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**Production and Evaluation of a Self-Instructional
Method for Teaching Jazz Guitar**

Michael Berard

**A Thesis
in
The Department
of
Education**

**Presented in Partial Fulfillment of the Requirements
for the Degree of Master of Arts
(Educational Technology)
at
Concordia University
Montreal, Quebec, Canada
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ABSTRACT

Production and Evaluation of a Self-Instructional Method for Teaching Jazz Guitar

Michael Berard

This thesis equivalent concerns the development and evaluation of a self-instructional method for jazz guitar. The method was designed to teach chords, scales and arpeggios to jazz guitarists enrolled in a university music program. A second purpose in the design was to create a method which focuses on presenting this information in a manner which is oriented towards jazz improvisation. As such, the method incorporates examples and exercises which are primarily rooted in jazz. The method is predominantly text based with numerous musical examples and is accompanied by a cassette which includes recordings of the various musical examples and exercises contained within the method.

The method was evaluated using a single group, pretest, posttest design. The dependent measures were obtained through a pretest administered prior to the trial period and through a posttest and an attitude questionnaire administered at the end of the trial period. The subjects were 14 jazz guitar majors studying at Concordia University in Montreal, Canada. The purpose of the evaluation was predominantly formative. As such, the results of the evaluation were used to analyze the effectiveness of each of the objectives. The 14 subjects were divided into small groups and instructed to each use 1 of 4 sections of the instructional method for a period of ten days. Overall, the objectives of the method were successfully met and

the subjects indicated positive attitudes towards the instruction. An objective by objective analysis of the dependent measures indicated weaknesses in specific areas of the method. A discussion of the conclusions drawn from the findings follows with recommendations for revisions to the instructional method. It was concluded that revisions should be made and that other forms of evaluation need to be applied.

Acknowledgments

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All of my guitar students
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CHAPTER 1

Rationale

As with an increasing number of university departments and faculties, the music department at Concordia University in Montreal, Canada is experiencing financial restraints and is being forced to meet their educational goals within a tighter budget. This being the case, cuts have been made in several areas in the faculty with regards to the course curriculum. One notable cut is in the area of private study.

Private study is essentially a course which provides individualized instruction on a wide variety of musical instruments. Private study includes instruction in the areas of classical and jazz music. Within each of these areas, there is instruction offered on most of the orchestral instruments, classical guitar, voice, organ and those instruments commonly associated with jazz and popular musical styles. For each instrument, there will usually be one or several instructors. These instructors will teach only the instrument and style in which they are considered to be an expert. As such, there are a large number of instrumental instructors who teach private study in the department of music. Each instructor is responsible for planning curriculum and selecting texts and instructional material for the instrument they teach.

During the lesson times, the instructor will present new information and concepts as well as monitor the progress the student has made on assigned work. Students are assigned work based on their own individual musical abilities and weekly progress. Often instructors rely on their own teaching resources which might include collections

from various texts as well as their own notes and resources. This is not to say that no curriculum exists, but rather that instruction is more individualized. Since the course of private study is basically one-on-one, there is a certain amount of flexibility with the delivery of the materials and the interpretation of the assigned work.

Instrumental instructors are most often hired on a per hour basis and therefore have little if any time outside of the lessons to spend with the students. Students will basically only see their instructor during a 45 minute scheduled weekly time slot. In such a scenario, students may encounter several problems. If for one reason or another a student encounters difficulties in completing his/her assigned work, or if the instructor is not available, an entire week's work may be lost. If one considers the possibility that not all students have the same learning styles or practice routines, then it is conceivable that students leave a lesson without fully grasping all that transpired. Once the lesson is completed, students are basically on their own.

The study of jazz guitar is an area which comprises a large percentage of the total number of students enrolled in private study. With each new academic year, jazz guitarists make up the largest number of students who apply for and are accepted into the program. As jazz guitar is my personal realm of expertise, this project will focus on private study in the area of jazz guitar.

At Concordia University, students receive one instrumental lesson per week for a total of 26 weeks. As the student teacher ratio is one-to-one the cost of this course far exceeds that of all other courses offered by the music department and perhaps all courses in the university. Along with the actual cost of the course is the amount of

space required within the department of music. With a teacher/student ratio of 1:1, the space requirements of the course are enormous. This in itself places enormous pressure on the department.

In an effort to work within tighter financial boundaries the department has chosen to limit the number of hours of instruction over the 26 week period. To this end, the lessons were reduced from 1 hour per week to 50 minutes per week in the first year of cuts and from 50 minutes per week to 45 minutes per week in the second year of cuts. This reduction in instructional time reduces both the cost of the course and the physical space requirements within the department.

Although the overall instruction time has been reduced, instrumental instructors are expected to provide the same level of instruction to students and naturally students are required to meet the same educational goals. With this decrease in instructional time the challenge is placed on the individual instructors to find ways to meet these same educational goals within this new framework.

One way to meet this challenge is to organize the course in ways which maximize the 45 minute lesson time. Lessons could be organized so that the students are able to look at material ahead of time and prepare for lessons effectively. As it stands now, the 45 minutes of lesson time are used to cover a number of wide ranging activities.

A typical guitar lesson would include any number of the following components:

- review of work from the previous lesson
- presentation of a new concept(s)
- answering questions from the learner

- looking at music which the learner is playing in one of his/her other courses
- sight reading of music
- work on chords
- work on scales and arpeggios
- work on improvisation
- work on sound
- work on technique

Although not all of these components will be covered in each lesson, one or two items might be discussed every other week or intensely for two or three lessons. Depending on the strengths and weaknesses of the learner, the jazz guitar instructor will focus on one specific area and less on others with the intention of developing the greater weaknesses first.

Basically, there seems to be a lack of time to accommodate the wide range of activities and the scope of the material to be covered. Previously, compressing all of this into a time frame of 1 hour per week seemed difficult, now with only 45 minutes per week, it has become even more difficult. An effective way to solve this instructional problem would be to design material which is primarily self-guided. I feel that the implementation of a uniform self-instructional learning package can compensate for the lack of time available for this course. An instructional package of this nature, which focuses on a number of the key elements of the course, would provide a means for instructors to use the 45 minute time frame more effectively.

Such a learning package would also provide students with the opportunity to look over material, listen to musical examples and come to lessons having already prepared a portion of the work. If students are able to prepare for lessons by preparing materials on their own, the lesson time can then be used to fine tune and trouble shoot.

It is hoped that a self-instructional learning package would allow the learners to take on a greater responsibility in the learning process. This in turn would transform the lessons into a more productive use of the available time. Since less time will be needed for the presentation of new material, more time becomes available. The book might also act as a reference which would allow students the opportunity to review material, formulate questions and find answers to problems on their own.

In order to achieve this goal, such a learning package will need to provide a similar experience to that which is currently experienced during the individual lessons. During one lesson, a typical scenario would include both student and instructor with their musical instruments. The instructor will often demonstrate the correct way to play a scale or perhaps demonstrate a possible interpretation of a musical component. As words do not always effectively convey the message which is to be taught, the very existence of the one-to-one instrumental instruction where the instrumental expert is present is the ideal learning situation. It is critical in instrumental instruction that the learner have the opportunity to hear an expert execute the music. Not only are the actual sounds and pitches demonstrated by the instructor, but also interpretation, sound, style and emotions. Merrill, Zhongmin & Jones (1990) discuss the issue of “situated cognition.” Merrill states that, “much of what we learn is

supported by the environment in which we perform and that learning is better when these contextual supports are part of the learning environment.” (p. 53) Tennyson (1990) also supports this statement. He writes, “the key to both effective acquisition and employment of knowledge is the organization of the information according to contextual applications” (p. 9). In instrumental instruction, the correct context will need to include a performance of some kind.

To achieve a similar experience outside of this one-on-one learning environment, it is critical that students be provided with listening examples which illustrate the musical elements being taught. Much of what is difficult or impossible to explain can be effectively communicated through sound. Aspects of tone, pitch, style and phrasing are better taught through sound examples and not through text or diagrams. To this end, sound recordings will be an integral part of the previously described learning package. The package will also make use of standard musical notation, diagrams of fingerings and text-based explanations of the concepts and activities being discussed. These will be needed as substitutes for the visual element of watching the instructor perform the various musical examples.

The use of video to capture the visual element would certainly provide learners with the component of watching the instrumental instructor demonstrate various examples and techniques. This option was not pursued for several reasons. If one is to look at the normal day of a music student in a university music program and analyze their schedule and practice habits, this option does not prove such a good one. As students spend a large portion of their time at the university, this is the place where

they will do the majority of their practice. The availability of video playback equipment on Concordia University's campus is limited and therefore not a practical option.

The aim of the learning package is to provide instructional resources and educational activities which are similar to the experience of the individualized lessons. This, it is hoped, would effectively extend the experience of this unique learning environment beyond the current 45 minutes of lesson time which the students currently receive. It is hoped that students will have a new educational resource which simulates the environment currently available only during one-on-one contact with a private instrumental instructor. With this, students will take on a greater responsibility and hopefully achieve more on their own.

The intention of this package is to create a method using various media (sound, text and graphics) which stimulates musical growth by capturing the fundamentally important aspects of individualized instrumental instruction. The ability to see, hear and comprehend music are the goals of this method.

CHAPTER 2

Statement of the Problem

In light of the information presented, the purpose of this project was to develop and evaluate a self-instructional method on jazz guitar for use as a text for students enrolled in a course of private instruction in jazz guitar at Concordia University in Montreal, Canada. The level of instruction for this method was geared towards students studying at the university level. Although there are a number of jazz guitar books available today, it is the opinion of this author that the majority of these books do not suit the needs of most university jazz guitar courses. An extensive search of the literature revealed no studies on jazz guitar materials or the production of them. Several dissertations dealing with the production and evaluation of jazz related teaching materials for Bb trumpet, piano and clarinet were found (Aitken, 1975; Damron, 1973; Konowitz, 1971). These studies focused on a similar objective to this project in that the focus was to develop and evaluate teaching materials in the area of jazz.

Jazz education is relatively new in the curriculum (Aitken, 1975; Konowitz, 1971; Leibman, 1996) as compared to classical, which has been in existence and part of the music curriculum for centuries. Jazz education has formally been in existence only since about 1950 where it began as a one person faculty in a number of high schools, colleges and universities in the United States (Leibman, 1996; Suber, 1979). At that

time, there existed very few books, and jazz educators found themselves in a position where they had to develop their own materials (Suber, 1979).

Many of the books currently available for jazz guitar can be generally described as being too specific to one topic and lacking in the presentation of prerequisite knowledge for the skills being taught. Books which focus on instrumental concepts and techniques are specific to one particular aspect of an instrument or one particular style of performance. Often a particular book may present an aesthetic appreciation which is not in line with that of the instructor and can leave the learner on his/her own to try and arrive at an appropriate interpretation.

It is often the case that the instrumental instructor will not use a specific text for the course. In the majority of cases, instructors rely on their own notes and bits and pieces of material from favorite or popular resources. They may also require students to take their own notes. In a survey of literature for teaching trumpet in the jazz style, McCauley (1973) reported that a “considerable number of instructors chose to formulate their own course of study.”(p. 26) Although this can prove successful, I believe that having all of the information in one well-organized and sequenced volume will benefit both the students and the instructors. Also important to consider is that jazz education is relatively new in colleges and universities. Because of this, there still exists a limited number of resources in many areas of the jazz studies curriculum. A comprehensive text which provides clear explanations, examples and exercises, and which is geared to the curriculum and level of a college or university instrumental course would help to address this situation.

In light of this, the instructional method I have designed is unique from the perspective that it has been designed to meet the needs of a specific group of learners. These learners are students enrolled in a course of private instruction in jazz guitar at a college or university. It is complete in the sense that it offers a full compliment of explanations and exercises in a self-instructional format. Used in conjunction with an instrumental jazz guitar teacher, the method will allow the learners to prepare for instrumental lessons thus allowing for more effective use of the available contact time.

CHAPTER 3

Instructional Design

Needs Assessment

An analysis of a learning situation using any of the various needs assessment techniques can reveal relevant information which provides educators and educational designers an opportunity to clearly assess the abilities and potential of the learners.

Needs assessment (NA) is used to establish a discrepancy between the actual performance and the optimal performance of the learners (Rossett, 1987). Rossett (1987) defines NA as “analysis activities trainers use to examine performance problems or new technologies.” (p. 14) Bonner (1988) describes needs assessment as the determination of “the gaps between actual and desired states.” As there is not actually a problem in the performance of the students discussed in this work, but rather a gap between the performance level they are currently attaining and what they could potentially attain, the goal in assessing the needs of the learners is geared more towards the Bonner perspective than the Rossett.

My own ten years of teaching experience has allowed me to gather a comprehensive understanding of the learners at the particular educational institution where I work. As a qualified instructor in jazz guitar and a professional recording and performing artist, I safely qualify as a Subject Matter Expert (SME) in this area as well. During the time I have worked at my current place of employment, I have

observed what the actuals are, and I believe there is a gap between the current state and the desired state I wish my students to reach.

Unofficial needs assessment data were informally gathered for this project through student performance observations over the last ten years of teaching guitar. Rossett (1987) argues that "observation is a useful and highly touted front-end tool." (p. 27). Even though nonsystematic observations were gathered for this work, I believe that such data were quite useful in determining many areas of the instructional design portion of the project.

Based on these observations, a number of relevant points can be noted with respect to my own teaching. Throughout my time as an instructor, I used several approaches in the delivery of instruction for instrumental lessons. As much of my own musical instruction in jazz guitar did not include the use of an assigned text but was through demonstrations and note taking, this was also my initial approach to teaching as well. My instruction focused on providing verbal explanations and demonstrating concepts and techniques on the guitar. Bits and pieces of information from various sources as well as a number of short modules which I had prepared were also used to supplement this approach. Upon searching for an appropriate method for the course, no text was found which was deemed appropriate for the learners with which I was involved. Although some texts offered many interesting and useful sections, most were lacking in important areas of the curriculum. Many provided explanations with some exercises but generally little or no feedback.

After a period of several years of teaching in this manner, I began to develop more instructional materials. I discovered that using this material as part of the course notes brought about positive results in the performance abilities of the students. Students' comments were positive and an improvement in performance was noted. In this way I was encouraged to design more instructional materials. Since I was able to design the instructional material specifically to fit the needs of these students, this allowed for two important factors to be realized - the designing of instructional materials which fulfilled the requirements of the university curriculum, and designing instructional materials which met the level of the learners.

However, had other methods of needs assessment been used, more information could have been gathered about the learners. Two methods which Rossett (1987) outlines for conducting needs assessment, interviews and questionnaires, would have been effective in gathering data on different aspects of the learners and their performance. As only needs assessment data was unofficially gathered by the author of this project, a specific aesthetic viewpoint will no doubt exist in the instructional design. Responses from other SME's in the field would have also provided a broader perspective in identifying the content and level of the learners as well as other relevant information which might influence the design process.

One-on-one evaluation

One-on-one evaluations were conducted in the two years prior to the formal development of the instructional method. During this time, individual lessons were

developed in a rough format and subsequently utilized during one on one instrumental lessons with the target learners. The one-on-one evaluations provided an opportunity for the author to uncover major errors in the explanations and musical examples. A number of wrong notes and typographical errors were uncovered and corrected. Aspects of the instructional approach were found to be ineffective and elements of confusion in the presentation of the objectives were uncovered. This led to the application and testing of other approaches until one was found which was more effective.

This evaluation period provided the author an opportunity to investigate the learning conditions inherent in the instructional objectives of the method. Observations of the learners utilizing the materials at this very early stage of development allowed for the analysis of the steps required to perform the objectives. This information played an important role in defining the objectives, formulating test questions and the subsequent development of the current version of the method.

Analysis of skills

In developing the instructional strategy for this method, it was important to consider the type of knowledge and skills which the objectives of the method reflect. Gagne (1977) states that, "Learning conditions are not the same for different varieties of what is learned" (p. 26). It is essential to identify what Gagne terms "learned capabilities" as this allows one to gain insight into the types of activities which best suit the identified type of learning. The objectives I have defined seem to qualify as cognitive strategies (Gagne, 1977). These objectives require the learner to understand

and combine various skills and the understanding of a number of musical concepts to arrive at the intended educational goal.

The implications for teaching a cognitive strategy suggest a particular approach to instruction. The instructional strategy will need to incorporate the approach which is most effective for delivering information and stimulating learning. Gagne defines cognitive strategies as being “internally organized skills” (p. 37). Cognitive strategies are skills in which the learner is in control of the learning process. They are responsible for processing and organizing the information. In other words, cognitive strategies are mental processes which take place within the learner. As any instructor or educational designer has no control over the inner processes of the learner, Gagne (1977) suggests providing environments which generate an opportunity for the learner to put the cognitive strategy to use.

To achieve this, the instructional strategy of this instructional method will present the relevant information, demonstrate the relationships which exist between the various concepts and provide settings in which the learner can practice applying the cognitive strategy. Musical examples will also serve to illustrate the outcome of combining a number of elements which produce an elaborate musical performance.

Bonner (1988) also notes the importance of determining whether the needs identified “exist in a performance related to complex cognitive skills, simple procedures, attitudes, motor skills, etc.” Although some of the elements identified may appear to be simple, procedures, scales and arpeggios for example, these and other elements included in the method must be examined in the context of jazz

performance. As the focus in the jazz idiom is on improvisation, the context of the presentation will be different from a presentation in classical music. Chords, scales and arpeggios must be practiced and understood in the context of an harmonic background. The instruction will require that the learner understands the fundamentals of scales, chords and arpeggios to begin. This knowledge will then be expanded on by situating the various concepts within a specific context. As such, the development of the instructional objectives will reflect a presentation of the tools (chords, scales and arpeggios) as well as an application of these tools in the context of improvisation.

This is best illustrated in learning chords and chord extensions and subsequently learning to apply them in progressions. The following steps are essential to apply extensions to chords in an harmonic progression:

- Learn the various chord voicings.
- Analyzes each chord and determine its function. As each chord type can have a number of functions, there are a number of possibilities for chord extensions in each case.
- Determine the appropriate extensions based on an understanding of chord scale relationships.
- Play the chord progression with the appropriate extensions in a creative and musical manner.

As the nature of jazz music is extemporaneous, the goal is to become spontaneous and creative in this process. Ultimately, the guitarist will learn to do this in real time. This is a difficult task which requires preparation and a firm understanding of harmony combined with a strong foundation on one's musical instrument.

Instructional Objectives

The design of the instructional method is based primarily on the Dick and Carey (1978) model. Three main instructional goals were identified and subsequently broken down into a hierarchical classification. The three main instructional goals identified are as follows:

Objective 1

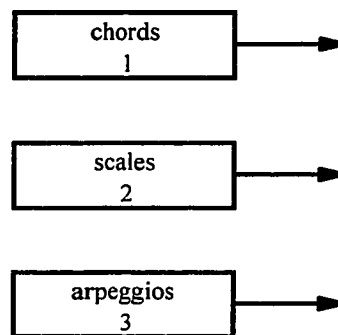
Given a jazz composition with chord symbols, the learner should be able to identify all of the notes contained in each chord, determine which extensions are available for each, locate and play appropriate drop 2 chord voicings for each and select a logical sequence of chords which create a musical accompaniment.

Objective 2

The learner should identify and play all major, melodic minor and harmonic minor scales in five positions and in all keys using 3 different approaches; vertical, horizontal and one octave positions.

Objective 3

The learner should identify and play all maj7, min7, dom7, m7(b5), dim7, maj6, m6 and m(maj7) arpeggios in all positions using scale positions and one octave fingerings in all keys.



Within each goal, there are a number of subdivisions which result. Dick et al, (1978) prescribe conducting a goal analysis to determine the steps required to meet each of the instructional goals. Skills which the learners are expected to know in order to use the instructional method (prerequisite skills) have been included. Each goal

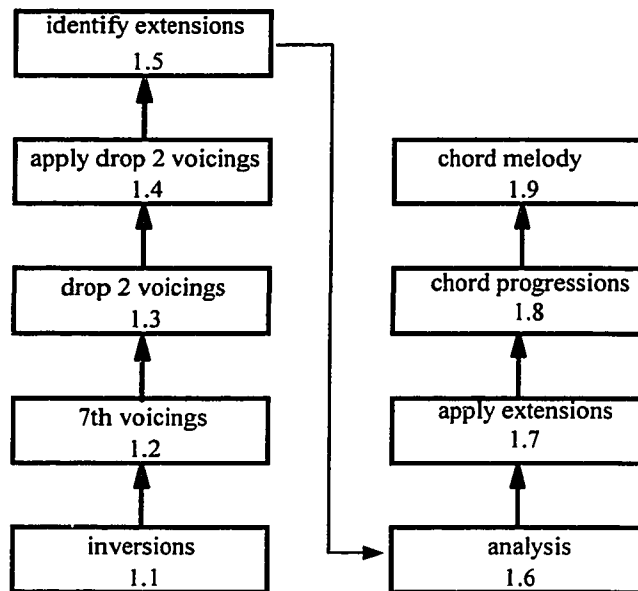
was mapped using flowcharts to determine the steps required to achieve each of the goals. These steps should give the reader a better sense of the level of prior knowledge expected of the target learner. The instruction is geared towards learners who possess these prerequisite skills and have achieved a level of musical training which is not at a basic level. In this manner, the following sub-divisions of the instructional goals were formulated. The flowcharts represent the steps required to reach each of the instructional goals. From the instructional analysis, the objectives were formulated.

Subdivisions of Objective 1

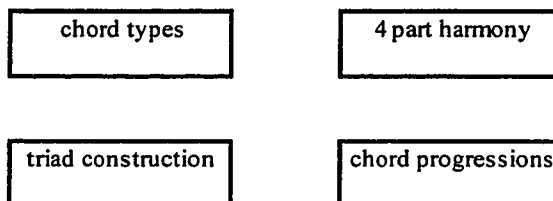
Objective 1

Given a jazz composition with chord symbols, the learner should be able to identify all of the notes contained in each chord, determine which extensions are available for each, locate and play appropriate drop 2 chord voicings for each and select a logical sequence of chords which create a musical accompaniment.

Chords



entry behavior line



prerequisite skills

- 1.1 Label each of the 4 inversions of 7th chords.
- 1.2 Spell 7th chord voicings for each of 8 chord types.
- 1.3 Spell drop 2 chord voicings and learn guitar fingerings for each.

- 1.4 Apply Drop 2 chord voicings to various chord progressions.
- 1.5 Determine the available extensions for each of the chords in the major, harmonic minor and melodic minor scales. Determine the available extensions for all secondary dominants and their related minor 7th chords. Determine the available extensions for diminished chords.
- 1.6 Analyze and explain several common jazz chord progressions.
- 1.7 Add 9ths to Drop 2 chord voicings.
- 1.8 Play several common chord progressions on the guitar using drop 2 chord voicings and some extensions.
- 1.9 Using the knowledge of drop 2 chord voicings, extensions and chord progressions, create a musical accompaniment in which the chords, inversions and extensions combine to produce musical phrases. The phrases should move predominantly by tones and semi-tones and in a clear direction.

Test questions

- 1.1 Label each of the following 7th chords as either root position, first inversion, 2nd inversion or third inversion.
- 1.2 Spell each of the following 7th chords.
- 1.3 Spell each of the following chords in each of the 4 inversions of the drop 2 voicing and write the guitar fingerings for 3 adjacent sets of strings.
- 1.4 In the following example, the top note of each chord is given. Complete the chords to create drop 2 voicings by adding notes below the melody.

1.5 Write the notes for each of the chords in the major, harmonic minor and melodic minor scales to the 13th and determine the available extensions for each using the b9 rule. Write the notes for all secondary dominants and their related minor 7th chords and determine the available extensions for each using the b9 rule. Write the notes for each of the diminished chords and determine the available extensions for each.

1.6 Analyze the following chord progression indicating all chord extensions.

1.7 In the following example, the top note of each chord is given. Complete the chords to create drop 2 voicings of 9th chords by adding notes below the melody.

1.8 Play the following chord progressions on the guitar using drop 2 chord voicings and extensions.

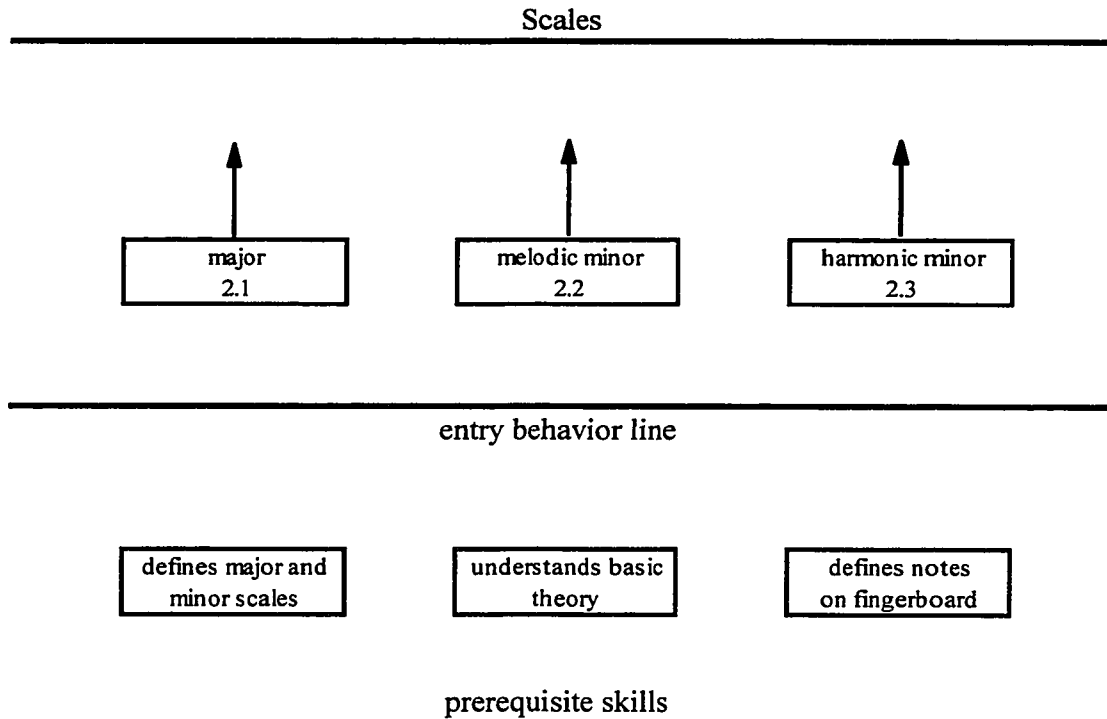
1.9 Create a chordal accompaniment for the following chord progression. Use appropriate extensions and melodic phrasing.

Subdivisions of objective 2

Objective 2

The learner should identify and define all major, melodic minor and harmonic scales. The learner should play all major, melodic minor and harmonic scales in five positions and in all keys.

Hierarchical Analysis

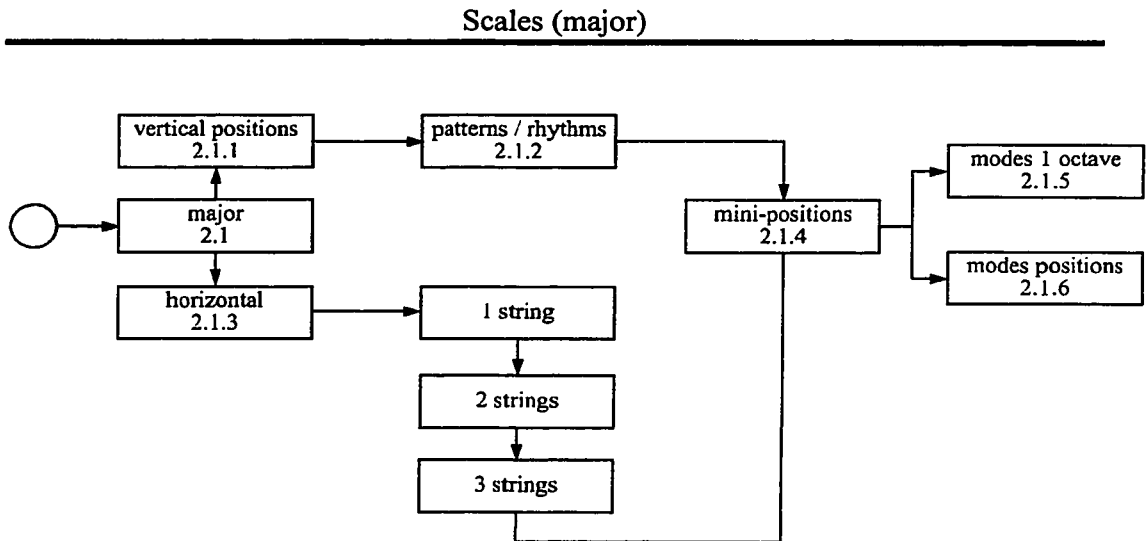


Scales are divided into three types: major, melodic minor and harmonic minor.

Each scale can be broken down into the same subordinate skills. The hierarchical analyses and objectives for each scale type are as follows.

Objective 2.1

2.1 Play the major scale using 3 fingering techniques.



2.1.1 The learner should play major scales in five positions and in 12 keys using vertical fingering patterns.

2.1.2 The learner should play major scales patterns in five positions and in 12 keys using vertical fingering patterns and rhythms.

2.1.3 The learner should play major scales in 12 keys using horizontal fingerings.

2.1.4 The learner should play major scales in 12 keys using all possible one octave fingering patterns.

2.1.5 The learner should play 1 octave major modes in 12 keys using all possible one octave fingering patterns.

2.1.6 The learner should play major modes in 12 keys using vertical fingering patterns.

Test questions

2.1 Play major scales in five positions and in 12 keys using vertical fingering patterns.

2.1.1 Play each of the 12 major scales in all five positions using vertical fingering.

2.1.2 Play each of the 12 major scales in all five positions using vertical fingering and scale patterns.

2.1.3 Play each of the 12 major scales on each string using horizontal fingerings.

2.1.4 Play each of the 12 major scales using all possible mini-positions.

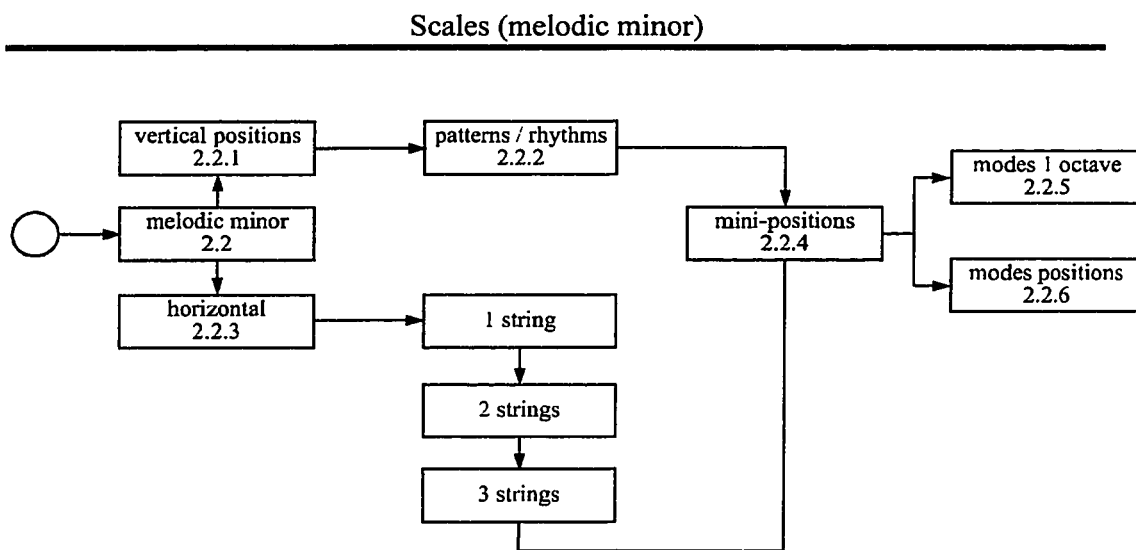
2.1.5 Play the dorian and mixolydian modes using all possible mini-positions.

2.1.6 Play the dorian and mixolydian modes using all five vertical fingerings.

Objective 2.2

2.2 Play the melodic minor scale using 3 fingering techniques.

Hierarchical Analysis



2.2.1 The learner should play melodic minor scales in five positions and in 12 keys using vertical fingering patterns.

2.2.2 The learner should play melodic minor scales patterns in five positions and in 12 keys using vertical fingering patterns and rhythms.

2.2.3 The learner should play melodic minor scales in 12 keys using horizontal fingerings.

2.2.4 The learner should play melodic minor scales in 12 keys using all possible one octave fingering patterns.

2.2.5 The learner should play 1 octave melodic minor modes in 12 keys using all possible one octave fingering patterns.

2.2.6 The learner should play melodic minor modes in 12 keys using vertical fingering patterns.

Test questions

2.2 Play the melodic minor scale in all 12 keys using 3 fingering techniques.

2. 2.1 Play each of the 12 melodic minor scales in all five positions using vertical fingering.

2. 2.2 Play each of the 12 melodic minor scales in all five positions using vertical fingering and scale patterns.

2. 2.3 Play each of the 12 melodic minor scales on each string using horizontal fingerings.

2. 2.4 Play each of the 12 melodic minor scales using all possible mini-positions.

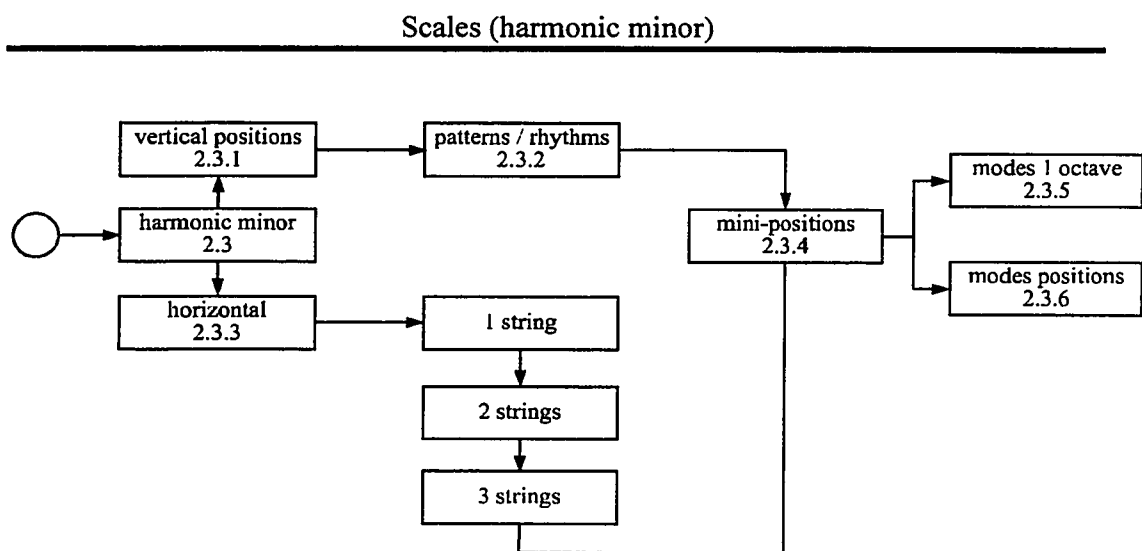
2.2.5 Play the Lydian augmented and super locrian modes using all possible mini-positions.

2.2.6 Play the Lydian augmented and super locrian modes using all five vertical fingerings.

Objective 2.3

2.3 Play the harmonic minor scale using 3 fingering techniques

Hierarchical Analysis



2.3.1 The learner should play harmonic minor scales in five positions and in 12 keys using vertical fingering patterns.

2.3.2 The learner should play harmonic minor scales patterns in five positions and in 12 keys using vertical fingering patterns and rhythms.

2.3.3 The learner should play harmonic minor scales in 12 keys using horizontal fingerings.

2.3.4 The learner should play harmonic minor scales in 12 keys using all possible one octave fingering patterns.

2.3.5 The learner should play 1 octave harmonic minor modes in 12 keys using all possible one octave fingering patterns.

2.3.6 The learner should play harmonic minor modes in 12 keys using vertical fingering patterns.

Test questions

2.3 Play the harmonic minor scale in all 12 keys.

2.3.1 Play each of the 12 harmonic minor scales in all five positions using vertical fingering.

2.3.2 Play each of the 12 harmonic minor scales in all five positions using vertical fingering and scale patterns.

2.3.3 Play each of the 12 harmonic minor scales on each string using horizontal fingerings.

2.3.4 Play each of the 12 harmonic minor scales using all possible mini-positions.

2.3.5 Play the 3rd and 5th modes using all possible mini-positions.

2.3.6 Play the 3rd and 5th modes using all five vertical fingerings.

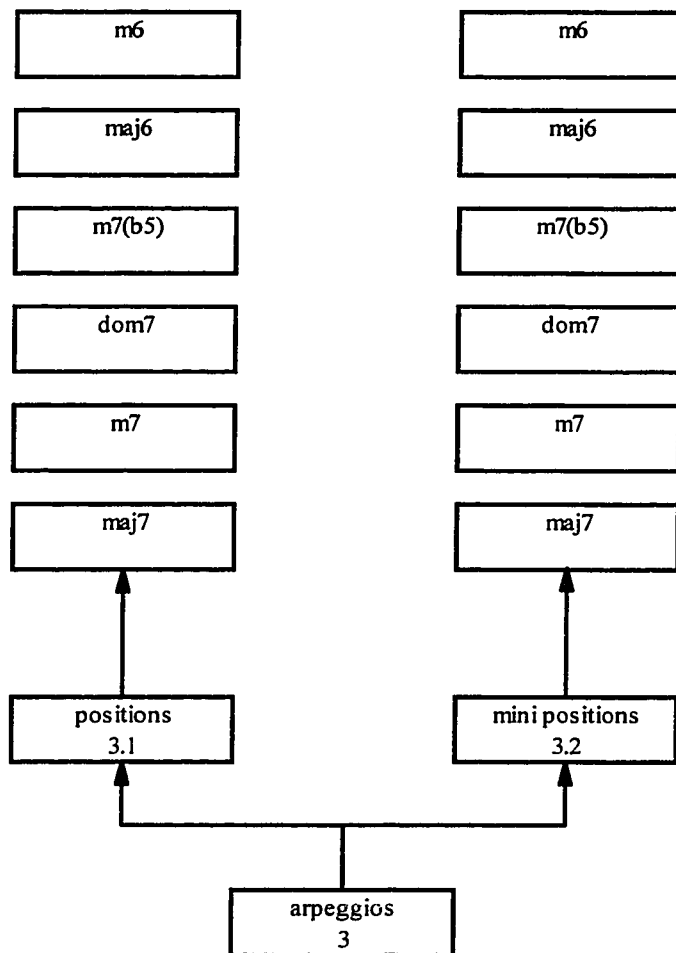
Subdivisions of objective 3

Objective 3

3.0 The learner should play maj7, min7, dom7, m7(b5), dim7 and m(maj7) arpeggios in all keys and positions using one octave fingerings.

Hierarchical Analysis

Arpeggios



3.1 . The learner should demonstrate the ability to extract arpeggios from major and minor scale positions.

3.2 The learner should identify and define all maj7, min7, dom7, m7(b5), dim7 and m(maj7) arpeggios. The learner should play all maj7, min7, dom7, m7(b5), dim7 and m(maj7) arpeggios in all positions using one octave fingerings, and in all keys.

Test questions

3.1 Play arpeggios for IIm7, V7 and Imaj7 in two octaves and in five positions.

3.2 Play arpeggios for all maj7, min7, dom7, m7(b5), dim7 and m(maj7) arpeggios in all possible positions on the guitar.

Instructional Strategy

The nature of jazz instruction

The major focus in preparing learners in the area of jazz should be to equip them with the necessary tools for jazz improvisation. Coker (1964) defines the tools necessary for improvisation as, “intuition, intellect, emotion, sense of pitch and habit” (p. 3). Intellect, sense of pitch and habit are outcomes which can be addressed through educational means while those of intuition and emotion can not. Any teaching which takes place in the jazz area, will always be limited by the nature of the idiom which uses improvisation as its main focus.

Leibman (1996) narrows it down to three elements: head, hand and heart. Hand is defined as training the instrumentalist to play scales and patterns, and head is the knowledge of the musical relationships and intellectual skills to apply the patterns and

according to the musical relationships. The heart refers to the emotions and passions which influence and shape the final outcome of improvisation. Again, as this area concerns one's own personal life experiences, feelings and such; it is not an area which can be dealt with in instruction. For each, there is only one avenue for the educator to pursue. This, for Coker (1964), is through the intellect, sense of pitch and habit, and for Leibman (1996) through the head and hand. As such, these are the areas on which this method focuses. Equipping the learners with a solid foundation for jazz improvisation is the overall goal of this instructional method. To achieve this goal, this method concentrates on developing the necessary tools and resources for jazz improvisation.

Instructional presentation

Many constructivists argue that instruction is more successful when it builds upon previous knowledge (Merrill et al. 1991; Jonassen, 1990). Elements of the presentation in this method were designed to introduce information based on an understanding of the backgrounds of the target audience. As music reading skills are generally weak amongst this group of learners, block diagrams were used to present chords, scales and arpeggios. By including traditional music notation along with the block diagrams, a link is presented which will hopefully provide a connection between familiar and unfamiliar knowledge. Also, the inclusion of multiple approaches in the instructional design provides the learners with a wide variety of perspectives, thus enabling them to have a better chance of finding familiar ground.

This approach also affords a certain amount of flexibility. Jonassen (1991) refers to cognitive flexibility theory (Spiro, Coulson, Feltovich & Anderson, 1988) as a possible approach to instructional design. Jonassen (1991) defines flexibility theory as "stressing conceptual interrelatedness, providing multiple representations or perspectives on the content because there is no single schema, (no objective reality) and emphasizing case-based instruction that provides multiple perspectives or themes inherent in the cases" (p. 11). Care has been taken not to assume a single correct perspective of the method's content.

