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INTRODUCTION

The purpose of this syllabus is to present, in as concise a form as possible, the scales which are used in improvisation. The book, which shows the scales in treble and bass clef in all keys, is intended as a practice manual. The syllabus should be considered an aid to eventually memorizing the scales in all keys. Thorough understanding of the interval structure of each scale form, as it is practiced, will greatly speed this process.

In addition to the scales themselves, explanations are included as to the application of each scale form to one or more chord types. Also, charts showing the relationship of certain scales to each other are included. Finally, some suggestions are made as to how to practice the scales to learn them thoroughly.

GENERAL NOTES

1. Unless otherwise indicated, all scales in this book are constructed on the root of the chord to which they relate.
2. The words mode and scale mean the same thing.
3. In the Guide To Scale Choice chart, the chord type is dictated either by a given chord progression or by personal taste.
4. In a II-V-I progression in a major key, the Dorian, Mixolydian, and Major scales which accompany those chords all have the same key signature.
5. In a II-V-I progression in a minor key, the Harmonic Minor scale of the key may be used with three chords.
6. An * beside the name of a scale indicates that it has no "wrong" notes, or notes which would sound intolerably dissonant if emphasized.
7. The scales in the syllabus are not arranged in order of difficulty or importance but, instead, grouped in what seem to be logical categories.
8. Those modes of the Melodic and Harmonic Minor scales which are rarely used have not been presented in all keys. It is felt that the serious student, interested in pursuing the creative possibilities of those scales, will be able to supply the necessary transpositions.
9. If it is indicated that a scale is used with a certain family of chords, it will work with any size chord in that family (triad, 7th, 9th, 11th or 13th).

SUGGESTIONS FOR PRACTICE

Scales should be practiced with a metronome, in all keys, at different rhythmic levels such as the following examples.

a) $\frac{1}{4}$ NOTES etc. b) $\frac{1}{8}$ NOTES etc.
c) TRIPLETTS etc. d) $\frac{1}{16}$ NOTES etc.

When practicing, stress absolute rhythmic evenness and flawless execution. Concentrate on tone, pitch and articulation as well.

Scales should be practiced over the entire range of the instrument, from the lowest note of the scale found on the instrument to the highest.

(saxophone)

etc.

Besides playing scales stepwise, practice them in broken 3rds.

etc.

Practice scales in broken triads and 7th chords.

etc.

Finally, play all over the scale, over the full range of your instrument, using stepwise motion and leaps of larger intervals.

etc.

Strive for speed and ease in playing scales. This will help both in developing facility and in thoroughly learning the scale. Begin by practicing a scale only as fast as you can play it perfectly and gradually increase your speed from that point. Marking metronome markings on the scale page to remind you of your most recent stage of progress will help avoid wasting time.

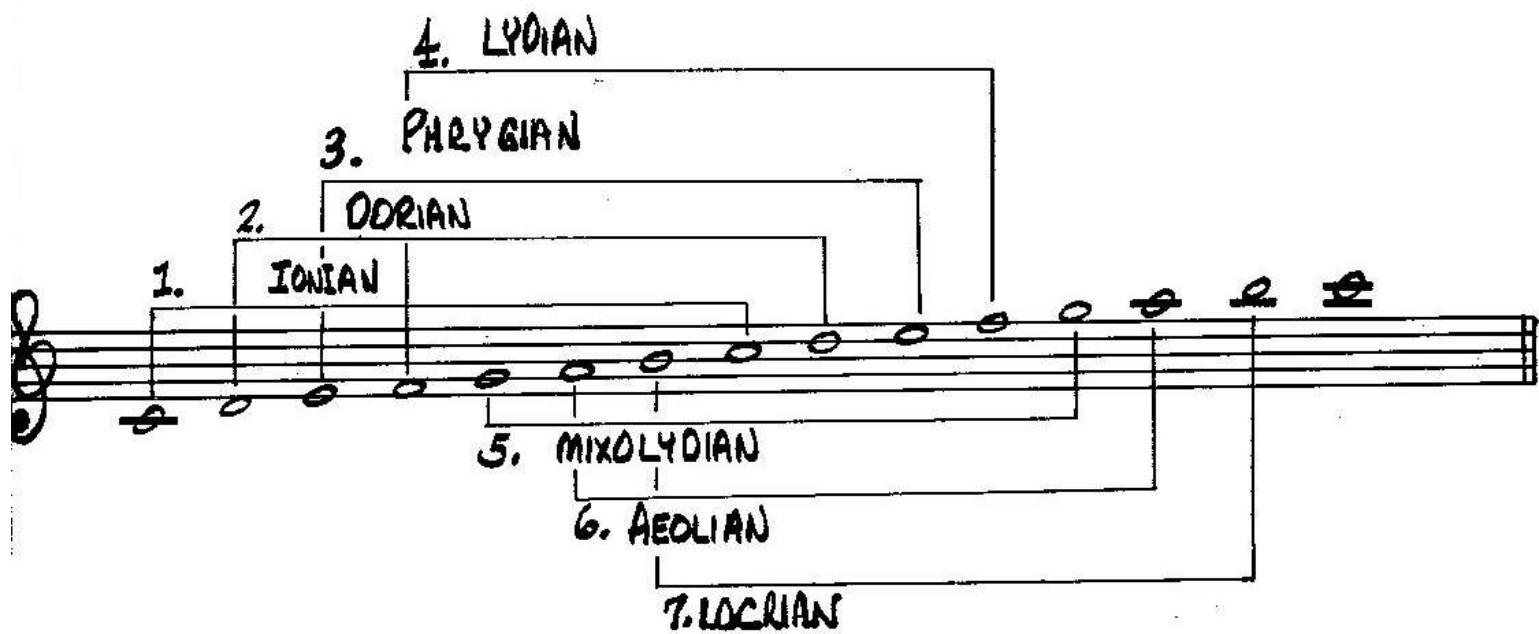
SECTION I

MODES GENERATED BY THE MAJOR SCALE

SECTION I

MODES GENERATED BY THE MAJOR SCALE

Chart is based on C Major scale:



1. C to C generates the C Ionian (Major) scale.
2. D to D generates the D Dorian scale.
3. E to E generates the E Phrygian scale.
4. F to F generates the F Lydian scale.
5. G to G generates the G Mixolydian scale.
6. A to A generates the A Aeolian (pure minor) scale.
7. B to B generates the B Locrian scale.

THE IONIAN (MAJOR) SCALE

The Ionian scale is known to most people simply as the major scale. It is constructed of 5 whole steps and 2 half steps. The half steps occur between steps 3 and 4 and steps 7 and 8 of the scale.

C Major (Ionian)

1 2 3 4 5 6 7 8

The Ionian (major) scale is used with major family chords such as the major triad, major 7th, major 6-9 chord. The scale cannot be used when a chromatic alteration foreign to the scale is present in harmony (example #5 or #11). There are other scale forms especially suited for those occasions.

In using the scale, it is important to remember that the 4th scale step is dissonant to a major chord. It has a strong tendency to resolve to the 3rd of the chord. Also, if the major 7th is present in the chord, the 1st (8th) scale step is relatively dissonant. It has a tendency to "resolve" to the 7th.

Because of the potential dissonance of the 1st and 4th scale steps, the "pretty" notes of the scale are the other five scale steps (2, 3, 5, 6, and 7). It will be found that these scale steps form a minor pentatonic scale which could be constructed on the 3rd of a major chord. This application will be examined more closely in the section on pentatonic scales.

IONIAN (MAJOR) SCALES

Handwritten musical staff diagrams for Ionian Major scales, showing treble and bass clef staves for each key signature.

The keys shown are:

- C: Treble clef, no sharps or flats.
- D^b (C#): Treble clef, one sharp (F#).
- D: Treble clef, one sharp (F#).
- E^b: Treble clef, one flat (B#).
- E: Treble clef, one sharp (F#).
- F: Treble clef, one flat (B#).
- G^b (F#): Treble clef, two sharps (D# and A#).
- G: Treble clef, one sharp (F#).
- A^b: Treble clef, one flat (B#).
- A: Treble clef, one sharp (F#).
- B^b: Treble clef, one flat (B#).
- B(C^b): Treble clef, one flat (B#).
- C: Bass clef, no sharps or flats.
- D^b (C#): Bass clef, one sharp (F#).
- D: Bass clef, one sharp (F#).
- E^b: Bass clef, one flat (B#).
- E: Bass clef, one sharp (F#).
- F: Bass clef, one flat (B#).
- G^b (F#): Bass clef, two sharps (D# and A#).
- G: Bass clef, one sharp (F#).
- A^b: Bass clef, one flat (B#).
- A: Bass clef, one sharp (F#).
- B^b: Bass clef, one flat (B#).
- B(C^b): Bass clef, one flat (B#).

THE DORIAN SCALE *

The Dorian scale is constructed of 5 whole steps and 2 half steps. The half steps occur between steps 2 and 3 and steps 6 and 7 of the scale.



