

## The Science

Embedded deeply within the framework of the Micro Sessions are extensively researched learning strategies that work. Supported by decades of scientific evidence, these include: **Spaced Repetition, Interleaved Practice, Retrieval Practice and Variation.** By spacing, switching and varying tasks, we intentionally create interference and memory lapse. Although learning feels effortful, working harder to retrieve concepts results in a better mastery, longer retention and more versatility.



### INTERLEAVING

Instead of dedicating oneself to one topic in a block, interleaved practice *alternates* between topics in a single session.

Interleaving helps improve the brain's ability to differentiate between concepts, increases adaptability and sharpens our focus. Playing music demands a raft of skills readily at hand: *time keeping, comping, improvising and listening.* Focusing on several areas at a time effectively sets us up for the realistic demands of any musical environment.



### SPACED REPETITION

The prevailing view amongst musicians is that the most effective way to learn is through *massed or blocked practice*—the intensive, focused practice of one topic followed by the next. Surprisingly, this commonly favoured approach ranks as the least productive amongst the various learning strategies. The *spacing or distributed practice effect*—was first documented over 100 years ago and states that memory is **TWICE (!)** as effective when learning is distributed over a period rather than in one sitting.

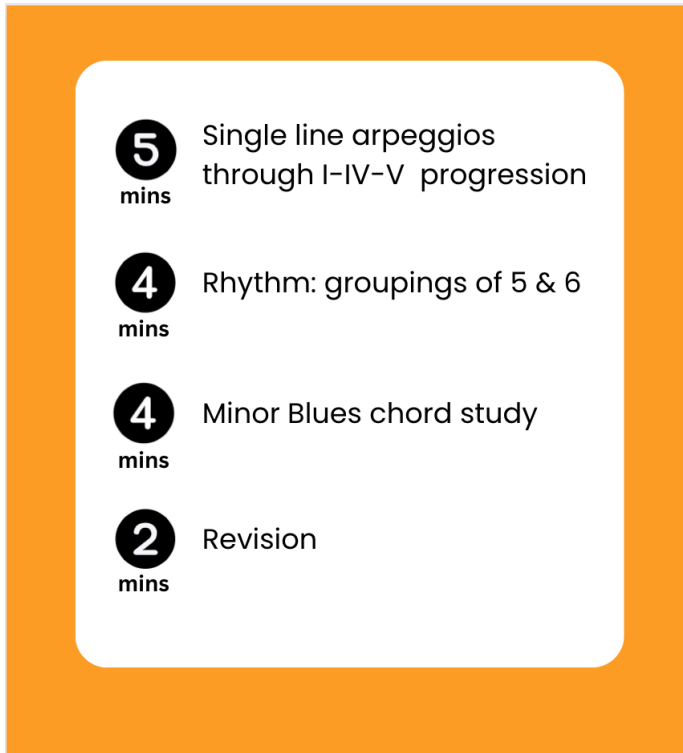


### RETRIEVAL PRACTICE

Retrieval practice is a learning strategy that involves actively recalling information from memory rather than simply reviewing it passively. It has been demonstrated in over 200 studies from over a century of research and like the spacing effect, is regarded as one of the most robust findings in the psychology of learning.

Digital Deluge is the overwhelming feeling that one is drowning in digital information. Pre-eminent cognitive neuroscientist the Dr. Sandra Chapman says we are exposed to 20,000 times more information than people twenty years ago. The result is anxiety, stress and information overload. Her studies have revealed that innovation requires a narrowing of our focus. The Micro Practice Sessions represent the antithesis to the digital deluge in that they target highly specific areas, ensuring that across a month, concepts have a genuine opportunity of becoming solidified.

The diagram on the below outlines a typical breakdown of a Micro Session with a focus on one specific concept - let us use our maj7b5 chord as our example:



The seemingly opposing elements of interleaving and a narrowing focus are reconciled through the use of variation. Exploring the maj7b5 chord *harmonically, melodically, rhythmically, transposing keys, alternating registers and tempos*, improves our ability to transfer the learning from one situation and apply it successfully to another. Variation also conveniently helps to delineate structures that can then be interleaved. e.g. chords vs single lines.

While the nominated time on each area appears minimal, the magic happens over the course of weeks, when the spacing effect kicks in. Also the low stakes revision testing encourages regular retrieval of information.

## Major 7th (b5)

Of all the chords types available, the major7(b5) is undisputably one of the most important. Its ability to be effectively superimposed over numerous chords and sophisticated sound, accounts for its prevalence in jazz, fusion and blues. Because of this, a comprehensive study of the chord is time well spent.

