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\* Topic can be applied on drums.  
 + Topic is considered by author to be an important *special effect* rather than fundamentally important to the study of improvising.

**PREREQUISITES**

A workable knowledge of scales, chords, chord progressions, sight reading, and a familiarity with the musical vocabulary (i. e. rhythms, melodies and harmonies) of early improvisational styles such as bebop, swing, Dixieland, blues, or rhythm and blues etc., is helpful to derive the maximum benefit from this book, especially if its study is unsupervised.



### Chord Scale Practice - Exercise #3: "Improvising Over Chord Changes"

Select 2 different chords and assign appropriate but contrasting chord scales, as in the following examples:

1. G7 altered (A $\flat$  melodic minor), C $\Delta$ 7 Ionian (C major scale)
2. G7 altered, C-6 melodic minor
3. D-7 Dorian, G7 altered
4. D $\emptyset$  Locrian, G7 (1/2,1)

Practice improvising on each chord of the 2-chord pattern individually, with unlimited duration, modal-style, (with and without using a selected rhythm - see below) in order to become familiar with the notes and sound of each chord scale.

Then assign an equal duration to each chord, e.g. 8 beats (2 bars each) or 4 beats (1 bar each) in 4/4 time. Use repeat signs to indicate indefinite repeat of progression.

**Example I:66**

There is little contest to being melodically active and accurate *before* or *after* a chord has changed. The real challenge is to play actively and accurately *during* a chord change. Therefore, choosing your own melody notes, use the following rhythms to insure that the improvising will be melodically and rhythmically active (to varying degrees) *while* the chords are changing.

Rhythm of #1 is displaced by 1 full beat; use same chords:

Rhythm of #1 is displaced by 2 full beats; same chords:

Rhythm of #1 is displaced by 3 full beats; same chords:

Now reverse the order of the chords and repeat the above rhythms.

**Example I:67**



## Section I

**Variations:**

1. Use simpler, easier rhythms, e.g.



2. Practice without 2-bar rest at end.
3. Practice at fast tempos.
4. Change melodic curve each time.
5. End on a different pitch each time.
6. Apply rhythms 1-4 separately or in sequence, e.g. rhythm #1 for X repeats, to rhythm #2 for X repeats, to rhythm #3, etc.
7. Apply rhythms separately or in sequence to a tune progression, beginning in the 1st or 2nd bar of the progression. [Note: Progressions where the general chord duration is 4 or 8 beats (1 or 2 bars) are easiest to work with.]

**Example: Daily Practice Schedule - Chord Scales/Melodic Accuracy**

1. 40 (20) minutes on scale patterns played mechanically.
2. 20 (10) minutes on improvising with individual scales.
3. 40 (20) minutes on improvising over chord changes using predetermined rhythms (apply to chord patterns and tune progressions).
4. 20 (10) minutes on the spirit and mood of the music.





## Section III

### Rhythmic Displacement

The following abbreviations will be used for analyzing musical examples of rhythmic displacement:

- OM - Original motif
- MD - Motif development
- RD - Rhythmic displacement
- DB - Downbeat
- UB - Upbeat
- R - Rhythm
- M - Melody
- S - Same

Rhythmic displacement occurs when the rhythm of a previous motif is repeated but starting on a different beat than the previous motif. For example, if the original motif begins on the 1st downbeat of a measure, the development would start on the 2nd, 3rd, or 4th downbeat (in 4/4 time) of a measure, and then duplicate the original motif's rhythmic attack points.

[Note: To create an exaggerated effect of rhythmic displacement in the following examples, repeat each original motif (OM) 3 times in a row in tempo, *then* play and compare the rhythmically displaced version.]

Examples III:1R

OM (begin on first DB)                      MD, SR/RD (begin on 3rd DB)

Example III:2R

OM (begin on first DB)                      MD, SR/RD (begin on 2nd DB)

Example III:3R

OM (begin on first UB)                      MD, SR/RD (begin on 4th UB)

Displacing the rhythm of a previous motif (with or without changing the melody notes) is sufficient *alone* to create motif development, i.e. the rhythm and melody of a previous motif can be exactly the same in the development, but the development must begin on a different (or new) beat of the measure.