There are three ways of conceiving a Dorian scale:

- 1) A pure minor scale with a raised 6th scale step.
- 2) A major scale with lowered 3rd and 7th scale steps.
- 3) A scale bearing the same key signature as the major scale located a whole step below (C Dorian has the key signature of B-flat major).

The Dorian scale is used with minor family chords which do not include any alterations. It will be found that the Dorian scale is comprised of all of the tones of a complete minor 13th chord. Therefore, there are no "wrong" notes in the sense of a "clinker" that is terribly dissonant to the harmony. Any note in the scale will sound acceptable with an unaltered minor harmony. However, the choice of one note over another may be unfortunate in a musical sense, naturally.

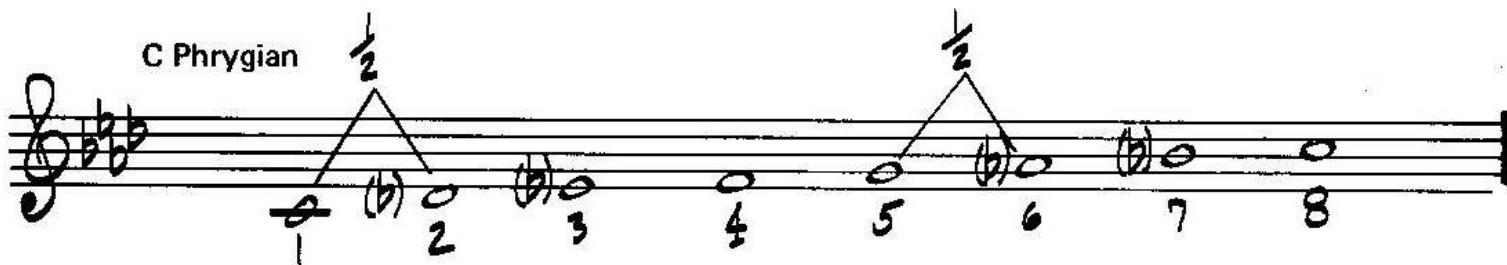
The Dorian scale is generally used with minor chords which function as a I, II or IV chord in a minor key. If the minor chord occurs as a III or VI chord, the Phrygian or Aeolian scale may be a better choice.

DOLIAN SCALES*

The image displays twelve pairs of handwritten musical staff diagrams, each representing a different Dorian mode. The modes are listed vertically on the left side of the staves: C, C#(D♭), D, E♭, E, F, F#, G, A♭, A, B♭, and B. Each pair of staves shows a treble clef on the left and a bass clef on the right. The notes are represented by small circles (o) on the five-line staff. The first note of each scale is explicitly labeled with a vertical tick mark above it. The scales are constructed using the notes of the corresponding major scale, with the seventh degree flattened.

THE PHRYGIAN SCALE

The Phrygian scale is constructed of 5 whole steps and 2 half steps. The half steps occur between steps 1 and 2 and steps 5 and 6 of the scale.



There are three ways of conceiving a Phrygian scale:

- 1) A pure minor scale with a lowered 2nd scale step.
- 2) A major scale with lowered 2nd, 3rd, 6th, and 7th scale steps.
- 3) A scale bearing the same key signature as the major scale located a major 3rd below (C Phrygian has the same key signature as A-flat major).

The Phrygian scale is probably most used in playing compositions which are written in the Phrygian mode. Such pieces often have a strong tonal center which is either of a long duration or returns often throughout the progression. The 2nd and 6th scale steps are dissonant and want to resolve downward to the 1st and 5th steps of the scale.

The Phrygian scale is also used with minor chords which function as III or VI chords in a major I chord though the Aeolian scale may be a better choice for the VI chord.

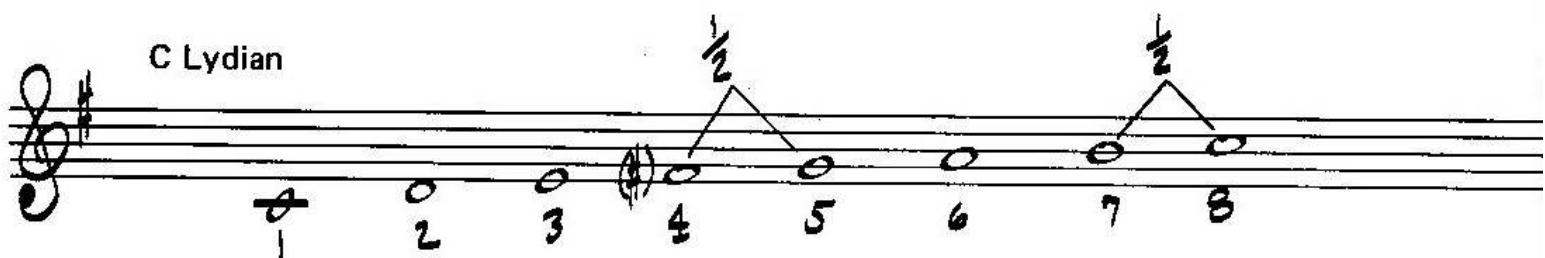
PHRYGIAN SCALES

The score consists of eight pairs of staves, each pair representing a Phrygian scale starting on a different note. The left staff of each pair uses a treble clef, and the right staff uses a bass clef. The scales are written in common time with a key signature of one flat. The notes are represented by open circles.

- C:** Treble staff: C, D, E, F, G, A, B, C. Bass staff: C, D, E, F, G, A, B, C.
- C# (E♭):** Treble staff: C#, D, E, F, G, A, B, C#. Bass staff: C#, D, E, F, G, A, B, C#.
- D:** Treble staff: D, E, F, G, A, B, C, D. Bass staff: D, E, F, G, A, B, C, D.
- D# (E♭):** Treble staff: D#, E, F, G, A, B, C, D#. Bass staff: D#, E, F, G, A, B, C, D#.
- E:** Treble staff: E, F, G, A, B, C, D, E. Bass staff: E, F, G, A, B, C, D, E.
- F:** Treble staff: F, G, A, B, C, D, E, F. Bass staff: F, G, A, B, C, D, E, F.
- F# (A♭):** Treble staff: F#, G, A, B, C, D, E, F#. Bass staff: F#, G, A, B, C, D, E, F#.
- G:** Treble staff: G, A, B, C, D, E, F, G. Bass staff: G, A, B, C, D, E, F, G.
- A:** Treble staff: A, B, C, D, E, F, G, A. Bass staff: A, B, C, D, E, F, G, A.
- B♭:** Treble staff: B♭, C, D, E, F, G, A, B♭. Bass staff: B♭, C, D, E, F, G, A, B♭.
- B:** Treble staff: B, C, D, E, F, G, A, B. Bass staff: B, C, D, E, F, G, A, B.

THE LYDIAN SCALE *

The Lydian scale is constructed of 5 whole steps and 2 half steps. The half steps occur between steps 4 and 5 and steps 7 and 8 of the scale.



There are two ways of conceiving a Lydian scale:

- 1) A major scale with a raised 4th scale step.
- 2) A scale bearing the same key signature as the major scale located a perfect 4th below (C Lydian has the same key signature as G Major).

The Lydian scale is used with major family chords especially when the #11 occurs in the harmony. When a b5 occurs in the chord, the Lydian scale is also a good choice. However, alteration of the major chord is not necessary for the use of this scale. The #4 in the scale eliminates the problem of the dissonant 4th of the major scale and may be emphasized without resolution.

Like the major scale, the 1st scale step may be fairly dissonant when the major 7th is present in the harmony. It has the same tendency to resolve down to the 7th.

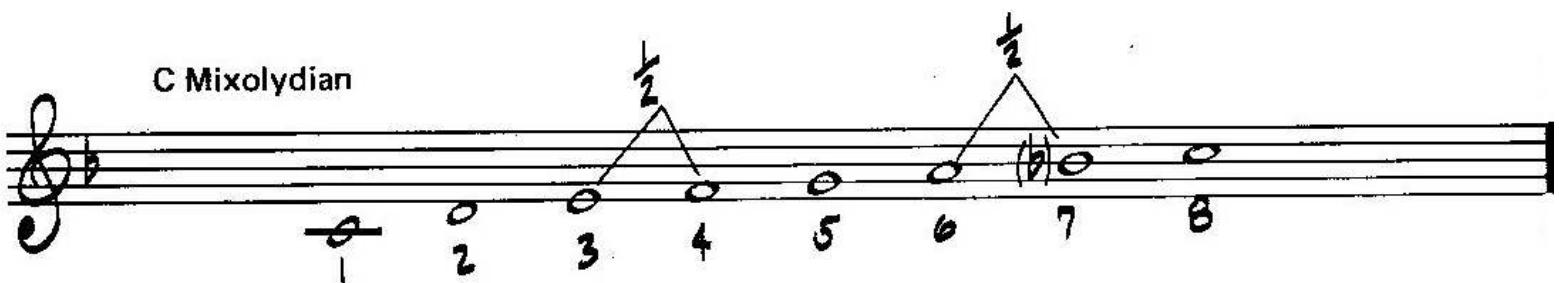
All of the tones of the scale besides the 1st (or 8th) are "pretty" notes to use with major harmonies. It will be found that there are two minor pentatonic scales within these six tones of the scale. One can be built on the 3rd of the chord (using steps 3, 5, 6, 7, and 2) and the other can be built on the 7th (using steps 7, 2, 3, #4, and 6). This will be elaborated on in the section on pentatonic scales.