The table below illustrates the superimposition of a C major7(b5) over an additional five chords: A-6/9, D13, Ab7(alt), F#-7b5 and Bsus (b9). During the month we will spend the majority of time working with the first four, given they represent the most commonly encountered:

	<b>C</b>	<b>E</b>	<b>Gb (F#)</b>	<b>B</b>
<b>C Maj7b5</b>	R	3	b5	7
<b>A- 6/9</b>	b3	5	6	9
<b>D13</b>	b7	9	3	13
<b>Ab7(Alt)</b>	3	#5	b7	#9
<b>F# -7b5</b>	b5	b7	R	11
<b>Bsus (b9)</b>	b9	4	5	R

The table below outlines the relationship between the major7(b5) chord and its superimpositions. In order to exploit the chord's fullest potential, it is essential these relationships are memorised:

<b>Chord</b>	<b>Play major 7 b5 from:</b>
<b>Minor 6/9</b>	<b>b3rd</b>
<b>Dom 13th</b>	<b>b7</b>
<b>Altered Dominant (#5/#9)</b>	<b>maj 3rd</b>
<b>Min 7b5</b>	<b>b5th</b>
<b>Sus (b9)</b>	<b>b2nd</b>

Note that although a b5 is synonymous with #11, the latter assumes the presence of a perfect 5th *and* #11. For our purposes, we will be working exclusively with the four note major7(b5) chord which features a flattened fifth only.

## Chord Progressions and Studies

Given its propensity to work over minor and dominant chords, the major7(b5) lends itself perfectly to blues and blues related material. Throughout the month, we will focus intently on the following. These will be explored both melodically and harmonically.

### MINOR PROGRESSIONS

Over a minor chord, the major7(b5) adds both a 6th and 9th degree, and as such, provides a colorful, 'loungy' jazz feeling - at home in any Bossa Nova environment.

<b>I min</b>	<b>V7 (alt)</b>
<b>A-6/9</b>	<b>E7 (alt)</b>
<b>Cmaj7(b5)</b>	<b>G#maj7(b5)</b>

The above progression can be extended by adding a II before the V resulting in a minor II V I:

<b>II min7b5</b>	<b>V7 (alt)</b>	<b>I min</b>
<b>B-7b5</b>	<b>E7 (alt)</b>	<b>A-6/9</b>
<b>FMaj7(b5)</b>	<b>G#maj7(b5)</b>	<b>Cmaj7(b5)</b>

A variation on this is produced by interchanging the II-7b5 for a b6 dominant. This is commonly heard in the turnaround of minor progressions:

<b>bV17</b>	<b>V7 (alt)</b>	<b>I min</b>
<b>F7(13)</b>	<b>E7 (alt)</b>	<b>A-6/9</b>
<b>EbMaj7(b5)</b>	<b>G#maj7(b5)</b>	<b>Cmaj7(b5)</b>

Another excellent vehicle for the major 7th(b5) is the movement of I minor to the IV minor chord (e.g Blue Bossa):

<b>I min</b>	<b>IV min</b>	<b>V7</b>
<b>A-6/9</b>	<b>D-6/9</b>	<b>E7(alt)</b>
<b>Cmaj7(b5)</b>	<b>Fmaj7(b5)</b>	<b>G#maj7(b5)</b>

Changing the I minor into an altered dominant (prior to the IV) is a device often used to create further tension. This also provides us with the opportunity to add another major 7(b5) to the progression:

<b>I min</b>	<b>I7 alt</b>	<b>IV min</b>	<b>V7</b>
<b>A-6/9</b>	<b>A7 #5#9</b>	<b>D-6/9</b>	<b>E7</b>
<b>Cmaj7(b5)</b>	<b>C# maj7(b5)</b>	<b>Fmaj7(b5)</b>	<b>G#maj7(b5)</b>

### DOMINANT PROGRESSIONS

The major7th(b5) has the capacity to transform a dominant 7th into either a colorful extended chord, or a heavily altered one - both of which are perfectly suited to the blues or any I, IV V type progressions:

<b>I7</b>	<b>V7 (alt)</b>
<b>A13</b>	<b>E7 (alt)</b>
<b>G maj7(b5)</b>	<b>G#maj7(b5)</b>

<b>I7</b>	<b>IV7</b>	<b>V7 (alt)</b>
<b>A7</b>	<b>D7</b>	<b>E7 (alt)</b>
<b>Gmaj7(b5)</b>	<b>C maj7(b5)</b>	<b>G#maj7(b5)</b>

Like our previous I to IV example (minor) we can again add a further degree of tension by altering the I chord. Notice how the I chord moves from *inside* to *outside*, by playing a major 7(b5) a tritone away - G to C#. Also pay attention to the way this resolves down a semitone to C:

<b>I7</b>	<b>I7 (alt)</b>	<b>IV7</b>	<b>V7 (alt)</b>
<b>A7</b>	<b>A7(alt)</b>	<b>D7</b>	<b>E7 (alt)</b>
<b>Gmaj7(b5)</b>	<b>C#maj7(b5)</b>	<b>Cmaj7(b5)</b>	<b>G#maj7(b5)</b>