Example III:4R

OM (begin on 2nd DB)                      MD, SMR/RD (begin on 3rd DB)





**Example III:12**

**Example III:13**

**Example III:14**

Before applying rhythmic displacement as a technique of motif development in a playing context, it is important to acquire the ability to begin motifs in specific places within the measure by "feel", versus by (mentally) counting the beats. This can be learned with the help of the following exercises.

**Preparing for Rhythmic Displacement - Exercises #1 and 2**

1. Using the play/rest approach, improvise in tempo with a single pitch (note) only, playing short contrasting rhythmic motifs. Throughout the solo, begin each idea on:

a) the 1st downbeat of a measure

**Example III:15**

b) the 2nd downbeat of a measure

c) the 3rd downbeat of a measure

d) the 4th downbeat of a measure

e) the 1st upbeat of a measure

f) the 2nd upbeat of a measure

**Example III:16**

etc.

Section III

- g) the 3rd upbeat of a measure
- h) the 4th upbeat of a measure

The objective is to acquire a "feel" for starting ideas in specific places within the measure, e.g. the 2nd downbeat, the 4th upbeat, etc.

Continue each of the above exercises (starting different ideas in the same place within a measure) for several minutes at a time.

2. Select a harmonic setting, tempo and mode of accompaniment. Improvise with melody and rhythm using the play rest approach. Throughout the solo, begin each idea on:

- a) the 1st downbeat of a measure
- b) the 2nd downbeat of a measure
- c) the 3rd downbeat of a measure
- d) the 4th downbeat of a measure
- e) the 1st upbeat of a measure
- f) the 2nd upbeat of a measure
- g) the 3rd upbeat of a measure
- h) the 4th upbeat of a measure

**Symmetrical Rhythmic Displacement, Exercises #1-9**

[Note: The following exercises should first be practiced using a single pitch (note) and rhythm only, i.e. no melody or harmonic setting, with metronome accompaniment.]

Select a harmonic setting, tempo and mode of accompaniment. Using the play/rest approach, improvise throughout the solo as follows:

- 1. a) play a short (rhythmically simple) motif starting on the 1st downbeat of a measure;
- b) rest (4-8 beats);
- c) play a development by repeating the rhythm of the previous motif but starting on the 3rd downbeat of a measure (melody may repeat or change);
- d) rest;
- e) repeat a-d (above) throughout the solo using a different original motif each time.

**Example III:17R**

The musical notation for Example III:17R consists of three staves of music in a 4/4 time signature. The first staff (measures 1-8) shows a sequence of chords: CΔ7, A7, D-7, G7, CΔ7, A7, D-7, G7. The melody starts on the first downbeat with a quarter note, followed by a rest for 4 beats, then a motif starting on the 3rd downbeat. The second staff (measures 9-16) continues the sequence with chords: CΔ7, A7, D-7, G7, CΔ7, A7, D-7, G7. The melody repeats the motif from the first staff, starting on the 3rd downbeat. The third staff (measures 17-24) continues with the same chord sequence and motif. The notation includes triplets and rests.

[Note: The form of exercise #1 applies to exercises #2-9 also. Continue each exercise for several minutes at a time.]

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2. Start a motif on the 2nd downbeat of a measure, repeat its rhythm starting on the 4th downbeat of a measure. Continue throughout solo.
3. Start a motif on the 3rd downbeat of a measure, repeat its rhythm starting on the 1st downbeat of a measure. Continue throughout solo.
4. Start a motif on the 4th downbeat of a measure, repeat its rhythm starting on the 2nd downbeat of a measure. Continue throughout solo.
- 5 - 8. Repeat exercises #1-4 (above) replacing downbeat starts with upbeat starts.
9. Start a motif on any downbeat or upbeat within a measure. Repeat its rhythm starting two full beats away from the original motif's starting place. (For example, if an original motif begins on the 3rd upbeat of a measure, the development must begin on the 1st upbeat of a measure.)