LYDIAN SCALES *

The image displays a handwritten musical score consisting of 12 pairs of staves, each pair representing a different key signature. The keys are arranged in two columns of six. The left column contains C major (no sharps or flats), D major (one sharp), E major (two sharps), F major (one flat), G major (no sharps or flats), and A major (two sharps). The right column contains C major (no sharps or flats), D major (one sharp), E major (two sharps), F major (one flat), G major (no sharps or flats), and A major (two sharps). Each staff is divided into measures by vertical bar lines. The notes are represented by small circles. In some cases, specific notes are labeled with their names and accidentals: D^b(C[#]), E^b, G^b(F[#]), A^b, and B^b. The score is written on standard five-line music staves.

THE MIXOLYDIAN (DOMINANT) SCALE

The Mixolydian scale is constructed of 5 whole steps and 2 half steps. The half steps occur between steps 3 and 4 and steps 6 and 7 of the scale.



There are two ways of conceiving a Mixolydian scale:

- 1) A major scale with a lowered 7th scale step.
- 2) A scale bearing the same key signature as the major scale located a perfect 4th above it (C Mixolydian has the same key signature as F major).

The Mixolydian mode (sometimes called the dominant scale) is used with dominant family harmonies which have no alterations present such as b5 or #5, b9 or #9, or #11. The 4th scale step is very dissonant to a dominant 7th chord and has a strong tendency to resolve downward to the 3rd of the chord. This resolution creates a motive which has been the originating germ for many "bluesy" ideas. Any other tone in the scale may be emphasized without fear of it sounding wrong.

The Mixolydian scale is also used when there is a suspended 4th present in a dominant 7th chord. In this case, the 4th should receive the emphasis rather than the 3rd of the chord.

MIXOLYDIAN (DOMINANT) SCALES

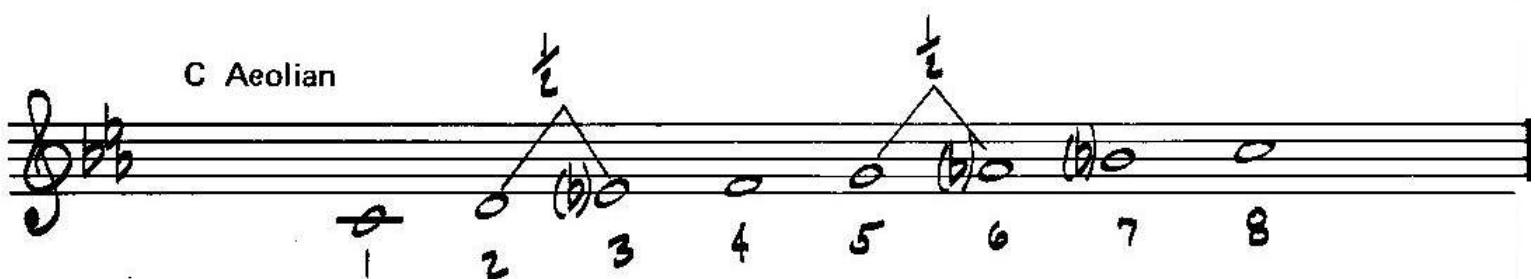
Handwritten musical staff diagrams for Mixolydian dominant scales, showing two staves per key signature. The keys shown are C, D, E, F, G, A, and B.

The diagrams show the following patterns:

- C:** Treble clef, 4 sharps. Scale: C D E F# G A B C.
- D:** Treble clef, 2 sharps. Scale: D E F# G A B C D.
- E:** Treble clef, 1 sharp. Scale: E F# G A B C D E.
- F:** Treble clef, no sharps or flats. Scale: F G A B C D E F.
- G:** Bass clef, 1 sharp. Scale: G A B C D E F# G.
- A:** Bass clef, 2 sharps. Scale: A B C D E F# G A.
- B:** Bass clef, 3 sharps. Scale: B C D E F# G A B.
- D♭(C♯):** Treble clef, 1 flat. Scale: D♭ E F G A B C D♭.
- E♭:** Treble clef, 2 flats. Scale: E♭ F G A B C D♭ E♭.
- F♯(G♭):** Treble clef, 1 flat. Scale: F♯ G A B C D♭ E F♯.
- A♭:** Bass clef, 1 flat. Scale: A♭ B C D E F♯ G A♭.
- B♭:** Bass clef, 2 flats. Scale: B♭ C D E F♯ G A♭ B♭.
- B:** Bass clef, 3 flats. Scale: B♭ C D E F♯ G A♭ B.

THE AEOLIAN (PURE MINOR) SCALE

The Aeolian scale is constructed of 5 whole steps and 2 half steps. The half steps occur between steps 2 and 3 and steps 5 and 6 of the scale.



There are three ways of conceiving an Aeolian scale:

- 1) A pure minor scale.
- 2) A major scale with lowered 3rd, 6th and 7th scale steps.
- 3) A scale bearing the same key signature as the major scale located 3 half steps above (relative major).

The Aeolian scale is used with minor family chords which do not include any alterations. The scale step is dissonant to a minor chord and has the tendency to resolve downward to the 5th of the chord.

The Aeolian mode is generally best used on minor chords which function as either a III or VI chord in a major key. When the minor chord assumes the function of a I or II chord, the Dorian scale is generally a better choice.

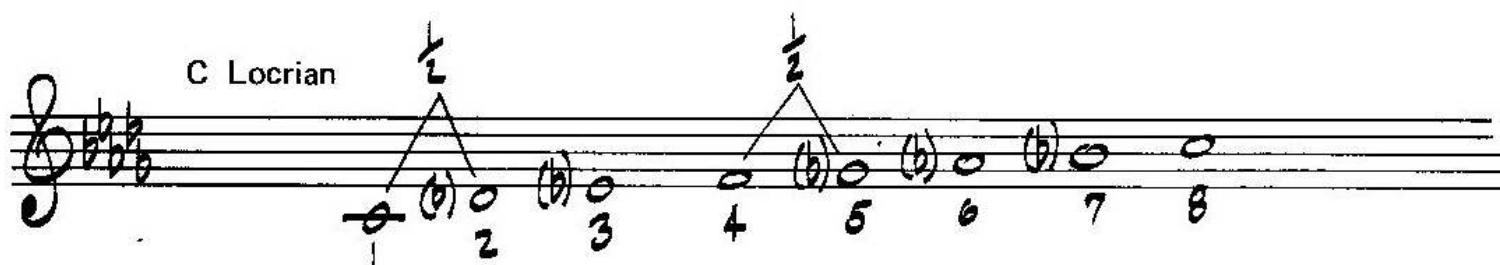
AEOLIAN (PURE MINOR) SCALES

Handwritten musical staff diagrams for the Aeolian mode (Pure Minor). The diagrams show two staves for each note, with the left staff typically in treble clef and the right staff in bass clef. The notes are represented by open circles. The scales are as follows:

- C:** Treble staff: G, A, B, C, D, E, F. Bass staff: E, F, G, A, B, C, D.
- C#:** Treble staff: A, B, C, D, E, F, G. Bass staff: F, G, A, B, C, D, E.
- D:** Treble staff: B, C, D, E, F, G, A. Bass staff: G, A, B, C, D, E, F.
- E♭(D#):** Treble staff: C, D, E, F, G, A, B. Bass staff: A, B, C, D, E, F, G.
- E:** Treble staff: D, E, F, G, A, B, C. Bass staff: B, C, D, E, F, G, A.
- F:** Treble staff: E, F, G, A, B, C, D. Bass staff: C, D, E, F, G, A, B.
- F♯:** Treble staff: F, G, A, B, C, D, E. Bass staff: D, E, F, G, A, B, C.
- G:** Treble staff: G, A, B, C, D, E, F. Bass staff: E, F, G, A, B, C, D.
- G♯(A♭):** Treble staff: A, B, C, D, E, F, G. Bass staff: F, G, A, B, C, D, E.
- A:** Treble staff: B, C, D, E, F, G, A. Bass staff: G, A, B, C, D, E, F.
- B♭(A♯):** Treble staff: C, D, E, F, G, A, B. Bass staff: A, B, C, D, E, F, G.
- B:** Treble staff: D, E, F, G, A, B, C. Bass staff: B, C, D, E, F, G, A.

THE LOCRIAN SCALE

The Locrian scale is constructed of 5 whole steps and 2 half steps. The half steps occur between 1 and 2 and steps 4 and 5 of the scale.



There are three ways of conceiving a Locrian scale:

- 1) A pure minor scale with lowered 2nd and 5th scale steps.
- 2) A major scale with lowered 2nd, 3rd, 5th, 6th and 7th scale steps.
- 3) A scale bearing the same key signature as the major scale, located a half step above (C Locrian has the same key signature as D-flat major).