There are hundreds of different songs suitable for the use of the major7(b5). The following lists a few:

## Songs

### **Cantaloupe Island**

<b>F-6/9</b> (Ab maj7b5)	%	%	%
<b>Db13</b> (Cb maj7b5)	%	%	%
<b>D-6/9</b> (F maj7b5)	%	%	%
<b>F-6/9</b> (Ab maj7b5)	%	%	%

### **Blue in Green**

<b>G-6/9</b> (Bb maj7b5)	<b>A7 alt</b> (C# maj7b5)	<b>D-</b> (F maj7b5)	<b>Db13</b> (Bmaj7b5)	<b>C-7</b> (Eb maj7)	<b>F7</b> (A maj7b5)
<b>Bb maj7b5</b>	<b>A7 alt</b> (C# maj7b5)	<b>D- 6/9</b> (F maj7b5)		<b>E7 alt</b> (G# maj7b5)	
<b>A-6/9</b> (C maj7b5)	<b>D- 6/9</b> (F maj7b5)				

### Minor Blues

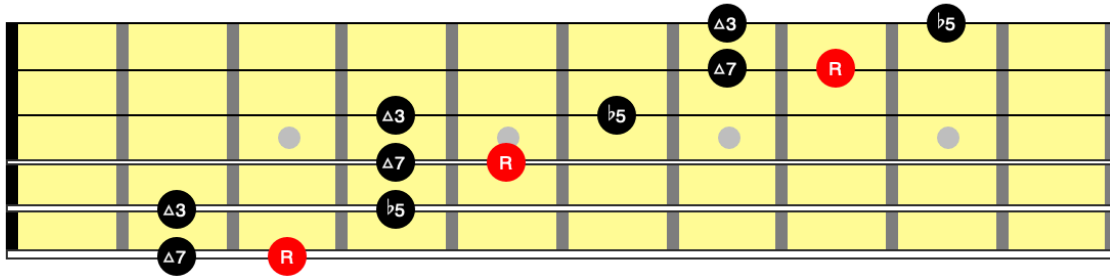
<b>C-6/9</b> Eb Maj 7 b5	%	%	<b>C7(alt)</b> E Maj 7b5
<b>F-6/9</b> Ab Maj 7b5	%	<b>C-6/9</b> Eb Maj 7 b5	%
<b>Ab7(13)</b> Gb Maj 7b5	<b>G7(alt)</b> B Maj 7b5	<b>C-6/9</b> Eb Maj 7 b5	<b>G7(alt)</b> B Maj 7b5

### Dominant Blues

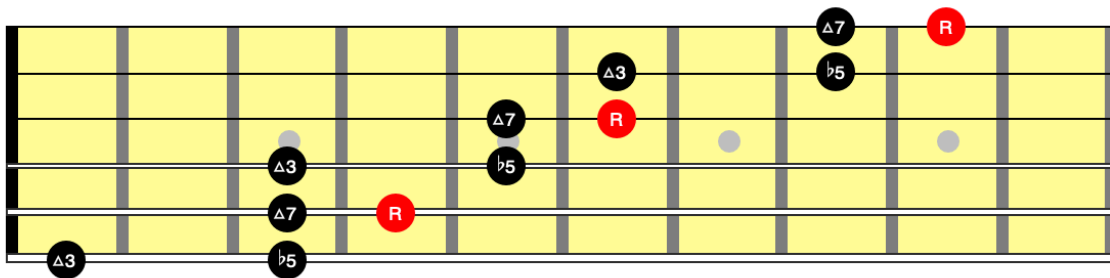
<b>Bb7</b> Ab Maj 7 b5	<b>Eb7</b> Db Maj 7 b5	<b>Bb7</b> Ab Maj 7 b5	<b>Bb7(alt)</b> D Maj 7 b5
<b>Eb7</b> Db Maj 7 b5	<b>Eb7</b> Db Maj 7 b5	<b>Bb7</b> Ab Maj 7 b5	<b>G7(alt)</b> B Maj 7 b5
<b>C7</b> Bb Maj 7b5	<b>F7</b> A Maj 7b5	<b>Bb7 G7</b> AbMaj 7b5 BMaj7b5	<b>C7 G7</b> BbMaj7b5 B Maj 7b5

# Major 7th b5 Arpeggios - Two notes per string

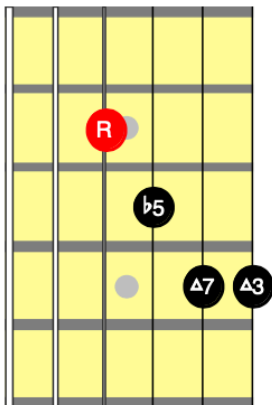
(6th string root)