**Example III:18R**

The musical notation for Example III:18R consists of four staves of music in 4/4 time. The chords and their positions are as follows:

- Staff 1: CΔ7 (measures 1-2), A7 (measure 3), D-7 (measure 4), G7 (measures 5-6), CΔ7 (measures 7-8), A7 (measures 9-10).
- Staff 2: D-7 (measures 11-12), G7 (measures 13-14), CΔ7 (measures 15-16), A7 (measures 17-18), D-7 (measures 19-20), G7 (measures 21-22), CΔ7 (measures 23-24).
- Staff 3: A7 (measures 25-26), D-7 (measures 27-28), G7 (measures 29-30), CΔ7 (measures 31-32), A7 (measures 33-34), D-7 (measures 35-36).
- Staff 4: G7 (measures 37-38), CΔ7 (measures 39-40), A7 (measures 41-42), D-7 (measures 43-44), G7 (measures 45-46). The piece ends with "etc." in measure 46.

**Example: Daily Practice Schedule - Symmetrical Rhythmic Displacement**

1. 30 minutes on preparing for rhythmic displacement, exercises #1 and 2.
2. 20 minutes on symmetrical rhythmic displacement using a single pitch and rhythm only, choose from exercises #1-8.
3. 40 minutes on symmetrical displacement using melody and rhythm (in harmonic settings), choose from exercises #1-8.
4. 15 minutes on symmetrical displacement using a single pitch and rhythm only, exercise #9.
5. 15 minutes on symmetrical displacement using melody and rhythm (in harmonic settings), exercise #9.

Section IV

### Expanding Chord Duration

Expanding chord duration means the soloist extends (lengthens) the duration of a selected chord in a progression by 1 (or more) beats into the next chord of the progression, thereby delaying the change to the next chord.

**Example IV:12**

Rhythm section plays the original harmonic rhythm:

while soloist plays:

G7 is extended by 4 beats. CΔ7 is delayed by 4 beats.

Normally, after an extension is played the (improvised) melody resolves immediately to the next chord, creating the desired effect of tension/release.

**Example IV:13R**

**Example IV:14R**

**IMPORTANT!**

During the extension of a chord, the (improvised) melody must clearly and obviously outline its chord sound. Arpeggiating the chord tones of the extended chord may accomplish this well, otherwise use available tensions (9ths, 11ths, 13ths). The proper result is achieved by featuring those notes which are foreign (or non-harmonic) to the *original* chord or chord scale. Often a triad arpeggio or pentatonic scale is effective. See previous examples: IV: 13, IV:14.

[Note: Sometimes an extension can continue for one or more measures, effectively cancelling out a chord (or chords) from the original progression. This is okay to do *after* you have first demonstrated an ability to play accurately and musically on the original chord progression]

Example IV:15

**Expanding Chord Duration, Exercises #1-4**

- Using the play/rest approach and a comping tape, improvise in tempo on any (2 or) 4-chord pattern while extending the 1st and 3rd chord by 2 beats or so (i.e. delaying the 2nd and 4th chord). Example (4-chord pattern):

Example IV:16

	D-7 →	( D-7 )	G7alt.	CΔ7 →	( CΔ7 )	A7alt.	
Soloist	: / / / /	/ / / /	/ / / /	/ / / /	/ / / /	/ / / /	Repeat indefinitely
Rhythm Section	D-7	G7alt.	CΔ7	A7alt.			

[Note: To make these exercises easier, play 2 bars then rest 2 bars throughout the solo. Reverse: Rest 2 bars then play 2 bars, etc.]

- Repeat #1 above but extending the 2nd and 4th chord by 2 beats or so (i.e., delaying the 1st and 3rd chord).

Example IV:17

	(A7alt.)	D-7	G7alt. →	(G7alt.)	CΔ7	A7alt. →	
Soloist	: / / / /	/ / / /	/ / / /	/ / / /	/ / / /	/ / / /	Repeat indefinitely
Rhythm Section	D-7	G7alt.	CΔ7	A7alt.			

- Using the play/rest approach and a comping tape, improvise in tempo on a tune progression while expanding chord duration of pre-selected chords. Add chord symbols of extended chords in parentheses to original chord sheet.

Example IV:18

- Using the play/rest approach and a comping tape, improvise in tempo on a tune progression while expanding chord duration at will.