The Locrian mode is often called the half-diminished scale. It is used with a minor 7th chord with lowered 5th (also called a half-diminished chord). The 2nd scale step is dissonant to a half-diminished chord and has a tendency to resolve downward to the root of the chord.

If the Locrian scale is used with a half-diminished chord which has the unaltered 9th present, the 2nd scale step must be raised to avoid a dissonant clash with the harmony.

LOCRIAN SCALES

Handwritten Locrian scales for twelve keys, arranged in two columns of six. Each column has a treble staff on the left and a bass staff on the right. The keys are C, C#, D, D#(E♭), E, F, F#(G♭), G, G#(A♭), A, A#(B♭), and B.

The scales are written using open circles (o) for note heads. The first note in each scale is the root note, and the last note is a half note (a short vertical line). The second note is a whole note (a long vertical line).

Key C: Treble staff shows notes o o o o o o o. Bass staff shows notes o o o o o o o.

Key C#: Treble staff shows notes o o o o o o o. Bass staff shows notes o o o o o o o.

Key D: Treble staff shows notes o o o o o o o. Bass staff shows notes o o o o o o o.

Key D#(E♭): Treble staff shows notes o o o o o o o. Bass staff shows notes o o o o o o o.

Key E: Treble staff shows notes o o o o o o o. Bass staff shows notes o o o o o o o.

Key F: Treble staff shows notes o o o o o o o. Bass staff shows notes o o o o o o o.

Key F#(G♭): Treble staff shows notes o o o o o o o. Bass staff shows notes o o o o o o o.

Key G: Treble staff shows notes o o o o o o o. Bass staff shows notes o o o o o o o.

Key G#(A♭): Treble staff shows notes o o o o o o o. Bass staff shows notes o o o o o o o.

Key A: Treble staff shows notes o o o o o o o. Bass staff shows notes o o o o o o o.

Key A#(B♭): Treble staff shows notes o o o o o o o. Bass staff shows notes o o o o o o o.

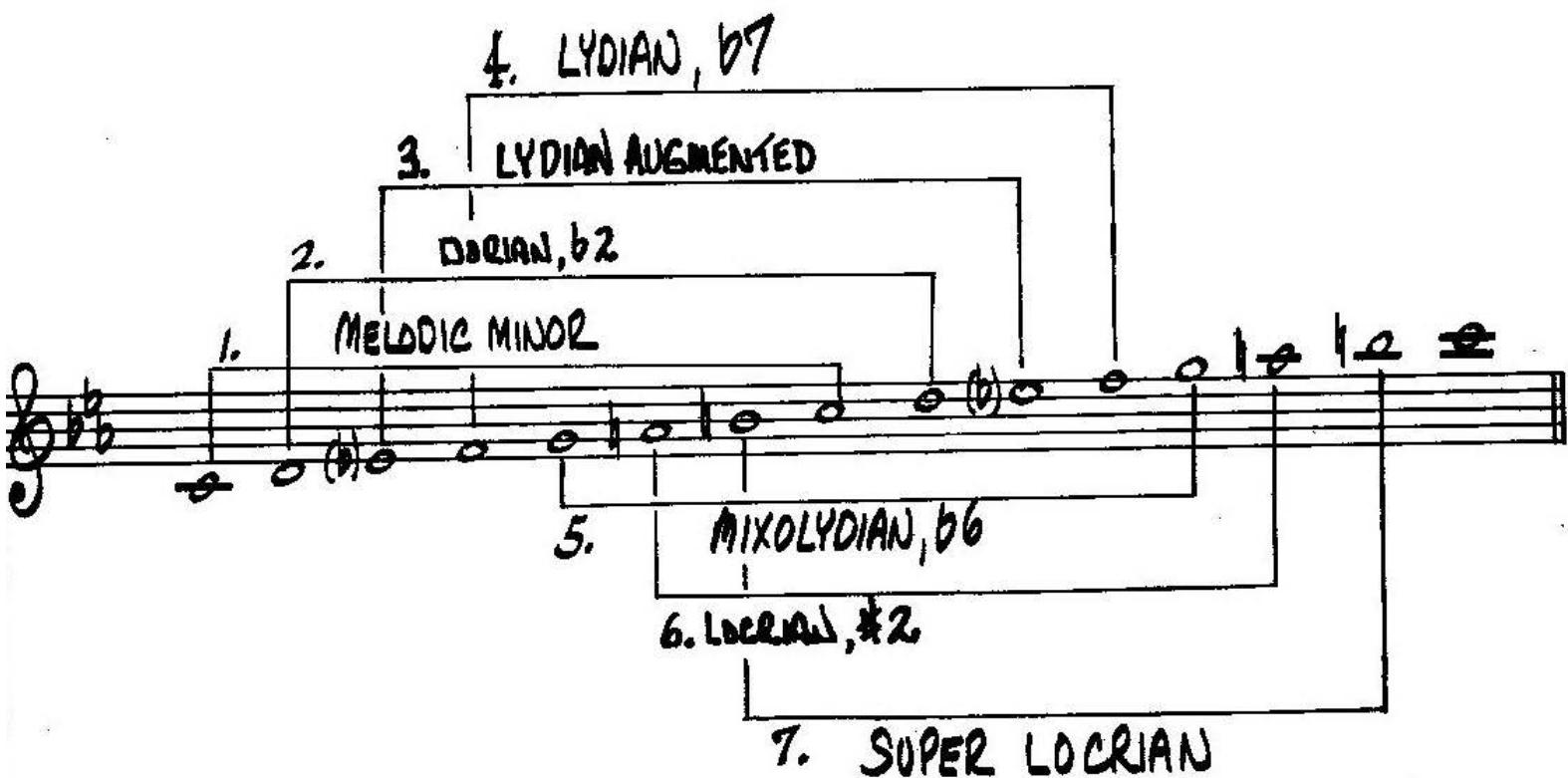
Key B: Treble staff shows notes o o o o o o o. Bass staff shows notes o o o o o o o.

SECTION II

MODES GENERATED BY THE ASCENDING MELODIC MINOR SCALE

SECTION II
MODES GENERATED BY THE
ASCENDING MELODIC MINOR SCALE

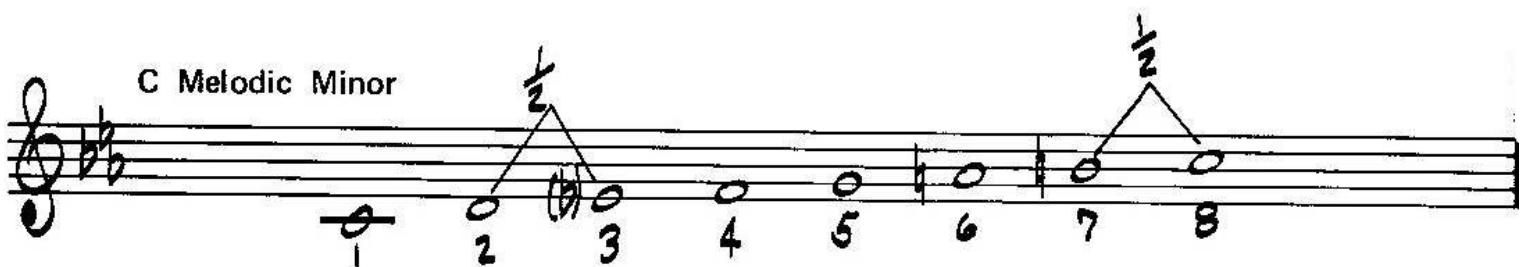
Chart is based on C melodic minor scale:



1. C to C generates the C melodic minor scale.
2. D to D generates the D Dorian, b_2 scale (uncommon, not included).
3. E_b to E_b generates the E_b Lydian Augmented scale.
4. F to F generates the F Lydian, b_7 scale.
5. G to G generates the Mixolydian, b_6 scale (uncommon, not included).
6. A to A generates the Locrian, $\#2$ scale.
7. B to B generates the Super Locrian scale.

THE ASCENDING MELODIC MINOR SCALE *

The Ascending Melodic Minor scale is constructed of 5 whole steps and 2 half steps. The half steps occur between steps 2 and 3 and steps 7 and 8 of the scale.



There are two ways of conceiving a Melodic Minor scale:

- 1) A pure minor scale with raised 6th and 7th scale steps.
- 2) A major scale with a lowered 3rd.

The Melodic Minor scale is used with a minor family chord which has a raised 7th. It may also be applied by playing the raised 7th scale step as a passing tone between the root and 7th of a conventional minor 7th chord. When the scale is used with a mi #7 chord, any scale tone may be emphasized with fear of an intolerable dissonance occurring. One exception is that the root of the chord may have a tendency to resolve downward to the raised 7th of the chord.

