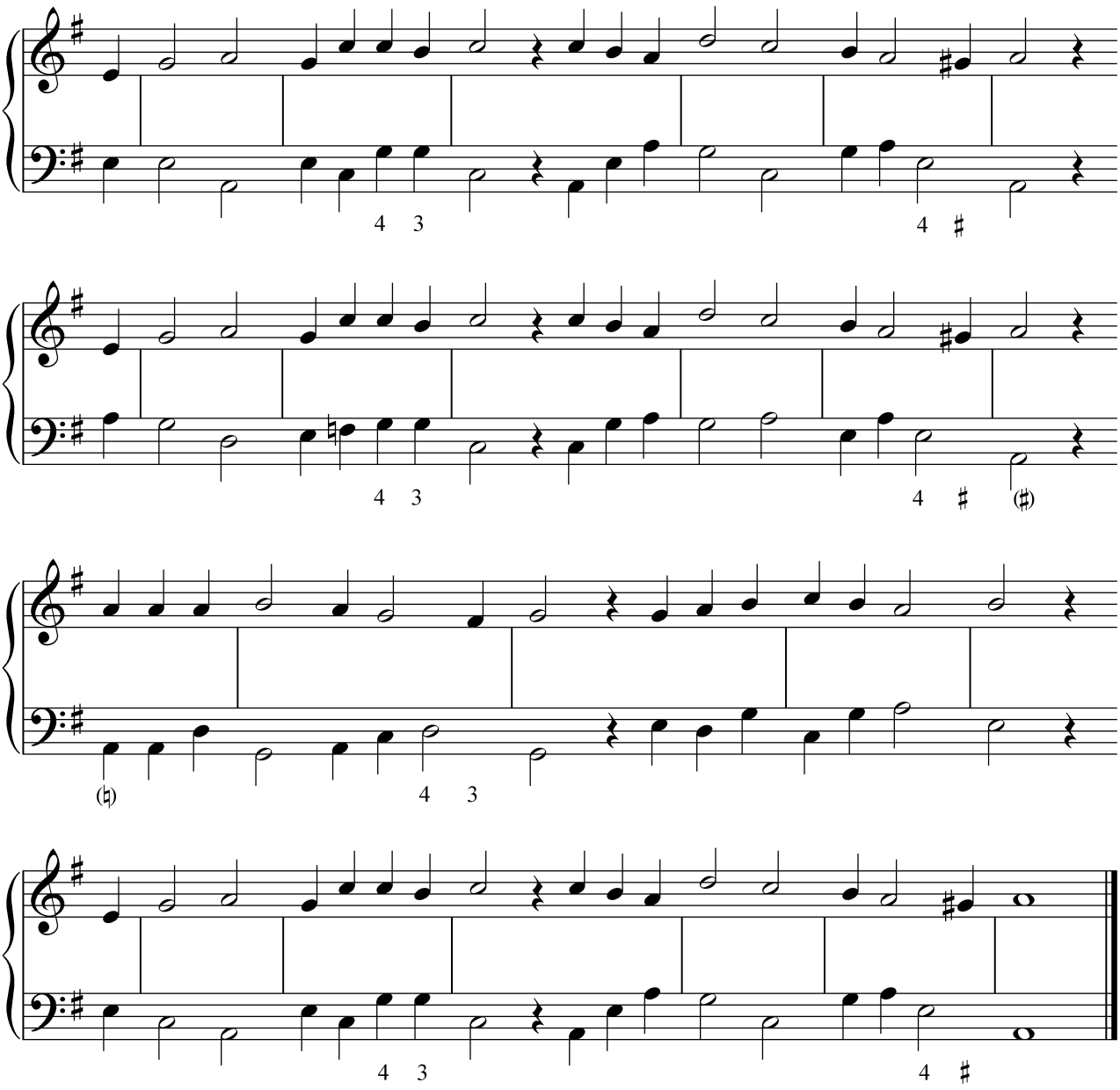
At the modulation to the key of C major, the soprano is rather low, leaving little room for the middle parts above the given bass. The solution is to play a unison doubling of the root in the tenor and bass:



2. Transpose the setting of *Es ist ein Ros entsprungen* to the key of G major.

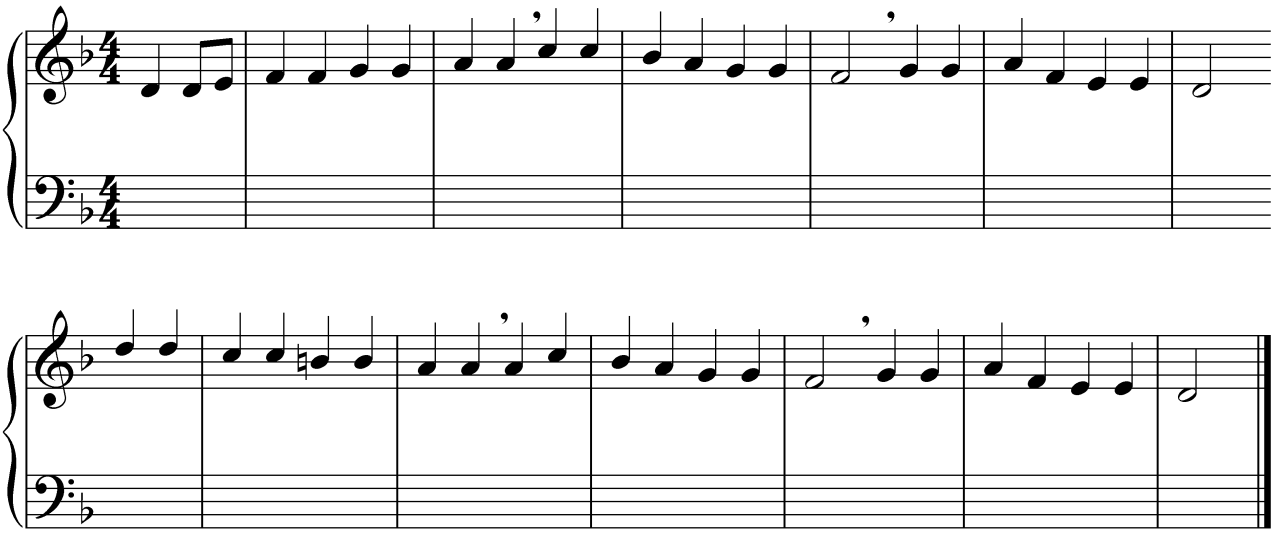
As in many hymns and chorales, the melody of *Es ist ein Ros entsprungen* contains a repeat. In his setting published in 1609, Michaël Praetorius simply repeats the harmonisation. This was apparently not a question of time shortage on Sunday mornings, since further examination reveals that it was most unusual in his period to write alternative harmonisations for repeated lines. Nevertheless, in *The Lost Chord* literal repeats are usually avoided, so that the reader hears - and is encouraged to discover for himself - different ways of harmonising the same given part.

3. The melody of *Was mein Gott will, das g'scheh allzeit* was written by Claude de Sermisy in 1529, before the advent of our 'modern' tonal system. For a note on the deviant key signature, see Part I p.45. Begin by playing the melody on its own, listening to the alternating keys of C major, A minor and G major; then practise in four parts.

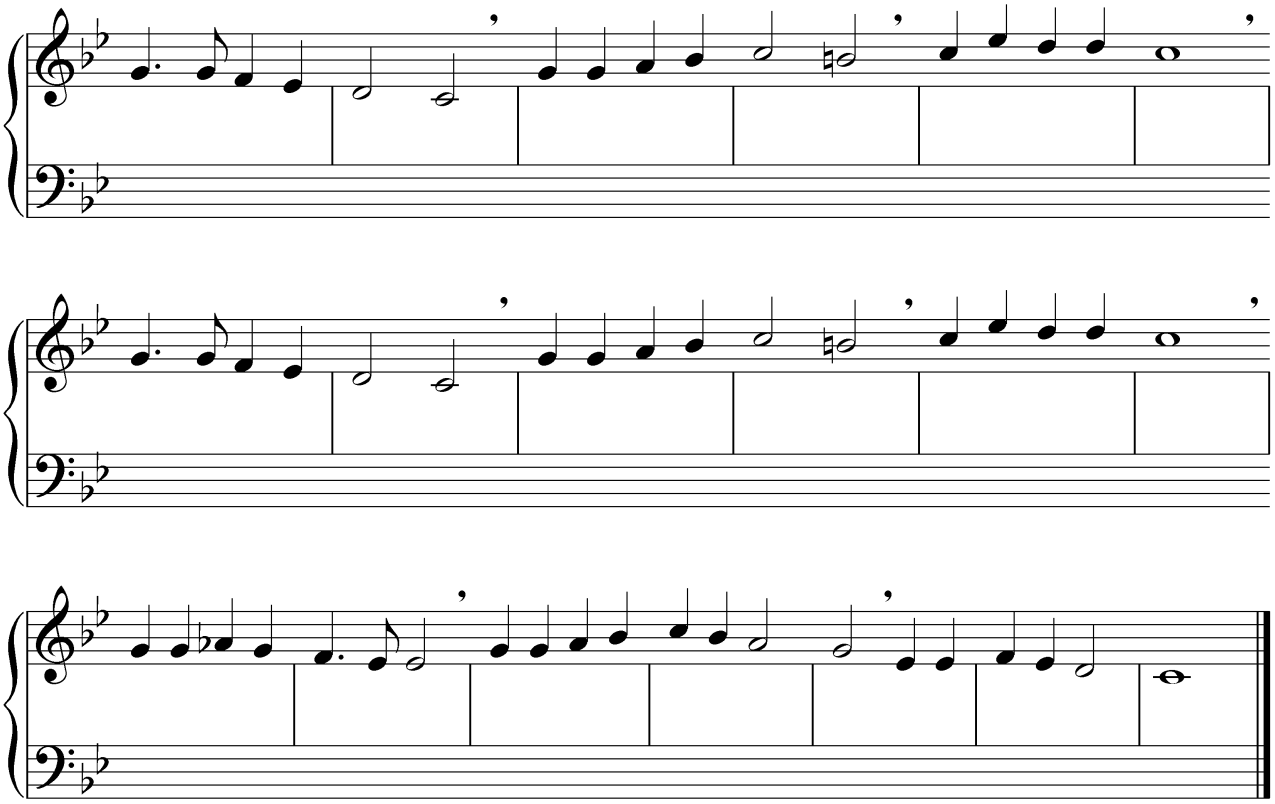


4. Write your own bass to the following melodies, first listening to the given part and trying to spot opportunities for modulation. Use the root of the desired triad in the bass, and give each note of the melody its own chord (whether a repeated chord or a new one, i.e. note-against-note technique). Check that you have written no successive 3-, 5- or 8-positions of the triad between the soprano and bass. Suspensions will add colour to your settings! Play your harmonisations in four parts.

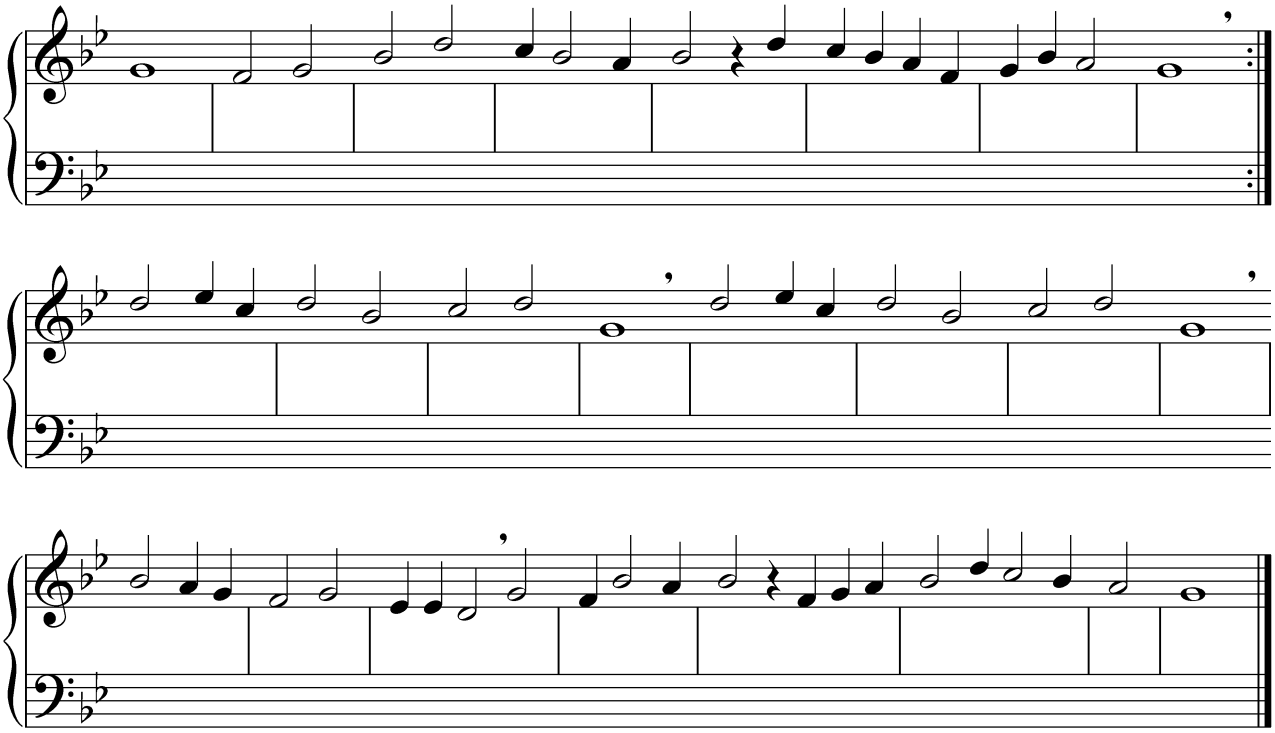
Ach, was soll ich Sünder machen



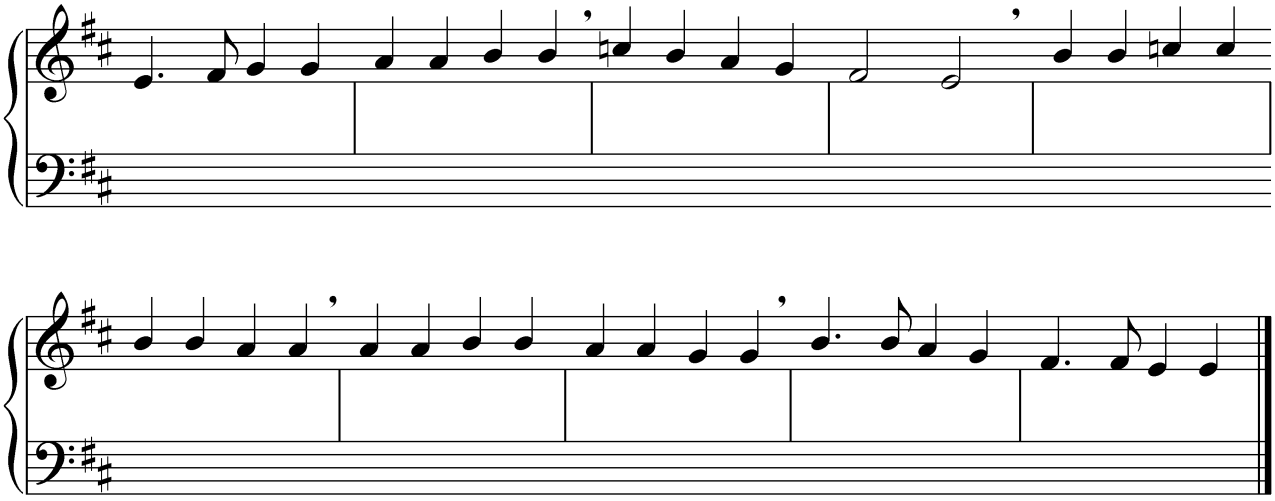
Jesu, meine Freude (the key is C minor; some triads require A natural, others A flat)



Allein zu dir, Herr Jesu Christ: parallel 5ths and 8ves between the final chord of one phrase and the first chord of the next cannot always be avoided (as Seth Calvisius demonstrated in 1594 in his own harmonisation). If we end the first system on a G minor triad, and begin the second one on a B flat triad, then we should at least employ contrary motion between the soprano and bass; otherwise this progression sounds very weak in closed spacing.



Ach wie flüchtig, ach wie nichtig (the key is E minor; some triads require C natural, others C sharp)



5.* Repeat the settings with a solo stop and pedals.

6. Practise the following transpositions:
   - *Was mein Gott will, das g'scheh allzeit* a whole tone lower
   - *Ach, was soll ich Sünder machen* in E and C minor
   - *Jesu, meine Freude* in D minor
   - *Allein zu dir Herr Jesu Christ* a whole tone higher
   - *Ach wie flüchtig, ach wie nichtig* in D minor

5

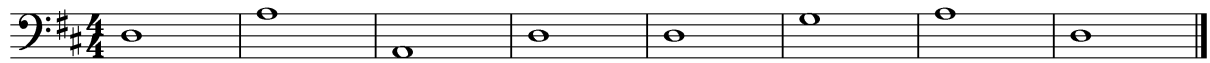
HARMONISING A GIVEN BASS (i)

Improvisation of a melody

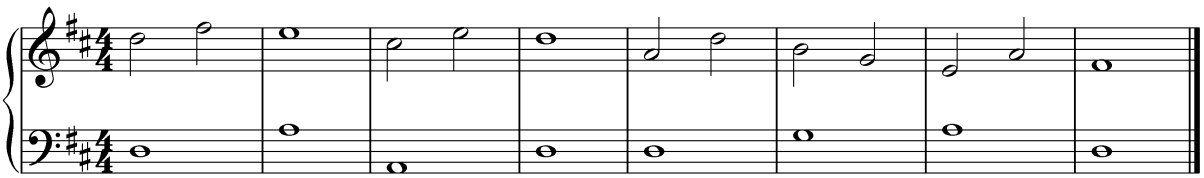
Up until this point we have concentrated on harmonising a given soprano. By writing our own bass we also determined the alto and tenor. Through listening to and playing good examples, and through much practice, this skill can be developed further. One of our aims is to acquire the ability to hear a suitable bass when we read a given upper part.

In order to develop this aural power of imagination, in which the relationship between the soprano and bass is fundamental, it is particularly fruitful to improvise our own melodies above existing bass lines.

Above the following bass:



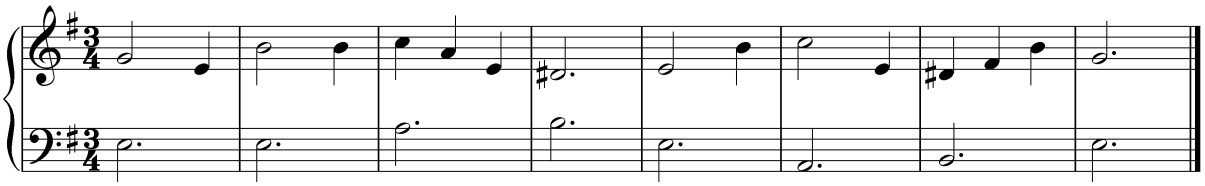
we could play this melodic line:



It is advisable to aim for simplicity, although we can branch out from note-against-note technique, as this example illustrates. For the moment, our melodies should employ only the three notes of the triad indicated by the root in the bass. Not to depart from this principle requires considerable care (and an appreciation of the beauty of simplicity!). Note the alternation of 8-, 3- and 5-positions at each new bar.

A second example:

could sound as follows:



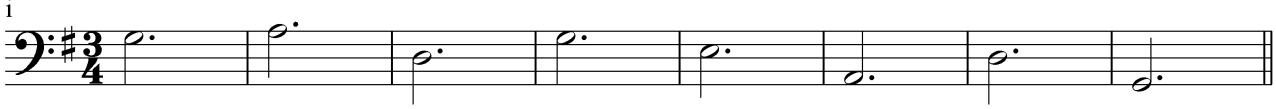
Countless melodic lines can be created above this type of bass. The many possibilities will only be discovered, however, if we challenge ourselves to improvise a different upper voice every time we play the bass. In the following exercises, therefore, it is counterproductive to try to remember and reproduce one particular solution. Here are the rules of the game:

- Use only the notes of the triad, determined by the bass, but do make full use of all three notes.
- Alternate 8-, 3- and 5-positions.
- Avoid repeating one and the same ‘solution’: be constantly on the lookout for something new, taking the risk that the right hand may sometimes get lost! (Only ex.5 may be worked out on paper.)

EXERCISES:

1. Improvise melodies above the following basses. In the fourth bar, half way, there is an intermediate cadence on I or V.

i



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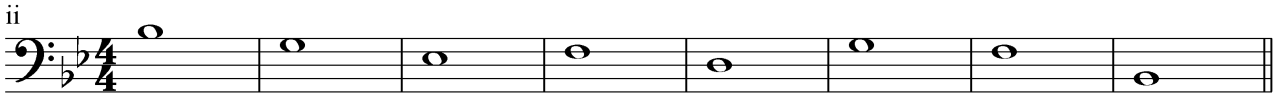

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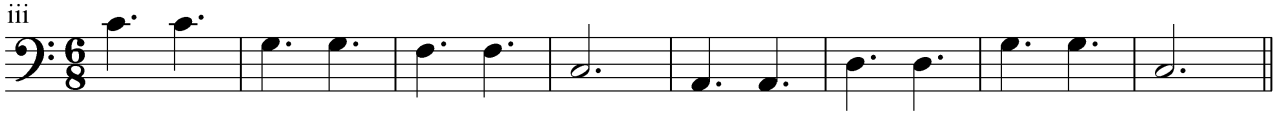
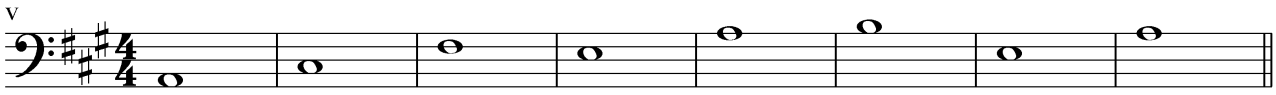


iv

v



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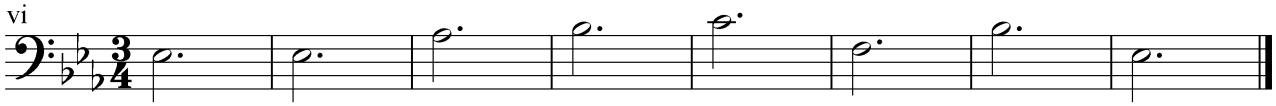
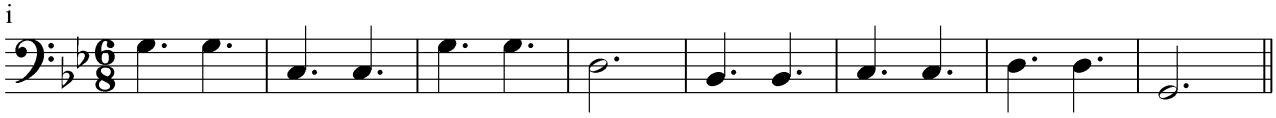


2. Improvise melodies above the following basses. Do not forget the leading note in the minor key - it is not included in the key signature!

i



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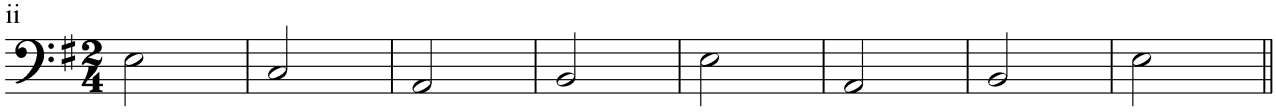

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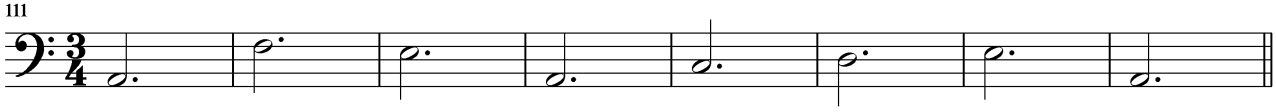

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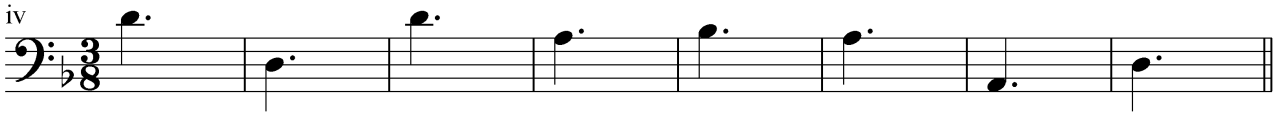

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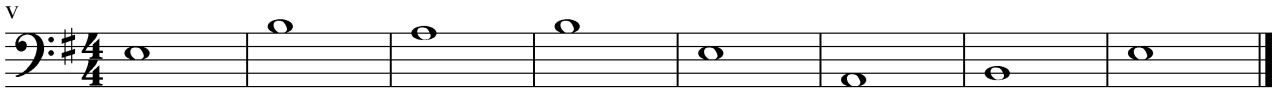
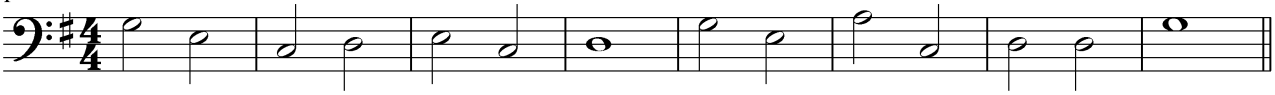


3. The following basses are more agile, so that note-against-note movement in our melodies will create sufficient liveliness.

i



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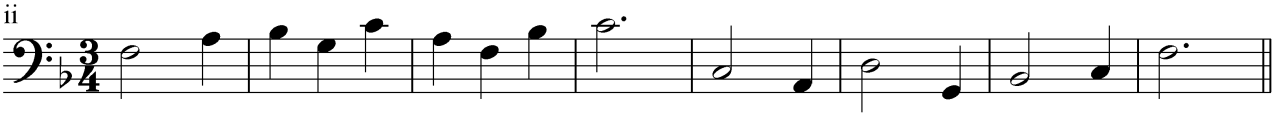

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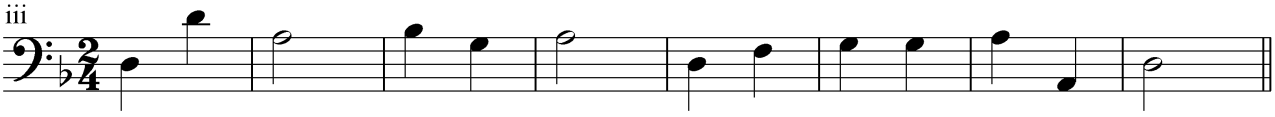

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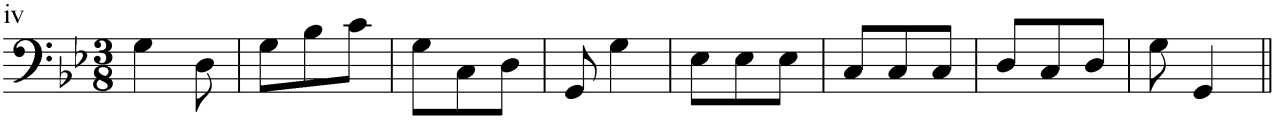

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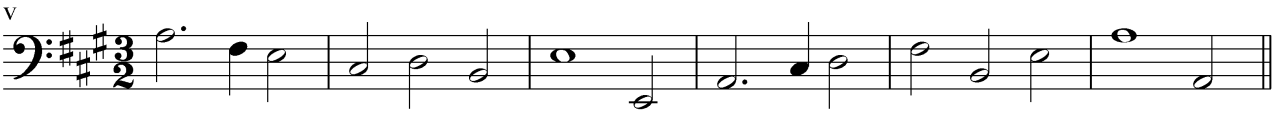

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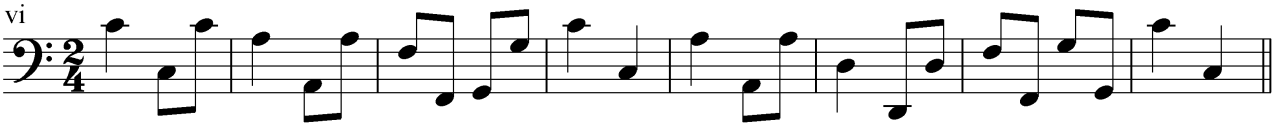

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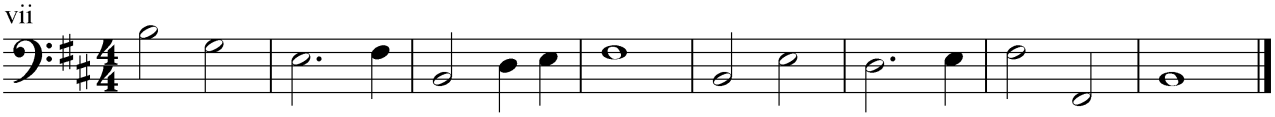
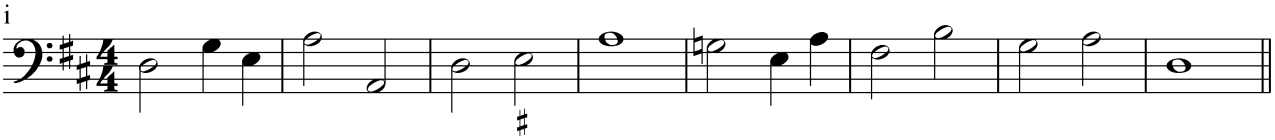


4. Modulations are indicated in the following exercise. Use the new leading note in the melody, and improvise largely note-against-note.

i



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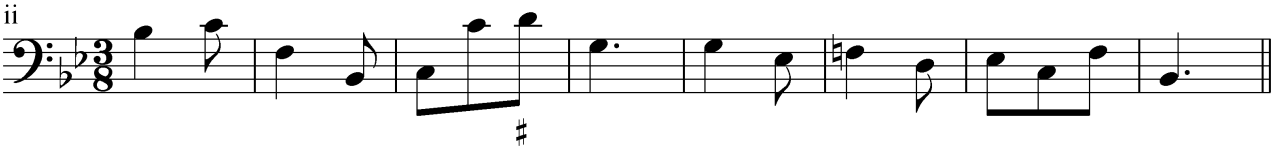

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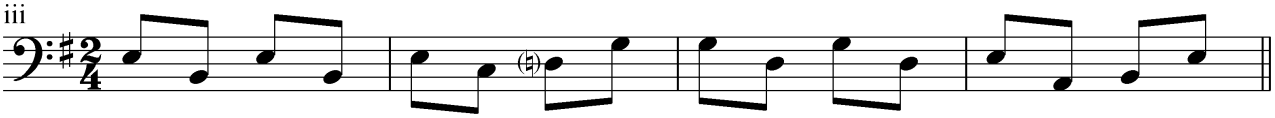

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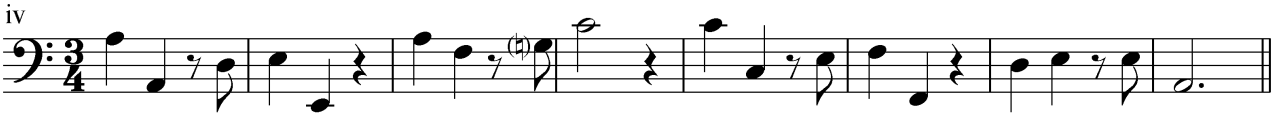

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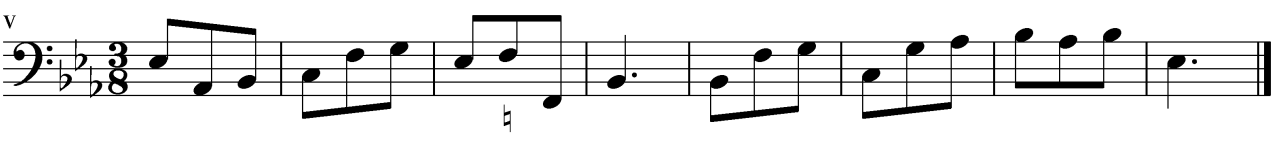
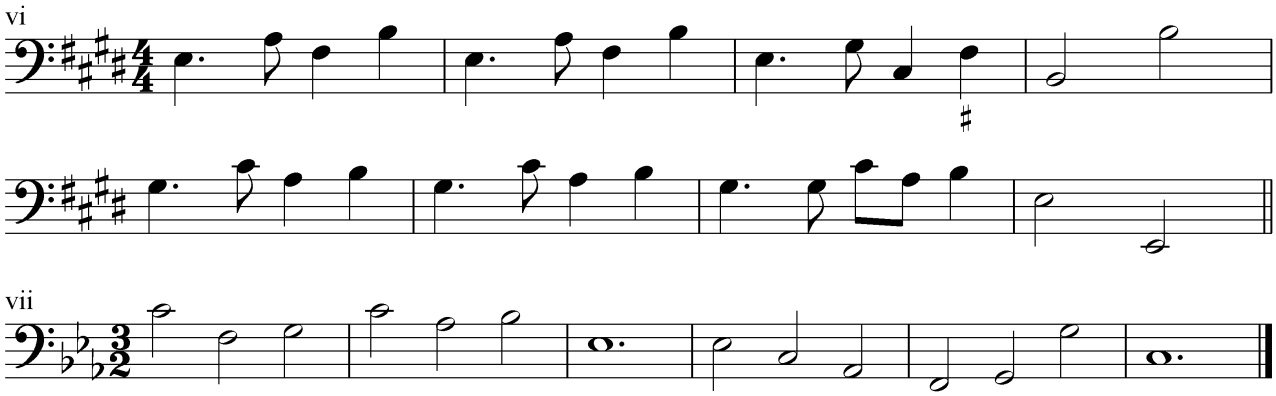
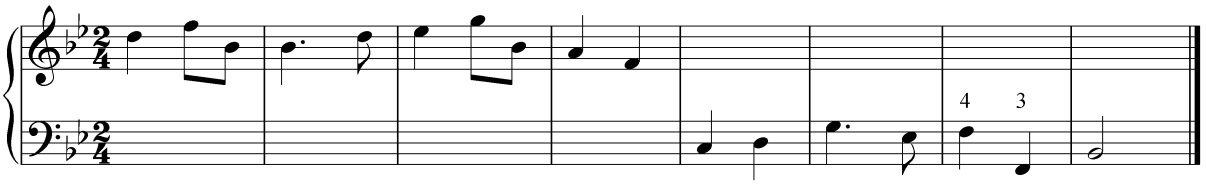


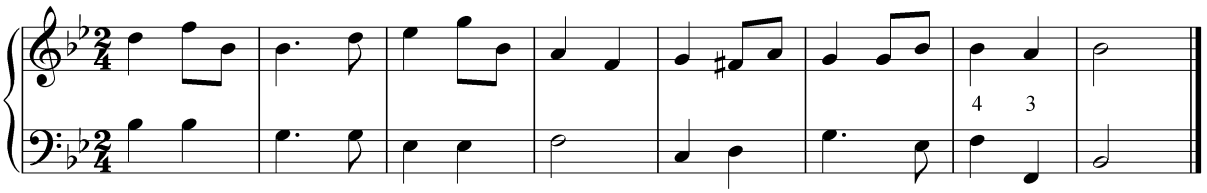


5. In the next exercise the given parts are incomplete. Fill in the empty bars, bearing in mind the character of the whole. In other words, read the given parts first and use corresponding rhythms and motifs, as in the following example:

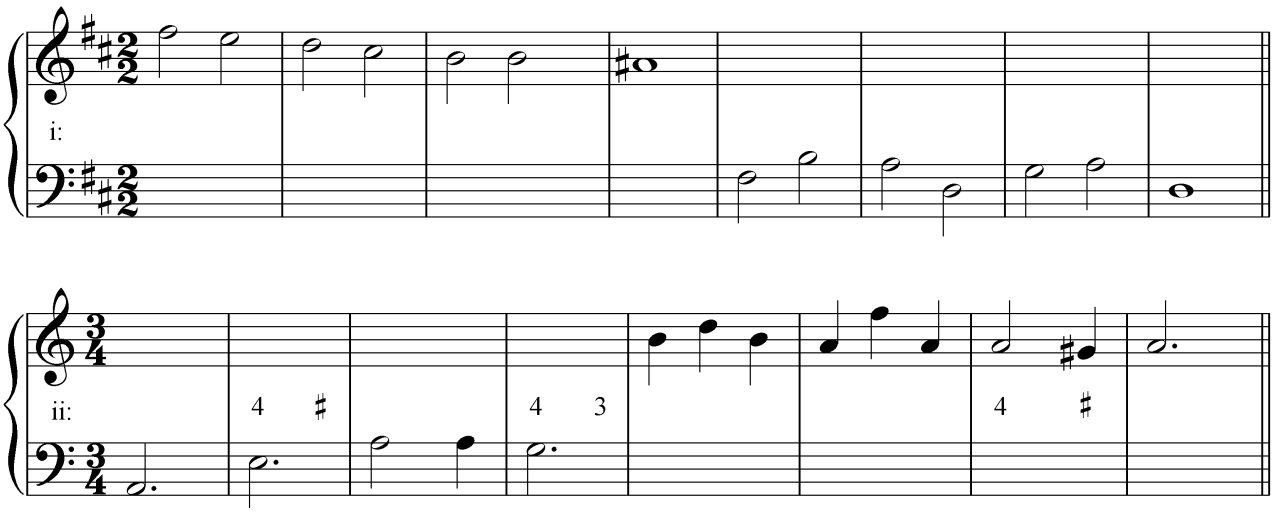
Given parts:

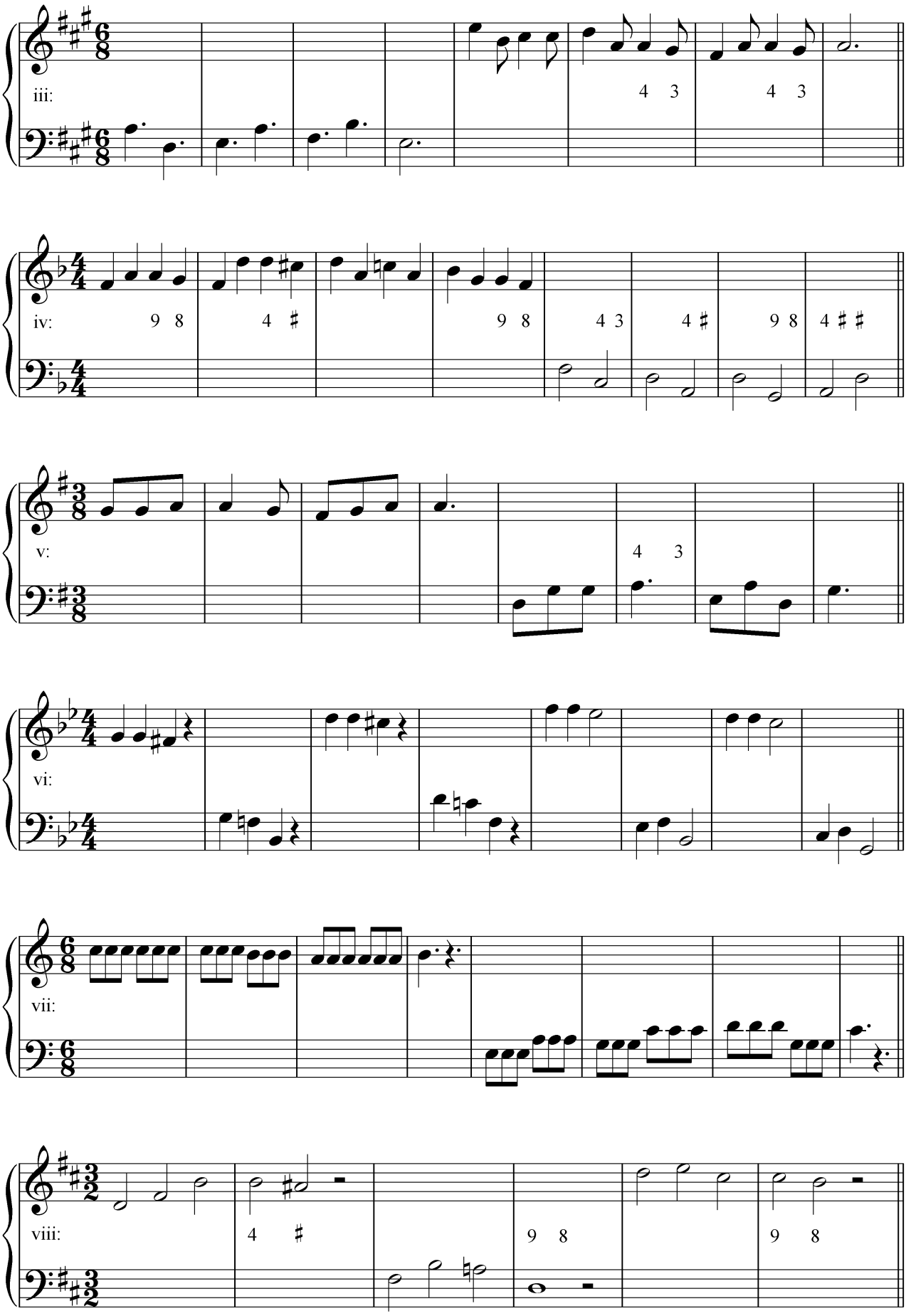


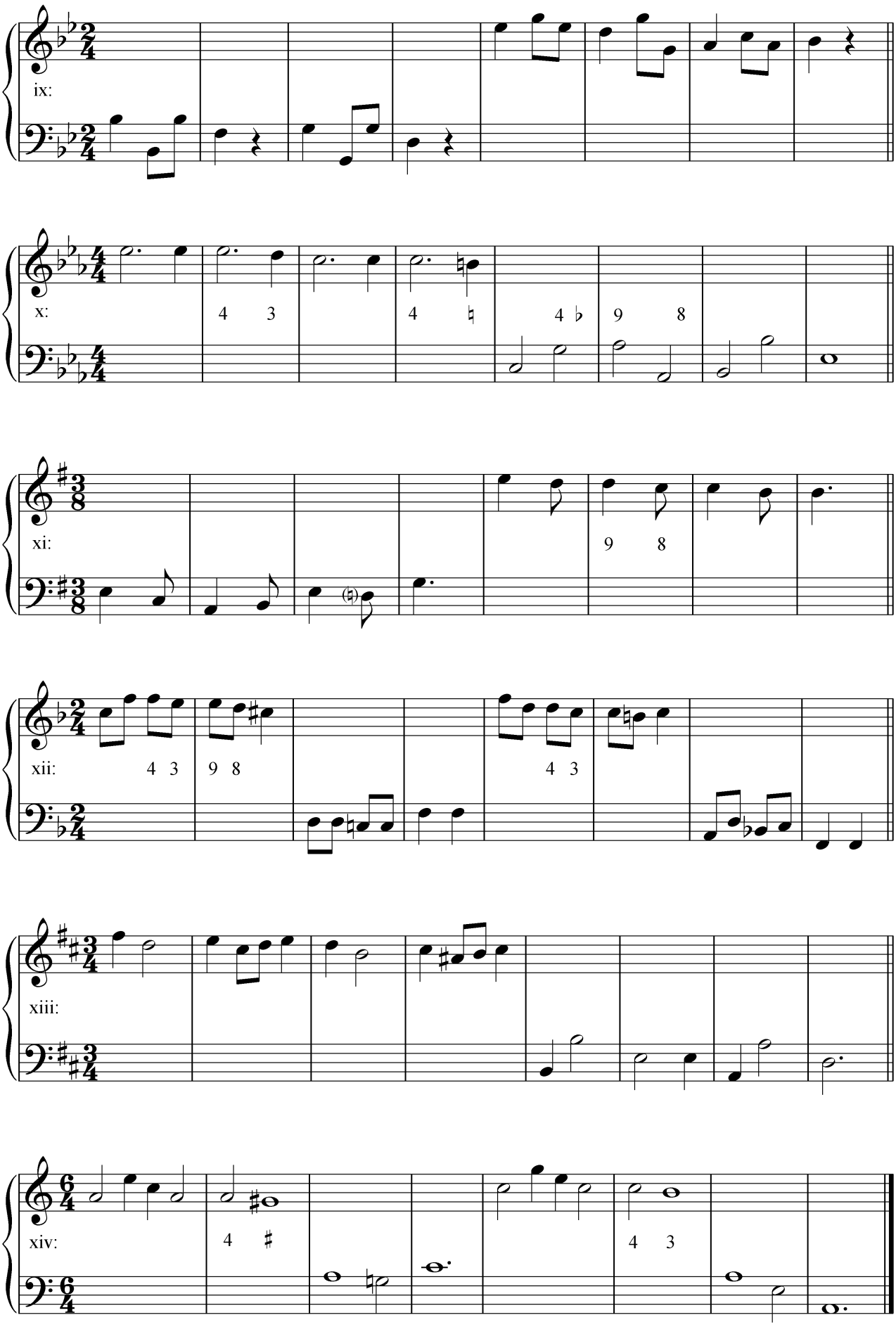
One of many ‘solutions’, in which we continue to limit ourselves to the notes of the triad:



If this exercise were to be played in four parts, we would be free to place the given suspension in a voice of our own choice. In two-part playing, make sure the suspension is incorporated in the upper voice, since otherwise this colourful detail will be lost. And remember that it makes for elegant part writing if the suspension is introduced by a consonant preparation!




iii:
4 3
4 3
iv:
9 8
4 ♯
9 8
4 3
4 ♯
9 8
4 ♯ ♯
v:
4 3
vi:
vii:
viii:
4 ♯
9 8
9 8


ix:
x:
4 3
4 ♮
4 ♭
9 8
xi:
9 8
xii:
4 3
9 8
4 3
xiii:
xiv:
4 ♯
4 3

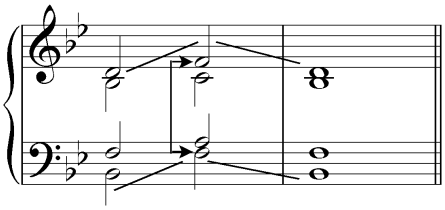
6

HARMONISING A GIVEN BASS (ii)

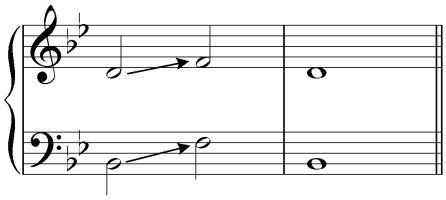
Four-part harmonisation of a given bass
Exposed 8ves and 5ths

In harmonising a given bass in four parts, the quality of the part writing in the soprano, alto and tenor is of the greatest importance. We have already seen how parallel 5ths and 8ves result in weak harmonic progressions. For the moment, we can avoid these parallels by consistently alternating the 8-, 3- and 5-positions of the triad. However, this cannot entirely safeguard us from weak progressions.

