M3 Jazz Guitar

Ralph Patt, 1955

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DRAFT: September 6, 2015

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Introduction

A few years ago, while running on a treadmill at the gym (don't read too much into this), I thought "Of course! Seven-string guitar tuned in major thirds! Same range as Spanish tuning, perfect symmetry, no B-string shift…It's perfect!" I found a cheap Ibanez solid-body on Craiglist and started investigating the possibilities.

When it finally occurred to me to fire up a Web browser and see if anyone else was working along these lines, I was immediately disabused of any notion of originality: in 1964, jazz guitarist Ralph Patt introduced the system, inspired by his studies with Gunther Schuller to devise a tuning that would make twelve-tone playing easier. (For details, check the terrific Wikipedia articles on Ralph Patt and major thirds tuning, and Ralph's web site.)

The system has its pros and cons, of course. I'm a jazz guy, so can't really speak to what it offers folk players, classical guitarists or rockers. I think it's probably fine for blues playing, though I don't think it confers any special advantages in that idiom.

Pros of M3 Tuning

- Symmetry: There's no B string shift, so there's only one fingering for a scale or chord, regardless of string set. For any given note, its octave can be found four strings away, on the same fret.
- Half-steps between adjacent strings are available without stretching, enabling rich jazz chords without strain.
- Chromatic scale in position (no stretch or shift), so more note choices are available with fewer shifts.
- Close voicings are easy, as are five- and six-note chords using barre and open strings
- It's great for jazz: I find that lines tend to skew diagonally up and across the neck. It seems to me that you run out of guitar less frequently, and it's easier to play long lines without going down some positional rat-hole that requires a sudden and awkward shift.

Finally, my experience is that the things my hands learn from playing M3 guitar seem to make them smarter when playing a conventionally tuned guitar. The training makes them willing to do things that we don't usually require of them.

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Cons of M3 Tuning

- Wide barres are frequently required.
- More string skipping and rolling is required.
- Weird custom string sets required.
- Lost at sea: Because of the symmetry, it seems to me a bit harder to lock into the location of notes on the fret board. Somehow the asymmetry of Spanish tuning makes it more navigable earlier on. This is surmountable.
- No commercial potential: no one is going to call around seeking an M3 guitarist (though apparently Ralph Patt was a successful studio player. Of course, that was then, and this isn't.)

Equipment

Guitars

Any decent seven-string will work without alteration, and this is a golden age for decent mass-produced guitars. Besides the aforementioned cheapo Ibanez, I bought a lovely Dale Unger archtop. It arrived strung for low A tuning. I restrung it as described below and it sounded fine, no adjustment to the nut required. So that's the good news.

String Sets

The bad news is that, to achieve a decent balance, you're going to have to use a custom string set. Online, Curt Mangan can provide custom string sets, but does not offer flat-wound strings. I used a custom set from him with round-wound strings on the bottom, but have come to the conclusion that it's not the right sonority for my archtop, but if you like round-wounds, he's the man.
You can order individual D'Addario flatwounds online. Here's what I'm using now:

String	Archtop	Solid Body
E	12 plain	10 plain
C	15 plain	13 plain
G#	20 plain	16 plain
E	28 flat	22 wound
C	35 flat	30 wound
G#	45 flat	38 wound
E	52 flat	46 wound

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Resources

www.curtmangan.com: Custom string sets, great customer service

www.ralphpatt.com: The basics and some history. An essential resource.

http://rudiseitz.com/category/music-2/guitar-music/

Neck Diagrams application for Mac: I used this simple, elegant application for the chord diagrams in this book. You can devise custom tunings easily, it's quite usable, reasonably priced, and the developer is very responsive and open to suggestions.

Sibelius notation software (7.5): What I've always used. It seems to be in maintenance mode now, and Sibelius 7 was not well received by the user base, but with a little research I was able to do all the notation required for this weird project, which speaks well for its breadth of features. I have no idea if Finale is equally capable; it wouldn't surprise me if it is.

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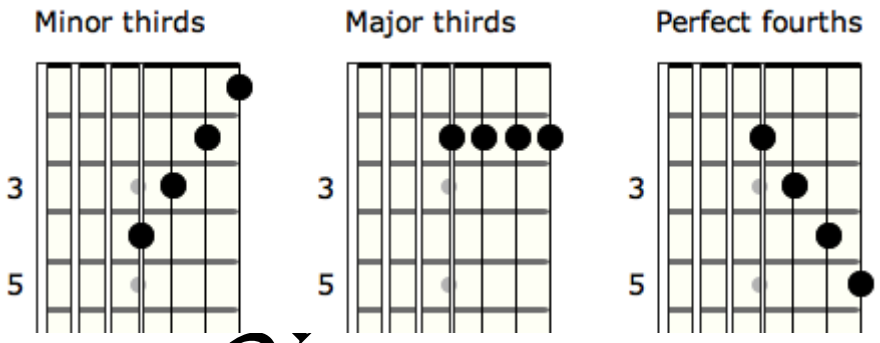
Single Lines

Because of the symmetry of M3 tuning, there's no big need to practice a pattern in all keys. To ensure that I get the experience of playing in all keys, I work on one key a day, progressing through the keys using the cycle of fifths. However, because M3 tuning provides a chromatic scale in position (that is, without stretching or shifting), there's a lot to be gained from practicing the same pattern starting on every finger, if the pattern permits. If I've presented only a descending form, play it ascending too.