The use of block diagrams in the presentation of scales represents a visual model of the guitar fingerboard which is valuable to learners who have limited music literacy skills. It initiates a particular learning approach which stresses a visual model. The visual model allows one to easily memorize the scale information and subsequently execute the scale on the guitar. Also included are standard music notation and in many cases audio recordings. These provide a different type of model and stimulate a different understanding of scales. The instructional method tries to address a wide range of perspectives in this manner. For the purposes of this instructional method, multiple perspectives is defined as the presentation of the information using more than one model or mode of understanding. This in most cases refers to how one will construct a conceptual model of the skill or concept, and how one will subsequently execute the skill or concept on the guitar.

There are a number of approaches to many of the key concepts in music. In the case of learning scales on the guitar, several approaches exist. Bertoncini (1990)

advocates using both horizontal and vertical approaches, while Goodrick (1987) advocates horizontal, vertical and mini-positions. Each of the approaches is useful and will provide the learner with a thorough understanding of scales. This method incorporates three different approaches to scales and arpeggios. These represent several conceptual understandings of scale knowledge and their application. This use of multiple perspectives in the conceptual understanding and execution of scales and arpeggios, it is hoped, will lead to a greater understanding of the guitar fingerboard.

Building on the knowledge base of the learners in this way will also lead to a re-evaluation by the learners of their own understanding of the information, in this case their understanding of chords, scales and arpeggios. When one is confronted with new information, one immediately tries to relate this information to previous knowledge. Using one's own model of the concepts, which has been built upon previous experiences, one must accommodate the new information in a way which makes sense to the learner. In trying to fit this new knowledge into one's existing model, the new information will not always satisfy all of the previous conditions. In such a case, one has encountered what Fosnot (1989) terms "cognitive conflict."

Cognitive conflict is what teachers and instructional designers should attempt to initiate in learners. Such a state causes learners to re-think all the conditions of their understanding. A learner must find a way to alter one or several of the conditions in an effort to restructure his/her understanding of the concept in order to accommodate the new information. When a learner achieves this, he/she has reached a new understanding of the concept.

The process of initiating a cognitive conflict in a learner's understanding of a concept entails several outcomes. When a learner is experiencing a cognitive conflict, he/she will be in a state of discontent. The learner's equilibrium with regards to his/her previous understanding of a concept becomes unbalanced, thus leaving the learner in a state where the puzzle, in a sense, no longer fits together. The learner's mind will actively be searching for a strategy which will allow the pieces to once more, fit together. In putting the puzzle back together, all of the pieces which are now known to be related to the concept must be merged. Once the learner becomes aware of a particular piece of information or perhaps even a new way of looking at a concept, he/she will be placed in a position where these issues cannot be avoided. The learner will not be content until all of the information can be accommodated.

My goal in the preparation of this instructional method was not only to ensure that the learners perform the objectives successfully, but also to ensure that a deeper understanding of the principles would exist. To this end, the exercises were designed whereby the learners are required to piece together several pieces of information to successfully complete a task. This is evident in learning chord voicings. Here, the learners are required to figure out the voicings on their own and then learn them on the guitar fingerboard. Many instructional methods in jazz guitar present enormous volumes of chord voicings which the learners are expected to memorize. As each chord can have a fair number of extensions, there are countless voicings which exist. This then becomes mostly a task in retention. It is important that jazz guitarists use an organized approach in learning chords. By combining a theoretical knowledge of

chord structures and an understanding of their origins, it is possible to learn the same number of chords in a more efficient way. It is no doubt a longer process, but the results are greater. Not only will the learners be capable of executing a considerable number of voicings, but they will also be equipped with an understanding of harmony and chord voicings. This, of course, is fundamental to the application of chords in improvisation.

As the intention of any instructional designer is that the learners achieve the intended goals and objectives of the instruction, outcomes of the learning must be addressed. The intention of this instructional method is that the learners achieve a thorough understanding of the guitar fingerboard coupled with an equal understanding of the application of all of the scales, arpeggios and chords presented. Merrill et. al (1990) stress that the focus of designing instruction should be to “communicate accepted meaning. The developer of instruction explicitly desires that the learner adopt the meaning intended by the developer” (p. 12). The intention in this instructional package is that the learners are well equipped with the necessary tools for jazz improvisation, and that they attain a level of comprehension with regards to the application of these tools. To this end, feedback will be an integral part of the instructional method. Recorded examples will provide a clear example of one possible outcome. As music is an art form which takes into account personal interpretation and aesthetic value, the recorded feedback will of course represent a stylistic viewpoint. In this case, the value of the information presented in recorded examples far exceeds the threat of imposing an aesthetic point of view. It is also

important to note that the majority of learners at this level are in the very early stages of aesthetic development. Presenting elements of style and interpretation will in most cases be helpful in developing the interpretive skills of the learners.

The audio portion is vital in the presentation of the musical examples. It serves two purposes: to present examples and provide feedback. The use of audio and visual media as a means for instructional delivery is important when the instructional message cannot always be easily expressed in words. In presenting the overall message, many elements can not be communicated through text alone (Romiszowski, 1986). Even though musical notation is used, elements of style, dynamics, interpretation and idiom will be lost. All of these elements are important factors which the learner must comprehend. Recorded audio examples communicate these in the most efficient way. Jonassen (1991) believes that “learning will occur most effectively in context” (p. 11). Recorded examples provide the learners with a context which is relevant to the type of instruction thus is central to instrumental instruction.

The audio examples were developed using a combination of real instruments and MIDI (Musical Instrument Digital Interface) instruments. Although the preferred choice of the author would have been to use only real instruments and instrumentalists, the cost of recording would have been too high. The use of MIDI sequences for both bass and drum parts allowed for both a reduced cost in the preparation of the recording, flexibility in preparation, and a reduced cost to the consumer.

The recordings consist of guitar and MIDI bass and drums. The bass and drum parts were sequenced using a sequencing software package. A SMPTE (Society of Motion Pictures and Television Engineers) time code tone was recorded to one track of a multitrack recorder and used to trigger the MIDI sequencer. In this way, the MIDI parts do not need to be recorded to tape and can be recorded directly to DAT (Digital Audio Tape) in the final stage of transfer. This method allows for optimal recording quality as it reduces the number of tape transfers and keeps noise to a minimum. The guitar was then recorded to tape. The final recording was then mixed to DAT. Each of the subjects then received a cassette copy which was transferred from the DAT.

Hypothesis

Jazz guitar students enrolled in the music department at Concordia University, Montreal, Canada who use a self-instructional method for jazz guitar will attain the objectives of the method and have positive attitudes about the form of instruction that they received. These variables will be measured through scores on a pretest and posttest, as well as through an attitude questionnaire.

CHAPTER 4

Method

Subjects

Subjects were selected from the Concordia University music department population of guitar students. The majority of the subjects were registered in private instrumental instruction in jazz guitar or had taken the course previously. The total number of students registered in jazz guitar is approximately 30 to 40. For this project, students were selected based on their availability and willingness to participate in the project. The sample size for the project was 14. The subjects' ages were typically 20 - 25 years old. Their practical instrumental backgrounds varied with regards to levels within the various areas of concern.

Normally, students enrolled in the department have competent performance skills, but are weak in theory and have basic musical literacy skills. In most cases, they have a college background which includes instruction on their primary instrument. For students who do not have a college background, previous instruction on their primary instrument with an instrumental teacher is expected. Students must also be accepted into one of the programs offered by the department of music. This course is not open to non-music majors.

Materials

The learning package is comprised of a book and cassette. The book is primarily text-based, but also includes notated musical examples and graphic diagrams. The musical examples, in the form of traditional music notation, are used whenever a musical idea or example must be presented. In the majority of cases, these are also reinforced with recorded examples. The cassette contains recorded examples and exercises illustrated in the book. Each example is numbered in the book and announced on the cassette for easy reference.

Procedure

All students who participated in the project were required to complete a pretest to evaluate their individual levels in each of the three areas of the instructional method. The three areas corresponded to the those in the instructional package: scales, arpeggios and chords. This was done prior to administration of the instructional package. The results of the pretest allowed the author of this project to determine the strengths and weaknesses of each subject. Students were then assigned a section of the book based on weaknesses observed.

Students did not receive any other instruction or tutoring supplemental to their exposure to the instruction. The learning package is intended to be a stand-alone package which allows students to receive supplemental help without the aid of an

instructor. In order to acquire valid data, no intervention or instruction on topics related to the curriculum of the method took place. Subjects were asked to use the instructional method for a period of ten days. The ten day trial period was based on two factors: the availability of the subjects, and the fact that they would only be using a portion of the instructional method. Ten days was viewed as sufficient to go through the only a selected portion of the material.

Prior to receiving the posttest, the subjects were asked to complete an attitude questionnaire. At the end of the ten day trial period, the subjects each completed a posttest used to evaluate attainment of the instructional objectives included in the instructional package.

Criterion Measures

The pretest was primarily a performance evaluation with the inclusion of one written item. For this question, the subjects were asked to write eight chord voicings of various 7th chords on manuscript paper. This was necessary as it would provide information regarding the weaknesses in performing items in the section of the pretest and posttest which measured subjects knowledge and application of chord voicings. The performance evaluation measured their ability to apply each of the various objectives on their instrument. The length of the pretest was approximately 20 minutes.

The posttest focused on measuring whether students made any substantial improvements in the areas of the book which they were assigned to use. Subjects were

not required to complete the entire posttest. The questions were exactly the same as those used in the pretest except that the qualities of the chords and the keys of the scales and arpeggios were changed. Where they were asked to play a C major scale in five positions for the pretest, they were asked to play perhaps an Eb major scale in five positions for the posttest. Although it is possible that they might be more fluent in a particular key, it was the judgment of the author that to ask the exact same question in the same key would not ascertain whether or not the student mastered the objective.

The pretest and the posttest were designed to measure each of the following areas for each subject:

- Knowledge of the concepts presented in the modules.
- Instrumental technique relevant to the concepts presented in the modules.
- Performance of the concepts presented in the modules.

The pretest and posttest were divided into the following sections:

- 1) chords including drop 2 voicings
- 2) chord extensions
- 3) major scales and arpeggios
- 4) melodic and harmonic minor scales

A three point scale was used in evaluating the performance of the test items on both the pretest and the posttest. The following are the interpretation for each of the three levels:

1. unable to perform the task
2. some ability at performing the task
3. able to perform the task with little or no difficulty

The attitude questionnaire focused on the subjects' feelings and opinions on the level and effectiveness of the instructional package compared to other packages which they may have used in the past. The questionnaire was deemed useful to gain additional information in several areas. These included:

1. subjects impression of the book
2. how they rated it compared to other books they may have used
3. clarity of the explanations
4. clarity of the diagrams and musical examples
5. clarity of the recorded examples.

The attitude questionnaire did not require that subjects include their name in hopes that the learners would answer as honestly as possible.

Experimental Design

The experimental design used in this project was a single group pretest-posttest design (Campbell and Stanley 1963) commonly used in evaluating instructional packages. Although this design has low internal validity, it was the best

choice for the sample size available. Had an additional 14 subjects been available, the pretest, posttest control group design would have generated more generalized findings. As the nature of the evaluation was on going development of an instructional method, conclusions drawn from the findings are being used only to improve upon the instructional method. Therefore, no conclusions can be drawn from this evaluation which could be transferred with any degree of confidence to other similar evaluation projects.

CHAPTER 5

Results

The purpose of the evaluation of this instructional method was primarily to obtain valuable information which could subsequently be used in locating areas which required modification. Small group evaluation was utilized as all the material in the method had undergone thorough one-on-one evaluation in the previous academic year. Dick and Carey (1978) prescribe a group of approximately 8 to 20 learners for this type of evaluation. For this evaluation, 14 subjects were used.

The dependent measures were obtained through a pretest, posttest and attitude survey. The sample size of 14 was disproportionately divided into four groups. As such, the sample sizes for each of the groups is as low as two subjects and as high as five. The grouping of subjects into the four areas of the instructional method based on measured weaknesses in the pretest. The groupings do not accurately represent an equal distribution of subjects by their weaknesses as the results of the pretest indicated that the majority of subjects were all weak in the same areas. As it was necessary to have representation in all areas of the instructional method, some subjects were asked to use sections of the method on which they scored moderately.

The questions on the pretest and posttest were designed to measure the effectiveness of each of the individual objectives. Where substantial gains were achieved by the subjects, it was assumed that the instruction was effective. Areas in

which little or no gains were measured indicated that the instruction for these objectives should be reviewed and possibly revised.

The questions on the pretest and posttest were identical except that the qualities of the chords and the keys of the scales and arpeggios were modified from the pretest to the posttest. The purpose in changing the qualities was to ensure that the subjects did not retain information from the pretest which might positively effect the posttest. An example of this type of modification is that where the subjects were asked to play an E minor scale in the pretest they might instead have been asked to play an A minor scale for the posttest. A second purpose was to allow for a greater distribution of keys. At this level of instrumental proficiency, there are often weaknesses in specific keys for a majority of these instrumentalists. By utilizing a broader range of keys in both the pretest and posttest, it was hoped that there would be a better chance that the subjects would not stumble upon the same difficult key in both tests. The chances that any particular question was testing a weak key would then be equally apparent in all questions and in both the pretest and the posttest.

The mean differences of the pretest and posttest were analyzed in 2 ways:

- 1: an analysis of groups of clustered objectives.
- 2: item by item.

The analysis of the clustered objectives provided a good overall view of the various sections of the book. The item by item analysis provided a closer look at each individual objective to pinpoint problems in the design more accurately.

Although there are only three primary objectives in the method, chords, scales and arpeggios, the assigned sections represent four partitions of the book. This partitioning of the book was necessary to assign an equal amount of work to each of the subjects. The four partitions of the method are as follows:

Section 1

Drop 2 chord voicings

Section 2

application of chord extensions to progressions

Section 3

major scales and arpeggios (all chord types)

Section 4

harmonic and melodic minor scales

For section 4, the subjects were also asked to read several pages from section 3. The information in these pages was essential in understanding a number of key elements of the presentation. This information is presented only in section 3 of the method which covers major scales. It is not repeated for the sections on harmonic and melodic minor scales as it is assumed that in

using the method, one would progress from beginning to end. In this way, the material would have been covered and does not need to be restated.

Within these sections the organization of the pretest and posttest also allowed for a further division of sections 3 and 4. In section 3, the scores for the major scales were not combined with the scores for arpeggios. In section 4, the scores for harmonic minor scales were not combined with those of the melodic minor scales. The result is a total of 6 sets of scores. The scores for the objectives on chords will be represented in two sets of scores, the objectives for scales will be represented in three sets of scores, and arpeggios will be represented with one set of scores.

As the subjects only completed the section of the posttest which corresponded to the section of the method they used, only those scores were used. Scores from the posttest were paired with the corresponding scores from the pretest. To obtain the scores for the clustered objectives, the sums of the scores for all questions which the subjects completed on both the pretest and the posttest were compared for differences in means. If a subject was required to use the first section of the book, then the scores from all objectives in that section were combined.

Interpretation of data

The effectiveness of the instructional method was based on an analysis of the pretest and posttest scores and through an attitude questionnaire. Analysis of the data collected was examined in two ways as several conditions existed. As the sample sizes for each of the groups of subjects was low, two - five subjects per group, the use

of statistical analysis was deemed inappropriate as an only indicator of substantial gains. Small sample sizes play an important role in determining the significance of any set of data. As the degrees of freedom (*df*) are reduced, statistical power decreases, and therefore the likelihood of achieving significant results will also decrease. As the size and depth of this instructional method is beyond the capacity of a ten day trial period, it was necessary to field test the instructional method in parts. As stated previously, the total number of subjects who participated in the evaluation (14) were divided into groups, thus making the total *N* per group quite small (2 - 5). For seven of the individual test questions, t-tests could not be calculated as the individual groups variance was 0. As such, a decision was made to measure the effectiveness of the instructional method based on a combination of factors.

At this point, in the development of the instructional method the purpose of performing an evaluation was predominantly one which Romiszowski (1986) terms "product development." The goal of the evaluation process is to find ways which will lead to improvements in the overall effectiveness of the instructional package. Romiszowski (1986) also notes that the use of statistical test is not necessary in product development. As such, the mean scores were used to attain a general understanding of the effectiveness of the instructional method. A set percentage in mean score gains from pretest to posttest was deemed appropriate as a measure to gauge a substantial increase.

In choosing a level which would indicate a substantial increase in mean scores, it was important to consider several factors. Again, the trial period for the use of the

instructional method was ten days. Working within the limits of the available subjects, this represented a realistic time frame based on their ability to commit an honest amount of time and energy. As the method was designed to cover a full year course, this trial period does not adequately reflect the actual time required. Such small gains were expected from pretest to posttest, therefore the use of other criterion such as mastery learning were ruled out. A true summative evaluation would require a full year of implementation into a course of private instruction. In such a case, one would expect to measure more significant gains and other ways to measure the dependent variable could be used. An analysis of the data where gains were made show on average a 20% improvement from pretest to posttest. A 20% gain represents a useful measure for a ten day evaluation period. As such, this was used as a guideline for evaluating the effectiveness of the instruction. Again, the reader should keep in mind that the overall purpose of the evaluation was to make improvements to an educational product. No inferences are being made as to the effectiveness of the instructional method beyond the scope of its use at Concordia University.

An analysis using t-tests of the results of the dependent measures for the clustered objectives indicated an overall gain from pretest to posttest. Clusters 2 - 5 measured significant gains in mean scores and clusters 1 and 6 did not ($p < .05$) Cluster 1 (15.14%) almost reached the criterion of 20% while clusters 2 - 6 did. (The Reader will note that clusters 2 and 3 measured gains of 19.45%. The author is comfortable accepting this measure.) Although the t-test for cluster 6 was not significant, a gain in mean score of 24.67% was achieved. Readers will note that the sample size for this

cluster of objectives was two. Had the same gain been achieved with a slightly larger sample, the chances of attaining a significant p would be greater.

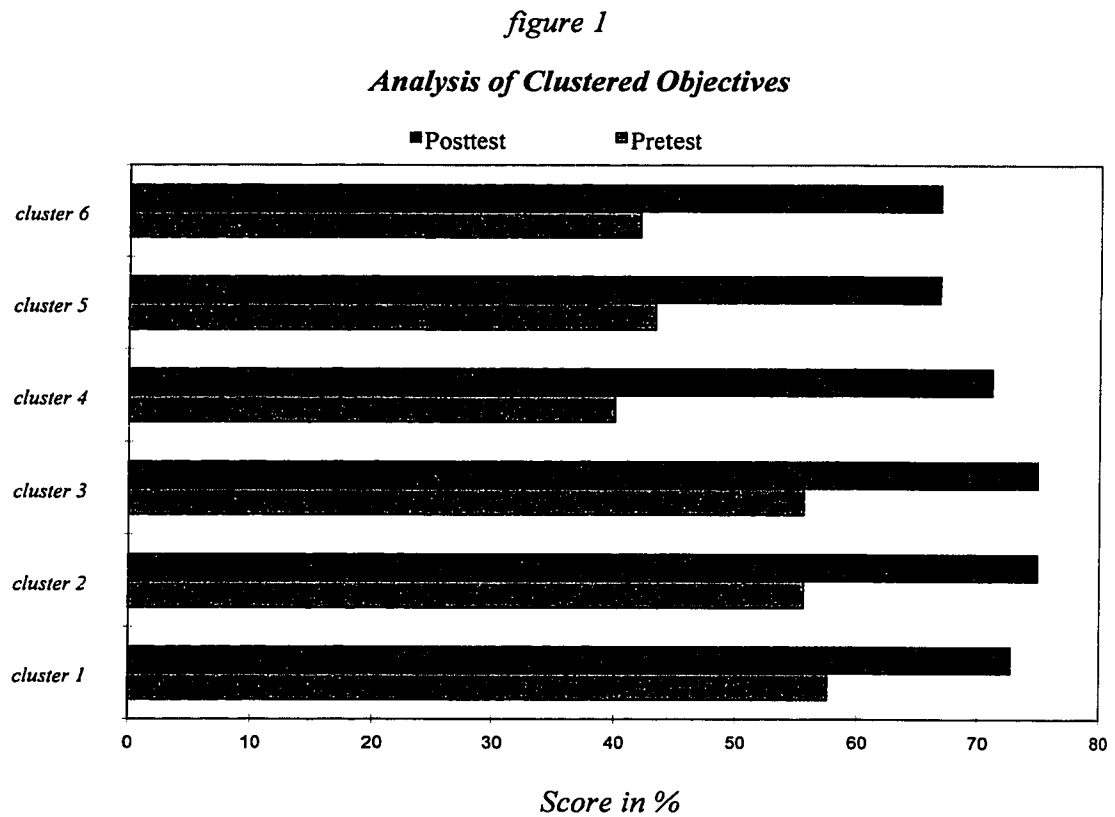
These results suggests that the instructional method was effective overall in meeting the objectives of the instructional design. A closer look at individual test questions indicates that not all objectives were met with the same level of success. The objective by objective measures were used to pinpoint areas of the instructional method which were less effective and subsequently locate problems in the instructional delivery. Based on this information, recommendations for revision were formulated.

An analysis of the results of the dependent measures for the individual test questions using t-tests found 11 of the 26 objectives to be significant at $p < .05$. For seven of the individual test questions, t-tests could not be calculated because the individual group variance was 0. One question showed a negative gain. As directionality was established, this question, for all intensive purposes, showed no gains. Possible reasons for a negative gain will be dealt with in the discussion.

A one-tailed t-test was used to obtain the p values. Gall, Borg and Gall (1996) recommend the use of the one-tailed test when directionality is specified in the hypothesis.

Analysis of clustered objectives

Figure 1 summarizes the results of the clustered objectives.



Results for the 6 clustered objectives

Cluster 1 (Objectives 1.1 - 1.4)

Drop 2 chord voicing

<i>Variable</i>	<i>n</i>	<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
Posttest	3	8.00	72.72	1.155	.82	.249
Pretest		6.33	57.58	.882		

Cluster 2 (Objectives 1.5 - 1.10)

Drop 2 chord voicings and extensions

<i>Variable</i>	<i>n</i>	<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
Posttest	3	9.00	75.00	.577	7.00	.010
Pretest		6.67	55.55	.333		

Cluster 3 (Objective 2.1)

Major scales

<i>Variable</i>	<i>n</i>	<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
Posttest	2	13.50	75.00	1.500	7.00	.045
Pretest		10.00	55.55	2.000		

Cluster 4 (Objective 2.3)

Harmonic minor scales

<i>Variable</i>	<i>n</i>	<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
Posttest	5	12.80	71.11	.735	7.48	.001
Pretest		7.20	40.00	.735		

Cluster 5 (Objective 2.2)

Melodic minor scales

<i>Variable</i>	<i>n</i>	<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
Posttest	5	12.00	66.67	1.378	7.20	.001
Pretest		7.80	43.33	1.200		

Cluster 6 (Objective 3)

Arpeggios

<i>Variable</i>	<i>n</i>	<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
Posttest	2	4.00	66.67	.000	3.00	.103
Pretest		2.50	42.00	.5000		

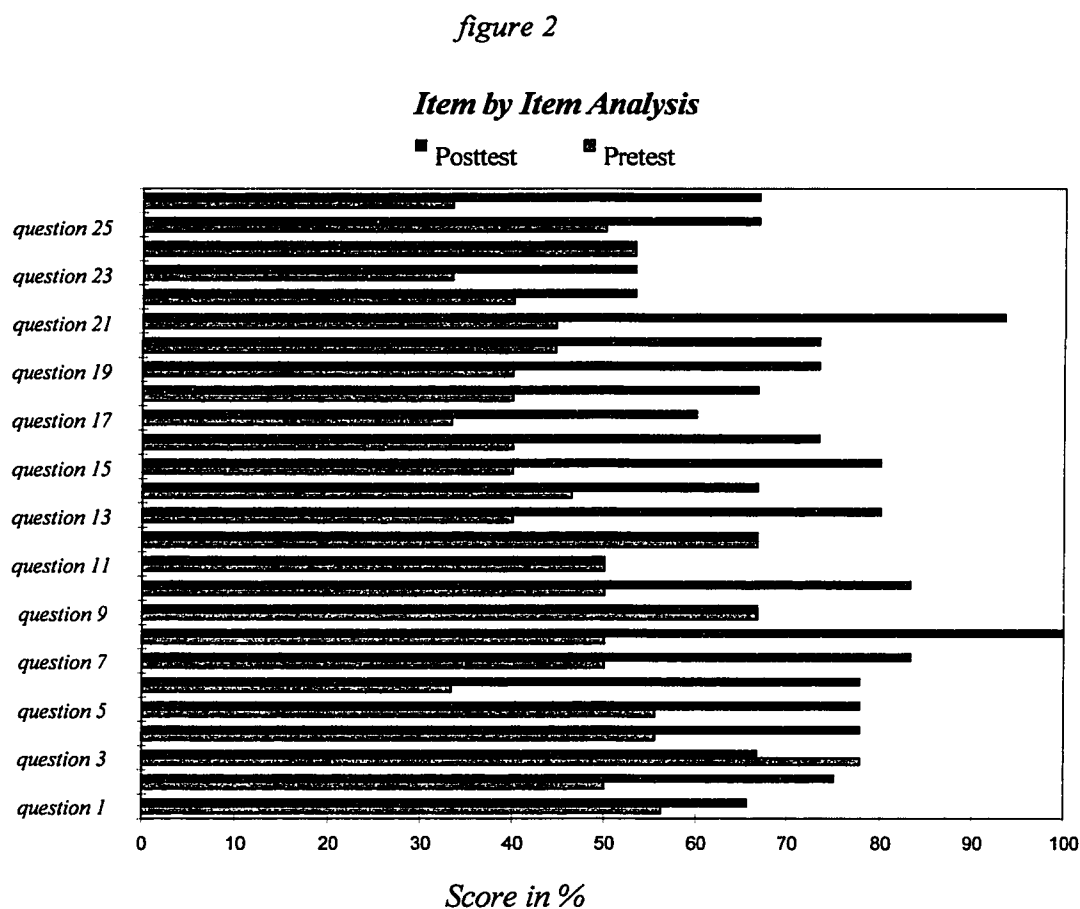
Item by item analysis

The results from the individual test items were used to evaluate the effectiveness of the instructional method objective by objective. As each test item reflects one of the instructional objectives, conclusions could be drawn about each. The only exception was with the objectives relating to chords where one or two questions incorporated more than one objective. As the intentions of the author were to keep the testing within a performance setting, it was deemed more appropriate to group several objectives as this presented a more realistic performance framework. As such, it may be more difficult to interpret a clear meaning for these items. It was decided at the outset that the results of creating test items which measured only the objectives in question individually might produce an inaccurate measure. The questions which were formulated situated the subjects in an appropriate jazz context which required them to perform in the performance setting which is typical of the idiom.

The individual test questions follow with means for both the pretest and the posttest. The means for both tests were converted to percentages to help provide a clearer picture of the results. A graph is included which provides a visual comparison of pretest and posttest scores. The graph includes all objectives and uses the

percentage scores. Implications of the results will be discussed in chapter 6 as well.

Figure 2 summarizes the results of the scores for each of the individual objectives.



Results for the item by item analysis

Chords

Test question 1

Variable	n	Mean	Mean in %	SE of Mean	t-value	p
Objectives 1.1, 1.2	4	Posttest	5.25	65.63	1.708	.52
		Pretest	4.50	56.25	1.291	

Test question 2

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objectives 1.3, 1.4</i>	4	Posttest	2.2500	75.00	.250	3.00	.003
		Pretest	1.5000	50.00	.289		

Test question 3

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objectives 1.5, 1.6, 1.7</i>	3	Posttest	2.0000	66.67	.000	-1.00	-
		Pretest	2.3333	77.78	.000		

Test question 4, 5, and 6

This question was used to test three items: use of melody, rhythms and extensions.

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Melody</i>							
<i>Objectives 1.8, 1.9</i>	3	Posttest	2.3333	77.78	.333	2.00	.092
		Pretest	1.6667	55.56	.333		
<i>Rhythms</i>							
	3	Posttest	2.3333	77.78	.333	1.00	.212
		Pretest	1.6667	55.56	.333		
<i>Extensions</i>							
	3	Posttest	2.3333	77.78	.333	4.00	.029
		Pretest	1.0000	33.33	.000		

Scales

Major

Test question 7

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> <i>2.1.1</i>	2	Posttest	2.5000	83.33	.500	-	-
		Pretest	1.5000	50.00	.500		

Test question 8

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> <i>2.1.2</i>	2	Posttest	3.0000	100.00	.000	3.00	.103
		Pretest	1.5000	50.00	.500		

Test question 9

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> <i>2.1.3</i>	2	Posttest	2.0000	66.67	.000	-	-
		Pretest	2.0000	66.67	.000		

Test question 10

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> <i>2.1.4</i>	2	Posttest	2.5000	83.33	.500	-	-
		Pretest	1.5000	50.00	.500		

Test question 11

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> <i>2.1.5</i>	2	Posttest	1.5000	50.00	.500	-	-
		Pretest	1.5000	50.00	.500		

Test question 12

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> <i>2.1.6</i>	2	Posttest	2.0000	66.67	.000	-	-
		Pretest	2.0000	66.67	.000		

Harmonic minor**Test question 13**

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> <i>2.2.1</i>	5	Posttest	2.4000	80.00	.400	3.21	.017
		Pretest	1.2000	40.00	.200		

Test question 14

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> <i>2.2.2</i>	5	Posttest	2.0000	66.67	.000	2.45	.035
		Pretest	1.4000	46.46	.245		

Test question 15

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> <i>2.2.3</i>	5	Posttest	2.4000	80.00	.245	3.21	.017
		Pretest	1.2000	40.00	.200		

Test question 16

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective 2.2.4</i>	5	Posttest	2.2000	73.33	.374	3.16	.017
		Pretest	1.2000	40.00	.200		

Test question 17

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective 2.2.5</i>	5	Posttest	1.8000	60.00	.200	4.00	.008
		Pretest	1.0000	33.33	.000		

Test question 18

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective 2.2.6</i>	5	Posttest	2.0000	66.67	.000	4.00	.008
		Pretest	1.2000	40.00	.200		

Melodic minor**Test question 19**

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective 2.3.1</i>	5	Posttest	2.2000	73.33	.374	3.16	.017
		Pretest	1.2000	40.00	.200		

Test question 20

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> 2.3.2	5	Posttest	2.2000	73.33	.374	2.14	.00495
		Pretest	1.4000	44.67	.245		

Test question 21

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> 2.3.3	5	Posttest	2.8000	93.33	.200	5.72	.003
		Pretest	1.4000	44.67	.245		

Test question 22

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> 2.3.4	5	Posttest	1.6000	53.33	.245	1.63	.089
		Pretest	1.2000	40.00	.200		

Test question 23

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> 2.3.5	5	Posttest	1.4000	53.33	.245	1.63	.089
		Pretest	1.0000	33.33	.000		

Test question 24

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> 2.3.6	5	Posttest	1.6000	53.33	.400	-	-
		Pretest	1.6000	53.33	.400		

Arpeggios

Test question 25

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> 3.1	2	Posttest	2.0000	66.67	.000	1.00	.250
		Pretest	1.5000	50.00	.500		

Test question 26

<i>Variable</i>	<i>n</i>		<i>Mean</i>	<i>Mean in %</i>	<i>SE of Mean</i>	<i>t-value</i>	<i>p</i>
<i>Objective</i> 3.2	2	Posttest	2.0000	66.67	.000	-	-
		Pretest	1.0000	33.33	.000		

Attitude Questionnaire

An attitude survey was administered prior to the posttest. The results provided information in a number of areas:

- demographics.
- previous use of instructional methods in jazz guitar.
- information regarding the quality and clarity of the explanations, musical examples and recorded examples.

The entire questionnaire is included in appendix B along with the distribution of the results expressed in percentages. A summary of the key elements follows. (One case is equal to 7.1%)

Private study

Responses indicated that 78.6% of the subjects were enrolled in private study, and 21.4% were not during the evaluation period.

Use of an assigned text

A majority of subjects reported not using a text for their course in private study (78.6%). This question was included in order to establish if texts were being used by students enrolled in private study. The subjects were also asked to name the texts they were using. This information was deemed insightful as it would answer the author's assumption that texts were not being used. Where texts were in use, the author was also interested in knowing which ones were used. This would perhaps lead to information on other books on jazz guitar which should be reviewed and possibly compared to this method.

Use of guitar method prior to university study

Responses indicated that 78.6% of the subjects had used some type of text prior to university study while 21.4% had not.

Recorded examples

Subjects were asked to rate the recorded examples in terms of their effectiveness as part of the instructional method. Subjects rated the recorded examples as slightly helpful (64.3%), helpful (21.4%) and very helpful (7.1%).

Quality of the explanations and presentation

Responses indicated that 57.1% of the subjects found the explanations and presentation to be very clear, 21.4% found them to be clear and 21.4% found them to be slightly difficult to understand.

Quality of the diagrams

Responses indicated that 64.3% of the subjects found the diagrams to be very clear, 28.6 found them to be clear while 7.1% found them to be slightly difficult to understand.

Quality of the recorded examples

The quality of the recorded examples was found to be good (57.1%) to very good (35.7%). As MIDI instruments were used in the preparation of the recorded examples, there was concern that the subjects would react negatively to this.

Subjects' rating of the method.

For this question, 4 subjects did not respond for a total of 28.6%. The remaining subjects responded that the method rates about the same (35.7%) or was more informative (28.6%).

How much did you learn?

Subjects were asked to evaluate how much they felt that had learned from using the instructional method. Responses indicated that 71.4% of the subjects felt they had learned a fair amount and 21.4% felt they learned very much. Only 7.1% felt they only learned a little.

Use as a reference.

Subjects were asked if they felt the method would be useful as a reference in future study in jazz. Responses indicated that 71.4% thought it would be very useful, 21.4% thought it would be useful and 7.1% thought it would be only slightly useful.

Feelings about using the book.

Subjects were asked to comment on how much they liked using the book. 42.9% reported that they liked it a lot, 37.5% reported that they liked it and 21.4% were neutral.

Would you recommend the book?

Subjects were asked if they would recommend the method to friends or colleagues. Responses indicated that 85.7% would recommend the method and 7.1% would not.

CHAPTER 6

Discussion

Objectives requiring review

Based on the evaluation criterion outlined in Chapter 5, (Results) the following instructional objectives were identified as requiring revision.

Test question 1(Objectives 1.1, 1.2)

Test question 3 (Objectives 1.5, 1.6)

Test question 9 (Objective 2.1.3)

Test question 11 (Objective 2.1.5)

Test question 12 (Objective 2.1.6)

Test question 22 (Objective 2.3.4)

Test question 24 (Objective 2.3.6)

Test question 25 (Objective 3.1)

A discussion of each test question follows which focuses on identifying possible reasons why the instructional method was not effective in raising the mean scores from pretest to posttest for these objectives.

Recommendations for revisions

Test question 1

Test question 1 incorporated 2 objectives: 1.1 and 1.2. They are both similar except that 1.1 requires the learner to identify chord structures while objective 1.2 requires the learners to write them out. Generally, it can be assumed that even if the learners were competent in objective 1.1, the important task is in the writing of chords. As such the focus should be on objective 1.2. Objective 1.2 is critical in the development of all other objectives related to chords. As such this is an area which the learners need to master. A review of the material in the instruction method which addresses this objective indicated to the author that the presentation was too dry. Exercises which engage the learner in a more meaningful way would be beneficial. An effort to design instructional activities which motivate and stimulate the learner should be incorporated to replace or augment the existing material.

Test question 3

The mean scores for the pretest and posttest indicated a decrease in mean of 11.11%. Test question 3 incorporated 3 objectives: 1.5, 1.6 and 1.7. These objectives all deal with chord extensions. Applying chord extensions in chord progressions requires a number of steps. It was decided that these objectives should be combined, thus creating a true performance situation. As only one score was recorded for this question, discerning the exact nature of the faults in the instructional material was

difficult. Although the premise of combining the objectives appears to be sound, Dick and Carey (1990) prescribe using test items to measure only one specific objective at a time. Yet, a review of the instructional materials for these objectives pointed to limited number of examples and exercises. As well, no recordings were provided for these examples and exercises. The information was presenting in a theoretical manner perhaps making the instruction too technical and wordy. The addition of recorded examples might help to provide an audio cue for the correct use of extensions, once again making the instruction more meaningful and relevant. As with most elements in music, the desired sound is usually recognizable before any understanding of the technical requirements are known. Recorded examples would provide a reference which links the sounds to the theory.

The decrease in mean scores from the pretest to the posttest also indicate that perhaps the instruction caused the learners to become more confused. Again this is most likely due to the wordiness of the instructional materials. Although this information represents an area which is characterized by a more technical understanding, an effort should be made to re-work the instructional material in these areas. An effort is required to produce a less abstract presentation in favor of one which is more stimulating and immediate for the learners.

To gain a clearer picture of the ambiguity which exists in locating the objective or objectives which failed to instruct the learners successfully, the test item needs to be re-written to allow for a clear observation of each of the objectives. The use of several test items which are more specific to each of the objectives would be beneficial.

These sections of the instructional method will then need to be re-evaluated in a subsequent analysis.

Test question 9

Test question 9 relates to objective 2.1.3. For this question no gain or decrease in means was observed. The sample size for this set of questions was two. A closer look at the individual scores for the two subjects indicate similar results. Both subjects scored a 2 out of 3 on both the pretest and posttest. As the same question was used to measure the same skill for the harmonic and melodic minor scales, the results of those test questions were reviewed as well to help provide useful information. The objective for all 3 test questions measured the subjects' ability to play scales on individual strings. The corresponding test questions and objectives are test question 15 (objective 2.2.3) and test question 21 (objective 2.3.3). Test question 9 referred to the major scales, test question 15 referred to the harmonic minor scale, while test question 21 referred to the melodic minor scale. For all three, except for the quality of the scale, the exact same question was posed. One would normally expect the opposite to occur. As the major scales are usually the stronger of all three scale types, one would expect to measure weaknesses with these scales. The pretest scores for all three test questions indicate that weaknesses were observed in harmonic and melodic minor scales.

There are several conclusions one might draw from this information. The first observation is that the number of subjects posed a problem. As only two subjects

participated in the evaluation of this section of the instructional method, the potential for subject error is extremely high. The possibility that the subjects did not spend much time on this area of the instructional method is one possible explanation. Another is that each of them found particular problems with the question which is not representative of other learners in this sample. Based on the results of the other two test questions, test questions 15 and 21, which both measured gains of 40% or more, no modifications will be made. In subsequent evaluations, this assumptions should be verified.

Test question, 11

Test question 11 corresponds to objective 2.1.5. This objective deals with major scale modes played using one octave positions. Only two subjects participated in the evaluation of this section of the instructional method as well. Again, the potential for subject error is extremely high. A closer look was deemed a wise choice as modes are generally confusing to most learners studying jazz. As there were gains measured with the major scale itself using one octave fingerings, the introduction of the modes are most likely the reason no gains were achieved. There were also small gains or no gains measured on other questions which deal with modes (test questions 12 and 24). With the understanding that modes are often an area of difficulty and confusion, all objectives in the instructional method on modes should be reviewed. It would be a good idea to try to develop lessons on modes which provide a number of approaches. Although there were several approaches presented for playing scales and modes, in

terms of fingerings and references to the guitar fingerboard, only one perspective was provided in the explanation of how modes are derived. A presentation of the derivation of modes from the various scales which adheres to the principles of flexibility in conceptual understanding is needed. Once again, this would allow one to reach a wider range of backgrounds. As there were only two subjects who used this section of the instructional method, the likelihood that the perspective presented in the method was not familiar to these two particular learners is high. Changes should be made in this respect and subsequently followed up with more evaluation.

Test question 12

Test question 12 corresponds to objective 2.1.6. This objective has two components: modes and vertical scale playing. Both subjects did not make gains in vertical scale playing as cited in the discussion of test question 9 and thus no further comments will be made in this area. Both subjects did not make gains in mode playing as well. The revisions cited in the discussion of question 11 regarding modes should also be implemented for this objective.

Test question 22

This test question corresponds to objective 2.3.4. For this test question, a gain of 13.33% was measured. Although some gains were made, they fall short of the 20% criterion established. There are once again two elements to consider in evaluating the nature of the small gain in mean score. The components of the objective are one

octave positions and harmonic minor scales. As with the two other objectives which include the use of one octave scales (objectives 2.1.4 and 2.2.4), both measured substantial gains from pretest to posttest; this element will be ruled out. To most learners, the harmonic minor scale is a more difficult scale as compared to the major and melodic minor scales. The low gain in mean scores most likely signifies difficulties with the scale overall. The possibility of enhancing or supplementing sections on harmonic minor should be considered.

Test question 24

This test question corresponds to objective 2.3.6. No gains from pretest to posttest were measured. Once again, the problem of modes is presented. Harmonic minor modes are slightly more ambiguous than major. Revisions cited in recommendations for test question 9 should also be implemented here.

Test question 25

This test question corresponds to objective 3.1. A gain of 16.67% was measured from pretest to posttest. This is slightly under the 20% gain which has been established. For this objective, the learners were required to extract arpeggios from major and minor scale forms. A competent knowledge of scale forms is essential in this task. The measures from this same group of subjects for scale form performance indicate an appreciable knowledge in this area. The gains for test question 26 which is also within the arpeggio realm indicates a substantial gain in score from pretest to

posttest (33.43%). It is probable that this perspective on deriving fingerings for arpeggios was a new one for these learners. It is also possible that this same perspective might be unfamiliar to many of the learners in this target group. As such, more exercises on extracting arpeggios from scale fingerings could be incorporated into the instructional method.

Attitude questionnaire

The overall positive responses obtained from the attitude questionnaire signify that the instructional method presented a clear and intelligible delivery of instruction. The subjects responded favorably to questions relevant to the quality and clarity of the diagrams, musical examples and recorded examples. As an instructional designer, it was important to know whether the medium and layout of the method were comprehensible and appropriate for the content of the method.