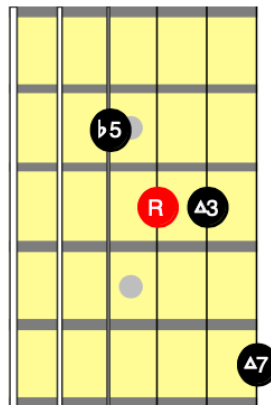
(5th string root)



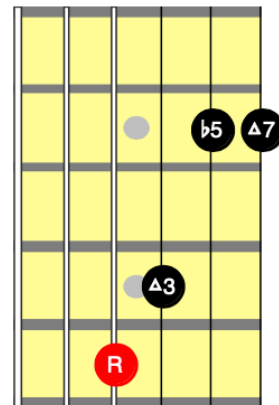
Major 7b5



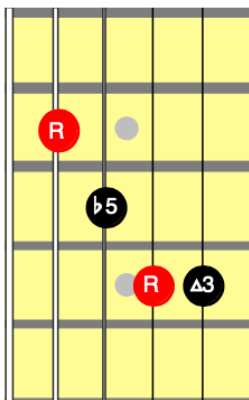
Major 7b5



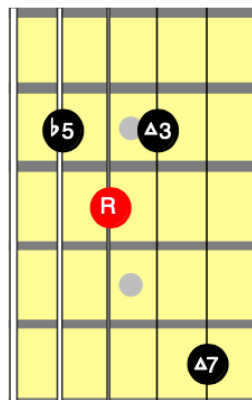
Major 7b5



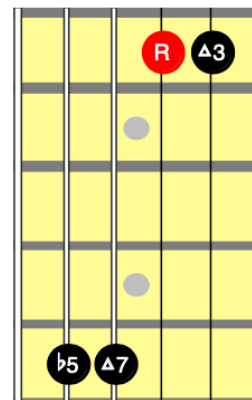
Major 7b5



Major 7b5



Major 7b5



# 24 x Permutations of Major 7(b5)

8 7 9 9 | 8 7 9 9 | 8 9 9 7 | 8 9 7 9 | 8 9 9 7 | 8 7 9 9

7 9 9 8 | 7 9 9 8 | 7 8 9 9 | 7 8 9 9 | 7 8 9 9 | 7 9 9 8

9 8 7 9 | 9 8 7 9 | 9 7 8 9 | 9 7 8 9 | 9 7 8 9 | 9 8 7 9

9 8 7 9 | 9 8 9 7 | 9 9 8 7 | 9 9 7 8 | 9 7 9 8 | 9 7 8 9

# Ten Patterns

The following patterns are based on various Maj7b5 interval combination and sequences. Play through each one, highlighting any you prefer. There are hundreds of these available so be sure to experiment with your own.

Pattern 1: Treble clef, key signature of two sharps (F# and C#), 2/4 time signature. The melody consists of eighth notes: F#4, A4, B4, C#5, F#4, A4, B4, C#5, F#4, A4, B4, C#5, F#4, A4, B4, C#5. The guitar tablature below shows the fretting: 2 3, 2 4, 3 2 4 4, 2 4 4 5, 4 4 5 4.

Pattern 2: Treble clef, key signature of two sharps (F# and C#), 2/4 time signature. The melody consists of eighth notes: F#4, A4, B4, C#5, F#4, A4, B4, C#5, F#4, A4, B4, C#5, F#4, A4, B4, C#5. The guitar tablature below shows the fretting: 4 2 3 2, 4 3 2 4, 5 2 4 4, 4 4 5.

Pattern 3: Treble clef, key signature of two sharps (F# and C#), 2/4 time signature. The melody consists of eighth notes: F#4, A4, B4, C#5, F#4, A4, B4, C#5, F#4, A4, B4, C#5, F#4, A4, B4, C#5. The guitar tablature below shows the fretting: 4 2 3 2, 4 4 2 3, 5 4 4 2, 4 5 4 4.

Pattern 4: Treble clef, key signature of two sharps (F# and C#), 2/4 time signature. The melody consists of eighth notes: F#4, A4, B4, C#5, F#4, A4, B4, C#5, F#4, A4, B4, C#5, F#4, A4, B4, C#5. The guitar tablature below shows the fretting: 3 4 2 5, 4 4 6, 5 7 4 8, 6 7 7 9.

Pattern 5: Treble clef, key signature of two sharps (F# and C#), 2/4 time signature. The melody consists of quarter notes: F#4, A4, B4, C#5, F#4, A4, B4, C#5. The guitar tablature below shows the fretting: 4 2 3, 5 4 4, 6 4 4, 8 7 4 6.

System 1: Treble clef, key signature of two sharps (F# and C#), 4/4 time signature. The staff contains a melodic line with eighth and quarter notes. Below it are two guitar TAB staves with fret numbers and bar lines.