There are tons of exercises that are endemic to practicing jazz. In this book, I've tried to include only patterns that illustrate some advantage of the M3 tuning, which meant omitting some that I think are cool but aren't endemic to or easier in M3 tuning.

Besides exercises, I find it really helpful to practice soloing in position, without shifting. This approach is a quick way to educate your hand to find the note you're hearing in your head, and it brings to light the different moves you need to learn to make to function on an M3 neck.

Notable symmetries:



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Symmetrical Diminished Patterns

The half-step/whole step symmetrical diminished scale is a common one in modern jazz, useful over both altered dominant 7th chords and diminished 7th chords.

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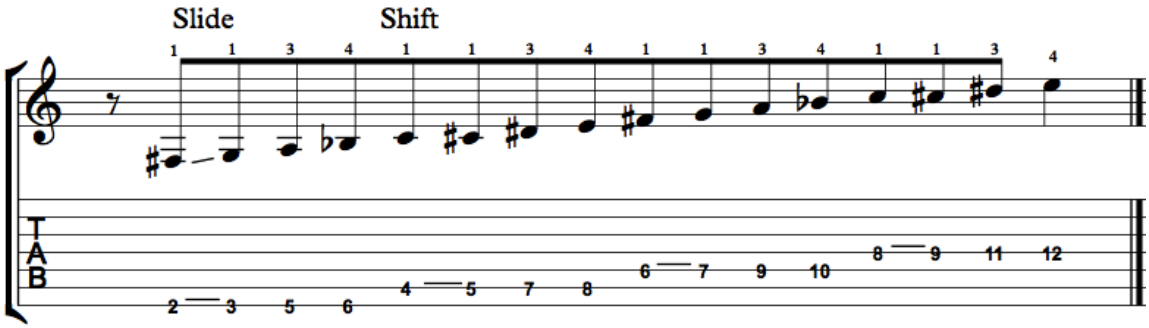
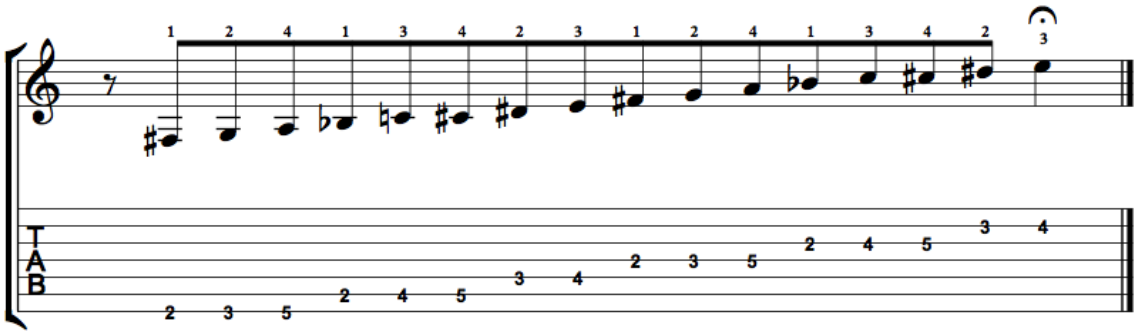
Exercise 1.

Here's a fingering that skews nicely up and across the fret board. It requires a first-finger slide plus a string and position shift every four notes, but feels pretty natural.



Here's an in-position fingering for the scale:



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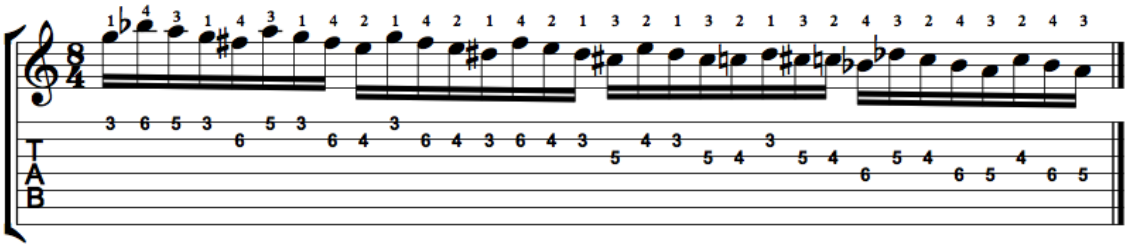
Exercise 2.

Practice this scale using various contours in position.