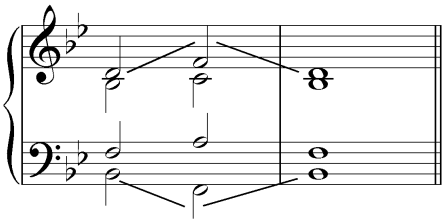
Listen to the following I-V-I progression:



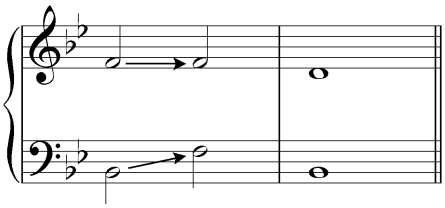
It hardly sounds robust. All voices move in the same direction, or in similar motion. The soprano and bass leap in the same direction to the dominant, landing an 8ve apart, which sounds conspicuous and emphasises the rather bare nature of that interval:



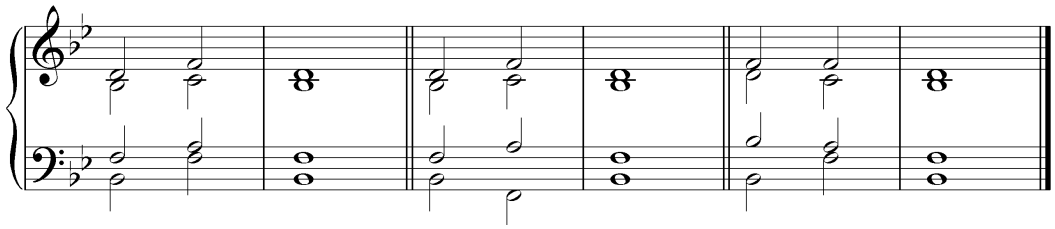
The 8ve is said to be **exposed**, because (a) it is approached in similar motion, (b) it occurs between the outer voices, and (c) both voices leap. If the soprano were a given part, the most obvious solution would be to create contrary motion between the three upper voices and the bass by simply having the bass move in the opposite direction:



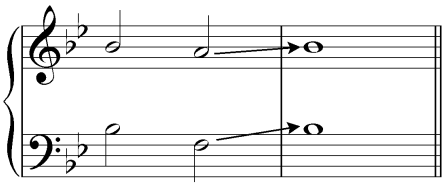
How much stronger does this contrary motion sound in comparison with the similar motion above! If the bass were a given part, the similar motion and exposed 8ve could be avoided as follows:



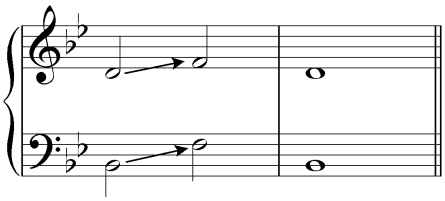
Such apparently small alterations have far-reaching consequences. The musical effect of intervals depends not only on their intrinsic tension, but on their context. Listen again to the three versions of the I-V-I progression discussed, and note how the effect of the 8-position on V is strongly determined by its context:



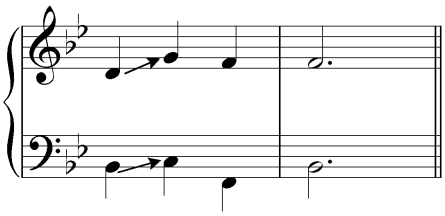
If the upper voice leaps to the 8ve or 5th in similar motion to the bass, we speak of **exposed 8ves** and **exposed 5ths**.
One of the ways in which we played the I-V-I progression in Part I was as follows:



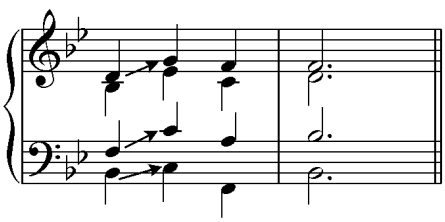
The similar motion to the 8-position on the tonic is not problematic, since the soprano moves by step and therefore does not expose the 8ve in the way it did in the first example in this chapter:



In the following example, while the bass moves by step, the upper voice leaps in similar motion to the 5th:

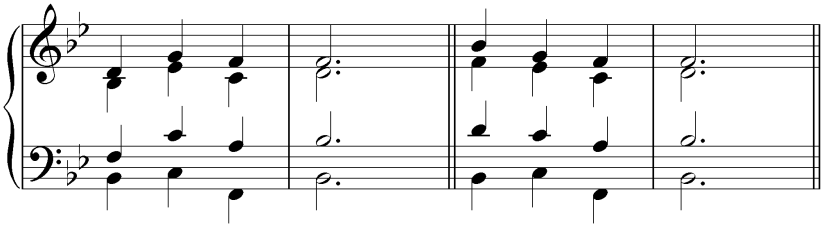


The exposed 5th on the second beat is unduly prominent, indeed it almost has the same effect as a parallel 5th. As is so often the case, this weak and incorrect point of departure between the outer parts only makes matters worse when filling in the inner voices, for one mistake very often leads to another:



All parts move in similar motion from the first to the second beat. Between the tenor and soprano is an exposed 5th, and between the tenor and bass an exposed 8ve. But this concerns inner parts, and we have defined exposed 5ths and 8ves as occuring between outer parts. Nevertheless, as so often, an error in the outer voices proves detrimental to the inner voices too. It is not without reason that some theorists go so far as to forbid exposed (or 'hidden') 8ves and 5ths between all voices.

Our aim is to employ healthy progressions to create convincing harmonisations. The choice between the following four-part settings of the above bass is not difficult to make:



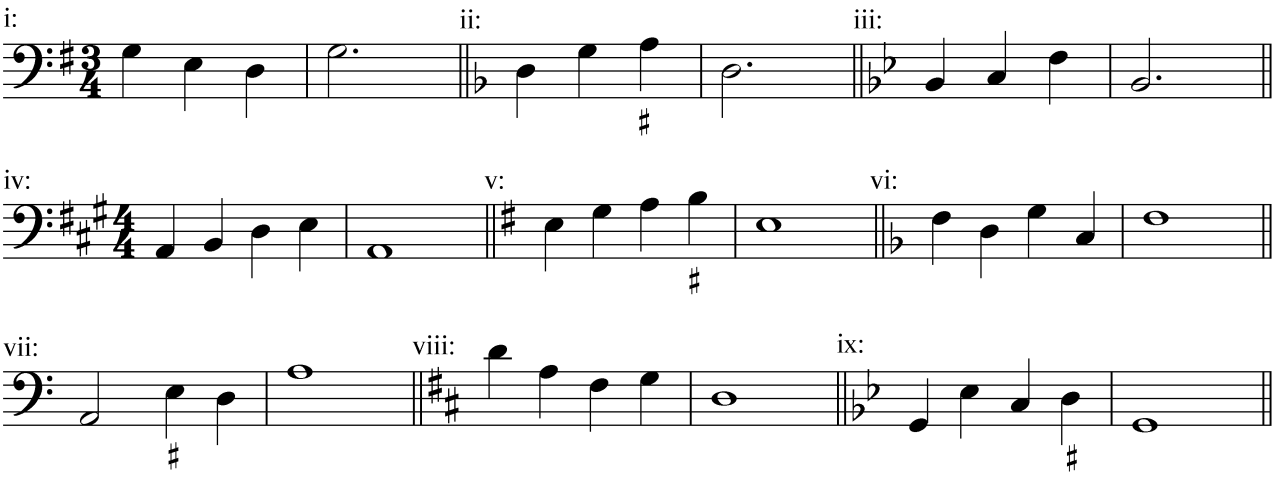
Note that while the I-II progression is corrected by creating contrary motion between the three upper voices and the bass, the II-V progression features similar motion between all four parts. There is, however, an essential difference: the upper voice now moves by step while the bass leaps, and precisely this is so often the clue to healthy progressions. Without similar motion, 'classical' harmonisation would be an impossibility!

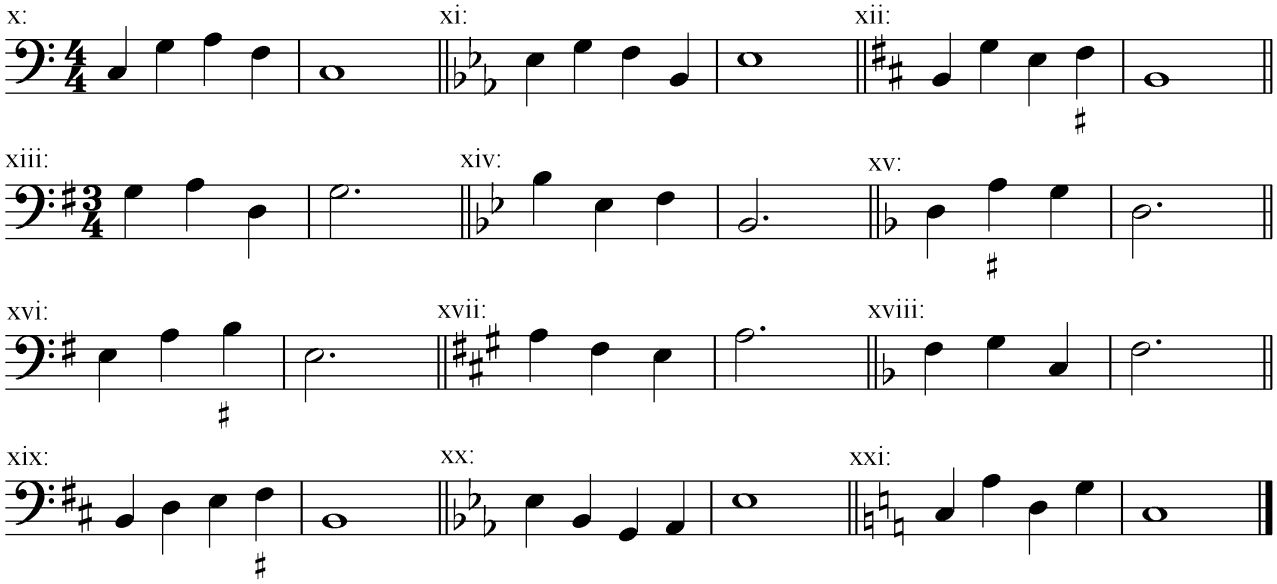
Parallel 5ths and parallel 8ves must be avoided. In questions of similar motion, including exposed 5ths and 8ves, taste and stylistic awareness also play a role. By developing our knowledge of styles, by listening to and playing good examples, we will come to realise that views changed in different periods of music history, including those concerning part writing.

EXERCISES:

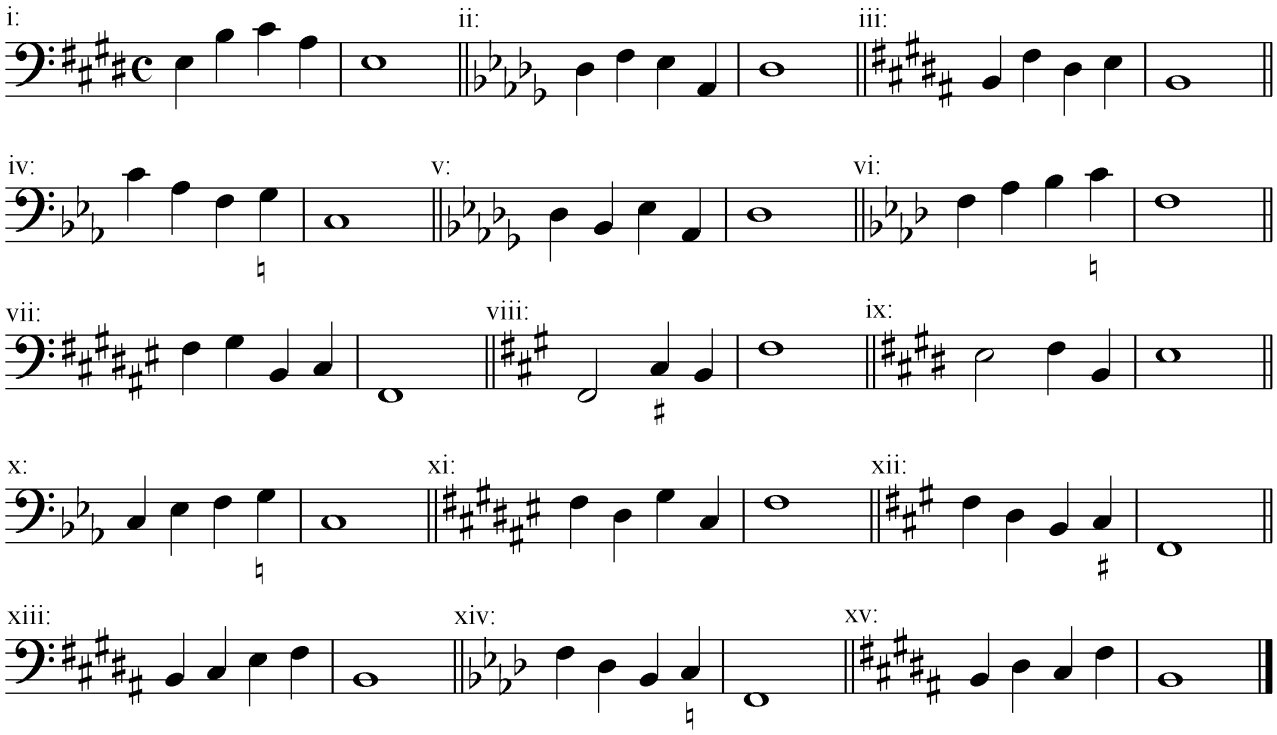
In the following exercises we practise cadence progressions without writing out the soprano. In addition to the V-I ('authentic') cadence we use the IV-I ('plagal') cadence (see Part I p.21).

1. Play the following cadences in four parts. Practise several 'solutions' to each progression by varying the position of the upper parts.

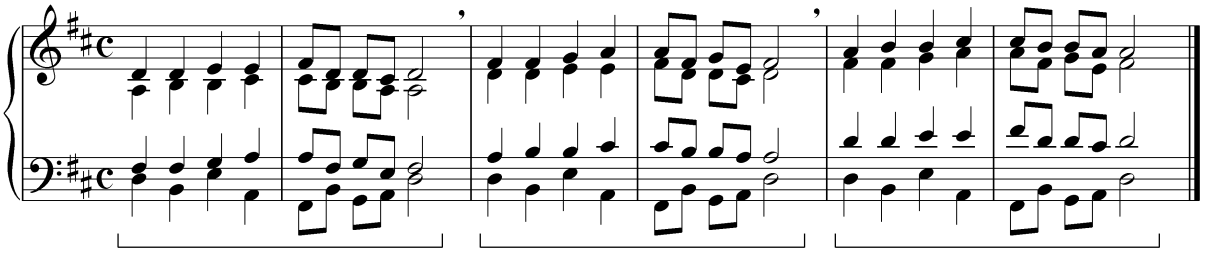




[2.] Practise the following four-part cadences in the same manner.

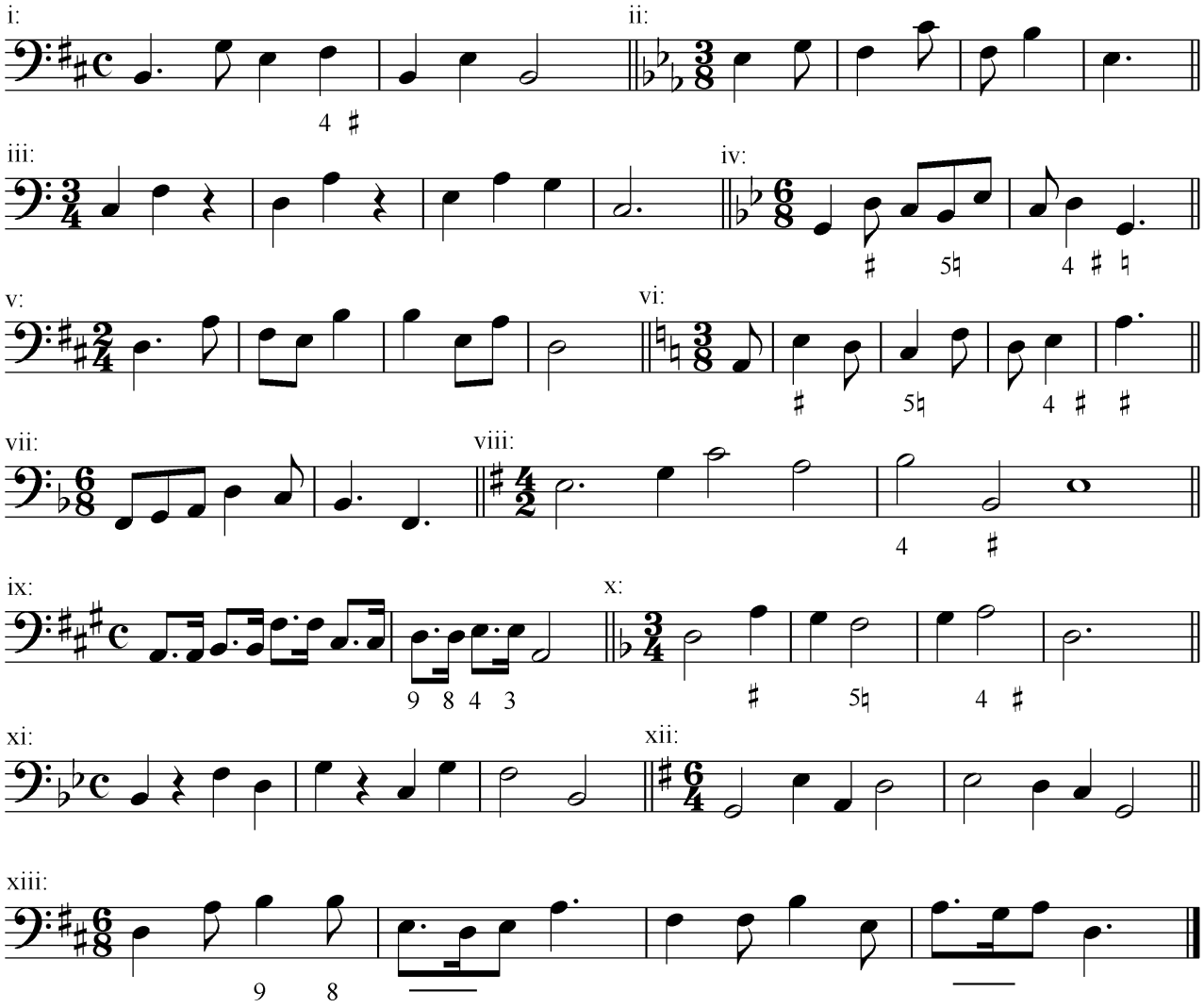


3. By playing the same progression successively in different positions, we can create a little composition on an ostinato bass:[+]

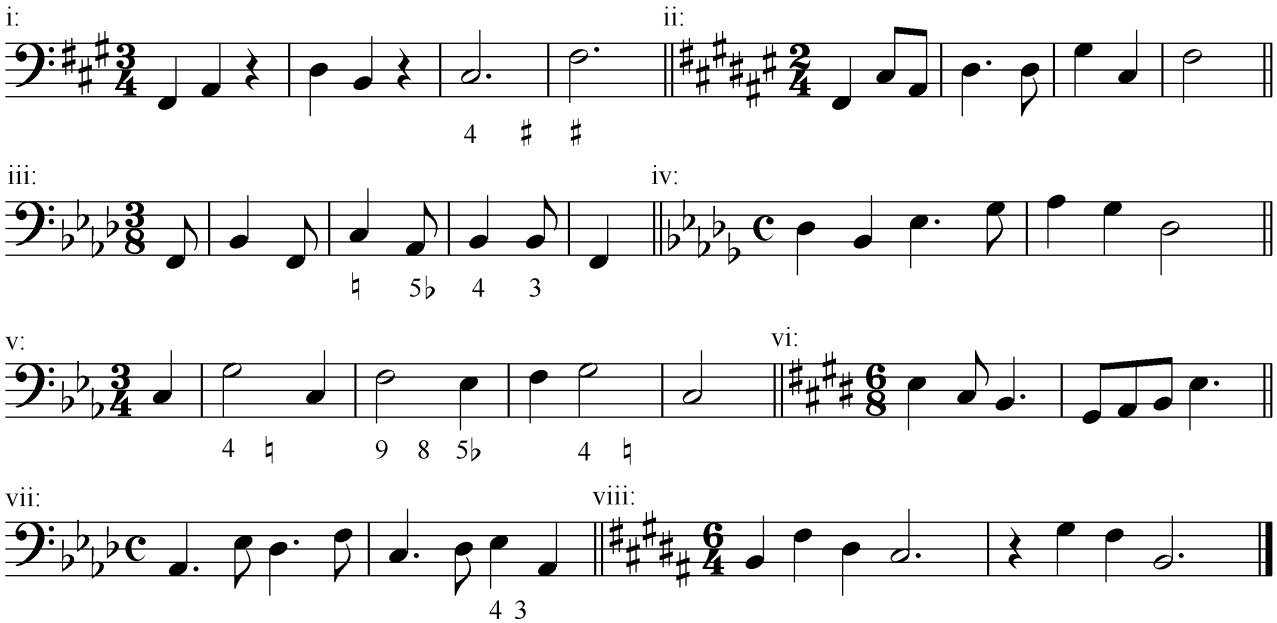


[+] An ostinato (from the Italian *obstinate*) is a pattern that is continuously repeated, like the bass in a passacaglia or chaconne.

Practise the following four-part progressions in the same manner by repeating each bass.



[4.] Play the following four-part progressions in the same manner.



5.* Repeat ex.1-3 [and 4] with a solo stop and pedals.

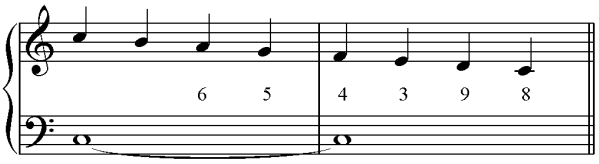
7

THE SIXTH

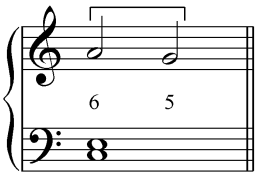
The 6th as an appoggiatura
The 6-5 progression

The moment has come to enlarge our harmonic vocabulary. The more chords we can use, the more varied our harmonic language will become.

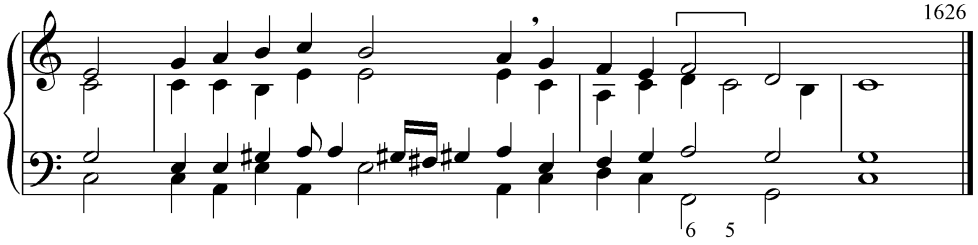
In ch.1 we listened to the tension and relaxation of the descending major scale:



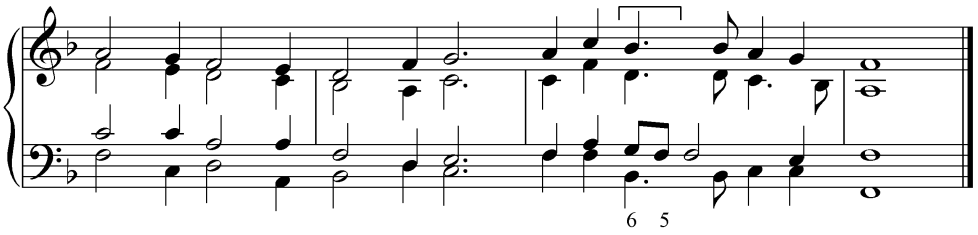
Above the root C, the 4-3 and 9-8 progressions move from tension to relaxation. We experience the 9-8 progression as a movement from dissonance to consonance. This is less so with the 4-3 progression. And it is even less so in the movement from 6 to 5. The 6th is not dissonant; it does create a certain tension, however, especially if we add the 3rd above the bass:



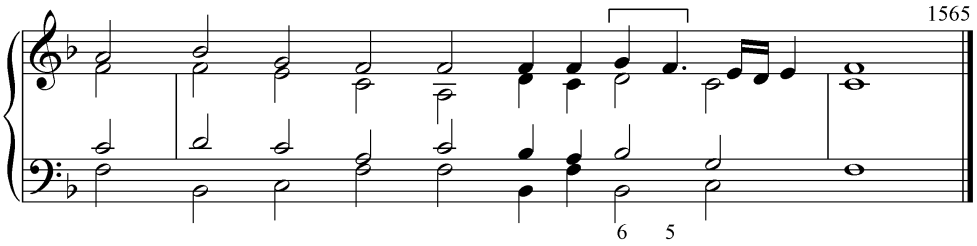
The 6th has become an appoggiatura (from the Italian *appoggiare*, to lean), leaning as it does against the 5th, which almost has the effect of a resolution. This remarkably expressive use of the 6th, as an ornament of the 5th, is found in much music of the Renaissance and early Baroque, for example at the end of Heinrich Schütz's setting of *Aus meines Herzens Grunde*:



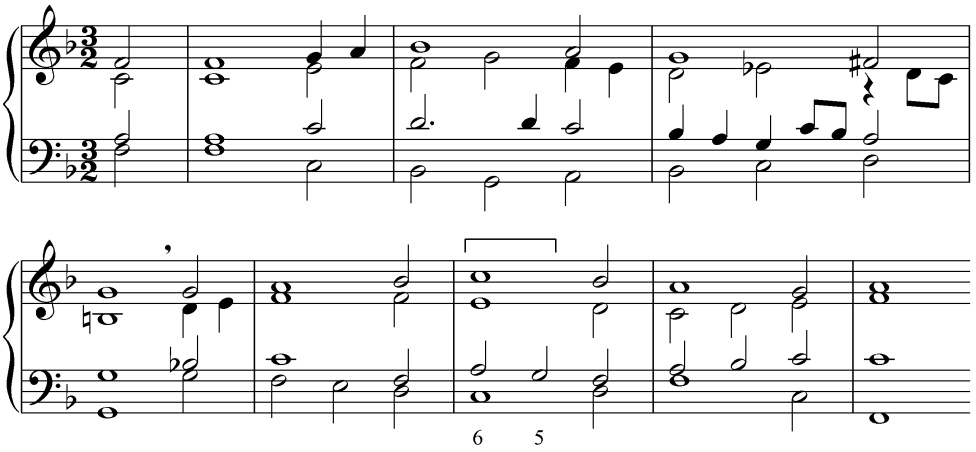
and at the end of John Dowland's *Now, O now I needs must part*:



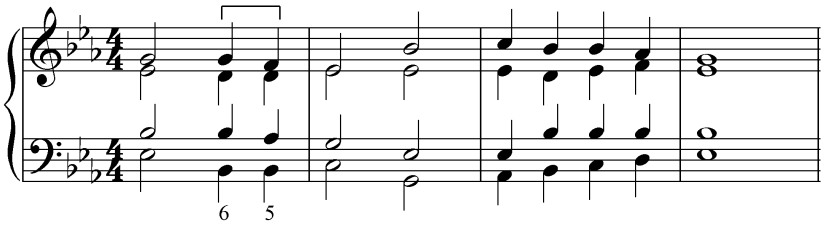
In these examples, in which the tension of the 6th is evident, we hear an echo of the linear texture of Renaissance polyphony. It is therefore hardly surprising that the Renaissance composer Claude Goudimel used the same cadence in 1565 in many of his metrical psalm tunes, as at the end of Psalm 1 (the melody is in the tenor):



Listen also to this fragment from the first of Sweelinck's organ variations on *Allein Gott in der Höh sei ehr*:



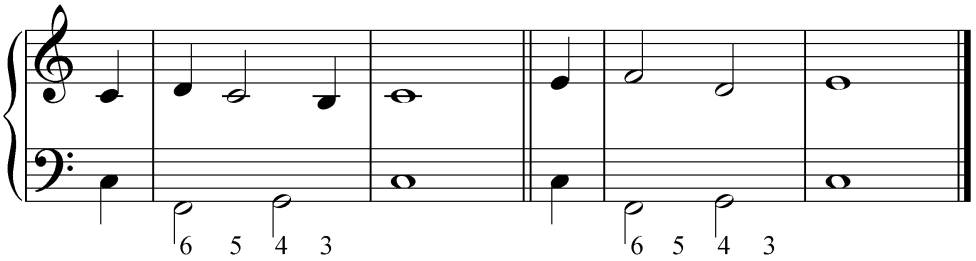
Is this Sweelinck's way of accentuating the highest point in these two lines of the melody? We experience the 6th as an appoggiatura, resolving into the 5th. There can be no doubt, however, that the bass note C, not only below the 5th but also below the 6th, is the root of the harmony.
Three centuries later, in Monk's *Abide with me*, the credentials of the 6th as an appoggiatura prove to have a long history:



In all the examples except the last, the 6th is not 'prepared' in the way a dissonance would first be heard as a consonance. It is clear that the 6-5 progression is not in the same category as the 9-8 progression. The interval of the 6th sounds milder, and therefore requires no preparation; at the same time, one could say that the tension is heightened precisely because the preparation is absent. In the next chapter we will see that, in the course of the 17th century, the chord of the 6th acquired an independent function.

EXERCISE:

Practise the following cadences in four parts in the major keys of C, G, D, A, F, B flat and E flat:



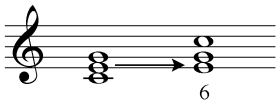
8

THE CHORD OF THE SIXTH (i)

The chord of the 6th as an inversion of the triad
Four-part writing with the chord of the 6th

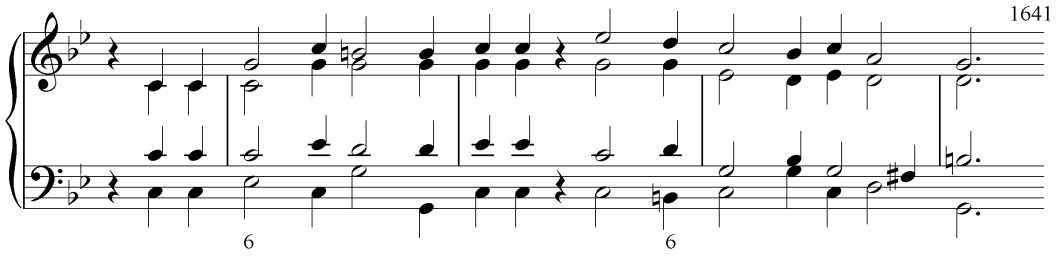
In the previous chapter, we examined the interval of the 6th as an ornament preceding the 5th. As the 17th century progressed, this linear approach to the 6th became less common as the 'basso continuo' style, with its vertical chord structure anchored in the bass, emerged as one of the mainstays of Baroque music.

As the Baroque style developed, so did the 'modern' tonal system, in which the chord of the 6th came to be viewed increasingly as an inversion of the triad. When a triad is inverted, the root is no longer heard in the bass: in the **1st inversion** the bass is the 3rd of the triad. The displaced root forms an interval of a 6th above the new bass:

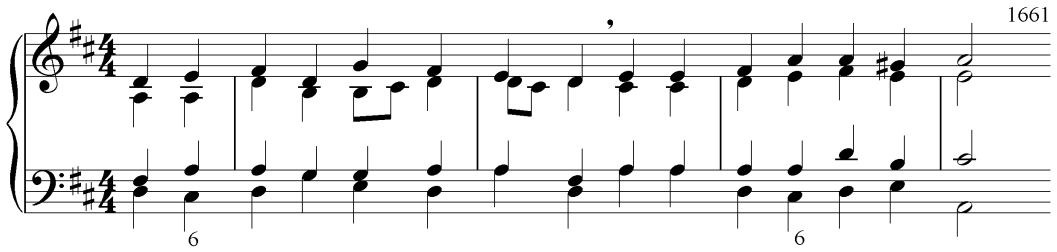


Thus the 1st inversion is also known as the **chord of the 6th**; it will also be referred to here as the **6-chord**, in accordance with figured bass practice. The 6-chord can be used on all degrees of the scale. Its name has nothing whatsoever to do with degree VI of the scale!

Listen to the beginning of Johan Schop's *Sollt ich meinem Gott nicht singen*:



In the two 6-chords, the root of the triad is heard in one or more of the upper parts; the 3rd of the triad is in the bass.
In the previous chapter, the 6th caused tension - apparently requiring a resolution to the 5th - in an upper voice. Now, tension moves to the bass itself, which, in losing the root, has also lost its stability. A chord without the root in the bass is a chord which is 'underway', as we experience in Schop's setting. Hardly surprising, therefore, that the very last chord of 'classical' compositions of the common practice period is always the tonic triad in root position!
A second example comes from Wolfgang Wessnitzer's *Jesu, meines Lebens Leben*:

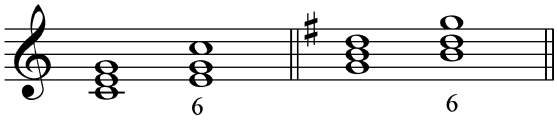


At two points, the composer employs the 1st inversion of the triad on V. He could have used the root position in both cases, and it is worth listening to the difference and to hear how the 6-chord creates a more ongoing movement. Moreover, by avoiding the bass note A in the penultimate bar, the subsequent modulation to the key of A major is all the more effective.

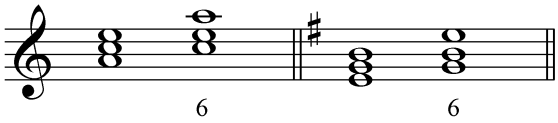
Before looking at more examples, it is important to get the feel of the 6-chord in our fingers. Our vocabulary must be at the ready, and it is therefore essential to learn to 'grasp' each new chord without hesitation.

EXERCISES:

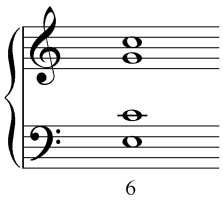
1. Play successively the root position and 1st inversion of the triad of C major; continue likewise around the circle of 5ths:



2. Repeat this exercise with the minor triads:



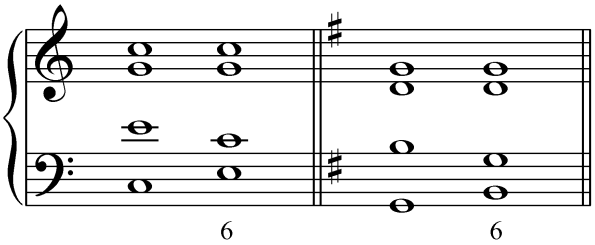
By doubling the root, we can play the 6-chord in four parts:



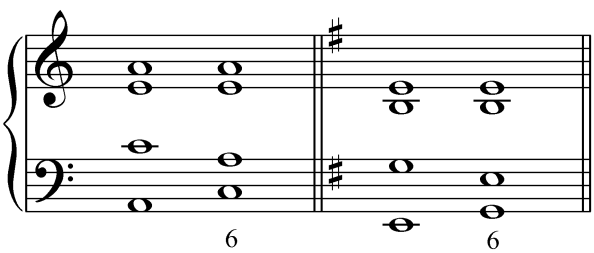
This chord is in **mixed spacing**, which is a combination of closed spacing and open spacing (see Part I ch.12). Certain notes of the triad (here the soprano and alto) are as close together as they can be; others are further apart, where notes of the triad have been 'skipped'. The distance between the soprano and tenor is consequently an 8ve or more.
The root of the triad is C; the bass of the 6-chord is E. In the inversion, the root C sounds in one or more of the upper parts, depending on how they are distributed. This distinction between the root and the bass of a chord is most important, but often a source of confusion!