Of particular interest to this author was the use of the recorded examples. As this can be one of the more costly mediums in the production of a method, the feelings and effectiveness of the audio portion was of concern. Although the subjects did rate the quality of the audio examples highly, their usefulness was rated as only slightly helpful (64.3%). The recorded examples were primarily a performance of the written musical examples. Comments solicited from the subjects informally indicated that the tempos were too fast for the majority of the examples and that the inclusion of recorded background for use as a practice vehicle would have been helpful.

An instructional method which includes information in the form of text or graphics allows the learner the opportunity to look at the material and assimilate it at

their own rate. In the case of musical examples which are presented in written form (musical notation) the learner can examine and play the examples at a tempo which is within their performance abilities. The use of recorded examples does not afford the same liberties. As each recorded example will be played at a specific speed, a tempo will be imposed on the learner. Several problems can arise because of this. For some, the tempo may be too fast, and for others, it may be too slow. In the formative stages of learning one of the objectives, the tempo of the recorded examples may be too fast for the learner and end up discouraging her or him.

There are several possible solutions which will need to be addressed. A simple solution, which would be the least costly, is to include several tempos for each example. This would take into account the range in levels of the learners, as well as to allow the learners to progress from one level to the next. Although other media exists which would allow the learners to adjust the tempo themselves, MIDI files and music software for computers, these solutions would be both costly and less accessible to this particular group of learners. As technology in music is moving forward very rapidly, any future developments of this instructional method will need to consider all technological alternatives.

The final questions of the attitude questionnaire were used to gage the learners' overall feelings about the book. The results indicate that they both liked using the method and felt that they learned a fair amount. Responses indicated that 85.7% of the subjects would recommend the book to friends or colleagues. This suggests that they felt it was useful to them and would be so to other learners.

Conclusion

The purpose of this thesis was to design, develop and evaluate an instructional method for jazz guitar. The purpose in evaluating the instructional method was to measure the overall effectiveness of the method against an expected outcome. In the areas of the method where substantial gains were measured, they were accepted as effective, and where low gains were measured, the materials were accepted as not being effective. In the case of the latter, the materials were reviewed and recommendations for revision were formulated. The conclusions are that the instructional method was effective overall, but that a number of revisions are required prior to the next stage of evaluation.

The design of the instructional method incorporated a number of design components from the Dick and Carey model, (1990) and constructivist theories of Merrill (1990) and Jonassen (1990). A second purpose was to ascertain the effectiveness of the constructivist components in the development of the instructional material. To the best of the author's knowledge, no studies have been done which apply constructivist theories to instruction in jazz guitar. The results of the evaluation of this method suggest that this may be an effective formula in the development of self-instructional jazz material. Significant contributions to the development of instructional materials in jazz education may lie in this area.

The instructional method was designed to present the material in a fashion which provides the learners with multiple perspectives of the material. This design component was included in hopes that the method would accommodate a wider

variety of learner backgrounds and approaches as well as to foster a deeper understanding of the content. The results of the attitude questionnaire and the overall effectiveness of the instructional method suggest that this approach was received favorably by the learners, and that it was effective in the delivery of instruction. Future evaluations should attempt to verify this point more thoroughly. Based on the immediate conclusions, further revisions of the method will incorporate this approach more widely.

The results revealed that even though multiple perspectives were formulated for all objectives, a single perspective nevertheless predominated in several areas of the instruction, most notably in the areas which dealt with modes. Although the modes were presented using 2 techniques, one octave fingerings and scale positions, the explanation of the origins of the modes was presented based on one theoretical model. Not only is it important to present multiple perspectives when instructing learners to execute modes on the guitar fingerboard, but also of equal importance is the presentation of multiple perspectives when developing the learner's conceptual understanding of the modes. Instructional designers who anticipate the inclusion of modes in future materials production in the jazz area should consider that a careful and thorough discussion of the modes needs to be included. The inclusion of a multi-perspective approach to the presentation of the modes will most likely be beneficial.

Informal discussions with several of the subjects after the posttest indicated a willingness to continue using the method on their own. They found the method to be of value in their own personal musical development. In order for the method to be

effective as a self-instructional learning package, the learners must be motivated to use the method. These positive responses indicate a strong likelihood that the learners will use the method on their own. As such, one can assume that its implementation into the regular curriculum of private study would be successful in addressing the initial problem of the reduction of contact time from 60 to 45 minutes. If the learners use the method on their own, they will be more prepared for their instrumental lessons and therefor allow for a more effective use of the available time.

The results and feedback from the attitude questionnaire were helpful in identifying areas which failed to meet the expected outcome of the instruction. The evaluation process in general has provided more information regarding the skills and attitudes of the target audience. A greater understanding of strengths and weaknesses has been attained. The information gathered in this thesis may prove beneficial to other authors who wish to develop self-instructional methods in this area.

As the evaluation process used was not exhaustive, further evaluation should be conducted. The evaluation used included both small group evaluation and one on one evaluation techniques. The one on one evaluation was conducted prior to this thesis. The use of Subject Matter Expert (SME) evaluation was not formally conducted. Although this author is an expert in this area of knowledge, the insight and opinions of other SME's would no doubt provide valuable information which could lead to a more diversified and comprehensive instructional method.

The evaluation of this instructional method would have offered more insightful and accurate results had there been more subjects available and a longer trial period.

An ideal situation would include a trial period of approximately 3 months and a larger *N* of perhaps 30 to 40 subjects. This would allow for several improvements in the evaluation. A longer trial period would allow the subjects to cover more ground in the instructional method. In such a case, it might be possible for the subjects to go through as much as half of the method. This is important as it implies that subjects would do larger sections of the book and less division of the subjects into groupings would result. If the method were divided into two sections, this would mean that the total *n* per group could then be 15 - 20 subjects. This would alleviate many of the shortcomings of the evaluation conducted in this thesis which was tainted by a small sample size. Given the total enrollment in any given university music program, one can not expect to find more subjects than the suggested 30 to 40. The possibility of using subjects from various universities is an option, but discrepancies in the level of the subjects may pose a problem. As this particular method was designed around a specific group of subjects in a particular setting, using a sample from this population is more representative of the expected outcome of the method.

Despite the weaknesses of the evaluation process, a substantial amount of information has been obtained which has indicated both positive features and shortcomings in the production of the instructional method. In conclusion, the materials produced are valuable in that they were successful in reaching their end. The revisions cited should be implemented and further and more extensive evaluation should also be conducted.

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Appendix A

Pretest and Posttest

Chords

1. Write the following 7th chords in the inversions indicated.

Fmaj7 (root position)

Cm7 (1st inversion)

Am7b5 (2nd inversion)

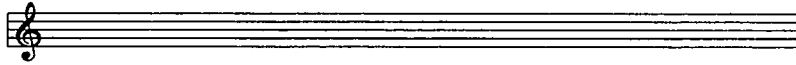
Bo7 (3rd inversion)

Bb7 (root position)

Am6 (1st inversion)

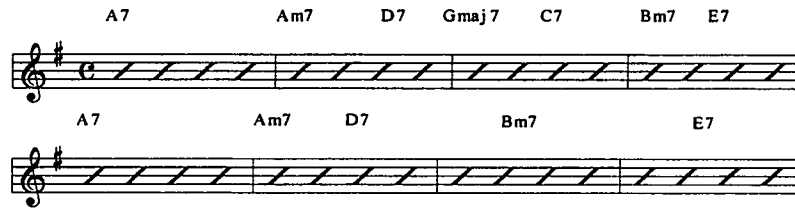
D6 (2nd inversion)

Em(maj7) (3rd inversion)

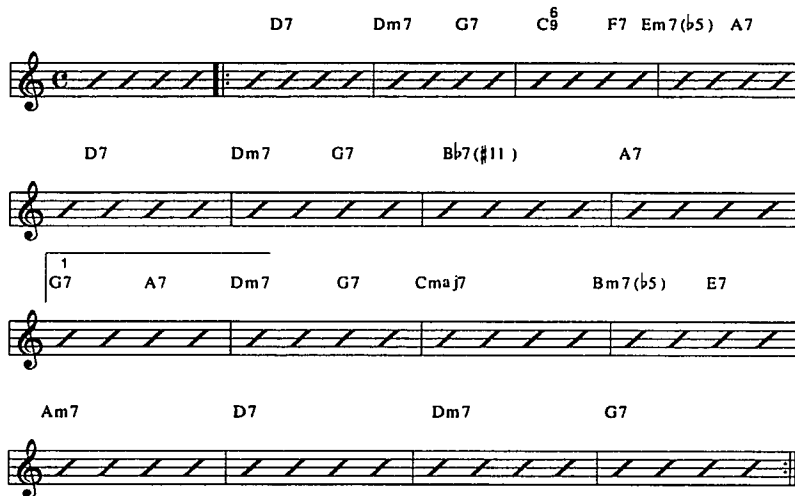


2. Play Fmaj7, Cm7 and Am7b5 in 4 inversions using drop 2 voicings.

3. List the available extensions for each chord in the following progression.



4. Play the following chord progression on the guitar. Focus on selecting voicings which will create a melodically interesting line. You can use extensions and rhythms as much as you want.



Scales

Major

1. Play the Eb major scale in 5 positions.
2. Play the D major scale on the high E string and the Eb major scale on the G string.
3. Play one octave of the Eb major scale in 4 ways using each of the 4 fingers to play the root.
4. Play Bb mixolydian in 2 positions (3rd and 8th)
5. Play one octave of the G phrygian mode in 4 ways using each of the 4 fingers to play the root.
6. Play E aeolian on the high E string.

Harmonic minor

1. Play the C harmonic minor scale in 5 positions.
2. Play the G harmonic minor scale on the high E string and the D harmonic minor on the G string.
3. Play one octave of the F harmonic minor scale in 4 ways using each of the 4 fingers to play the root.
4. Play the 5th mode of the harmonic minor scale where C is the root of the mode in 2 positions. (3rd and 8th)
5. Play one octave of the 5th mode of the harmonic minor scale where C is the root of the mode. Play the mode in 4 ways using each of the 4 fingers to play the root.
6. Play 5th mode harmonic minor scale starting on the note G on the high E string.

Melodic minor

1. Play the A melodic minor scale in 5 positions.
2. Play the D melodic minor scale on the high E string and the F melodic minor on the G string.
3. Play one octave of the F melodic minor scale in 4 ways using each of the 4 fingers to play the root.

4. Play Bb lydian b7 mode in 2 positions (5th and 8th)
5. Play one octave of the C super locrian mode in 4 ways using each of the 4 fingers to play the root.
6. Play the C lydian b7 mode on the high E string.

Arpeggios

1. Using the major and minor scale fingerings, play 2 octaves of the Fmaj7, Bb7 and Gm7 arpeggios in any position and with any chord tone as the lowest and highest note.
2. Play one octave of the Em7 arpeggio in 4 ways using each of the 4 fingers to play the root.

Posttest

Chords

1. Write the following 7th chords in the inversions indicated.

Fo7(root position)

A7(1st inversion)

Em7b5 (2nd inversion)

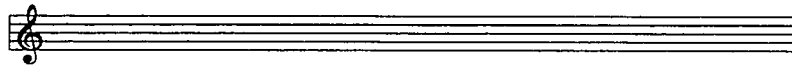
Bbmaj7 (3rd inversion)

Am(maj7)(root position)

Gb6(1st inversion)

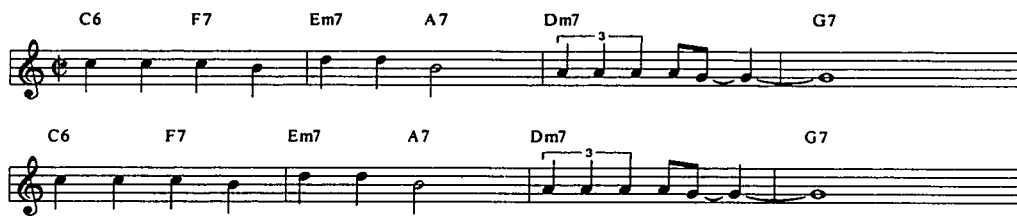
Dm6 (2nd inversion)

Ebm7(3rd inversion)



2. Play Gm7, A7 and Bbmaj7 in 4 inversions using drop 2 voicings.

3. List the available extensions for each chord in the following progression.



4. Play the following chord progression on the guitar. Focus on selecting voicings which will create a melodically interesting line. You can use extensions and rhythms as much as you want.

F#m7(b5) B7 Emin7 F#m7(b5) B7 Emin7
 Amin7 D7 G6 Emin7 CMaj7 Amin7 D7
 F#m7(b5) B7 Emin7 F#m7(b5) B7 Emin7
 Amin7 D7 G6 Emin7 CMaj7 Amin7 D7

Scales

Major

1. Play the D major scale in 5 positions.
2. Play the Bb major scale on the high E string and the G major scale on the G string.
3. Play one octave of the F major scale in 4 ways using each of the 4 fingers to play the root.
4. Play C mixolydian in 2 positions (3rd and 8th)
5. Play one octave of the B phrygian mode in 4 ways using each of the 4 fingers to play the root.
6. Play C aeolian on the high E string.

Harmonic minor

1. Play the A harmonic minor scale in 5 positions.
2. Play the C harmonic minor scale on the high E string and the F harmonic minor on the G string.
3. Play one octave of the G harmonic minor scale in 4 ways using each of the 4 fingers to play the root.
4. Play the 5th mode of the harmonic minor scale where A is the root of the mode in 2 positions. (3rd and 8th)

5. Play one octave of the 5th mode of the harmonic minor scale where A is the root of the mode. Play the mode in 4 ways using each of the 4 fingers to play the root.
6. Play 5th mode harmonic minor scale starting on the note B on the high E string.

Melodic minor

1. Play the G melodic minor scale in 5 positions.
2. Play the A melodic minor scale on the high E string and the D melodic minor on the G string.
3. Play one octave of the E melodic minor scale in 4 ways using each of the 4 fingers to play the root.
4. Play F lydian b7 mode in 2 positions (5th and 8th)
5. Play one octave of the Bb super locrian mode in 4 ways using each of the 4 fingers to play the root.
6. Play the G lydian b7 mode on the high E string.

Arpeggios

1. Using the major and minor scale fingerings, play 2 octaves of the Dmaj7, B7 and Am7 arpeggios in any position and with any chord tone as the lowest and highest note.
2. Play one octave of the Gm7 arpeggio in 4 ways using each of the 4 fingers to play the root.

Appendix B

Attitude Questionnaire and Responses

Attitude Questionnaire and responses

1. Your age is:

☐ 18-20
7.1%

☐ 21-23
50%

☐ 24-25
14.3%

☐ 26-30
7.1%

☐ over 30
21.4%

2. You are currently completing your:

☐ qualifying year
7.1%

☐ 1st year
42.9%

☐ 2nd year
35.7%

☐ 3rd year
14.3%

☐ 4th year or more
0%

3. Number of credits you are enrolled in this year.

☐ 6-12
7.1%

☐ 13-18
14.3%

☐ 19-24
28.6%

☐ 24-30
50%

☐ over 30
0%

4. Are you currently taking private study in jazz guitar?

☐ yes
78.6%

☐ no
21.4%

5. Do you use an assigned text?

☐ yes
21.4%

☐ no
78.6%

If so, which one(s)?

6. Have you used any guitar methods in the past?

☐ yes
50%

☐ no
50%

If yes, list them.

7. Did you study from a guitar method before coming to Concordia University?

☐ yes
21.4%

☐ no
78.6%

If you answered yes, what is the name of the book(s)?

List the pages you were asked to do for this study.

8. How would you rate the explanations and presentation of material in this book?

- | | |
|--|-------|
| <input type="radio"/> difficult to understand | 0% |
| <input type="radio"/> slightly difficult to understand | 21.4% |
| <input type="radio"/> clear | 21.4% |
| <input type="radio"/> very clear | 57.1% |

9. How would you rate the diagrams used in this book?

- | | |
|--|-------|
| <input type="radio"/> difficult to understand | 0% |
| <input type="radio"/> slightly difficult to understand | 7.1% |
| <input type="radio"/> clear | 28.6% |
| <input type="radio"/> very clear | 64.3% |

10. How would you rate the recorded examples used in this book?

- | | | | |
|-----------------------------------|--|-------------------------------|------------------------------------|
| <input type="radio"/> not helpful | <input type="radio"/> slightly helpful | <input type="radio"/> helpful | <input type="radio"/> very helpful |
| 7.1% | 64.3% | 21.4% | 7.1% |

11. How would you rate the quality of the recorded examples used in this book?

- | | | | |
|----------------------------|----------------------------------|----------------------------|---------------------------------|
| <input type="radio"/> poor | <input type="radio"/> acceptable | <input type="radio"/> good | <input type="radio"/> very good |
| 0% | 7.1% | 57.1% | 35.7% |

12. If you have used other guitar methods, would you rate this method as being:

- | | | |
|--|--------------------------------------|--|
| <input type="radio"/> less informative | <input type="radio"/> about the same | <input type="radio"/> more informative |
| 7.1% | 35.7% | 28.6% |

** 4 cases missing for a total of 28.6%*

13. Having used the book, would you say that you learned:

- | | |
|--|-------|
| <input type="radio"/> very little or nothing | 0% |
| <input type="radio"/> a little | 7.1% |
| <input type="radio"/> a fair amount | 71.4% |
| <input type="radio"/> very much | 21.4% |

14. Do you think that this book might be useful as a reference in any future study in jazz guitar?

- | | |
|---------------------------------------|-------|
| <input type="radio"/> not at all | 0% |
| <input type="radio"/> slightly useful | 7.1% |
| <input type="radio"/> useful | 21.4% |
| <input type="radio"/> very useful | 71.4% |

15. How well did you like using the book?

- ☐ not at all 0%
☐ neutral 21.4%
☐ liked it 37.5%
☐ liked it a lot 42.9%

16. Would you recommend the book to friends or colleagues?

- ☐ yes 85.7% ☐ no 7.1%

* 1 case missing for a total of 7.1%

Table 1

<i>Question</i>	<i>N</i>	<i>Mean</i>	<i>Min</i>	<i>Max</i>	<i>Highest</i>	<i>Std Dev</i>	<i>S.E.</i>
1	14	2.86	1	5	5	1.35	.36
2	14	2.71	1	5	5	1.14	.30
3	14	3.21	1	4	5	.97	.26
4	14	1.21	1	2	2	.43	.11
5	14	1.79	1	2	2	.43	.11
6	14	1.50	1	2	2	.52	.14
7	14	1.79	1	2	2	.43	.11
8	14	3.36	2	4	4	.84	.23
9	14	3.57	2	4	4	.65	.17
10	14	3.29	2	5	4	.73	.19
11	14	3.29	2	4	4	.61	.16
12	10	2.30	1	3	3	.67	.21
13	14	3.14	2	4	4	.53	.14
14	14	3.64	2	4	4	.63	.17
15	14	3.21	2	4	4	.80	.21
16	13	1.08	1	2	2	.28	.08

Appendix C

Raw Data

Pretest

Subject #	question number								
	1	2	3	4	5	6	7	8	9
1	6	2	2	2	1	2	3	2	3
2	5	2	2	1	2	1	2	2	2
3	5	2	3	2	1	2	1	2	2
4	4	2	2	2	2	1	2	2	3
5	4	1	2	2	1	1	2	1	2
6	4	1	1	1	1	1	1	1	2
7	4	3	2	1	1	2	3	2	2
8	8	2	2	3	3	3	2	3	3
9	8	1	2	1	1	1	1	1	2
10	7	2	2	1	1	1	3	2	2
11	5	1	1	1	2	2	2	1	2
12	8	3	2	2	3	3	2	2	2
13	7	1	1	2	2	2	2	2	2
14	3	2	2	2	2	3	3	2	3

Subject #	question number								
	10	11	12	13	14	15	16	17	18
1	3	2	3	2	1	2	1	1	1
2	1	1	2	1	2	2	1	1	1
3	1	1	2	1	1	1	1	1	1
4	2	1	3	1	1	1	1	1	1
5	2	1	1	1	1	1	1	1	1
6	1	1	2	1	1	1	1	1	1
7	1	1	2	1	2	1	1	1	1
8	2	2	3	1	2	2	2	1	2
9	1	1	2	1	1	1	1	1	1
10	2	1	2	1	1	1	1	1	1
11	2	1	2	1	1	1	1	1	1
12	1	1	2	2	1	1	1	1	1
13	2	2	2	1	1	1	1	1	1
14	2	1	2	2	1	2	1	1	1

Subject #	question number							
	19	20	21	22	23	24	25	26
1	2	2	2	1	1	2	2	2
2	2	1	2	1	1	2	2	2
3	1	1	1	1	1	1	1	2
4	1	1	1	1	1	1	2	1
5	1	1	1	1	1	1	1	2
6	1	1	1	1	1	1	1	2
7	1	1	1	1	1	1	2	3
8	2	2	2	2	1	3	1	2
9	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	2
11	1	1	2	2	1	1	2	2
12	1	2	2	1	1	2	2	2
13	1	1	1	1	2	1	2	1
14	1	2	2	1	1	2	2	3

Posttest

Subject #	question number								
	1	2	3	4	5	6	7	8	9
1	3	2	.	.	.	.	.	.	.
2	.	.	2	2	2	2	.	.	.
3	.	.	.	.	.	.	.	.	.
4	.	.	2	3	2	3	.	.	.
5	.	.	2	2	3	2	.	.	.
6	5	2	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	.	.
9	.	.	.	.	.	.	2	3	2
10	.	.	.	.	.	.	.	.	.
11	6	2	.	.	.	.	.	.	.
12	.	.	.	.	.	.	.	.	.
13	.	.	.	.	.	.	3	3	2
14	7	3	.	.	.	.	.	.	.

Subject #	question number								
	10	11	12	13	14	15	16	17	18
1
2
3	.	.	.	2	2	2	2	2	2
4
5
6
7	.	.	.	1	2	2	2	2	2
8	.	.	.	3	2	2	3	2	2
9	2	1	2	.	.	.	.	.	.
10	.	.	.	3	2	3	1	1	2
11
12	.	.	.	3	2	3	3	2	2
13	3	2	2	.	.	.	.	.	.
14

Subject #	question number							
	19	20	21	22	23	24	25	26
1	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.
3	2	1	3	2	2	1	.	.
4	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.
7	1	2	2	1	1	1	.	.
8	3	3	3	2	2	3	.	.
9	.	.	.	.	.	.	2	2
10	2	3	3	1	1	1	.	.
11	.	.	.	.	.	.	.	.
12	3	2	3	2	1	2	.	.
13	.	.	.	.	.	.	2	2
14	.	.	.	.	.	.	.	.

Attitude Questionnaire

Subject #	question number								
	1	2	3	4	5	6	7	8	9
1	2	2	4	1	2	1	1	2	4
2	5	2	2	2	2	1	1	3	4
3	2	2	1	1	2	2	2	2	4
4	5	5	4	2	2	2	2	3	2
5	5	3	2	2	2	1	1	1	4
6	2	3	3	1	2	1	2	1	4
7	2	3	4	1	2	1	2	2	3
8	4	5	4	1	1	2	2	4	4
9	3	3	3	1	2	1	2	1	2
10	2	3	3	1	1	2	2	.	4
11	1	2	4	1	2	1	2	1	3
12	2	1	4	1	2	2	2	4	4
13	3	2	3	1	1	2	2	4	2
14	2	2	4	1	2	2	2	.	3

Subject #	question number							
	10	11	12	13	14	15	16	17
1	4	5	3	2	3	4	4	1
2	4	3	3	3	3	4	3	1
3	4	3	4	3	4	4	4	1
4	2	3	3	2	2	2	2	2
5	4	4	4	2	3	3	4	1
6	4	3	3	3	3	4	3	1
7	3	3	3	1	4	4	3	1
8	4	4	3	.	3	3	4	1
9	3	4	4	3	3	3	3	1
10	4	3	3	.	4	4	4	1
11	4	2	4	2	3	4	2	1
12	4	3	4	.	3	4	2	.
13	3	3	2	2	3	4	3	1
14	3	3	3	.	3	4	4	1

Appendix D

Instructional Materials Development Plan

Development Plan

Objective 1.1

Identify and explain each of the 4 inversions of 7th chords.

information presentation

information

Explain and illustrate the concept of chord inversion. Illustrate the 4 inversions of a 7th chord.

examples

Example showing the 4 inversions of Cmaj7 and Cm7 in music notation.

student participation

practice items

Label the 4 inversions of each of the following chords.

feedback

Provide correct answer.

Objective 1.2

Identify and spell the 7th chord voicings for each chord type

information presentation

information

Explain and illustrate 8 types of 4 note chords. (maj7, min7, dom7, m7b5, m(maj7), maj6, m6, dim7) Note the chord qualities of the 3rd, 5th and 7th in each chord type.

examples

Example of each chord type. Include a table of chords and their associated qualities.

student participation

practice items

Spell chords in all inversions in various keys.

feedback

Provide answers

Objective 1.3

Identify and spell drop 2 chord voicings.

information presentation

information

Explain and illustrate drop 2, 7th chord voicings.

examples

C7 in closed position and in drop 2 open voicings.

student participation

practice items

Voice various chord examples in drop 2 position.

feedback

Provide answers.

Objective 1.4

Apply drop 2 chord voicings to various chord progressions.

information presentation

information

Example of chord progression with given top note.

examples

Example of chord progression with given top note.

student participation

practice items

Worksheets on applying drop 2 chord voicing to chord progressions.

feedback

Recorded and notated answers.

Objective 1.5

Identify the available extensions for each chord function.

information presentation

information

Define extensions. Present rules for determining extensions for each chord type. This will be limited to diatonic chords, secondary dominants, melodic minor and harmonic minor chords.

examples

Tables of chords, secondary dominants (including their related minor chords) melodic minor and harmonic minor chords.

student participation

practice items

Students will be given diatonic chord for the major scale, melodic minor scale and harmonic minor scale. They must determine the available extensions for each chord in each of the scales.

feedback

Provide answers and explanations of exceptions.

Objective 1.6

Analyze and explain several common jazz chord progressions.

information presentation

information

Simple roman numeral analysis which includes diatonic chords, secondary dominants, related minor 7th chords, a several frequently used chords from the parallel minor scale.

examples

Present a pieces which include an harmonic analysis.

student participation

practice items

Exercise on harmonic analysis.

feedback

Provide answers.

Objective 1.7

Add extensions to drop 2 chord voicings.

information presentation

information

Explain and illustrate the how the 9, b9 and #9 can replaces the root and b5 (#11), #5 (b13) and 13 can replace the 5th. Include chart on chord type and related available extensions.

examples

Example diagrams which illustrate replacing the root of the chord with the 9th. (include only one type of drop 2 chord: dom7)

student participation

practice items

Determine the drop 2, 9th voicings for m7, maj7, m(maj7), maj6, m6, dim7)

feedback

Provide answers.

Objective 1.8

Play several common chord progressions on their guitar using drop 2 chord voicings and extensions.

information presentation

information

Combining drop 2 voicings, chord extensions and rhythmic ideas to embellish a chord progression.

examples

Step by step procedure of how to embellish a chord progression.

student participation

practice items

Provide several chord progressions from the repertoire of jazz standards. Students must find the appropriate voicings, extensions and rhythmic embellishments.

feedback

Provide examples which illustrate all of the above components..

Objective 1.9

Combine his/her knowledge of drop 2 chord voicings, extensions and chord progressions to create a musical accompaniment in which the chords, inversions and extensions combine to produce musical phrases. The phrases should move predominantly by tones and semi-tones and in a clear direction.

information presentation

information

Present information on sequencing chord voicings to produce cohesive melodic phrases.

examples

Provide several which illustrate good movement and use of extensions.

student participation

practice items

Provide several examples which contain top note melodies to be harmonized with drop 2 voicings and extensions.

feedback

Provide 6 examples which illustrate melodic movement in the top note, use drop 2 voicings, include extensions and rhythms.

Objective 2.1

Define major scale fingering types.

information presentation

information

Vertical and horizontal fingerings explained. Interval relationship and degree qualities.

examples

Diagrams comparing vertical and horizontal scale concepts.

student participation

practice items**feedback**

Objective 2.1.1

Play major scales in 5 positions and in 12 keys using vertical fingering patterns.

information presentation

information

Present various practice strategies.

examples

Scale fingering diagrams and position charts.

student participation

practice items

Learn scale fingerings on guitar fretboard. Practice each fingering in various keys and positions. Assign scale practice strategy to aid in learning fingerings.

feedback

recorded examples

Objective 2.1.2

Play major scale and mode patterns in 5 positions and in 12 keys using vertical fingering patterns and rhythms.

information presentation

information

Explain the value of combining a number of elements to scale practice.

examples

Scale pattern and rhythm combined. Provide recorded example.

student participation

practice items

Scale exercises employing patterns and rhythms.

feedback

Provided recorded examples for several examples.

Objective 2.1.3

Play major scales in 12 keys using horizontal fingerings.

information presentation

information

Scales The guitar can be played using a horizontal approach to. All scales can be played on all strings and in all keys on the guitar fingerboard.

examples

.Examples of several horizontal scale fingerings on the E and B strings.

student participation

practice items

Play through all keys using horizontal scale fingerings. Assign scale practice strategy to aid in learning fingerings.

feedback

Provide recorded examples.

Objective 2.1.4

Play major scales in 12 keys using all possible one octave fingering patterns.

information presentation

information

Explain one octave scale fingerings which use all strings and fingering combinations.

examples

Diagram illustrating all combinations of a major scale using all fingering combinations.

student participation

practice items

Locate and play all combinations of each of the following one octave scales on all strings and with all possible fingering combinations.

feedback

Provide charts for all possibilities in the key of G major.

Objective 2.1.5

Play one octave modes in 12 keys using all possible one octave fingering patterns.

information presentation

information

One octave mode fingerings using all strings and fingering combinations.

examples

Diagram illustrating one octave modes using all fingering combinations.

student participation

practice items

Locate and play all combinations of each of the following one octave modes on all strings and with all possible fingering combinations.

feedback

Provide charts for all possibilities in the key of G major.

Objective 2.1.6

Play one octave modes in 12 keys using all possible vertical fingering patterns.

information presentation

information

Mode fingerings derived from the 5 major scale fingerings.

examples

Diagram illustrating fingerings for modes in positions.

student participation

practice items

Locate and play all combinations of each of the modes in all 5 positions.

feedback

Provide charts for all possibilities in the key of G major.

Objective 2.2

Define melodic minor scales.

information presentation

information

Interval relationship and degree qualities.

examples

Melodic minor scale diagram and chart of degree qualities

student participation

practice items

Write melodic minor scales in several keys.

feedback

Provide answers

Objective 2.2.1

Play melodic minor scales in 5 positions and in 12 keys using vertical fingering patterns.

information presentation

information

Present various practice strategies.

examples

Scale fingering diagrams and position charts.

student participation

practice items

Melodic patterns, intervals

feedback

recorded examples

Objective 2.2.2

Play melodic minor scales patterns in 5 positions and in 12 keys using vertical fingering patterns and rhythms.

information presentation

information

Explain the value of combining a number of elements to scale practice.

examples

Scale pattern and rhythm combined. Provide recorded example.

student participation

practice items

Scale exercises employing patterns and rhythms.

feedback

Provided recorded examples for several examples.

Objective 2.2.3

Play melodic minor scales in 12 keys using horizontal fingerings.

information presentation

information

The guitar can be played using a vertical approach to scales. All scales can be played on all strings and in all keys on the guitar fingerboard.

examples

G major scale illustrated both horizontally and vertically.

student participation

practice items

G major scale horizontally on string 1. Improvisational exercises using recorded examples.

feedback

Provide recorded examples.

Objective 2.2.4

Play melodic minor scales in 12 keys using all possible one octave fingering patterns.

information presentation

information

One octave scale fingerings using all strings and fingering combinations.

examples

Diagram illustrating all combinations of a major scale using all fingering combinations.

student participation

practice items

Locate and play all combinations of each of the following one octave scales on all strings and with all possible fingering combinations.

feedback

Provide charts for all possibilities in the key of G major.

Objective 2.2.5

Play one octave melodic minor modes in 12 keys using all possible one octave fingering patterns.

information presentation

information

One octave mode fingerings using all strings and fingering combinations.

examples

Diagram illustrating one octave modes using all fingering combinations.

student participation

practice items

Locate and play all combinations of each of the following one octave modes on all strings and with all possible fingering combinations.

feedback

Provide charts for all possibilities in the key of G melodic minor.

Objective 2.1.6

Play melodic minor modes in 12 keys using all possible vertical fingering patterns.

information presentation

information

Mode fingerings derived from the 5 melodic minor scale fingerings.

examples

Diagram illustrating fingerings for melodic minor modes in positions.

student participation

practice items

Locate and play all combinations of each of the melodic minor modes in all 5 positions.

feedback

Provide charts for all possibilities in the key of G melodic minor.

Objective 2.3

Define harmonic minor scales.

information presentation

information

Interval relationship and degree qualities.

examples

Harmonic minor scale diagram and chart of degree qualities

student participation

practice items

Write harmonic minor scales in several keys.

feedback

Provide answers

Objective 2.3.1

Play harmonic minor scales in 5 positions and in 12 keys using vertical fingering patterns.

information presentation

information

Present various practice strategies.

examples

Scale fingering diagrams and position charts.

student participation

practice items

Melodic patterns, intervals

feedback

recorded examples

Objective 2.3.2

Play harmonic minor scales patterns in 5 positions and in 12 keys using vertical fingering patterns and rhythms.

information presentation

information

Explain the value of combining a number of elements to scale practice.

examples

Scale pattern and rhythm combined. Provide recorded example.

student participation

practice items

Scale exercises employing patterns and rhythms.

feedback

Provided recorded examples for several examples.

Objective 2.3.3

Play harmonic minor scales in 12 keys using horizontal fingerings.

information presentation

information

The guitar can be played using a vertical approach to scales. All scales can be played on all strings and in all keys on the guitar fingerboard.

examples

G major scale illustrated both horizontally and vertically.

student participation

practice items

G major scale horizontally on string 1. Improvisational exercises using recorded examples.

feedback

Provide recorded examples.

Objective 2.3.4

Play harmonic minor scales in 12 keys using all possible one octave fingering patterns.

information presentation

information

One octave scale fingerings using all strings and fingering combinations.

examples

Diagram illustrating all combinations of a major scale using all fingering combinations.

student participation

practice items

Locate and play all combinations of each of the following one octave scales on all strings and with all possible fingering combinations.

feedback

Provide charts for all possibilities in the key of G major.

Objective 2.3.5

Play one octave harmonic minor modes in 12 keys using all possible one octave fingering patterns.

information presentation

information

One octave mode fingerings using all strings and fingering combinations.

examples

Diagram illustrating one octave modes using all fingering combinations.

student participation

practice items

Locate and play all combinations of each of the following one octave harmonic minor modes on all strings and with all possible fingering combinations.

feedback

Provide charts for all possibilities in the key of G harmonic minor.

Objective 2.3.6

Play one octave harmonic minor modes in 12 keys using all possible vertical fingering patterns.

information presentation

information

Mode fingerings derived from the 5 harmonic minor scale fingerings.

examples

Diagram illustrating fingerings for harmonic modes in positions.

student participation

practice items

Locate and play all combinations of each of the modes in all 5 positions.

feedback

Provide charts for all possibilities in the key of G harmonic minor.

Objective 3.0

The learner should identify and define all maj7, min7, dom7, m7(b5), dim7 and m(maj7) arpeggios. The learner should play all maj7, min7, dom7, m7(b5), dim7 and m(maj7) arpeggios in all positions using one octave fingerings, and in all keys. The learner should demonstrate the ability to extract arpeggios from major and minor scale positions.

information presentation

information

examples

student participation

practice items

feedback

Objective 3.1

The learner should demonstrate the ability to extract arpeggios from major and minor scale positions.

information presentation

information

Illustrate the 7th arpeggios in each of the 5 major scale position fingerings.

examples

Diagram and music notation illustrating fingerings of the arpeggios.

student participation

practice items

The learner should locate the arpeggios for the remaining 4 positions. Practice playing arpeggios in the chord progressions provided.

feedback

Provide recorded examples.

Objective 3.2

The learner should identify and define all maj7, min7, dom7, m7(b5), dim7 and m(maj7) arpeggios. The learner should play all maj7, min7, dom7, m7(b5), dim7 and m(maj7) arpeggios in all positions using one octave fingerings, and in all keys.

information presentation

information

Illustrate the 7th arpeggios as played using the technique of one octave fingerings.

examples

Provide examples of one type of arpeggio in all possible positions and fingerings.

student participation

practice items

Play each of the arpeggio types discussed in every possible position and fingering.

feedback

Provide illustrations for several examples. There are too many to include all answers.

Appendix E

Jazz Guitar Method

Jazz Guitar Technique

Exploring Chords, Scales and Arpeggios

Michael Berard

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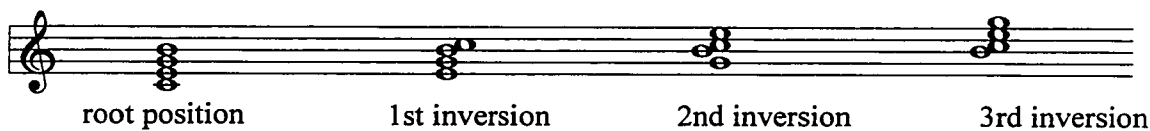
Part I

Chords

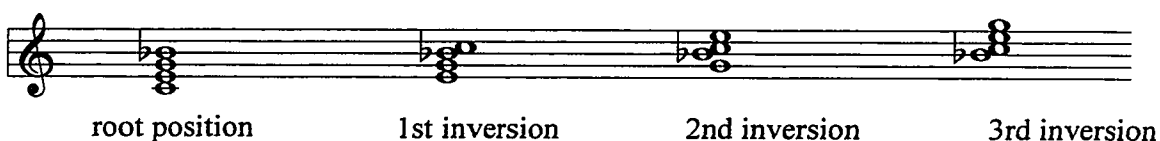
Chord Inversions (closed position)

There are 4 inversions of any 4 note 7th or 6th chord. The 4 inversions are as follows:

Cmaj7



C7



Exercises

Label each inversion for the following chord voicings. Label each as follows:

R = root position

1 = 1st inversion

2 = 2nd inversion

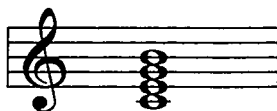
3 = 3rd inversion

Cmaj7	Fm7	Em7(b5)	A6
1. ____	2. ____	3. ____	4. ____
E7	Bbmaj7	Dm(maj7)	Go7
5. ____	6. ____	7. ____	8. ____
Bm7(b5)	C#m7	Dbmaj7	Ebm6
9. ____	10. ____	11. ____	12. ____
F7	F#m6	Abmaj7	Bo7
13. ____	14. ____	15. ____	16. ____

7th Voicings

The qualities of each of the 8 chord types we will be using are listed below.

maj7



3rd	major
5th	perfect
7th	major

dom7



3rd	major
5th	perfect
7th	minor

m7



3rd	minor
5th	perfect
7th	minor

m7(b5)



3rd	minor
5th	dim
7th	minor

m(maj7)



3rd	minor
5th	perfect
7th	major

maj6



3rd	major
5th	perfect
6th	major

m6



3rd	minor
5th	perfect
6th	major

dim7

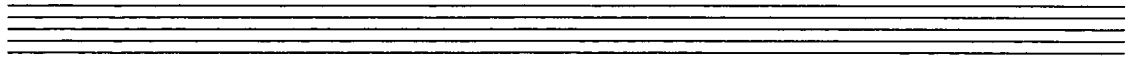


3rd	minor
5th	dim
7th	dim

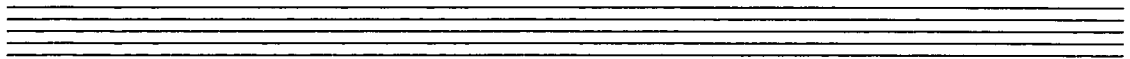
Exercises

Write the voicings for each of the 4 inversions of the following 7th chords.