MELODIC MINOR SCALES *

C



C



C#



C#



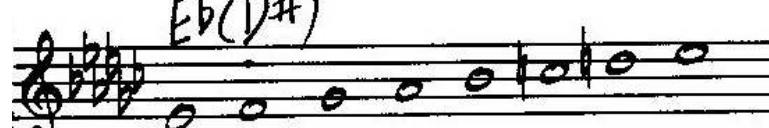
D



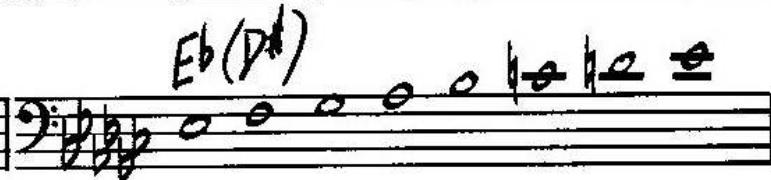
D



E-flat (D#)



E-flat (D#)



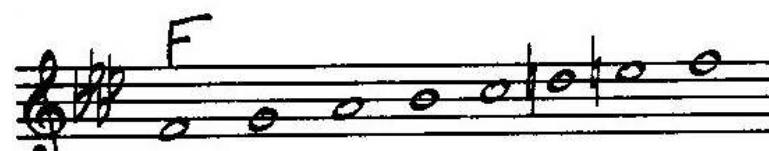
E



E



F



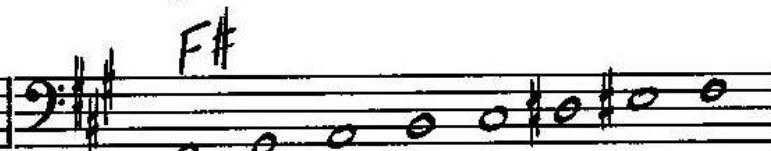
F



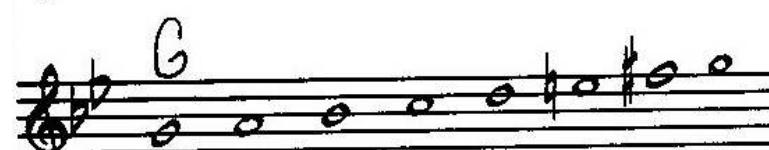
F#



F#



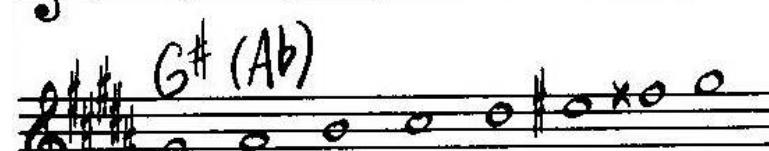
G



G



G# (Ab)



G# (Ab)



A



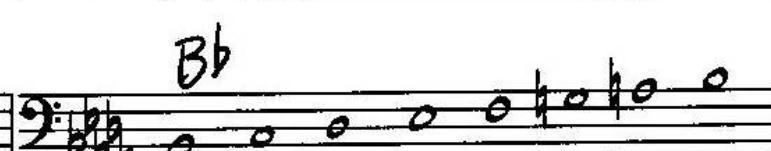
A



B-flat (A#)



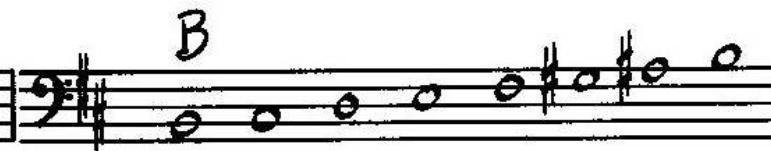
B-flat



B



B



THE LYDIAN-AUGMENTED SCALE *

The Lydian-Augmented scale is constructed of 5 whole steps and 2 half steps. The half steps are between steps 5 and 6 and steps 7 and 8 of the scale.

C Lydian-Augmented

1 2 3 4 5 6 7 8

There are two ways of conceiving a Lydian-Augmented scale:

- 1) A major scale with raised 4th and 5th scale steps.
- 2) A scale which has the same tones as a melodic minor scale built on the note three half steps below. (C Lydian-Augmented is the same as A melodic minor)

The Lydian-Augmented scale is used with a major family chord which has a raised 5th. Though implied by the scale, the #11 need not be present in the harmony.

As in a major scale, the root of this scale may be dissonant to the major 7th of the chord. It has the same tendency to resolve downward to the 7th. All other tones in the scale may be emphasized with concern.

LYDIAN AUGMENTED SCALES *

The image displays 12 staves of handwritten musical notation, each representing a different key signature. The staves are arranged in two columns of six. Each staff consists of a treble or bass clef, a key signature, and a series of vertical stems with horizontal dashes indicating pitch and rhythm. The keys shown are:

- Top row: C major (no sharps or flats), D major (one sharp), E major (two sharps), F major (one flat), G major (no sharps or flats), A major (two sharps).
- Middle row: D major (one sharp), E major (two sharps), F major (one flat), G major (no sharps or flats), A major (two sharps), B major (three sharps).
- Bottom row: C major (no sharps or flats), D major (one sharp), E major (two sharps), F major (one flat), G major (no sharps or flats), A major (two sharps).

Each staff has a unique set of note heads and stems, illustrating the specific intervals of each Lydian Augmented scale.

THE LYDIAN, $\flat 7$ SCALE *

The Lydian, $\flat 7$ scale is sometimes called the Lydian-Dominant scale. It is constructed of 5 whole steps and 2 half steps. The half steps occur between steps 4 and 5 and steps 6 and 7.

C Lydian, $\flat 7$

There are three ways of conceiving a Lydian, $\flat 7$ scale:

- 1) A Lydian scale with a lowered 7th scale step.
- 2) A Mixolydian scale with a raised 4th scale step.
- 3) A scale which has the same tones as a melodic minor scale built on the note a perfect fifth below. (C Lydian, $\flat 7$ is the same as G melodic minor)

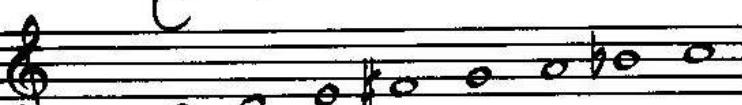
The Lydian, $\flat 7$ scale is used with dominant family chords which are unaltered with the exception of the $\sharp 11$ which may or may not be present. By raising the 4th of a Mixolydian mode to create this scale, dissonance of the unaltered 4th disappears. Therefore, any tone in the scale may be emphasized without fear of it sounding like a "wrong" note.

When the $\sharp 11$ is present in a dominant chord, the Lydian, $\flat 7$ is definitely a preferable choice over the Mixolydian scale. This is because the unaltered 4th of the Mixolydian mode would cause a dissonant clash with the $\sharp 11$.

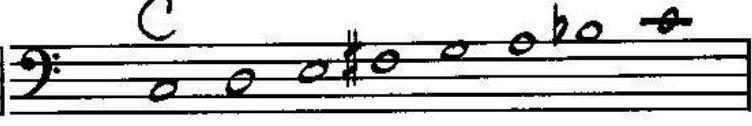
A Lydian, $\flat 7$ scale has the same tones as a Super Locrian scale built on the note located a tritone above or below. This information is useful in improvising on progressions which involve tritone substitutions of dominant chords.

LYDIAN, b7 SCALES *

C



C



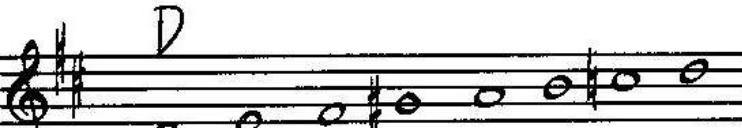
D_b(C#)



D_b(C#)



D



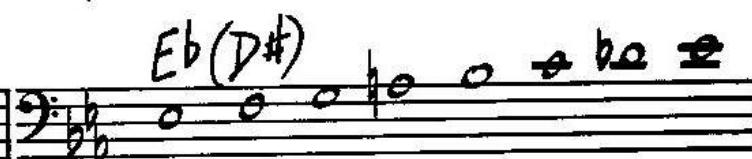
D



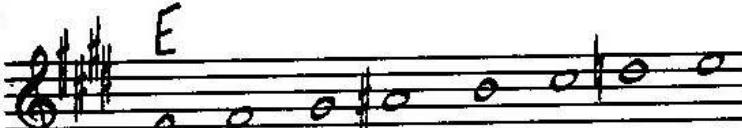
E_b(D#)



E_b(D#)



E



E



F



F



G_b(F#)



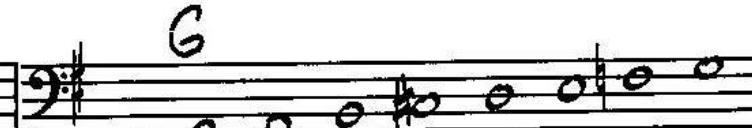
G_b(F#)



G



G



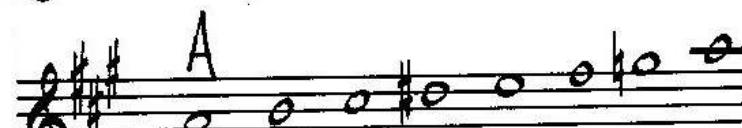
A_b(G#)