EXERCISES:

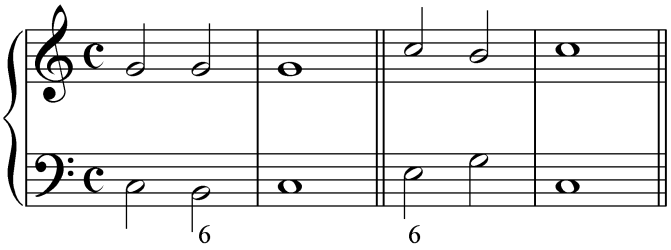
3. Play successively the root position and 1st inversion of the triad of C major in four parts. Continue likewise around the circle of 5ths. Remember to play the three upper parts with the r.h., the bass with the l.h.



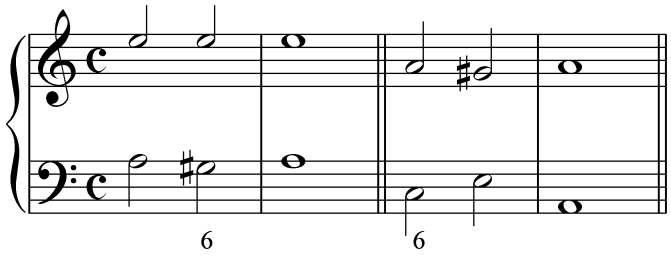
4. Repeat this four-part exercise with the minor triads:



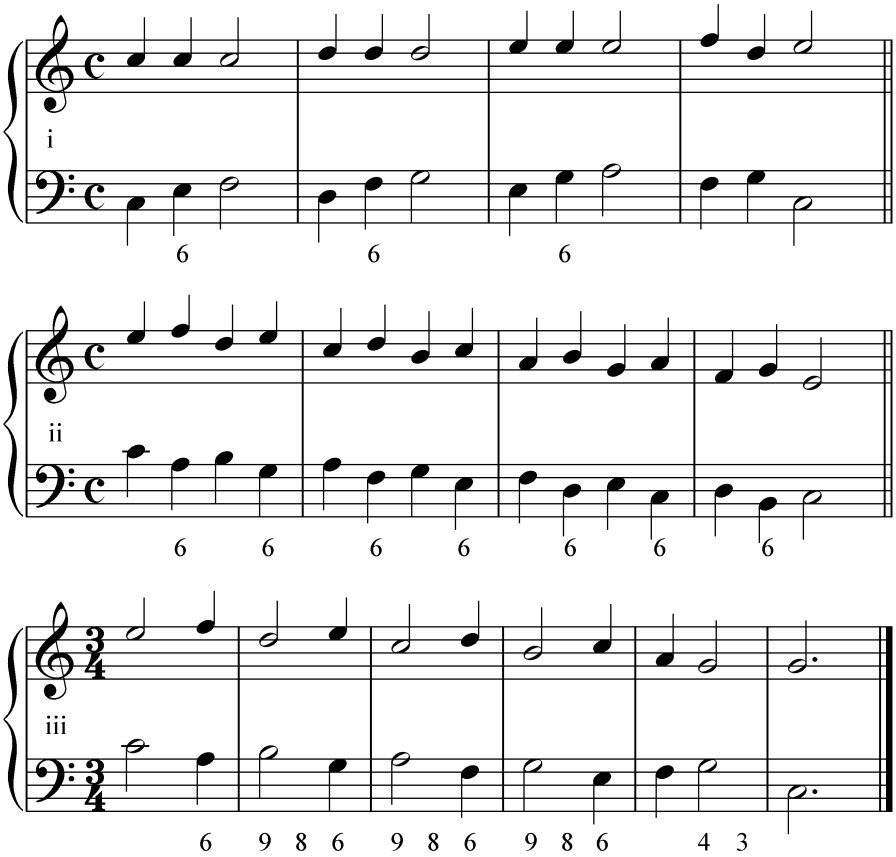
5. Practise the following I-V-I cadences in four parts in all major keys:



6. Practise the following I-V-I cadences in four parts in all minor keys:



7. Play the following sequences in the major keys of C, G, D, A, F, B flat and E flat:



8.* Repeat ex.3-7 with a solo stop and pedals.

[9.] Play ex.7 in the major keys of E, B, F sharp, A flat and D flat.

[10.*] Repeat ex.9 with a solo stop and pedals.

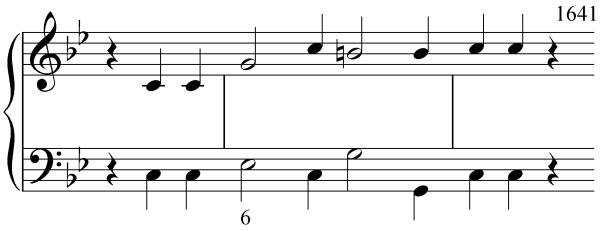
9

THE CHORD OF THE SIXTH (ii)

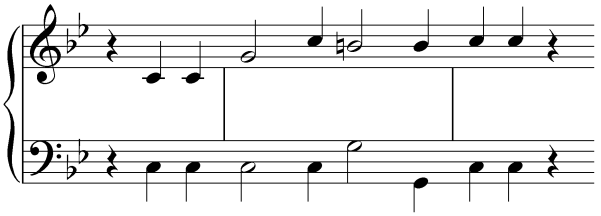
Application of the 6-chord

The chord of the 6th adds a new colour to our palette. Each new chord presents new ways of harmonising a particular turn of phrase convincingly. In this chapter, we examine musical applications of our new vocabulary.

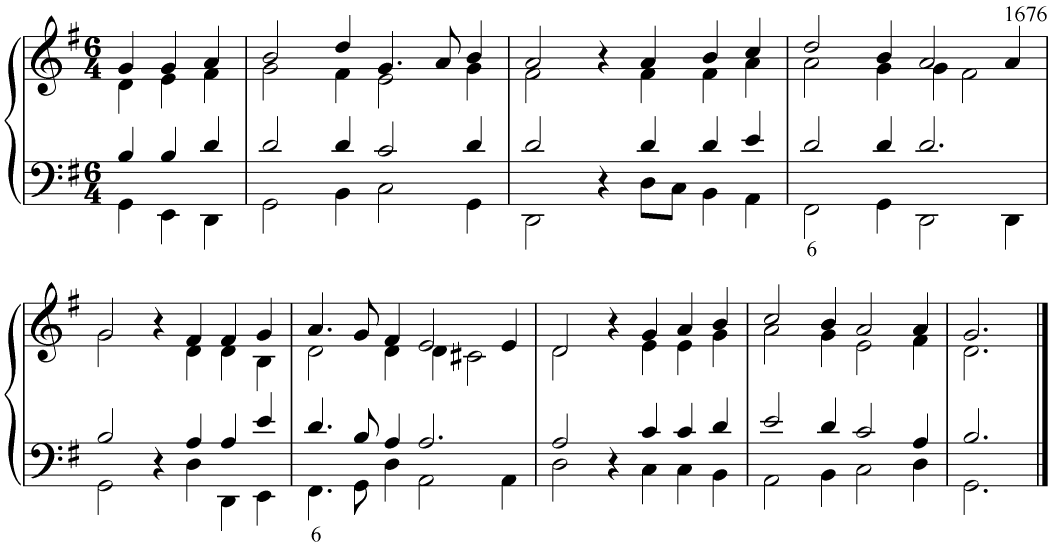
Let us return to Schop's *Sollt ich meinem Gott nicht singen*:



and compare this with the same harmonisation without the 6-chord:

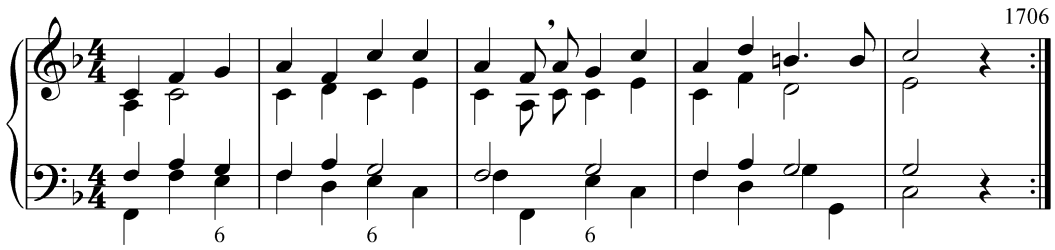


The 6-chord creates variety, and, more important, a certain tension on the strong beat of the bar.
In *O Jesu Christe, wahres Licht* the 6-chord is used at two points to reinforce the tension curve in the soprano:

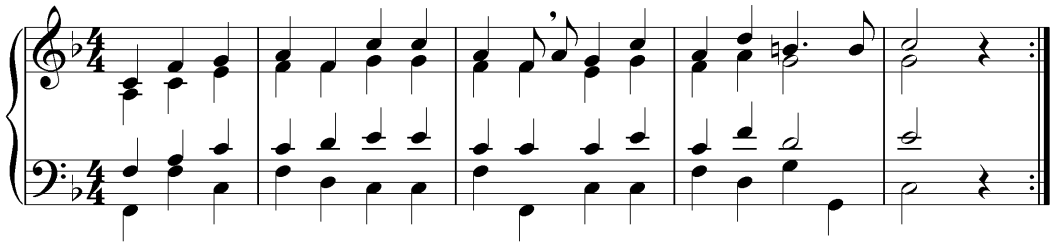


Because the root is absent in the bass, the 'underway' character of the 6-chords adds a pronounced ongoing movement to the harmonisation. (Compare the static effect of root positions instead of 1st inversions at the points in question.) Precisely because we experience the 6-chord as being relatively unstable, it is a very useful means of creating forward movement.

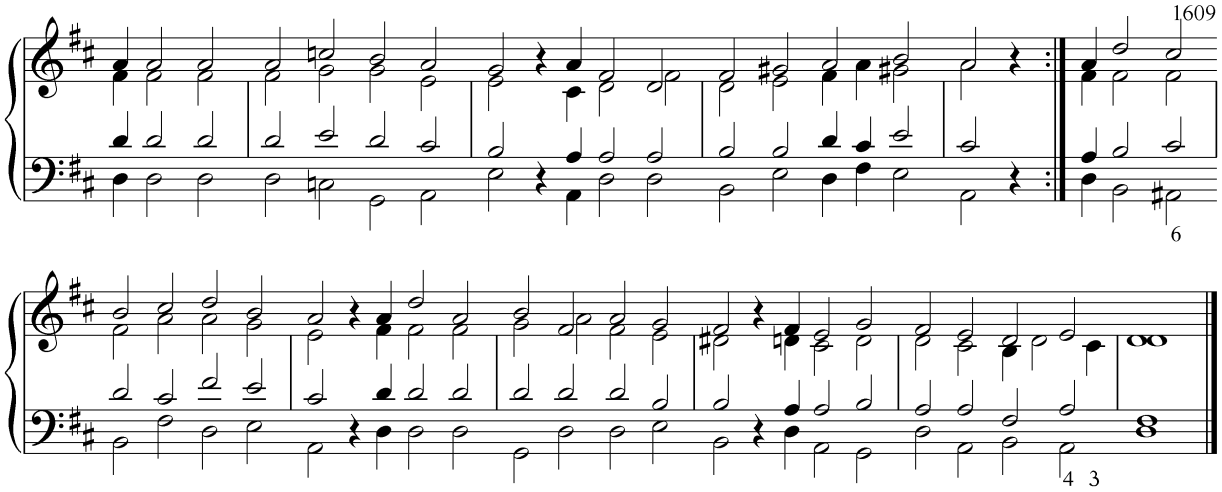
The unknown composer of *Die Tugend wird durchs Kreuz geübet* uses 6-chords to his advantage to provide both ongoing movement and variety:



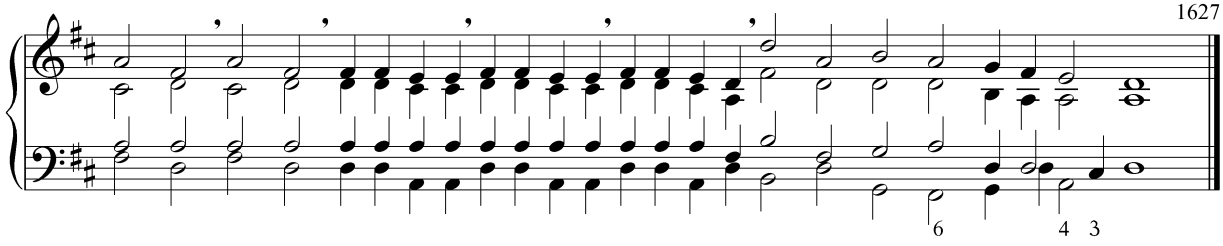
Until the modulation to the key of C major, the melody is harmonised only with the degrees I, V and VI in F major. By employing the 6-chord, the composer avoids excessive use of the note C in the bass. This, in turn, makes the modulation to C major all the more effective. Compare the same harmonisation without 6-chords:



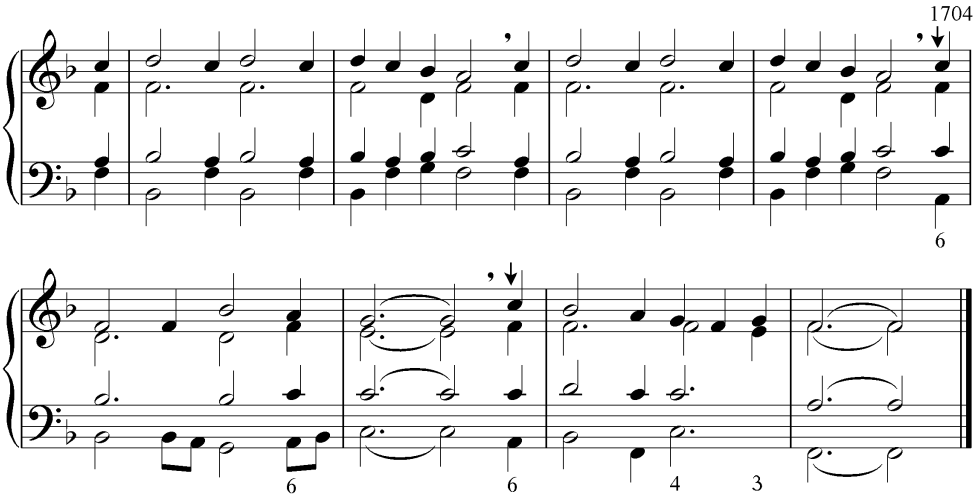
In the above examples, we are concerned with the well-considered use of the 6-chord, in accordance with its musical effect. Their is beauty in simplicity, as the great masters teach us. Melchior Vulpius wrote the following harmonisation of *Es ist das Heil uns kommen her* in 1609. Bearing the period in mind, it is not surprising that his setting features only one 6-chord. Like so many contemporaries, in his chorale settings Vulpius displays a strong preference for root positions, and indeed for repeated chords on the tonic as well:



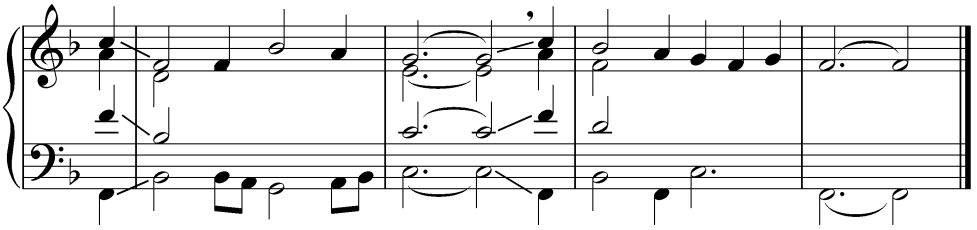
In 1627, Johann Hermann Schein wrote a setting of *Wie schön leuchtet der Morgenstern* in which repetitions of simple melodic-rhythmic motifs are supported in an equally simple and matching harmonic manner:



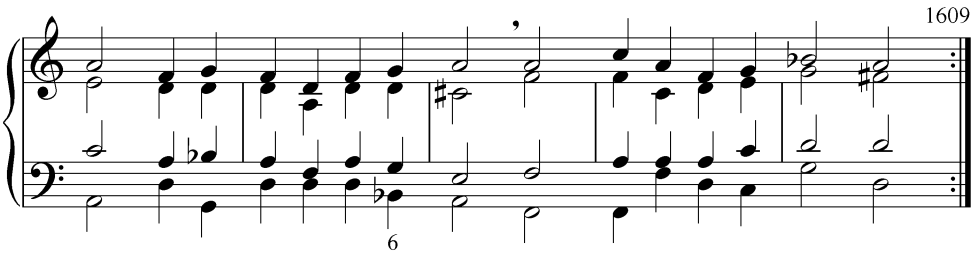
The following anonymous setting of the final lines of *Macht hoch die Tür, die Tor macht weit* is of comparable simplicity:



This harmonisation also illustrates how the 6-chord can be used to avoid parallel 5ths and 8ves. If the 6-chords at the upbeats to the last two phrases were to be replaced by root positions, harmonisation in closed spacing would result in undesired parallel motion in no less than three of the four voices:



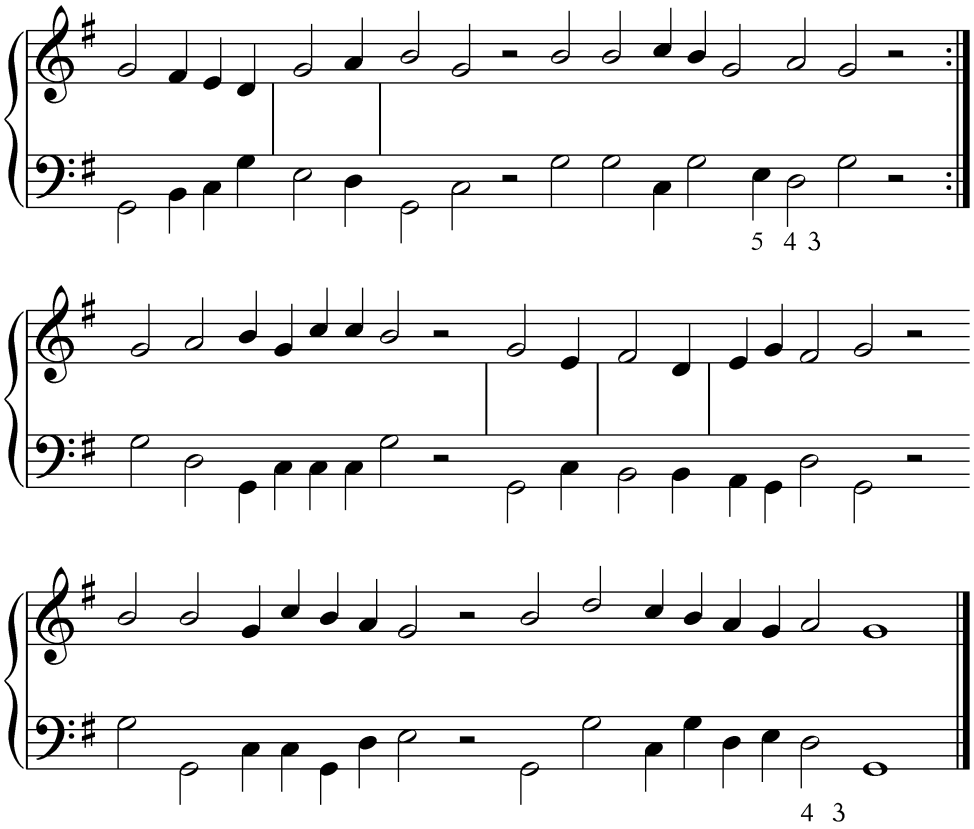
In the first line of Michael Praetorius's setting of *Ich ruf zu dir, Herr Jesu Christ*, the 6-chord is not only intended to create ongoing movement:



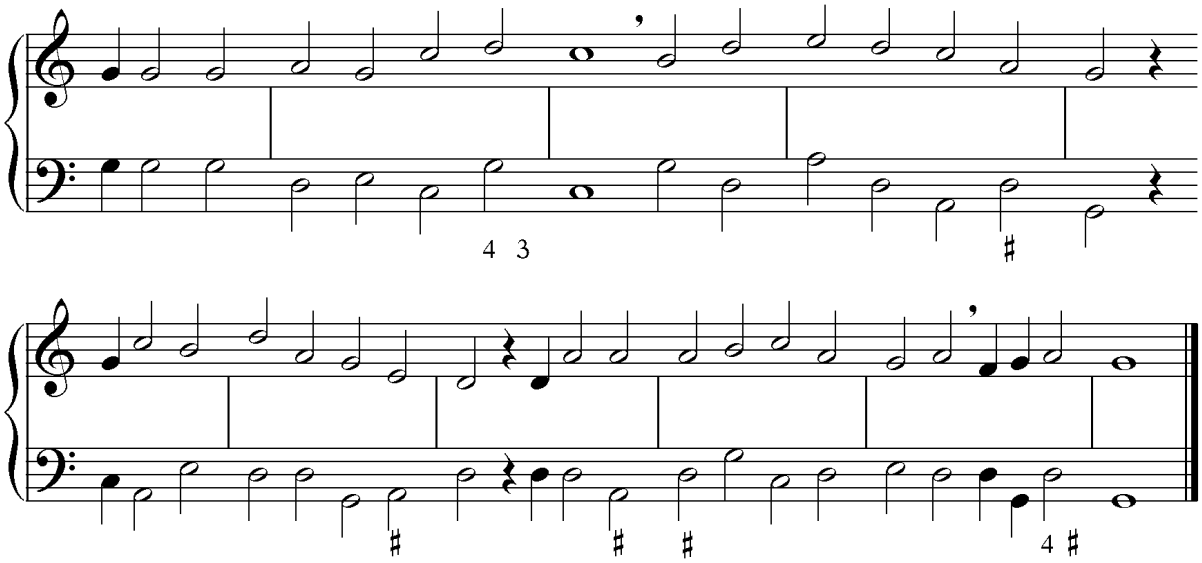
but also to avoid incorrect part writing: the root position would cause parallel 8ves between the soprano and bass and, in closed spacing, parallel 5ths between the alto and bass.

The above examples provide insight into the manner in which the 6-chord can be applied. The extent to which it should be employed in harmonising a given melody is perhaps not only a question of personal preference, but also of stylistic awareness: when was the melody written, and which particular chords will do it most justice? From the 17th century onwards, the harmonic vocabulary of our tonal system gradually increased. Certain chord progressions became old-fashioned, while others came in their place. It would be incorrect - and rather unadventurous - to assume that particular chords, inversions and harmonic progressions have been used to the same extent for centuries. The next two pages feature examples of original 16th- and 17th-century settings, at least two of which were written by leading composers of the period. These were not primitive times, neither were the composers second-rate: the apparent simplicity of some settings reveals a refinement and diversity unfamiliar to modern ears.

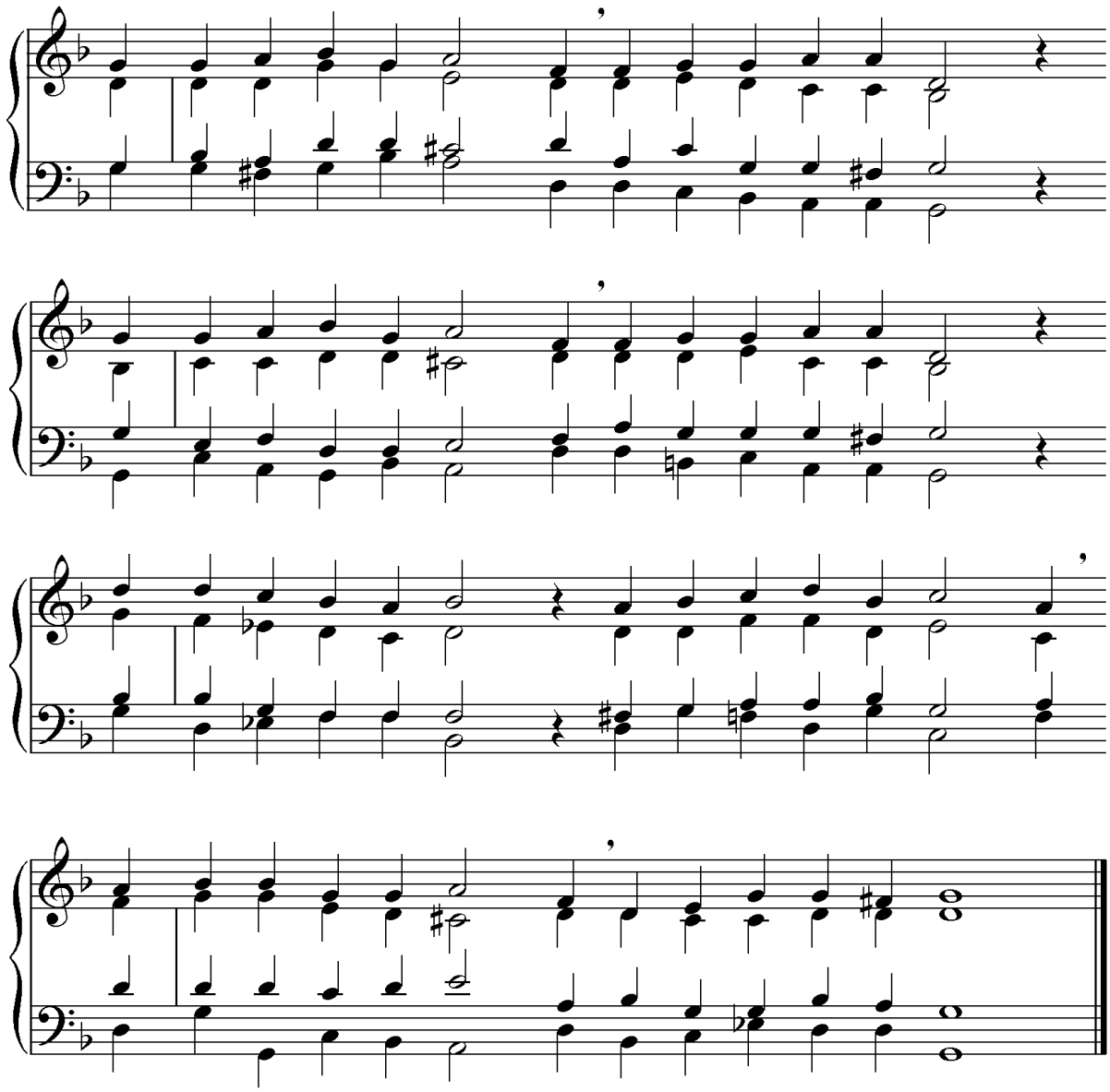
First, a metrical setting of Psalm 25. The melody by Louis Bourgeois was published in 1551; the setting is after Claude Goudimel and was published in 1565. Play in four parts:



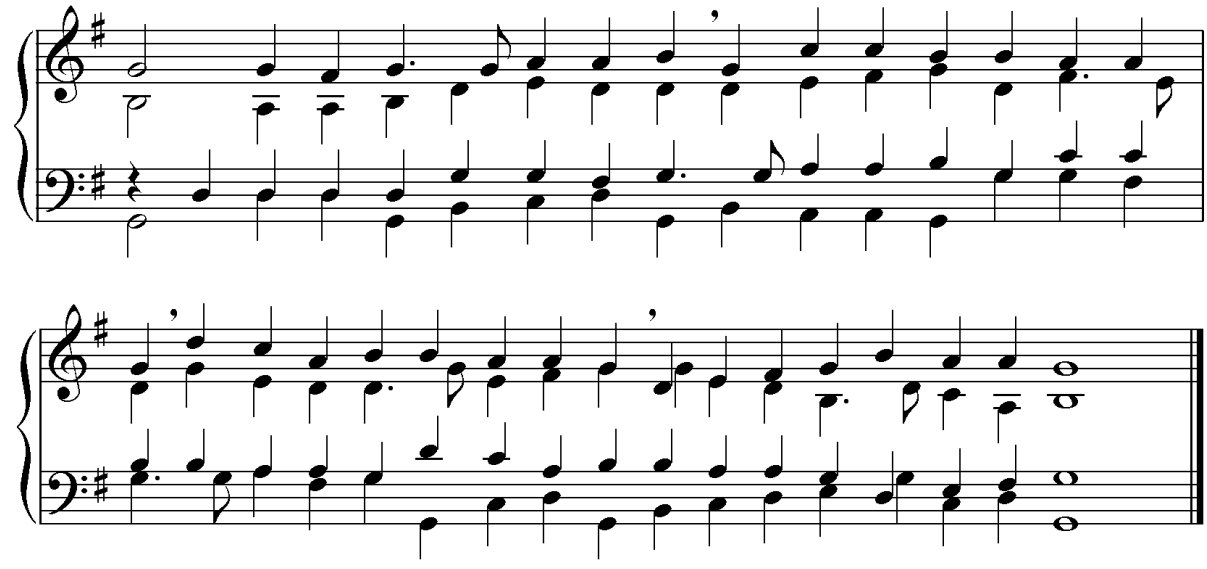
Until far into the 17th century and even later, such root-position settings remained popular. In some cases, the harmonisation is influenced by the fact that the melody dates from an earlier period (including those derived from Gregorian chant).
The Christmas chorale *Gelobet seist du Jesu Christ* was published in 1524, and the following setting in 1661. Play in four parts:



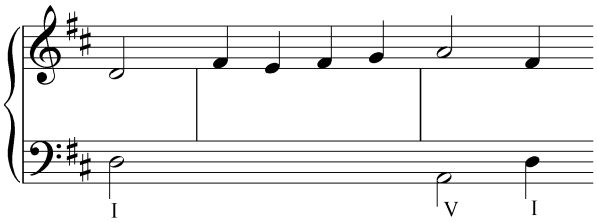
The 17th century also brought many hymns and chorales in a more modern style. The 16th-century chorale *Von Gott will ich nicht lassen* was harmonised by Michaël Praetorius in 1609 as follows. Some chords have not yet been discussed. Where the 6-chord occurs, write a 6 under the bass:



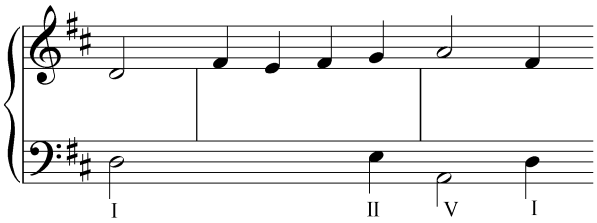
Finally, *Tallis's canon*, written in 1567 and published in 1621 in Ravencroft's Psalter in the following adventurous harmonisation (the canon is between the soprano and tenor):



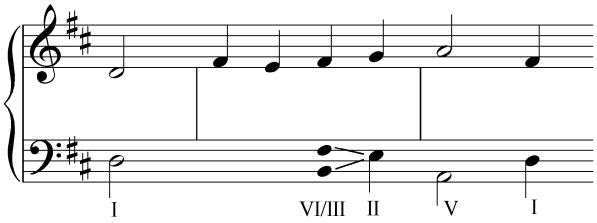
Since the 6-chord was used increasingly in the late 16th and early 17th centuries, it is not uncommon to come across melodies of the period that cannot be harmonised with root positions only. In Part I ch.20, the reader will have experienced that the first line of Melchior Vulpius's *Christus der ist mein Leben*, dating from 1609, is difficult to harmonise with root positions only, especially if we wish to use the dominant to underline the melodic curve:



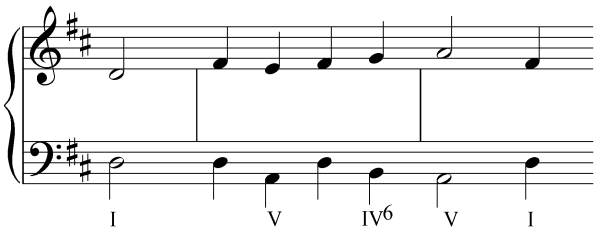
Let us work backwards from the cadence. Assuming only root positions, V can only be preceded by II:



Before II, only VI or III are possible:



Before VI or III, we again have little choice and even seem to get stuck. It is time to consult the master (Vulpius composed both melody and setting of *Christus der ist mein Leben*), where we see that V is preceded by IV in the 1st inversion:



The 6-chord not only enables us to reach the dominant more easily, but also gives the chord progression a natural flow towards this pivotal cadence. Vulpius gives us a fine example of unity of melodic line and harmonic progression:

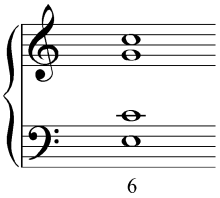
When harmonising a given part, it is most important to be sensitive to the style of the music. Which chords could the composer have had in mind when he wrote the melody? What was his musical vocabulary?

10

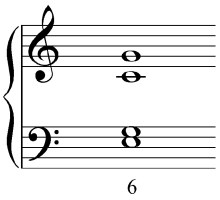
THE CHORD OF THE SIXTH (iii)

Doubling of the 5th of the triad
Parallel 3rds between the outer parts

In ch.8 and 9 we played the 6-chord in four parts by doubling the root of the triad:

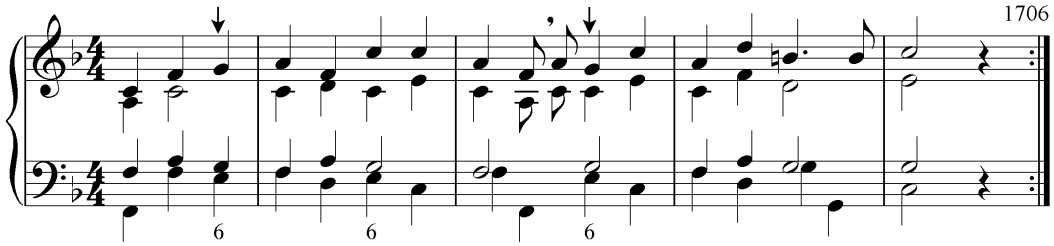


This mixed position (see p. 45) also gives us the possibility to double the 5th of the triad:

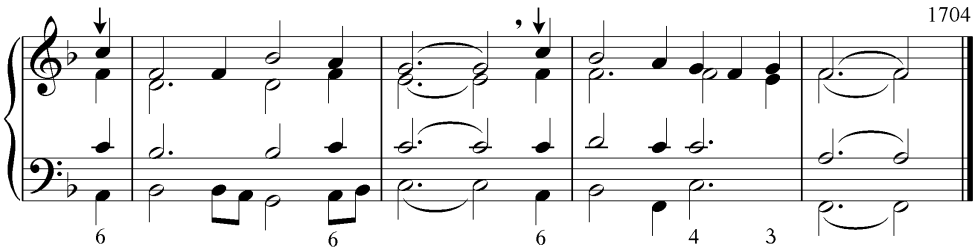


The alert reader may already have noticed this doubling in examples in the previous chapter:

(a) *Die Tugend wird durchs Kreuz geübet*:

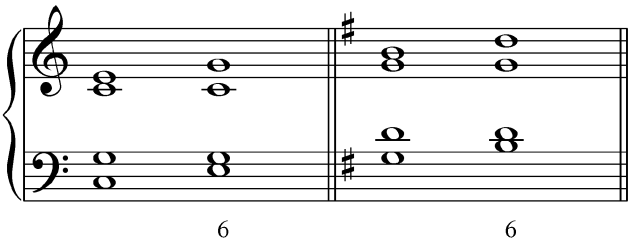


(b) *Macht hoch die Tür, die Tor macht weit*:

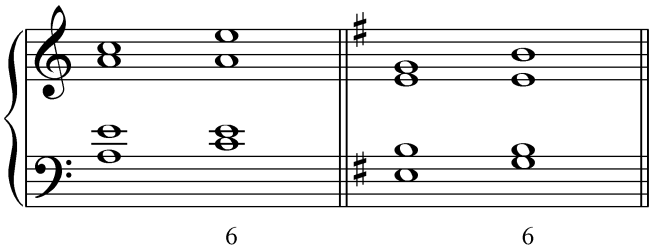


EXERCISES:

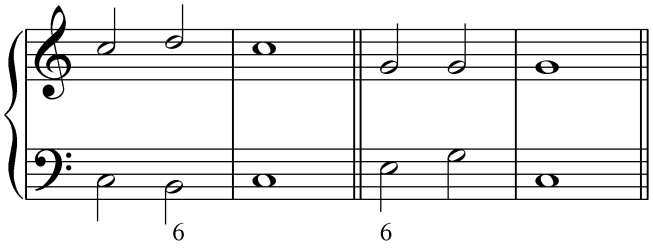
1. Play successively the following root position and 1st inversion of the triad of C major; continue likewise around the circle of 5ths:



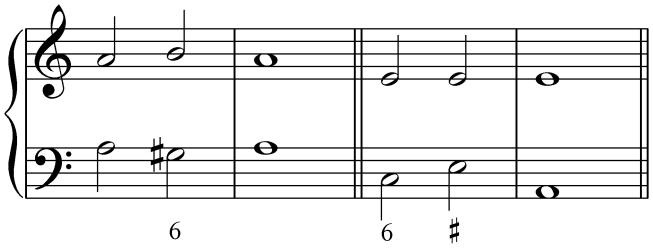
2. Repeat this exercise with all the minor triads:



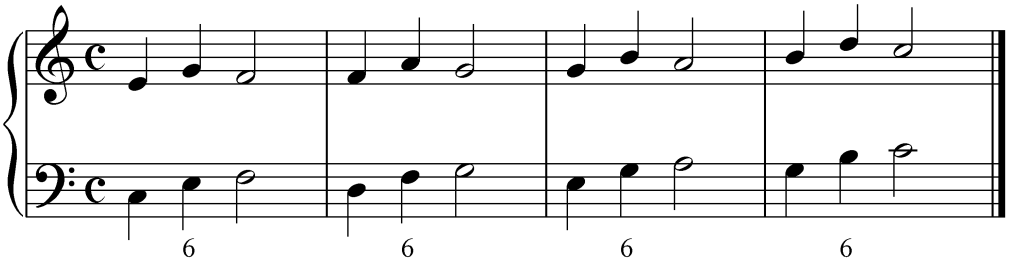
3. Play the following I-V-I cadences in four parts in all major keys:



4. Play the following I-V-I cadences in four parts in all minor keys:



5. Practise the following sequence in four parts in the major keys of C, G, D, A, F, B flat and E flat:



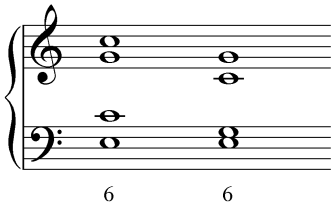
6.* Repeat ex.1-5 with a solo stop and pedals.

[7.] Practise ex.5 in the major keys of E, B, F sharp, A flat and D flat.

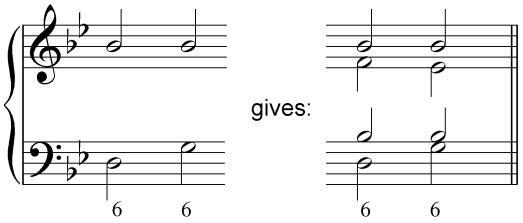
[8.*] Repeat ex.7 with a solo stop and pedals.