4	2	3	2	5	2	4	4	6	4	5	4	8	4	6	7
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

System 2: Treble clef, key signature of two sharps (F# and C#), 4/4 time signature. The staff contains a melodic line with eighth and quarter notes. Below it are two guitar TAB staves with fret numbers and bar lines.

4	2	3	2	5	4	4	2	6	4	5	4	8	7	6	4
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

System 3: Treble clef, key signature of two sharps (F# and C#), 4/4 time signature. The staff contains a chordal line with dyads. Below it are two guitar TAB staves with fret numbers and bar lines.

4	5	4	6	7	8	7	9	3	2	4	4	5	4	6	7
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

System 4: Treble clef, key signature of two sharps (F# and C#), 4/4 time signature. The staff contains a melodic line with eighth and quarter notes. Below it are two guitar TAB staves with fret numbers and bar lines.

2	4	3	2	4	5	4	2	4	6	5	4	7	8	6	4
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

System 5: Treble clef, key signature of two sharps (F# and C#), 4/4 time signature. The staff contains a chordal line with dyads. Below it are two guitar TAB staves with fret numbers and bar lines.

2	4	4	5	4	6	7	8	2	3	2	4	4	5	4	6
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

# Major 7th b5 Uses

## I7-IV7-V7

Ex.1

G<sup>13</sup> G<sup>7</sup>(<sup>#9</sup>) C<sup>13</sup> D<sup>7</sup>(<sup>#9</sup>) G<sup>13</sup> G<sup>7</sup>(<sup>#9</sup>) C<sup>13</sup> D<sup>7</sup>(<sup>#9</sup>)

Fmaj7b5 Bmaj7b5 Bbmaj7b5 F#maj7b5 Fmaj7b5 Bmaj7b5 Bbmaj7b5 F#maj7b5

G<sup>13</sup> G<sup>7</sup>(<sup>#9</sup>) C<sup>13</sup> D<sup>7</sup>(<sup>#9</sup>)

Fmaj7b5 Bmaj7b5 Bbmaj7b5 F#maj7b5

## I Min-bVI-V7

Ex.2

Cm<sup>6/9</sup> A<sup>b</sup>13 G<sup>7</sup>(<sup>#9</sup>) Cm<sup>6/9</sup> A<sup>b</sup>13 G<sup>7</sup>(<sup>#9</sup>)

Ebmaj7b5 Gbmaj7b5 Bmaj7b5 Ebmaj7b5 Gbmaj7b5 Bmaj7b5

Cm<sup>6/9</sup> A<sup>b</sup>13 G<sup>7</sup>(<sup>#9</sup>)

Ebmaj7b5 Gbmaj7b5 Bmaj7b5

## I Min-II-7b5 -V7

Ex.3

Cm<sup>6/9</sup> Dm<sup>7</sup>(<sup>b5</sup>) G<sup>7</sup>(<sup>#9</sup>) Cm<sup>6/9</sup> Dm<sup>7</sup>(<sup>b5</sup>) G<sup>7</sup>(<sup>#9</sup>)

Ebmaj7b5 Abmaj7b5 Bmaj7b5 Ebmaj7b5 Abmaj7b5 Bmaj7b5

Cm<sup>6/9</sup> Dm<sup>7</sup>(<sup>b5</sup>) G<sup>7</sup>(<sup>#9</sup>)

Ebmaj7b5 Abmaj7b5 Bmaj7b5

# Major 7th <sup>b</sup>5 Study

## I<sup>7</sup> - IV<sup>7</sup> - V<sup>7</sup>

**Ex.1**

B<sup>b</sup>13                      B<sup>b</sup>13                      B<sup>b</sup>7#5#9                      E<sup>b</sup>13                      E<sup>b</sup>13                      F7#5#9

AbMaj7<sup>b</sup>5                      AbMaj7<sup>b</sup>5                      DMaj7<sup>b</sup>5                      D<sup>b</sup>Maj7<sup>b</sup>5                      D<sup>b</sup>Maj7<sup>b</sup>5                      AMaj7<sup>b</sup>5

T	3	3	9	8	8	4
A	3	3	9	8	8	4
B	5	5	11	10	10	6
B	6	6	12	11	11	7

**Ex.2**

B<sup>b</sup>13                      B<sup>b</sup>13                      B<sup>b</sup>7#5#9                      E<sup>b</sup>13                      E<sup>b</sup>13                      F7#5#9

AbMaj7<sup>b</sup>5                      AbMaj7<sup>b</sup>5                      DMaj7<sup>b</sup>5                      D<sup>b</sup>Maj7<sup>b</sup>5                      D<sup>b</sup>Maj7<sup>b</sup>5                      AMaj7<sup>b</sup>5

T	8	8	14	13	13	9
A	8	8	14	13	13	9
B	7	7	13	12	12	8
B	6	6	12	11	11	7

**Ex.3**

B<sup>b</sup>13                      B<sup>b</sup>13                      B<sup>b</sup>7#5#9                      E<sup>b</sup>13                      E<sup>b</sup>13                      F7#5#9