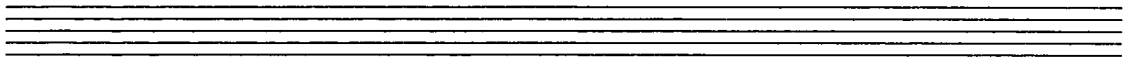
Dm7



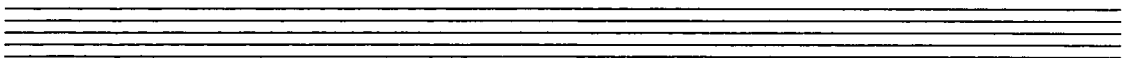
Bm7(b5)



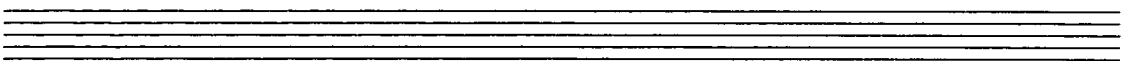
Fm(maj7)



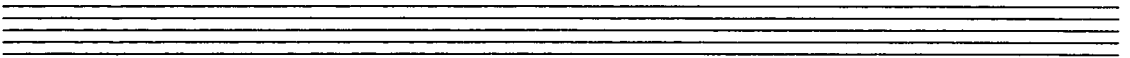
Eb6



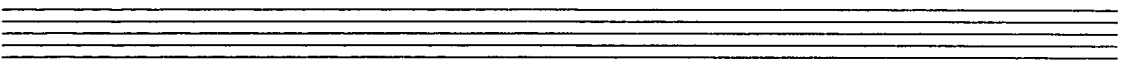
Ab6



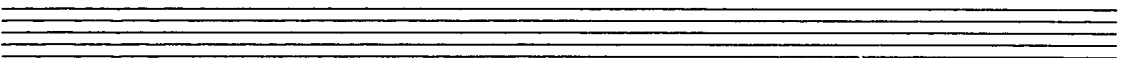
Bbm6



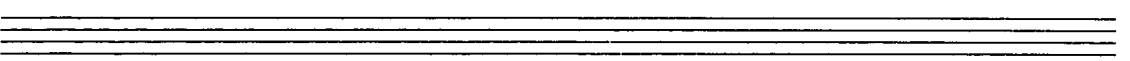
C7



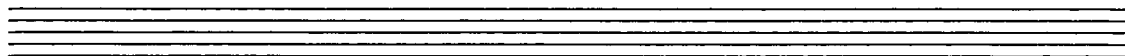
Gmaj7



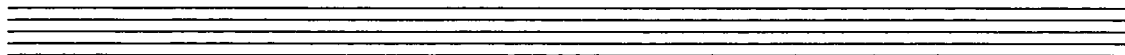
Gm7



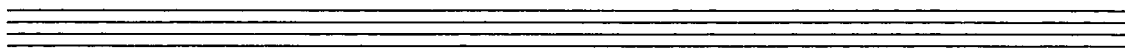
Co7



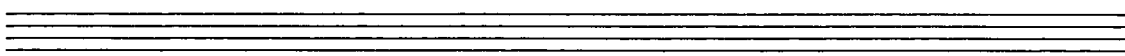
Dbmaj7



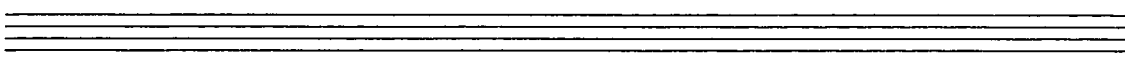
Ab7



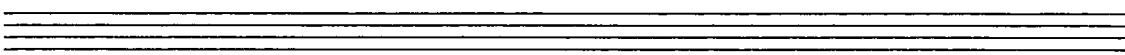
Fm7(b5)



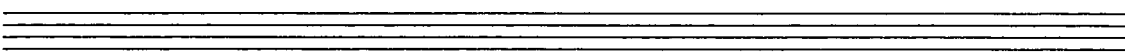
Bb6



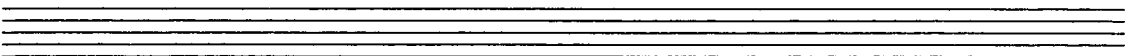
Gbm6



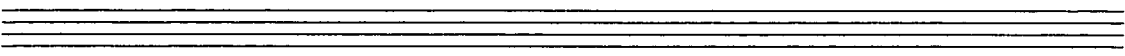
Cm7



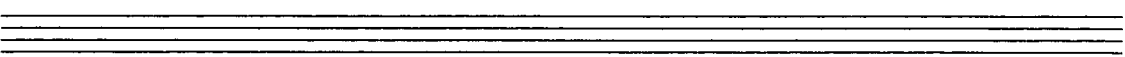
Fo7



Dm(maj7)



Cm7(b5)

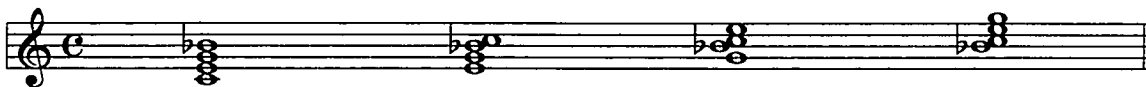


Drop 2 Chord Voicings

Drop 2 chord voicings are voicings which work well on the guitar. They contain the perfect spread of notes for the guitar's unique tuning. Most piano voicings do not work well on the guitar because they use smaller intervals. It is easy to see how with piano voicings, one would want to play notes which are closer together as this requires less stretching of the hand. On the guitar the opposite is true. As the guitar is tuned in fourths, voicings with larger intervals between chord tones are more suitable. Drop 2 voicings contain mostly of thirds, fourths and fifths with some tones and semi-tones.

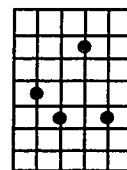
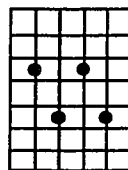
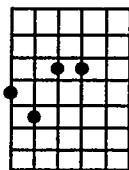
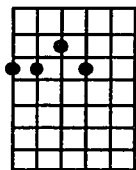
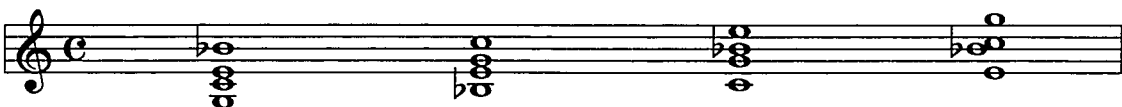
Drop 2 voicings are based on the four closed position voicings of a 4 note chord. In such a chord, the voices will be the soprano, alto, tenor and bass. These can also be referred to as the 1st, 2nd, 3rd and 4th voices where the soprano is voice 1 and the bass is voice 4. To construct a drop 2 chord voicing, simply lower the 2nd voice (alto) 1 octave. This will produce a voicing with more space between the voices.

The following example illustrates all inversions of C7 in closed position



Try playing any of these four voicings on the guitar. You instantly see that it is next to impossible to finger these voicings.

In this example the 2nd voice is dropped an octave lower to produce "Drop 2" voicings.



All chord diagrams do not in most cases indicate the correct positions. I find it preferable that the learner read the notes and find the correct position on the guitar. This helps in familiarizing oneself with the guitar fingerboard. All Drop 2 voicings will work on the guitar.

Learning to play Drop 2 chords

In learning to play drop 2 voicings, we will focus on the 4 inversions of each chord type (maj7, m7, dom7, m7b5, m(maj7), maj6, m6, dim7) across 3 sets of adjacent strings. This means you will learn 12 voicings for each of the chord types.

The page which follows contains the 12 voicings for C7. These voicings are presented in groups of 4 chords which corresponds to each of the 3 sets of adjacent strings. The first set uses strings 3, 4, 5 and 6 (lower 4 strings); the second set uses strings 2, 3, 4 and 5 (four middle strings); and the third set uses strings 1, 2, 3 and 4 (four high strings). I suggest you learn the voicings one set at a time or 4 chords at a time.

The following strategy is useful in learning drop 2 chord voicings.

Memorize the finger patterns for the first 4 voicings on a particular set of strings. (Any of the 3 will do.)

To help in memorization, you might use the following as a guide:

Learn all 4 voicings on the first set of strings.

Play all voicings on that string group starting from the lowest possible inversion.

As you play the chords, say the name of each chord's melody note.

Say the name of each chord's bass note.

Say the function of each chords melody note. ex. (Root, 3rd, 5th, 7th)

Say the function of each chord's bass note.

Repeat these activities for the next 2 sets of strings.

Play all 12 chords in sequence from lowest to highest

Drop 2 chord voicings

C7 (dom7)

The diagram illustrates 12 drop 2 chord voicings for C7 (dom7) on a 6-string guitar. Each voicing is shown as a 6-string grid and a corresponding musical staff notation in C major.

Row 1:

- Voicing 1: Grid shows notes on strings 1, 2, 3, 4, 5, 6. Staff notation shows C7 (dom7) in C major.
- Voicing 2: Grid shows notes on strings 1, 2, 3, 4, 5, 6. Staff notation shows C7 (dom7) in C major.
- Voicing 3: Grid shows notes on strings 1, 2, 3, 4, 5, 6. Staff notation shows C7 (dom7) in C major.
- Voicing 4: Grid shows notes on strings 1, 2, 3, 4, 5, 6. Staff notation shows C7 (dom7) in C major.

Row 2:

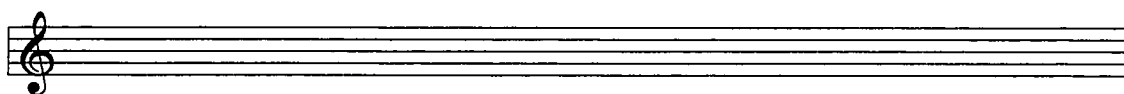
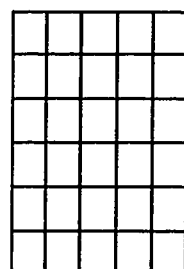
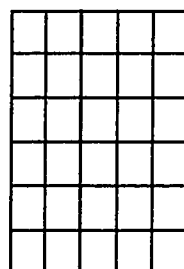
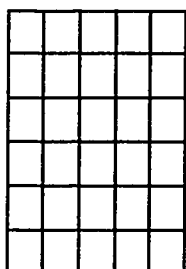
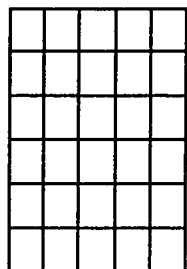
- Voicing 5: Grid shows notes on strings 1, 2, 3, 4, 5, 6. Staff notation shows C7 (dom7) in C major.
- Voicing 6: Grid shows notes on strings 1, 2, 3, 4, 5, 6. Staff notation shows C7 (dom7) in C major.
- Voicing 7: Grid shows notes on strings 1, 2, 3, 4, 5, 6. Staff notation shows C7 (dom7) in C major.
- Voicing 8: Grid shows notes on strings 1, 2, 3, 4, 5, 6. Staff notation shows C7 (dom7) in C major.

Row 3:

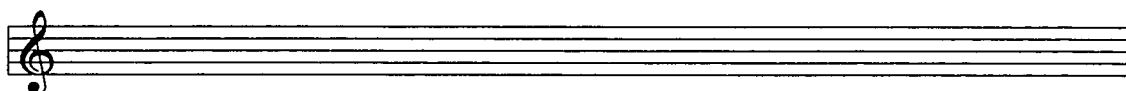
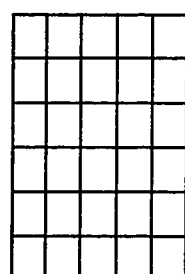
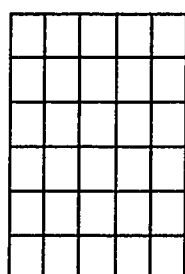
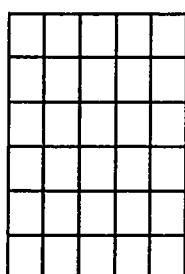
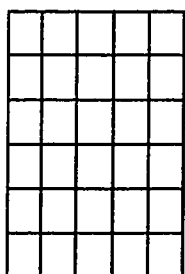
- Voicing 9: Grid shows notes on strings 1, 2, 3, 4, 5, 6. Staff notation shows C7 (dom7) in C major.
- Voicing 10: Grid shows notes on strings 1, 2, 3, 4, 5, 6. Staff notation shows C7 (dom7) in C major.
- Voicing 11: Grid shows notes on strings 1, 2, 3, 4, 5, 6. Staff notation shows C7 (dom7) in C major.
- Voicing 12: Grid shows notes on strings 1, 2, 3, 4, 5, 6. Staff notation shows C7 (dom7) in C major.

For each set of strings, write the drop 2 voicings for Cmaj7 on the staff and indicate the fingerings on the diagrams.

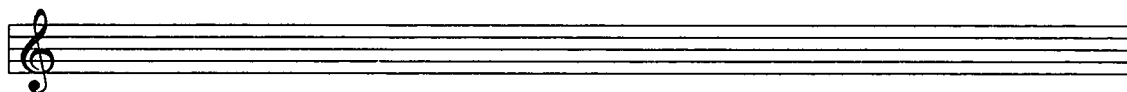
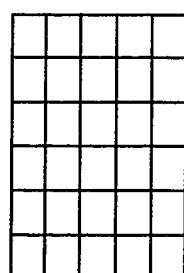
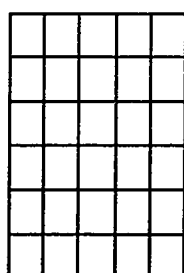
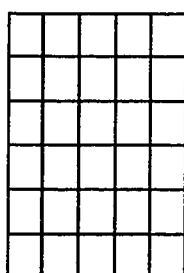
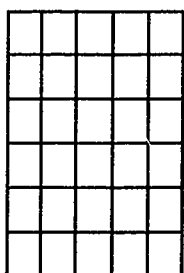
Low Strings



Middle Strings

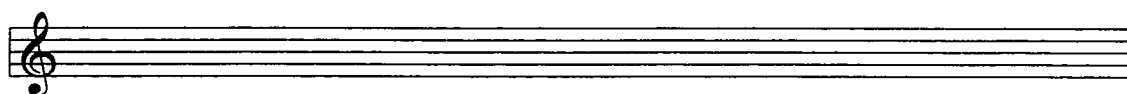
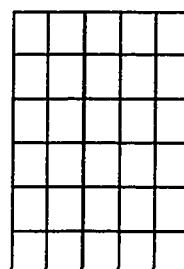
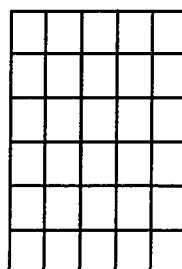
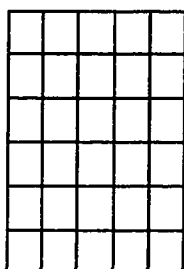
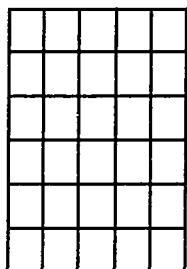


High Strings

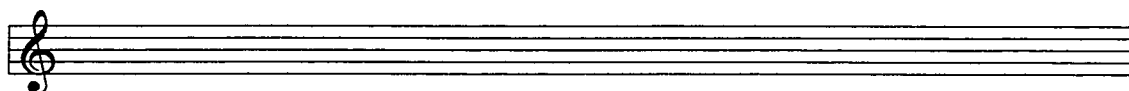
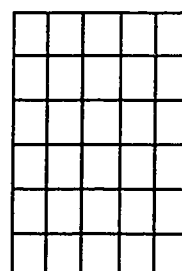
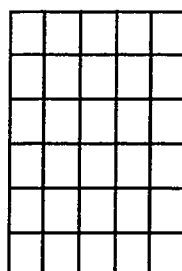
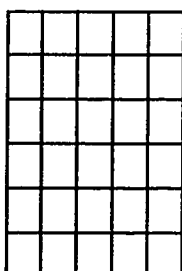
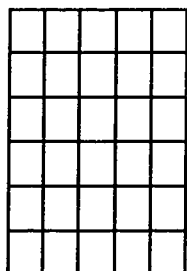


For each set of strings, write the drop 2 voicings for Cm7 on the staff and indicate the fingerings on the diagrams.

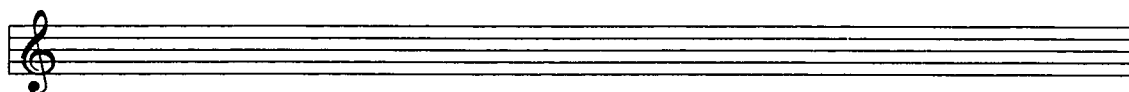
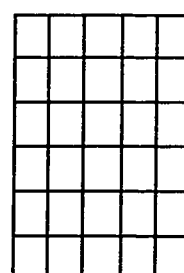
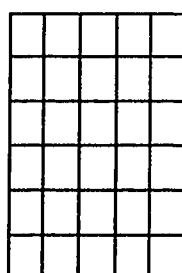
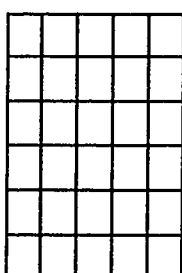
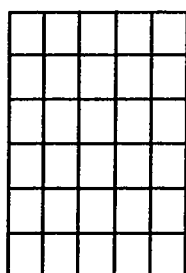
Low Strings



Middle Strings

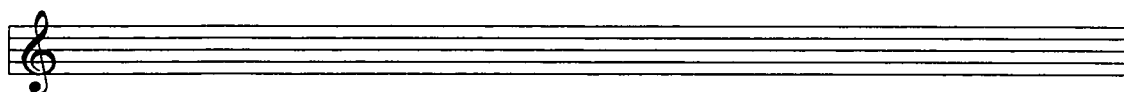
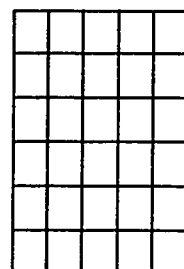
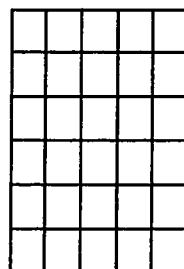
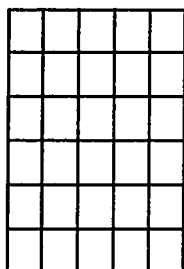
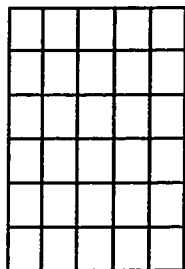


High Strings

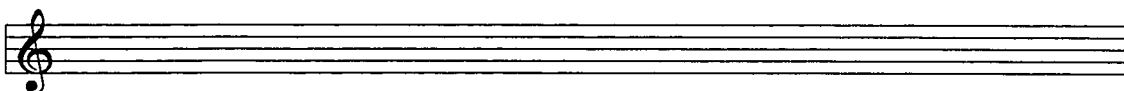
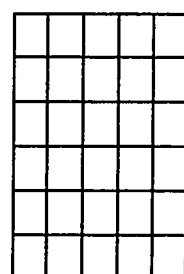
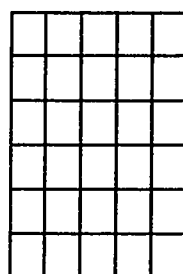
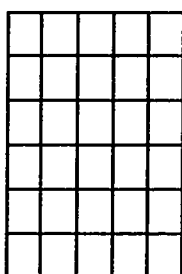
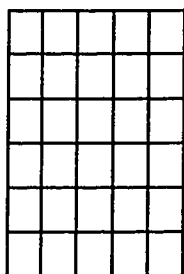


For each set of strings, write the drop 2 voicings for Cm7(b5) on the staff and indicate the fingerings on the diagrams.

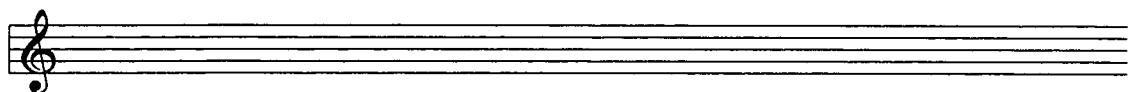
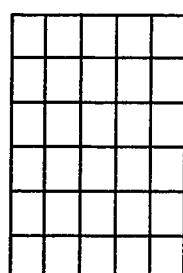
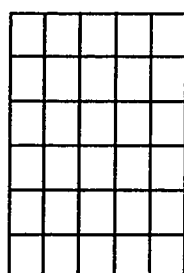
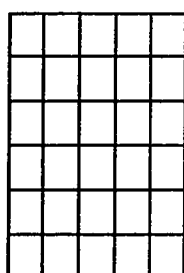
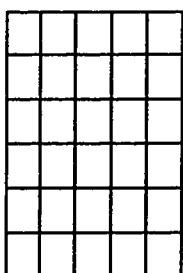
Low Strings



Middle Strings

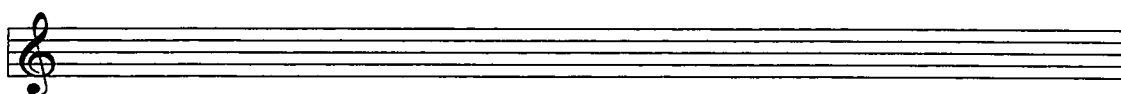
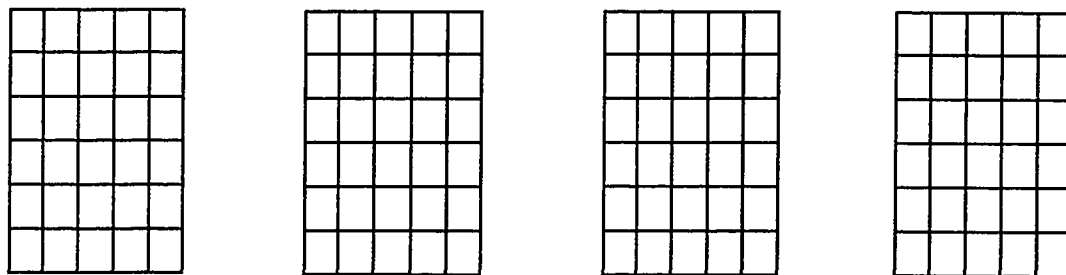


High Strings

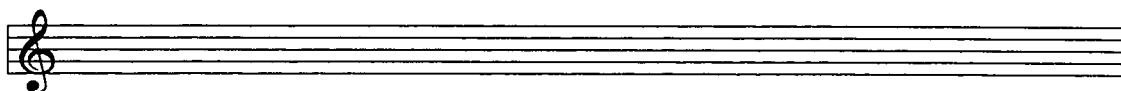
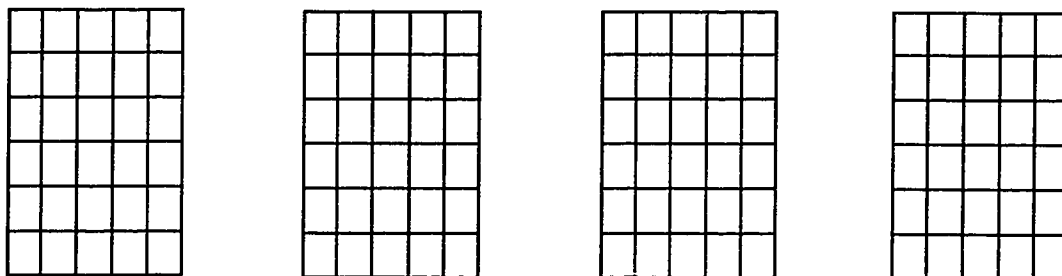


For each set of strings, write the drop 2 voicings for Cm(maj7) on the staff and indicate the fingerings on the diagrams.

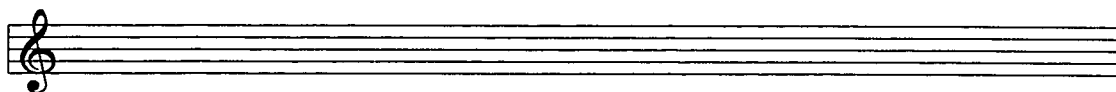
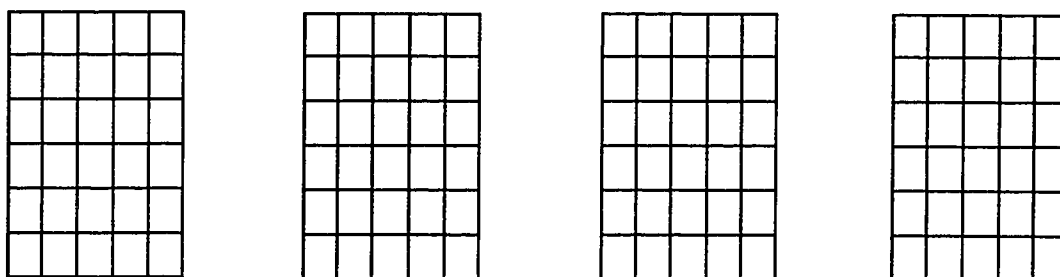
Low Strings



Middle Strings

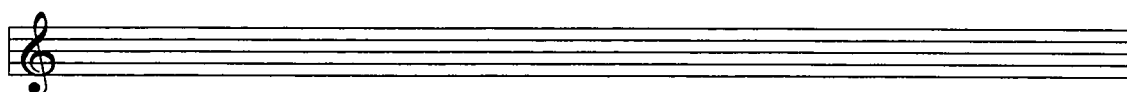
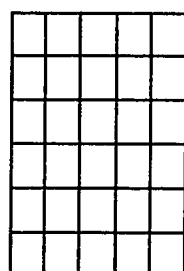
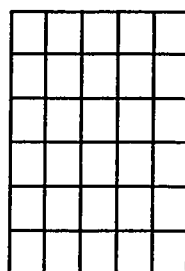
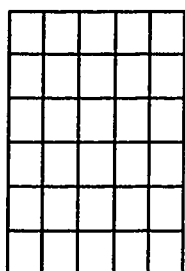
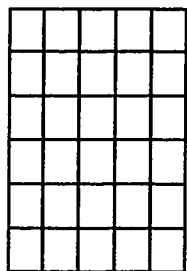


High Strings

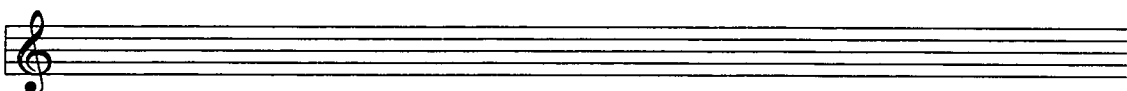
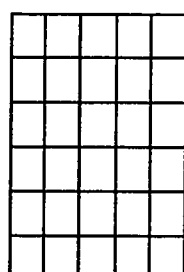
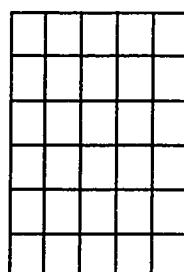
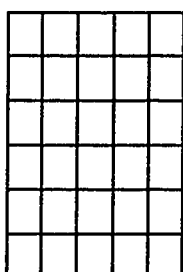
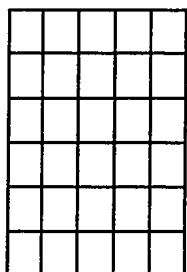


For each set of strings, write the drop 2 voicings for C6 on the staff and indicate the fingerings on the diagrams.

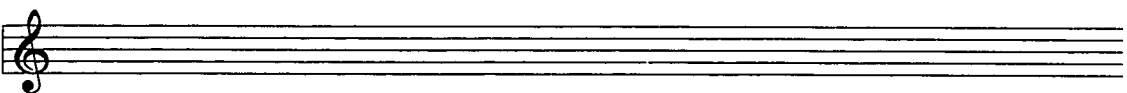
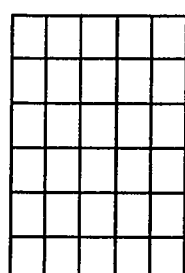
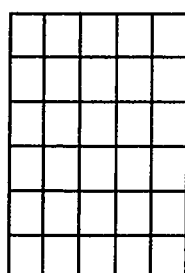
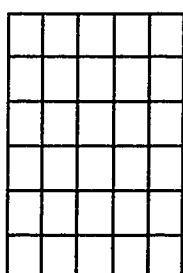
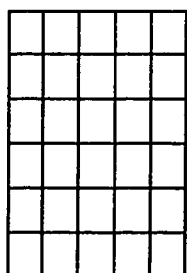
Low Strings



Middle Strings

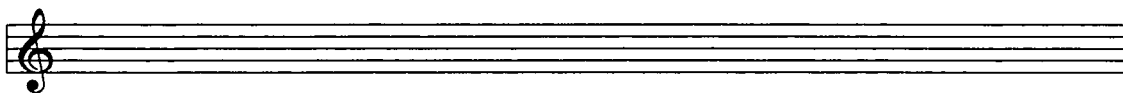
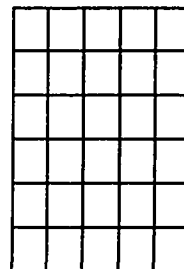
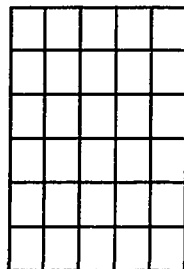
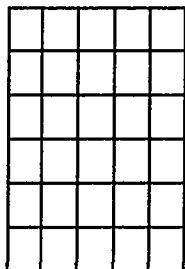
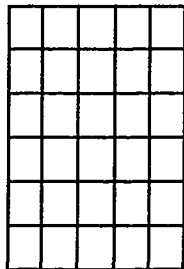


High Strings

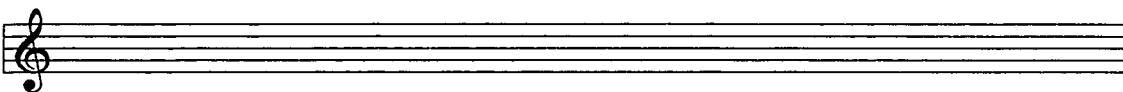
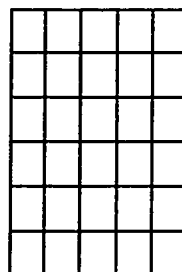
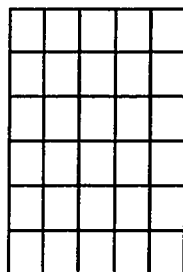
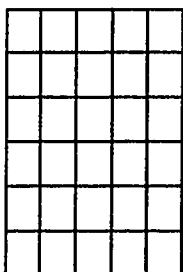
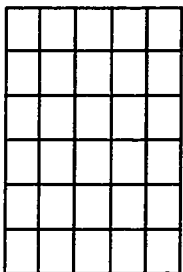


For each set of strings, write the drop 2 voicings for Cm6 on the staff and indicate the fingerings on the diagrams.

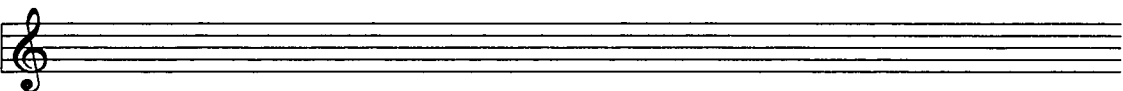
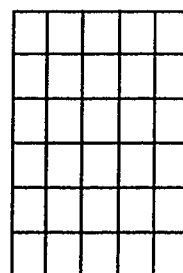
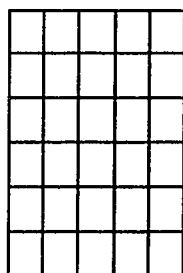
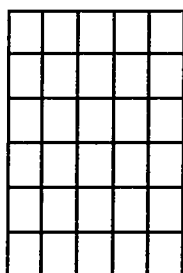
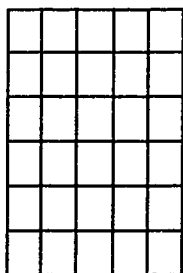
Low Strings



Middle Strings

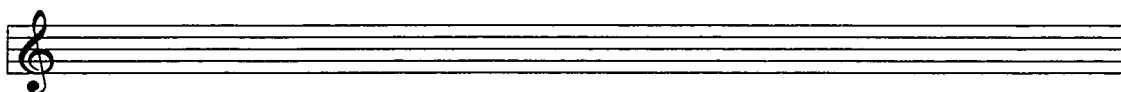
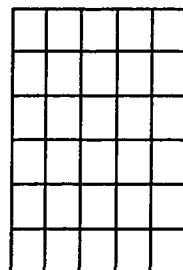
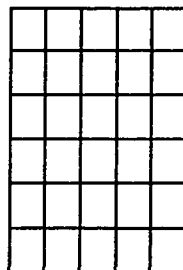
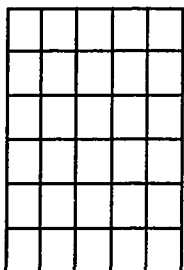
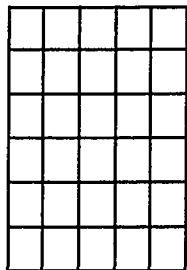


High Strings

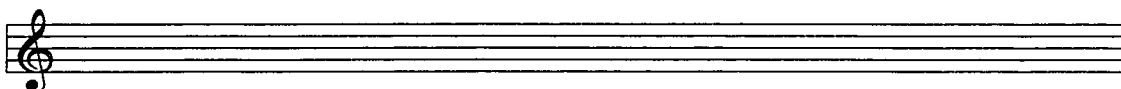
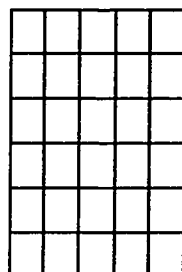
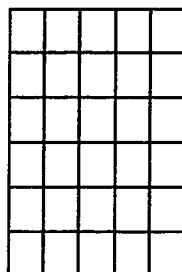
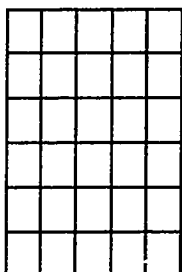
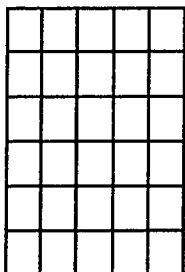


For each set of strings, write the drop 2 voicings for Co7 on the staff and indicate the fingerings on the diagrams.

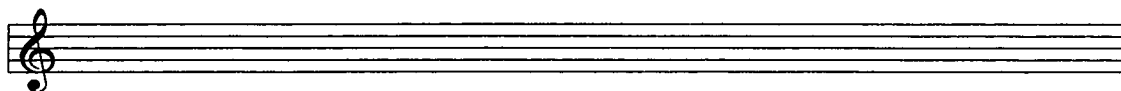
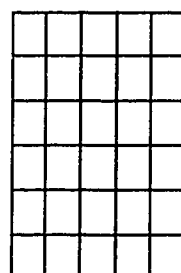
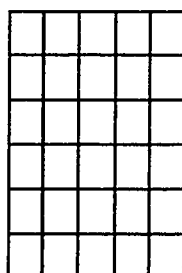
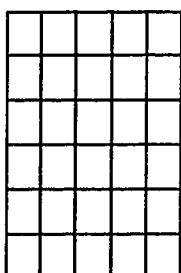
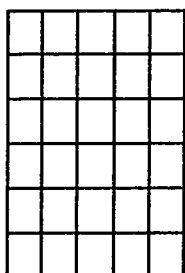
Low Strings



Middle Strings



High Strings



Applying Drop 2 Voicings

The following example illustrates the application of drop 2 chord voicings to a standard type chord progression. In this example, the melody note of each chord moves in a linear fashion to the next available note.

All The Things



no. 1

The musical score for "All The Things" is presented in 12 staves, each containing four chords. The chords are written in B-flat major and are as follows:

- Staff 1: Fm7, Bbm7, Eb7, Abmaj7
- Staff 2: Dbmaj7, Dm7(b5), G7, Cmaj7
- Staff 3: Cm7, Fm7, Bb7, Ebmaj7
- Staff 4: Abmaj7, Am7(b5), D7, Gmaj7
- Staff 5: Am7, D7, Gmaj7
- Staff 6: F#m7, B7, Emaj7, C7
- Staff 7: Fm7, Bbm7, Eb7, Abmaj7
- Staff 8: Dbmaj7, Dbm6, Cm7, Bb7
- Staff 9: Bbm7, Eb7, Abmaj7

Exercises

In the next 3 examples the top note of each chord is given. Complete each chord to create drop 2 voicings by adding notes below the melody. For these exercises, use only 7th chords. Do not add any extensions. Once you have completed the spelling of each chord, practice playing in time on the guitar.

Autumn

ex. 1



no. 2

Chord exercises for "Autumn" (ex. 1) in B-flat major. The exercises are organized into 8 rows of four measures each. Each measure contains a single note (the top note of the chord) and a chord label above it. The student's task is to complete the chord by adding notes below the melody to create a drop 2 voicing, using only 7th chords.

Row 1: Cm7 (C4), F7 (F4), Bbmaj7 (Bb4), Ebmaj7 (Eb4)

Row 2: Am7b5 (A4), D7 (D4), Gm7 (G4), G7 (G4)

Row 3: Cm7 (C4), F7 (F4), Bbmaj7 (Bb4), Ebmaj7 (Eb4)

Row 4: Am7b5 (A4), D7 (D4), Gm7 (G4), G7 (G4)

Row 5: Am7b5 (A4), D7 (D4), Gm7 (G4), G7 (G4)

Row 6: Cm7 (C4), F7 (F4), Bbmaj7 (Bb4), Ebmaj7 (Eb4)

Row 7: Am7b5 (A4), D7 (D4), Gm7 (G4), C7 (C4), Fm7 (F4), Bb7 (Bb4)

Row 8: Ebmaj7 (Eb4), Am7b5 (A4), D7 (D4), Gm7 (G4)

Dream

ex. 2



no. 3

Chord progression for "Dream" (ex. 2, no. 3) in C major, 4/4 time. The progression is written across eight staves, each containing four measures. Chords are indicated by labels above the notes.

Staff 1: Cmaj7 (C4, E4, G4), Dbmaj7 (Bb3, D4, F4, Ab4), Ebmaj7 (Eb3, G3, Bb3, D4), Fmaj7 (F3, A3, C4, Eb4).

Staff 2: Bbm7 (Bb2, D3, F3, Ab3), Eb7 (Eb2, G2, Bb2, D3), Abmaj7 (Ab2, C3, Eb3, G3), Fmaj7 (F2, A2, C3, Eb3).

Staff 3: Gm7 (G2, Bb2, D3, F3), C7 (C2, Eb2, G2, Bb2), Fmaj7 (F2, A2, C3, Eb3), Dbmaj7 (Bb2, D3, F3, Ab3).

Staff 4: Am7 (A2, C3, Eb3, G3), D7 (D2, F2, Ab2, C3), Ebm7 (Eb2, G2, Bb2, D3), Ab7 (Ab2, C3, Eb3, G3), Dm7 (D2, F2, Ab2, C3), G7 (G2, Bb2, D3, F3).

Staff 5: Cmaj7 (C2, Eb2, G2, Bb2), Dbmaj7 (Bb2, D3, F3, Ab3), Ebmaj7 (Eb2, G2, Bb2, D3), Fmaj7 (F2, A2, C3, Eb3).

Staff 6: Bbm7 (Bb2, D3, F3, Ab3), Eb7 (Eb2, G2, Bb2, D3), Cm7(b5) (C2, Eb2, G2, Bb2), F7 (F2, A2, C3, Eb3).

Staff 7: Dm7(b5) (D2, F2, Ab2, C3), G7 (G2, Bb2, D3, F3), Cmaj7 (C2, Eb2, G2, Bb2), F7 (F2, A2, C3, Eb3), Em7 (E2, G2, Bb2, D3), A7 (A2, C3, Eb3, G3).

Staff 8: Dm7 (D2, F2, Ab2, C3), G7 (G2, Bb2, D3, F3), C6 (C2, Eb2, G2, Bb2, D3), A7 (A2, C3, Eb3, G3), Dm7 (D2, F2, Ab2, C3), G7 (G2, Bb2, D3, F3), Cmaj7 (C2, Eb2, G2, Bb2).

Another You

ex. 3



no. 4

Chord progression for 'Another You' (Exercise 3, No. 4):

- Staff 1: $E\flat$ maj7, Cm7, $B\flat$ m7, $E\flat$ 7
- Staff 2: $A\flat$ maj7, $A\flat$ m6, $E\flat$ maj7, C7
- Staff 3: F7, Fm7, $B\flat$ 7
- Staff 4: $E\flat$ maj7, Cm7, $B\flat$ m7, $E\flat$ 7
- Staff 5: $A\flat$ maj7, $A\flat$ m6, $E\flat$ maj7, A m7(\flat 5), D7
- Staff 6: $E\flat$ maj7, $A\flat$ 7, Gm7, C7, Fm7, $B\flat$ 7, $E\flat$ 6

Further Activities:

1. Alter the rhythms to create interest.
2. Start on a new note and create a different line.

Adding Extensions

When adding extensions to a chord, it is important to understand the function of the chord and its relationship to the key of the piece or the key of the moment. Chord progressions in jazz compositions and standards range from simple diatonic chord progressions to more complex structures which borrow chords from other keys and modes. When adding an extension to a chord, you must first know the function of the chord. Knowing the function of the chord should then tell whether the chord is diatonic or borrowed. In both cases, this information then allows you to choose the appropriate extensions to embellish a chord.

In our study of chord extensions, we will look at some of the more important elements of jazz harmony in order to gain a clearer understanding of the origins of various chords. This information should then allow you to understand the relationship between scales and chords. Keep in mind that harmony is a wide area of study. In this book we will cover much of what you will need to play the majority of standards and much of the repertoire of jazz compositions from early jazz to the present.

Our study will focus on four general topics:

- diatonic chords
- secondary dominants and their related minor seventh chords
- chords borrowed from the relative minor
- chords borrowed from parallel modes and scales.


To apply the appropriate extensions to any given chord, each of the following steps must be carried out:

1. Identify the chord's harmonic function
2. Determine type of resolution
3. Find parent scale
4. Spell chord according to parent scale
5. Determine the appropriate extensions for the chord.

To begin, we will look at the diatonic chords generated by the major, melodic minor and harmonic minor scales in order to find the available extensions for each of the chords generated by these scales.

C major scale

Cmaj 7	Dm7	Em7	Fmaj 7	G7	Am7	Bm7 (b5)
--------	-----	-----	--------	----	-----	----------



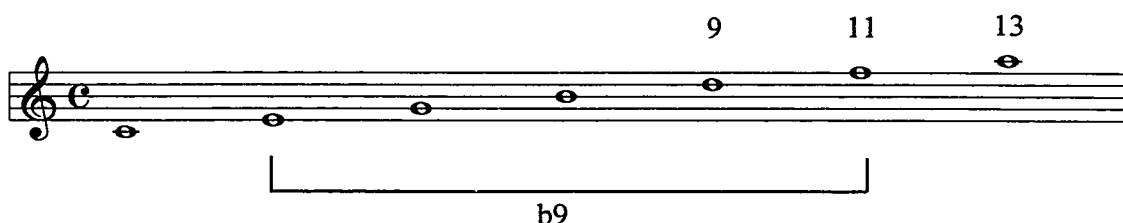
Each of these chords has a unique mode and set of upper extensions. For each chord we have four chord tones and three extensions, also known as passing tones.

When adding extensions to a chord, the following rule must be observed at all times.

b9 rule

Any extension can be used provided it does not create the interval of a b9 with any of the primary chord tones. (R 3 5)

ex: Cmaj7 as a I chord in the key of C major



In this example, the 11th degree creates the interval of a b9 with the 3rd of the chord. The 11th is therefore not an available extension for this chord. Both the 9th and the 13th are available extensions.