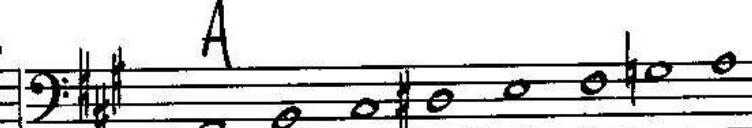
A_b(G#)



A



A



B_b



B_b



B

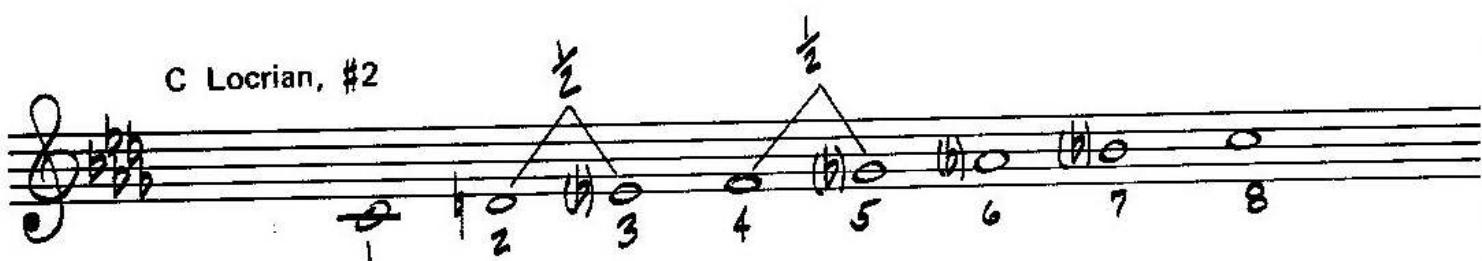


B



THE LOCRIAN, #2 SCALE *

The Locrian, #2 scale is constructed of 5 whole steps and 2 half steps. The half steps occur between steps 2 and 3 and steps 4 and 5 of the scale.



There are four ways of conceiving a Locrian, #2 scale:

- 1) A Locrian scale with a raised 2nd scale step.
- 2) A pure minor scale with a lowered 5th scale step.
- 3) A major scale with lowered 3rd, 5th, 6th and 7th scale steps.
- 4) A scale which has the same tones as a melodic minor scale built on the note three half steps above. (C Locrian, #2 is the same as Eb melodic minor)

The Locrian, #2 scale is used with a minor 7th chord which has a lowered 5th (half-diminished chord). Any tone in the scale may be emphasized without fear of it sounding "wrong". When the unaltered 9th is present in the harmony, this scale should be chosen in preference to the pure Locrian mode. This is because the lowered 2nd scale step in the Locrian mode would create a dissonant clash with the 9th of the chord.

LDCRIAN, #2 SCALES *

C



C#(Db)

C



D



D#(Eb)

D



E

E



F

F



F#(Gb)

F#(Gb)

G

G



G#(Ab)

G#(Ab)

A

A



Bb

Bb

B

B

THE SUPER LOCRIAN SCALE *

This scale has many names all of which are really correct and commonly used. It is called the Alter-Dominant scale, the Pomeroy scale, the Ravel scale, and the Diminished-Whole Tone scale. However, the classical name is the Super Locrian scale.

It is constructed of 5 whole steps and 2 half steps. The half steps occur between steps 1 and 2 at steps 3 and 4 of the scale.



There are two ways of conceiving a Super Locrian scale:

- 1) A Locrian scale with a lowered 4th scale step.
- 2) A scale which has the same tones as a melodic minor scale built on the note a half step above (C Super Locrian is the same as Db melodic minor)

The Super Locrian scale is used with dominant family chords which have both an altered 5th and an altered 9th present in any combination (-5-9, -5+9, +5-9, +5+9). The chord may include both altered 5ths and both altered 9ths since all of these alterations occur as scale tones in the Super Locrian scale.

If the dominant chord is lacking either an altered 5th or an altered 9th, the whole tone or diminished scale may be a better choice. This should be apparent due to the altered nature of the scale.

A Super Locrian scale has the same tones as a Lydian, $\flat 7$ scale built on the note located a tri-tone above or below. This information is useful in improvising on progressions which involve tri-tone substitutions of dominant chords.

SUPER LORLIAN SCALES*

The image displays twelve sets of handwritten musical notation, each representing a different Super Lorlian scale. Each set consists of two staves: a treble staff on top and a bass staff on the bottom. The notation uses a combination of letter names (C, D, E, F, G, A, B) and sharp/flat symbols to indicate pitch and mode. Key signatures are indicated by letters above the staves, such as C, D^b, D, E^b, E, F, F[#], G, A^b, A, B^b, and B. The notation uses vertical stems with horizontal dashes to represent note heads, and the music is divided into measures by vertical bar lines.

The scales are arranged vertically, starting with C at the top and ending with B at the bottom. The notation is handwritten in black ink on white paper.

SECTION

III

SYMMETRICAL ALTERED SCALES

SECTION III

SYMMETRICAL ALTERED SCALES

THE CHROMATIC SCALE

The Chromatic scale is constructed exclusively of half steps. Therefore, there is really only one Chromatic scale which may begin on any tone.

Chromatic Scale



The Chromatic scale may be used with any chord type with any combination of alterations. Naturally, some scale tones will always be dissonant to the harmony and have a strong tendency to resolve. This resolution will probably always be either up or down a half step to the nearest chord tone.

Chromatic motion can create excitement if used sparingly. If more than 4 or 5 successive chromatic scale steps are used, the musical style may become more "cocktailish" in character. This is because of the proliferation of "rippling" chromatic runs found in much commercial music. However, short chromatic "bursts" of notes can generate melodic energy and certainly should not be avoided.

THE WHOLE TONE SCALE *

The Whole Tone scale is constructed exclusively of whole steps, 6 in all. As there are only 12 tones in the chromatic scale, this means that there are only two different sounding whole tone scales. Each of those two scales can be interpreted enharmonically as several different scales.

C Whole Tone



A whole tone scale, by its nature, omits one letter of the musical alphabet in its spelling. This creates the interval of a diminished 3rd between two of the scale tones. The diminished 3rd (which is the same as a whole step) may occur between any two notes of the scale. An understanding of this fact should help avoid confusion in constructing the scale.

The Whole Tone scale is used with dominant family chords which have either a raised or lowered 5th or both. It can be seen that both of these alterations are present in the scale. However, if a lowered 5th is present, a Lydian, b7 scale would be an acceptable choice instead of the Whole Tone scale.

If an altered 9th is present in the harmony, the Whole Tone scale cannot be used because of the dissonant clash with the unaltered 9th which is present in the scale.

Because of its symmetry, the Whole Tone scale is capable of generating many patterns which move up or down through the scale at some regular interval. Whole Tone patterns were commonly used by jazz players in the Bebop era.

WHOLE TONE SCALES *

The image displays twelve hand-drawn whole tone scales, each consisting of six notes on a staff. The scales are arranged in two columns of six. The first column contains scales starting on C, D, E, F#, Ab, Bb, Db, Eb, F, G, A, and B. The second column contains scales starting on C, D, E, F#, Ab, Bb, Db, Eb, F, G, A, and B. Each scale is written on a staff with a clef (G or F) and a key signature of zero sharps or flats. The notes are represented by open circles (white note heads). The first note of each scale is bolded.

THE WHOLE STEP-HALF STEP DIMINISHED SCALE *

The Diminished scale is constructed of 4 whole steps and 4 half steps in regular alternation. As a result, there are only three different sounding diminished scales. Each one of those scales can be interpreted enharmonically as several different scales.

C Whole Step-Half Step Diminished

Since the diminished scale has 8 tones, one letter of the musical alphabet (besides the root) will be repeated in the spelling of the scale. This should not cause any confusion because the repeated letter may occur anywhere in the scale.

The Whole Step-Half Step Diminished scale is used with the diminished 7th chord. Within the scale are found the 4 tones of a diminished 7th chord and 4 tones which are located a whole step above the tones of the chord. These are the notes that are commonly added to a dim7 chord to color it or fill it out. Therefore, any tone of the scale will sound acceptable with a dim7 chord and may be emphasized without concern.

This scale may also be used with a half-diminished chord which leads to a dominant chord a 5th below. Some notes clash slightly but the dissonance disappears as the chord changes.

Because of its symmetry, the Diminished scale is capable of generating many patterns which move up or down through the scale at some regular interval. Diminished patterns are commonly used today.

Of course, this scale is really the same as the half-whole diminished scale starting on a different note. The advantage of conceiving this scale as beginning with a whole step is that it may then be constructed on the root of the chord that it accompanies.

WHOLE STEP, HALF STEP DIMINISHED SCALES*

Handwritten musical score for a 12-string guitar, featuring two staves and 12 measures. The score includes fingerings and letter labels (C, Eb, F#, A, C#, E, G, Bb, D, F, Ab, B) above the notes.