Parallels

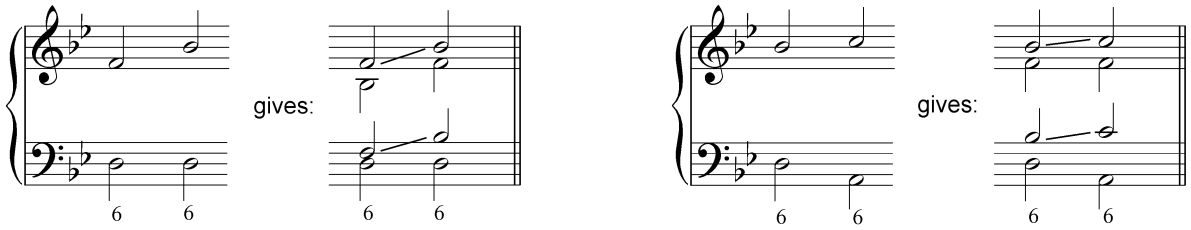
We now have two four-part positions of the 6-chord at our disposal, one with a doubled root, the other with a doubled 5th:



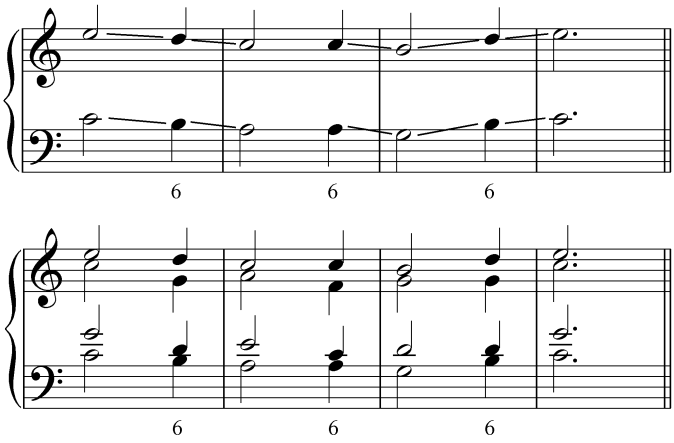
More positions will be discussed shortly. For the moment, however, we must avoid two 6-chords in succession, unless there is a repeated note in the soprano:



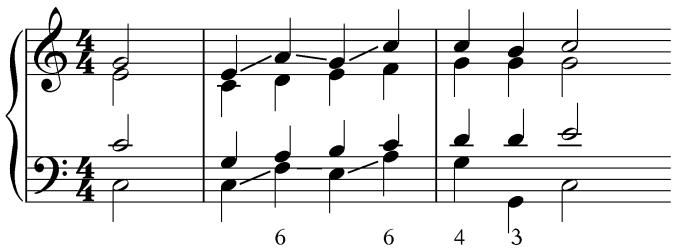
If the soprano moves, parallel 8ves are inevitable because of the 8ve between the soprano and tenor in the mixed position:



When harmonising with root position triads, we have noted that parallel 3rds between the outer parts result in parallel 5ths and 8ves (see p.18). Such parallel 3rds, however, are not incorrect in themselves, and the 6-chord now gives us the opportunity to harmonise parallel 3rds between the outer parts without causing parallel 5ths and 8ves:

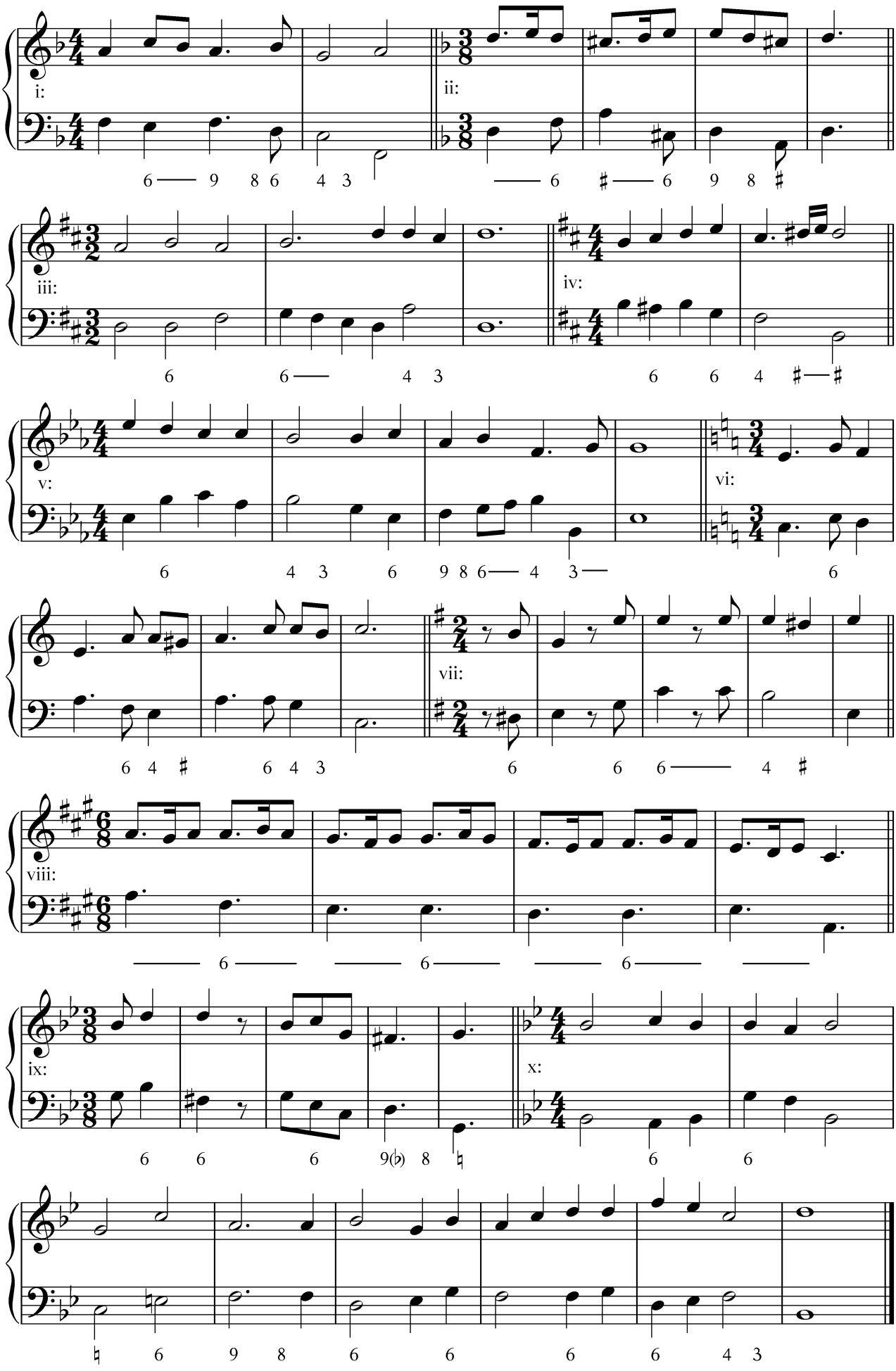


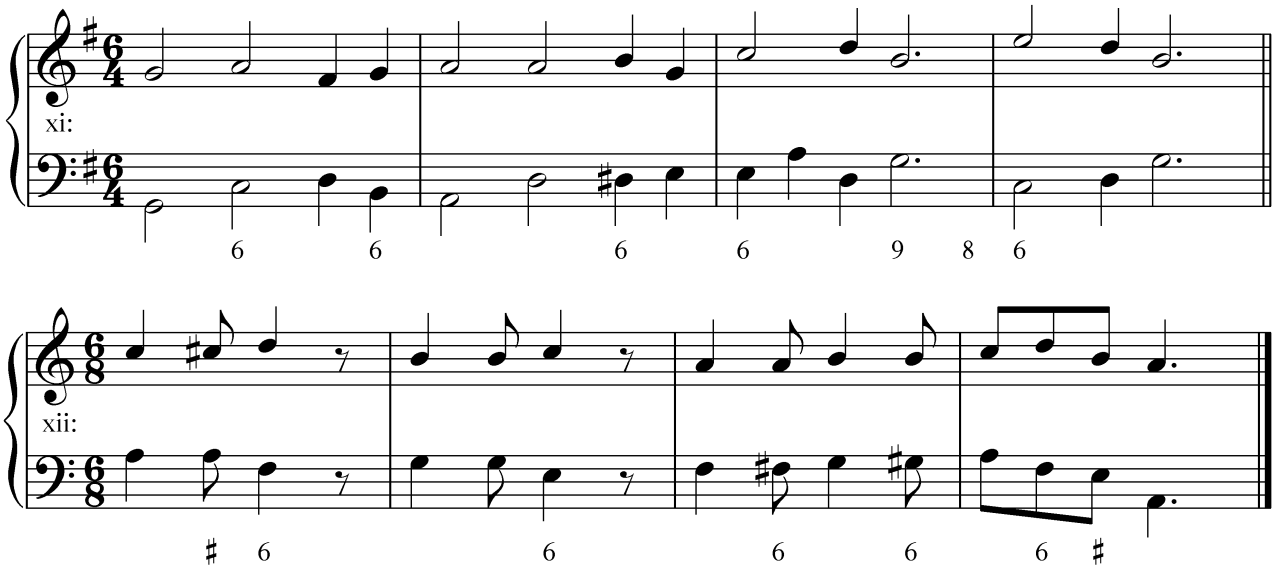
Compare the first line of the hymn *St. Anne* in the setting dating from 1708:



EXERCISES:

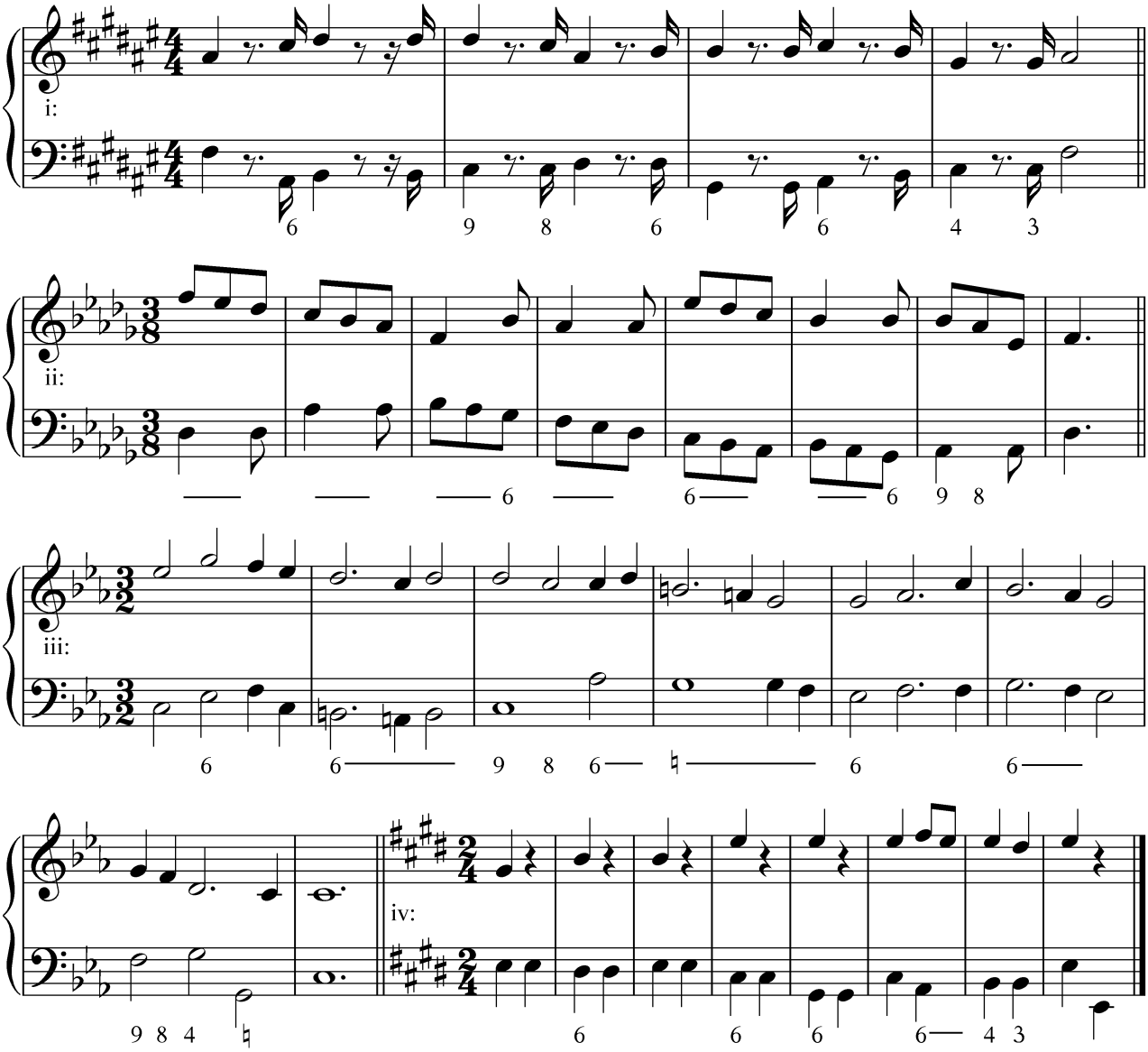
9. Practise the following phrases in four parts:

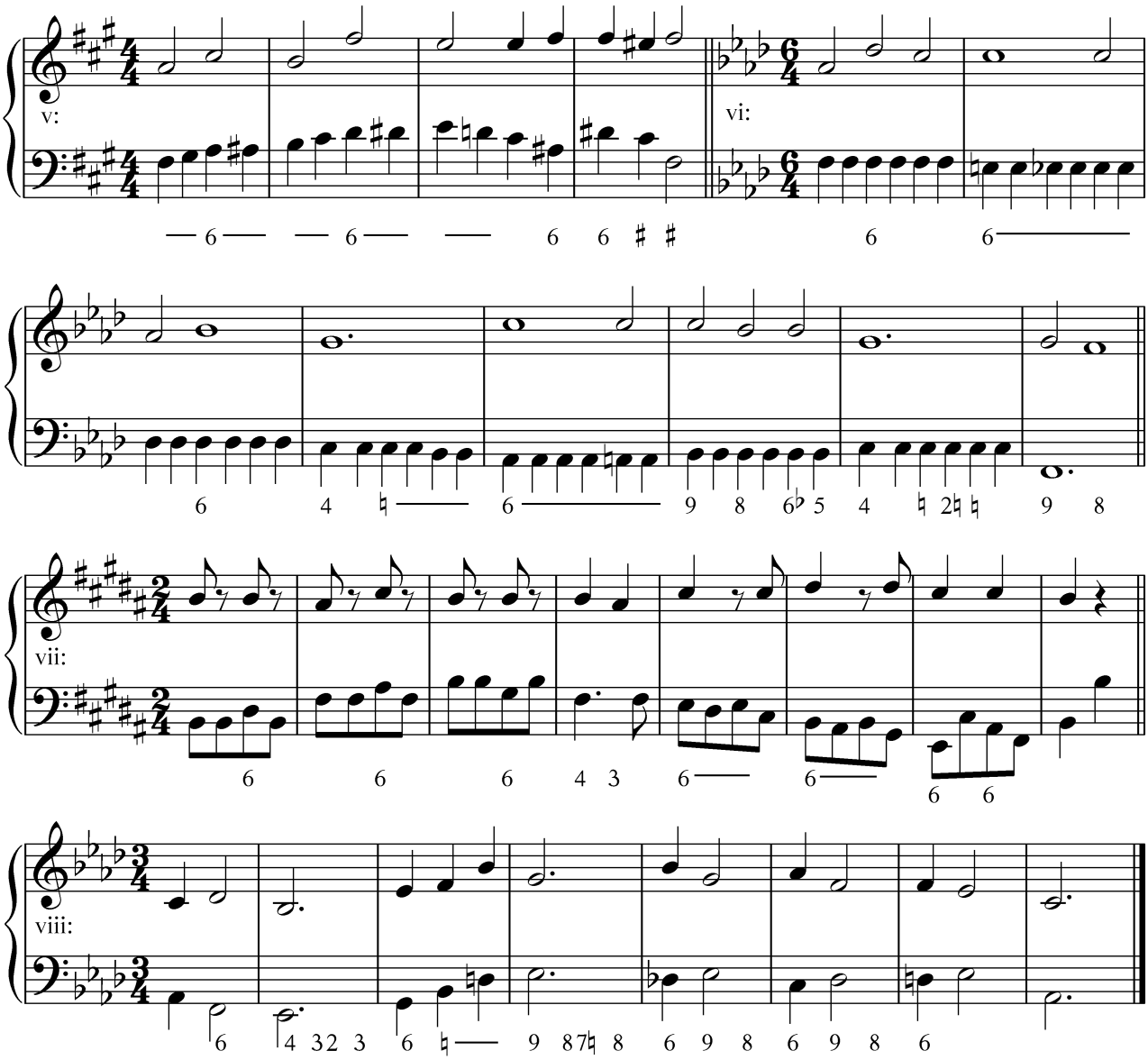

i:
ii:
iii:
iv:
v:
vi:
vii:
viii:
ix:
x:



10.* Repeat ex.9 with a solo stop and pedals.

[11.] Practise the following phrases in four parts:

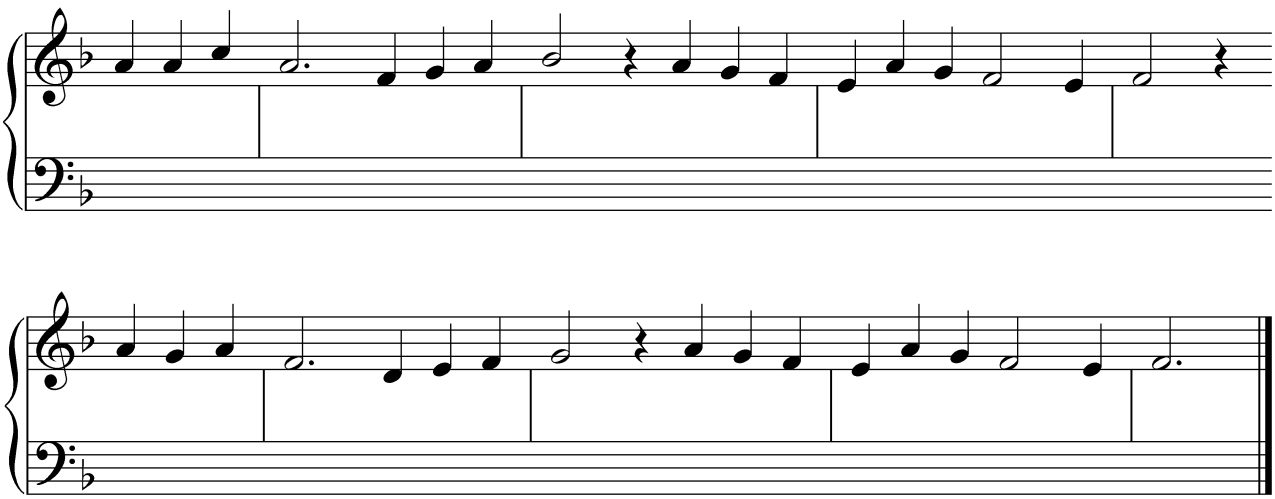




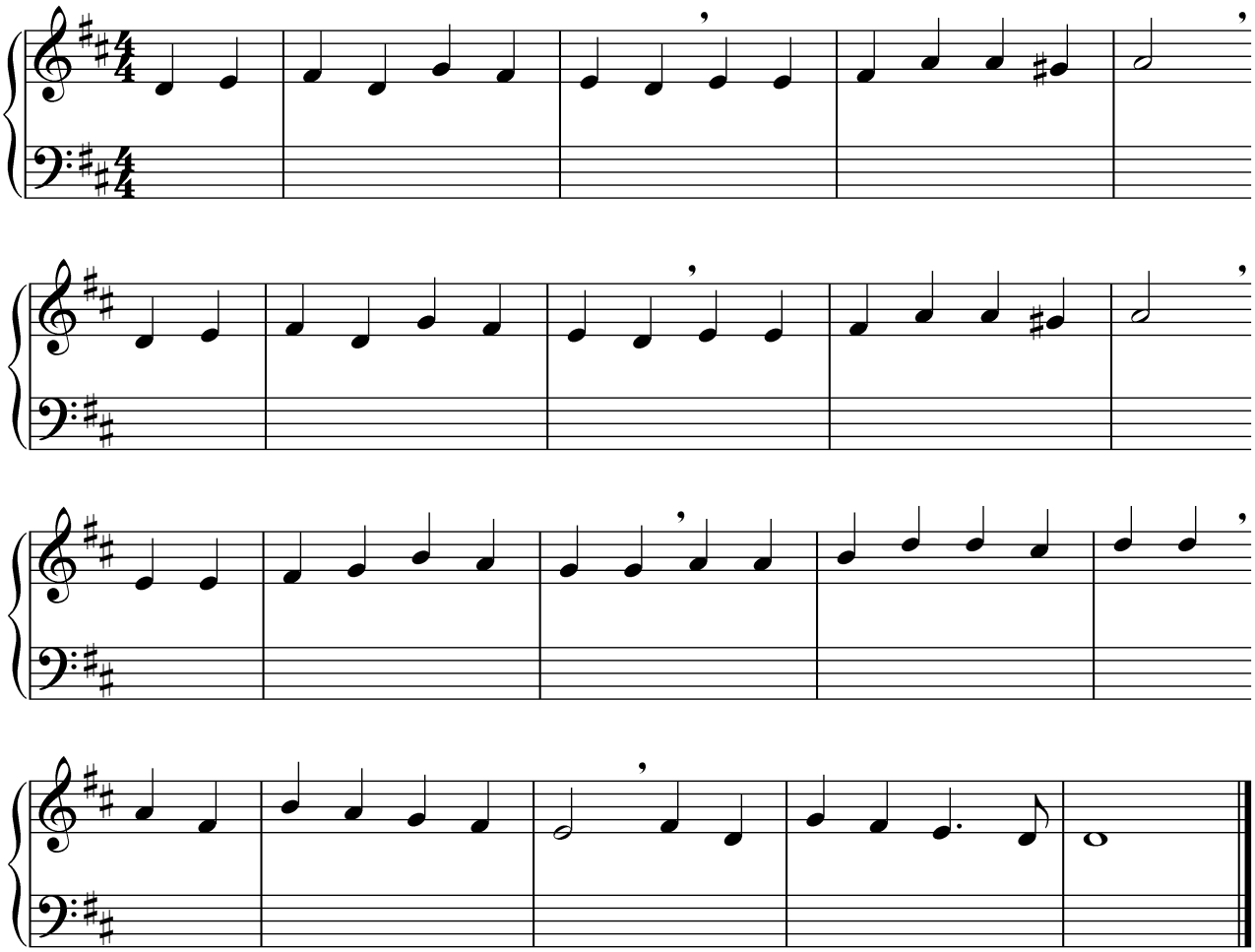
[12.*] Repeat ex.11 with a solo stop and pedals.

13. Write a figured bass to the following chorale melodies and practise in four parts.

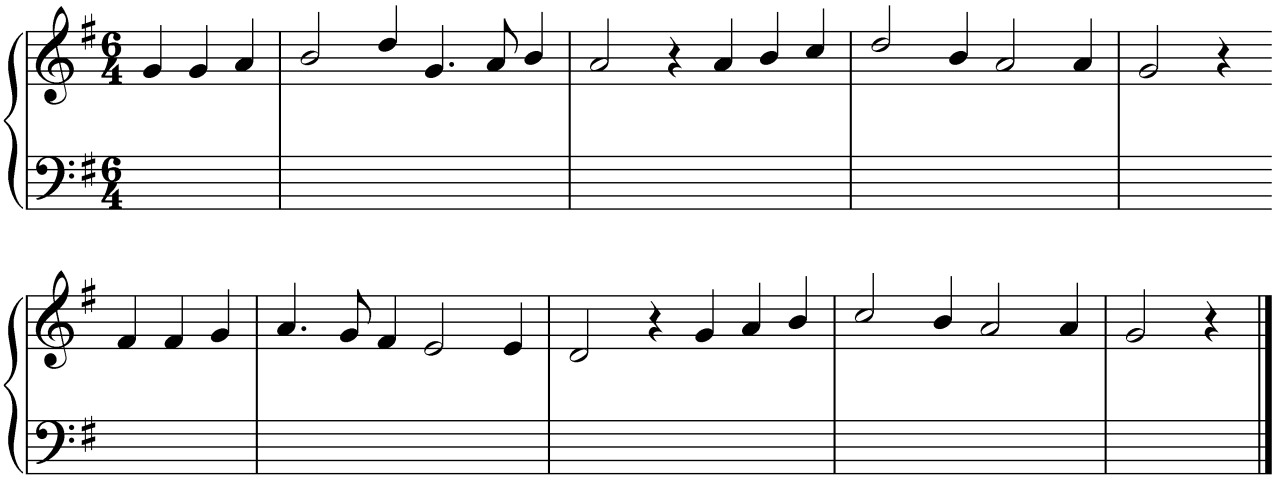
Ach bleib bei uns, Herr Jesu Christ



Jesu, meines Lebens Leben



O Jesu Christe, wahres Licht



[14.*] Repeat these chorales with a solo stop and pedals.

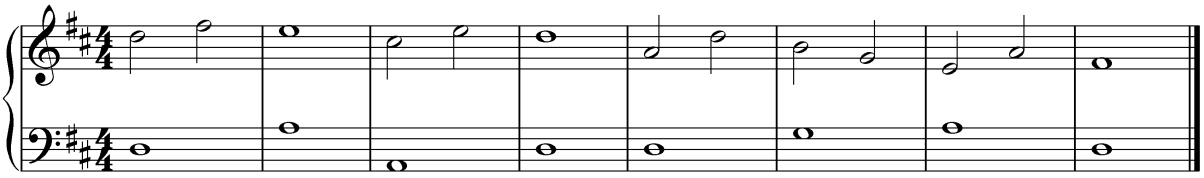
15. Practise the following transpositions:
   - *Ach bleib bei uns, Herr Jesu Christ* in G major
   - *Jesu, meines Lebens Leben* in C major
   - *O Jesu Christe, wahres Licht* in F and A major

11

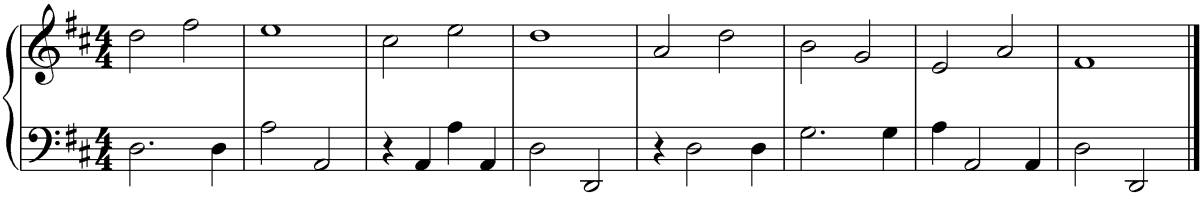
HARMONISING A GIVEN BASS (iii)

Two-part inventions
Four-part harmonisation of a given bass

In ch.5 we improvised our own melodies above a given bass. Each bar had only one bass note; our melodies, limited to the notes of the triad, were generally more agile than the basses:

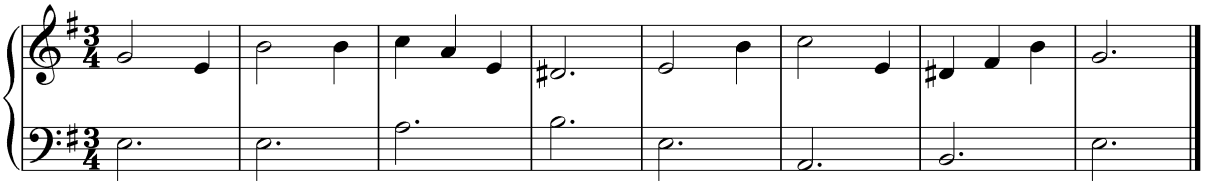


This approach, though yet modest, emphasises the melodic function of the soprano and the harmonic function of the bass. Settings of chorales and hymns are classical examples of **homophonic** composition technique (from the Greek *homophone* = *same sounding*): one voice has a melodic line, while the others provide harmonic support. This is very different from **polyphonic** composition technique (from the Greek *polyphone* = *many sounding*): in their melodic and rhythmic freedom, all voices appear to go their own way, as if competing with each other.
If we create a more lively bass, our improvisation becomes less homophonic:

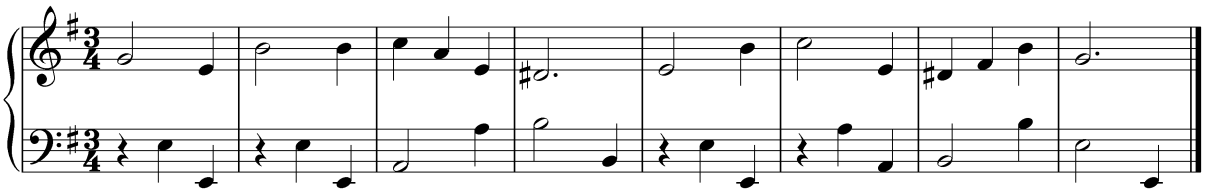


The bass enters into dialogue with the soprano, without losing its harmonic function.

The second example in ch.5 was as follows:



Without adding any different notes to the bass, we can give it a more active role simply by using more imaginative rhythms:



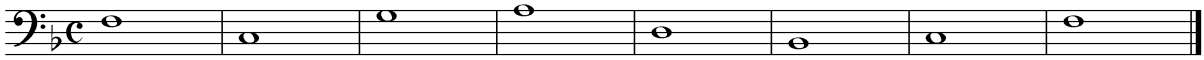
The character and range of the two parts suggest an instrumental *invention*: whereas in vocal music we would need to take text placement and voice range into account, here we can give full rein to our imagination, using typically instrumental motifs with large jumps,

sharp rhythms and unexpected rests. This idiomatic distinction between instrumental and vocal music is of great importance. If we wish to have our own harmonisations sung, the part writing must be suitable for voices. In classical harmonisation, which has its origins in vocal music, leaps of an augmented 2nd or 4th, for example, are usually avoided, because they are rather angular, ‘awkward’ intervals; a leap of an 8ve may be larger, but it is easier to sing. Successive 8ve jumps, however, will probably not amuse our singers. Here lies a difference with instrumental music, one that becomes clear if we compare J.S. Bach’s chorale harmonisations with his two-part keyboard *Inventions*.

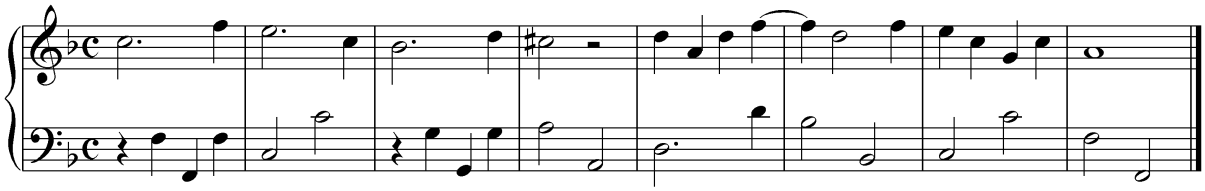
EXERCISE:

1. Improvise melodies above the following basses. The given root indicates the triad to be used; do not deviate from this by using other notes or 6-chords. But do use your imagination, employing 8ve leaps, repeated notes, rhythmic motifs and rests. Be on the look-out for opportunities to modulate, and pay attention to the leading note in the minor key.

The following bass pattern:

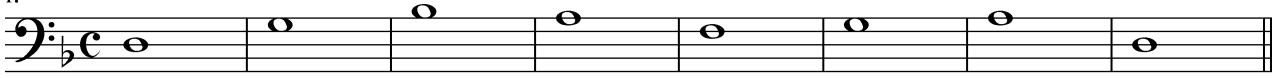


could be the basis for the following ‘invention’:

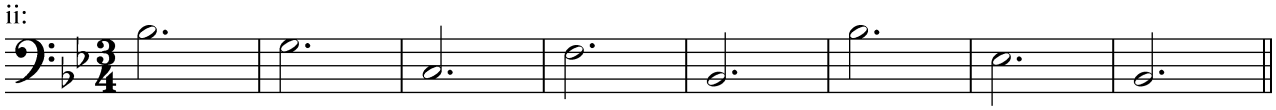


Proceed in the same manner:

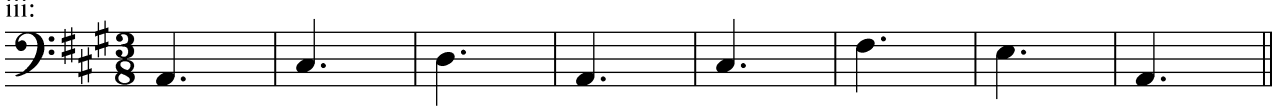
i:



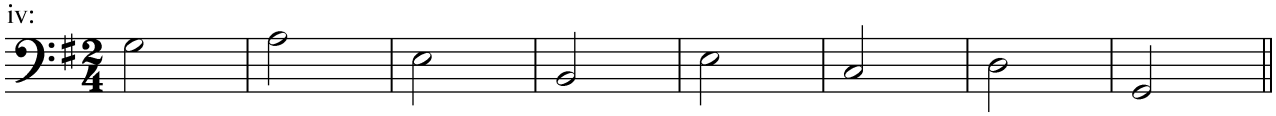
ii:



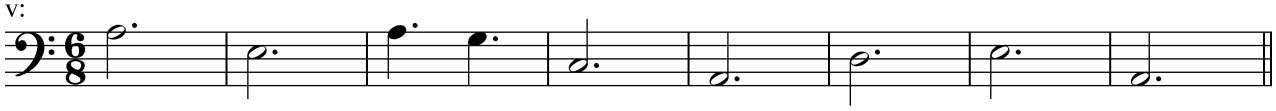
iii:



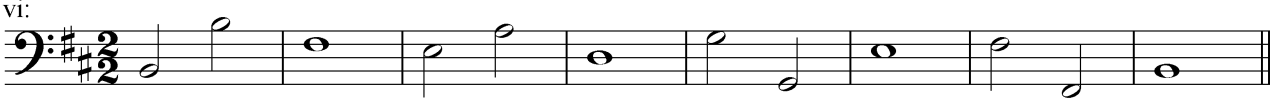
iv:



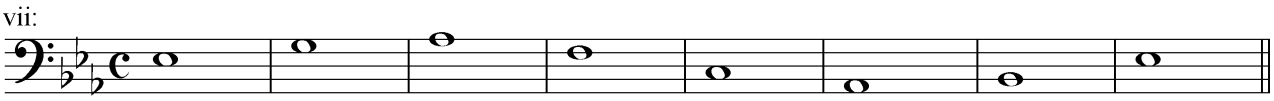
v:



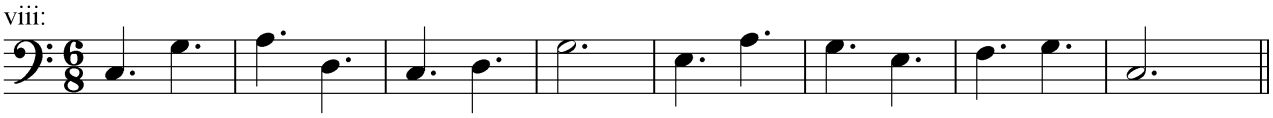
vi:



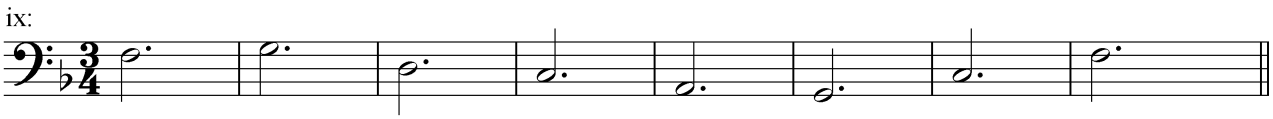
vii:



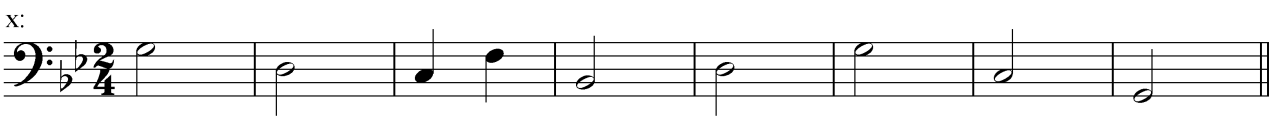
viii:



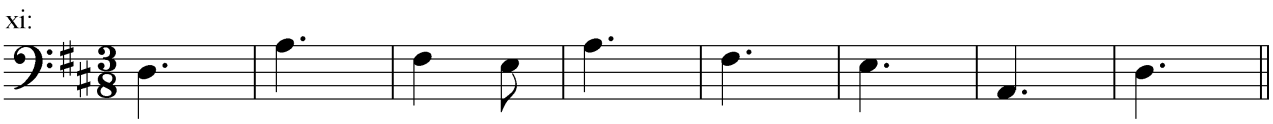
ix:



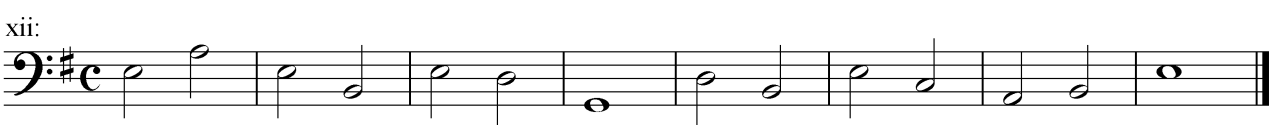
x:



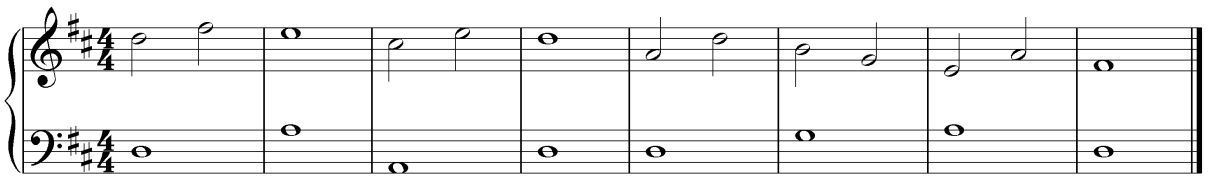
xi:



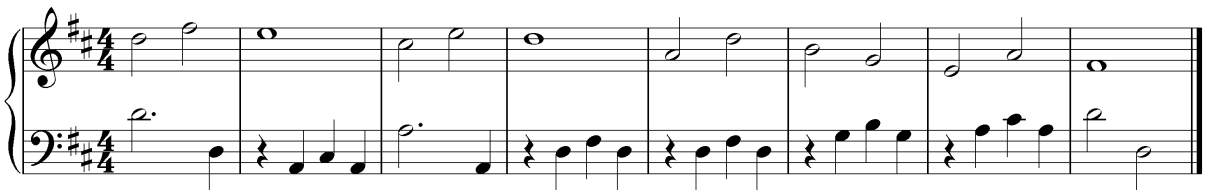
xii:



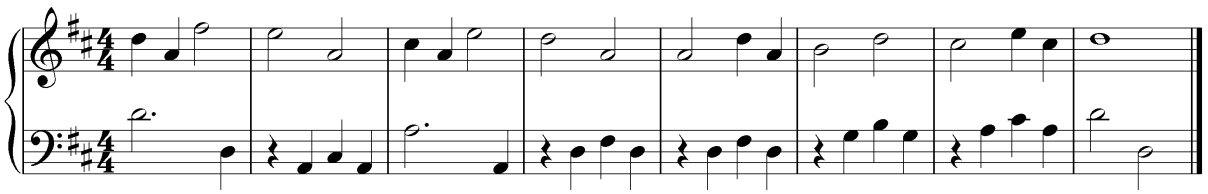
The possibilities of our bass parts increase considerably if we introduce the 6-chord. Using the 3rd of the triad in the bass will help to create more movement, though we must be careful not to cause parallel 5ths and 8ves. Let us return to our first example:



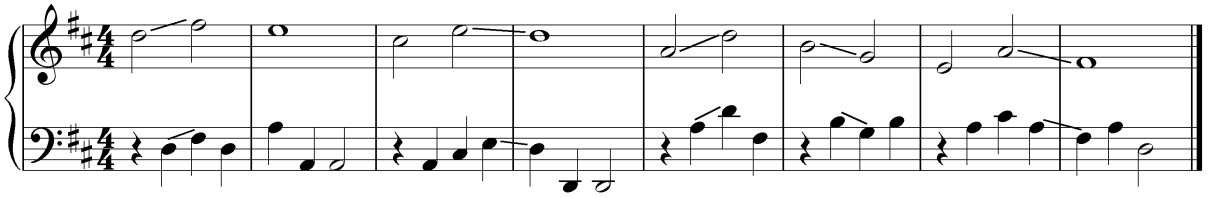
and add figuration to the bass:



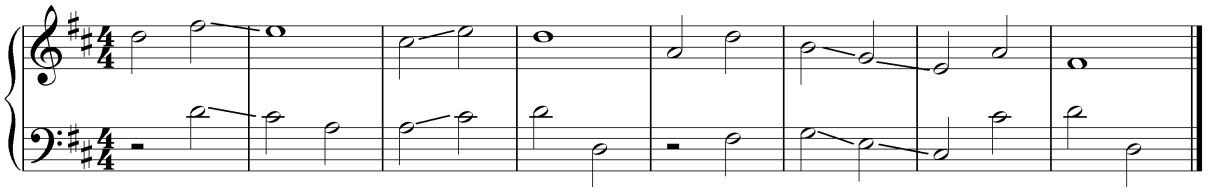
and then to the soprano:



Naturally, we must avoid the following:



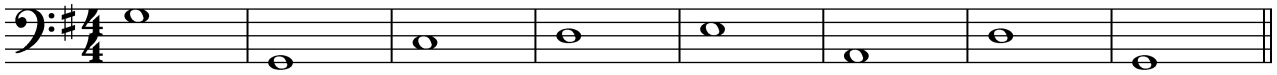
parallel 3rds, on the other hand, may be employed freely in two-part writing:



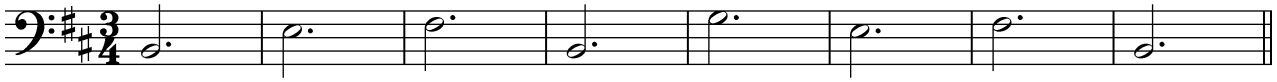
EXERCISE:

2. Improvise your own two-part inventions on the following harmonic schemes (which may include modulations). In the bass, the root and 3rd may alternate as desired. Once again, make full use in both voices of 8ve leaps, repeated notes, rhythmic motifs and rests, and never play the same thing twice!