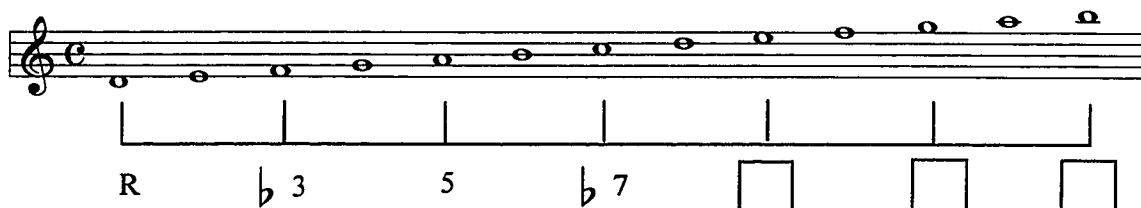
extensions	
available	omit
9, 13	11

The only exception to the rule is with a dom7. A b9 can be used in any dom7 chord even though there is an interval of a b9 between the b9 and the root of the chord.

Exercises

For each of the remaining chords in the major scale, indicate the quality of the 9th, 11th and 13th. Check for b9 intervals between each extension and the primary chord tones to determine those extensions which can not be used. Circle each of the available extensions for each of the chords.

IIIm7(Dorian)



III^{Im}7 (Phrygian)

R \flat 3 5 \flat 7

IV^{maj}7 (Lydian)

R 3 5 7

V7 (Mixolydian)

R 3 5 \flat 7

VI^{Im}7 (Aeolian)

R \flat 3 5 \flat 7

VII^{Im}7 \flat 5 (Locrian)

R \flat 3 \flat 5 \flat 7

The **melodic minor scale** is a scale which is used extensively in jazz music. It generates a number of interesting chords and modes. Using the same procedure as the major scale, we derive the following chords. The same rules apply for chord extensions: write out the scale in thirds up to the 13th degree and check for b9 intervals.

Cm(maj7) Dm7 Ebmaj7(#5) F7 G7 Am7(b5) B7(#11)

Exercises

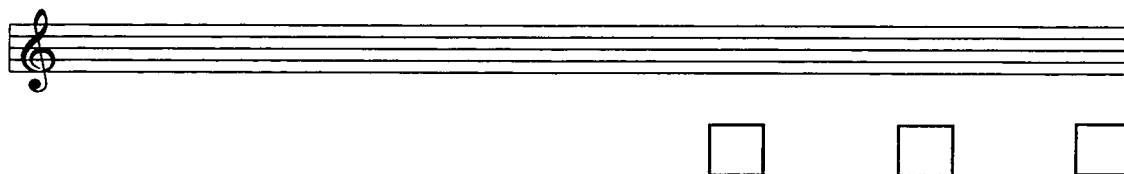
For each of the chords in the melodic minor scale, write out the chord arpeggio to the 13th and indicate the quality of the 9th, 11th and 13th. Check for b9 intervals between each extension and the primary chord tones to determine those extensions which can not be used. Circle each of the available extensions for each of the chords.

Cm(maj7)

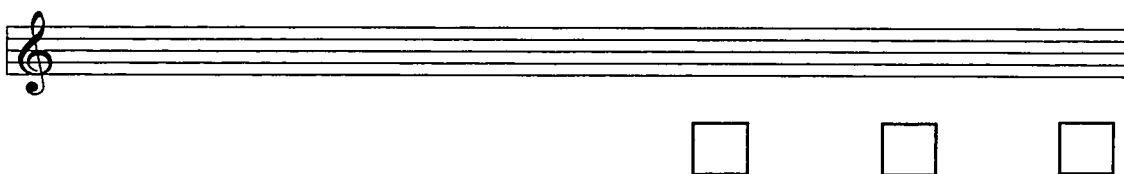
Dm7

Ebmaj7(#5)

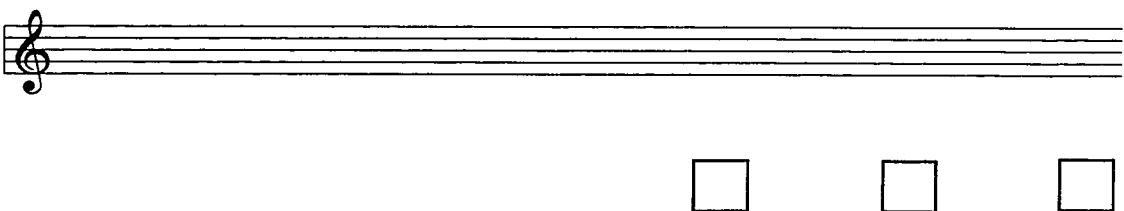
F7



G7



Am7(b5)



The last chord in the melodic minor scale will normally yield a Bm7b5 chord. Most jazz musicians will use the 4th degree, which is an Eb note (D# enharmonically) as the major 3rd. This will create a more colourful chord with altered extensions.

B7(#11)



The next scale we will look at is the **harmonic minor scale**. Although some of the chords are the same as those of the melodic minor scale, the extensions are different. A more complete explanation on when and where to use each will follow.

Cm(maj7) Dm7(b5) Ebmaj7(#5) Fm7 G7 Abmaj7 B°7

Exercises

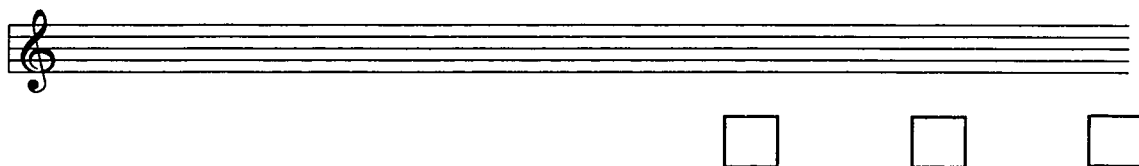
For each of the chords in the harmonic minor scale, write out the chord arpeggios to the 13th and indicate the quality of the 9th, 11th and 13th. Check for b9 intervals between the extension and the primary chord tones to determine those extensions which can not be used. Circle each of the available extensions for each of the chords.

Cm(maj7)

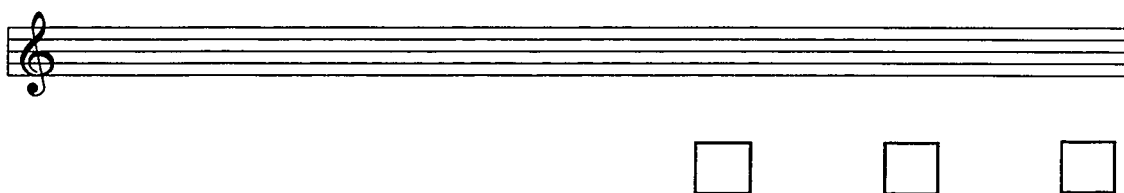
Dm7(b5)

Ebmaj7(#5)

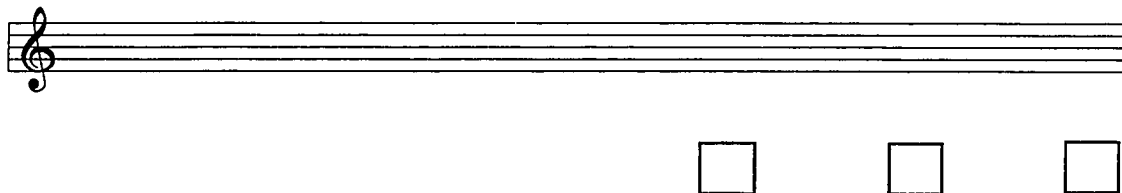
Fm7



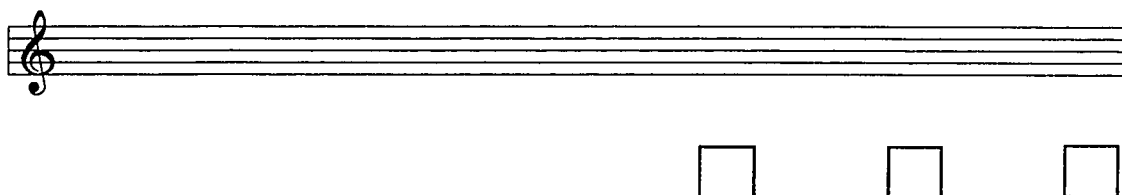
G7



Abmaj7



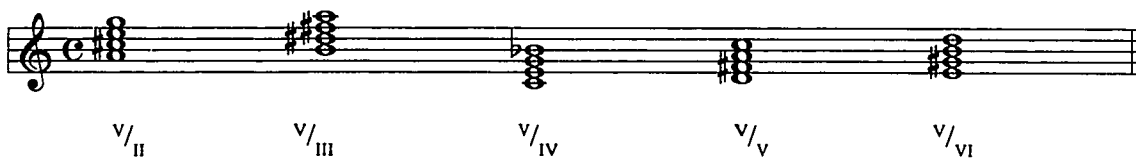
Bo7



Secondary Dominants and Related min7 chords

There are 5 secondary dominant chords in any major key. They are: V7/II; V7/III; V7/IV; V7/V and V7 of VI. The I chord has a naturally occurring dominant and there is no secondary dominant for the VII chord because it does not have a natural 5th degree.

The 5 secondary dominants are as follows.



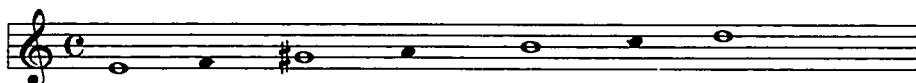
Each secondary dominant can have a related min7 chord which is found a fourth below the secondary dominant. Those resolving to major chords (IV and V) will use a min7 chord, and those resolving to minor chords (II, III and VI) will use a min7(b5) chord.

We now end up with II - V7 of each of the 5 diatonic chords.

Five rows of musical staves, each showing a diatonic chord and its corresponding secondary dominant. The chords are: II (D4, F4, A4), III (E4, G4, B4), IV (F4, A4, C5), V (G4, B4, D5), and VI (A4, C5, E5). The secondary dominants are: V7/II (F#4, C#5, G#5), V7/III (D#4, F#5, C#5), V7/IV (Bb4, Db5, Ab5), V7/V (F#4, C#5, G#5), and V7/VI (D#4, F#5, C#5). The min7 chords are: IImin7b5 (D4, Fb4, Ab4), IIImin7b5 (E4, Gb4, Bb4), IVmin7 (F4, Ab4, Cb5), Vmin7 (G4, Bb4, Db5), and VImin7b5 (A4, Cb5, Eb5).

To find the appropriate scale for each of the secondary dominants and their related m7 chords, spell the secondary dominant chord and complete the scale by inserting diatonic scale tones as passing tones.

In this example we have V7/VI (E7). The chord is spelled out horizontally and diatonic notes from the key (C major) are inserted as passing tones.

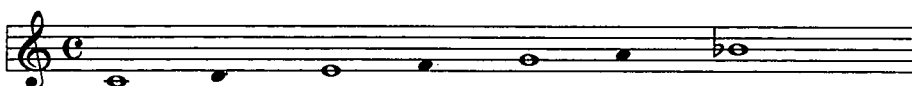


Because we have started our scale on the root of the secondary dominant chord, the resulting scale will be a mode of one of the primary scales. In this example, if we re-write the scale from the note A, we produce an A harmonic minor scale.



Our parent scale for the secondary dominant chord and its related m7 chord is the A harmonic minor scale. If you look back to the chords and extensions for the harmonic minor scale, you will find the available extensions for V7 and IIm7b5 in harmonic minor.

In this example we have V7/IV (C7). The chord is spelled out horizontally and diatonic notes from the key (C major) are inserted as passing tones.



Again, because we have started our scale on the root of the secondary dominant chord, the resulting scale will be a mode of one of the primary scales. In this example, if we re-write the scale from the note F, we produce an F major scale. (C mixolydian mode) Again, the extensions for both the related m7 and the secondary dominant can be found in the F major scale.



Exercises

For each of the following secondary dominants, indicate the quality of the 9th, 11th and 13th. Keep in mind that all chords are dominant 7th chords and therefore can use the b9 degree. In these examples, all extensions are available. The only exception is the 11th which is present in each chord. For these, use the 11th as the 4th scale degree, replacing the 3rd. The chord symbol will be 7sus4.

V7/II

A musical staff in C major showing the notes of the V7/II chord (D7b9). The notes are D4 (quarter), F#4 (quarter), A4 (quarter), B4 (quarter), D5 (quarter), F#5 (quarter), and Bb5 (quarter). Below the staff are three empty square boxes for the 9th, 11th, and 13th extensions.

V7/III

A musical staff in C major showing the notes of the V7/III chord (E7b9). The notes are E4 (quarter), G#4 (quarter), B4 (quarter), C#4 (quarter), E5 (quarter), G#5 (quarter), and Bb5 (quarter). Below the staff are three empty square boxes for the 9th, 11th, and 13th extensions.

V7/IV

A musical staff in C major showing the notes of the V7/IV chord (F#7b9). The notes are F#4 (quarter), A4 (quarter), B4 (quarter), C#4 (quarter), F#5 (quarter), A5 (quarter), and Bb5 (quarter). Below the staff are three empty square boxes for the 9th, 11th, and 13th extensions.

V7/V

A musical staff in C major showing the notes of the V7/V chord (G7b9). The notes are G4 (quarter), B4 (quarter), D5 (quarter), E5 (quarter), G5 (quarter), B5 (quarter), and Db6 (quarter). Below the staff are three empty square boxes for the 9th, 11th, and 13th extensions.

V7/VI

A musical staff in C major showing the notes of the V7/VI chord (A7b9). The notes are A4 (quarter), C#4 (quarter), D5 (quarter), E5 (quarter), A5 (quarter), C#5 (quarter), and Db6 (quarter). Below the staff are three empty square boxes for the 9th, 11th, and 13th extensions.

Harmonic Analysis

In adding extensions to chords it is important to understand the function of each chord so that the correct extensions are applied. Harmonic analysis is a simple means to locating diatonic chords, secondary dominants and borrowed chords which are from other scales and modes. As we have seen, each chord from the various scales requires a unique set of extensions. The following analytical conventions will be used.

Diatonic chords: use simple Roman numerals with no chord suffixes.

I II III IV V VI VII

Secondary dominants

V7/II V7/III V7/IV V7/V V7/VI

When the secondary dominant's related minor chord is also present, use a bracket to indicate its relationship to the secondary dominant.

Cmaj7 Em7(b5) A7 Dm7 G7

I V7/II II V

All other chords which are neither diatonic nor secondary dominants require a roman numeral to indicate its relationship to the key and a chord suffix. The following rules apply:

When a chord occurs on a diatonic note, use a Roman numeral and a chord suffix to identify the quality of the chord.

Cmaj7 Fm7 Cmaj7

I IVm7 I

When a chord occurs on a non-diatonic note, indicate its relationship to the key by adding a sharp or flat before the Roman numeral and include the appropriate chord suffix.

Cmaj7 Bb7 Cmaj7

I bVII7 I

The following example illustrates an harmonic analysis of a standard chord progression. (Note the modulation)

Staff 1: Eb: Fm7 Bb7 Ebmaj7 Cm7 Fm7 Bb7 Ebmaj7
 II V I VI II V I

Staff 2: G: Am7 G7 Gmaj7 Em7 Am7 D7 Gmaj7
 II V I VI II V I

Staff 3: Eb: Gm7 Gb°7 Fm7 Bb7
 III bIII°7 II V

Staff 4: Ebmaj7 Gm7(b5) C7 Fm7 Bb7
 I V7/II II V

Staff 5: Fm7 Bb7 Ebmaj7 Cm7 Fm7 Bb7 Ebmaj7
 II V I VI II V I

Staff 6: G: Am7 D7 Gmaj7 Em7 Am7 D7 Gmaj7
 II V I VI II V I

Staff 7: Eb: Fm7 Cm7 Fm7 Bb7 Gm7(b5) C7
 II VI II V V7/II

Staff 8: Fm7 Bb7 Ebmaj7
 II V I

The majority of the chords in this example are either diatonic to the key of Eb or G major. These chords, will use available extensions from their parent key. The secondary dominants and their related minor chords resolve to minor chords and will therefore use extensions appropriate for resolution to minor chords. The only other chord is the bIIIo7 chord. There are 4 possible passing tones which may be used to embellish this chord. Use a passing tone which best fits the particular voicing you plan to use.

Exercises

Analyze the chord progression to "My Everything" using Roman numerals.

My Everything

Chord progression for "My Everything" (first system):

Chords: Cmaj7, F#m7 B7, Em7, A7

Chord progression for "My Everything" (second system):

Chords: Dm7, G13

Chord progression for "My Everything" (third system):

Chords: Em7, Ebm7, Ab7, Dm7, Dm7/C, Bm7(b5), E7

Chord progression for "My Everything" (fourth system):

Chords: Am7, D7, Dm7, G7

Chord progression for "My Everything" (fifth system):

Chords: Dm7, F#m7, B7

Chord progression for "My Everything" (sixth system):

Chords: Am7, C7, Fmaj7, Bb7(#11)

Chord progression for "My Everything" (seventh system):

Chords: Em7, Ebm7, Dm7, G7, Dbmaj7

Chords Borrowed from Parallel Minor

The majority of chord progressions you will encounter in standards and jazz compositions will not be limited to diatonic chords and secondary dominants. These compositions will often borrow chords from parallel modes and scales. The most common of these is the parallel minor scales. This is to say that in the key of C major, all chords from the parallel minor (C minor) can be used. Below are the three forms of C minor.

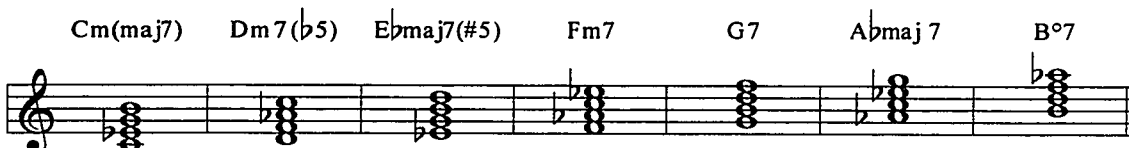
C natural minor (aeolian mode)



C melodic minor



C harmonic minor



As we have seen, each chord in these three scales has a unique set of extensions. When any of these chords are encountered in a piece, these extensions will apply. It is often the case that these borrowed chords will be preceded by an extended dominant chord and its related m7th chord. For these chords we will apply the secondary dominant rule. This is to say that all extended dominants resolving to minor type chords will use b9, sus4 and b13 while those resolving to major type chords will use 9, sus4 and 13. Chords resolving to major can borrow from the extensions for secondary dominants resolving to minor. Therefore, they can also use b9, and b13. Chords resolving to minor chords should not borrow from the extensions for secondary dominants resolving to major.

The example which follows contains diatonic chords, chords borrowed from the parallel natural minor (aeolian), and extended dominants and their related m7th chords.

In this example, the piece uses the same 8 bar progression repeated twice. It is then repeated a perfect 4th above, and again it is repeated one last time in the original key. There are several borrowed chords which are from the parallel natural minor scale: Abmaj7, Dm7(b5), and Cm7. The G7 which resolves to Cm7 should also be considered a borrowed chord as it is resolving to Im7. The Bbm7 and Eb7 chords which resolve to Abmaj7 are extended dominants.

If we refer to our chart on extensions for C natural minor, we find all the correct extensions for each of the borrowed chords.

Cm7	(Im7)	9. 11
Abmaj7	(bVIImaj7)	9, #11. 13
Dm7(b5)	(IIIm7(b5))	11

G7 comes from either of the other 2 minor scales, harmonic minor and melodic minor. Those 2 scales will produce the following extensions:

harmonic minor

G7 (V7) b9, sus4, b13

melodic minor

G7 (V7) 9, 11, b13

For the extended dominant and its related m7, treat them as secondary dominants resolving to a major chord.

Bbm7 9 sus4

Eb7 9, sus4, 13

Exercises

Analyze the following piece using Roman numerals and determine the available extensions for each chord.

The image shows four musical staves, each with a treble clef and a common time signature 'C'. Each staff is divided into four measures by vertical bar lines. Above the staves, chord labels are placed over specific measures:

- Staff 1: Cmaj7 (first measure), Fm7 (third measure), Bb7 (fourth measure)
- Staff 2: Cmaj7 (first measure), Bbm7 (third measure), Eb7 (fourth measure)
- Staff 3: Abmaj7 (first measure), Am7 (third measure), D7 (fourth measure)
- Staff 4: Dm7 (first measure), G7 (second measure), Cmaj7 (third measure), Ebmaj7 (fourth measure), Abmaj7 (fifth measure), Dbmaj7 (sixth measure)

Modal interchange

Modal interchange is another common source for generating chords. This method employs the remaining modes from the major scale. (major and natural minor have already been discussed) As with the three minor scales, each mode must have the same starting note as the key of the piece. In other words all modes are parallel in relation to the key of the piece. The following are the chords generated by each of the modes.

Dorian	IIm7	IIIm7	bIIImaj7	IV7	Vm7	VIIm7b5	bVIIImaj7
Phrygian	IIm7	bIIImaj7	bIII7	IVm7	Vm7b5	bVIImaj7	bVIIIm7
Lydian	IImaj7	II7	IIIm7	#IVm75	Vmaj7	VIIm7	VIIIm7
Mixolydian	I7	IIIm7	IIIm7b5	IVmaj7	Vm7	VIIm7	bVIIImaj7
Locrian	IIm7b5	bIIImaj7	bIIIm7	IVm7	bVImaj7	bVI7	bVIIIm7

Chord progressions for each mode, starting on C:

Dorian (C): Cm7, Dm7, Ebmaj7, F7, Gm7, Am7b5, Bbmaj7

Phrygian (C): Cm7, Dbmaj7, Eb7, Fm7, Gm7b5, Abmaj7, Bbm7

Lydian (C): Cmaj7, D7, Em7, F#m7b5, Gmaj7, Am7, Bm7

Mixolydian (C): C7, Dm7, Em7b5, Fmaj7, Gm7, Am7, Bbmaj7

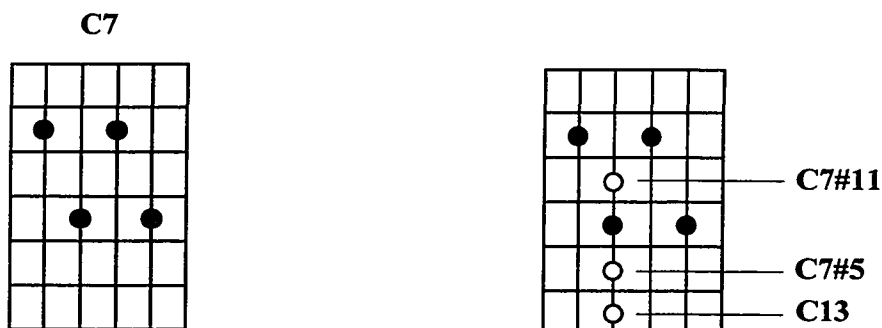
Locrian (C): Cm7b5, Dbmaj7, Ebm7, Fm7, Gbmaj7, Abm7, Bbm7

As all of these chords are derived from major scales, their extensions can be determined by relating each chord back to its parent scale. If you take the bIIImaj7 chord from the phrygian mode and relate it back to its parent scale of Ab major, you can see that this chord is IV in its parent key. It will then use the extension for a IV chord in major.

Chord Extensions

Each of the 8 basic Drop 2 voicings can be expanded upon to create a number of new chords by altering the basic chord tones. Most often, the Root and 5th of the chord will be altered. Altering the 3rd and 7th will only change the quality of the chord as from maj7 to dom7 or minor to major and so on.

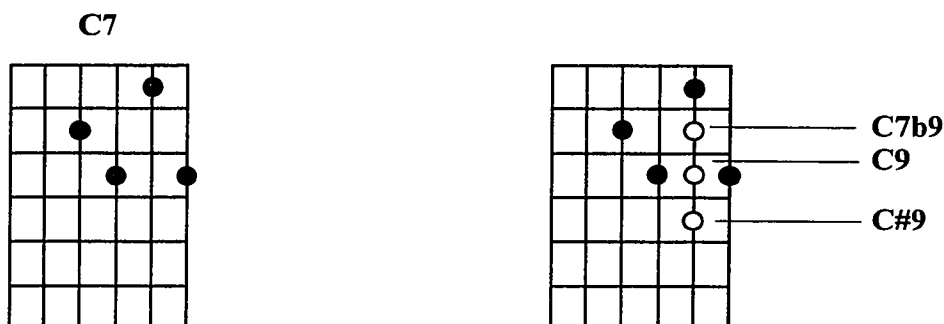
Let's look at a dom7 voicing and explore the possibilities available by altering the 5th of the chord.



If we are to start with a C7 Drop 2 chord voicing and lower the 5th by 1 semitone, we end up with C7#11 (C7b5). By raising the 5th 1 semitone, we create C7#5 (C7b13). Raising the 5th 2 semitones from its original position we end up with a C13th chord.

Fingerings will usually change with each alteration.

Now let's look at another dom7 voicing and explore the possibilities available by altering the root of the chord.

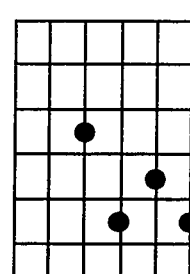
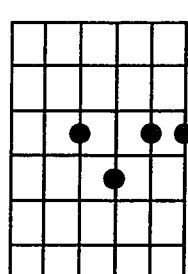
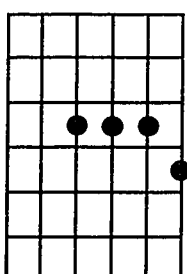
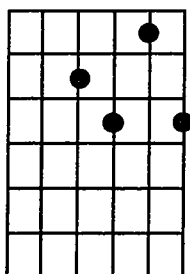
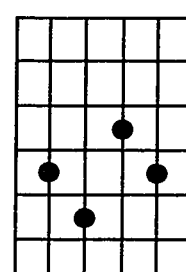
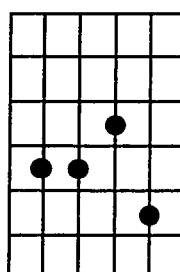
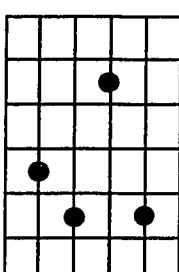
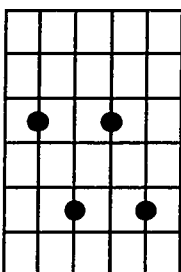
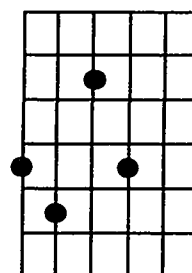
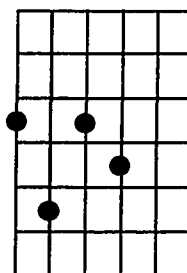
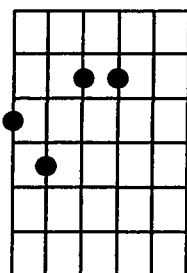
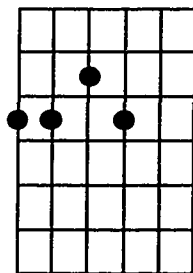


If we start with a C7 Drop 2 chord voicing and raise the root by 1 semitone, you end up with C7b9. By raising the root 1 tone we now have C9. Raising the root 3 semitones from its original position we end up with a C#9 chord.

Exercises

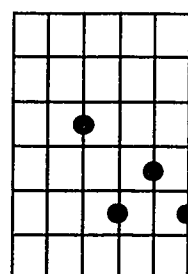
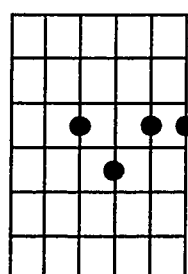
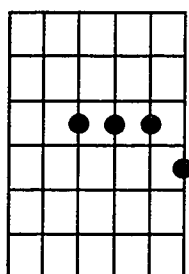
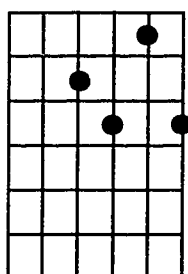
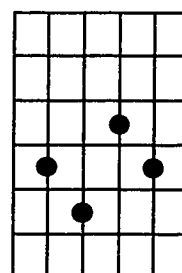
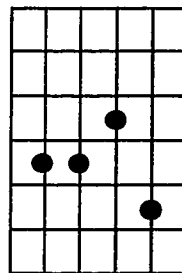
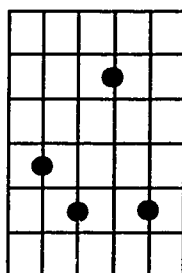
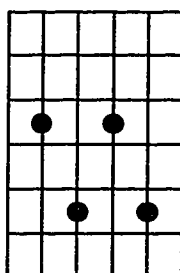
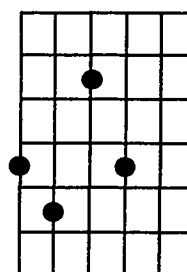
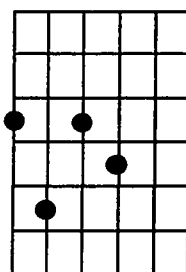
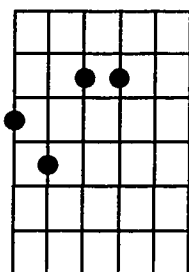
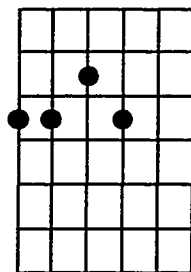
Using the dom7 Drop 2 voicings, alter the root of each chord to create 9, b9 and #9 chords. Although in theory each voicing will usually be a valid voicing, depending on the register of the chord and the voice in which the root lies, some voicings will not sound great and therefore not be useful.

Play all chord on the guitar.



Using the same dom7 Drop 2 voicings, alter the 5th of each chord to create b5 (#11), #5 (b13) and 13 chords. As with 9ths, all voicings may not be useable.

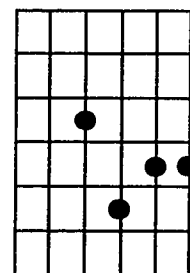
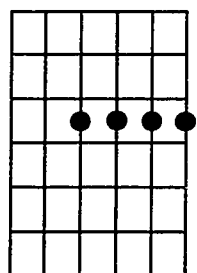
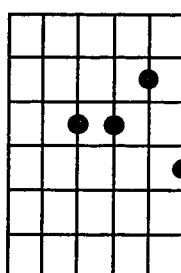
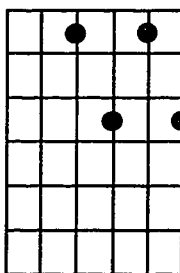
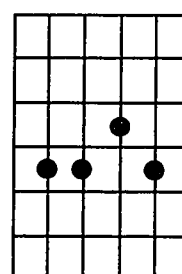
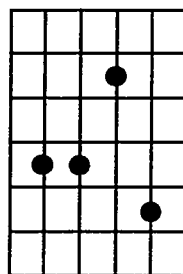
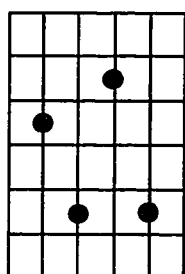
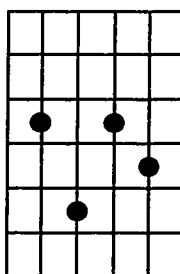
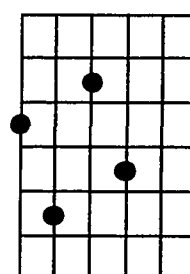
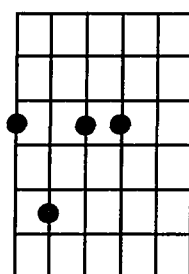
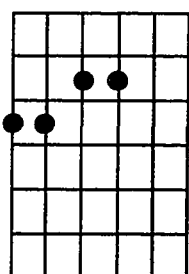
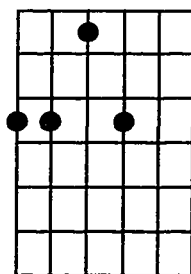
Play all chord on the guitar.



Exercises

Using the m7 Drop 2 voicings, alter the root of each chord to create 9th chords and the 5th of each chord to create m7b5 and m7#5 (b13). Although in theory each voicing will usually be a valid voicing, depending on the register of the chord and the voice in which the root lies, some will not sound good or be useful.

Play all chords on the guitar.

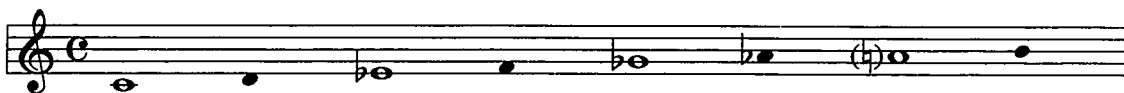


Extensions (Further Activities)

1. Using the maj7 drop 2 voicings, alter the root of the chord voicing to create maj9 voicings and the 5th to create maj7(#11), maj7(#5) and maj13 voicings.
2. Using the maj6 drop 2 voicings, alter the root of the chord voicing to create maj6/9 voicings.
3. Using the m(maj7) drop 2 voicings, alter the root of the chord voicing to create m9(maj7) voicings and the 5th to create m11(maj7) voicings.
4. Using the m6 drop 2 voicings, alter the root of the chord voicing to create m6/9 voicings.
5. Using the m7b5 drop 2 voicings, alter the root of the chord voicing to create m9(b5) voicings and the 3rd to create m11(b5) voicings.

Altering diminished chords

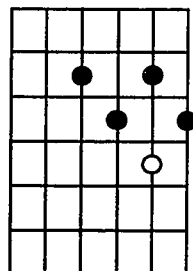
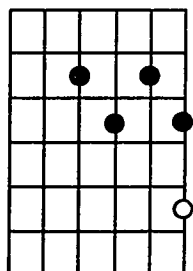
The diminished scale is a symmetrical scale consisting of a pattern of tones and semi-tones.



As the diminished scale and o7 chord are symmetrical, any chord tone can be raised 1 tone adding a colour note to the chord. The following qualities will result:

Raising the root:	added tone = 9
Raising the b3:	added tone = sus4 (11)
Raising the b5:	added tone = b6 (b13)
Raising the o7:	added tone = maj7

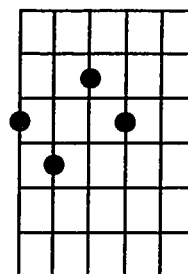
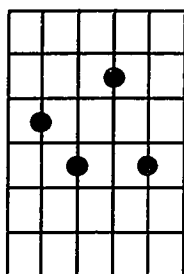
Add only one alteration at a time. With drop 2 voicings, the added note is most effective when it occurs in the soprano and alto voices.



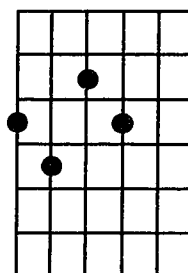
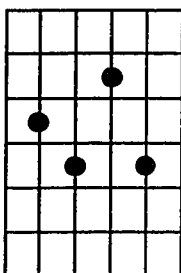
The symmetrical aspect of the diminished seventh chords also means that all voicings will repeat themselves. In this case, it is only necessary to learn one voicing on each set of strings and repeat the voicing up or down a minor third.

Exercise

Using the drop 2, o7 chord voicings on the middle and lower sets of strings, raise the note in the soprano voice one tone to create altered diminished 7th voicings.



Using the drop 2, o7 chord voicings on the middle and lower sets of strings, raise the note in the soprano voice one tone to create altered diminished 7th voicings.



As with all other chords, practice these diminished voicings on the guitar and in chord progressions to become familiar with their sound.

Applying Extensions to Progressions

In this next section we will add extensions to chord progression using drop 2 voicings. There will be several steps to follow. The procedure is as follows:

Analyze the progression to determine the function and origin of each chord.

Determine the available extensions for each chord based on your analysis.

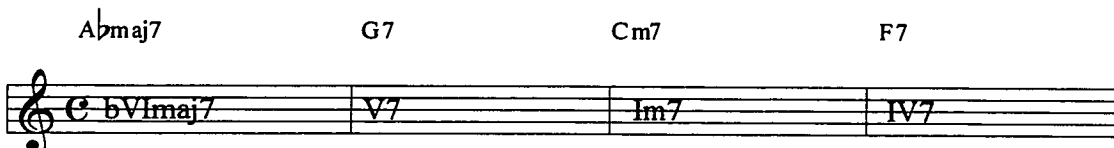
Write out the drop 2 voicing and alter the chord with one or several of the available extensions.

When all voicings for all chords are complete, play the progression on the guitar.

The following 4 bar example illustrates each of these steps.



Analysis



If we assume that this segment is from a larger progression in the key of C major, we analyze the piece according that key. The first chord Abmaj7 is from the C natural minor scale. The G7 can be V7 in C major, V7 in C harmonic minor, or V7 in C melodic minor. Since the chord is resolving to Cm7, we treat it as V7 in one of the minor keys. For this example we will choose C harmonic minor. Cm7 is Im7 in C natural minor and F7 is IV7 from C melodic minor.

Available extensions

Abmaj7	9, #11, 13
G7	b9, sus4, b13 (from harmonic minor)
Cm7	9, 11
F7	9, #11, 13

We will use the following top notes.



In this last step I have chosen freely from the available extensions for each chord .



Exercises

For the examples on the next 2 pages, the top note of each chord is given. Using the steps outlined above, complete the chord to create drop 2 voicings which contain extensions. Once you have completed the spelling of each chord, play the progression on the guitar.

Autumn



no. 5

Chord progression for "Autumn" (no. 5) in B-flat major (three flats).

Row 1: Cm7, F7, Bbmaj7, Ebmaj7

Row 2: Am7b5, D7, Gm7, G7

Row 3: Cm7, F7, Bbmaj7, Ebmaj7

Row 4: Am7b5, D7, Gm7

Row 5: Am7b5, D7, Gm7, G7

Row 6: Cm7, F7, Bbmaj7, Ebmaj7

Row 7: Am7b5, D7, Gm7, C7, Fm7, Bb7

Row 8: Ebmaj7, Am7b5, D7, Gm7

Dream



no. 6

Cmaj9 D♭maj9

B♭m9 E♭9 A♭maj9

Gm9 C7(♭9) Fmaj9

Am9 D7(♭9) E♭m9 A♭9 Dm9 G9

Cmaj9 D♭maj9

B♭m9 E♭9 Cm7(♭5) F7(♭9)

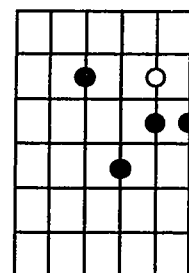
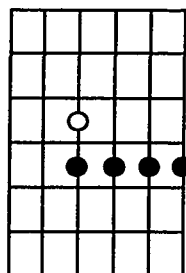
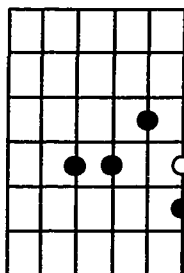
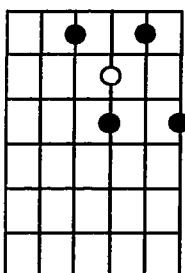
Dm7(♭5) G7(♭9) Cmaj9 F9 Em7(♭5) A7(♭9)

Dm9 G9 Cmaj9 A7(♯5) Dm9 G9 Cmaj9

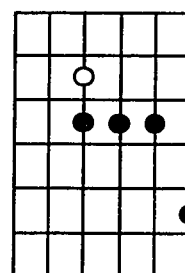
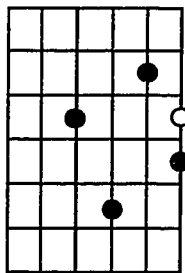
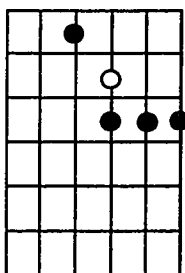
Progressions

II $\text{m}7$ - V7 progressions

The II $\text{m}7$ - V7 and II $\text{m}7(\text{b}5)$ - V7 progressions are present in almost every jazz progression. It is a good idea to prepare a repertoire of chord phrases which include various combinations of extensions. To create simple II - V7 chord progressions, start with min7 voicings. Find the 7th of the chord and resolve it down a semitone (1 fret). The new chord will be a dom9.



In this next example, the starting chord is a min9. The new chord is now a dom13. (also contains 9th) Keep in mind that not all of the voicings work as 9th chords because of register and inversion. Here is an example using 3 of the m9 drop 2 voicings on the upper set of strings. The final voicing on this string does not yield a useful progression because the 9th is in the bass and creates a b9 interval with the melody note. (Eb)



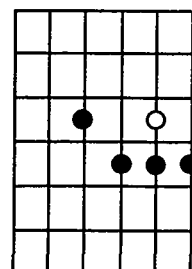
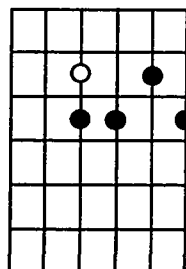
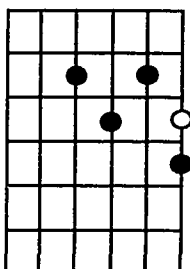
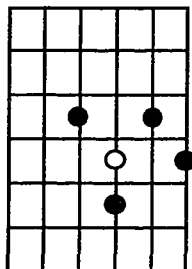
Activities

Practice resolving all m7 chords on all sets of strings.

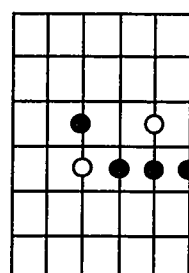
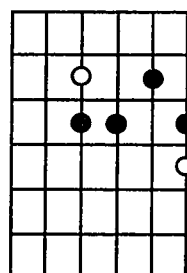
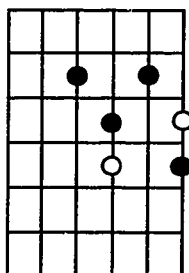
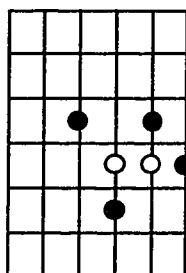
Practice resolving all m9 chords on all sets of strings.

Here are several more II - V7 possibilities. The examples are illustrated using the top set of strings. Be sure to work out the all possible chords on the middle and lower sets of strings.

