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## **Preface**

This book on harmony is meant to be for each and every musician. Irrespective of whether you are an instrumentalist, vocalist, composer, arranger, sound engineer, music teacher or student; the information contained in this textbook is essential for your day-to-day contact with music. It is for this reason that I have endeavoured to make each individual section of this book as detailed and as lucid as possible.

This book is also designed to be used at music schools, colleges and conservatories, where multitudes of classically trained teachers are faced with the problem of having to impart the terminology of rock, pop and jazz music to their eagerly awaiting students. It is here that this book - especially in the legendary and enigmatic field of improvisation - can be an aid both to teaching and learning. It should be used to try to bridge the gap and unite the oft antagonistic camps of classical harmony and popular music by applying their rudiments and relating them to each other.

This harmony method is published in two volumes and is subdivided into different sections, the first two of which will be dealt with in this volume. The tonal system of western harmony is explained in the first part. To enable even the true beginner to learn a little about harmony, the book's first chapter deals with notation. This work thus attempts the virtually impossible: it should, without even calling upon the help of a teacher, serve the layperson as a textbook - even though this may not appear to be worth recommending to most of the experienced educators.

Using the harmonic series, the second chapter illustrates the origins of our tonal system, which are to be found in nature. It can be omitted if the reader wishes to limit him- or herself to learning the rules of harmony. These often neglected facts are, however, of considerable significance for understanding larger interrelationships, which is why I would recommend each reader - perhaps after having read the didactic section - to have a look at this part.

It is the third chapter of the second part of this book which gets down to dealing with the real theory of harmony. The sequence of the chapters has been arranged in such a way that they go from monophony (intervals) right up to the more complex polyphony (triads and chords of four notes). The chords presented are first of all seen as static forms which only later take on the shape of larger-scale harmonic serial forms. There is an introduction in the sixth chapter (Ionian system) to the way of thinking of the modern chord-scale theory, which this harmony method is based on. The chapter on the circle of fifths is followed by all the important and common scales together with the chords based upon them.

There is a whole range of examples for each important subject and they are generally to be found after the paragraph in question. The references printed in *italics* make it easy to find the explanatory text to the individual examples, and in addition, important terms are printed in **bold** type the first time they appear, so that this textbook lends itself to a sort of encyclopaedia or dictionary of harmony for quickly browsing over certain headwords.

There is an alphabetic index of the most important headwords and special terms of harmony at the end, to enable careful, thorough and academic work to be carried out when using this book. You will find a selection of tasks and exercises at the end of each chapter, which will serve to check what you have learnt and which will help you to gain the confidence needed when dealing with such material. The answer key at the end of this book should only really be used in cases of doubt or to check tasks you have already solved.

Many people helped me so much while I was working on this book and I would like to take this opportunity to express my heartfelt gratitude to them. I would mention Detlef Kessler, without whose energy this whole project would never have got off the ground, Michael Küttner, who supported me during my times of trouble with my computer, Eddy Marron, Gunnar Plüner, Herbert Kraus, Denis Wieger and my father Hans-Hilger Haunschild, who all looked through the manuscript critically. I would particularly like to mention Wolfgang Fiedler and René Teichgraber for the page make-up, Manfred Drechsel for the graphic design and Steve Taylor for the English translation. My particularly profound thanks, however, go to my wife Sabine for her constant support and encouragement and to my children Lisa and Felix.

I would refer those who have enjoyed reading the first volume of this work and would like to learn more about harmonic relationships, to the second volume of this book on harmony. It is also published by AMA Verlag and in addition to matters such as II-V-I-progressions, modal changes, tritone substitutes, secondary dominants, turnarounds and the blending of major and minor, it contains a four-colour diatonic modulation table in DIN A1 format. I hope I am able with this book to bring the reader closer to what for me has always been the driving force behind my pre-occupation with harmony, and that is simply the love of music.