**Example: Daily Practice Schedule, Expanding Chord Duration**

- 15 minutes on exercise #1 (in various keys).
- 15 minutes on exercise #2 (in various keys).
- 10 minutes on exercise #3.
- 10 minutes on exercise #4.
- 10 minutes on the spirit and mood of the music.

Section V

### Tetratonic Scales (TRT)

One common tetratonic scale (4-note scale) consists of the following scale degrees: root, perfect 4th, diminished 5th, major 7th, octave.

Example V:37

C tetratonic scale

This formula produces a symmetrical (repeating) arrangement of intervals, i.e. perfect 4th, minor 2nd, perfect 4th, minor 2nd.

Example V:38

C tetratonic scale

This particular tetratonic scale can also be derived from the whole-step/half-step and half-step/whole-step scales. It can be built (found) on the root, -3rd, °5th, and M6th of the 1, 1/2 scale, and on the -2nd, M3rd, P5th and -7th of the 1/2, 1 scale.

Example V:39

C (1, 1/2)

B (1/2, 1)

There are a total of 6 different tetratonic scales using the above interval formula. They are: C, D<sup>b</sup>, D, E<sup>b</sup>, E and F. The G<sup>b</sup> (F<sup>♯</sup>) tetratonic scale is an inversion of the C tetratonic scale, and vice-versa. The G tetratonic scale is an inversion of the D<sup>b</sup> (C<sup>♯</sup>) tetratonic scale and vice versa. The G<sup>♯</sup> (A<sup>b</sup>) tetratonic scale is an inversion of the D tetratonic scale, and vice versa. The A tetratonic scale is an inversion of the E<sup>b</sup> tetratonic scale, and vice versa. The B<sup>b</sup> tetratonic scale is an inversion of the E tetratonic scale, and vice versa. And, the B tetratonic scale is an inversion of the F tetratonic scale, and vice versa.

Example V:40

Section V

The tetratonic scale can be used as a completely harmonic source to derive melody on any chord to which a whole-step/half-step or half-step/whole-step scale can be applied as a conventional chord scale, i.e., on diminished chords (1, 1/2) and dominant 7 chords (1/2, 1) only.

**Example V:41**

**a** C<sup>o</sup>7 C (1, 1/2)

The tetratonic scales which are completely harmonic to the above chord and scale are as follows:

C/F# (TRT) Eb/A (TRT)

**b** C7 C (1/2, 1)

The tetratonic scales which are completely harmonic to the above chord and scale are as follows:

Db/G# (TRT) E/Bb (TRT)

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However, tetratonic scales can also be effectively used as non-harmonic sources to derive melody on any chord, and at least 2 notes (sometimes 3) will always be harmonic to the chord.

Example V:42

Example V:42 consists of six staves of musical notation, each showing a different chord and its corresponding tetratonic scale. The scales are written in a 4-note format, often with a tritone interval.

- a** CΔ7 C/F# (TRT) D♭/G (TRT) D/A♭ (TRT) E♭/A (TRT) E/B♭ (TRT) F/B (TRT)
- b** C7
- c** C-6 C-Δ7
- d** C-7
- e** Cø
- f** C°7

Melodies derived from the tetratonic scale will produce wide intervals and, therefore, very angular melodic curves, similar to the tritonic scale previously discussed. The minor 2nd interval in the tetratonic scale also allows stepwise motion (chromatic), as well as a strong, smooth way of resolving non-harmonic notes.

Example V:43

Example V:43 shows a single staff of musical notation for a melody in C major. The title is "CΔ7 (using D TRT)". The melody starts with a quarter rest, followed by a series of notes: C4, D4, E4, F#4, G4, A4, B4, C5, B4, A4, G4, F#4, E4, D4, C4. The notes F#4 and B4 are circled, and the notes G4 and A4 are circled with an asterisk, indicating they are non-harmonic to the CΔ7 chord.

\*[Note: Parenthesized notes are non-harmonic to the chord, but because of the strength of this tetratonic scale, non-harmonic notes need not always resolve by 1/2 step.]