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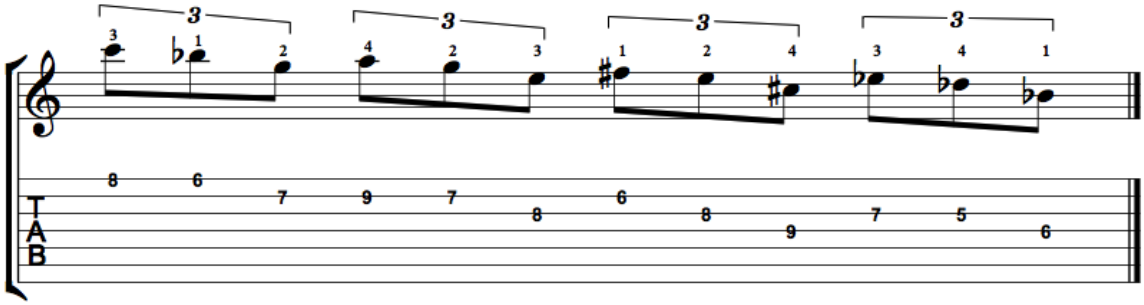
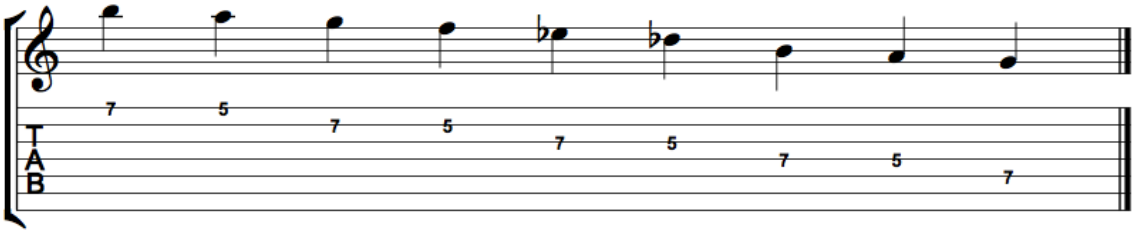
Exercise 3.

The following example is fingered starting on 3. Practice starting on 1, 2 and 4, adjusting the string set as required.



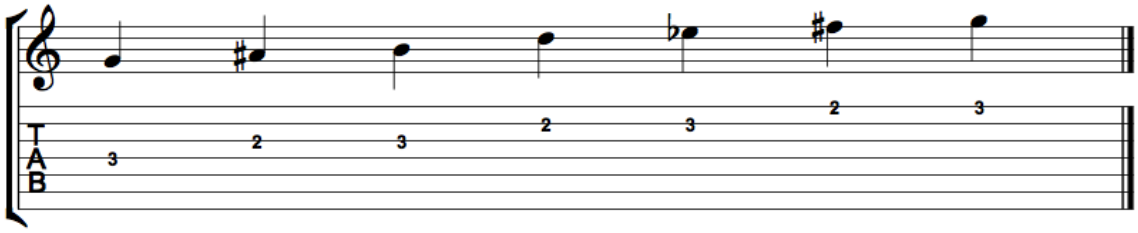
Whole Tone and Augmented Scales

These sonorities are native to M3 tuning. Both whole tone scales are available in position, two notes per string fingered 1 +3 or 2 + 4:

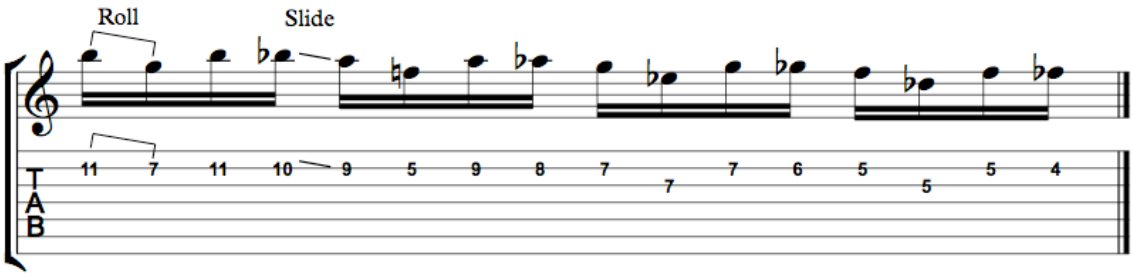


Whole tone scales yield wonderful Monkish lines – try them with hammer-ons in ascending runs and pull-offs in descending runs.

The augmented scale is a gapped symmetrical scale composed of a minor third followed by a half step, which lays perfectly in position, fingered 1-4 across the strings:



The following whole tone scale in thirds is a good way to practice rolling. Practice with each finger.