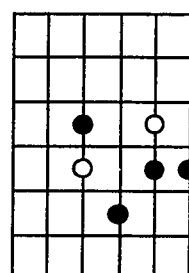
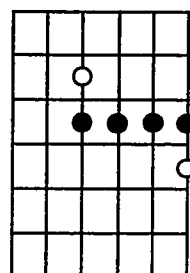
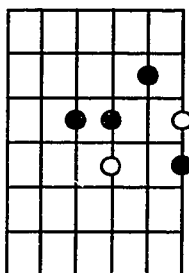
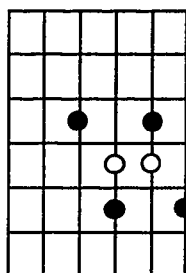
m7(b5) resolving to 7(b9)



m7(b5) resolving to 7(b9 #5)



m7 resolving to 7(#5)



Chord Melody

An excellent exercise which helps with chord soloing is to practice playing through a progression using various chord tones and/or extensions as the melody note. Start with the root of the chord and play through a simple progression such as I VI II V. In this example, the root of each chord is used as the melody note.

Play melody notes on string 1.

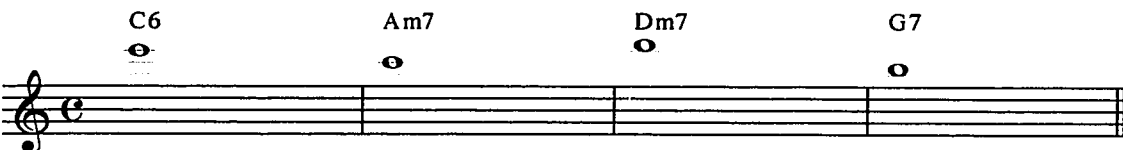


Now play the melody notes on string 2.



Combine the 2 strings and play as many variations and combinations with root in the melody.

Next use the 3rd.



Continue to practice using other chord tones such as the 5th and the 7th. Once these are mastered you can start to work on the extensions. (9th, 11ths and 13ths.)

Exercises

Practice over various common progressions and song forms.

Chord Melody


With the large number of chords we have covered so far and all of the extensions available on each, it is likely that you will not know where to start or which chords will work well together. There are literally hundreds of combinations possible with these many voicings. A good starting point in creating good sounding chord progressions is to focus on the top note of the chords. When listening to a jazz musician accompanying the melody of a vocalist or soloist, the first element of the accompaniment that you hear is the melody the progression is creating. Therefore, as a starting point, we will focus on creating simple melodies and harmonize them with chord voicings.

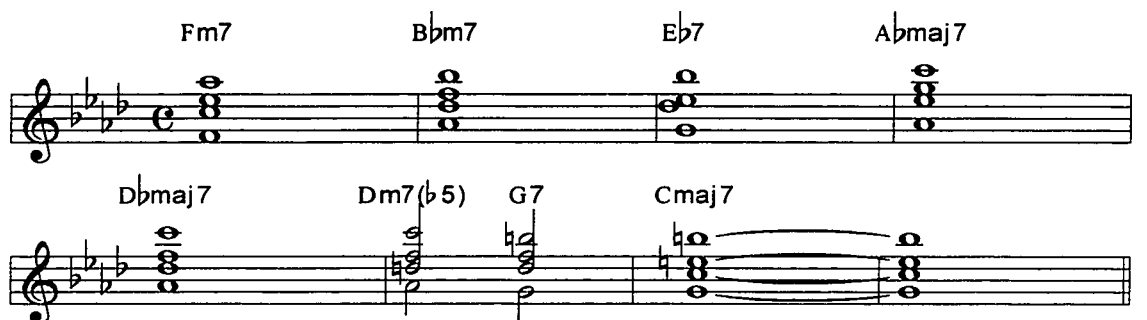
We will focus on three simple melodic ideas:

- ascending motion
- descending motion
- chromatic motion

The idea is to choose a direction, pick a starting note for the first chord and then try to find voicings which fit both the chord and melody note at that moment.

The following example uses Drop 2 voicings with no extensions. The melody of the progression ascends from an Ab to C then descends to a B natural.

 no. 7



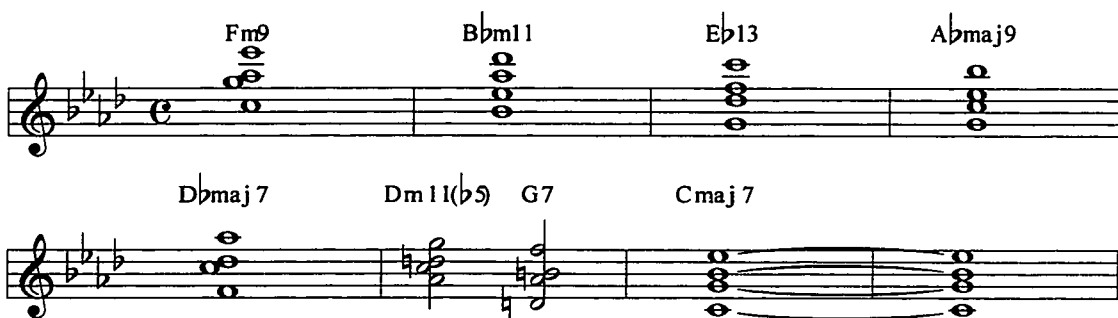
Even though there are no extensions in the chords, the progression sounds strong. The melody ties together the voicings to produce an effective chord progression. The use of extensions on the chords will not only add to the overall sound and richness of the progression, but also make it easier to create more interesting melodic lines by providing a wider selection of tones to work with.

Melodic direction

Descending motion

In this example the melody of the progression descends. Extensions are used extensively and occur both as melody notes and inner voices.

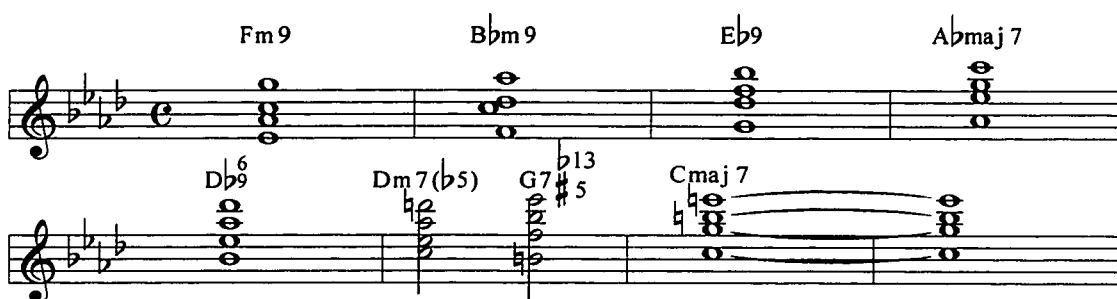
 no. 8



Ascending motion

In this example the melody of the progression ascends. Extensions are again used extensively and occur both as melody notes and inner voices.

 no. 9



Chromatic motion

In this example, the melody of the progression ascends chromatically with the exception of one interval, that of a major 2nd. Once again, extensions are used extensively and occur both as melody notes and inner voices.



Chord progression notation on a grand staff (treble and bass clefs) in B-flat major (two flats). The chords are written above the staff, and the corresponding notes are written on the staff.

Chords: Fm9, Bbm7, Eb13, Abmaj7, Dbmaj9, Db6, Dm7(b5), G7#9, Cmaj7.

We will now break down the process by looking at a simple 4 bar progression. The progression will be enhanced with extensions and rhythm.

An important point regarding standards and the way they are notated in leadsheets is that the chord progressions are meant as a basic starting point. Leadsheets give one an overall guide to the harmony of the piece. When playing the chords to a be-bop tune or a standard, you are expected to be creative with the harmony. This implies all of the points mentioned above.

Here is an example of a simple chord progression as you would see it in a fakebook or on a leadheet.

Chord progression notation on a grand staff (treble and bass clefs) in C major (no sharps or flats). The chords are written above the staff, and the corresponding notes are written on the staff.

Chords: Cmaj7, Dm7, G7, Cmaj7.

Chord symbols provide information about the harmony of a given piece. They illustrate chord qualities and the harmonic rhythm of the piece. Using this information, the accompanist will then create an interesting and creative background for either the melody or a soloist. To do this, one must add chord extensions, rhythm, and a melodic line (Which is essentially the top note of the chords). In other words, one is not restricted to playing a Cmaj7 voicing and strumming a quarter note rhythmic figure. To better understand how one can apply all of these elements to a chord progression, we will isolate each element with examples and exercises. The examples which follow illustrate the development of the above progression from a simple chord progression to one which is stylistically more appropriate.

Progression voiced with drop 2 chords and a descending melodic line.



no. 11

Cmaj7 Dm7 G7 Cmaj7

Extensions and a passing tone added to enhance the harmony



no. 12

Rhythm added



no. 13

Exercises

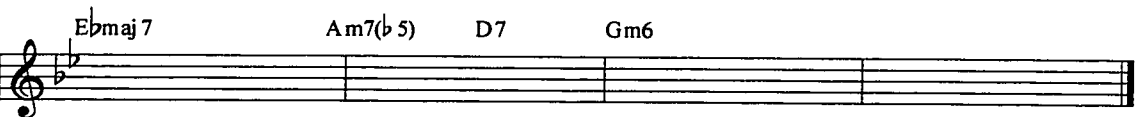
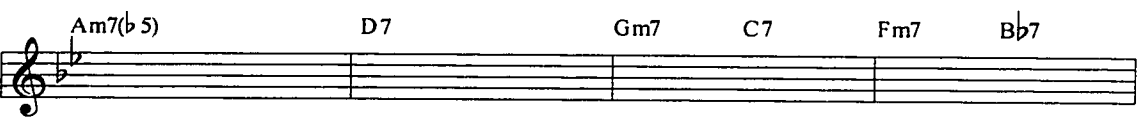
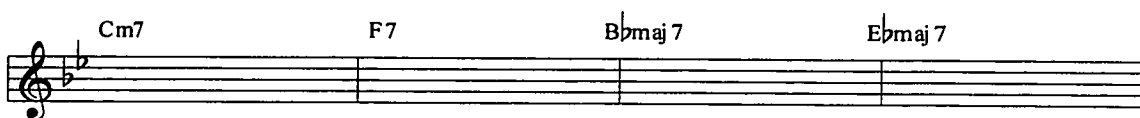
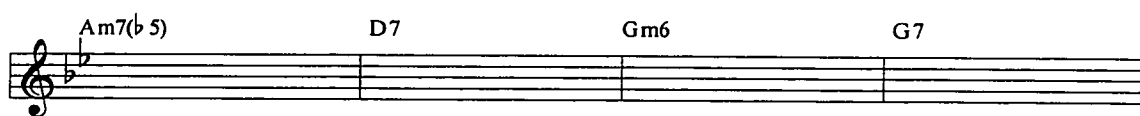
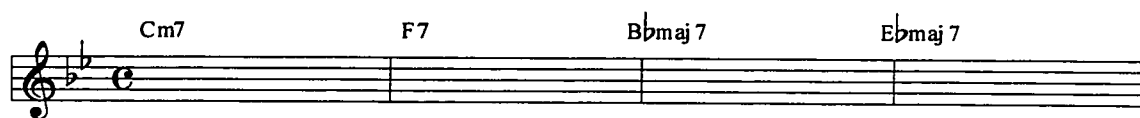
In the examples on the next 4 pages, you are required to find drop 2 voicings for each chord. Choose voicings to create a melodic line in the upper voice of the chords. You may enhance the chords using passing tones and rhythmic ideas.

All The Things

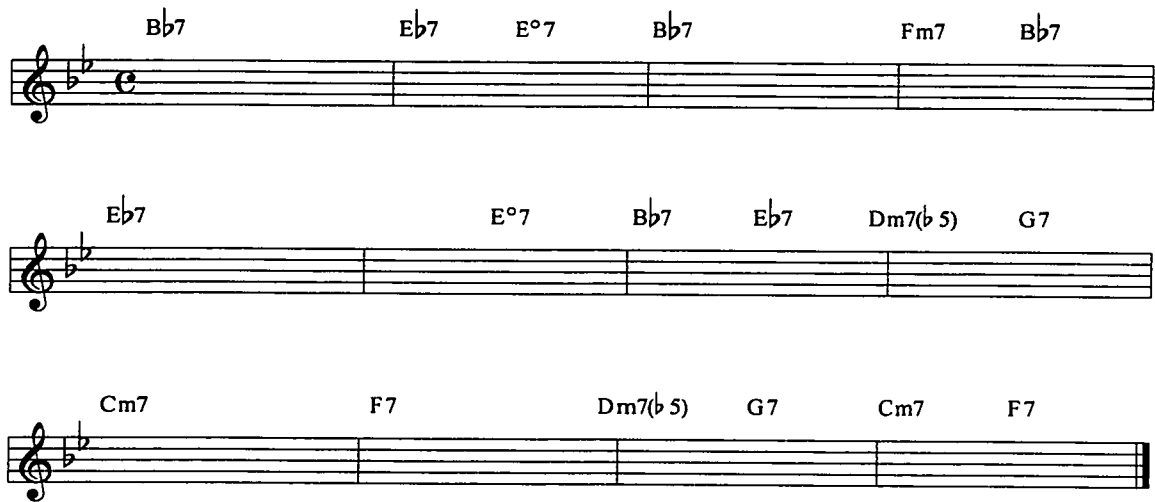
The exercise consists of eight staves of musical notation, each containing four chords. The key signature is B-flat major (two flats). The chords are as follows:

- Staff 1: Fm7, Bbm7, Eb7, Abmaj7
- Staff 2: Dbmaj7, Dm7(b5), G7, Cmaj7
- Staff 3: Cm7, Fm7, Bb7, Ebmaj7
- Staff 4: Abmaj7, Am7(b5), D7, Gmaj7
- Staff 5: Am7, D7, Gmaj7
- Staff 6: F#m7, B7, Emaj7, C7(#5)
- Staff 7: Fm7, Bbm7, Eb7, Abmaj7
- Staff 8: Dbmaj7, Dbm6, Cm7, Cb°7
- Staff 9: Bbm7, Eb7, Abmaj7, C7(#5)

Autumn



Blues I



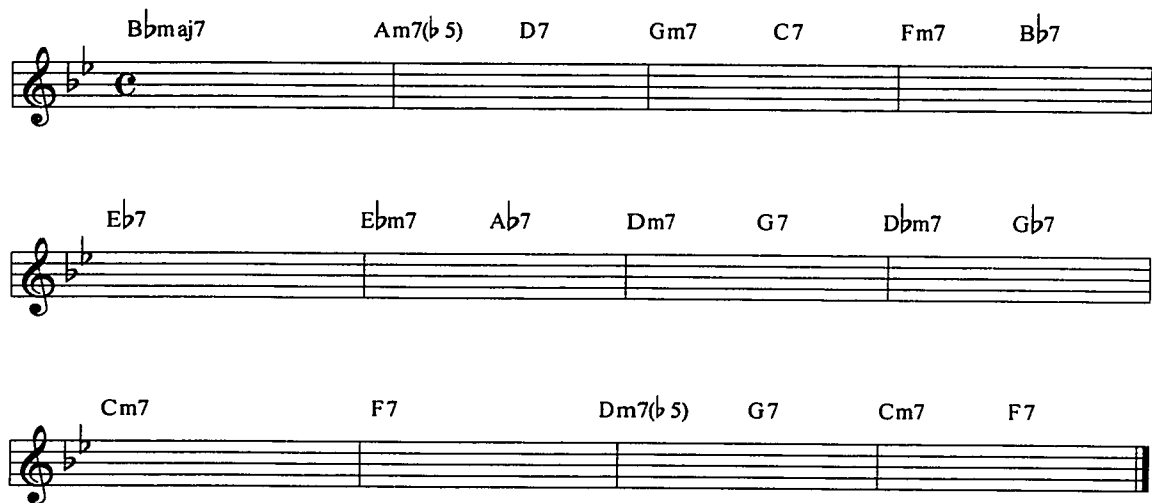
Blues I chord progression in E-flat major (three flats). The progression consists of 12 measures, grouped into three sets of four measures each. The chords are: Bb7, Eb7, E°7, Bb7, Fm7, Bb7, Eb7, E°7, Bb7, Eb7, Dm7(b5), G7, Cm7, F7, Dm7(b5), G7, Cm7, F7.

Bb7 Eb7 E°7 Bb7 Fm7 Bb7

Eb7 E°7 Bb7 Eb7 Dm7(b5) G7

Cm7 F7 Dm7(b5) G7 Cm7 F7

Blues 2



Blues 2 chord progression in E-flat major (three flats). The progression consists of 12 measures, grouped into three sets of four measures each. The chords are: Bbmaj7, Am7(b5), D7, Gm7, C7, Fm7, Bb7, Eb7, Ebm7, Ab7, Dm7, G7, Dbm7, Gb7, Cm7, F7, Dm7(b5), G7, Cm7, F7.

Bbmaj7 Am7(b5) D7 Gm7 C7 Fm7 Bb7

Eb7 Ebm7 Ab7 Dm7 G7 Dbm7 Gb7

Cm7 F7 Dm7(b5) G7 Cm7 F7

Dream

Chord progression for the song "Dream" in C major, 4/4 time. The progression is written on a single staff with a treble clef and a common time signature (C). The chords are as follows:

Measure	Chord
1	Cmaj7
2	D♭maj7
3	B♭m7
4	E♭7
5	A♭maj7
6	Gm7
7	C7
8	Fmaj7
9	Am7
10	D7
11	E♭m7
12	A♭7
13	Dm7
14	G7
15	Cmaj7
16	D♭maj7
17	B♭m7
18	E♭7
19	Cm7(♭5)
20	F7
21	Dm7(♭5)
22	G7
23	Cmaj7
24	F7
25	Em7
26	A7
27	Dm7
28	G7
29	Cmaj7

The following examples illustrate the use of drop 2 chord voicings, (other types of voicings are used as well) with ascending, descending and chromatic motion as well as an extensive use of rhythm. Analyze and play the examples and try to locate all of these elements. Look in particular at the melody notes and the directions in which they move. Each phrase fits the harmonic rhythm of the piece.

All The Things

no. 14

The musical score for 'All The Things' is presented in four staves, each featuring a melody line and a harmonic accompaniment using drop 2 chord voicings. The key signature is B-flat major (two flats).

Staff 1: The melody begins with a quarter note G4, followed by a quarter rest, then a quarter note A4. The harmony consists of chords: Fm9, Bbm11, Eb9, Eb7#9, and Abmaj9. The melody continues with a quarter note B4, a quarter note C5, and a quarter note B4.

Staff 2: The melody starts with a quarter note B4, followed by a quarter note C5, and a quarter note B4. The harmony includes Dbmaj7, Dm11(b5)G7(b9), and Cmaj7. The melody concludes with a triplet of eighth notes: A4, G4, and F#4.

Staff 3: The melody begins with a quarter note F#4, followed by a quarter note G4, and a quarter note F#4. The harmony features Cm11, Fm9, Bb13, Ebmaj9, and Ebmaj7. The melody continues with a quarter note E4, a quarter note D4, and a quarter note C4.

Staff 4: The melody starts with a quarter note B3, followed by a quarter note A3, and a quarter note G3. The harmony includes Abmaj9, Am7(b5), D7#9, and Gmaj9. The melody continues with a quarter note F#3, a quarter note E3, and a quarter note D3. The final staff shows a triplet of eighth notes: C4, B3, and A3, followed by a quarter note G3, a quarter note F#3, and a quarter note E3.

$B7^{\#9}$ $B7^{\flat9}$ $Emaj7$ $C7^{\#9}$ $C7^{\flat9}$ $Fm9$
 $Bbm9$ $Eb13(\flat9)$ $Eb7(\flat9)Abmaj7$
 $Dbmaj9$ Dbm^6 $Cm7$ $Cml1$ $B^\circ7$ $Bbm11$
 $Bbm7$ $Eb7^{\#9}$ $Eb7^{\flat9}$ Ab^6 $G7(\sharp5)$ $C7^{\#9}$ $Fm7$


Autumn



no. 15


Cm9 F9 Bb9 Ebmaj9
 Am7(b5) D7(#11) Gm7 G7(b9)
 Cm7 F7(b9) F7(#5) Bbmaj13 Bbmaj9 Ebmaj7 Eb6
 Am11(b5) D7#9 D7b9 Gm11 Gm9
 Am7(b5) D7#9 Gm11 G9(#11) Cm9
 F13(b9) F7(b9) Bbmaj7 Ebmaj7 Am7(b5)
 D7#9 D7b9 Gm9 C13(b9) Fm9
 Bb13(b9) Ebmaj7 Am7(b5) D7#9 Gm9

Blues 1

 no. 16



Blues 2

 no. 17



For this piece, no chord symbols are included. To analyze the harmony, use the chord changes for Blues 1 and Blues 2 which can be found on page 57.

Dream



no. 18

The musical score for 'Dream' is written on eight staves. It begins with a treble clef and a common time signature (C). The first staff features a melodic line with a half note, followed by a series of eighth and sixteenth notes, and a final half note. The subsequent staves show a complex harmonic texture with various chords, including triads and dyads, and some melodic fragments. The notation includes many beamed notes, suggesting a fast or intricate piece. The key signature changes from one flat (B-flat) to two flats (B-flat and E-flat) in the middle of the score. The piece concludes with a final chord on the eighth staff.

For this piece, no chord symbols are included. To analyze the harmony, use the chord changes for Dream which can be found on page 58.

Using the chord progressions on the next 2 pages, choose voicings to create a chordal accompaniment which incorporates all of the elements discussed in this book. These would include drop 2 voicings, rhythmic ideas, extensions and the development of a melodic line. To begin, analyze the piece. This information will then help you to determine the extensions available for each of the chords. Choose a starting note and proceed to develop each phrase.

Nowhere

Chord progression for "Nowhere":

Staff 1: Gmaj7 Bbm7 Eb7

Staff 2: Gmaj7 Bm7 E7

Staff 3: Am7 E7 Am7

Staff 4: Bbm7 Am7 D7

Staff 5: Gmaj7 Bbm7 Eb7

Staff 6: Gmaj7 Bm7 E7

Staff 7: Am7 E7 Am7 Cm(maj7)

Staff 8: Bm7 E7 Am7 D7 G6

Starlight

Em7(b5) A7 Cm7 F7

Fm7 Bb7 Ebmaj7 Ab7

Bbmaj7 Em7(b5) A7 Dm7 Bbm7 Eb7

Fmaj7 Em7(b5) A7 Am7(b5) D7


G7(#5) Cm7

Ab7 Bbmaj7

Em7(b5) A7 Dm7(b5) G7

Cm7(b5) F7 Bb6

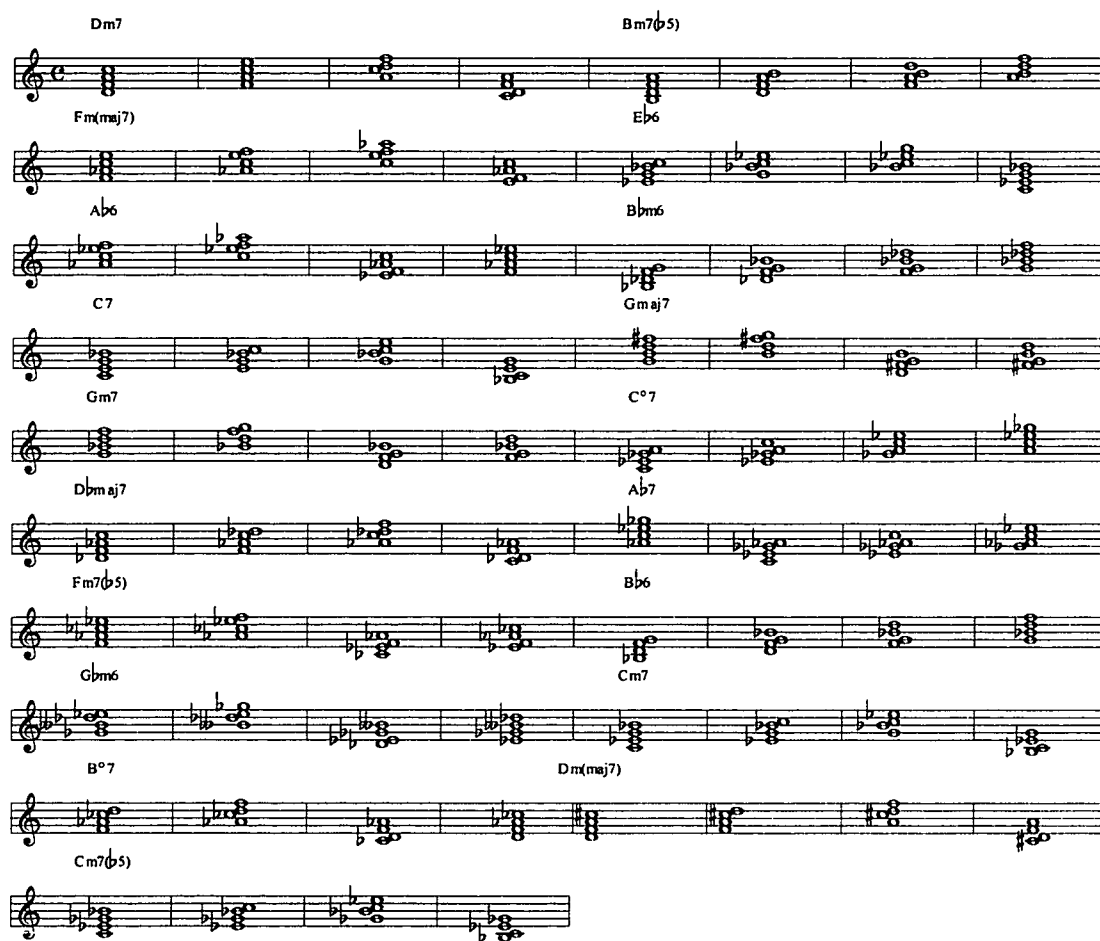
Answers Part I

All exercises which display the tape icon  can be found on the tape.

Inversions

- | | | | |
|-------|-------|-------|-------|
| 1) 2 | 2) R | 3) 2 | 4) 3 |
| 5) R | 6) 3 | 7) 1 | 8) 1 |
| 9) 2 | 10) R | 11) 3 | 12) 1 |
| 13) 3 | 14) 2 | 15) R | 16) 1 |

Chord Spelling in all Inversions

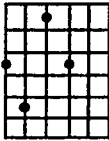
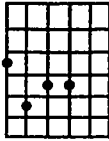
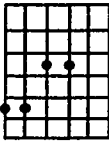
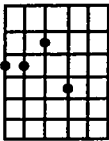


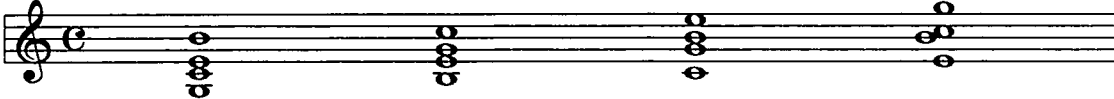
Chord spellings shown in the notation:

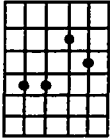
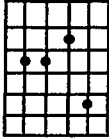
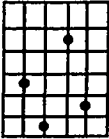
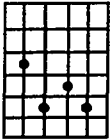
- Left Column: Dm7, Fm(maj7), Ab6, C7, Gm7, Dbmaj7, Fm7(b5), Gbm6, B°7, Cm7(b5)
- Right Column: Bm7(b5), Eb6, Bbm6, Gmaj7, C°7, Ab7, Bb6, Cm7, Dm(maj7)

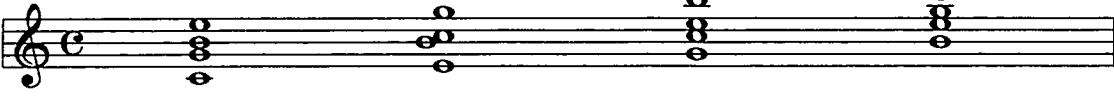
Drop 2 chord voicings

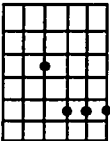
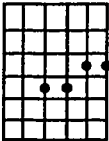
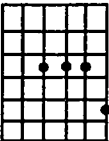
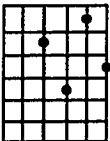
maj7

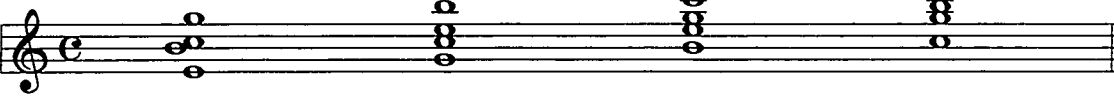




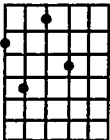
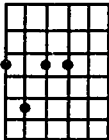
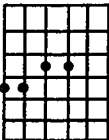
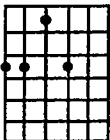


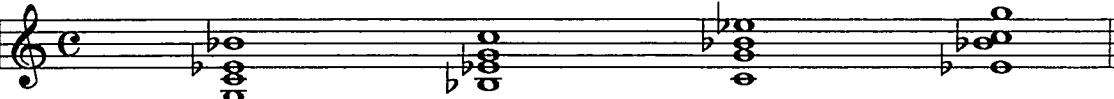


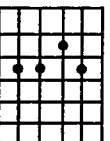
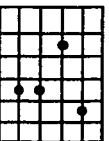
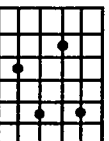
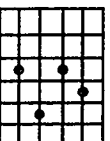


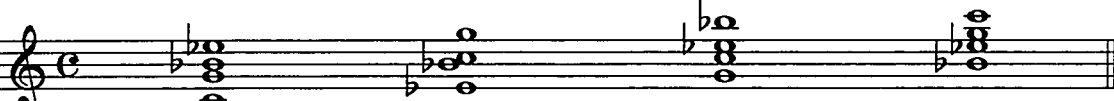


m7









Four guitar fretboard diagrams and a corresponding musical staff. The diagrams show fingerings for chords: D major (first), D minor (second), D7 (third), and D7b9 (fourth). The musical staff shows the chords in a sequence: D major, D minor, D7, and D7b9.

m7b5

Four guitar fretboard diagrams and a corresponding musical staff. The diagrams show fingerings for m7b5 chords: Dm7b5, Ebm7b5, Fm7b5, and Gbm7b5. The musical staff shows the sequence: Dm7b5, Ebm7b5, Fm7b5, and Gbm7b5.

Four guitar fretboard diagrams and a corresponding musical staff. The diagrams show fingerings for chords: Dm7 (first), Ebm7 (second), Fm7 (third), and Gbm7 (fourth). The musical staff shows the sequence: Dm7, Ebm7, Fm7, and Gbm7.

Four guitar fretboard diagrams and a corresponding musical staff. The diagrams show fingerings for chords: Dm7b9 (first), Ebm7b9 (second), Fm7b9 (third), and Gbm7b9 (fourth). The musical staff shows the sequence: Dm7b9, Ebm7b9, Fm7b9, and Gbm7b9.

m(maj7)

Four guitar fretboard diagrams and a corresponding musical staff. The diagrams show fingerings for m(maj7) chords: Dm(maj7), Ebm(maj7), Fm(maj7), and Gbm(maj7). The musical staff shows the sequence: Dm(maj7), Ebm(maj7), Fm(maj7), and Gbm(maj7).

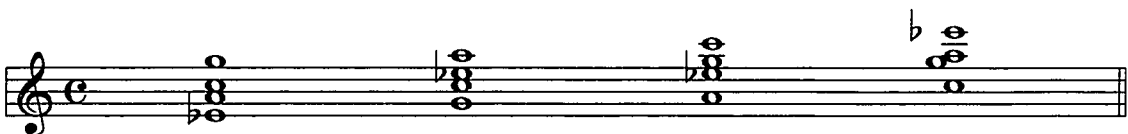
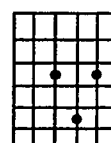
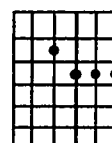
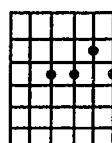
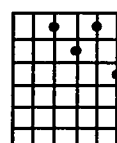
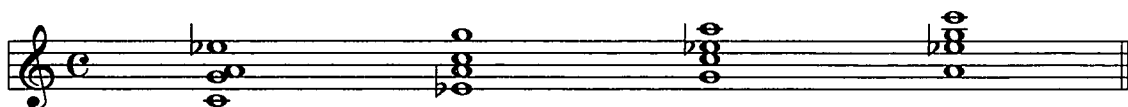
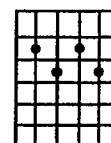
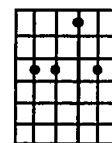
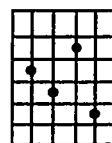
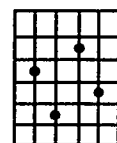
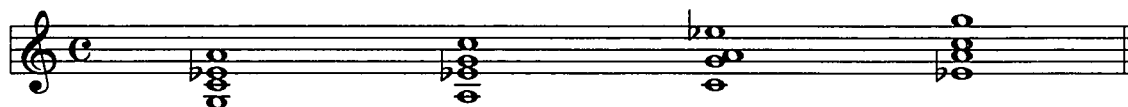
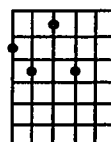
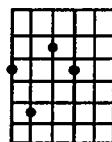
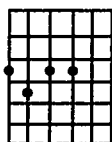
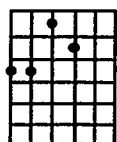
Diagram illustrating four sets of guitar chord shapes and their corresponding musical notation for the major 6th (maj6) chord.

Set 1 (Top): Four guitar chord diagrams showing different voicings of the maj6 chord. Below each diagram is a musical staff in treble clef with a C-clef, showing the notes of the chord (C, D, E, F, G, A) in various positions on the staff.

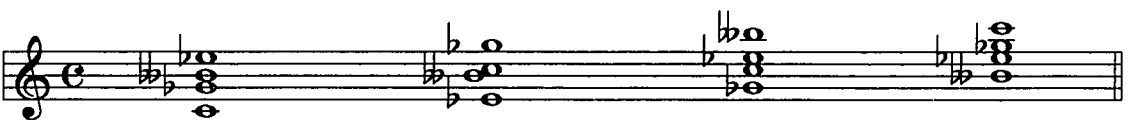
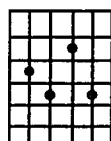
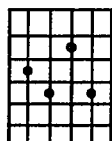
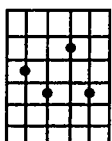
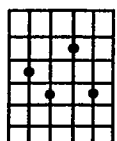
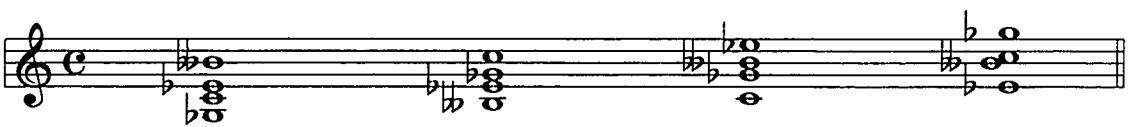
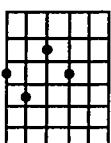
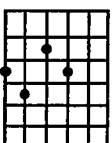
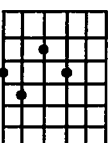
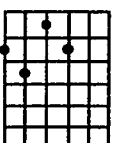
Set 2 (Middle): Four guitar chord diagrams showing different voicings of the maj6 chord. Below each diagram is a musical staff in treble clef with a C-clef, showing the notes of the chord (C, D, E, F, G, A) in various positions on the staff.

Set 3 (Bottom): Four guitar chord diagrams showing different voicings of the maj6 chord. Below each diagram is a musical staff in treble clef with a C-clef, showing the notes of the chord (C, D, E, F, G, A) in various positions on the staff.

m6



dim7



The image shows four 5x5 grid diagrams, each with a specific dot pattern representing a chord. Below these is a musical staff in treble clef with a key signature of one flat (Bb). It contains four chord diagrams corresponding to the grids above: Cm7, Dm7, Em7, and Fm7(b5).

Adding extensions

Major scale

Cmaj7	Dm7	Em7	Fmaj7	G7	Am7	Bm7(b5)
I(maj7)	II(m7)	III(m7)	IV(maj7)	V7	VI(m7)	VII(m7(b5))
9, 13	9, 11	11	9, #11, 13	9, sus4, 13	9, 11	11, b13
11	13	9, *b13		**11	b13	b9

* Em7 is a tonic type chord and often substitutes for Imaj7. In most cases the Em7 tends to sound and function more like an inversion of Cmaj7. It is possible to omit the 5th and use the b13.

** It is possible to use the 4th but not the 11th. Using the 11th implies the presence of the 3rd. These 2 notes will create a b9 interval. Replacing the 3rd with the 4th creates a suspended 4th chord and avoids the problem of the b9 all together.

The 13th on II(m7) does not create a b9 interval but adds the b note which when combined with the 3rd of the chord (F) creates a tritone. The chord will tend to now sound more like an inversion of G7.

Melodic minor

Cm(maj7)	Dm7	Ebmaj7(#5)	F7	G7	Am7(b5)	*B7
I(maj7)	II(m7)	bIII(maj7)	IV7	V7	VI(m7(b5))	*VII7
9, 11, 13	11	9, #11	9, #11, 13	9, sus4, b13	9, 11, b13	b9, #9, #11, b13
	b9, 13	**13				

* The chord generated on the 7th of the scale is actually a Bm7(b5). The 11th of the chord is enharmonically a major 3rd, therefore, it makes more sense to view the chord as a dom7 with a diminished 5th. There are now 2 passing tones between the root and the major 3rd. These are b9 and #9. The only note not accounted for is the b13 which can be seen enharmonically as #5. I have also included the #11 even though the actual note is b5 and there is no natural 5th. In most cases it will be referred to as #11.

** The 13th of Ebmaj7(#5) can be used if the #5 is omitted.

Harmonic minor

Cm(maj7)	Dm7(b5)	Ebmaj7(#5)	Fm7	G7	Abmaj7	*Bo7
I(maj7)	IIIm7(b5)	bIIImaj7	IVm7	V7	bVIImaj7	*VIIo7
9, 11	11	9, 13	9	b9, sus4, b13	9, 11, b13	b13
b13	b9, 13	11	#11, 13			

* There is only one note which can be added to this chord. (b13)

As with the melodic minor scale, the 13th can be added to the bIIImaj7 chord if the #5 is removed.

Secondary donimants

A7	B7	C7	D7	E7
V7/II	V7/III	V7/IV	V7/V	V7/VI
9, sus4, b13	b9, sus4, b13	9, sus4, 13	9, sus4, 13	b9, sus4, b13

As a general rule, use b9 and b13 when resolving to m7 and 9 and 13 when resolving to maj7 and dom7. The sus4 is available on all secondary dominant chords.