Staff 1 (Treble Clef):

- Measure 1: C (x12)
- Measure 2: Eb (x12)
- Measure 3: F# (x12)
- Measure 4: A (x12)
- Measure 5: C# (x12)
- Measure 6: E (x12)
- Measure 7: G (x12)
- Measure 8: Bb (x12)
- Measure 9: D (x12)
- Measure 10: F (x12)
- Measure 11: Ab (x12)
- Measure 12: B (x12)

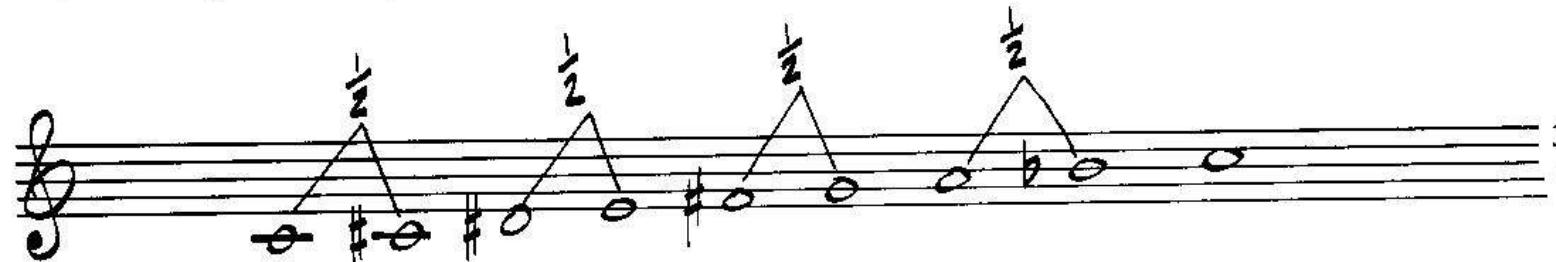
Staff 2 (Bass Clef):

- Measure 1: C (x12)
- Measure 2: Eb (x12)
- Measure 3: F# (x12)
- Measure 4: A (x12)
- Measure 5: C# (x12)
- Measure 6: E (x12)
- Measure 7: G (x12)
- Measure 8: Bb (x12)
- Measure 9: D (x12)
- Measure 10: F (x12)
- Measure 11: Ab (x12)
- Measure 12: B (x12)

THE HALF STEP-WHOLE STEP DIMINISHED SCALE *

The Diminished scale is constructed of 4 half steps and 4 whole steps in regular alternation. As result, there are only three different sounding diminished scales. Each one of those scales can be interpreted enharmonically as several different scales.

C Half Step-Whole Step Diminished



Since the diminished scale has 8 tones, one letter of the musical alphabet (besides the root) will be repeated in the spelling of the scale. This should not cause any confusion because the repeated letter may occur anywhere in the scale.

The Half Step-Whole Step Diminished scale is used with a dominant 7th family chord which has either a raised or lowered 9th or both present. It can be seen that both of these alterations are present in the scale. The other scale tones are the root, 3rd, 5th, b7th, #11th and 13th.

If a raised 5th is present in the harmony, the Diminished scale cannot be used because of the dissonant clash with the unaltered 5th present in the scale. If a lowered 5th is present in the chord, the diminished scale could be used but would be a less good choice than Super Locrian.

Because of its symmetry, the Diminished scale is capable of generating many patterns which move up or down through the scale at some regular interval. Diminished patterns are commonly used today.

Of course, this scale is really the same as the whole-half diminished scale starting on a different note. The advantage of conceiving this scale as beginning with a half step is that it may then be constructed on the root of the chord that it accompanies.

HALF STEP, WHOLE STEP DIMINISHED SCALES*

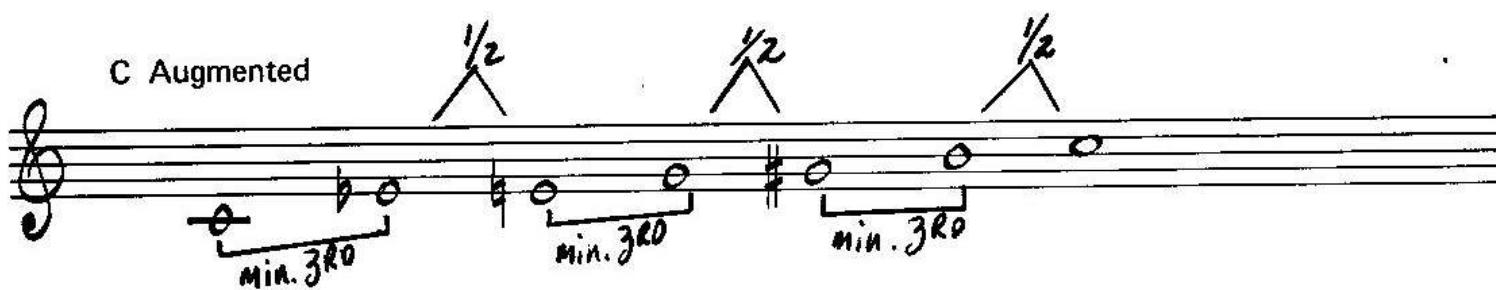
The image displays twelve pairs of musical staves, one for treble clef and one for bass clef, arranged in three columns of four pairs each. Each pair represents a diminished scale starting from a specific note. The keys are C, Eb, F#, A, C#, E, G, Bb, D, F, Ab, and B. The notation uses a combination of half steps (semitones) and whole steps (tones) indicated by 'o' and '#' respectively. The first staff of each pair shows the notes from bottom to top, and the second staff shows them from top to bottom.

Key Signatures:

- C: Treble: o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o. Bass: o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o
- Eb: Treble: obo#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o. Bass: ob#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o
- F#: Treble: #oo o obo obo obo obo obo obo obo obo obo obo. Bass: #oo o obo obo obo obo obo obo obo obo obo obo
- A: Treble: obo o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o. Bass: obo o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o
- C#: Treble: #oo o o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o. Bass: #oo o o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o
- E: Treble: oo o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o. Bass: oo o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o
- G: Treble: o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o. Bass: o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o
- Bb: Treble: ob#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o. Bass: ob#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o
- D: Treble: obo o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o. Bass: obo o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o o#o#o
- F: Treble: o#o#o o#o#o. Bass: o#o#o o#o#o
- Ab: Treble: ob#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o. Bass: ob#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o obo#o
- B: Treble: oo o#o#o o#o#o. Bass: oo o#o#o o#o#o

THE AUGMENTED SCALE

The Augmented scale is constructed of 3 half steps and 3 intervals of a minor 3rd (augmented 2nd). These minor 3rds occur in regular alternation with the half steps. As a result, there are only four different sounding Augmented scales. Each of those scales can be interpreted enharmonically as several different scales.



Since there are only 6 tones in the Augmented scale, one letter of the musical alphabet will be omitted in the spelling of this scale. This omission could occur at any point in the scale.

The Augmented scale is used with major family chords which have a raised 5th present in the harmony. There are actually six augmented triads, the roots of which form two augmented triads, in the scale. There are also three major triads present in the scale.

Because of its symmetry, the Augmented scale is capable of generating patterns which move up or down through the scale at some regular interval. These are less common than whole tone or diminished patterns but sound very effective.

AUGMENTED SCALES

The image displays 12 augmented scales, each with two staves: treble (G clef) and bass (F clef). The scales are arranged vertically, grouped by key signature.

- C:** Treble staff: C, D, E, F, G, A, B. Bass staff: C, D, E, F, G, A, B.
- D_b:** Treble staff: D_b, E, F, G, A, B, C. Bass staff: D_b, E, F, G, A, B, C.
- D:** Treble staff: D, E, F, G, A, B, C. Bass staff: D, E, F, G, A, B, C.
- E_b:** Treble staff: E_b, F, G, A, B, C, D. Bass staff: E_b, F, G, A, B, C, D.
- E:** Treble staff: E, F, G, A, B, C, D. Bass staff: E, F, G, A, B, C, D.
- F:** Treble staff: F, G, A, B, C, D, E. Bass staff: F, G, A, B, C, D, E.
- F#:** Treble staff: F#, G, A, B, C, D, E. Bass staff: F#, G, A, B, C, D, E.
- G:** Treble staff: G, A, B, C, D, E, F. Bass staff: G, A, B, C, D, E, F.
- A_b:** Treble staff: A_b, B, C, D, E, F, G. Bass staff: A_b, B, C, D, E, F, G.
- A:** Treble staff: A, B, C, D, E, F, G. Bass staff: A, B, C, D, E, F, G.
- B_b:** Treble staff: B_b, C, D, E, F, G, A. Bass staff: B_b, C, D, E, F, G, A.
- B:** Treble staff: B, C, D, E, F, G, A. Bass staff: B, C, D, E, F, G, A.