### Tetratonic Scales, Exercises #1-6

1. Begin by practicing the 6 tetratonic scales on your instrument using various scale-pattern exercises.

Example V:44

Example V:44 consists of eight tetratonic scale exercises, labeled a through h, written on a single staff in treble clef. Each exercise is presented as two phrases separated by a repeat sign (two dots with a slash).  
- Exercise a: G major, ascending and descending phrases.  
- Exercise b: G major, ascending and descending phrases.  
- Exercise c: G major, ascending and descending phrases.  
- Exercise d: G major, ascending and descending phrases.  
- Exercise e: G major, ascending and descending phrases.  
- Exercise f: G major, ascending and descending phrases.  
- Exercise g: G minor, ascending and descending phrases.  
- Exercise h: F major, ascending and descending phrases.  
Each exercise concludes with a double bar line and the text "etc." to indicate that the scale continues.

Section V

- Practice improvising for several minutes on each individual tetratonic scale *without* applying it to a chord. Practice with and without a tempo.

Example V:45R

C tetratonic

- Using a comping tape, practice soloing on individual dominant 7th and diminished 7th chords only, using completely harmonic tetratonic scales. E.G., on C7, E<sup>7</sup>, G<sup>7</sup>, A7, D<sup>9</sup>7, E<sup>9</sup>, G<sup>9</sup>, and B<sup>9</sup>7, use the D<sup>9</sup>/G and E/B<sup>9</sup> tetratonic scales.

Example V:46R

C7

- Using a comping tape, practice applying various non-harmonic tetratonic scales on individual chords.

Example V:47R

CΔ7

D/A<sup>b</sup> E/B<sup>b</sup>

CΔ7

G/D<sup>b</sup> B/F

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Example V:48R

Example V:48R consists of two staves of music in C major, 4/4 time. The first staff starts with a C-7 chord and contains two measures of music. The first measure is bracketed with an F/B chord below it, and the second measure is bracketed with a C/Gb chord below it. The second staff starts with a C-7 chord and contains two measures of music. The first measure is bracketed with an E/Bb chord below it, and the second measure is bracketed with a D/Ab chord below it. The second staff ends with "etc." indicating the pattern continues.

5. Using a comping tape, practice applying harmonic and non-harmonic tetratonic scales to chord patterns.

Example V:49R

Example V:49R consists of two staves of music in C major, 4/4 time. The first staff has four measures of music. Above the first measure is a G7 chord, above the second is a CΔ7 chord, above the third is a G7 chord, and above the fourth is a CΔ7 chord. Brackets below the staff indicate chord patterns: F/Bb for the first measure, Eb/A for the second, and D/Ab for the fourth. The second staff has four measures of music. Above the first measure is a G7 chord, above the second is a CΔ7 chord, above the third is a G7 chord, and above the fourth is a CΔ7 chord. Brackets below the staff indicate chord patterns: F/B for the first measure and E/Bb for the fourth. The second staff ends with "etc." indicating the pattern continues.

Example V:50R

Example V:50R consists of two staves of music in C major, 4/4 time. The first staff has eight measures of music. Above the first two measures is a CΔ7 chord, above the next two is an A7 chord, above the next two is a D-7 chord, and above the last two is a G7 chord. Brackets below the staff indicate chord patterns: Eb/A for the first two measures, D/Ab for the next two, and F/B for the last two. The second staff has eight measures of music. Above the first two measures is a CΔ7 chord, above the next two is an A7 chord, above the next two is a D-7 chord, and above the last two is a G7 chord. Brackets below the staff indicate chord patterns: G/Db for the first two measures and F/B for the last two. The second staff ends with "etc." indicating the pattern continues.

Section V

6. Using a comping tape, practice applying harmonic and non-harmonic tetratonic scales to tune progressions.

**Example V:51R**

**Example: Daily Practice Schedule - Tetratonic Scales**

1. 15 minutes on exercise #1.
2. 15 minutes on exercise #2.
3. 15 minutes on exercise #3.
4. 15 minutes on exercise #4.
5. 15 minutes on exercise #5.
6. 30 minutes on exercise #6.
7. 15 minutes on the spirit and mood of the music.