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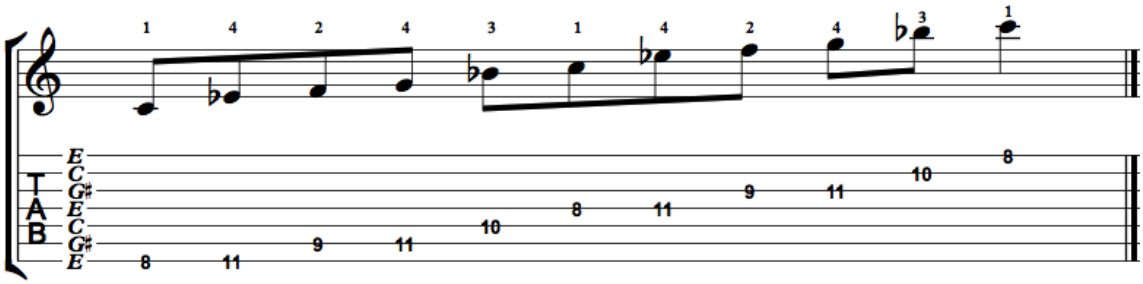
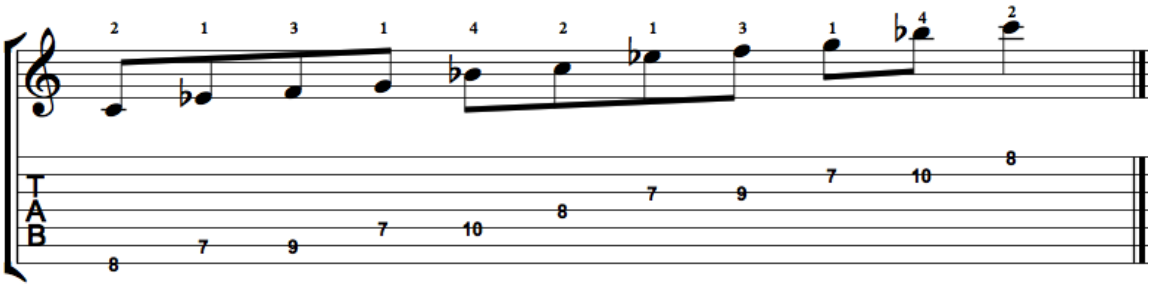
Pentatonic

In M3 tuning, there are four in-position fingerings for the pentatonic scale, one for each starting finger. There's more string skipping, because in Spanish tuning you can count on two notes per string, which is not the case for M3. Following are the four in-position pentatonic fingerings.

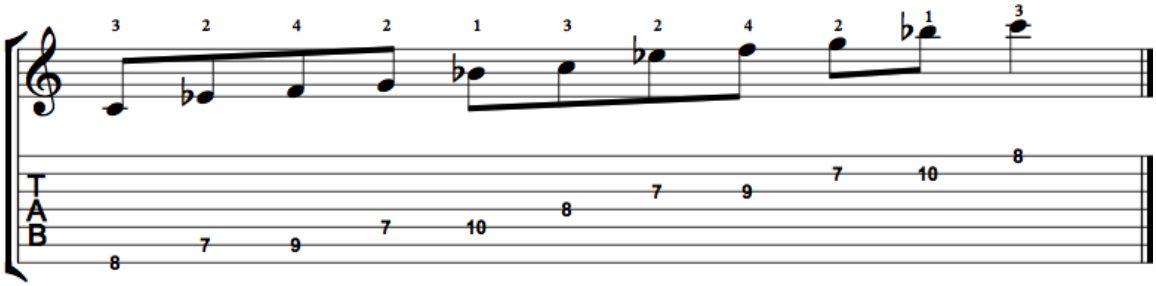
Starting on 1:



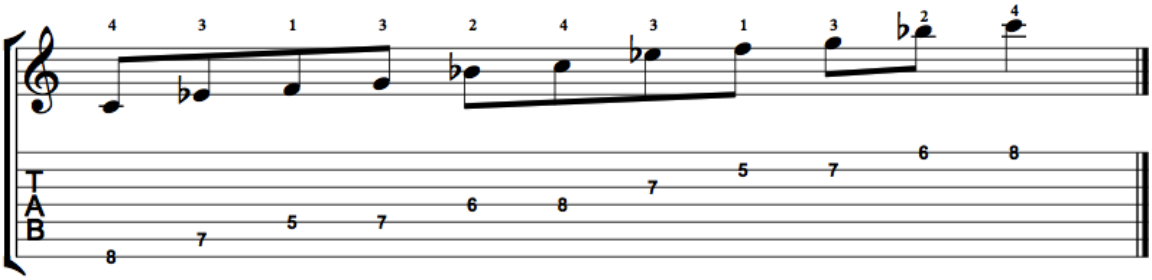
Starting on 2:



Starting on 3:

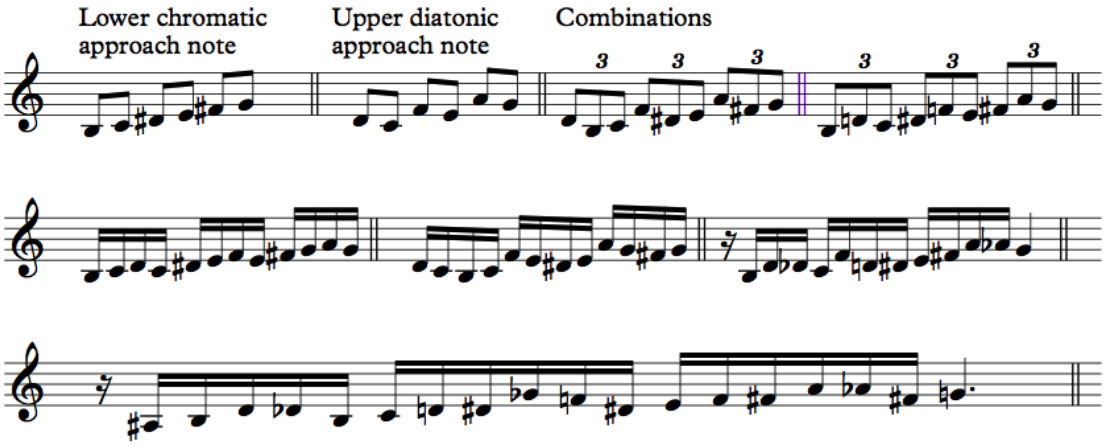


Starting on 4:



Approach Notes

A lot of bebop and swing lines are based on arpeggios and approach notes. At Berklee in the 1970s, we learned this material by transcribing and by practicing the exercises in Joe Viola's book *Technique of the Saxophone - Volume 2: Chord Studies*, still available from Berklee Press. Following are some approach note patterns, best studied, I think, in conjunction with the arpeggios on which they're based. Here are the combinations I practice on triads. I've written them out for major triads. Adapting them to other triads and seventh chords is left as an exercise for the reader.



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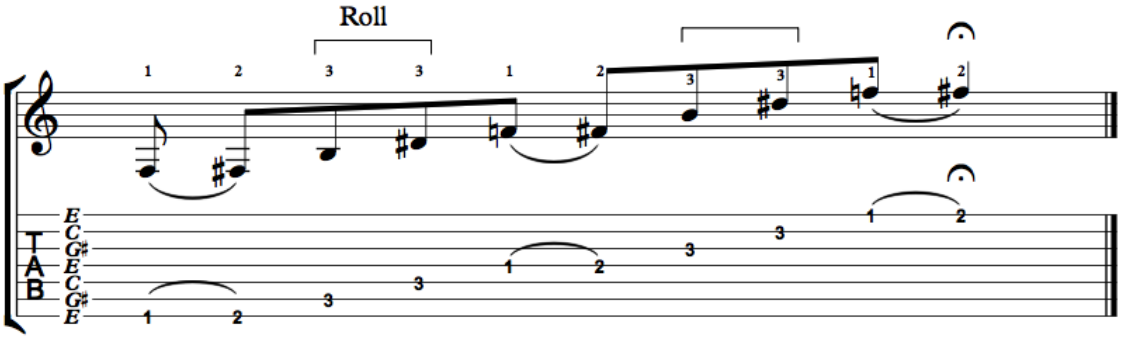
Exercise 4.

A B triad with an approach note to the fifth, which provides a nice Lydian sound.



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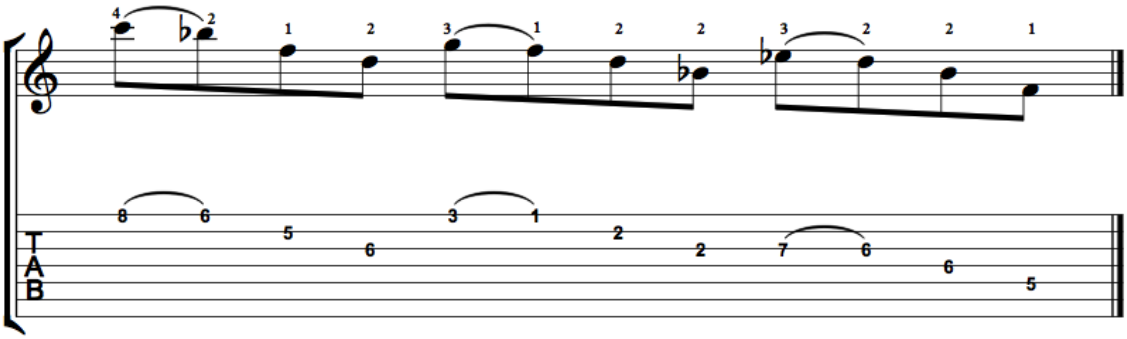
Exercise 5.

Bb triad descending, with approach notes from above. A nice sound, not all that common.