Bonn, Autumn 1988



Frank Haunschild



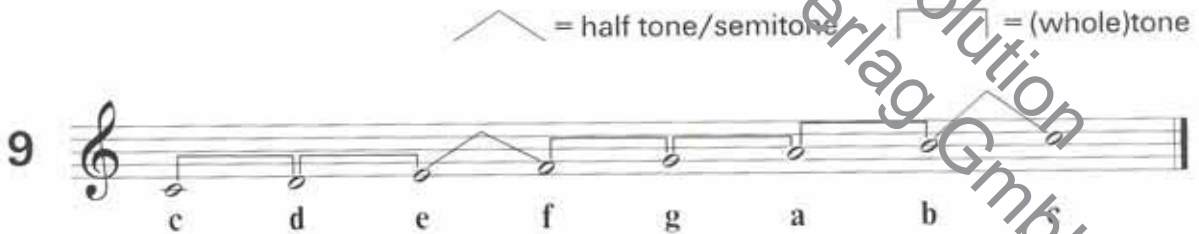
## Half Tones and Whole Tones

Let's first just have a look at our notes in Examples 5 and 6 again. These notes seem to be spaced at the same distance to each other but this is most certainly not the case, for we must differentiate between **half tones/semitones** and **(whole) tones**. The half tone is the smallest possible distance between two notes in our occidental tonal system. A tone can be divided into two half tones. Two notes which come after one another in steps are generally one tone apart from each other. There are only two exceptions (*Example 8*): there is always the distance of one half tone between the notes "e" and "f" and between the notes "b" and "c". The whole tones are commonly marked with a square bracket and the half tones with a bracket coming to a point.



## The C Major Scale

Armed with this knowledge it is possible to create the **C major scale** (*Example 9*), which may be regarded as the basis of our entire western tonal system. This C major scale has the following structure: it consists of seven notes, the eighth being the same as the first again, and the half tones are invariably between the third and the fourth and the seventh and the eighth note. Virtually all 7-note (heptatonic) scales are made up of 5 tones and 2 half tones. This specific change of whole-tone and half-tone steps is called **diatonicism**. The C major scale is thus a **diatonic scale**.



## Table of Intervals

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Interval	Name	Half Tones/ Semitones
c - c	(perfect) unison	0
c - d <sup>b</sup>	minor second	1
c - d	major second	2
c - d <sup>#</sup>	augmented second	3
c - e <sup>b</sup>	minor third	3
c - e	major third	4
c - f	(perfect) fourth	5
c - f <sup>#</sup>	augmented fourth	6
c - g <sup>b</sup>	diminished fifth	6
c - g	(perfect) fifth	7
c - g <sup>#</sup>	augmented fifth	8
c - a <sup>b</sup>	minor sixth	8
c - a	major sixth	9
c - b <sup>b</sup>	minor seventh	10
c - b	major seventh	11
c - c'	(perfect) octave	12

Let's follow the sequence in this table and start with the minor second, which we have already met as the half tone. As I mentioned before, it comes in the C major scale between the notes **e** and **f** and **b** and **c'** (see Page 10, Examples 8 and 9). The interval of a major second, which is often called a (whole) tone, is between the notes **c** and **d**, **d** and **e**, **f** and **g**, **g** and **a** and **a** and **b**. It simply won't do to call such an interval a "second". Just as we have to differentiate between half tones and tones, we also have to distinguish between minor and major seconds. "Minor" and "major" should be seen as an integral part of each and every name of an interval.

There are three half tones in the minor third and it is indeed the first third of a **minor triad** (see Page 43, Example 3). In the C major scale the minor third comes between the notes **d** and **f**, **e** and **g** and **a** and **c'**. The major third is made up of four half tones and can be found in the C major scale (see Example 4) between **c** and **e**, **f** and **a** and **g** and **b**. The minor sixth (8 half tones) is located between **e** and **c'**, the major sixth (9 half tones) between **c** and **a** and **d** and **b**. The interval of the minor seventh (10 half tones) is between **d** and **c'** and to round it off we have the major seventh (11 half tones) which is between the notes **c** and **b**.

## Chapter 5

# Four-Note Chords and their Extensions

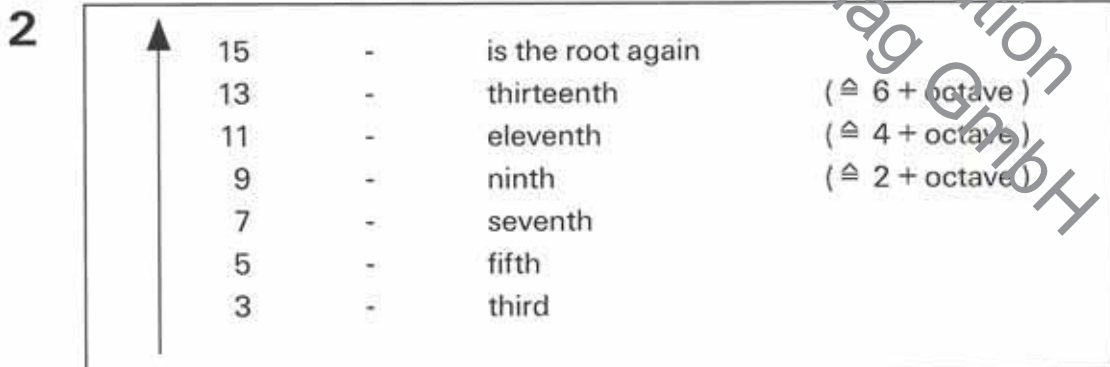
Chords of four notes are basically formed by extending triads by a further third, so that the four basic triads (see Page 43/44, Examples 2 to 4), for instance, are each extended by a major or a minor third thus producing a series of chords with four notes. Let's now take a much closer look at these chords, arranged according to the size of their intervals (Example 1).