My Everything

Cmaj7 F#m7 B7 Em7 A7

Dm7 G13

Em7 Ebm7 Ab7 Dm7 Dm7/C Bm7(b5) E7

Am7 D7 Dm7 G7

Dm7 F#m7 B7

Am7 D7 Gm7 C7 Fmaj7 Bb7(#11)

Em7 Ebm7 Dm7 G7 Dbmaj7

Available extensions

All diatonic chords will use extensions available from parent major scale

Chord	Function/Parent scale	Extensions		Mode
Cmaj7	I	9	13	(ionian mode)
Dm7	II	9	11	(dorian mode)
G7	V	9	sus4 13	(mixolydian mode)

Secondary dominants and related m7

D7 is V7/V and therefore resolves to a major chord (V)

D7	V7/V	9	sus4 13	(mixolydian mode)
Am7	rel. m7	9	11	(dorian mode)

Borrowed chords

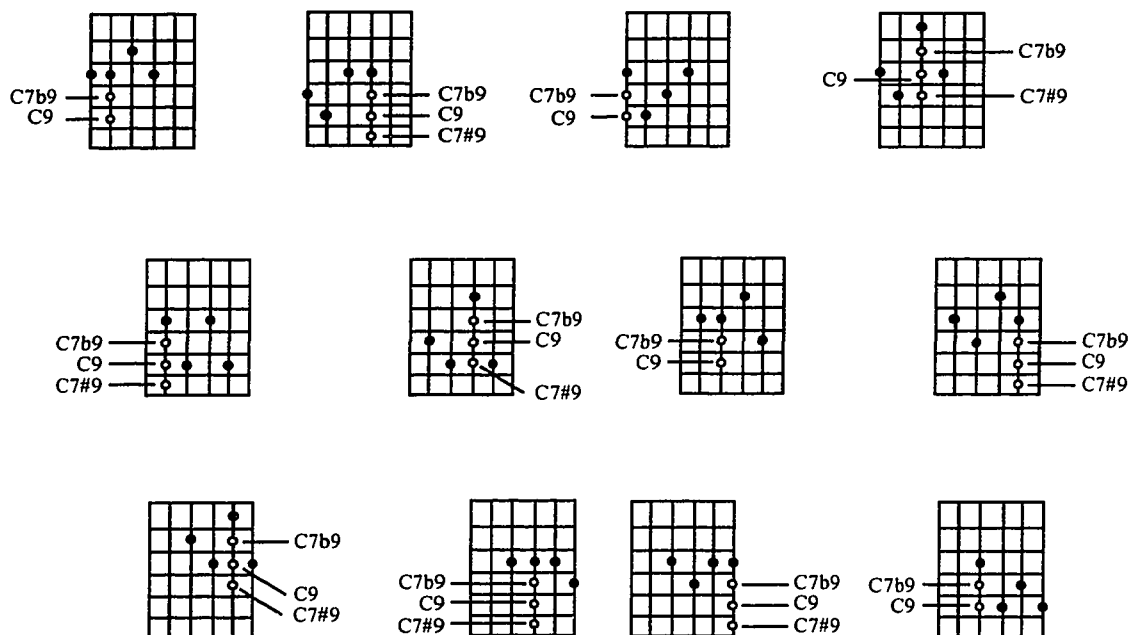
Abmaj7	from aeolian	9	#11 13	(lydian mode)
Ebmaj7	from aeolian	9	#11 13	(lydian mode)
Dbmaj7	from phrygian	9	#11 13	(lydian mode)

Extended dominants and related m7

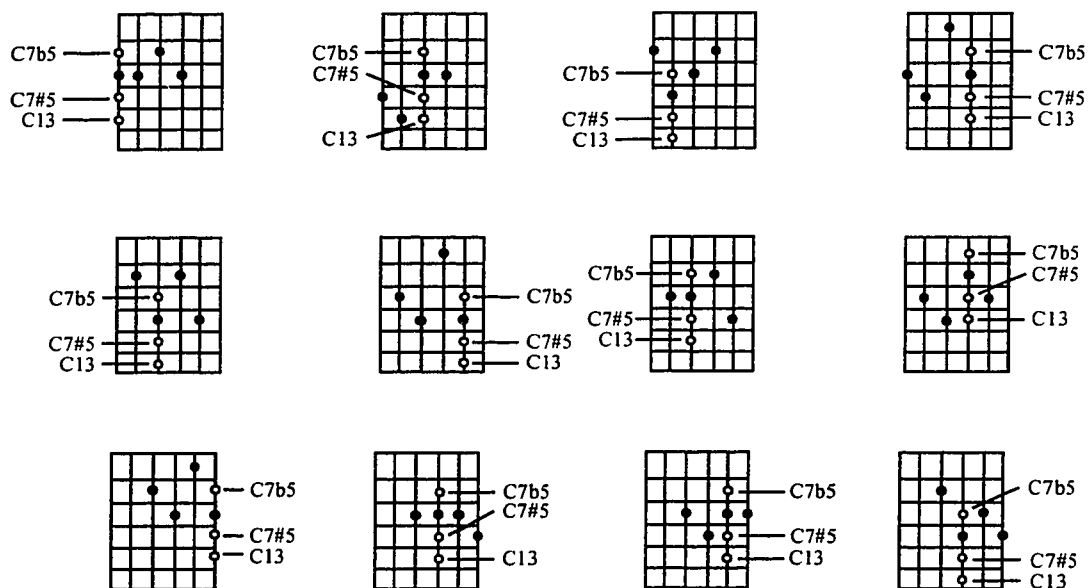
Eb7	resolves to major	9	sus4 13	(mixolydian mode)
Bbm7	rel. m7	9	11	(dorian mode)

Extensions

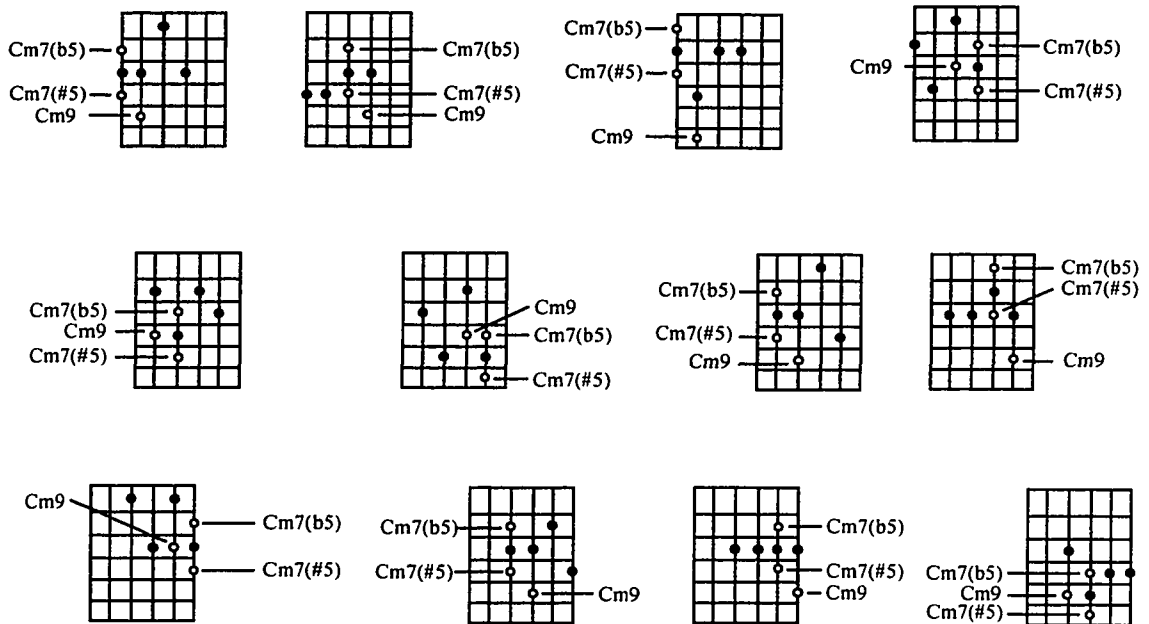
Adding 9ths to dom7



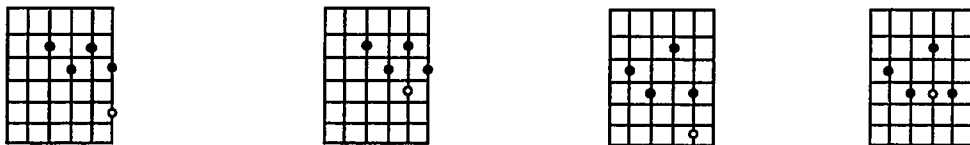
Adding b5, #5 and 13ths to dom7



Adding b5, #5 and 9 to m7



Adding extensions to diminished chords.



High strings

Middle strings

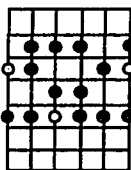
Part 2

Scales

Vertical and Horizontal Scales

There are two popular schools of thought regarding scales on the jazz guitar. These will be referred to as horizontal scales and vertical scales. Their names describe how each is conceptualized. Neither is a better approach, but rather each offers different strengths and weaknesses with regards to use in improvisation. The best approach is to be versatile in both methods. Vertical scale forms are generally known as position playing. The horizontal approach to scales focuses on playing on one or two strings at a time. The following are examples which illustrate both scale types.

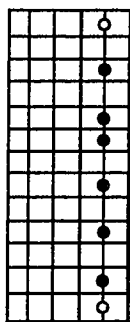
Vertical scale pattern



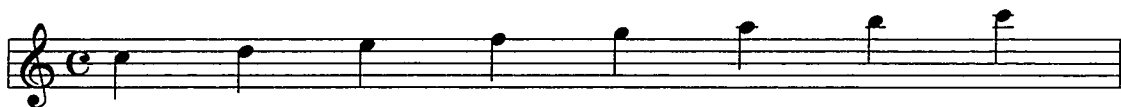
G major scale, 2nd position



Horizontal scale pattern



C major scale on 2nd string



Major Scales

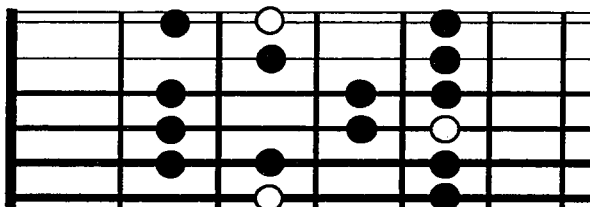
The major scale and its modes are the most frequently used melodic material in jazz improvisation. As most jazz standards and original jazz compositions are tonal compositions, their chord structures will be from major keys and therefore have modes from major keys. The major scale contains the following scale degree qualities.

Root
major 2nd
major 3rd
perfect 4th
perfect 5th
major 6th
major 7th

The fingerings which follow are 5 choices from a total of 12 vertical fingerings which exist on the guitar fingerboard. The chart indicates the position of the form for each of the 12 keys. A position is defined as 1 fret below the second finger. Finger 2 is a better indicator as it rarely stretches out of position. Keep in mind as well that all of the major scale modes are contained within each of these 5 major scale fingerings.

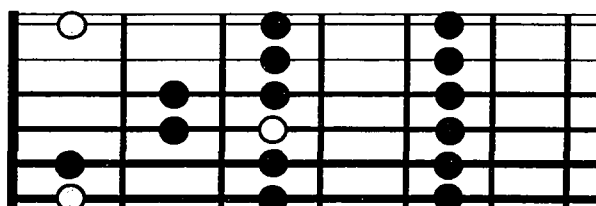
MAJOR SCALE FORM 1

KEY	G	C	F	B \flat	E \flat	A \flat	D \flat	G \flat	B	E	A	D
	<i>Em</i>	<i>Am</i>	<i>Dm</i>	<i>Gm</i>	<i>Cm</i>	<i>Fm</i>	<i>Bbm</i>	<i>Ebm</i>	<i>G\sharpm</i>	<i>C\sharpm</i>	<i>F\sharpm</i>	<i>Bm</i>
POSITION	II	VII	XII	V	X	III	VIII	XIII	VI	XI	IV	IX



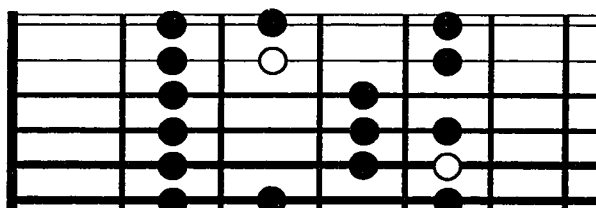
MAJOR SCALE FORM 2

KEY	G	C	F	B \flat	E \flat	A \flat	D \flat	G \flat	B	E	A	D
	<i>Em</i>	<i>Am</i>	<i>Dm</i>	<i>Gm</i>	<i>Cm</i>	<i>Fm</i>	<i>Bbm</i>	<i>Ebm</i>	<i>Gbm</i>	<i>Cbm</i>	<i>Fbm</i>	<i>Bm</i>
POSITION	IV	IX	II	VII	XII	V	X	III	VIII	XIII	VI	XI



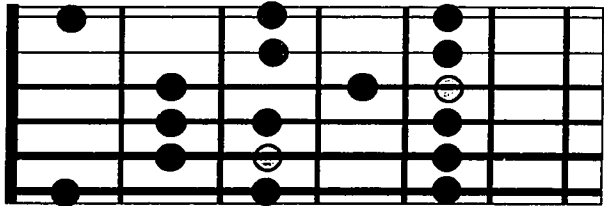
MAJOR SCALE FORM 3

KEY	G	C	F	B \flat	E \flat	A \flat	D \flat	G \flat	B	E	A	D
	<i>Em</i>	<i>Am</i>	<i>Dm</i>	<i>Gm</i>	<i>Cm</i>	<i>Fm</i>	<i>Bbm</i>	<i>Ebm</i>	<i>Gbm</i>	<i>Cbm</i>	<i>Fbm</i>	<i>Bm</i>
POSITION	VII	XII	V	X	III	VIII	XIII	VI	XI	IV	IX	II



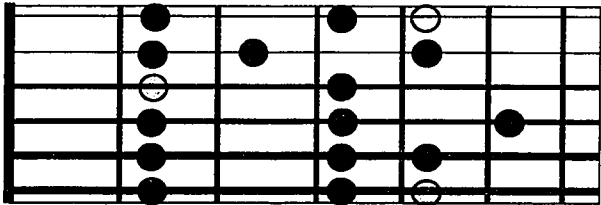
MAJOR SCALE FORM 4

KEY	G	C	F	Bb	Eb	Ab	Db	Gb	B	E	A	D
	<i>Em</i>	<i>Am</i>	<i>Dm</i>	<i>Gm</i>	<i>Cm</i>	<i>Fm</i>	<i>Bbm</i>	<i>Ebm</i>	<i>Gbm</i>	<i>C#m</i>	<i>F#m</i>	<i>Bm</i>
POSITION	IX	II	VII	XII	V	X	III	VIII	XIII	VI	XI	IV



MAJOR SCALE FORM 5

KEY	G	C	F	Bb	Eb	Ab	Db	Gb	B	E	A	D
	<i>Em</i>	<i>Am</i>	<i>Dm</i>	<i>Gm</i>	<i>Cm</i>	<i>Fm</i>	<i>Bbm</i>	<i>Ebm</i>	<i>Gbm</i>	<i>C#m</i>	<i>F#m</i>	<i>Bm</i>
POSITION	XII	V	X	III	VIII	XIII	VI	XI	IV	IX	II	VII



Vertical Scale Exercises

Scale practice should be included in the routine of any musician. As a jazz musician, knowing scales and modes is of extra importance. Scales are a major component of all solos. The more one is familiar with scales the more facility one will have in the execution of ideas during improvisations. Learning scales on the guitar can be difficult and time consuming. There are 12 scales which can be played in 5 different positions for a total of 60 scale forms. To achieve this goal it is best to proceed with a logical and organized approach. Practicing all 5 forms in all 12 keys every day would take up far too much practice time leaving little time to do much else. The scheme in Table I is designed to spread the work out over a longer period. You will play each form in 2 keys per day, eventually covering all 12 keys and 5 forms in a six day period. When practicing the scales, play each form in all positions from lowest to the highest note. At this point your goal should be to learn the fingerings by memory and develop the ability to find fingerings for each of the 12 scales using all 5 forms.

Practice Table I

Key	Form 1	Form 2	Form 3	Form 4	Form 5
C		day 6	day 5	day 4	day 3
F	day 2		day 6	day 5	day 4
Bb	day 3	day 2		day 6	day 5
Eb	day 4	day 3	day 2		day 6
Ab	day 5	day 4	day 3	day 2	
Db	day 6	day 5	day 4	day 3	day 2
Gb		day 6	day 5	day 4	day 3
B	day 2		day 6	day 5	day 4
E	day 3	day 2		day 6	day 5
A	day 4	day 3	day 2		day 6
D	day 5	day 4	day 3	day 2	
G	day 6	day 5	day 4	day 3	day 2

Table 1 will be used in the sections of the book which deal with melodic and harmonic minor scales.

Major Scale Modes

The following are the modes generated by the major scale. They are presented as they relate to their parent scale of C major and with a common starting note of C. Spelling each of the modes from C allows one to see the intervallic qualities which are inherent in each of the modes.

Major scale



Dorian



Phrygian



Lydian



Mixolydian



Aeolian



Locrian



An excellent way to practice scales and modes is play them in chord progressions. This will require the use of the modes and an understanding of chord scale relationships. Let's start with II - V7 - I.



The following are the corresponding scales for these three chords played in an ascending direction from root to 7th.

D dorian (Dm7)



G mixolydian (G7)



C major (Cmaj7)



If we use a progression with a harmonic rhythm of one chord per bar, and combine the scales and modes, we end up with the following pattern.



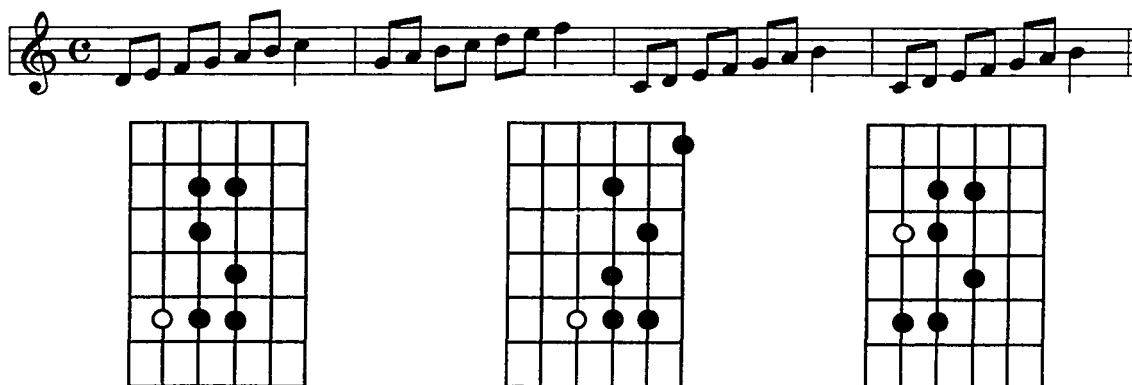
There are two ways one might find fingerings for these scales:

- Scale forms
- One octave modes

Scale forms

To practice modes using scale forms, choose one of the 5 scale forms and find each of the 3 modes within that form. Although it may be possible to play more than one octave of a particular mode, play only one octave as in the pattern above. Play through each of the modes from root to 7th without moving out of the scale form.

Using major scale form 4, we devise the following fingerings for our three modes, dorian, mixolydian and ionian. (major scale)



Exercises

Play the dorian mode through the circle of 5ths. Derive your fingerings from major scale forms.

no. 19



Play the mixolydian mode through the circle of 5ths. Derive your fingerings from major scale forms.

Play the major scale through the circle of 5ths.

Play the major scale modes in sequence through the circle of 5ths. This example illustrates the modes from the key of C major. Practice in all 12 keys.



no. 20

Cmaj7 Fmaj7 Bm7(b5) Em7

Am7 Dm7 G7 Cmaj7

Play IIm7 - V7 - Imaj7 (dorian, mixolydian and Ionian) modes through the circle of 5ths. For each key, choose a position which accomodates the range.



no. 21

Dm7 G7 Cmaj7

Gm7 C7 Fmaj7

Cm7 F7 Bbmaj7

Handwritten musical notation on ten staves, each featuring a sequence of chords and a corresponding melodic line. The notation is in treble clef and includes various accidentals (flats, sharps, naturals) and note values (quarter, eighth, and sixteenth notes).

The chords are labeled above the staves:


- Staff 1: Fm7, Bb7, Ebmaj7
- Staff 2: Bbm7, Eb7, Abmaj7
- Staff 3: Ebm7, Ab7, Dbmaj7
- Staff 4: Abm7, Db7, Gbmaj7
- Staff 5: C#m7, F#7, Bmaj7
- Staff 6: F#m7, B7, Emaj7
- Staff 7: Bm7, E7, Amaj7
- Staff 8: Em7, A7, Dmaj7
- Staff 9: Am7, D7, Gmaj7

Applying rhythms to scale practice

When practicing scales and modes, it is important to keep your practice as interesting and creative as possible. Do not make scale practice a physical exercise geared at simply moving your fingers. This is a waste of time. Scale practice should be seen as a time to practice as many musical ideas as possible. The idea is to incorporate many other musical elements into scale practice.

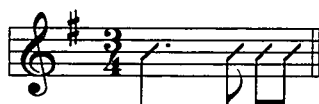
An example would be to practice your scales using patterns, rhythms, dynamics, tempos, and time signatures.

Here is an example of how to apply patterns and rhythms to scale practice. Using the G major scale as an example, play the scale in thirds as follows.

 no. 22



Next add a rhythmic pattern to the scale pattern. We will use a pattern which has four articulations. This will avoid too much syncopation between the rhythmic and scale patterns.



The result of combining the rhythmic and scale patterns will be as follows.



As you become comfortable with combining scale and rhythmic patterns, try adding one other musical element such as dynamics or tempo changes. Play the same example starting piano and build the dynamic level to a forte by the end of the phrase. Other ideas which will help to make practicing scales more musical and creative include; playing staccato; using legato techniques; (slurring two or more notes which occur on the same string) improvising and sound production. Always be conscious of the sound you are producing. Sound production from the guitar (not the amp) should always be full and focused at all dynamic levels. If you strive for the best possible sound production from the instrument, the amp sound will almost certainly be good as well.

The following are rhythms which are to be used for scale practice. Choose a different rhythm for each practice session. This will help you to concentrate and not fall victim to the monotony of scale practice. You can proceed with scale practice using the following steps.

1. apply a melodic pattern to a scale form.
2. apply a rhythm to a scale form.
3. apply both a rhythm and melodic pattern to a scale form.

When combining the melodic and rhythmic patterns, it is best to start by choosing a rhythmic pattern that has an articulation which matches the melodic cells of the scale pattern. If we take the G major scale in thirds as an example and look at its structure, we see that it has a melodic cell which contains two notes. Therefore, it is easiest to combine this scale pattern with a rhythmic pattern that is composed of either two or four articulations per bar.

Rhythms

3/4 Time



2/4 Time



These rhythms contain a variety of patterns and articulations. They may be combined in various ways to create more complex rhythmic patterns. The articulations vary from 1 to 5 per pattern. Combine them in ways which create compounds of 2 and 4 articulations. This will create rhythmic patterns which blend with the melodic scale patterns that follow.

Patterns

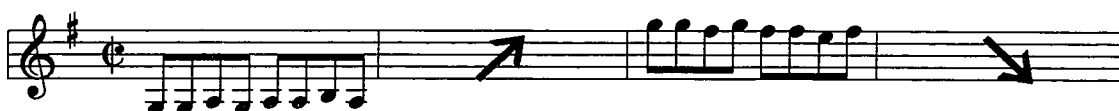
ex. 1



ex. 2



The next pages of patterns will appear as written below. The first bar or two of each pattern will be given both ascending and descending followed by an arrow. Simply continue the pattern by transposing the pattern one note higher diatonically.



To end a pattern, find a musical way to land on the tonic of the scale. In some positions this will mean that the root of the scale will be on either string 2 or string 3 in the ascending direction, and on either string 4 or string 5 in the descending direction.

When practicing, be conscious of the following factors:

- sound you are producing
- whether or not you are relaxed (always try to be relaxed)
- whether there is any tension in your muscles
- finger movements (small movements are best, economy)
- phrasing
- dynamics
- overall musicality

Speed should be increased in small increments while maintaining a relaxed body and mind.

Patterns

The image displays 12 musical staves, each containing a specific melodic pattern in G major (one sharp). The patterns are organized into three groups of four staves each.

- Group 1 (Staves 1-4):** Each staff begins with a half-note scale ascending (A4-B4-C5-D5-E5-F#5-G5) and descending (G5-F#5-E5-D5-C5-B4-A4). The first staff includes a double bar line at the end.
- Group 2 (Staves 5-8):** Each staff begins with a quarter-note scale ascending (A4-B4-C5-D5-E5-F#5-G5) and descending (G5-F#5-E5-D5-C5-B4-A4). The first staff includes a double bar line at the end.
- Group 3 (Staves 9-12):** Each staff begins with an eighth-note scale ascending (A4-B4-C5-D5-E5-F#5-G5) and descending (G5-F#5-E5-D5-C5-B4-A4). The first staff includes a double bar line at the end.

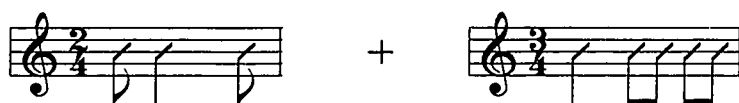
More Patterns

The image displays ten staves of musical notation, each featuring a treble clef and a key signature of one sharp (F#). The notation is organized into two groups of five staves each. The first group (staves 1-5) shows a sequence of patterns: a four-measure phrase of eighth notes, followed by a measure with a diagonal arrow pointing up and to the right, then a four-measure phrase of eighth notes, and finally a measure with a diagonal arrow pointing down and to the right. The second group (staves 6-10) shows a sequence of patterns: a four-measure phrase of eighth notes, followed by a measure with a diagonal arrow pointing up and to the right, then a four-measure phrase of eighth notes, and finally a measure with a diagonal arrow pointing down and to the right. The notation is consistent across all staves, with the only variation being the direction of the arrows in the final measure of each pattern.

Exercises

1. Choose a scale pattern and combine the pattern with a major scale form and play the scale pattern in all 12 keys. Use Practice Table 1 to organize your practice time. Use different scale forms on different days and apply a different scale pattern each time.
2. Choose a rhythmic pattern and combine the pattern with a major scale form and play the rhythmic pattern in all 12 keys. Use Practice Table 1 to organize your practice time. Use different scale forms on different days and apply a different rhythmic pattern each time.
3. Combine 2 rhythmic patterns, one from the 2/4 examples and one from the 3/4 examples to create a 5/4 rhythm.

ex.



combined

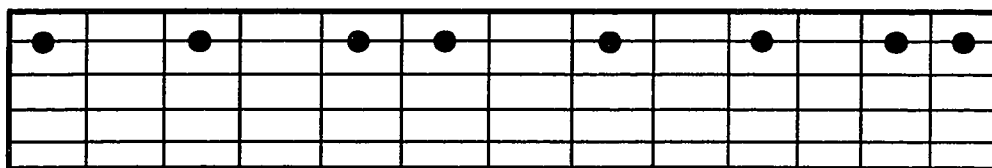


The combination of these two rhythmic patterns creates a total of eight articulations. This will allow you to combine the rhythmic pattern with any of the scale patterns which contain melodic cells of two, four or eight notes.

4. Combine a rhythmic pattern and a scale pattern and practice with all 5 scale forms in all twelve keys. As always, use the practice table to spread the work out over time.
5. Combine a two rhythmic patterns to create a rhythmic pattern in compound time and apply it to a scale pattern and practice with all 5 scale forms in all twelve keys.
6. Combine scale and rhythmic patterns in many creative combinations in simple and compound time and apply to all 5 scale forms in twelve keys.

Horizontal Approach

The horizontal approach is another method of conceptualizing the guitar fretboard. Playing scales and melodies on the guitar using a horizontal approach is very natural and musical. The guitar is well suited to this approach as its design is essentially based on changing the pitch of the individual strings by shortening their length. It is possible to play all scales and modes on each string as each string has a range of almost 2 octaves. We will organize learning scales using the circle of 5ths and the 6 strings of the guitar. If we consider that each scale can be played on each of the 6 strings and that there are 12 keys, we can conclude that there are 72 scale possibilities on the guitar fretboard. We will begin with C major on string 2.



There are numerous fingering possibilities in playing horizontal scales. Start simply, using only one finger to play the entire scale. This will allow you to learn the notes of the scale. When you are familiar with the notes of the scale on that particular string, try different combinations of fingerings. It is possible to use 1, 2, 3 or 4 fingers to play the scales.

2 fingers

For notes a tone apart, use fingers 1 and 3 and then shift position to play the next note again using finger 1. For notes a semitone apart, use fingers 1 and 2 then shift position.

3 fingers

Use normal fingering except when playing 3 tones in a row, use fingers 1, 2 and 4 then shift position and start again with finger 1.

4 fingers

Each finger will play 1 note then shift position.

When descending the scale, use the exact fingerings you used to ascend. For example, if you played 1, 3 and 4 as your last 3 notes, play 4, 3 and 1, then shift position.

Use the following table to organize your horizontal scale practice. As with Table I, the idea is to spread the work out over a six day period. In this way, you will avoid spending your entire practice session on one item. This practice schedule will allow you to play in all keys and on all strings, but not all in the same day. Don't expect to know all of your scales on all strings right away. This will take some time.

Practice Table II

	1	2	3	4	5	6
C		day 6	day 5	day 4	day 3	day 2
F	day 2		day 6	day 5	day 4	day 3
Bb	day 3	day 2		day 6	day 5	day 4
Eb	day 4	day 3	day 2		day 6	day 5
Ab	day 5	day 4	day 3	day 2		day 6
Db	day 6	day 5	day 4	day 3	day 2	
Gb		day 6	day 5	day 4	day 3	day 2
B	day 2		day 6	day 5	day 4	day 3
E	day 3	day 2		day 6	day 5	day 4
A	day 4	day 3	day 2		day 6	day 5
D	day 5	day 4	day 3	day 2		day 6
G	day 6	day 5	day 4	day 3	day 2	

Exercises

One of the most enjoyable ways to practice horizontal scales is to improvise on chord progressions. The three examples which follow provide a framework for improvisation. One or several modes can be organized into simple progressions. You can either record a progression or have another guitarist or pianist play it. Improvise freely on the harmony restricting yourself to one string and the mode.

Modal examples

example 1

Dm7 (dorian)

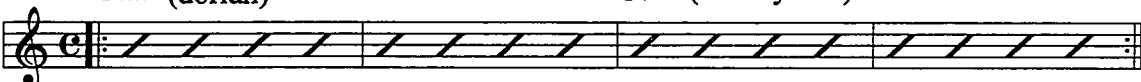


Fm7 (dorian)

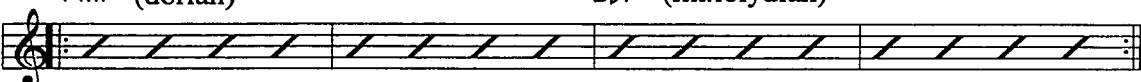


example 2

Dm7 (dorian) G7 (mixolydian)

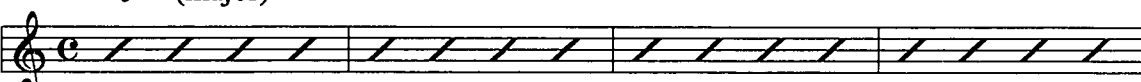


Fm7 (dorian) Bb7 (mixolydian)

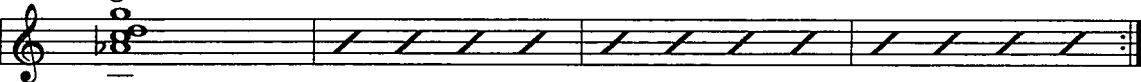


example 3

Cmaj7 (major)

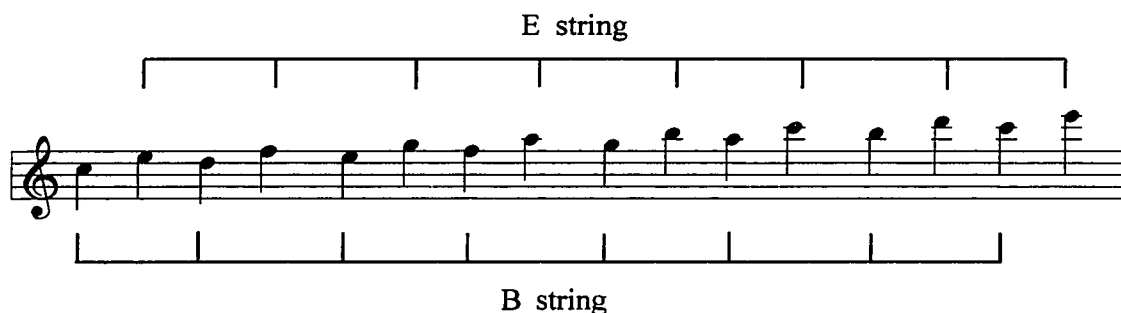


Abmaj7(11) (G phrygian)



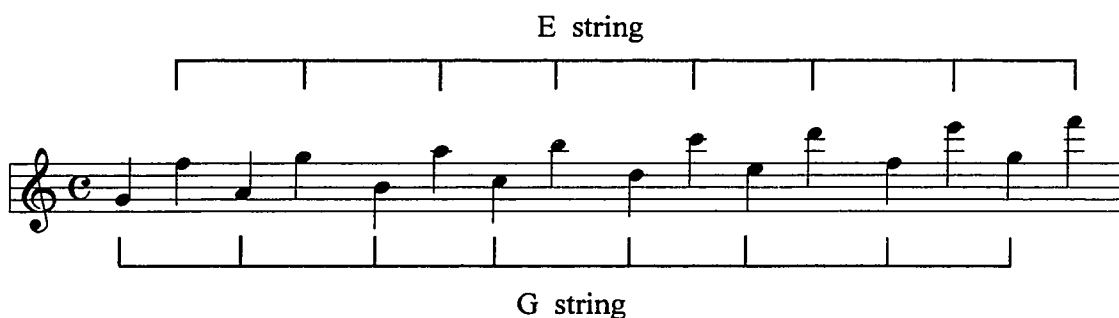
Combining Strings

Intervals are easy to play using two adjacent strings. To play intervals, use one string for the lower note of the interval and the other string for the higher note. The following example illustrates diatonic thirds in C major.



Using adjacent strings it is possible to play seconds, thirds, fourths, fifths and sixths. Minor seconds and sixths are the only intervals which will require a stretch.

Skipping one string facilitates larger intervals. This next example illustrates the diatonic sevenths in C major.



Skipping one string will work well with fifths, sixths, sevenths and octaves.

Triads, in all inversions, can be played across three strings. To play triads, play one tone of the triad per string. Practice starting on each of the three chord degrees. (root, third and fifth)

Exercises

1. Practice playing each of the modes from the major scales on each of the six strings and in all keys. Use Practice Table II as a guide to organize your practice time.

2. Improvise using two adjacent strings in each of the 7 modes utilizing the following:

2nd and 3rds
4ths and 5ths

2nds and 4ths
2nds and 6ths

3. Improvise across strings (skipping one string) in each of the 7 modes utilizing the following:

5ths, 6ths, 7ths, octaves, triads

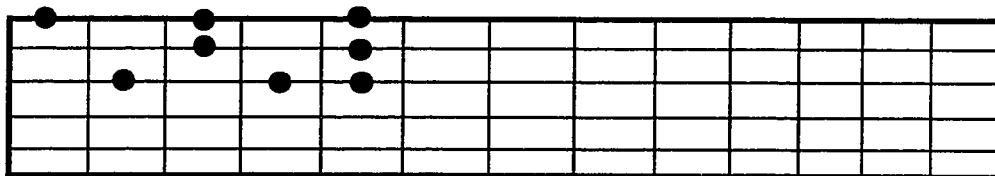
(For all examples with intervals, practice both as single notes and as double stops)

4. Using three adjacent strings and horizontal scale techniques, play each of the 7 modes of the major scale. Start on the root of each mode and ascend one octave. In this example, the C major modes are illustrated on the top 3 strings.



no. 23

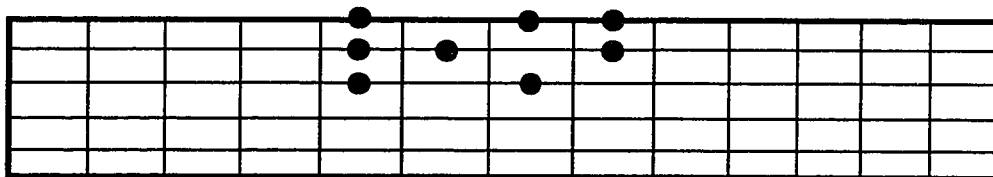
A aeolian mode



B locrian



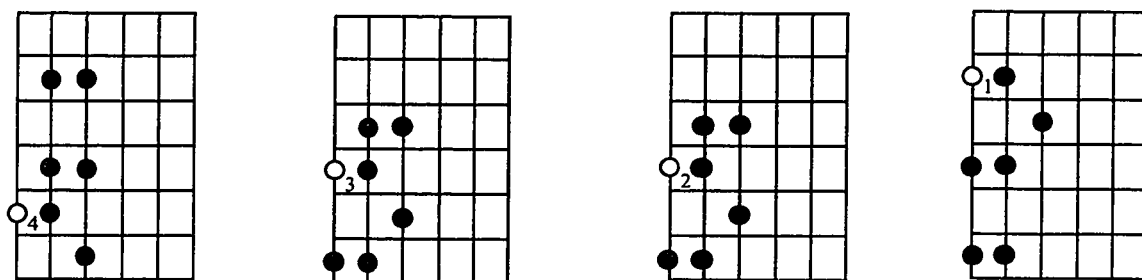
C Ionian (major)



One octave scale practice

One other approach to scales is to learn them in one octave using all possible fingering combinations. This method is based on the concept that each finger plays the root of the scale. Using the 6th string as an example we find the notes in the following manner.

finger 4 plays root
finger 3 plays root
finger 2 plays root
finger 1 plays root



Starting with fingers 2 and 3 will often produce the same pattern. In this example, the pattern starting on finger 2 produces the best result. Continue working through the major scales on string 5, string 4 and finally string 3. You will find that some fingerings will be more useful than others. Work through all possibilities to find those which are most useful.

Exercises

Using one octave fingerings, play major scales through the cycle of 5ths. (All 12 keys) Circle of 5ths diagrams are included on the next page.

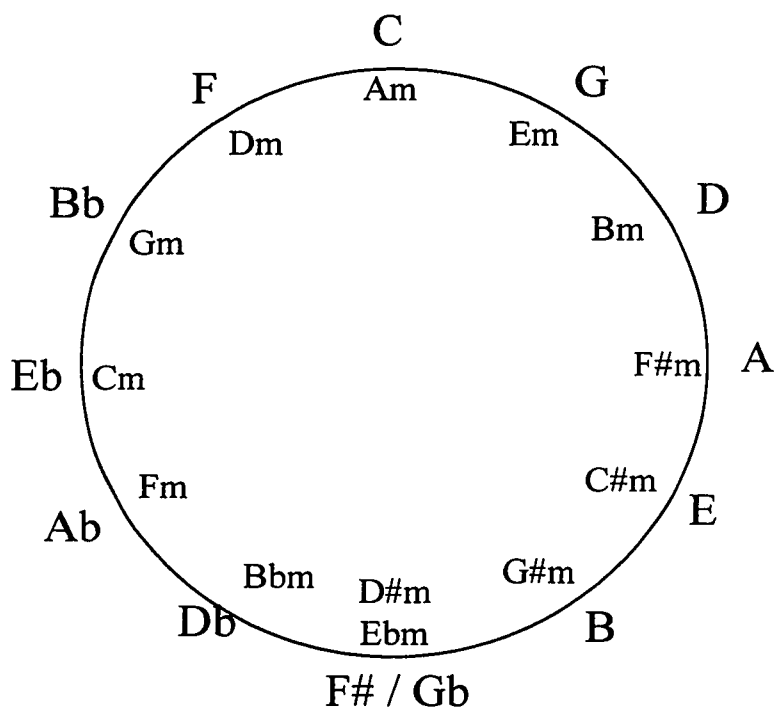
There are several ways to approach this:

- Choose an area of the fingerboard and stay within that position as much as possible.
- Choose positions at random.
- Start on each of the four possible strings.
- Start on each of the four possible fingerings.
- Choose a piece of music (preferably a standard or jazz piece) and practice playing through the piece by playing the appropriate mode for each chord.

Circle of 5ths

The image displays six musical staves, each containing a series of slanted lines representing notes. The notes are labeled as follows:

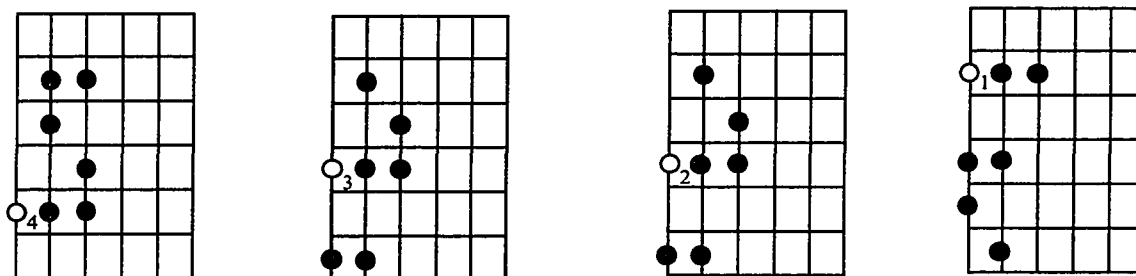
- Staff 1: C, F
- Staff 2: B \flat , E \flat
- Staff 3: A \flat , D \flat
- Staff 4: G \flat , B
- Staff 5: E, A
- Staff 6: D, G



One octave mode practice

Practicing modes in one octave is similar to the one octave major scales. We will again begin by starting on one of the strings (for now string 6) and use each of the 4 fingers to play the root of the mode.

Dorian Mode



As with the major scales, starting with fingers 2 and 3 will often produce the same pattern. In this example, the pattern starting on finger 2 produces the best result.

The next step is to repeat this procedure for strings 5, 4 and 3 using dorian mode. Repeat the process for the mixolydian and ionian (major scale) modes.

Exercises


1. Play dorian mode in 12 keys using one octave fingerings.

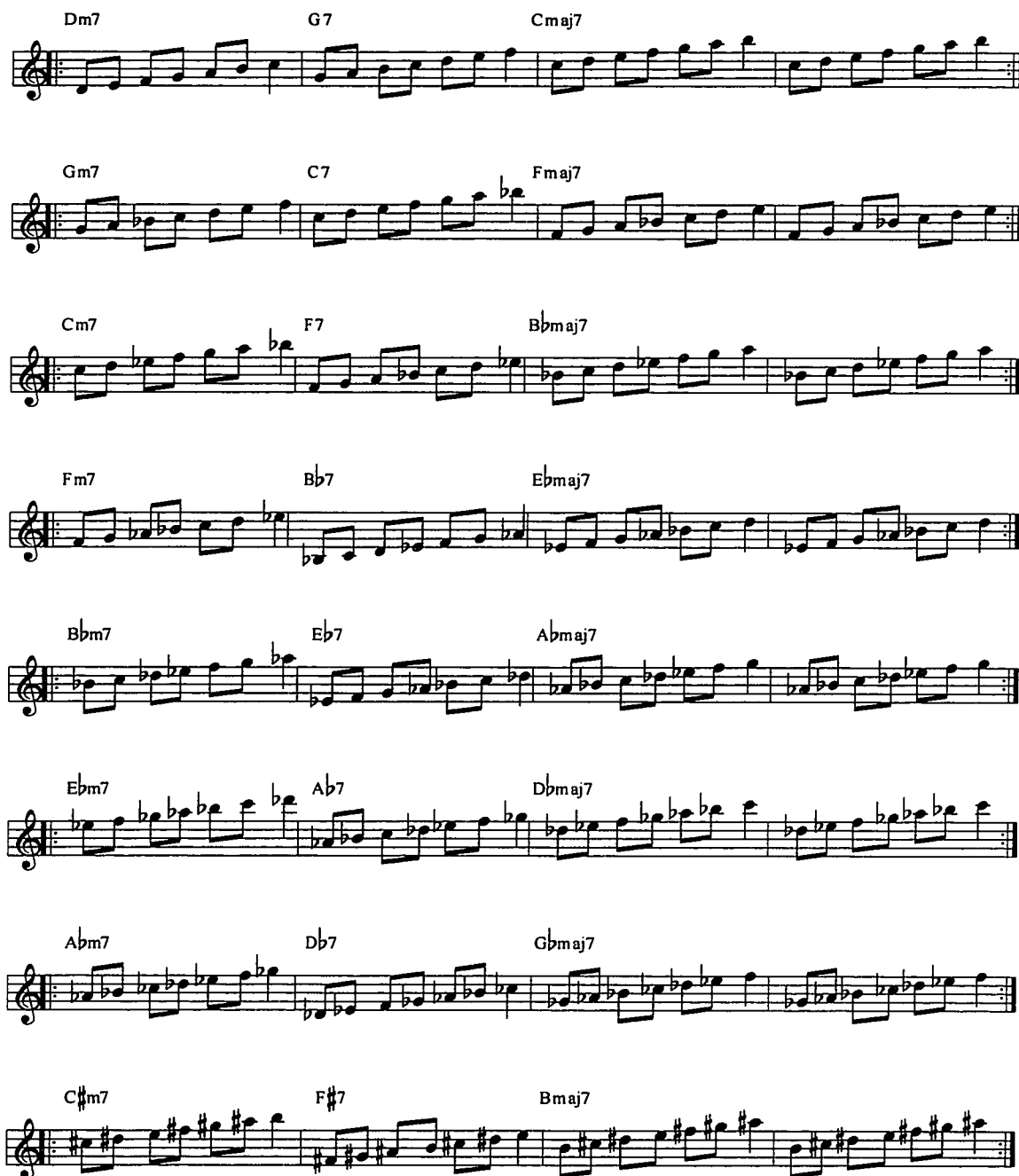
There are several ways to approach this:

- Choose an area of the fingerboard and stay within that position as much as possible.
- Choose positions at random.
- Start on each of the four possible strings. (Use only one string at a time)
- Start on each of the four possible fingerings. (Use only one fingering at a time)

2. Play mixolydian mode in 12 keys using one octave fingerings.
3. Play the modes for a II - V7 - I chord progression (dorian, mixolydian and ionian) through the cycle of 5ths using one octave fingerings. (All 12 keys) This exercise is similar to recorded example 21, except that you conceptualize each mode individually based on fingerings and not major scale forms.