AbMaj7<sup>b</sup>5                      AbMaj7<sup>b</sup>5                      DMaj7<sup>b</sup>5                      D<sup>b</sup>Maj7<sup>b</sup>5                      D<sup>b</sup>Maj7<sup>b</sup>5                      AMaj7<sup>b</sup>5

T	3	3	9	8	8	4
A	1	1	7	6	6	2
B	1	1	7	6	6	2
B	0	0	6	5	5	1

# Major 7<sup>th</sup> <sup>b</sup>5 Study

## I Min - IV Min - V<sup>7</sup>

**Ex.1**

	C <sub>-69</sub>	C <sub>-69</sub>	C7#5#9	F <sub>-69</sub>	F <sub>-69</sub>	G7#5#9																												
	EbMaj7 <sup>b</sup> 5	EbMaj7 <sup>b</sup> 5	EMaj7 <sup>b</sup> 5	AbMaj7 <sup>b</sup> 5	AbMaj7 <sup>b</sup> 5	BMaj7 <sup>b</sup> 5																												
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A	10	10	11	3	3	6																												
B	12	12	13	5	5	8																												
B	13	13	14	6	6	9																												

**Ex.2**

	C <sub>-69</sub>	C <sub>-69</sub>	C7#5#9	F <sub>-69</sub>	F <sub>-69</sub>	G7#5#9																												
	EbMaj7 <sup>b</sup> 5	EbMaj7 <sup>b</sup> 5	EMaj7 <sup>b</sup> 5	AbMaj7 <sup>b</sup> 5	AbMaj7 <sup>b</sup> 5	BMaj7 <sup>b</sup> 5																												
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A	3	3	4	8	8	11																												
B	2	2	3	7	7	10																												
B	1	1	2	6	6	9																												

**Ex.3**

	C <sub>-69</sub>	C <sub>-69</sub>	C7#5#9	F <sub>-69</sub>	F <sub>-69</sub>	G7#5#9																												
	EbMaj7 <sup>b</sup> 5	EbMaj7 <sup>b</sup> 5	EMaj7 <sup>b</sup> 5	AbMaj7 <sup>b</sup> 5	AbMaj7 <sup>b</sup> 5	BMaj7 <sup>b</sup> 5																												
<table border="0" style="font-size: small;"> <tr><td>T</td><td>10</td><td>10</td><td>11</td><td>3</td><td>3</td><td>6</td></tr> <tr><td>A</td><td>8</td><td>8</td><td>9</td><td>1</td><td>1</td><td>4</td></tr> <tr><td>B</td><td>8</td><td>8</td><td>9</td><td>1</td><td>1</td><td>4</td></tr> <tr><td>B</td><td>7</td><td>7</td><td>8</td><td>0</td><td>0</td><td>3</td></tr> </table>	T	10	10	11	3	3	6	A	8	8	9	1	1	4	B	8	8	9	1	1	4	B	7	7	8	0	0	3						
T	10	10	11	3	3	6																												
A	8	8	9	1	1	4																												
B	8	8	9	1	1	4																												
B	7	7	8	0	0	3																												

# Bb Blues

(Major 7th<sup>b5</sup> study)

Bb7                      Eb7                      F7                      Bb7                      Bb7

A<sup>b</sup> Maj7th<sup>b5</sup>                      D<sup>b</sup> Maj7th<sup>b5</sup>                      A Maj7th<sup>b5</sup>                      A<sup>b</sup> Maj7th<sup>b5</sup>                      A<sup>b</sup> Maj7th<sup>b5</sup>                      D Maj7th<sup>b5</sup>

	8	8	8	8	9	8	8	8	8	9	9
T	8	8	8	6	9	8	8	8	8	7	7
A	7	7	7	6	8	7	7	7	7	7	7
B	6	6	6	5	7	6	6	6	6	6	6

Eb7                      Eb7                      F7                      Bb7                      Bb7                      G7

D<sup>b</sup> Maj7th<sup>b5</sup>                      D<sup>b</sup> Maj7th<sup>b5</sup>                      A Maj7th<sup>b5</sup>                      A<sup>b</sup> Maj7th<sup>b5</sup>                      A<sup>b</sup> Maj7th<sup>b5</sup>                      B Maj7th<sup>b5</sup>

	8	8	8	8	9	9	8	8	8	8	6	6
T	6	6	6	6	9	9	8	8	8	8	6	6
A	6	6	6	6	8	8	7	7	7	8	8	8
B	5	5	5	5	7	7	6	6	6	9	9	9

C7                      F7                      Bb7                      G7                      C7                      F7                      Bb7