The augmented triad can only be extended by a minor third as extending it by a major third would result in the root of the augmented triad again and nothing would have been changed, save for doubling the root. All the other basic triads can be extended by both the major and the minor third, producing 7 different four-note chords. We'll look at these 7 main seventh chords in the next few sections after we have dealt with chord symbols.

### **The Make-Up and Extension of Four-Note Chords**

As we learned when dealing with the triads, all the chords are traditionally seen as thirds superimposed on top of each other. If then four note chords are to be extended, this is also done by superimposing another third, and this can go right up to the root again 2 octaves higher (Example 2).



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I Ionian  C<sup>major</sup>7 (9/11/13)

II Dorian  D<sup>minor</sup>7 (9/11/13)

III Phrygian  E<sup>minor</sup>7 (b9/11/b13)

IV Lydian  F<sup>major</sup>7 (9/#11/13)

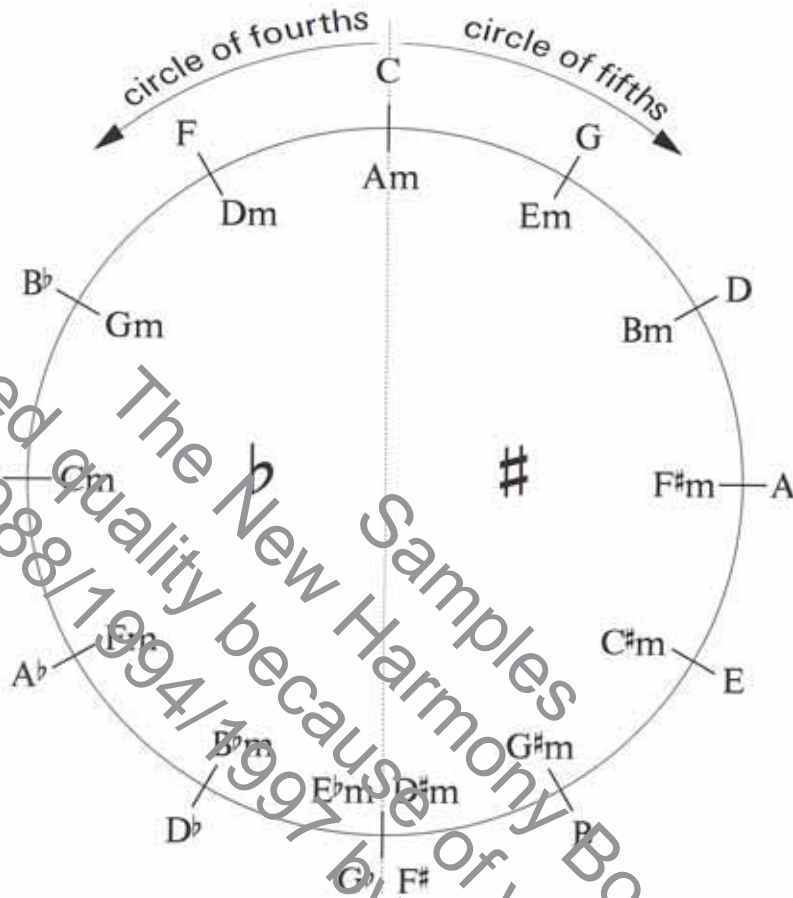
V Mixolydian  G<sup>7</sup> (9/11/13)

VI Aeolian  A<sup>minor</sup>7 (9/11/b13)

VII Locrian  B<sup>minor</sup>7b5 (b9/11/b13)

We see then that the 7 notes of a scale can be divided into two groups: on the one hand we have the four notes forming the seventh chord of the scale and on the other we see the three optional notes (*Example 4*).

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### The Circle of Fifths as the Touchstone of Relationships

Immediately adjacent keys in the circle of fifths may be regarded as being closely related to each other. The further apart the keys are in the circle of fifths, the less related they become to each other. The greatest degree of relationship is the **major-minor relationship**. The sixth degree of a major scale is the fundamental one of its related minor key, which means therefore that the Aeolian scale (*see P 69*) becomes the scale of the related minor key. In classical harmony it is known as the **natural minor**. Related keys get by on the same notes in their scales (*Example 8*) and as a result are written together in the circle of fifths, with the circle of the major keys on the outside and that of the minor keys on the inside.

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