II - V7 - I through circle of 5ths

refer to  no. 21



The image displays eight staves of musical notation, each representing a II - V7 - I chord progression through the circle of fifths. The first four staves are in C major, and the last four are in C minor. Each staff contains three measures, with the chord names labeled above the notes. The notation uses a treble clef and a key signature of one flat (Bb) for the C minor section.

Staff	Chord 1	Chord 2	Chord 3
1	Dm7	G7	Cmaj7
2	Gm7	C7	Fmaj7
3	Cm7	F7	Bbmaj7
4	Fm7	Bb7	Ebmaj7
5	Bbm7	Eb7	Abmaj7
6	Ebm7	Ab7	Dbmaj7
7	Abm7	Db7	Gbmaj7
8	C#m7	F#7	Bmaj7

Four staves of musical notation in treble clef, each with four measures and a key signature of one sharp (F#). The notation includes various chords and melodic lines. The chords are labeled above the staves:

- Staff 1: F#m7, B7, Emaj7
- Staff 2: Bm7, E7, Amaj7
- Staff 3: Em7, A7, Dmaj7
- Staff 4: Am7, D7, Gmaj7

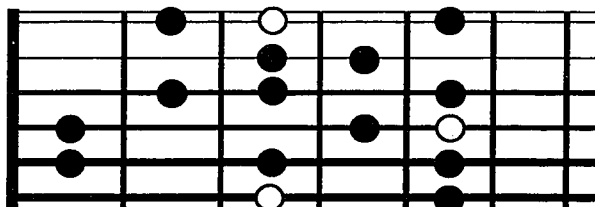
Harmonic Minor Scale

The harmonic minor scale is a natural minor scale with a raised 7th degree. This scale is commonly used in improvisation over IIm7b5 and V7b9 , resolving to any form of minor chord. It may also be used over tonic minor when there is a major 7th in the chord, although the augmented 2nd interval between 6 and 7 should be hand-led with care. A better choice for tonic minor with a major 7th is the melodic minor scale. Mode 3 of harmonic minor works well over maj7\#5 when there is a natural 4th scale degree.

Root
major 2nd
minor 3rd
perfect 4th
perfect 5th
minor 6th
major 7th

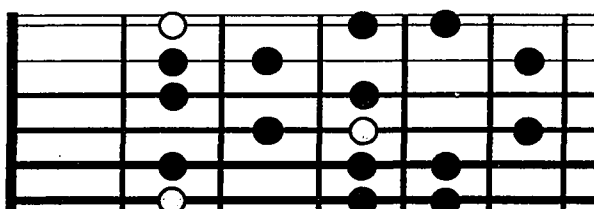
HARMONIC MINOR SCALE FORM 1

KEY	<i>Gm</i>	<i>Cm</i>	<i>Fm</i>	<i>Bbm</i>	<i>Ebm</i>	<i>G#m</i>	<i>C#m</i>	<i>F#m</i>	<i>Bm</i>	<i>Em</i>	<i>Am</i>	<i>Dm</i>
POSITION	II	VII	XII	V	X	III	VIII	XIII	VI	XI	IV	IX



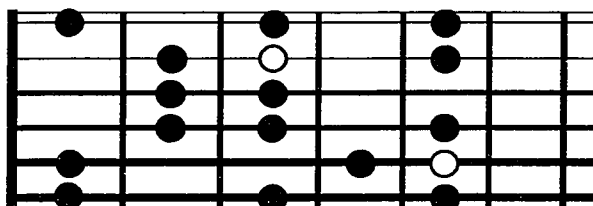
HARMONIC MINOR SCALE FORM 2

KEY	<i>Gm</i>	<i>Cm</i>	<i>Fm</i>	<i>Bbm</i>	<i>Ebm</i>	<i>G#m</i>	<i>C#m</i>	<i>F#m</i>	<i>Bm</i>	<i>Em</i>	<i>Am</i>	<i>Dm</i>
POSITION	III	VIII	XIII	VI	XI	IV	IX	II	VII	XII	V	X



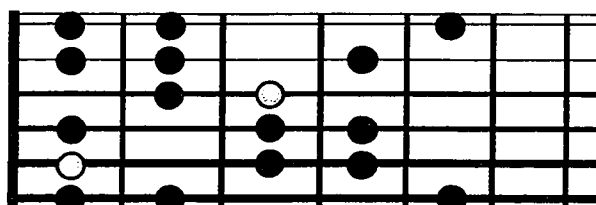
HARMONIC MINOR SCALE FORM 3

KEY	<i>Gm</i>	<i>Cm</i>	<i>Fm</i>	<i>Bbm</i>	<i>Ebm</i>	<i>G#m</i>	<i>C#m</i>	<i>F#m</i>	<i>Bm</i>	<i>Em</i>	<i>Am</i>	<i>Dm</i>
POSITION	VII	XII	V	X	III	VIII	XIII	VI	XI	IV	IX	II



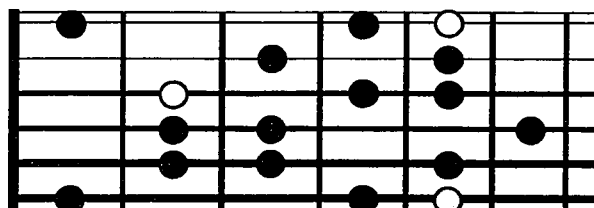
HARMONIC MINOR SCALE FORM 4

KEY	<i>Gm</i>	<i>Cm</i>	<i>Fm</i>	<i>Bbm</i>	<i>Ebm</i>	<i>G#m</i>	<i>C#m</i>	<i>F#m</i>	<i>Bm</i>	<i>Em</i>	<i>Am</i>	<i>Dm</i>
POSITION	X	III	VIII	XIII	VI	XI	IV	IX	II	VII	XII	V



HARMONIC MINOR SCALE FORM 5

KEY	<i>Gm</i>	<i>Cm</i>	<i>Fm</i>	<i>Bbm</i>	<i>Ebm</i>	<i>G#m</i>	<i>C#m</i>	<i>F#m</i>	<i>Bm</i>	<i>Em</i>	<i>Am</i>	<i>Dm</i>
POSITION	XII	V	X	III	VIII	XIII	VI	XI	IV	IX	II	VII



Harmonic minor scale exercises

1. Practice all 5 forms in all 12 keys according to the practice scheme outlined in table 1.
2. Once you are familiar with the fingerings and are able to execute the scales in all 12 keys, add patterns and rhythms to your melodic minor scale practice. Use the approach outlined in practicing major scales.

Patterns and Rhythms

1. Choose a scale pattern and combine the pattern with a harmonic minor scale form and play the scale pattern in all 12 keys. Use Practice Table 1 to organize your practice time. Use different scale forms on different days and apply a different scale pattern each time.
2. Choose a rhythmic pattern and combine the pattern with a harmonic minor scale form and play the rhythmic pattern in all 12 keys. Use Practice Table 1 to organize your practice time. Use different scale forms on different days and apply a different rhythmic pattern each time.
3. Combine 2 rhythmic patterns, one from the 2/4 examples and one from the 3/4 examples to create a 5/4 rhythm.
4. Combine a rhythmic pattern and a scale pattern and practice with all 5 scale forms in all twelve keys. As always, use the practice table to spread the work out over time.
5. Combine two rhythmic patterns to create a rhythmic pattern in compound time and apply it to a scale pattern and practice with all 5 scale forms in all twelve keys.
6. Combine scale and rhythmic patterns in many creative combinations in simple and compound time and apply to all 5 scale forms in twelve keys.

Harmonic minor modes

The harmonic minor scale generates 6 additional modes apart from the scale itself as does the major scale. Although all are valid modes, for our purposes we will look only at mode 5 which is used frequently in jazz improvisation. This mode is used mostly over V7 chords which resolve to minor.

harmonic minor mode 5



Mode 5 is presented here as it relates to its parent scale of C harmonic minor and with a common starting note of C.

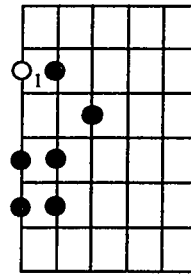
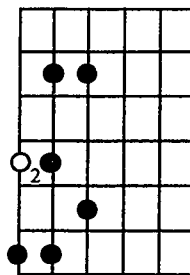
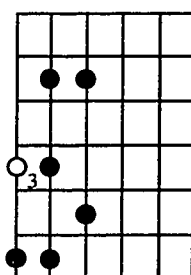
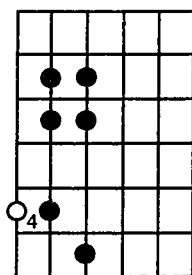
Exercises

Learn mode 5 harmonic minor in all 12 keys.

One octave scale practice (Harmonic Minor)

As with the major scale, each finger plays the root of the scale. Using the 6th string as an example find the notes in the following manner.

finger 4 plays root
finger 3 plays root
finger 2 plays root
finger 1 plays root



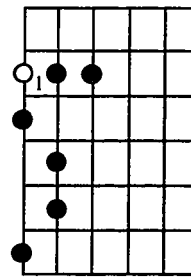
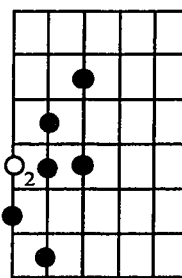
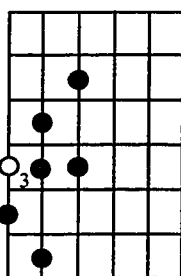
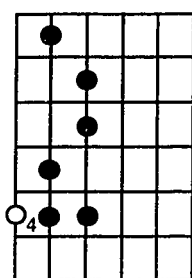
Exercises

Using one octave fingerings, play harmonic minor scales through the cycle of 5ths. (All 12 keys)



One octave mode practice (harmonic minor)

Mode 5 harmonic minor.



Exercises

1. Practice mode 5 harmonic minor starting on string 6, 5, 4 and 3 in all 12 keys.
2. The pattern on the next page is based on mode 5 harmonic minor. It has been arranged to create a more musical line. Vary your practice by applying these guidelines.

Choose an area of the fingerboard and stay within that position as much as possible.

Choose positions at random.

Start on each of the four possible strings. (Use only one string at a time)

Start on each of the four possible fingerings. (Use only one fingering at a time)



Sheet music for 12 staves, each containing a melodic line and a chord progression. The chords are labeled above the staves.

Staff 1: C7(♯5) Fm6

Staff 2: F7(♯5) Bbm6

Staff 3: Bb7(♯5) Ebm6

Staff 4: D#7(♯5) G#m6

Staff 5: G#m7(♯5) C#m6

Staff 6: C#7(♯5) F#m6

Staff 7: F#7(♯5) Bm6

Staff 8: B7(♯5) Em6

Staff 9: E7(♯5) Am6

Staff 10: A7(♯5) Dm6

Staff 11: D7(♯5) Gm6

Staff 12: G7(♯5) Cm6

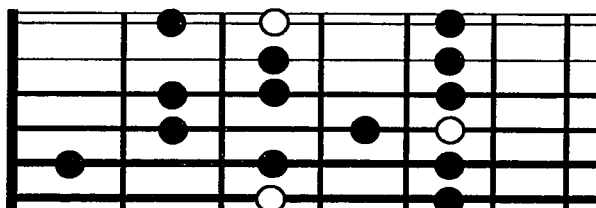
Melodic Minor Scale

The melodic minor scale is a natural minor scale with raised 6th and 7th degrees. Only the ascending melodic minor scale is used in jazz. It is often referred to as the "real melodic minor" or the "jazz minor" scale. These names are meant to distinguish it from the classical form of the scale which descends using the natural minor form. The melodic minor scale generates a number of frequently used scales for improvisation. (lydian b7, super locrian, lydian augmented) The melodic minor scale from its root is an excellent choice for tonic minor chords which contain major 6th and major 7th scale degrees.

Root
major 2nd
minor 3rd
perfect 4th
perfect 5th
major 6th
major 7th

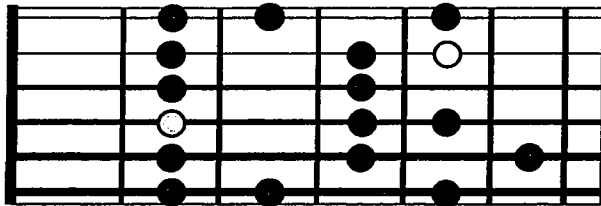
MELODIC MINOR SCALE FORM 1

KEY	<i>Gm</i>	<i>Cm</i>	<i>Fm</i>	<i>Bbm</i>	<i>Ebm</i>	<i>G#m</i>	<i>C#m</i>	<i>F#m</i>	<i>Bm</i>	<i>Em</i>	<i>Am</i>	<i>Dm</i>
POSITION	II	VII	XII	V	X	III	VIII	XIII	VI	XI	IV	IX



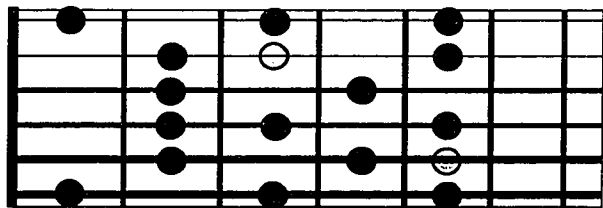
MELODIC MINOR SCALE FORM 2

KEY	<i>Gm</i>	<i>Cm</i>	<i>Fm</i>	<i>Bbm</i>	<i>Ebm</i>	<i>G#m</i>	<i>C#m</i>	<i>F#m</i>	<i>Bm</i>	<i>Em</i>	<i>Am</i>	<i>Dm</i>
POSITION	V	X	III	VIII	XIII	VI	XI	IV	IX	II	VII	XII

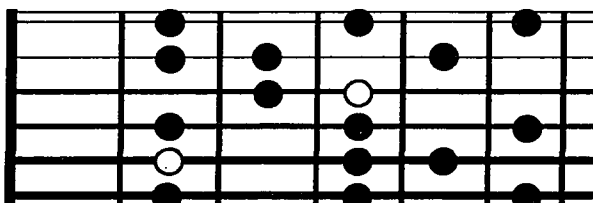


MELODIC MINOR SCALE FORM 3

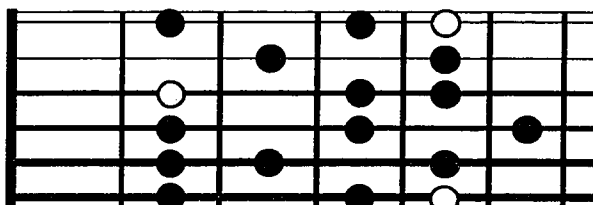
KEY	<i>Gm</i>	<i>Cm</i>	<i>Fm</i>	<i>Bbm</i>	<i>Ebm</i>	<i>G#m</i>	<i>C#m</i>	<i>F#m</i>	<i>Bm</i>	<i>Em</i>	<i>Am</i>	<i>Dm</i>
POSITION	VII	XII	V	X	III	VIII	XIII	VI	XI	IV	IX	II



KEY	Gm	Cm	Fm	Bbm	Ebm	G#m	C#m	F#m	Bm	Em	Am	Dm
POSITION	X	III	VIII	XIII	VI	XI	IV	IX	II	VII	XII	V



KEY	Gm	Cm	Fm	Bbm	Ebm	G#m	C#m	F#m	Bm	Em	Am	Dm
POSITION	XII	V	X	III	VIII	XIII	VI	XI	IV	IX	II	VII



Melodic minor scale exercises

1. Practice all 5 forms in all 12 keys according to the practice scheme outlined in Table 1.
2. Once you are familiar with the fingerings and are able to execute the scales in all 12 keys, add patterns and rhythms to your melodic minor scale practice. Use the approach outlined in practicing major scales.

Patterns and Rhythms

1. Choose a scale pattern and combine the pattern with a melodic minor scale form and play the scale pattern in all 12 keys. Use Practice Table 1 to organize your practice time. Use different scale forms on different days and apply a different scale pattern each time.
2. Choose a rhythmic pattern and combine the pattern with a melodic minor scale form and play the rhythmic pattern in all 12 keys. Use Practice Table 1 to organize your practice time. Use different scale forms on different days and apply a different rhythmic pattern each time.
3. Combine 2 rhythmic patterns, one from the 2/4 examples and one from the 3/4 examples to create a 5/4 rhythm.
4. Combine a rhythmic pattern and a scale pattern and practice with all 5 scale forms in all twelve keys. As always, use the practice table to spread the work out over time.
5. Combine two rhythmic patterns to create a rhythmic pattern in compound time and apply it to a scale pattern and practice with all 5 scale forms in all twelve keys.
6. Combine scale and rhythmic patterns in many creative combinations in simple and compound time and apply to all 5 scale forms in twelve keys.

Melodic minor modes

As with the major scale modes, the melodic minor modes are presented in two ways, as they relate to their parent scale of C melodic minor and with a common starting note of C.

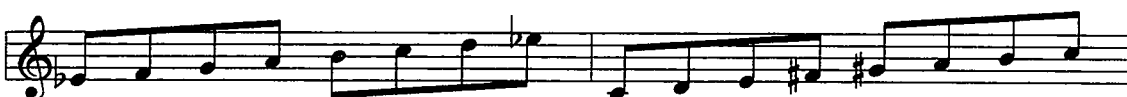
melodic minor



dorian $\flat 2$



lydian augmented



lydian $\flat 7$



mixolydian $\flat 6$



locrian $\flat 2$



super locrian



Exercises

Play each mode through the circle of 5ths. In this example the lydian b7 mode is used.



no. 26



Play the modes in sequence through the circle of 5ths and in all keys. This example uses all modes from the key of C melodic minor.



no. 27



This next example combines modes from the major scale and one from melodic minor. The chord progression is II - V7 - I. We will use dorian on the IIm7 chord, the seventh mode from melodic minor (super locrian) on the V7 chord and the major scale on the Imaj7. The starting key is C major and the progression moves through the circle of 5ths.

no. 28

The musical score consists of 12 lines, each containing three measures of music. The chords and their corresponding modes are as follows:

- Line 1: Dm7 (Dorian), G7 (Super Locrian), Cmaj7 (Major)
- Line 2: Gm7 (Dorian), C7 (Super Locrian), Fmaj7 (Major)
- Line 3: Cm7 (Dorian), F7 (Super Locrian), Bbmaj7 (Major)
- Line 4: Fm7 (Dorian), Bb7 (Super Locrian), Ebmaj7 (Major)
- Line 5: Bbm7 (Dorian), Eb7 (Super Locrian), Abmaj7 (Major)
- Line 6: Ebm7 (Dorian), Ab7 (Super Locrian), Dbmaj7 (Major)
- Line 7: Abm7 (Dorian), Db7 (Super Locrian), Gbmaj7 (Major)
- Line 8: C#m7 (Dorian), F#7 (Super Locrian), Bmaj7 (Major)

F#m7 B7 Emaj7

Bm7 E7 Amaj7

Em7 A7 Dmaj7

Am7 D7 Gmaj7

Exercises

1. Practice playing each of the modes from the melodic minor scales on each of the six strings and in all keys. Use Practice Table II as a guide to organize your practice time.

2. Improvise using two adjacent strings in each of the 7 modes utilizing the following:


2nds and 3rds
 4ths and 5ths
 2nds and 4ths
 2nds and 6ths


3. Improvise across strings (skipping one string) in each of the 7 modes utilizing the following:

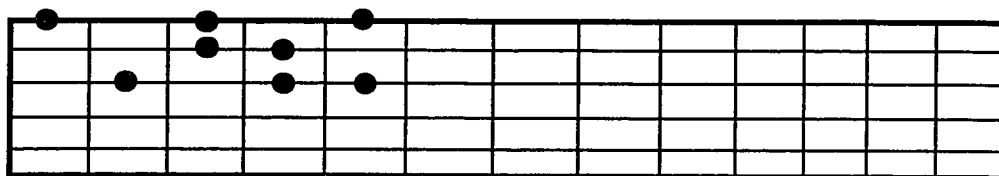
5ths, 6ths, 7ths and octaves
 triads

(For all examples with intervals, practice both as single notes and as double stops)

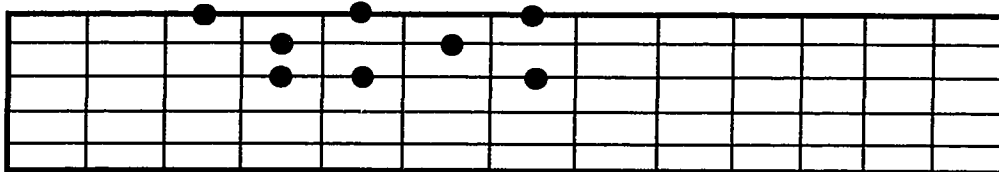
4. Using three adjacent strings and horizontal scale techniques, play each of the 7 modes of the melodic minor scale. Start on the root and ascend one octave. The first three modes from C melodic minor are presented on the next page.

This example is similar to recorded example  23.

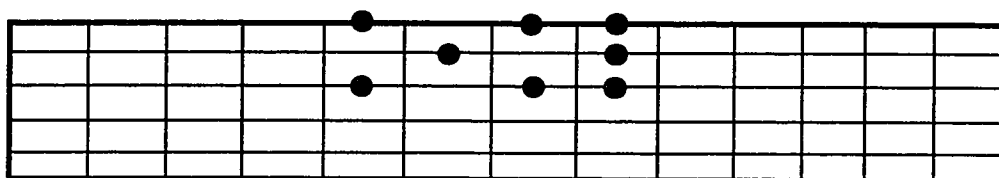
locrian  2



B super locrian



C melodic minor



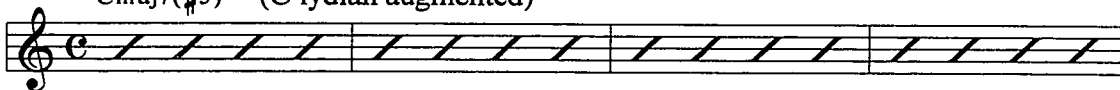
Exercises

Improvise on the harmonic progressions below restricting yourself to one string and the appropriate modes.

Modal examples

example 1

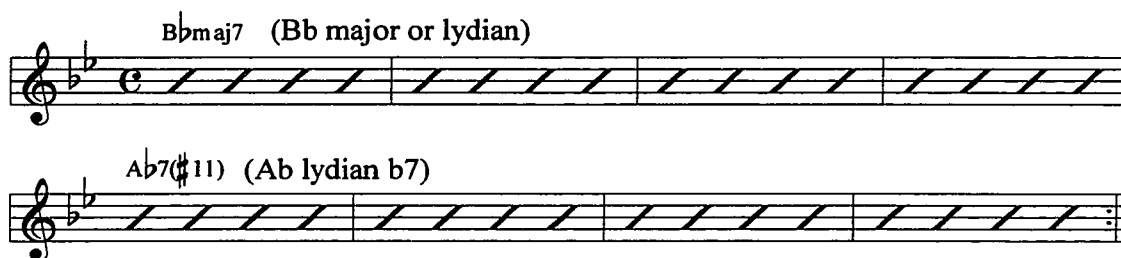
Cmaj7($\sharp 5$) (C lydian augmented)



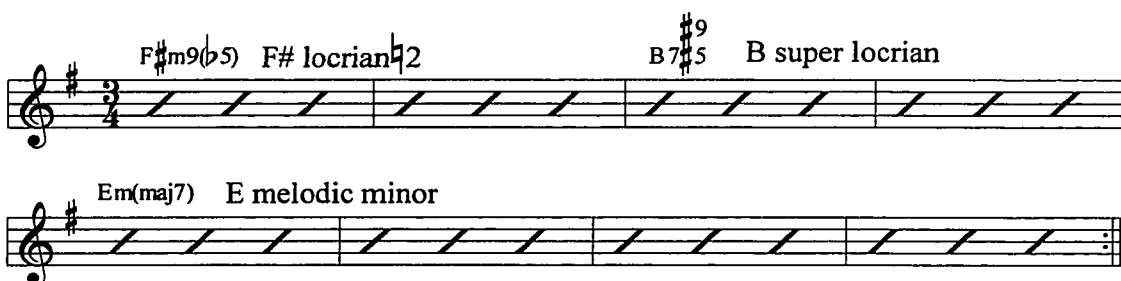
Ebmaj7($\sharp 5$) (Eb lydian augmented)



example 2



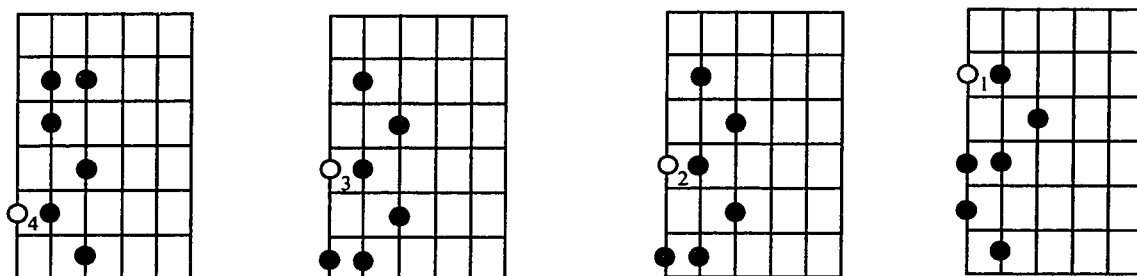
example 3



One octave scale practice (Melodic Minor)

As with the major scale, each finger plays the root of the scale. Using the 6th string as an example, find the notes in the following manner.

finger 4 plays root
finger 3 plays root
finger 2 plays root
finger 1 plays root



Starting with fingers 2 and 3 will often produce the same pattern. In this example, the pattern starting on finger 2 produces the best result. Continue working through the melodic minor scales on string 5, string 4 and finally string 3. Again, some fingerings will be more useful than others. Work through all possibilities to find those which are most useful.

Exercises

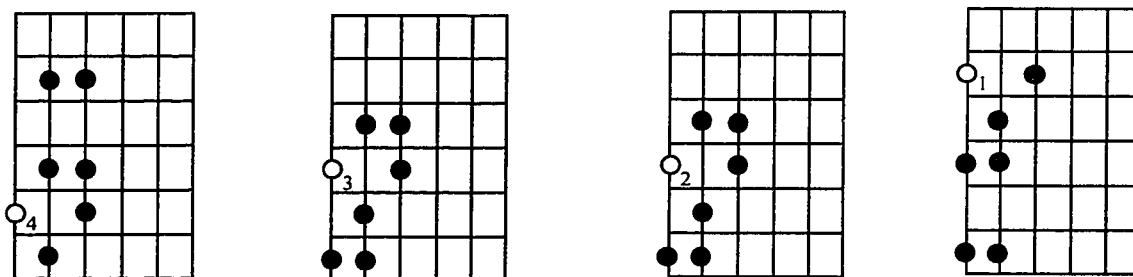
Using one octave fingerings, play melodic minor scales through the cycle of 5ths. (All 12 keys) You may use these points as a guideline to organize your practice.

Choose an area of the fingerboard and stay within that position as much as possible.
Choose positions at random.
Start on each of the four possible strings.
Start on each of the four possible fingerings.
Choose a piece of music (preferably a standard or jazz piece) and practice playing through the piece by playing the appropriate mode for each chord.

One octave mode practice (melodic minor)

We will begin with string 6 and use each of the 4 fingers to play the root of the mode. In this example we will use the lydian b7 mode.

lydian b7



Exercises

1. Play the lydian b7 mode in 12 keys using one octave fingerings.
2. Play the super locrian mode in 12 keys using one octave fingerings.
3. Play all other modes in 12 keys using one octave fingerings

Part 3

Arpeggios

Arpeggios

Arpeggios are an important element in jazz improvisation. They are one of the main elements in improvised solos and as such need to be easily available on the guitar. There are 2 ways which I find useful in finding and executing arpeggios with facility.

1. relating arpeggios to scale forms
2. one octave fingerings

With the first method, arpeggios are found within the 5 fingerings of each of the scales. This method requires that you know the quality of each of the arpeggios contained in each scale. It provides a number of useful fingerings for each arpeggio. Each scale produces a set of chords. The following are the chord types for each scale.

C major scale						
Cmaj7	Dm7	Em7	Fmaj7	G7	Am7	Bm7(b5)
C melodic minor scale						
Cm(maj7)	Dm7	Ebmaj7(#5)	F7	G7	Am7(b5)	B7
C harmonic minor scale						
Cm(maj7)	Dm7(b5)	Ebmaj7(#5)	Fm7	G7	Abmaj7	Bo7

The C major scale can also produce C6 on the tonic chord and the C melodic minor will produce the Cm6 chord on its tonic.

In this book we will examine the following arpeggios:

maj7	m7	dom7
maj6	m6	dim7
m(maj7)	m7(b5)	maj7(#5)

The second method is perhaps more time consuming and difficult to learn, but helps to develop a stronger knowledge of the fingerboard. This will eventually allow for greater facility in playing arpeggios. With this method, arpeggios are played in one octave in as many locations on the fingerboard as possible. It is essentially the same as one octave scales. As with the scales, the root of an arpeggio is played on each string using each one of the four fingers. If we use strings 6, 5, 4, and 3 as starting notes and multiply these by the four fingers, we end up with 16 possible fingerings for each arpeggio.

Method I

Using scale positions, it is possible to extract fingerings for arpeggios. To do this, we will use our theoretical knowledge of scales and the chords which they generate. Each major scale contains two maj7 type chords, three m7 type chords, one dom7 type chord and one m7b5.

ex. Key of C major generates:

Cmaj7 Dm7 Em7 Fmaj7 G7 Am7 Bm7b5

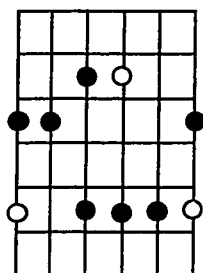
Using each of the five major scale positions we can find fingerings for each of these arpeggios. There are several advantages to this method:

Positions generate 2 octave arpeggios.

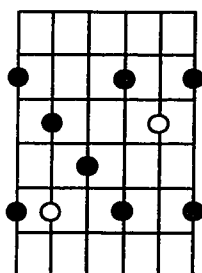
Easy to visualize the relationship between the arpeggio and the tonic key.

Several arpeggios can be linked without changing positions. (as in II - V7 - I)

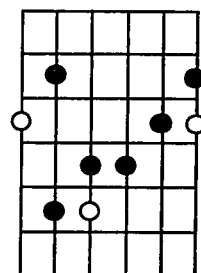
Using scale position 1 we generate the following arpeggio fingerings for II - V7 - I in the key of G major.



Am7



D7



Gmaj7

Am7

D7

Gmaj7



Play all available notes for each chord type from the lowest note in the position to the highest. Be aware of the function of each note (root, 3rd, 5th, 7th) as well as the names of each note in the arpeggio. It's best in the long run to avoid only memorizing the fingering patterns. This often becomes a trap when trying to apply arpeggios to improvisation. Say the note names and/or functions as you play through each arpeggios.

Exercises

1. Using the four other major scale forms, locate and practice the II, V7 and I arpeggios contained within each form. As you play through each arpeggio, be aware of the functions and names of each note in the arpeggios.

2. In this next example, each line should be practiced individually and in all keys. The scale forms that correspond to each arpeggio are indicated in the staff. Some progressions require the use of more than one scale form.



no. 29

1.

Cmaj 7 Am7 Dm7 G7 Cmaj 7
2.

Em7 Am7 Dm7 G7 Cmaj 7
3.

Em7(b 5) A7 Dm7 G7 Cmaj 7
4.

Cmaj 7 Fmaj 7 Em7(b 5) A7 Dm7 G7 Cmaj 7
5.

Dm7(b 5) G7(b 9) Cm(maj7)
6.

Fm7 Bb7 Cmaj 7
7.

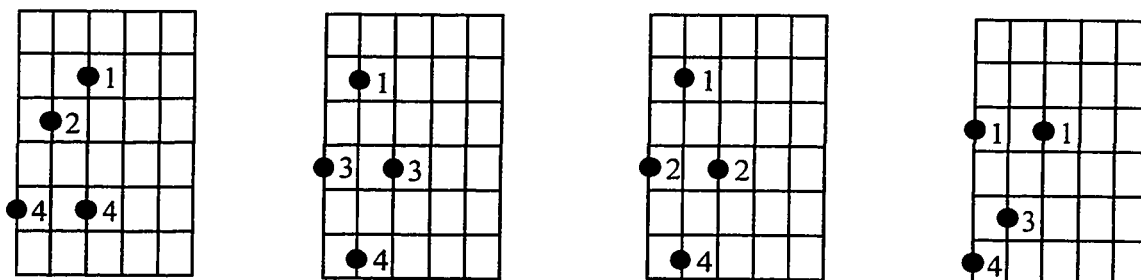
Abmaj 7 G7 Cm7
8.

Ebmaj7(#5) Dm7(b 5) Cm(maj7)

Method 2 (One Octave Fingerings)

Once again, this method is similar to that of one octave scale and mode practice. Using string 6 as an example we generate fingerings where each of the 4 fingers plays the root of the arpeggio.

ex. Am7



As was the case with the scales, we end up with only three patterns which work well. This will again occur most of the time with the exception of some arpeggios on strings sets which include the B string. (ex. Gmaj7 arpeggio starting on string 4) It's a good idea to practice all four fingerings as it is best to visualize all scales and arpeggios from as many perspectives as possible.

Exercises

1. Practice arpeggios in all keys for each of the following chords using one octave fingerings.

maj7 m7 dom7 m7b5 m6 maj6 m(maj7) o7

Play these exercises in tempo. You should be able to locate and play the arpeggio for each of the chords in time. This should be viewed as both a mental exercise (where the goal is retrieving roots and positions as quickly as possible) and as a technical exercise. (where the key is to play each arpeggio with good sound and accuracy)

2. Practice playing the following arpeggio sequences by visualizing each arpeggio from its root. Play the arpeggios in strict time using fingerings at random. This is an excellent exercise which provides practice in finding arpeggios in time. Start with II - V7 - I in the key of C major and work through the cycle of 5ths.



As facility increases, start to add restrictions as in the following:

Always start your II chord on string 6, then string 5, 4 and 3.
Play all roots for the 3 chords on string 6, then string 5, 4 and 3.
Increase the tempo.

3. The next exercise is similar except that the speed of execution is increased. (both II and V7 in the same bar) Practice this exercise in the same manner as above. (restrictions and increase in tempo)



3. Use the progressions on the page which follows and play the arpeggios in time. Use the various techniques described above. As with the previous arpeggio example, each line should be practiced individually and in all keys.

Note

Remember to refer to "Table I" in the scale section and vary your arpeggio practice from day to day. In this way you will be able to get through all of the exercises and will be thinking rather than letting your finger memory do all of the work. Scale and arpeggio practice is cumulative. Playing a variety of scale and arpeggio exercises on a daily basis will help you to develop a strong understanding of the fingerboard.

Progressions



no. 30

Chord progressions are shown on a treble clef staff with a common time signature (C). Each progression consists of five measures, each containing a single chord represented by a slash (/).

Progression 1: Cmaj 7, Am 7, Dm 7, G 7, Cmaj 7

Progression 2: Em 7, Am 7, Dm 7, G 7, Cmaj 7

Progression 3: Em 7(b 5), A 7, Dm 7, G 7, Cmaj 7

Progression 4: Cmaj 7, Eb 7, Dm 7, G 7, Cmaj 7

Progression 5: Em 7, Eb 7, Dm 7, G 7, Cmaj 7

Progression 6: Cmaj 7, Eb 7, Ab 7, Db 7, Cmaj 7

Progression 7: Dm 7, G 7, Abm 7, Db 7, Cmaj 7

Progression 8: Dm 7, G 7, Dbm 7, Gb 7, Cmaj 7

As it would be impossible to illustrate every possible chord progression available, you may add freely to these progressions .

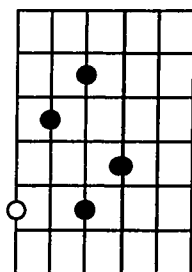
9th arpeggios

Ninth arpeggios can be played in 2 ways:

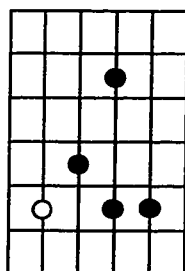
from root to 9th (5 note arpeggios)

from 3rd to 9th (4 note arpeggio with root omitted)

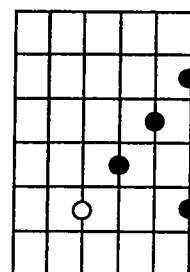
Both are important to practice and visualize on the guitar, each presenting a different challenge. In this example the progression IIm9 - V9 - Imaj9 is played. The fingerings are derived from form 1 of the G major scale.



Am9



D9



Gmaj9

Exercises


root to 9th

1. Using the 5 major scale positions, play maj9 arpeggios from root to 9th.
2. Using the 5 major scale positions, play m9 arpeggios from root to 9th.
3. Using the 5 major scale positions, play dom9 arpeggios from root to 9th.

Note

In some positions you will be able to play the arpeggio in 2 different octaves. However, in others you will only be able to play the arpeggio in 1 octave. Choose the octave which is most comfortable for the progression you are playing.

4. Using the 5 major scale positions, play IIm9 - V9 - Imaj9 arpeggios through all 12 keys.

 no. 31



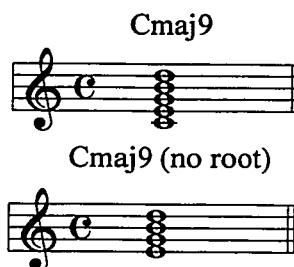
The musical score consists of six staves, each containing two measures of music. The first measure of each staff is labeled with a chord name, and the second measure is labeled with a different chord name. The chords are as follows:

- Staff 1: Cm9, Fm9
- Staff 2: Bbm9, Ebm9
- Staff 3: Gbm9, Cbm9
- Staff 4: Fbm9, Bm9
- Staff 5: Em9, Am9
- Staff 6: Dm9, Gm9

The music is written in treble clef with a key signature of one flat (Bb). The rhythm is a steady eighth-note pattern. The first measure of each staff is marked with a repeat sign (double bar line with dots) and the second measure is marked with a repeat sign (double bar line with dots).

3rd to 9th (omit root)

When the root of a 9th arpeggio is omitted, the 4 remaining notes will form a 7th chord. As an example, let us look at Cmaj9.

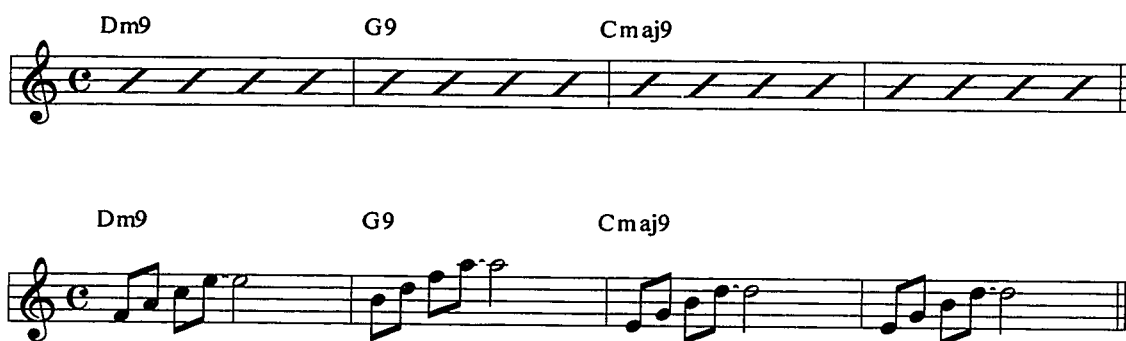


If you remove the root from Cmaj9, you are left with Em7, or Em7/C. The following are the chords which substitute for the diatonic 9th chords when the root is omitted.

Cmaj9 (no root)	=	Em7
Dm9 (no root)	=	Fmaj7
Fmaj9 (no root)	=	Am7
G9 (no root)	=	Bm7(b5)
Am9 (no root)	=	Cmaj7

These substitutes will also work with chords voicings.

The following example illustrates the use of substitute arpeggios in a chord progression.



Exercises

1. Play m9th arpeggios through the circle of fifths.



no. 32

Diagram illustrating the m9th arpeggios through the circle of fifths, showing 12 chords and their corresponding arpeggio patterns on a staff:

- Cm9
- Fm9
- Bbm9
- Ebm9
- G#m9
- C#m9
- F#m9
- Bm9
- Em9
- A m9
- Dm9
- Gm9

2. Repeat for dom9 and maj9 arpeggios.

3. Play IIm9 - V9 - Imaj9 all all keys using major scale positions.

4. Play IIm9 - V9 - Imaj9 all all keys using one octave fingerings.