B<sup>b</sup> Maj7th<sup>b5</sup>                      A Maj7th<sup>b5</sup>                      A<sup>b</sup> Maj7th<sup>b5</sup>                      B Maj7th<sup>b5</sup>                      B<sup>b</sup> Maj7th<sup>b5</sup>                      A Maj7th<sup>b5</sup>                      A<sup>b</sup> Maj7th<sup>b5</sup>

	5	4	3	6	5	4	3	3	2	1	3
T	5	4	3	4	3	2	3	3	2	1	1
A	7	6	5	4	3	2	2	2	1	1	0
B	8	7	6	3	2	1	0	0	0	0	0

Bb7                      Eb7                      F7                      Bb7                      Bb7

15                      13                      16                      15                      15                      15                      15                      14                      14

	15	15	15	13	16	15	15	15	15	15	14	14
T	13	13	13	13	14	13	13	13	13	13	14	14
A	13	13	13	12	14	13	13	13	13	13	13	13
B	12	12	12	11	13	12	12	12	12	12	12	12

T	13	13	13	13	16	15	15	15	15	11	11
A	13	13	13	13	14	13	13	13	13	11	11
B	12	12	12	12	14	13	13	13	13	10	10
B	11	11	11	11	13	12	12	12	12	9	9

T	10	11	10	9	8	11	10	9	8
A	10	9	8	8	8	11	10	9	8
B	9	9	8	8	7	10	9	8	7
B	8	8	7	7	6	9	8	7	6

Remember:

**For Dominant 13th, play Major 7<sup>th</sup> <sup>b5</sup> down one tone.**

**For Altered Dominant (#5,#9), play Major 7<sup>th</sup> <sup>b5</sup> up Major 3rd**

Using this formula, identify each Major 7th b5 chord in the above blues progression.

# Major<sup>7</sup>th<sup>b5</sup> (Minor Blues)

Lucas Michailidis

Chord progression: C- G7 C- C7

Chords: C- (E<sup>b</sup>Maj<sup>7</sup>th<sup>b5</sup>), G<sup>7</sup> (B Maj<sup>7</sup>th<sup>b5</sup>), C- (E<sup>b</sup>Maj<sup>7</sup>th<sup>b5</sup>), C<sup>7</sup> (E Maj<sup>7</sup>th<sup>b5</sup>)

Fingering (T, A, B strings):

3	3	3	6	3	3	3	4
3	3	3	4	3	3	3	4
2	2	2	4	2	2	2	3
1	1	1	3	1	1	1	2

Chord progression: F- F- G7 C- C- E♭7

Chords: F- (A<sup>b</sup>Maj<sup>7</sup>th<sup>b5</sup>), F- (A<sup>b</sup>Maj<sup>7</sup>th<sup>b5</sup>), G<sup>7</sup> (B Maj<sup>7</sup>th<sup>b5</sup>), C- (E<sup>b</sup>Maj<sup>7</sup>th<sup>b5</sup>), C- (E<sup>b</sup>Maj<sup>7</sup>th<sup>b5</sup>), E<sup>b</sup>7 (D<sup>b</sup> Maj<sup>7</sup>th<sup>b5</sup>)

Fingering (T, A, B strings):

3	3	3	6	3	3	3	6
1	1	1	4	3	3	3	6
1	1	1	4	2	2	2	6
0	0	0	3	1	1	1	5

Chord progression: A♭7 G7 C- D-7♭5 G7

Chords: A<sup>b</sup>7 (G<sup>b</sup>Maj<sup>7</sup>th<sup>b5</sup>), G<sup>7</sup> (B Maj<sup>7</sup>th<sup>b5</sup>), C- (E<sup>b</sup>Maj<sup>7</sup>th<sup>b5</sup>), D-<sup>7</sup>b<sup>5</sup> (A<sup>b</sup>Maj<sup>7</sup>th<sup>b5</sup>), G<sup>7</sup> (B Maj<sup>7</sup>th<sup>b5</sup>)

Fingering (T, A, B strings):

6	6	6	3	3	3	3	6	6
6	6	6	4	3	3	3	4	4
5	5	5	4	2	2	2	5	4
4	4	4	3	1	1	1	6	3

13

C-                      C-                      G<sup>7</sup>                      C-                      G-7<sup>b5</sup>                      C<sup>7</sup>

TAB

17

F-                      F-                      G<sup>7</sup>                      C-                      C-                      E<sup>b</sup>7

TAB

21

A<sup>b</sup>7                      G<sup>7</sup>                      C-                      D-7<sup>b5</sup>                      G<sup>7</sup>

TAB

Once comfortable with this exercise, be sure to work out the same set of inversions on the string set below i.e. 5 4 3 2.