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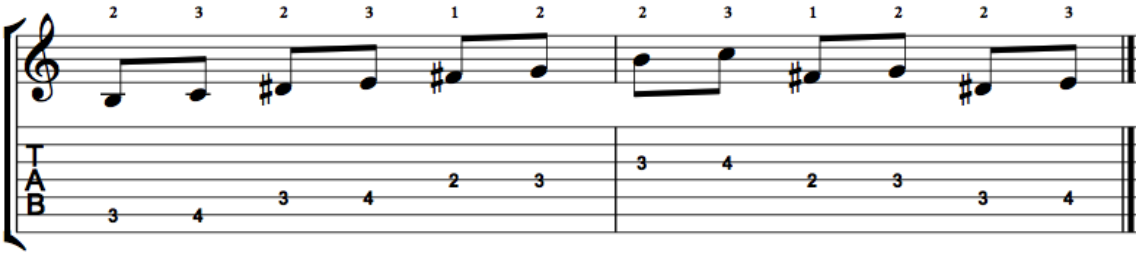
Exercise 6.

C triad with approach notes from below, all in position. On the beat:



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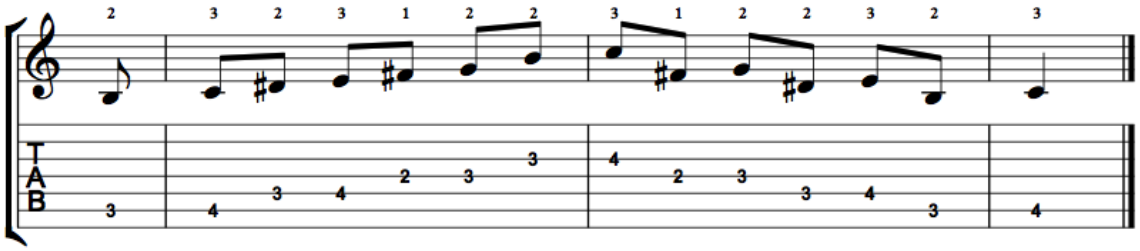
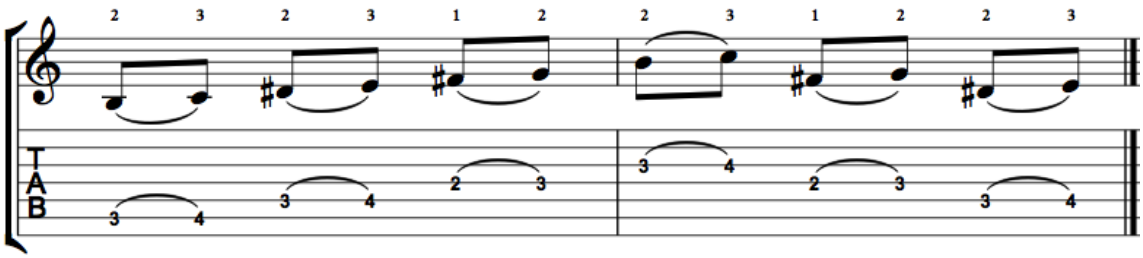
…and off the beat, which places the chord tones on the beat:



Also practice slurring into the chord tones:



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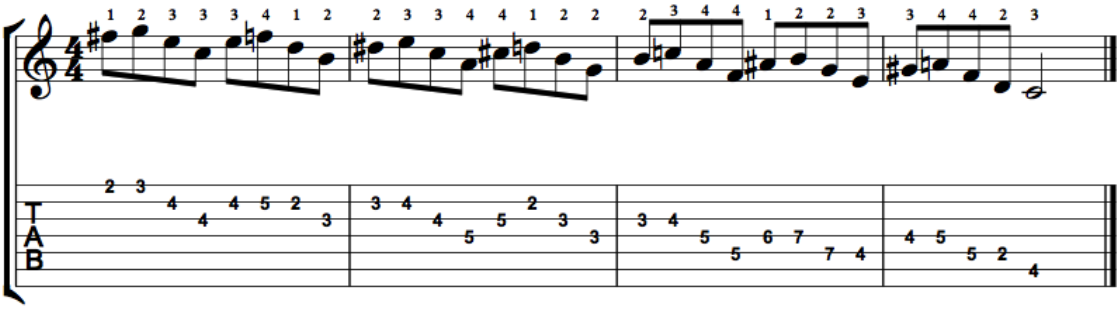
Exercise 7.

Diatonic triads with approach notes, in position. In reality, you probably wouldn't finger such a line as it is fingered below – it sounds more natural when the approach note and target chord tone are on the same string. It is a great way to begin to see the key in position, though.



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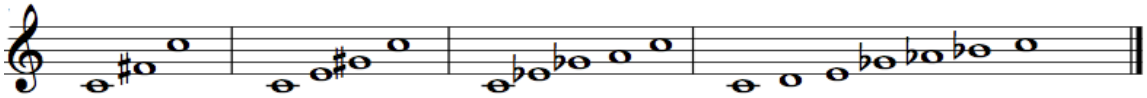
Intervallic Exercises and Patterns

A lot of modern jazz uses patterns and harmonic movement based on symmetrical divisions of the octave, a la Slonimsky:



Patterns based on these symmetrical divisions cycle out of a key and back in, passing through remote keys in the process. It's a great way to "take it out," because even though no traditional harmonic progression underlies the resulting line, there's a strong musical logic that the ear can readily accept. The general approach is to take a group of notes and transpose it through such a cycle. M3 guitar is beautifully suited to this kind of playing, due to its innate symmetry. I refer the interested reader to the *Thesaurus of Scales and Melodic Patterns* by Nicolas Slonimsky and improvisation books by Gerry Bergonzi for detailed information, and to the music of Coltrane, McCoy Tyner and Woody Shaw to hear it in action.