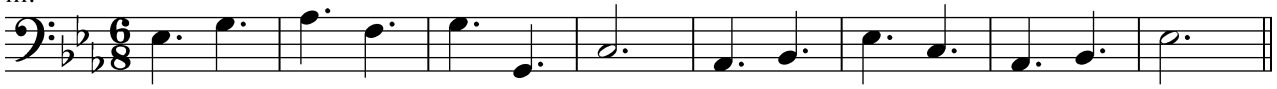
i:



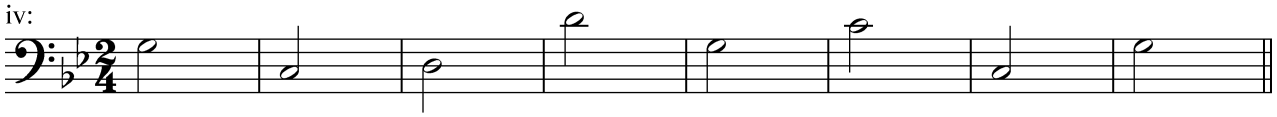
ii:



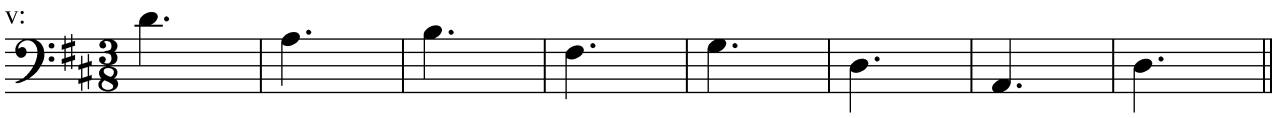
iii:



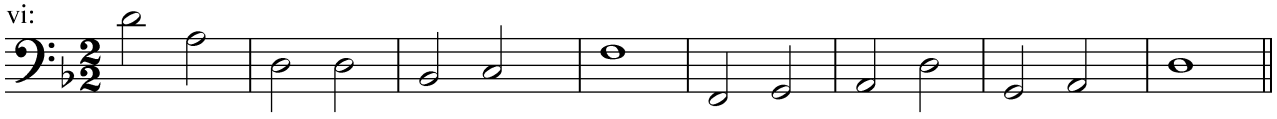
iv:



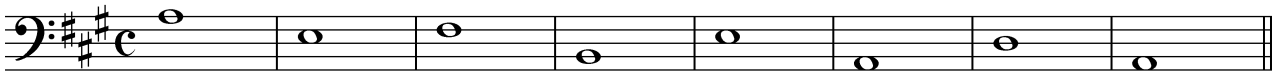
v:



vi:

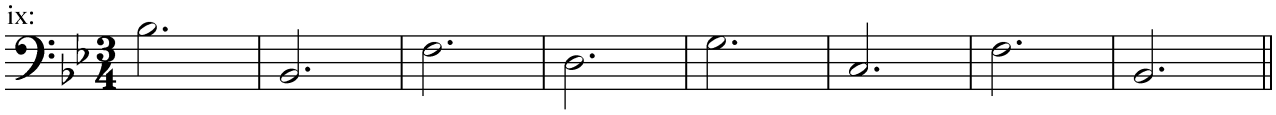


vii:

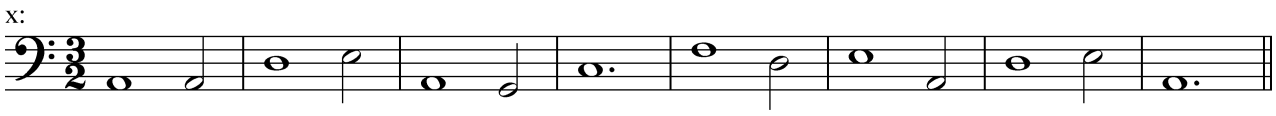


viii:

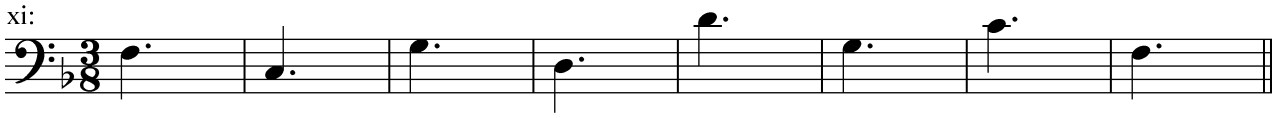
ix:



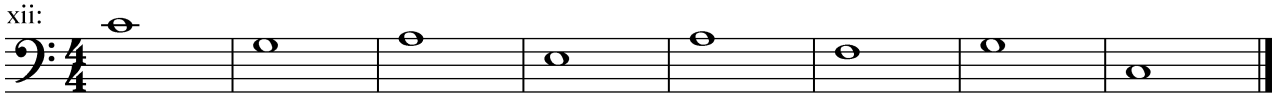
x:



xi:



xii:



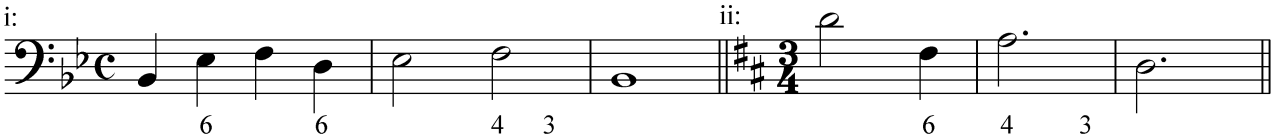
These exercises help us to become aware of 'classical' eight-bar phrase structure (often with a cadence - and perhaps a modulation - in bar 4!), as employed by such composers as Haydn and Mozart. They also provide the opportunity to improvise figuration without losing sight of the harmonic scheme. By playing through simple two-part keyboard pieces, we will find all sorts of ideas - ask your teacher for suggestions!

In the following exercises we return to four parts. The voices are more static, more homophonic than in two-part inventions, but this is hardly a problem. A greater problem is if we make no distinction between different styles and techniques, so that everything ends up sounding the same.

EXERCISES:

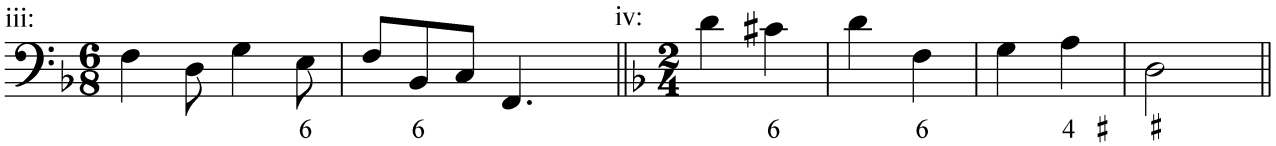
3. Play in four parts. Try to find several solutions to each progression by varying the position of the upper parts.

i:



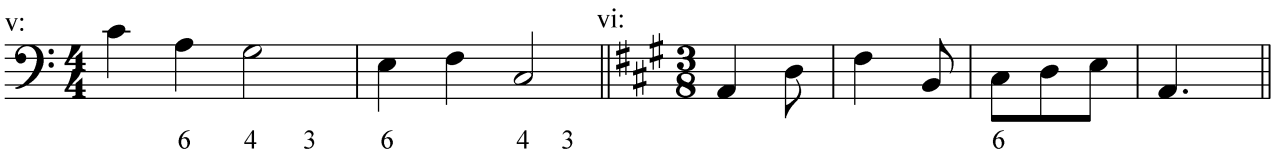
ii:

iii:

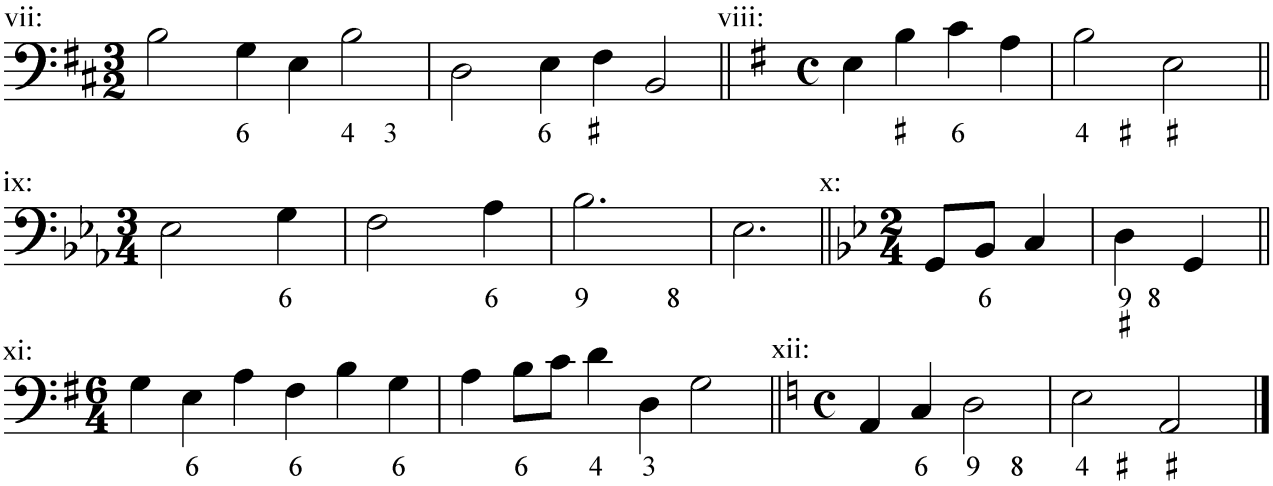


iv:

v:

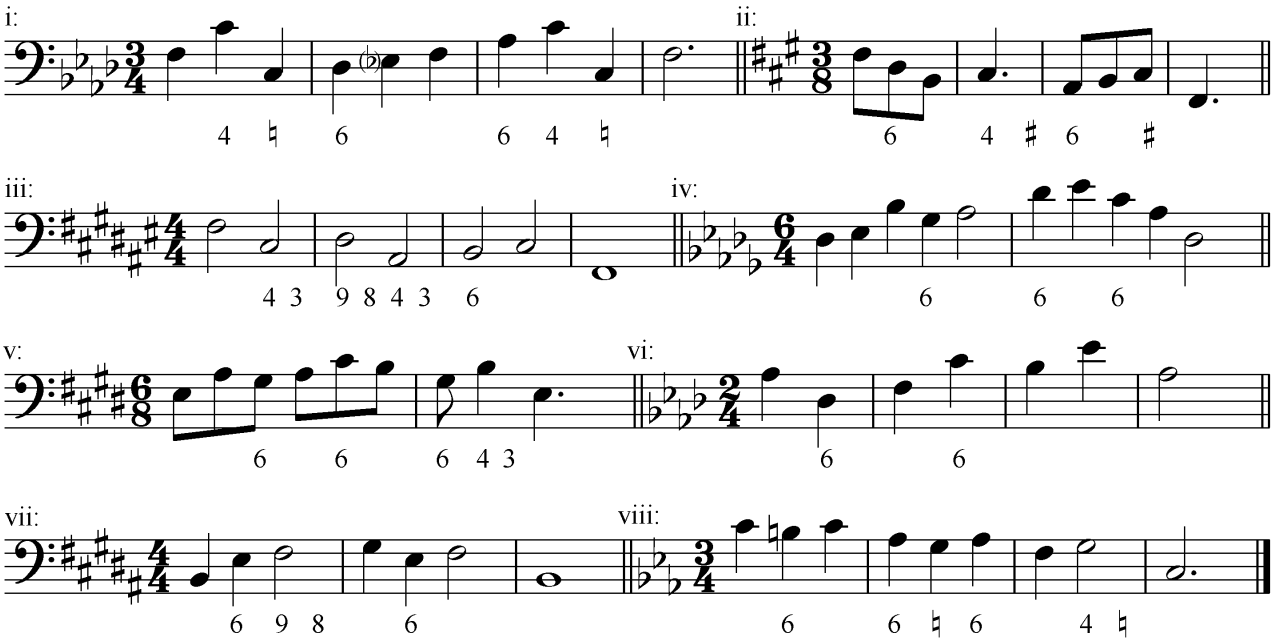


vi:



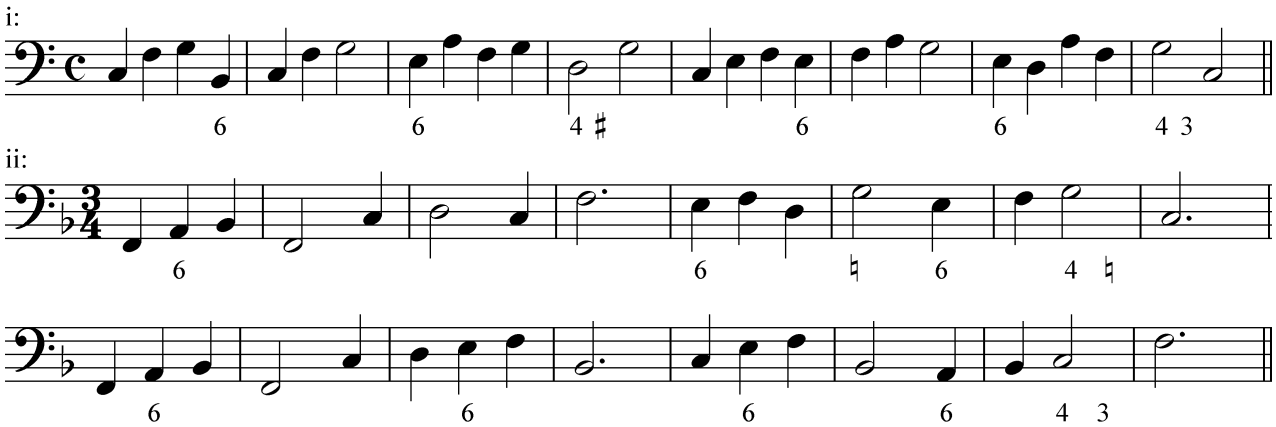
4.* Repeat ex.3 with a solo stop and pedals.

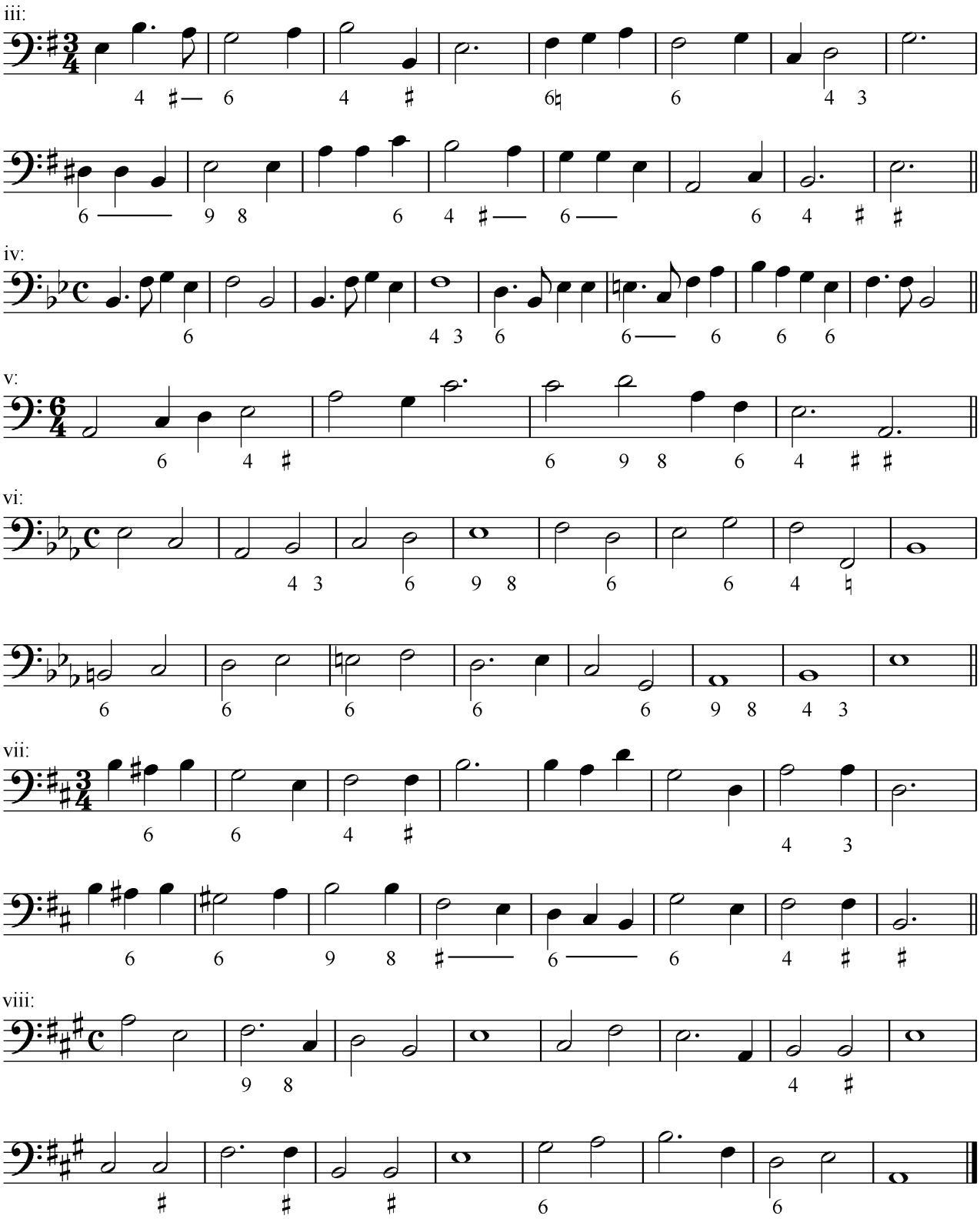
[5.] Play in four parts, creating variations as in ex.3.



[6.*] Repeat ex.5 with a solo stop and pedals.

7. Improvise your own ‘chorales’ above the following basses. By playing the upper parts in different positions, and changing position as you go, countless melodies can be created.





8. Transpose the ‘chorales’ in ex.7 as follows:

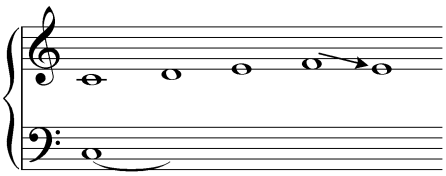
- i in D and B flat major
- ii in G and E flat major
- iii in D minor
- iv in A and C major
- v in G and B minor
- vi in D and F major
- vii in A minor
- viii in B flat and G major

12

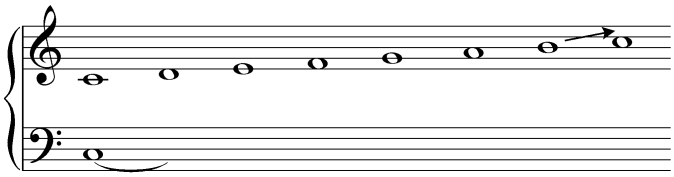
THE DIMINISHED TRIAD

The diminished 5th
The diminished triad in root position and 1st inversion

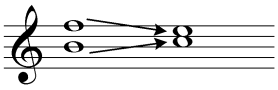
At the very beginning of Part I of *The Lost Chord* we considered the tension generated by the ascending scale of C major. We observed that the note F has the inclination to return to E, especially when the tonic C is held under the scale:



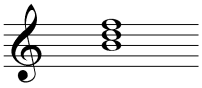
while the leading note B lives up to its name by leading the scale upwards to C:



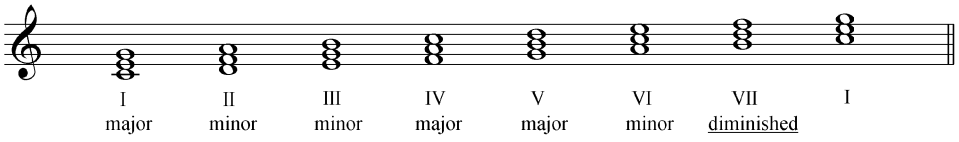
If we play F and B together, we hear the combined tension of the downward push of F and the upward pull of B. This tension is resolved in the logical move to the major 3rd C-E:



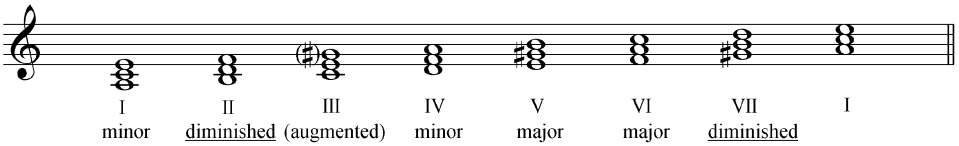
By adding the 3rd to this **diminished 5th** (see Part I p.12), we form the **diminished triad**:



In Part I ch.17 we noted the diminished triad on VII in the major scale:

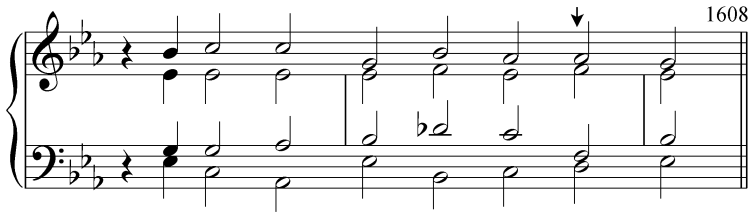


and on II and VII in the harmonic minor scale:

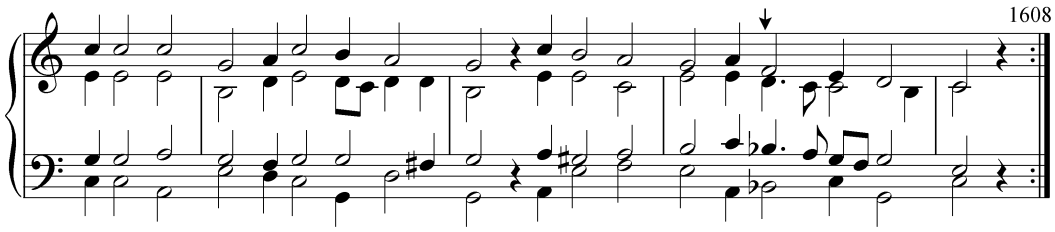


The diminished triad in root position

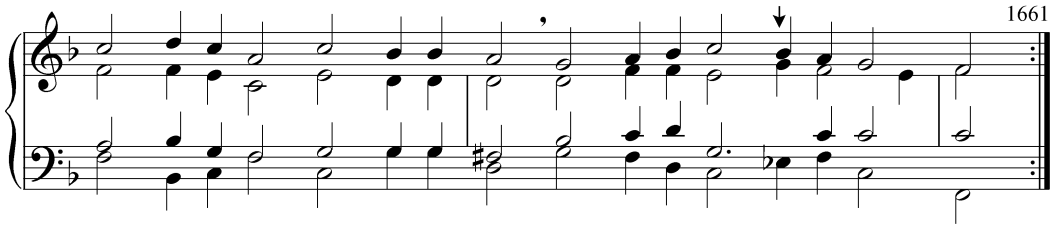
In my search for the diminished triad in root position among the several hundred ‘classical’ settings in the Dutch *Liedboek voor de Kerken*, I found only two! One was in the third line of Hans Leo Hassler’s setting of *Wo Gott zum Haus nicht gibt sein Gunst*:



It is exceptional, for the diminished triad is rarely used in the root position. Indeed, in many situations where our ‘tonal’ ear would perhaps expect to hear it, the diminished triad was entirely avoided in the 17th century. Here is Hassler again, in *Ein feste Burg*:



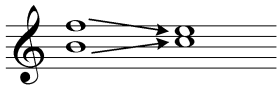
Where we might expect to hear the leading note B natural, Hassler wrote B flat. A similar example is to be found in an anonymous setting of *An Wasserflüssen Babylon*:



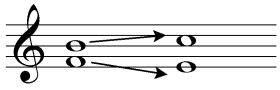
Where we might expect E and a diminished triad, the composer opted for E flat.

The diminished triad in the 1st inversion

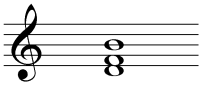
We have noted that the diminished 5th comprises notes that pull towards one another:



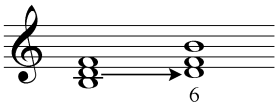
If we invert the diminished 5th, we hear the augmented 4th, in which the same notes repel one another:



If we add a D under the augmented fourth:

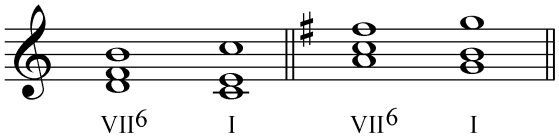


we have the 1st inversion of the diminished triad:

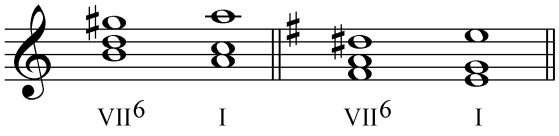


EXERCISES:

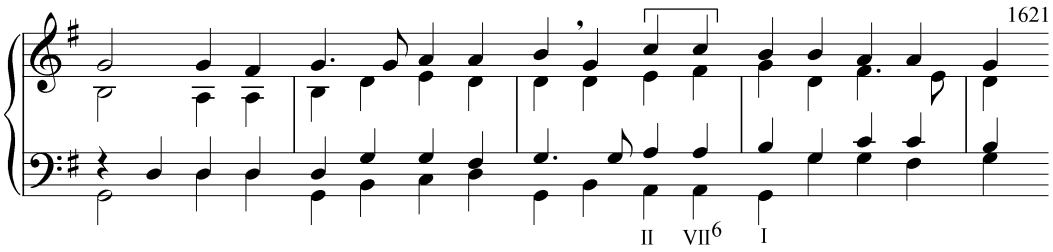
1. Play the 1st inversion of the diminished triad on VII, followed by I, in all major keys:



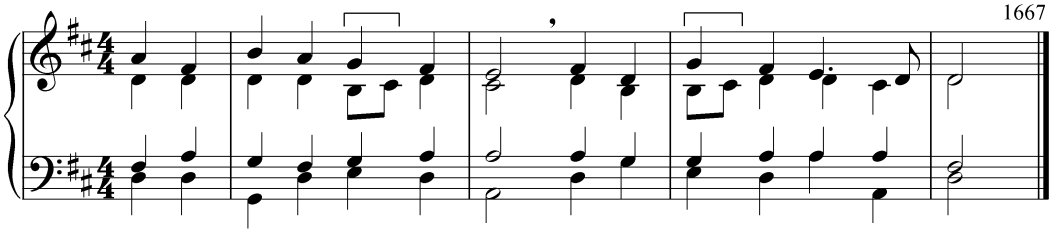
2. Play the 1st inversion of the diminished triad on VII, followed by I, in the minor keys of A, E, B, F sharp, D, G, C and F:



My search through the Dutch hymn book for 1st inversions of the diminished triad was considerably more rewarding. Here once again is Tallis's canon:

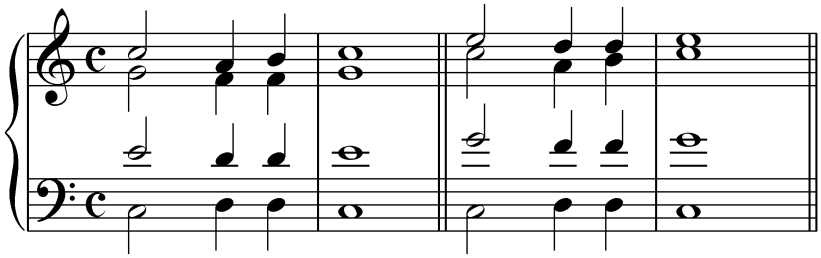


In terms of degrees, at the given point II is followed by VII. However, since three of the four voices stay where they are, we are primarily aware of the alto moving from the 5th to the 6th above the bass, sounding the leading note in the approach to the tonic.
On our first acquaintance with the 6th in ch.7, it took the form of an ornament, an appoggiatura preceding the 5th. In the above example, the 6th also seems to be ornamental as it succeeds the 5th in a strong upward movement to the tonic.
At the end of Wessnitzer's *Jesu, meines Lebens Leben*, this ornamental effect is even more evident, as the 6th is heard in a quaver motif between the homophonic movement of the other voices:

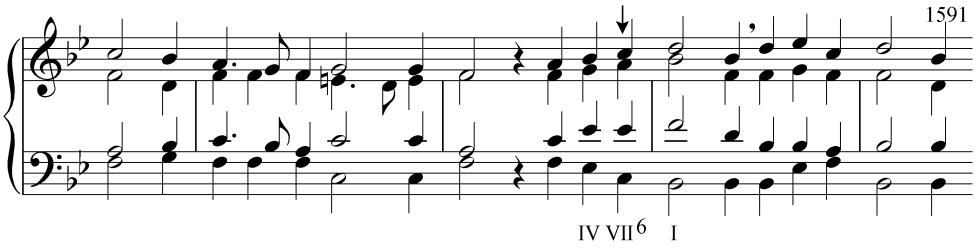


EXERCISE:

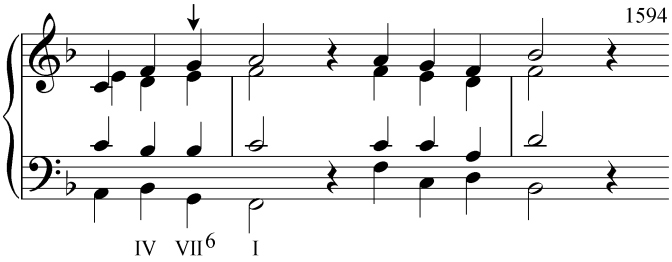
3. Practise the following progressions in all major keys:



Continuing our search for the diminished triad, we discover situations in which the 1st inversion acquires a more independent role. In his setting of *In dir ist Freude*, Gastoldi modulates from F to B flat major:



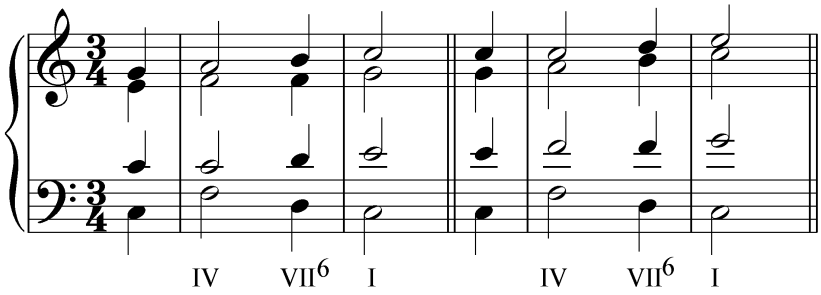
In *Gij die mijn liefste kleinood zijt,* Calvisius writes:



Here, the 1st inversion of VII is no longer ornamental, but plays an independent role in the progression from IV to I.

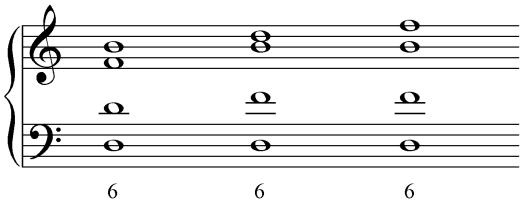
EXERCISE:

4. Practise the following progressions in all major keys:



In all the above examples in the major key, the 1st inversion of the diminished triad occurs on VII. In the minor key, the diminished triad may also occur on II - see p.67 and p.75.

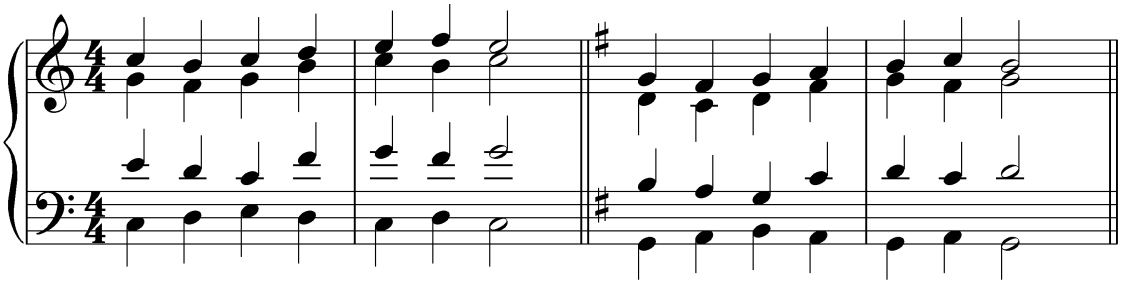
By reason of its common position on the leading note and its exceptional tension, the diminished triad is subject to certain rules of its own. A general rule of harmonisation is that doubling of the leading note tends to sound very conspicuous, and is nearly always ill-advised. In the case of the diminished triad on VII, this rules out doubling of the root. This is an important distinction from major and minor triads, in which the root is usually the first note to be doubled. The second distinction is that the 3rd of the diminished triad may be freely doubled. In common with major and minor triads, the 5th may also be doubled. Translated from the root position to the first inversion:



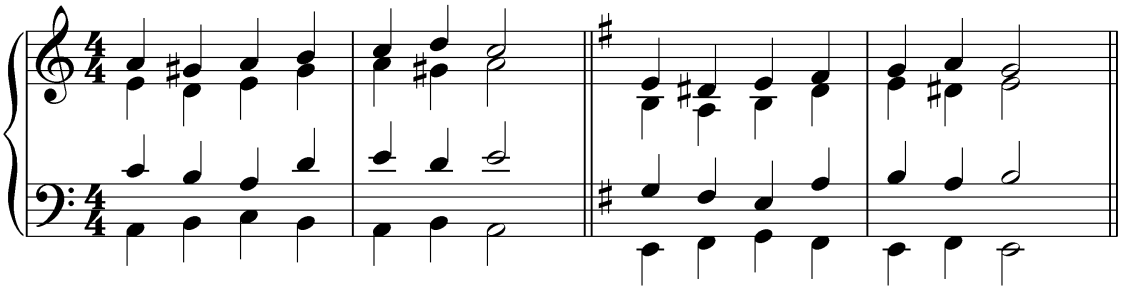
The chord is the 1st inversion of VII in the key of C major, the diminished triad B-D-F. Since the root B is the leading note of the key and should therefore not be doubled, we double D (the bass of the 6-chord) or F.

EXERCISES:

5. Practise the following VII-I progression in all major keys:

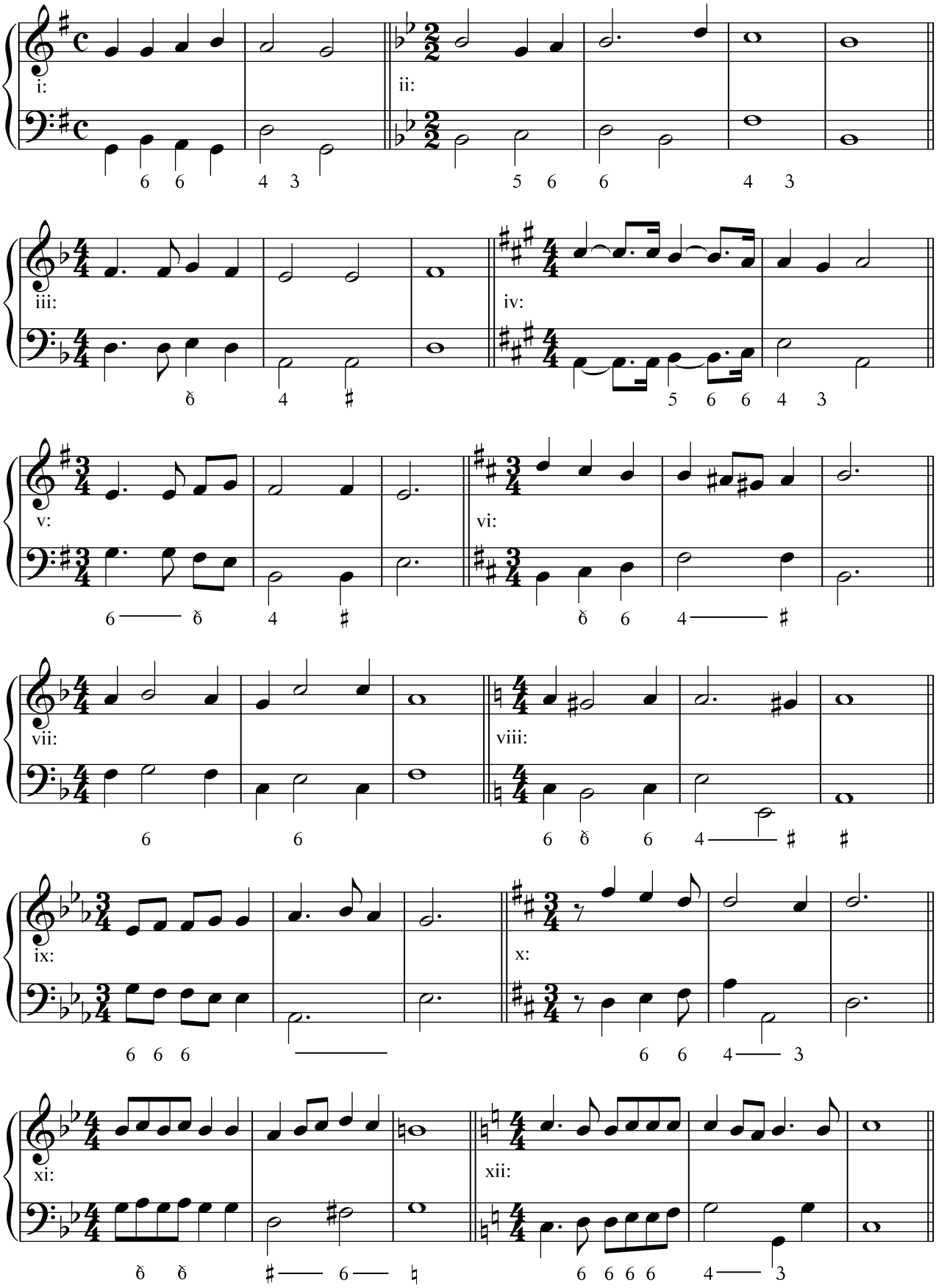


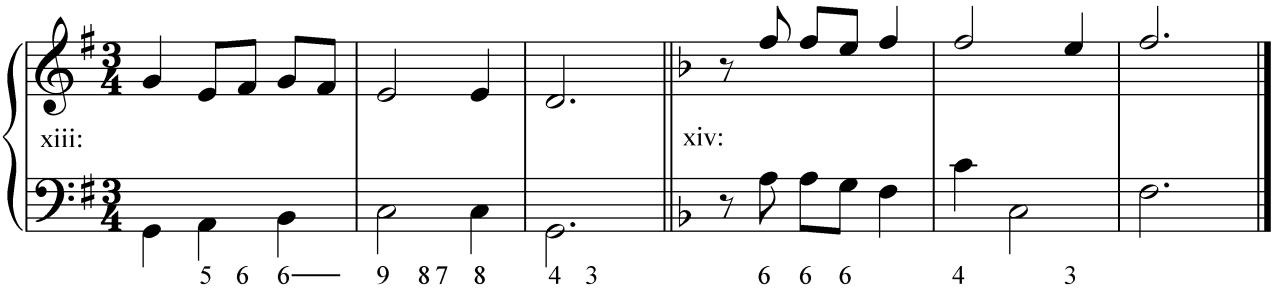
6. Practise the following VII-I progression in the minor keys of A, E, B, F sharp, D, G, C and F:



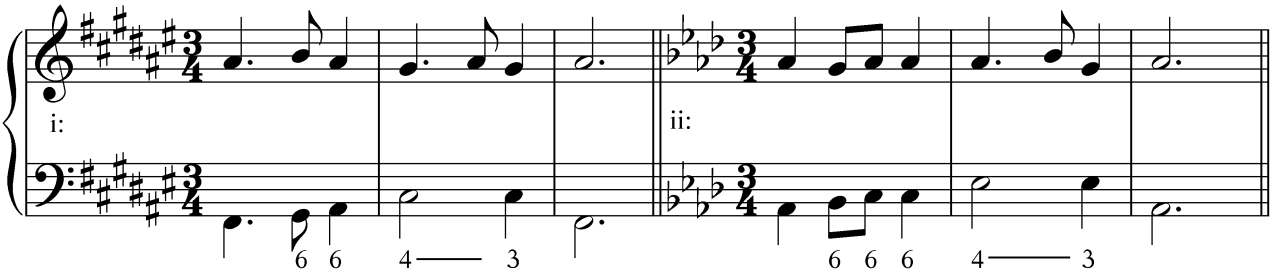
7.* Repeat these phrases with a solo stop and pedals.

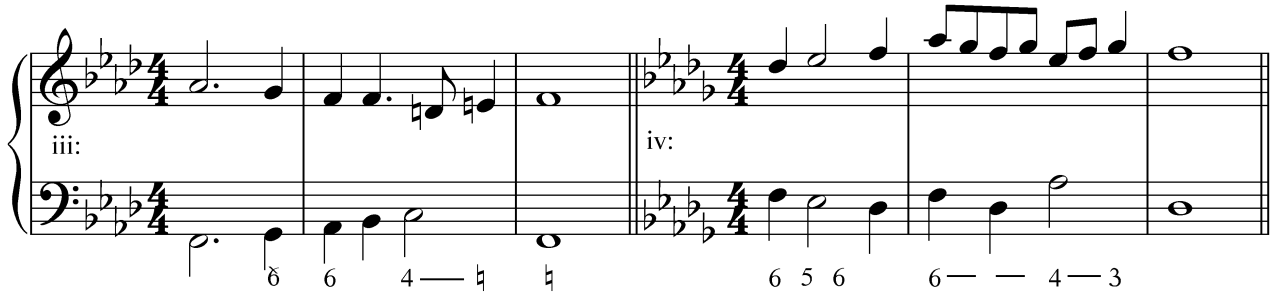
8. In the following exercise, the diminished triad on VII is preceded by I or II and followed by I. In the minor key the sharpened 6th (the leading note) is indicated by ♮, rather than by 6 with an adjacent sharp, as is customary in figured bass. Practise in four parts.