SECTION IV

MISCELLANEOUS SCALES

SECTION IV

MISCELLANEOUS SCALES

Major Pentatonic Scale



Minor Pentatonic Scale



Blues Scale



Harmonic Minor Scale



THE MAJOR PENTATONIC SCALE *

The Major Pentatonic scale is constructed of 3 whole steps and 2 intervals of a minor 3rd. The minor 3rds occur between steps 3 and 4 and steps 5 and 6.

C Major Pentatonic

Min. 3RD Min. 3RD

1 2 3 4 5 6

The Major Pentatonic scale is used with major family chords which have no alterations present. However, it may be constructed on notes other than the root of a chord to produce a number of harmonic sonorities. Examples are given below to show several uses of the same Major Pentatonic scale. The scale tones are analyzed in relation to each chord type.

C MAJ., 6-9

B° MAJ. 13

A min. 11

F MAJ. 6-7-9

G° 7-5#5-9#9

D min. 11

G13 sus. 4

MAJOR PENTATONIC SCALES*

Handwritten musical staff diagrams for major pentatonic scales. Each row contains two staves: a treble clef staff on the left and a bass clef staff on the right. The scales are arranged in pairs, with each pair sharing the same key signature.

- C:** Treble staff: C, D, E, G, A. Bass staff: C, D, E, G, A.
- D_b:** Treble staff: D_b, E, G, A, B. Bass staff: D_b, E, G, A, B.
- D:** Treble staff: D, F, G, A, C. Bass staff: D, F, G, A, C.
- E_b:** Treble staff: E_b, G, A, C, D. Bass staff: E_b, G, A, C, D.
- E:** Treble staff: E, G, A, C, D. Bass staff: E, G, A, C, D.
- F:** Treble staff: F, G, A, C, D. Bass staff: F, G, A, C, D.
- G_b:** Treble staff: G_b, A, C, D, E. Bass staff: G_b, A, C, D, E.
- G:** Treble staff: G, B, C, D, E. Bass staff: G, B, C, D, E.
- A_b:** Treble staff: A_b, C, D, E, G. Bass staff: A_b, C, D, E, G.
- A:** Treble staff: A, C, D, E, G. Bass staff: A, C, D, E, G.
- B_b:** Treble staff: B_b, C, D, E, G. Bass staff: B_b, C, D, E, G.
- B:** Treble staff: B, C, D, E, G. Bass staff: B, C, D, E, G.

THE MINOR PENTATONIC SCALE *

The Minor Pentatonic scale is constructed of 3 whole steps and two intervals of a minor 3rd. The minor 3rds occur between steps 1 and 2 and steps 4 and 5 of the scale.

C Minor Pentatonic

min. 3RD

min. 3RD

1 2 3 4 5 6

The Minor Pentatonic scale is used with minor family chords which have no alterations present. However, it may be constructed on notes other than the root of a chord to produce a number of harmonic sonorities. Examples are given below to show several uses of the same Minor Pentatonic scale. The scale tones are analyzed in relation to each chord type.

C min 11

1 3 11 5 7 1

A flat MAJ. 6-7-9

3 5 6 7 9 3

E flat MAJ. 6-9

6 1 9 3 5 6

A7-5#5-9#9

+9 -5 +5 7 -9 +9

B flat 13 sus. 4

9 4 5 13 1 9

F min 11

5 7 1 9 11 5

D flat MAJ. 13

7 9 3 +11 13 7

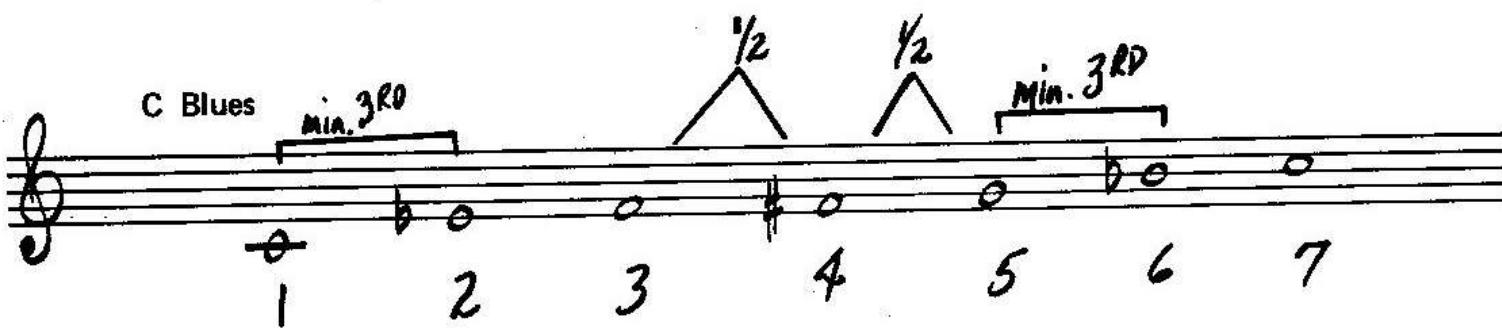
MINOR PENTATONIC SCALES*

Handwritten musical staff diagrams for minor pentatonic scales. Each diagram consists of two staves: a treble clef staff on top and a bass clef staff on the bottom. The notes are represented by open circles. The scales are:

- C: Treble staff: C, D, E, G, A. Bass staff: C, D, E, G, A.
- C#: Treble staff: C#, D, E, G, A. Bass staff: C#, D, E, G, A.
- D: Treble staff: D, E, F, G, A. Bass staff: D, E, F, G, A.
- E♭: Treble staff: E♭, F, G, B♭, C. Bass staff: E♭, F, G, B♭, C.
- E: Treble staff: E, F, G, B, C. Bass staff: E, F, G, B, C.
- F: Treble staff: F, G, A, C, D. Bass staff: F, G, A, C, D.
- F♯: Treble staff: F♯, G, A, C, D. Bass staff: F♯, G, A, C, D.
- G: Treble staff: G, A, B, D, E. Bass staff: G, A, B, D, E.
- A♭: Treble staff: A♭, B, D, E, G. Bass staff: A♭, B, D, E, G.
- A: Treble staff: A, B, C, E, G. Bass staff: A, B, C, E, G.
- B♭: Treble staff: B♭, C, E, G, A. Bass staff: B♭, C, E, G, A.
- B: Treble staff: B, C, D, G, A. Bass staff: B, C, D, G, A.

THE BLUES SCALE

The Blues scale is constructed of 2 whole steps, 2 half steps, and 2 minor 3rds. The location of the half steps and the minor 3rds is shown below.



The Blues scale could be conceived as a Minor Pentatonic with the addition of a half step between steps 3 and 4. It is commonly used with both minor and dominant family chords.

When used with an unaltered minor 7th chord, the 4th scale tone is dissonant to the harmony and has a tendency to resolve either up or down a half step to the 11th or 5th of the chord.

When used with a dominant chord, the 3rd scale tone is dissonant and wants to move away. The 2nd scale tone creates an augmented 9th in relation to the dominant harmony which, along with the lower 5th present in the scale, tends to give it the "bluesy" effect.

The Blues scale is often used in conjunction with all 3 or 4 chords of a simple blues progression. In this case, only the blues scale built on the tonic note of the key is used (that is, a B-flat Blues scale in the key of B-flat).

GUIDE TO SCALE CHOICE (continued)

Minor Family

Chord Type	Appropriate Scale Form
Minor 7th, III or VI function	Aeolian Phrygian
Minor 7th, sus 4	Dorian * Minor Pentatonic * Minor Pentatonic on the 5th *
Minor, #7	Ascending Melodic Minor * Harmonic Minor

Dominant Family

Chord Type	Appropriate Scale Form
Dominant 7th, unaltered	Mixolydian Lydian, b7 * Major Pentatonic *
Dominant 7th, b5 or #11	Lydian, b7 *
Dominant 7th, b5 or #5 or both	Whole Tone *
Dominant 7th, b9	Half Step-Whole Step Diminished * 5th Mode, Harmonic Minor
Dominant 7th, #9	Half Step-Whole Step Diminished * Dorian Blues Minor Pentatonic
Dominant 7th, b9 and #9	Half Step-Whole Step Diminished
Dominant 7th, altered 5th and 9th (any combination)	Super Locrian * Minor Pentatonic on the b3rd * Major Pentatonic on the b5th *
Dominant 7th, sus 4	Mixolydian Minor Pentatonic on the 2nd * Minor Pentatonic on the 5th *

* Scale which has no "wrong" notes (see General Notes, No. 6)

GUIDE TO SCALE CHOICE (continued)

Half-Diminished Chords

Chord Type	Appropriate Scale Form
Half-Diminished (Minor 7th, $\flat 5$)	Locrian Locrian, $\#2^*$ 2nd Mode, Harmonic Minor Whole Step-Half Step Diminished
Minor 9th, $\flat 5$	Locrian, $\#2^*$

Diminished Chords

Chord Type	Appropriate Scale Form
Diminished 7th	Whole Step-Half Step Diminished 7th Mode, Harmonic Minor

* Scale which has no "wrong" notes (see General Notes, No. 6)