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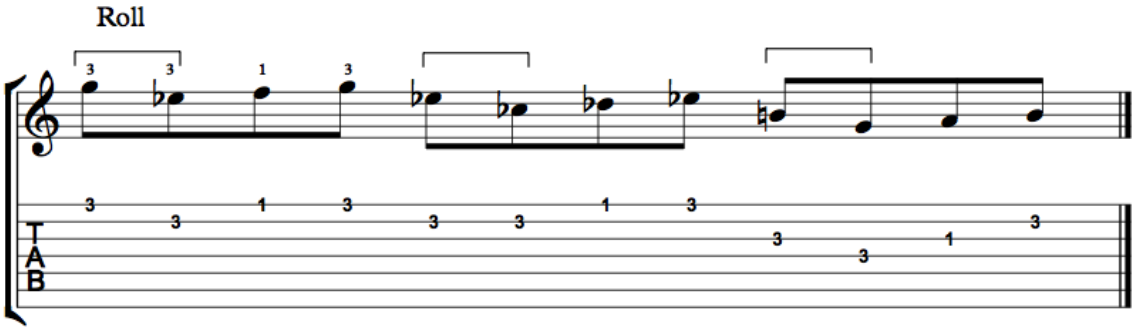
Exercise 8.

The following exercise takes advantage of the whole tone scale that is innate in the M3 tuning. It requires you to roll the starting finger to the adjacent string. Practice it starting with your ring finger (3), then your little finger (4).



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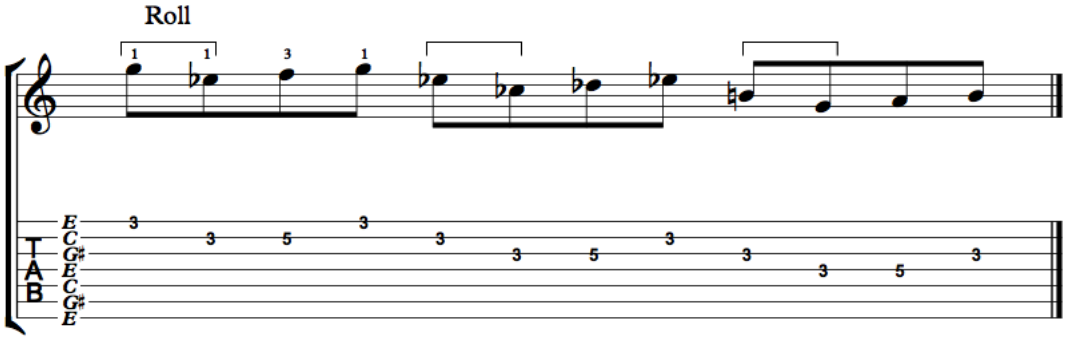
Here's an alternative contour, placing the third note one fret up on the lower string rather than one fret down on the higher one. Practice starting it on your index finger (1) and on your second finger (2).



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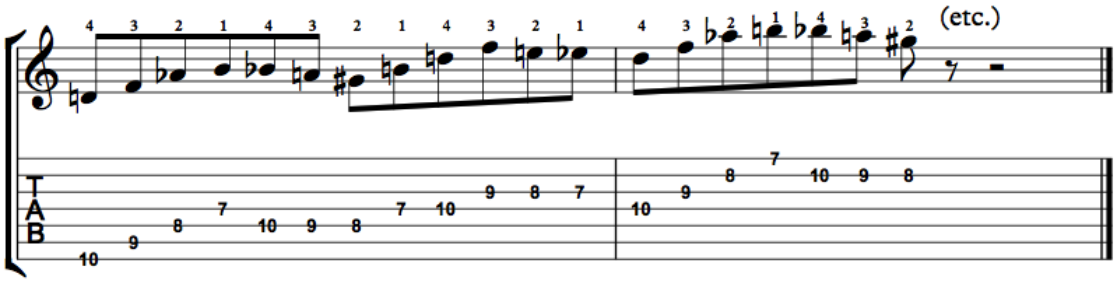
Exercise 9.

The following exercise illustrates the beautiful natural contour of diminished patterns in M3 tuning. It's basically an altered dominant line that bridges Bb7 and E7. Notice how the second bar is identical to the first in fingering and fretting, simply shifted three strings up. Again, practice it starting on each finger and see how that changes the string crossings required.