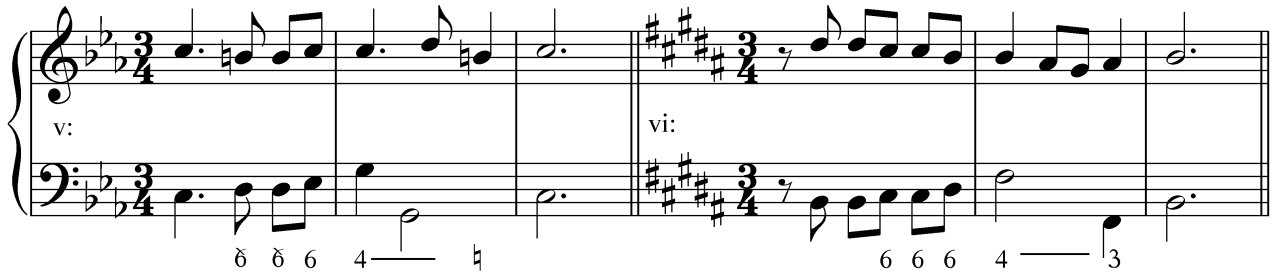


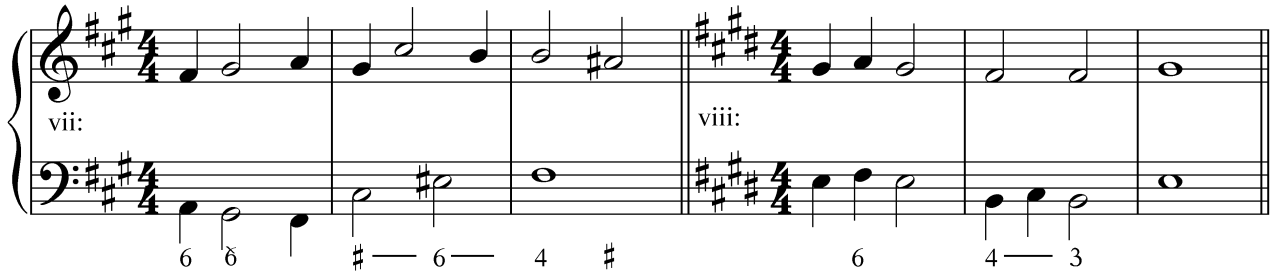


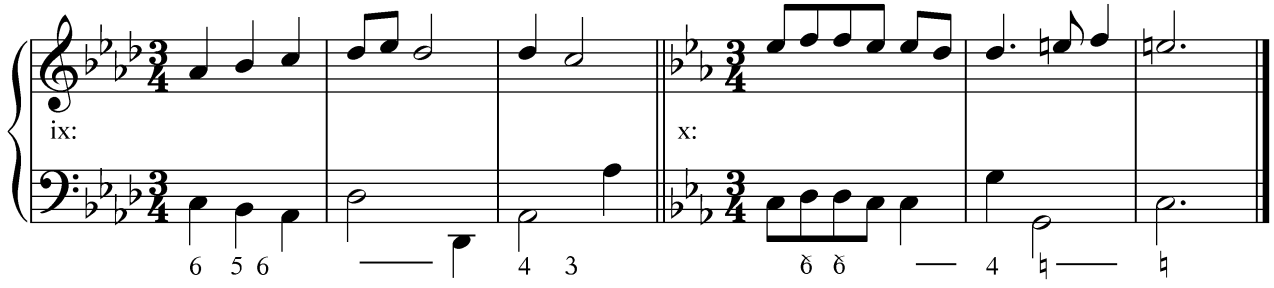
[9.]





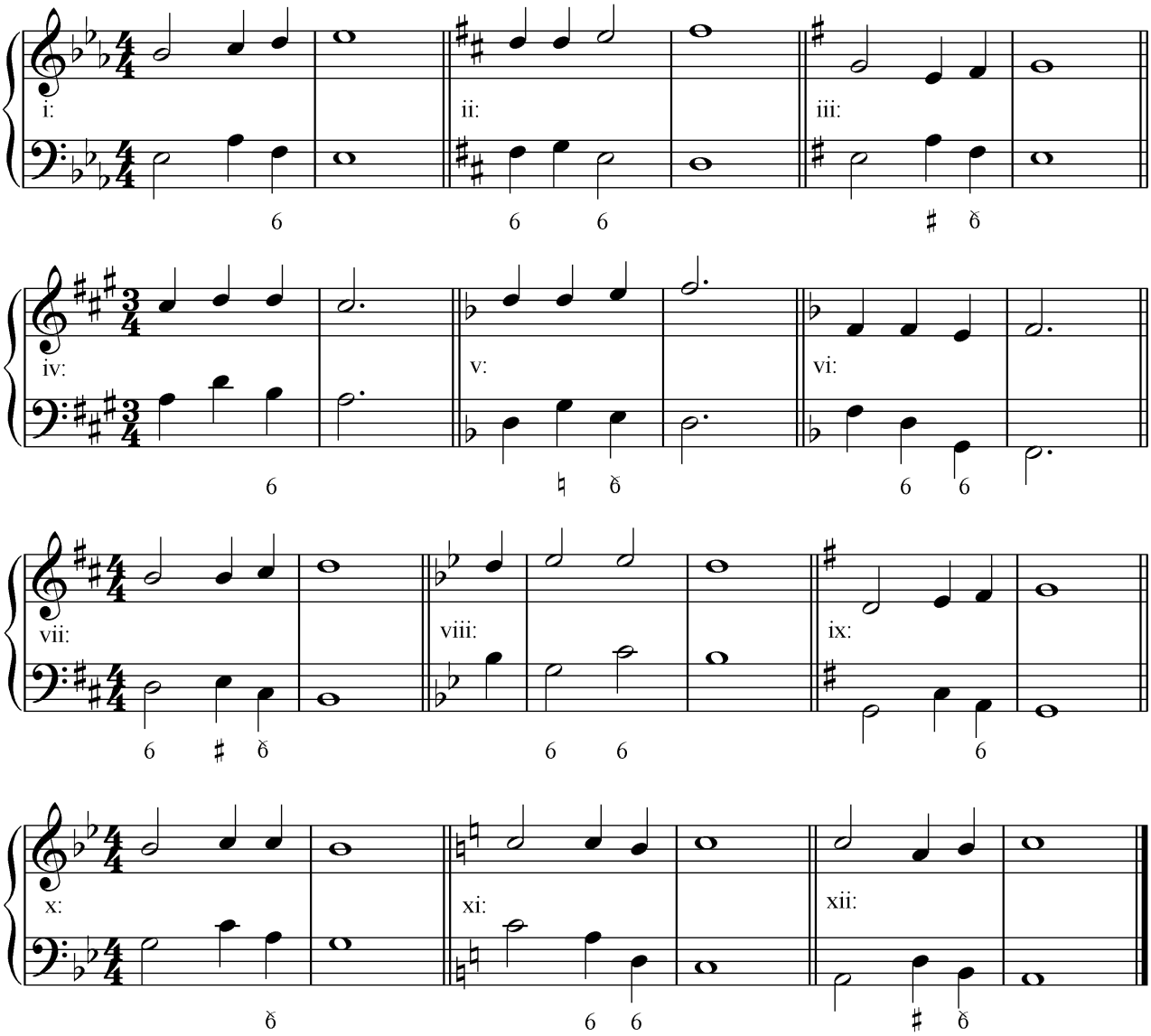




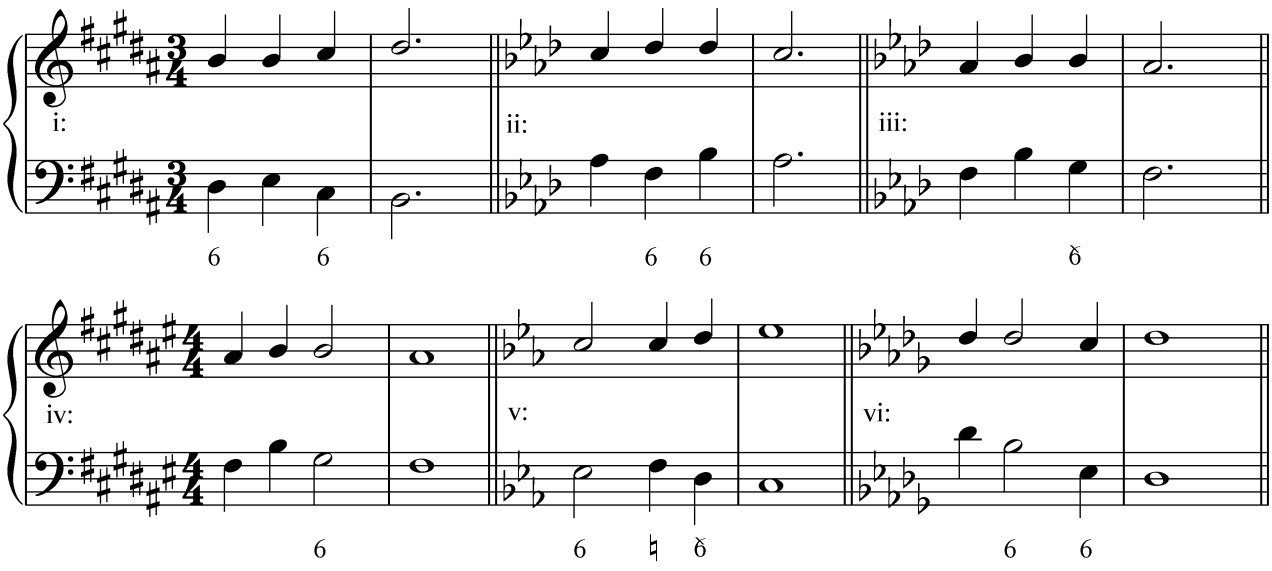


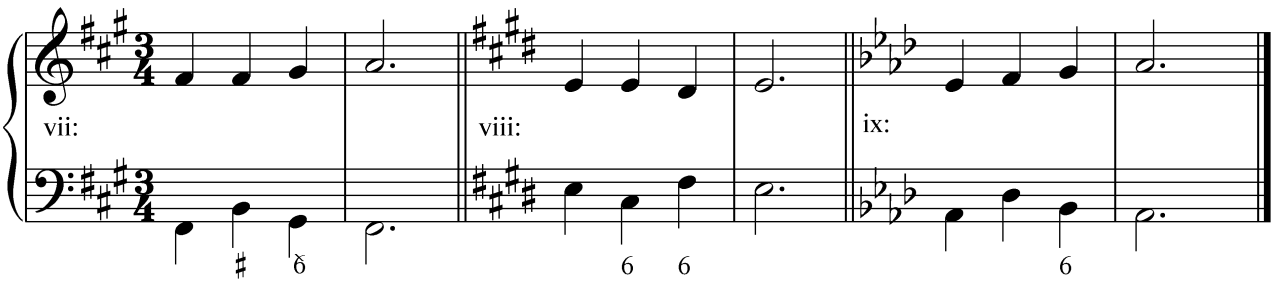
In the following cadences, the diminished triad on VII is preceded by IV and followed by I. Practise in four parts.

10.

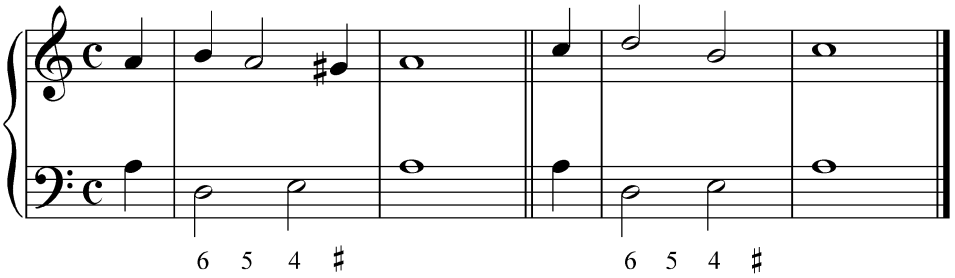


[11.]

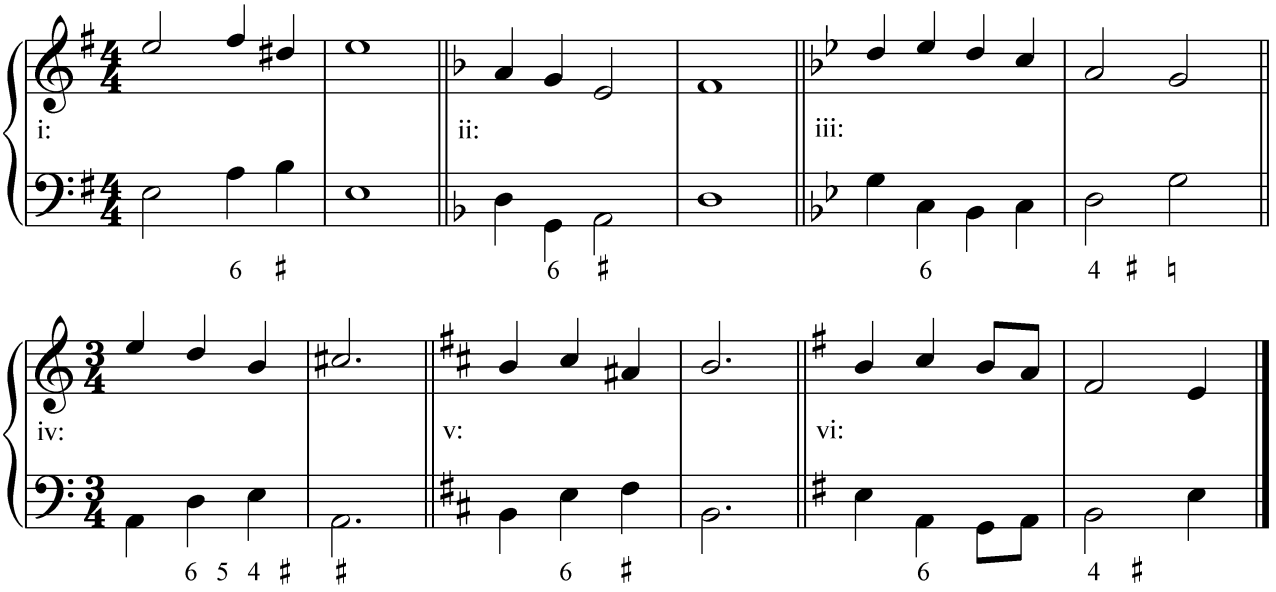




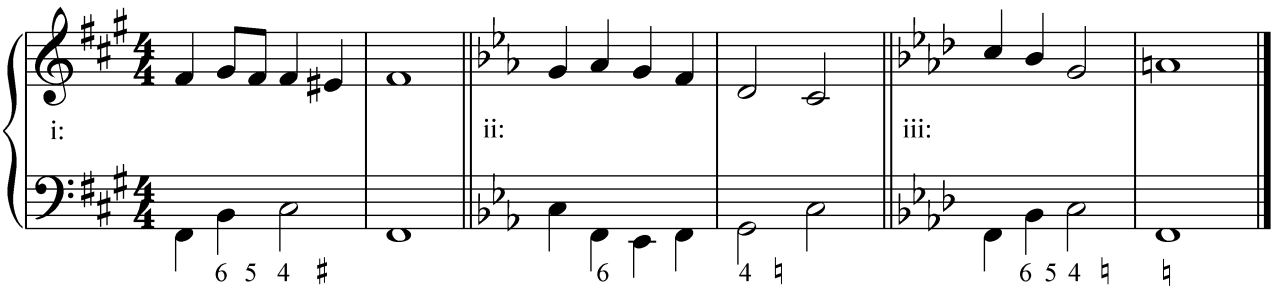
12. On p.43 we practised a cadence in which the 6th functioned as an appoggiatura of the 5th. We can now practise the same cadence in minor keys, using the diminished triad on II. Play in four parts in the minor keys of A, E, B, F sharp, D, G, C and F.



13. In the following minor cadences, the diminished triad also occurs on II:



[14.]



15.* Repeat ex.8-14 with a solo stop and pedals.

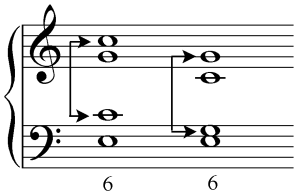
13

THE CHORD OF THE SIXTH (iv)

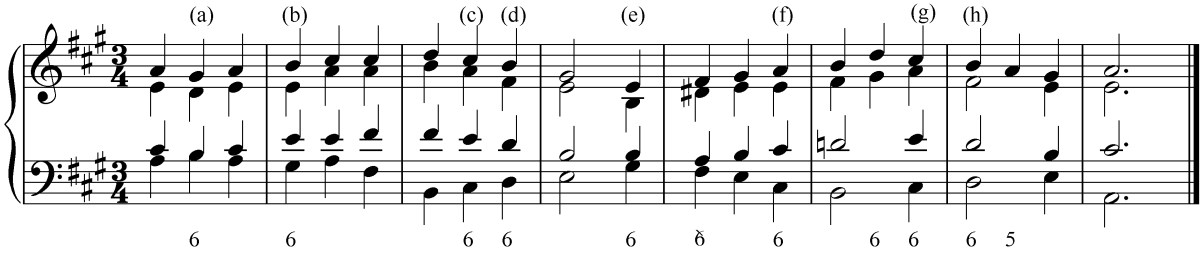
More four-part positions of the 6-chord
Consecutive 6-chords

The 6-chord can be played in many positions, which we must master in order to create supple part writing in all sorts of situations.

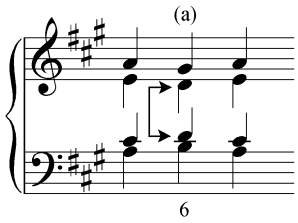
Two positions have already been discussed, one with the doubled root and the other with the doubled 5th:



The following fragment presents several new possibilities:

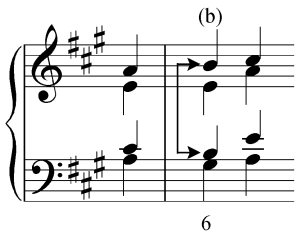


(a): unison doubling (*unisonus* = Latin: one sound) of the 3rd of the diminished triad on VII, due to the limited space between the outer voices. Another possibility would be a unison doubling of the 5th:



On a keyboard instrument we press three keys, but we play four parts.

(b): unison doubling of the root. The E in the tenor contributes to smooth part writing. The 5th could also be doubled, creating a less smooth part but a slightly fuller texture:

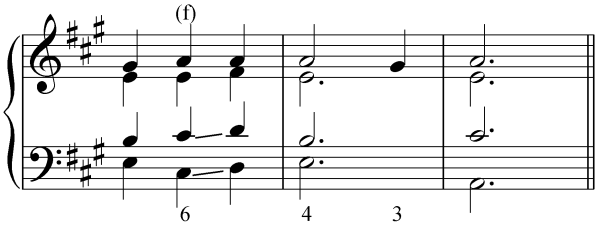


(c): doubling of the 3rd of the major triad. In the 1st inversion, the above doubling is quite common, except on the dominant, which would produce a doubled leading note. The outer parts move stepwise in contrary motion, helping our ear to accept this deviant doubling.

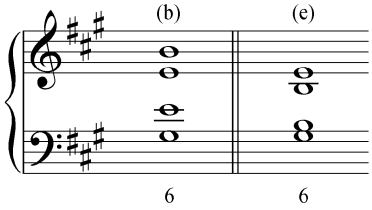
(d): doubling of the 3rd of the minor triad. The voices move in contrary motion by the smallest possible interval.

(e): unison doubling of the 5th.
(f): doubling of the 3rd.
(g): ditto.
(h): ditto.

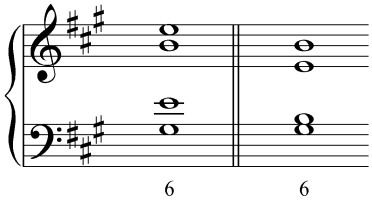
Doubling of the 3rd of the triad (c,d,f,g,h) must be considered within the given context, in which contrary motion between the upper voices and the bass is of the greatest importance. If we were to play the doubled 3rd at (f) in a different context, neglecting contrary motion, major errors could arise:



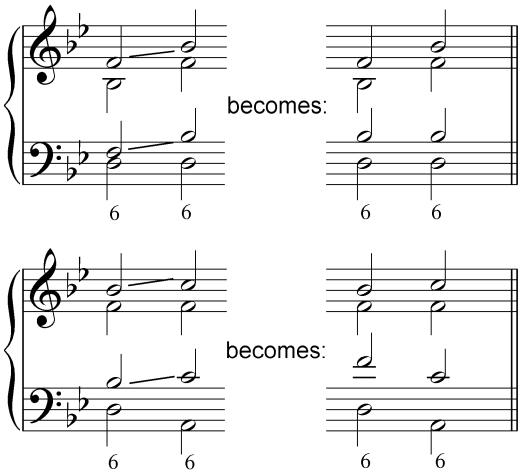
The 6-chords at (b) and (e) present two most useful new positions:



Naturally, these are variants of earlier 6-chord positions, in which the root or 5th is doubled:

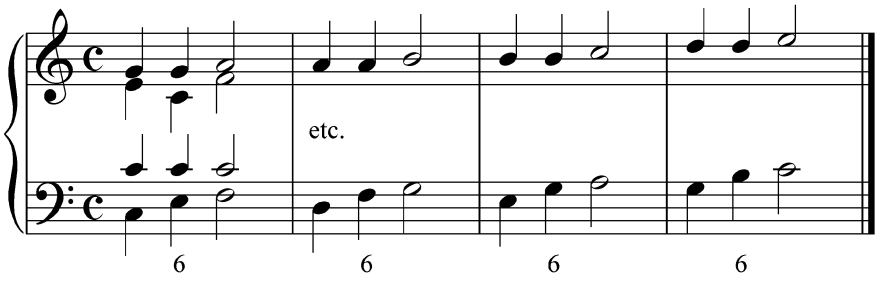


Positions (b) and (e) are useful in two particular situations. Firstly, where the distance between the outer voices leaves little room for a wider spacing. Secondly, in order to avoid parallel 8ves when playing consecutive 6-chords. Earlier, on p.55, the reader was warned about consecutive 6-chords, because at the time we had insufficient means at our disposal to avoid parallel 8ves. With the help of the new positions, this problem can now be solved:

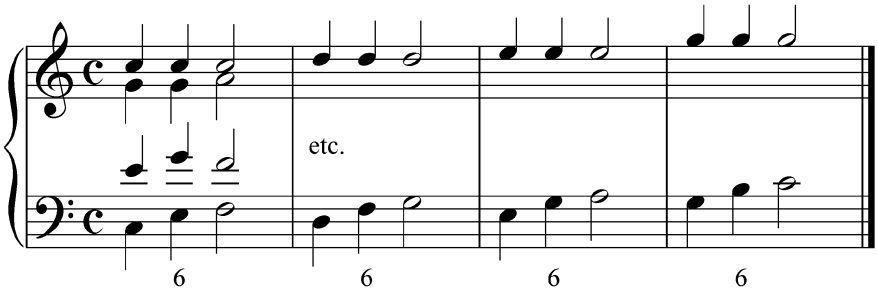


EXERCISES:

1. Practise the following sequence in four parts in all major keys. On the second beat, we play a unison doubling of the root in the alto and tenor, imagining four singers rather than three keys of the keyboard!

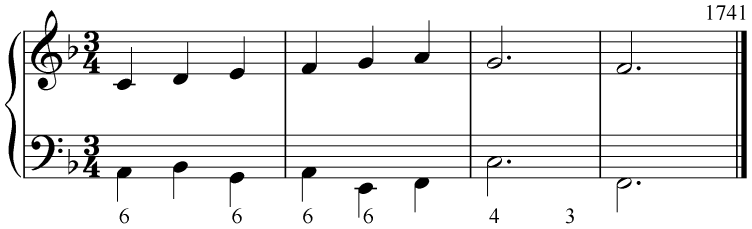


2. Practise the following sequence in four parts in all major keys. On the second beat, we play a unison doubling of the 5th in the alto and tenor.

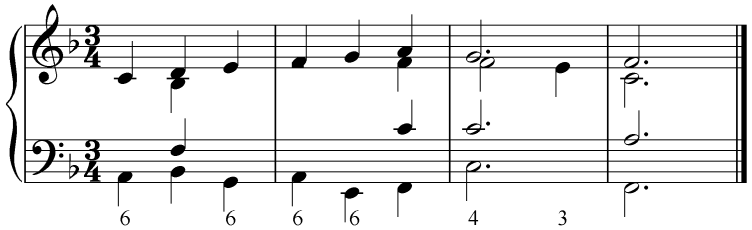


These new positions make it easier to play consecutive 6ths where desired. Let us examine fragments of two chorales with original figured basses.+

In a setting published in 1741, the final phrase of *Lobe den Herren* is as follows:

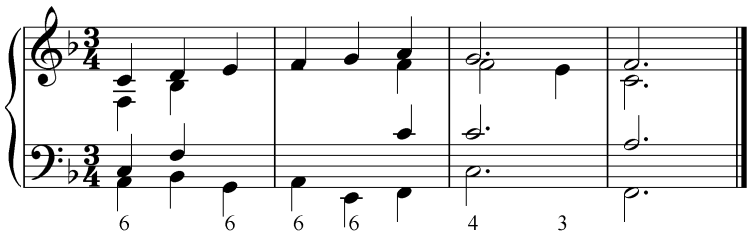


The figured bass allows the alto and tenor to be added in various ways. Let us first fill in the root position on IV (bar 1) and the cadence:

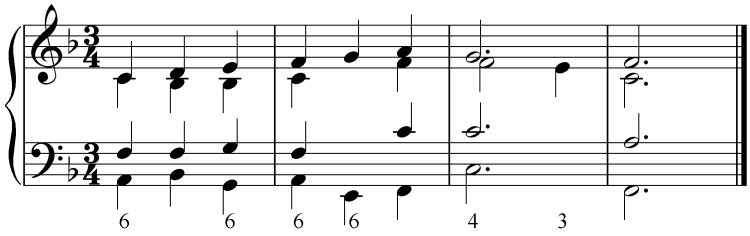


Now we can determine the spacing of the first 6-chord. A mixed spacing with doubled 5th would cause quite large leaps in the alto and tenor, while the first note tenor note is rather low:

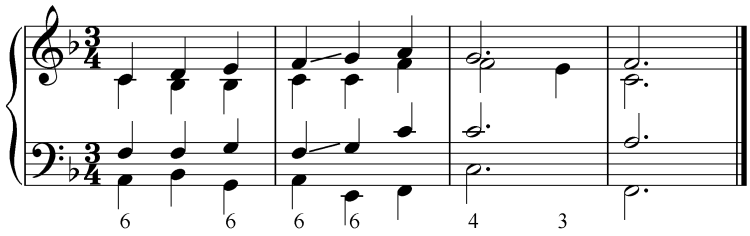
+ Many 17th- and 18th-century composers wrote down only the chorale melody and figured bass. The chord progressions thus determined, the player is free to fill in the middle voices as desired.



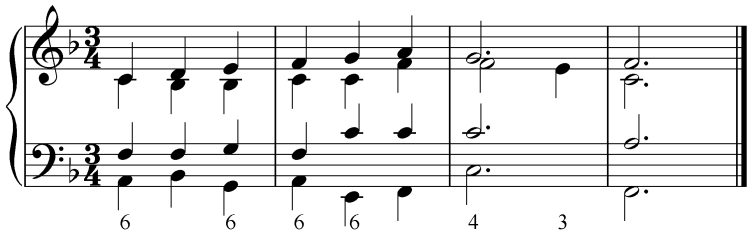
We therefore opt for a unison doubling of the 5th between the soprano and alto, and proceed to fill in the next two 6-chords:



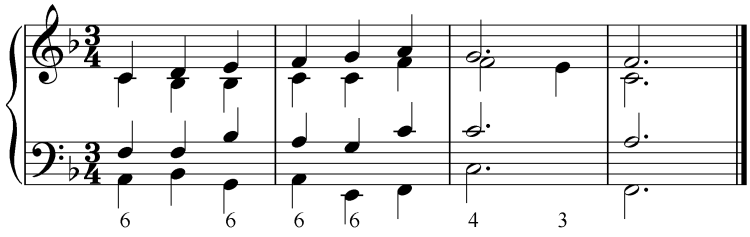
Since the 6-chord on V cannot be filled in as follows:



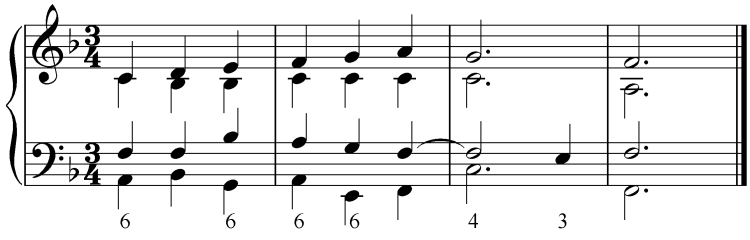
the problem can be solved by unison doubling of the root:



If, on the third beat of the first bar (the diminished triad on VII), we had doubled the 5th instead of the 3rd, we could have proceeded in the second bar as follows:

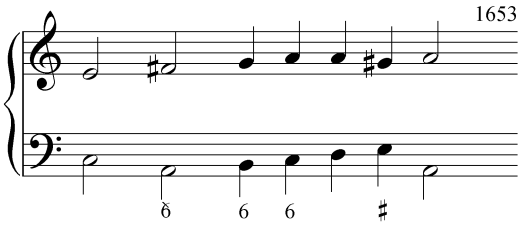


And if our teacher is liberally minded, we may be allowed the following cadence:

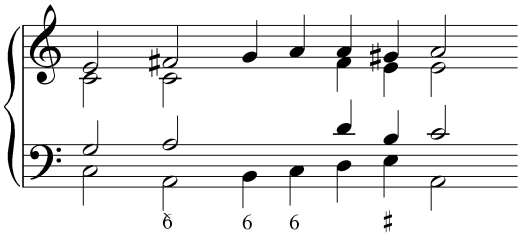


The open spacing (see Part I ch.12) at the end of the second bar allows us to move the 4-3 suspension to the tenor, thus smoothing out both the tenor and the alto.

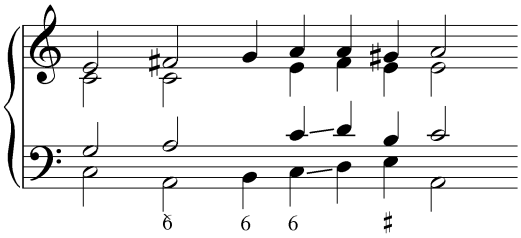
In a number of chorales with figured bass published in 1653, Johann Crüger reveals a liking for consecutive 6-chords. Our second example is a phrase from his setting of *Jesus, meine Zuversicht*:



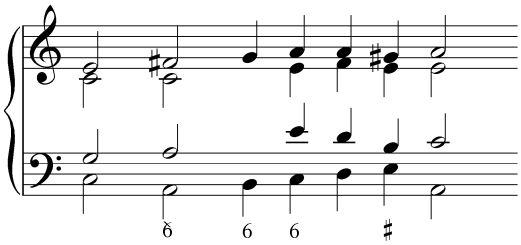
The beginning and end can be filled in:



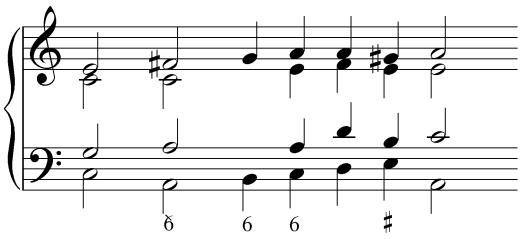
Care is required, however, for the outer voices move almost entirely in similar motion, which could cause problems if the inner parts do likewise. The following position of the third 6-chord must therefore be ruled out:



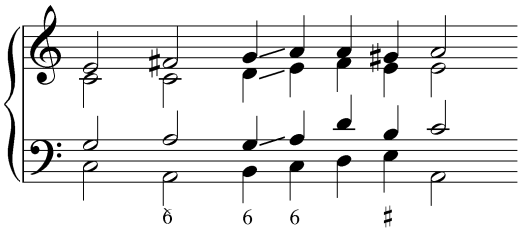
Another possibility, with contrary motion between the tenor and bass, would require quite a leap upwards in the tenor:

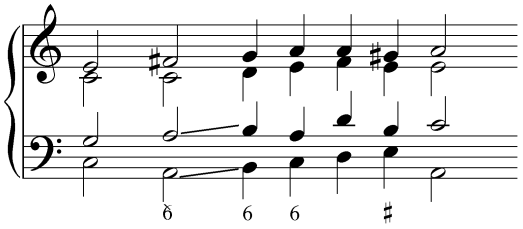


Let us therefore double the root in the soprano and tenor, so that all parts move upwards except the soprano:

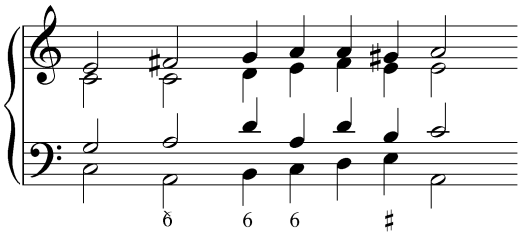


This in turn rules out two solutions for the remaining 6-chord:

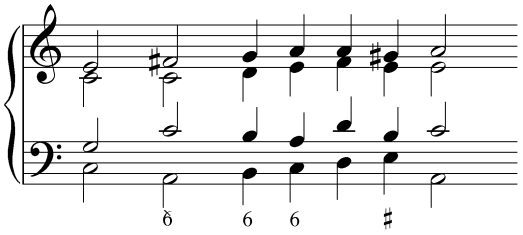




Leaving only one option:

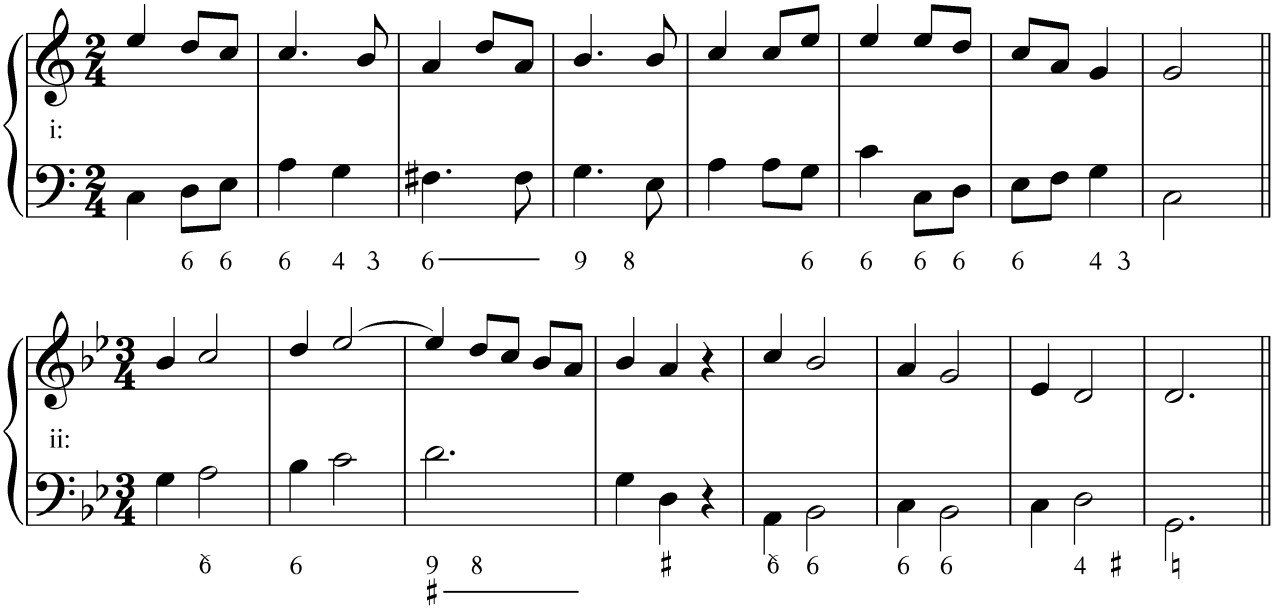


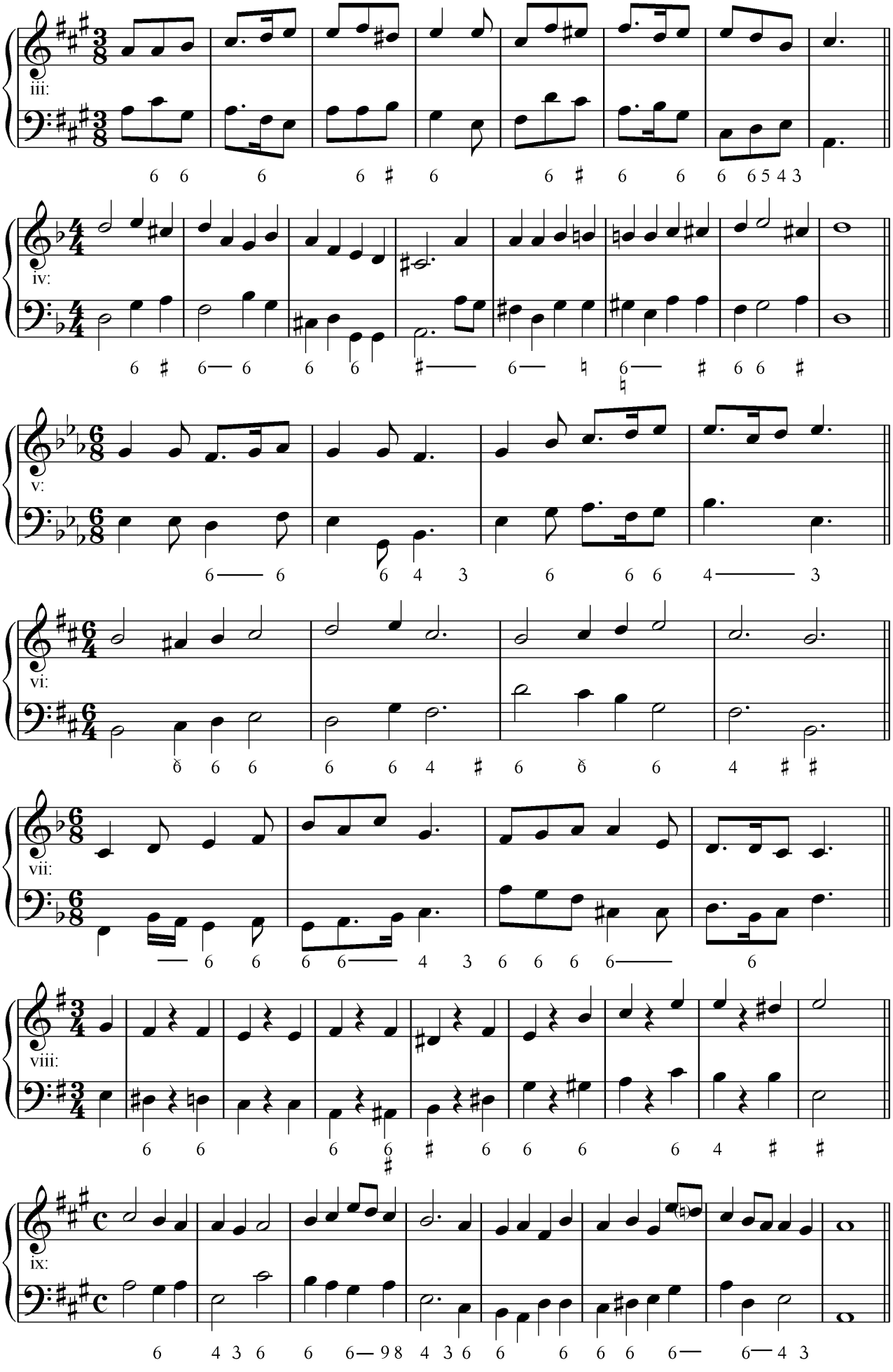
That should keep our tenors amused! In hindsight, perhaps it would have been better to give the tenor a higher position in the diminished triad, followed by descending motion against the rising bass:



EXERCISES:

3. Practise the following phrases in four parts.




iii:
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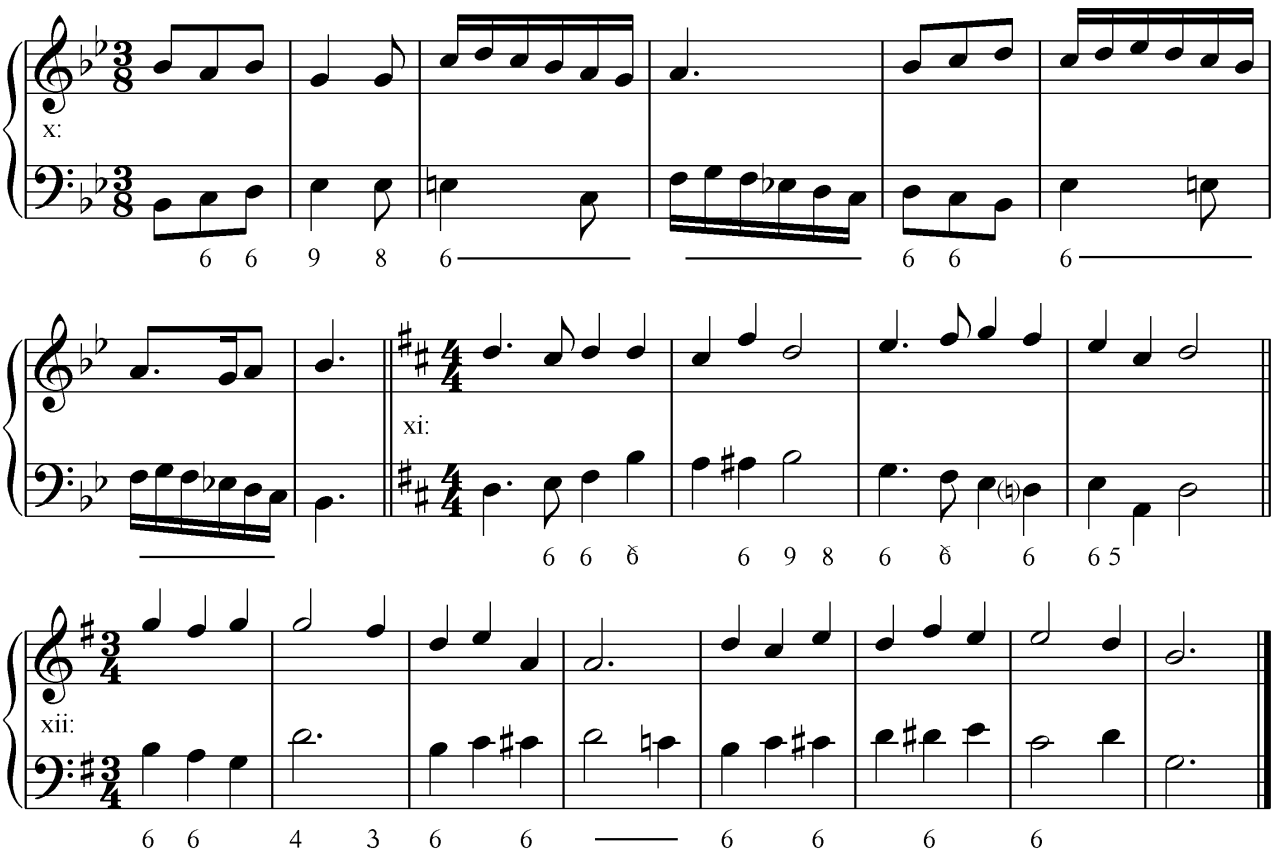
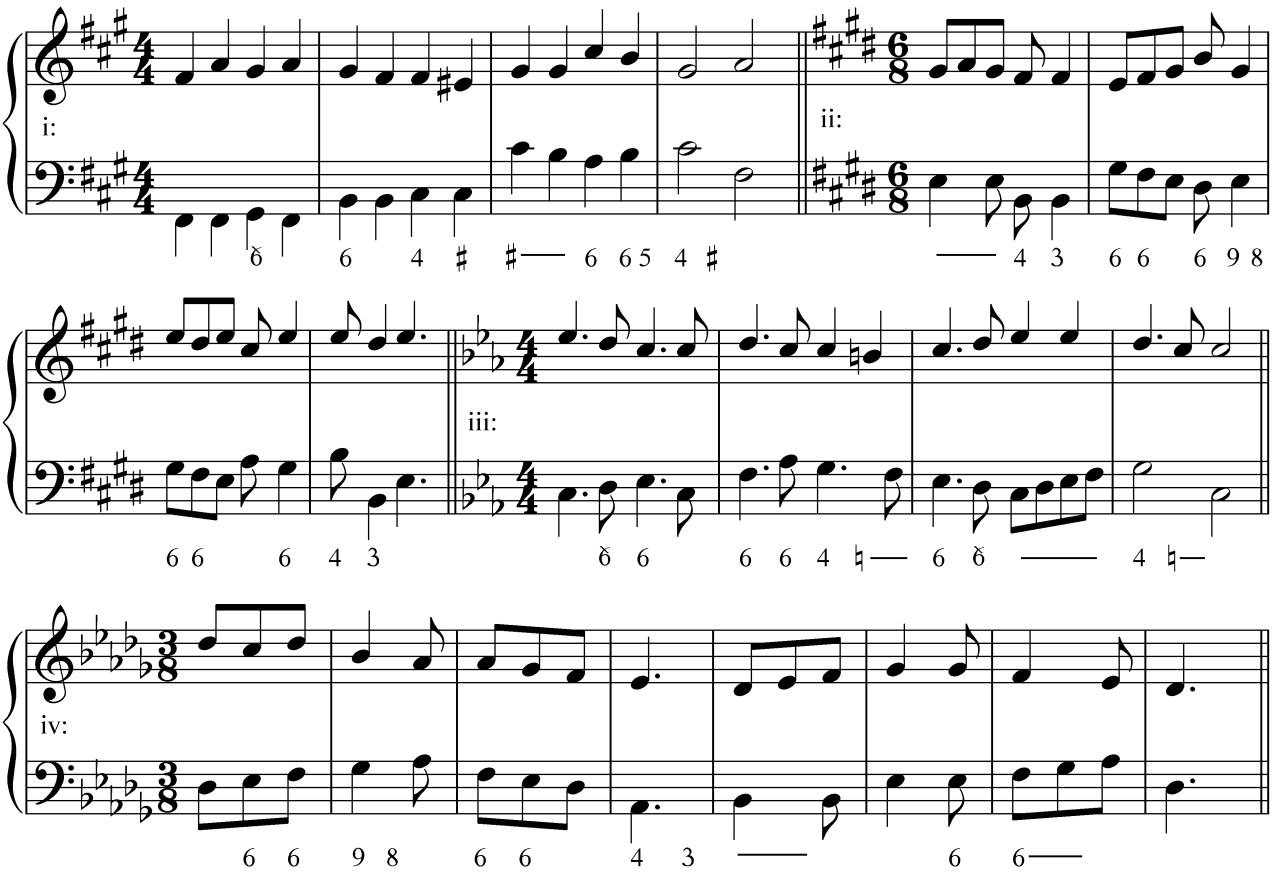
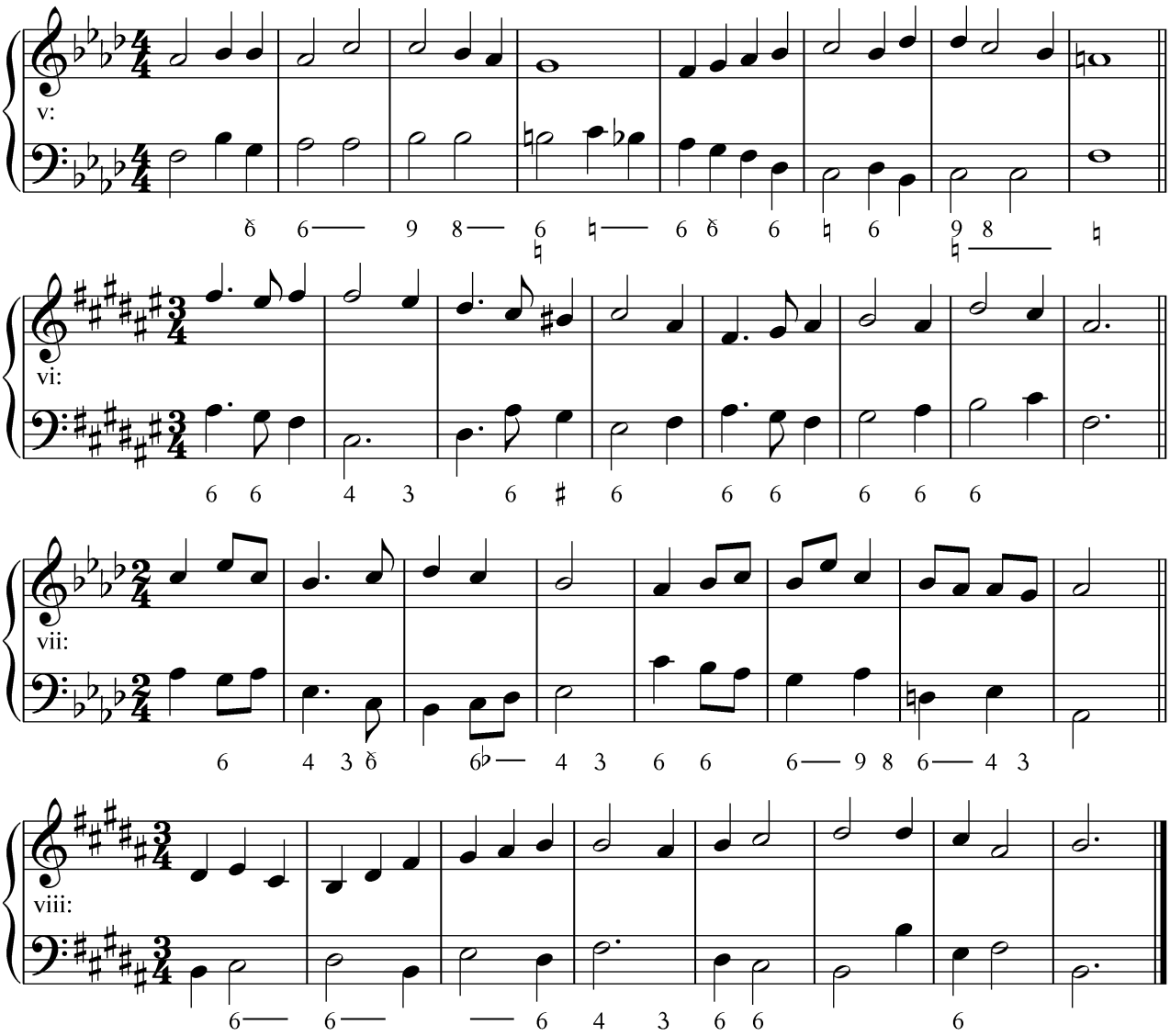


4.* Repeat ex.3 with a solo stop and pedals.

[5.] Practise the following phrases in four parts.

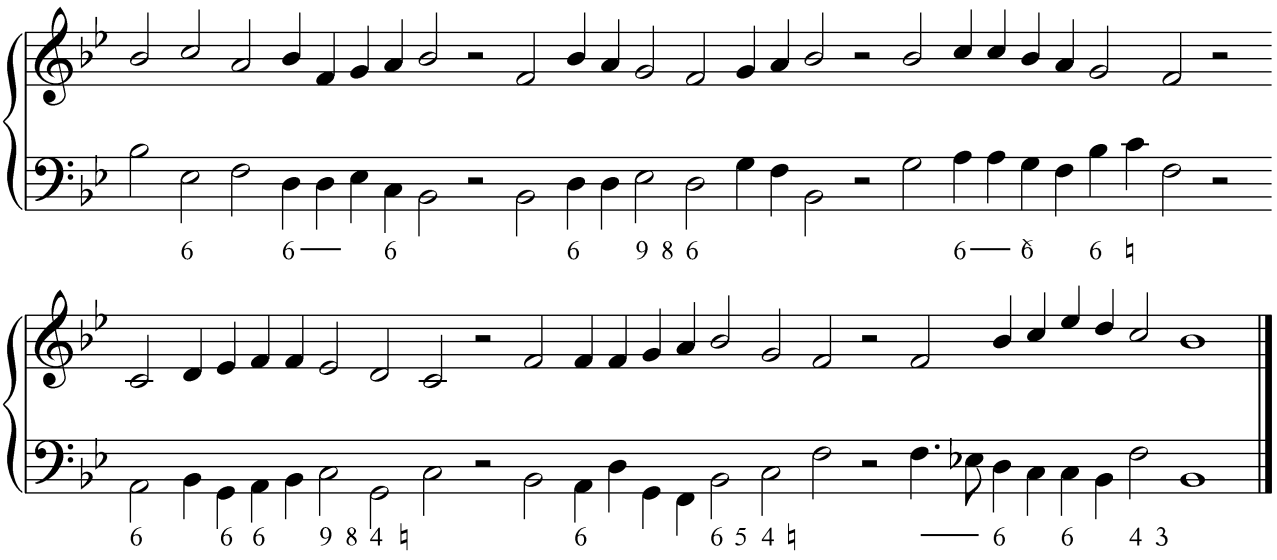




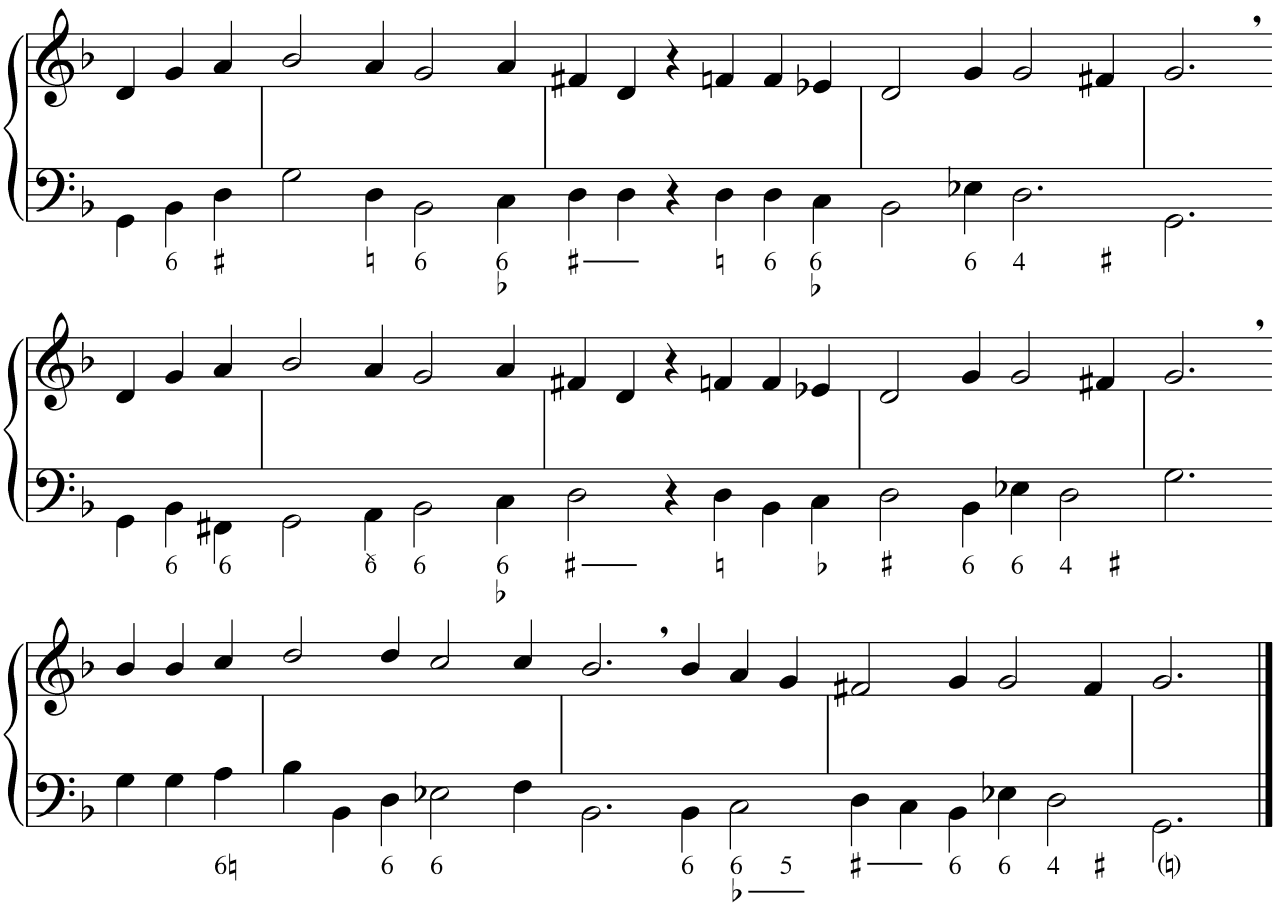
[6.*] Repeat ex.5 with a solo stop and pedals.

7. Play the following chorales in four parts.

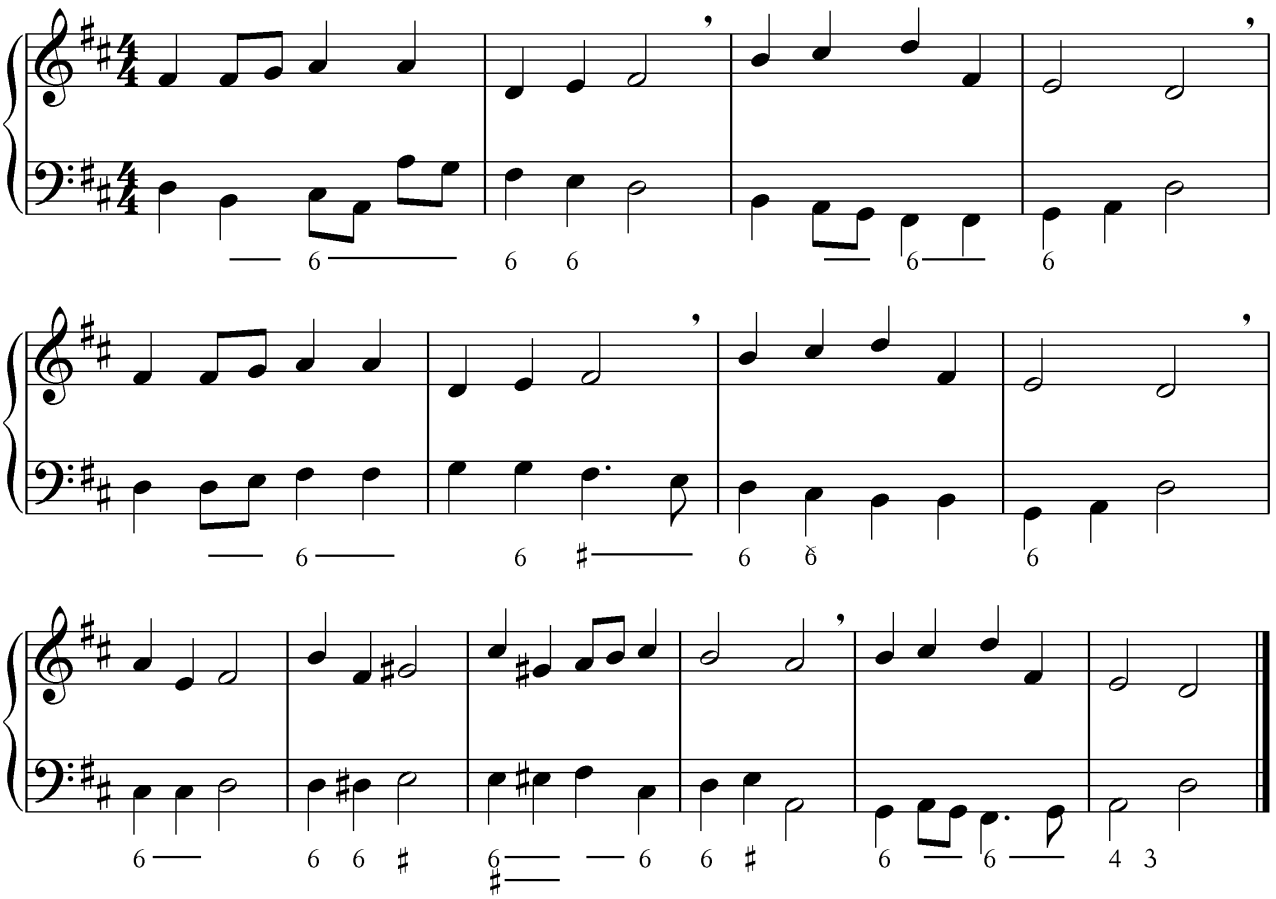
Alléluja! louange à Dieu



Wer nur den lieben Gott lässt walten



Straf mich nicht in deinem Zorn

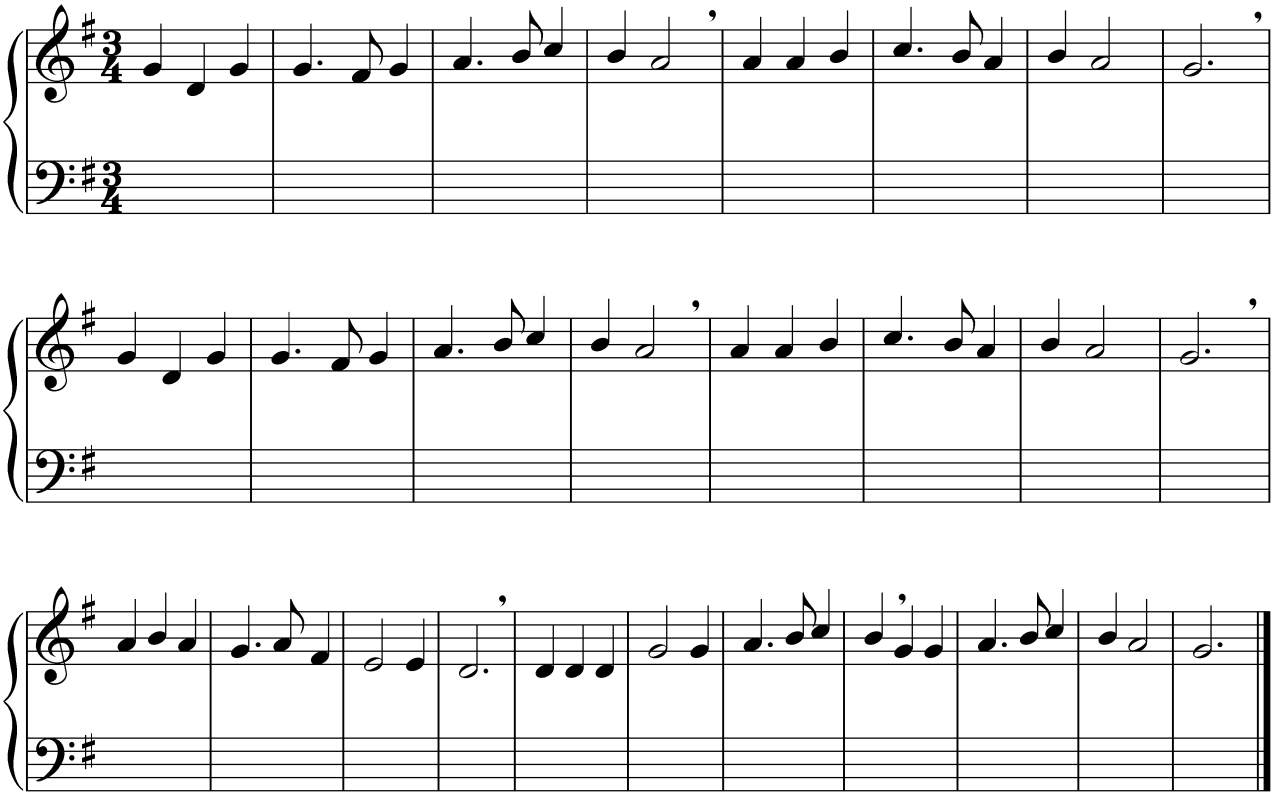


8.* Repeat the chorales with a solo stop and pedals.

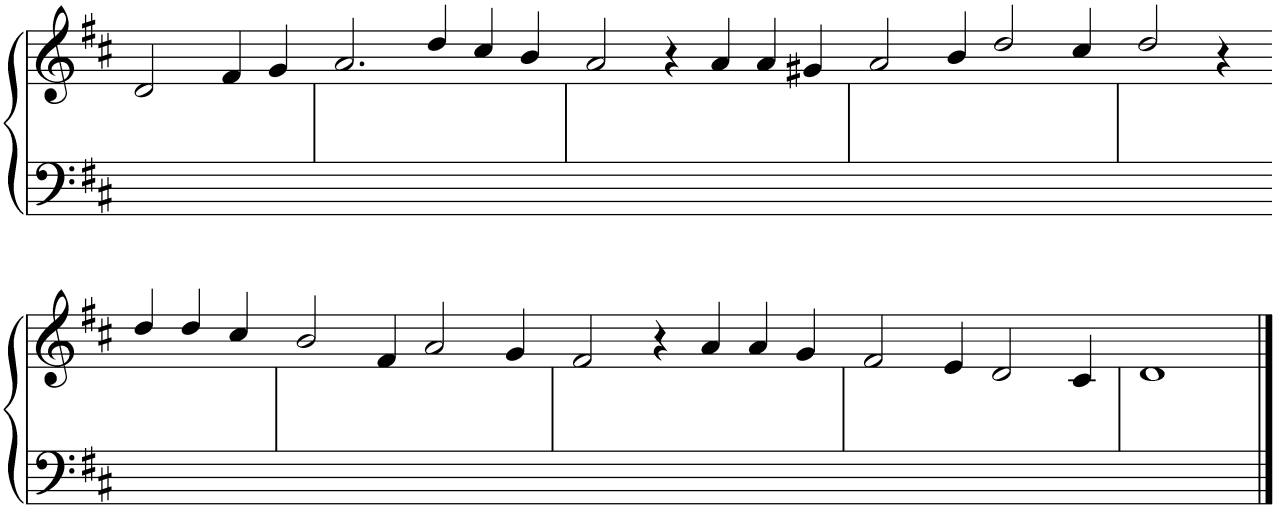
9. Play the following transpositions:
- *Alléluja! louange à Dieu* in C and A major
- *Wer nur den lieben Gott lässt walten* in A minor
- *Straf mich nicht in deinem Zorn* in C and E flat major.

10. Write a bass to the following chorale melodies and practise in four parts.

Lobe den Herren, o meine Seele



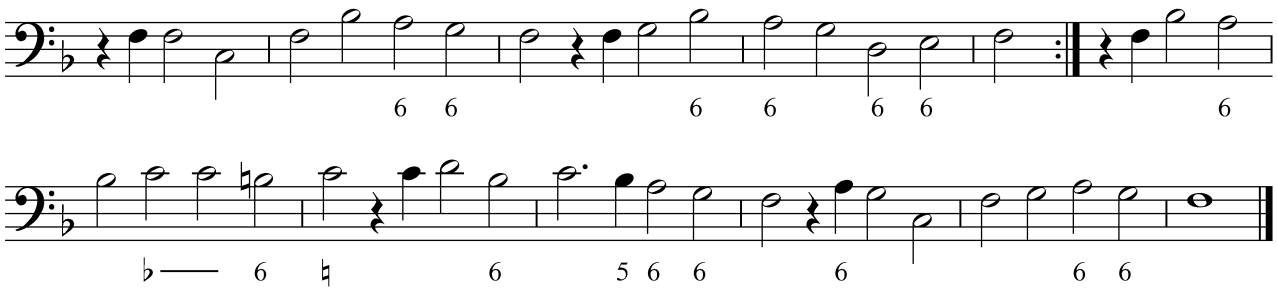
Die helle Sonn leucht' jetzt herfür



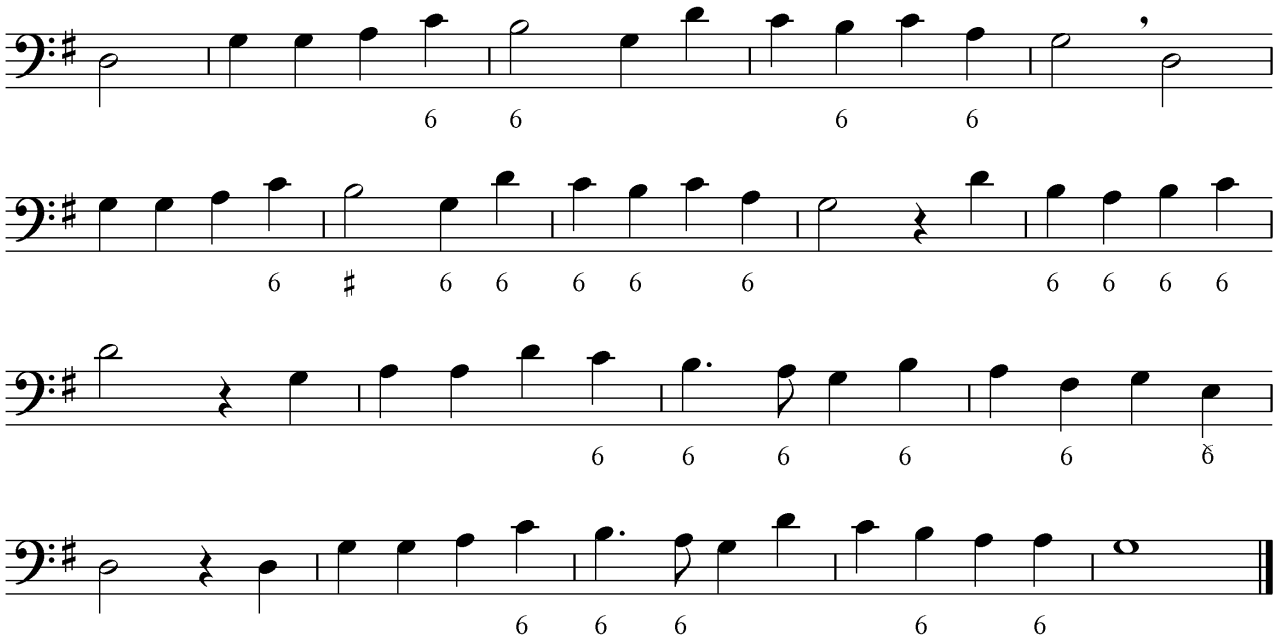
11.* Repeat the chorales with a solo stop and pedals.

12. In the following chorales, the melody is now in the bass, giving rise to an entirely new harmonisation. By taking different chord positions as the point of departure, and by changing position again as we go, we can improvise many different four-part settings.

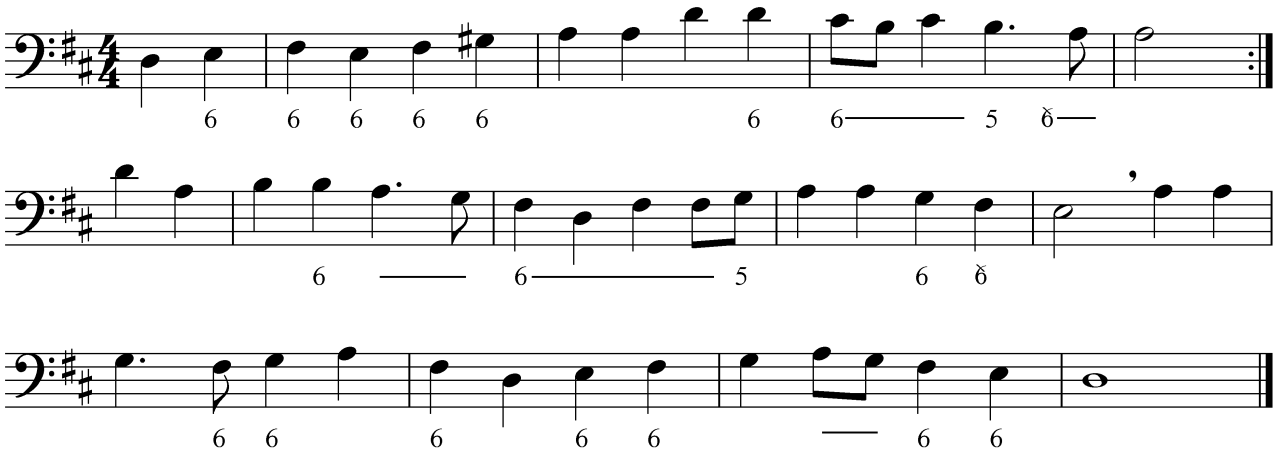
Nun freut euch lieben Christen gmein



Dich lobn wir Gott mit eine



O Durchbrecher aller Bande



13.* Repeat ex.12 with the bass in the pedal, preferably with an 8' reed stop.

14

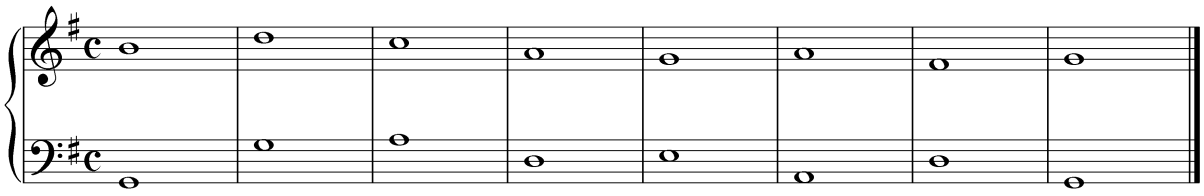
REVISION EXERCISES

Two-part inventions
Four-part exercises and chorales

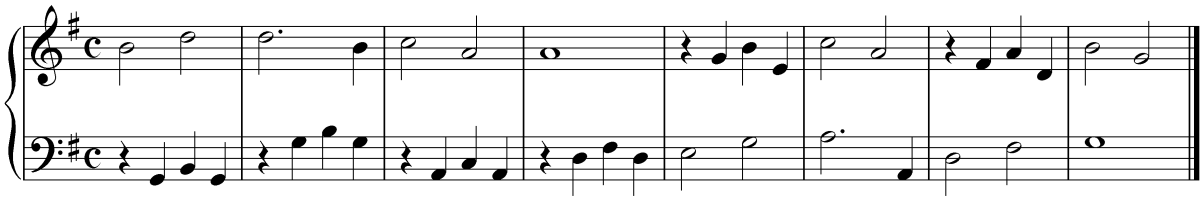
The player who has progressed so far, may consider himself proficient in various *keyboard skills*. A visit to other havens than *The Lost Chord* may be welcome, and exploration of Baroque figured bass will provide the necessary diversion. 17th-century motets, for example by Heinrich Schütz, usually contain many root position chords. Simple sonatas for a solo instrument and basso continuo present the opportunity to practise 6-chords (and - in the case of organists - improve social skills!). Genuine music is preferable to exercises, not to mention the fact that the present author has the irritating habit of scattering too many suspensions and 1st inversions along the way!
The following revision exercises pave the way to the third volume of *The Lost Chord*, in which the poem of the same name by Adelaide Proctor will reach its apotheosis.

EXERCISES:

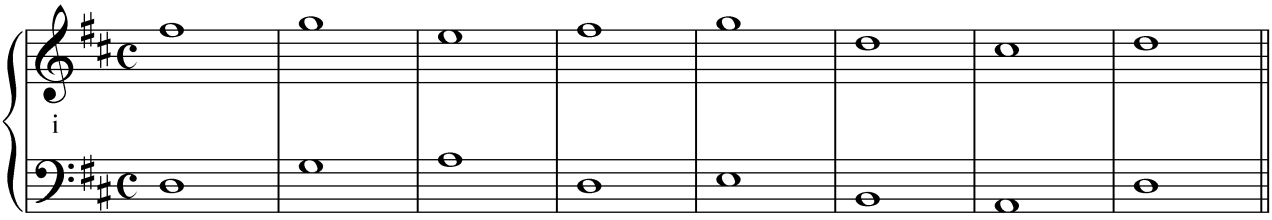
1. The following scheme:

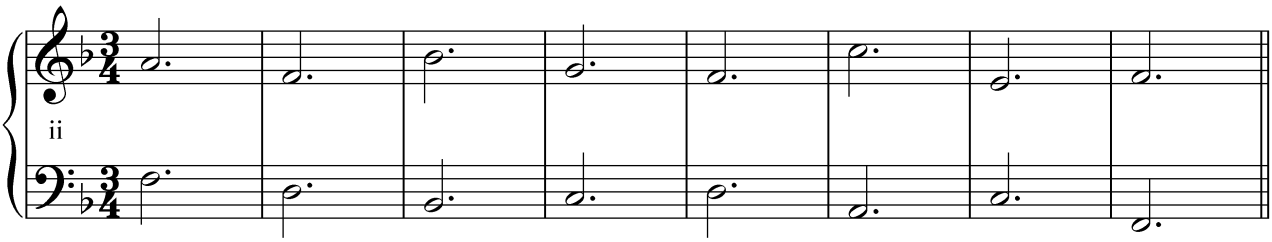


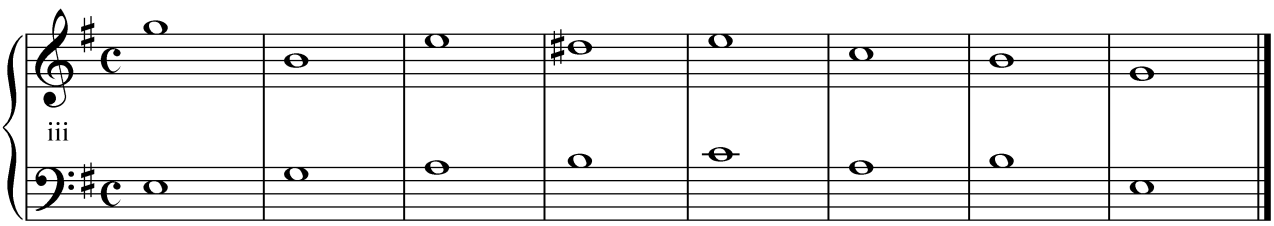
offers the opportunity to improvise countless inventions, among which the following:



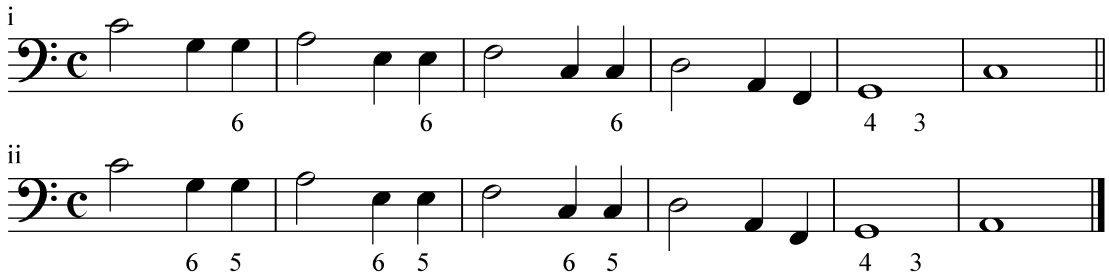
Improvise many different two-part inventions on the schemes below. The given root positions can be freely exchanged for 1st inversions.







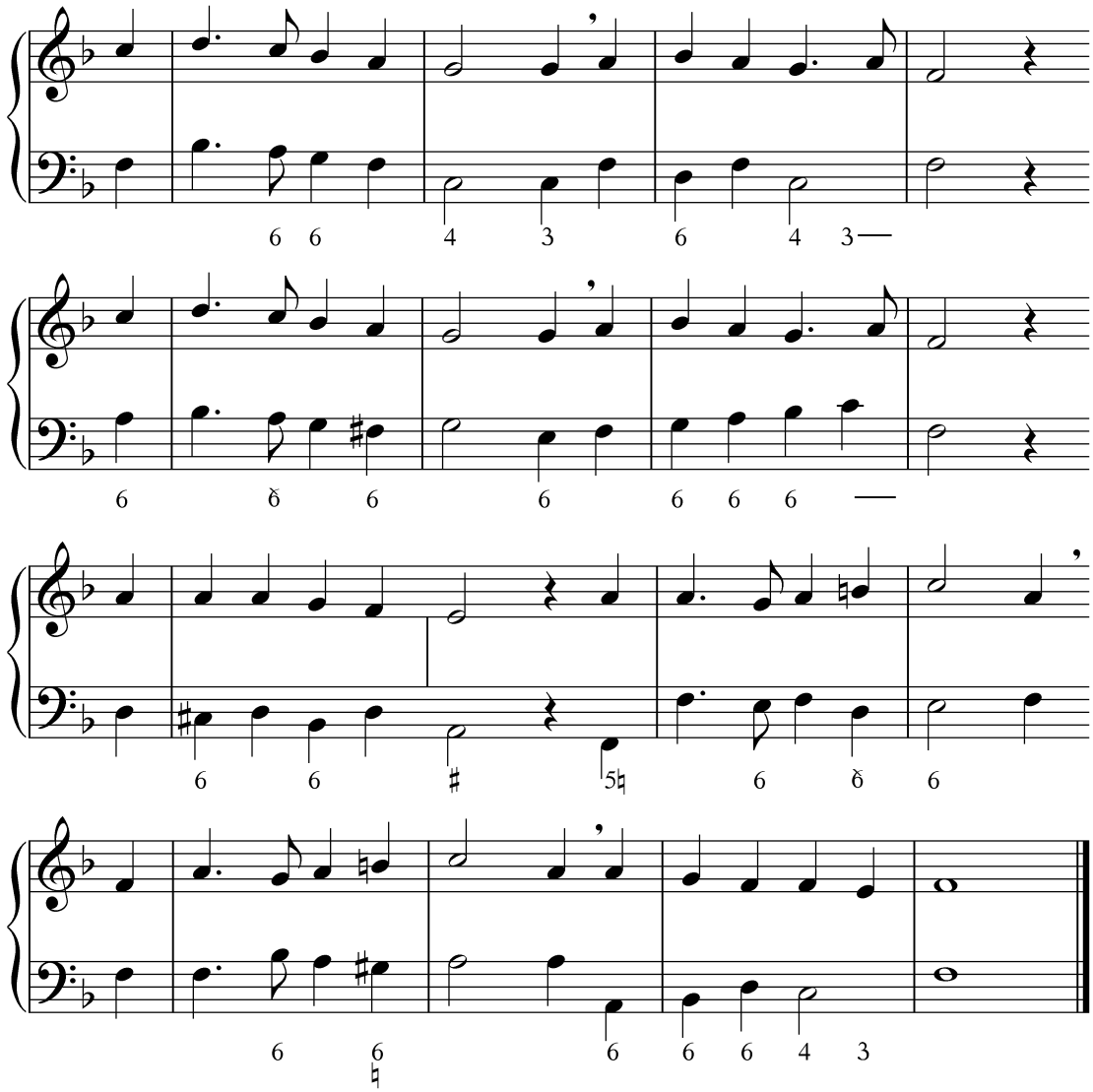
2. Play the following progressions in all major keys. The first chord, in 8-, 3- or 5-position, determines the course of the r.h.; use all three points of departure alternately. Take due note of the sequence in the first three bars.