## Bergonzi Cycles

### Major 7 (b5) Cycle

C Maj7(b5)	E Maj7(b5)	Ab Maj7 (b5)	B Maj7 (b5)
Eb Maj7 (b5)	G Maj7 (b5)	Bb Maj7 (b5)	D Maj7 (b5)
F#Maj7 (b5)	A Maj7 (b5)	C# Maj7 (b5)	F Maj7 (b5)

### Dominant 13th Cycle

C13 Bb Maj7 (b5)	E13 D Maj7 (b5)	Ab13 Gb Maj7 (b5)	B13 A Maj7 (b5)
Eb13 Db Maj7 (b5)	G13 F Maj7 (b5)	Bb13 Ab Maj7 (b5)	D13 C Maj7(b5)
F#13 E Maj7(b5)	A13 G Maj7 (b5)	C#13 B Maj7 (b5)	F13 Eb Maj7 (b5)

### Minor 6/9 Cycle

C-6/9 Eb Maj7 (b5)	E-6/9 G Maj7 (b5)	Ab-6/9 B Maj7 (b5)	B-6/9 D Maj7 (b5)
Eb-6/9 Gb Maj7 (b5)	G-6/9 Bb Maj7 (b5)	Bb-6/9 Db Maj7 (b5)	D-6/9 F Maj7 (b5)
F#-6/9 A Maj7 (b5)	A-6/9 C Maj7(b5)	C#-6/9 E Maj7(b5)	F-76/9 Ab Maj7 (b5)

# Rhythmic Grouping

## FOUR NOTES

1	1	2	3	4	5
2	1	2	3	4	5
3	1	2	3	4	5
4	1	2	3	4	5
5	1	2	3	4	5

This diagram illustrates the way in which a four note pattern (such as Major7b5) can be converted into a grouping of five by simply adding one beat rest. The five figure displaces the four note pattern and results in interesting rhythmic configurations.

## FOUR NOTES

1	1	2	3	4	5	6
2	1	2	3	4	5	6
3	1	2	3	4	5	6
4	1	2	3	4	5	6
5	1	2	3	4	5	6
6	1	2	3	4	5	6
7	1	2	3	4	5	6
8	1	2	3	4	5	6
9	1	2	3	4	5	6
10	1	2	3	4	5	6
11	1	2	3	4	5	6
12	1	2	3	4	5	6
13	1	2	3	4	5	6
14	1	2	3	4	5	6
15	1	2	3	4	5	6

Similarly, this diagram illustrates the way in which a four note pattern can be converted into grouping of six, by adding two beats of rest. Not playing the rests consecutively results in more possibilities becoming available.

## Observations

- I couldn't use the D Dorian voicings because of the "low D" tuning, but I did transpose them up a whole step! (Last two voicings of harmonic continuity).
- In the first page, all C major 7th chords are bracketed, chord symbols are simplified. Analyze and be aware of all chord tones and tensions in all voicings.
- In harmonic continuity, chord symbols are used only on "passing chords" (a little "artistic liberty") that were not included on page 68.
- Notice all C major 7th chords on pages 68 and 69. (Brackets are omitted on page 70). Notice all other major 7th chords on pages 68 and 69. (FM7, GM7, BbM7, DM7).
- It might be a good idea to write a melody for this harmonic continuity. Then, start improvising on the changes.
- Think of all the other tonalities that could have been used if I had been able to transpose the C Major 7th chord!
- The harmonic continuity is a very good study in four, five, and six part voicings. Study voice leading carefully.
- You might have to use a tape recorder to play all the notes in the voicings (or another guitarist; or a bass player).

## Uses of C major 7 b5

The image displays musical notation for various chord voicings, organized into three rows. Each row contains five chords with their names written above the notes. The notes are shown in a treble clef with stems and flags, and some are bracketed to indicate groupings.

**Row 1:**

- C Maj7(b5)
- D-7(b5)
- G7 Alt.
- C Lyd.
- A7 Alt.

**Row 2:**

- D7 <sup>9</sup>/<sub>13</sub>
- A-11
- D7
- B-7
- E7 (b9,13)

**Row 3:**

- F#-7(b5)
- F#-7(b5)
- B7 Sus 4
- E-
- A7

Ab7 Alt. Eb-7 Ab7 Alt. Db Maj.7 Bb7 Alt.

A- $\frac{6}{9}$  B-7(b5) E7 A- $\frac{6}{9}$  D7 Alt.

B7 Sus 4 (b9) F#-7(b5) B7 Sus.4 (b9) E-Maj.7 G13

- Step 1. Write three or more variations for each of the six uses (three or four per variation). Use the three voicings above for the three variations (or use others, if you prefer).
- Step 2. Write a progression using at least 75% of the material you came up with (add passing chords if you like).
- Step 3. Write a melody.
- Step 4. Write out changes and begin improvising.

Question:

Can you find six different Major (b5) chords in the previous harmonic continuity?

These two unassuming pages from Mick Goodrick's 'Advancing Guitarist' are where I was first exposed to this concept. I remember the mind blowing moment when the implications of this humble chord hit home. Thanks Mick.