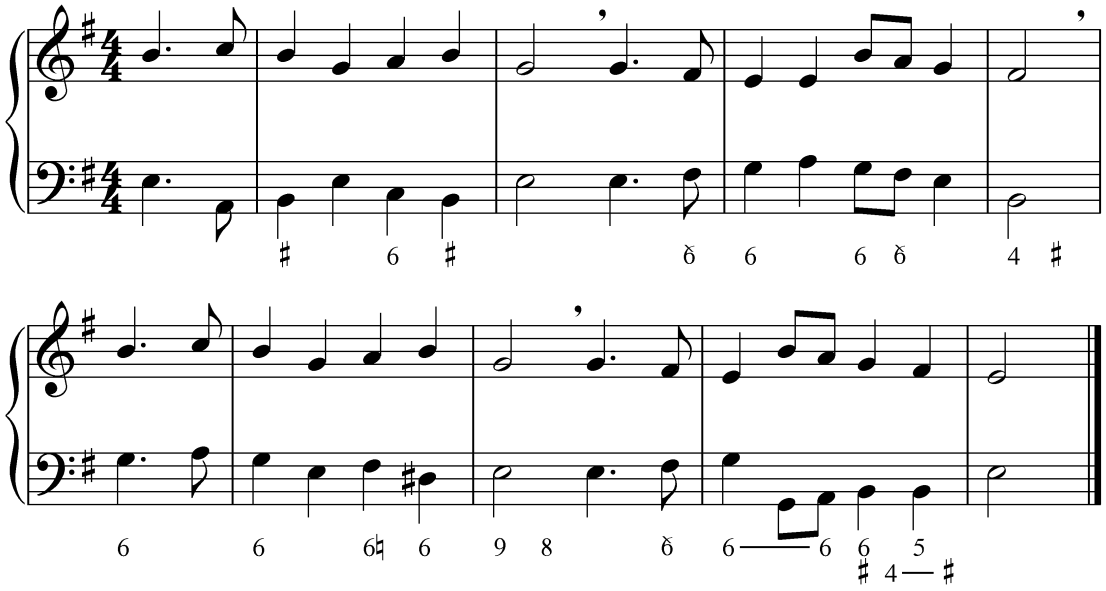
3.* Repeat ex.2 with a solo stop and pedals.

4. Play the following chorales in four parts.

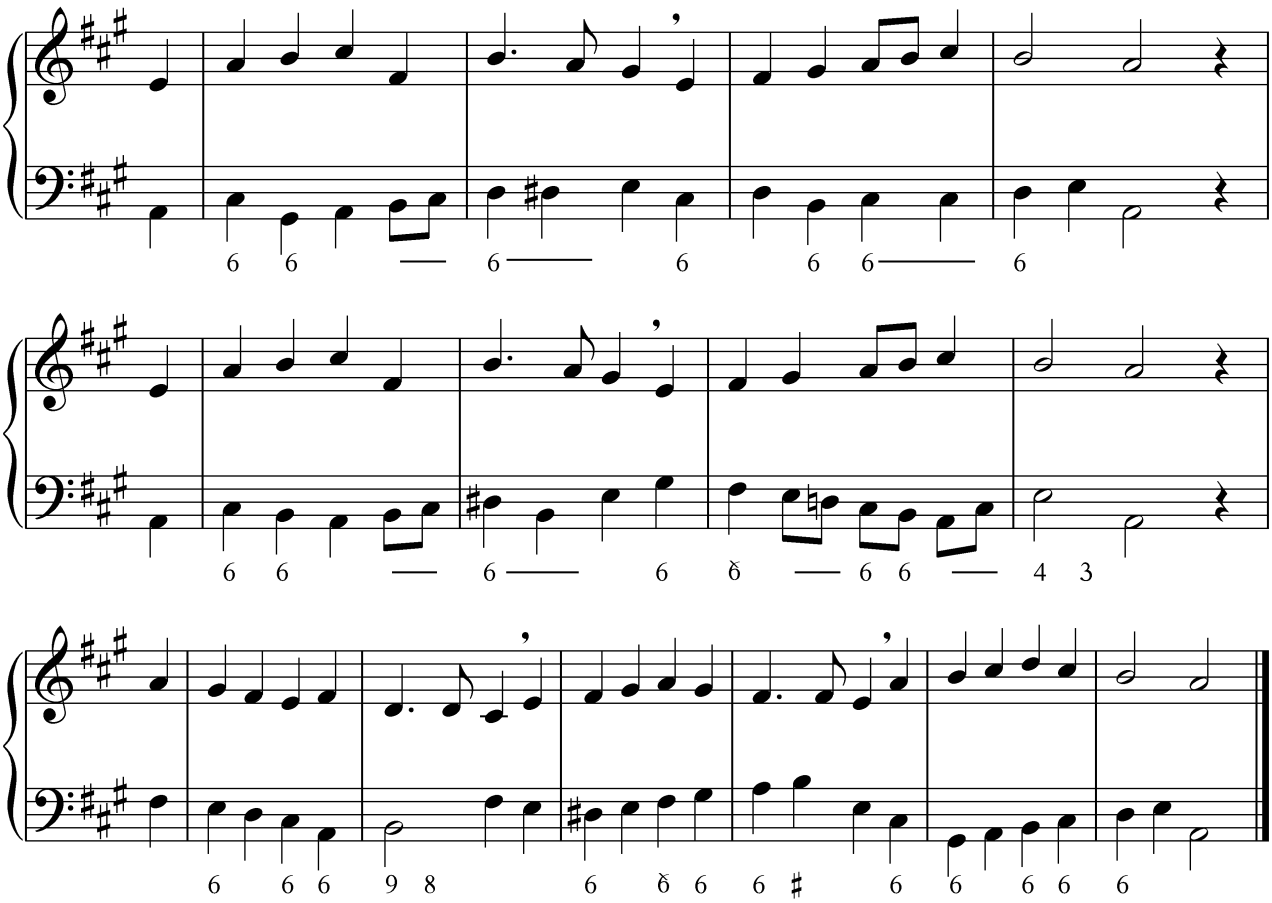
Nun jauchzet, all ihr frommen



Jésus, au nom saint et doux



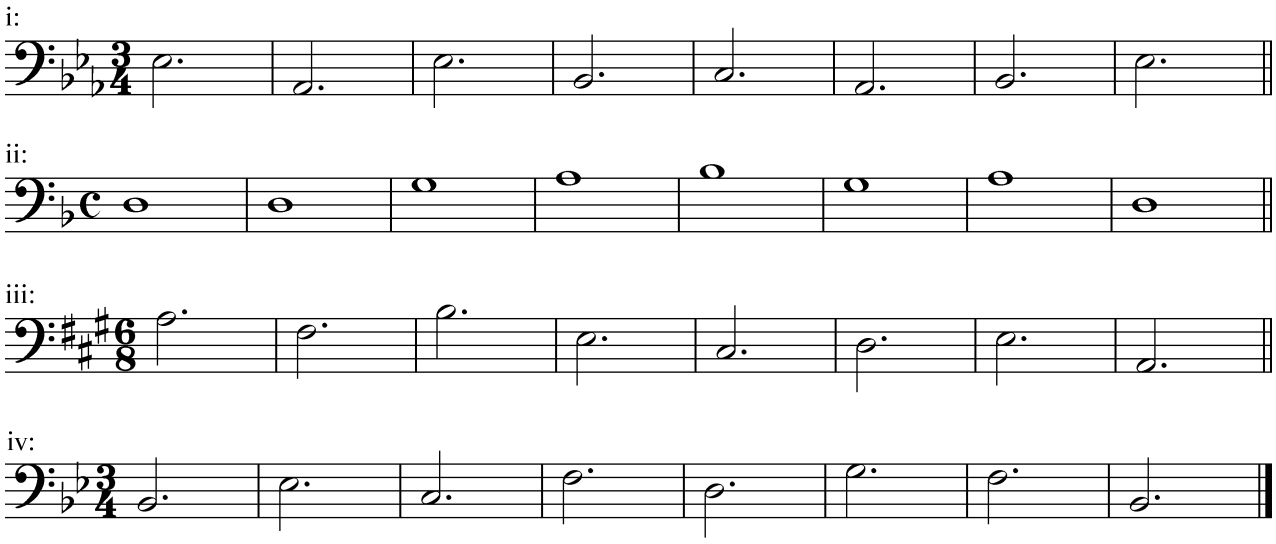
Du Lebensbrot, Herr Jesu Christ



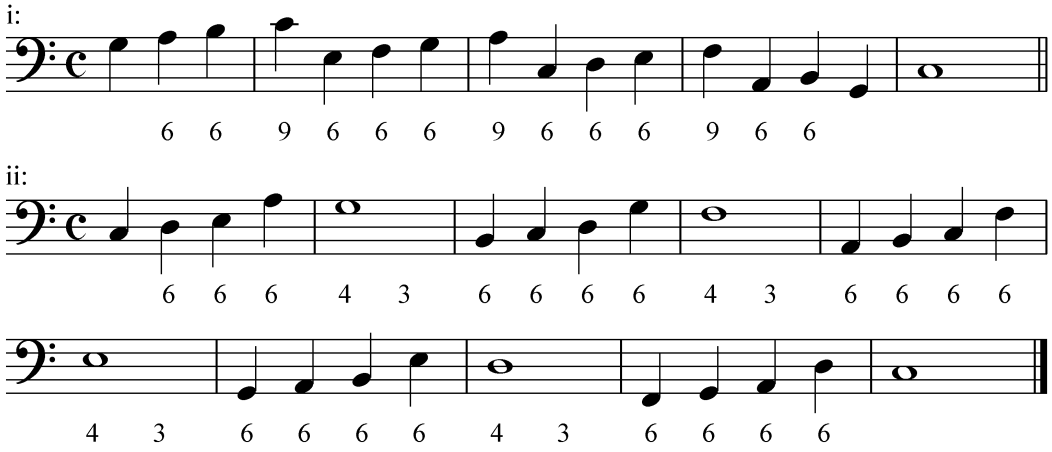
5.* Repeat the chorales with a solo stop and pedals.

6. Play the following transpositions:
   - *Nun jauchzet, all ihr frommen* in G and E flat major
   - *Jésus, au nom saint et doux* in D minor
   - *Du Lebensbrot, Herr Jesu Christ* in G and B flat major

7. Improvise two-part inventions as in ex.1. The absence of a scheme for the r.h. allows more freedom for the player's imagination.



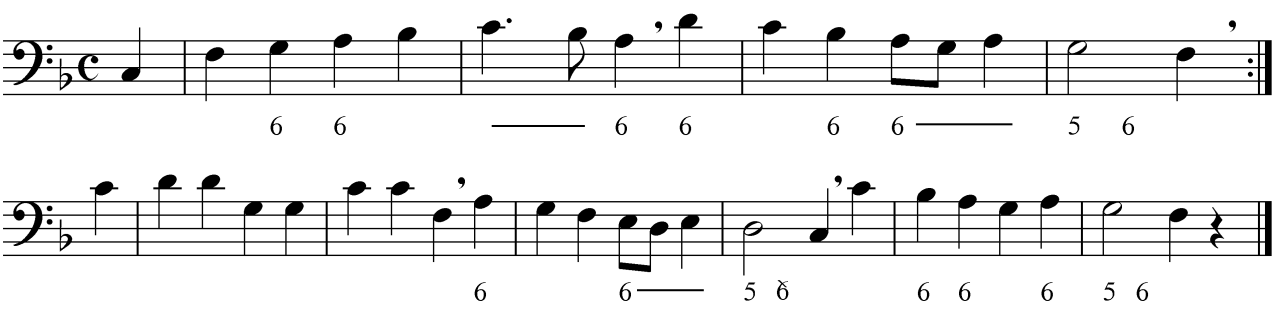
8. Play the following progressions in all major keys. The r.h. begins in the 8-, 3- or 5-position. When playing sequences, we repeat the same part writing in all voices, even if this results in doubling of the leading note, diminished triads in root position etc.



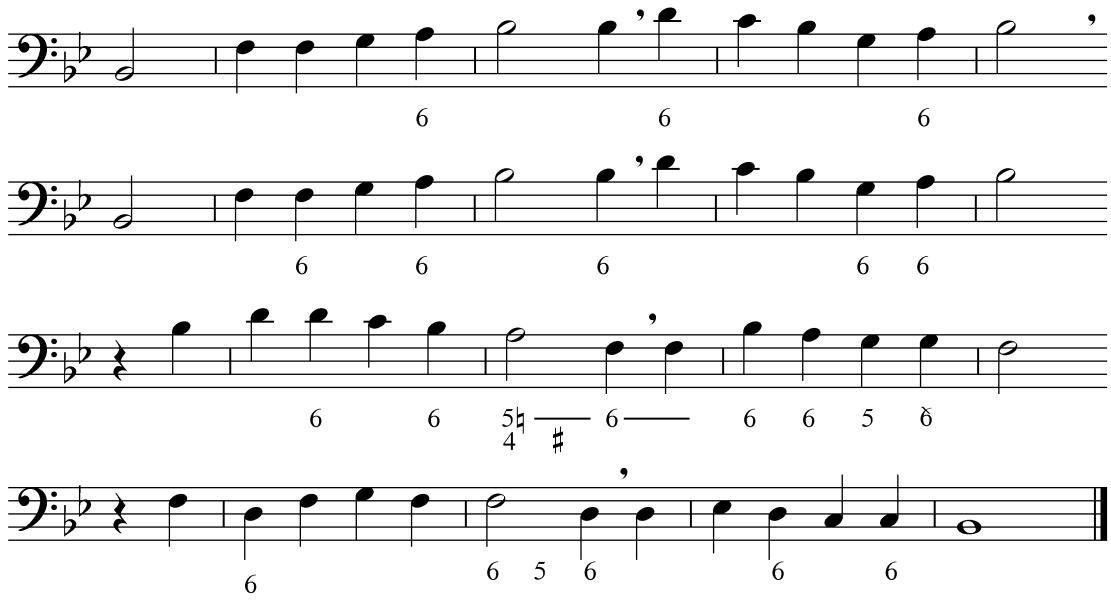
9.* Repeat ex.8 with a solo stop and pedals.

10. In this exercise, chorale melodies function as figured basses. Here again, many different four-part realisations are possible. A flexible r.h. is a prerequisite for all continuo players!

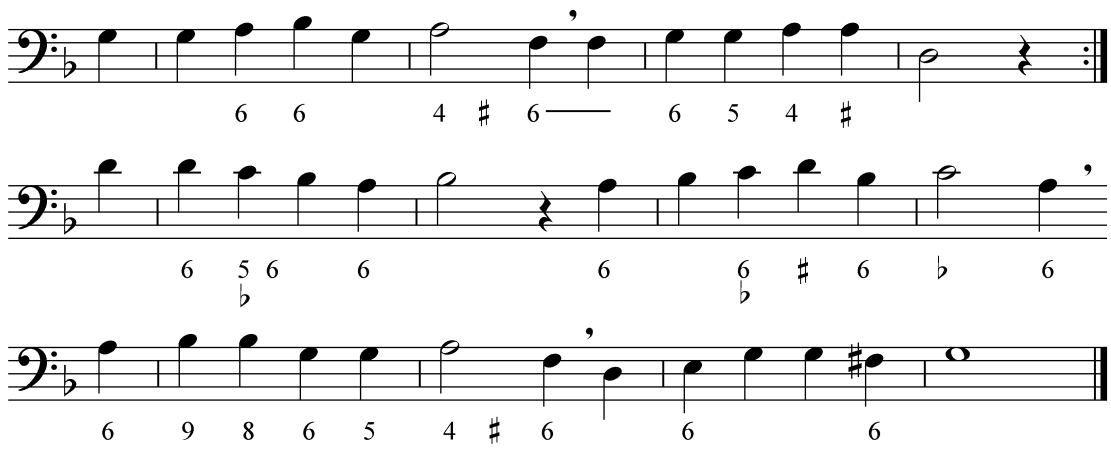
Was Gott tut, das ist wohlgetan



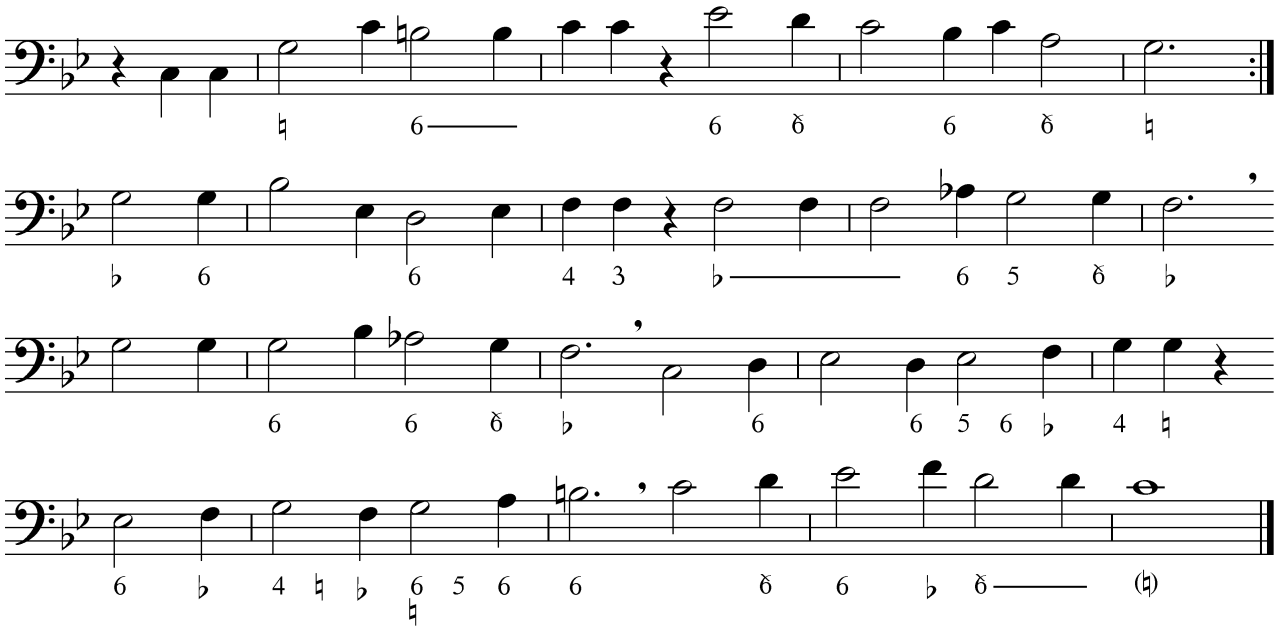
Valet will ich dir geben



Von Gott will ich nicht lassen



Sollt ich meinem Gott nicht singen



11. Improvise two-part inventions as in ex.1 and 7. We no longer play from a given bass, but from a scheme with a degree of the scale for each bar. The choice of key and time signature is for the player, as is the tempo and the position and style of the part writing. Countless variations are possible, so avoid wasting time trying to remember and perfectly reproduce only one solution!

major keys:

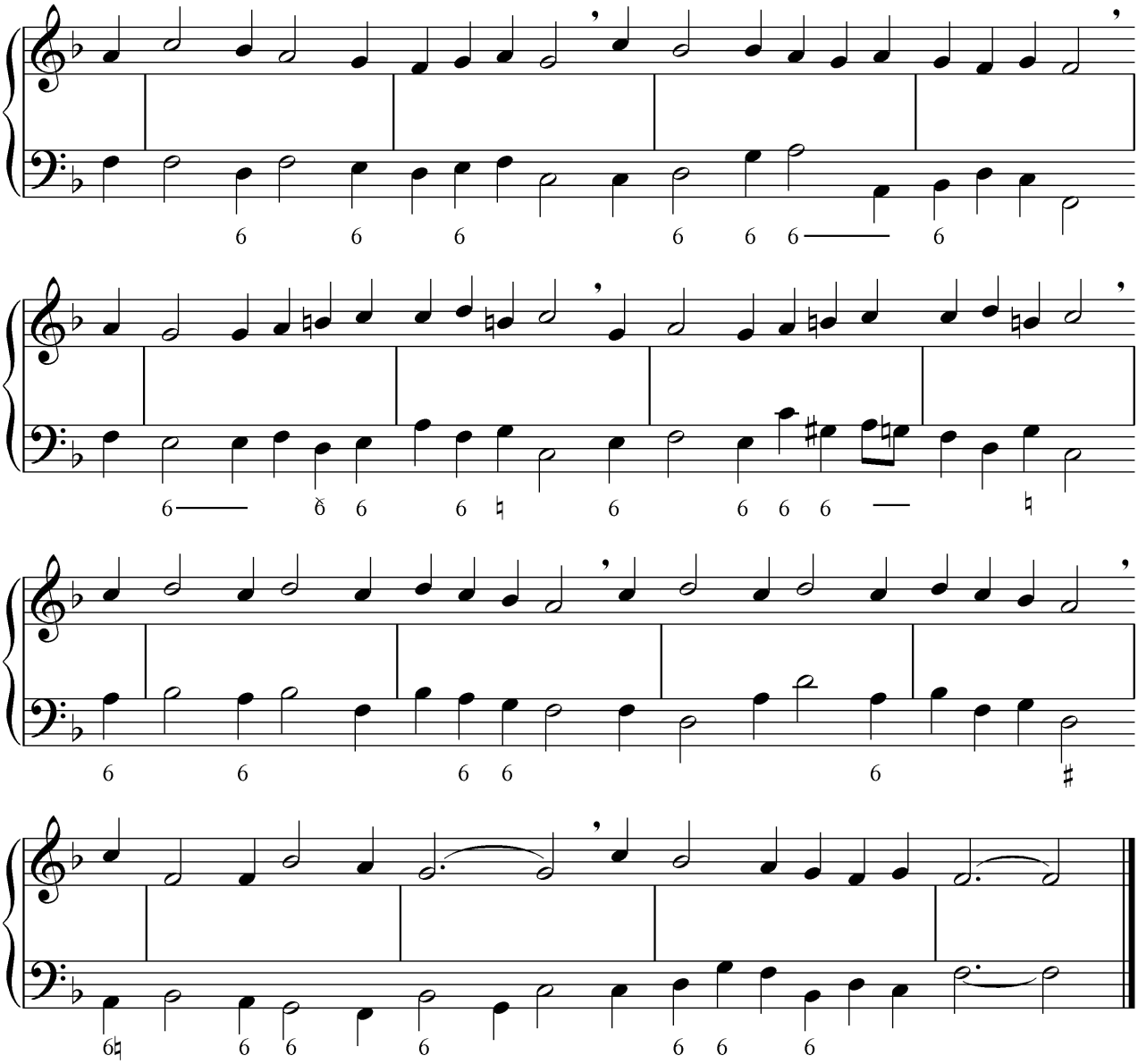
I	IV	V	I	II	VI	V	I
I	IV	I	V	VI	II	V	I

minor keys:

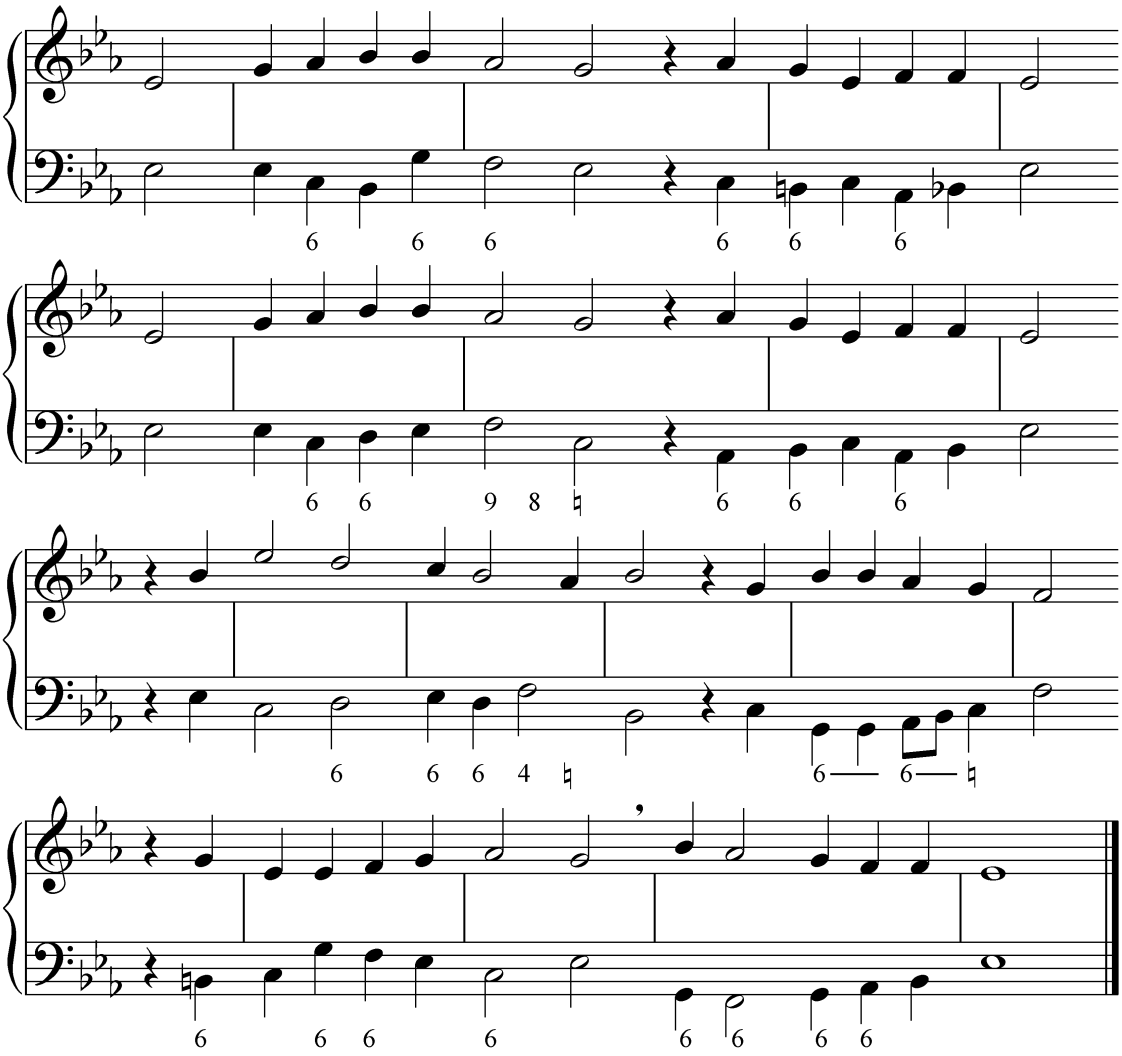
I	VI	IV	V	I	IV	V	I
I	I	IV	I	VI	IV	V	I

12. Play the following chorales in four parts:

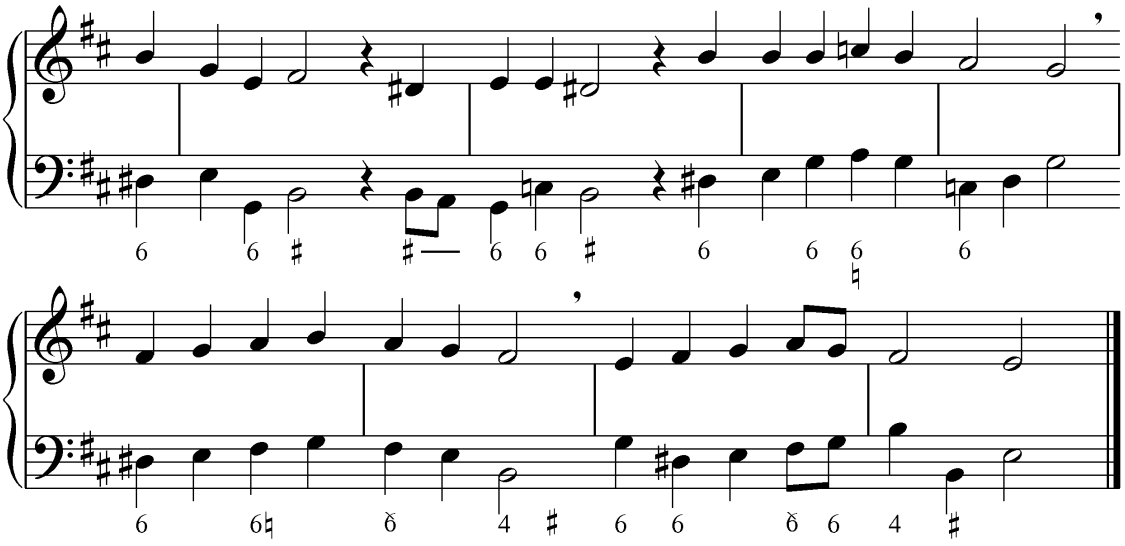
Macht hoch die Tür, die Tor macht weit



Wie soll ich dich empfangen - compare Part I p.79



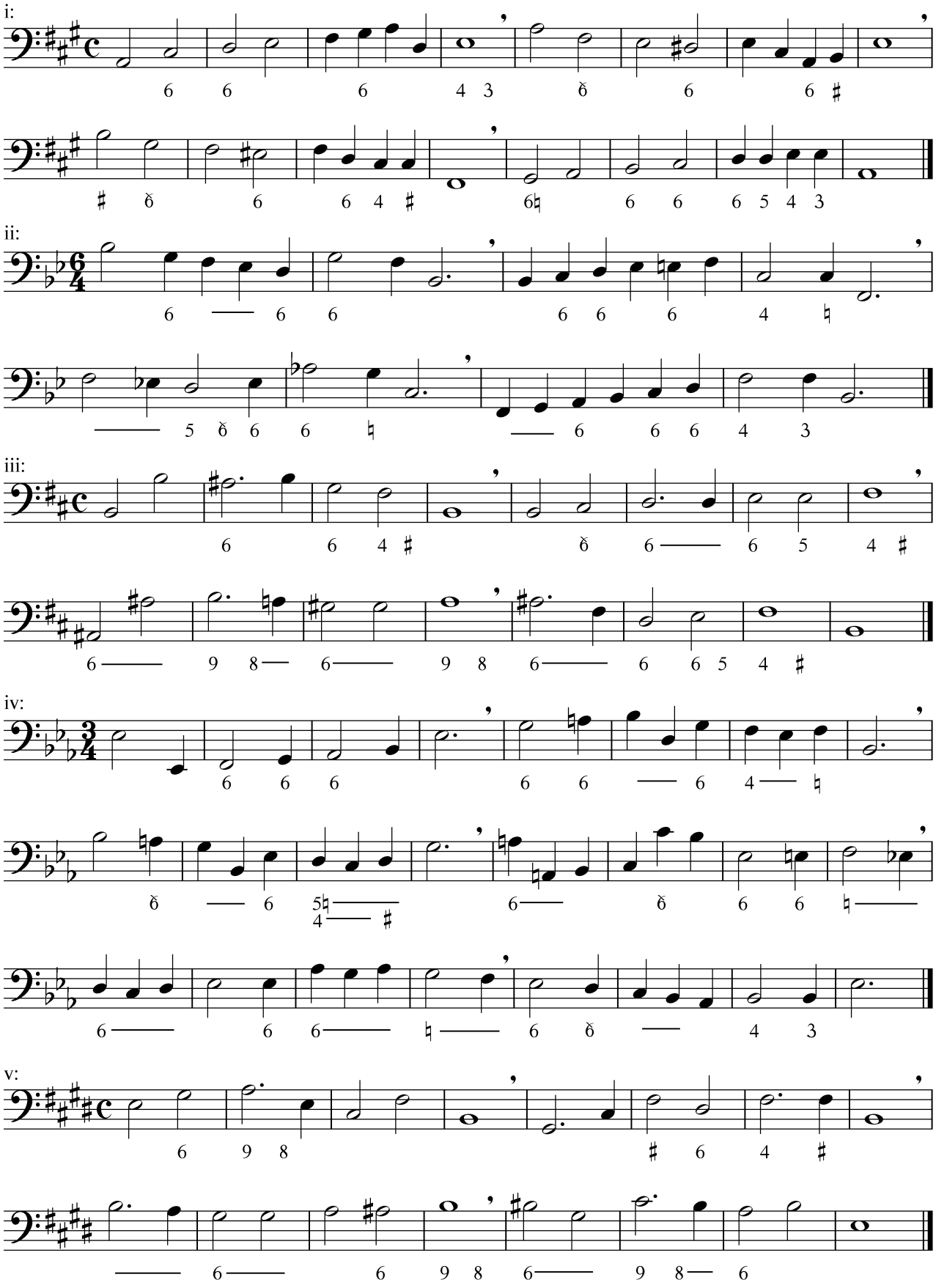
O Traurigkeit, o Herzeleid - compare Part I p.82

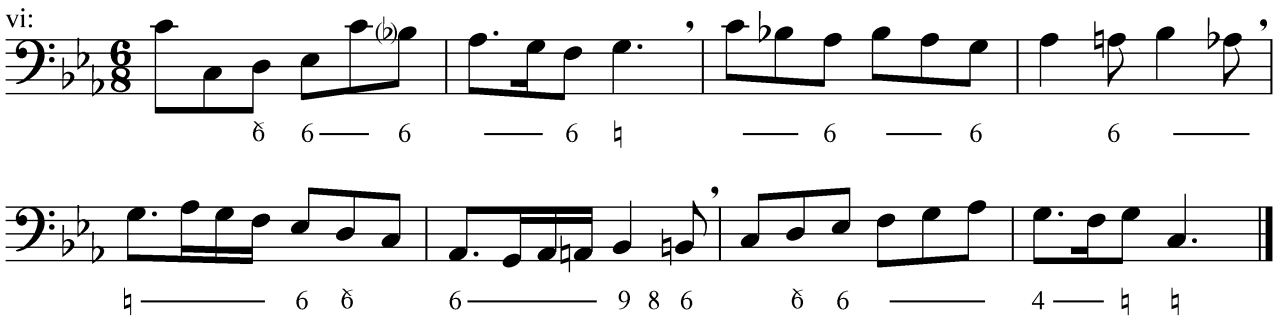


13.* Repeat the chorales with a solo stop and pedals.

14. Play the following transpositions: *Macht hoch die Tür, die Tor macht weit* in G and E flat major, *Wie soll ich dich empfangen* in D and F major, *O Traurigkeit, o Herzeleid* in D minor.

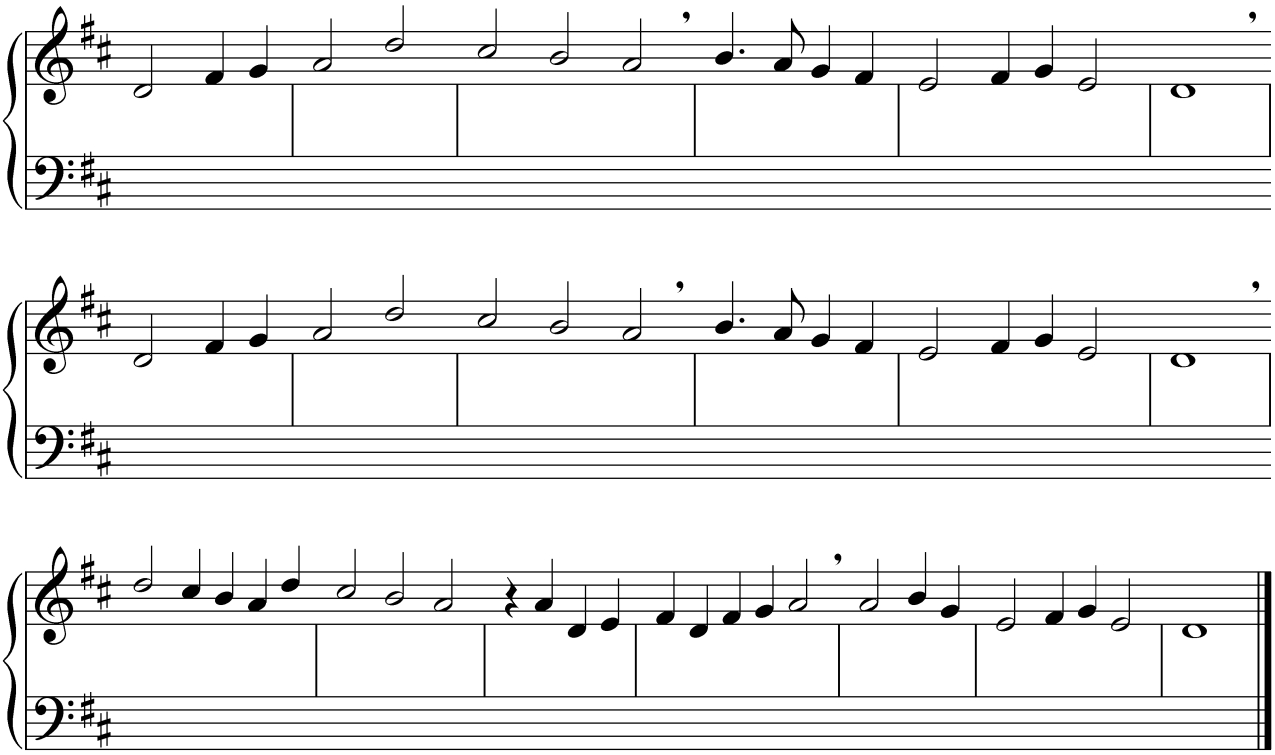
15. Improvise your own four-part ‘chorales’ above the following basses. Vary the position of the r.h., creating a new melody each time a bass is repeated.



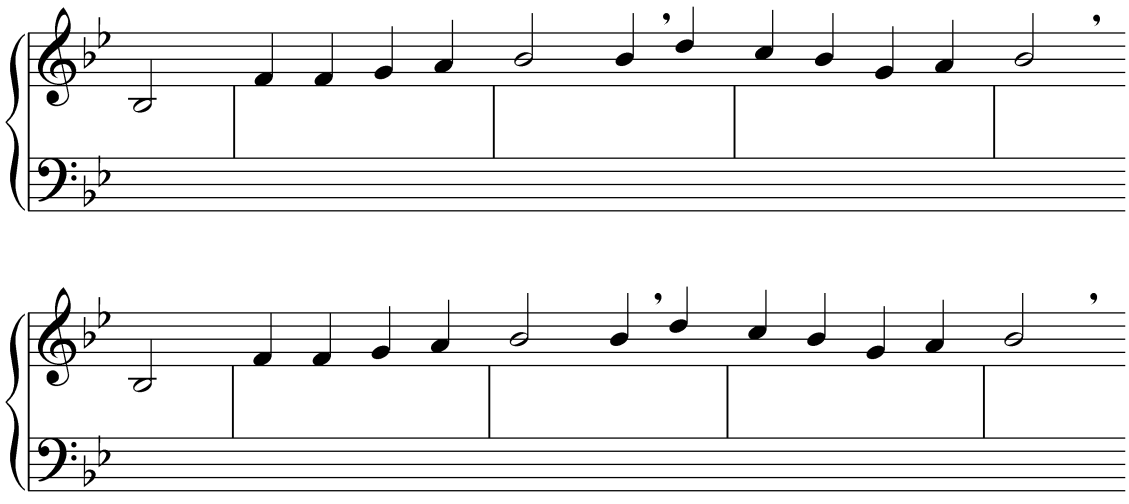


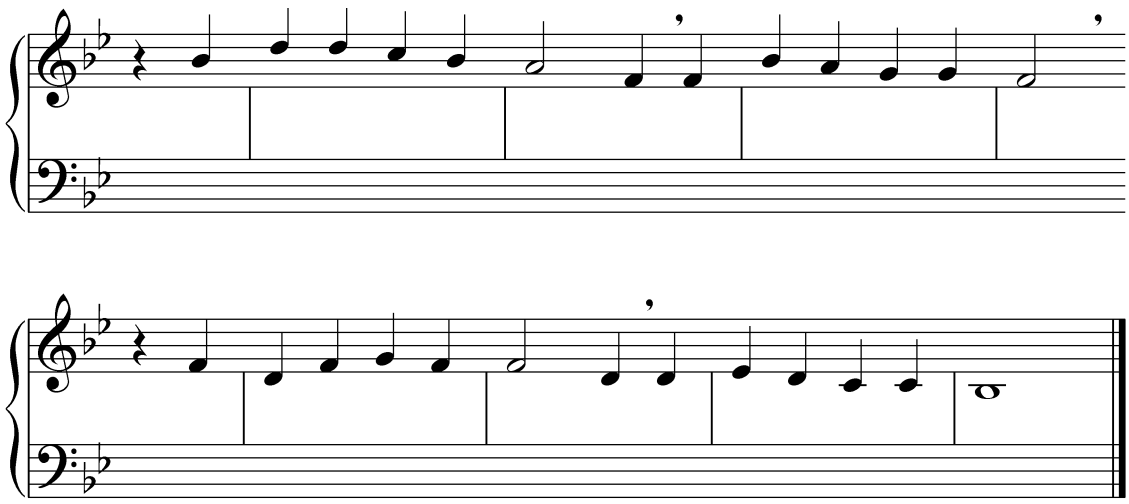
16. Write a bass to the following chorales and play in four parts:

Mit Freuden zart



V*alet will ich dir geben*





Cantico de le creature