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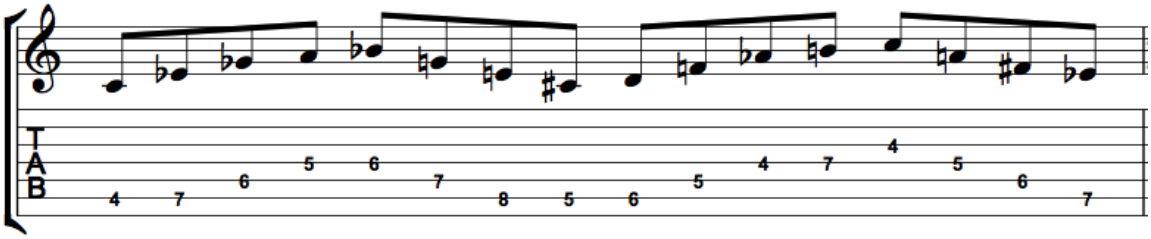
Exercise 10.

Here's an exercise for remaining in position: chromatically ascending diminished seventh arpeggios. Patterns like this are terrific for learning to take advantage of one of the key strengths of M3 tuning, the availability of all chromatics without shifting.



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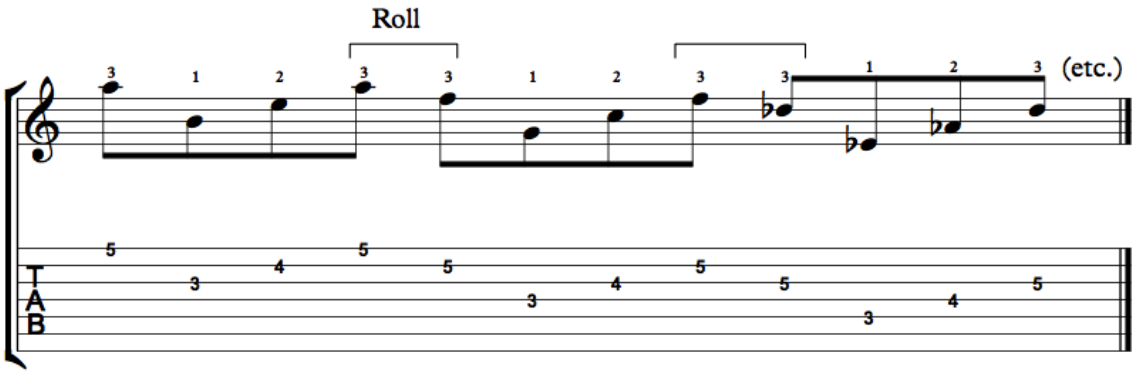
Exercise 11.

Perfect fourths in major thirds. Again, note the beautiful symmetry. A pattern like this on Spanish-tuned guitar is made much more complicated by the B string shift, whereas on M3 guitar it's a contour that's gratifying to the fingers. The pattern progresses in thirds, so the fourth iteration brings you back to the original key.



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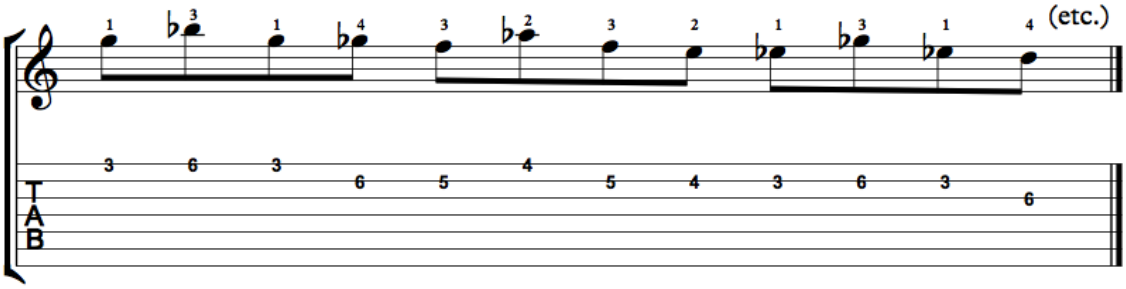
Exercise 12.

Minor thirds moving in major seconds.



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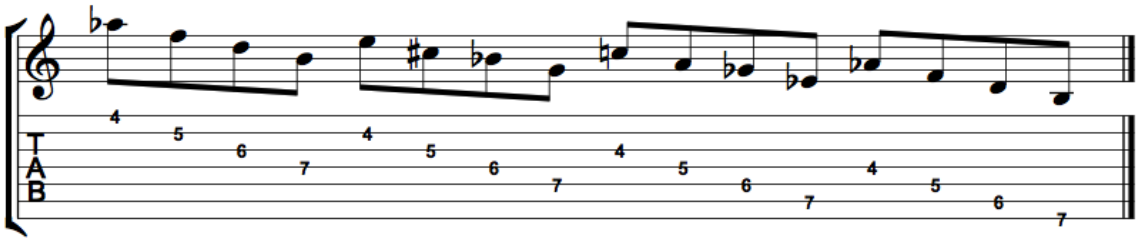
Exercise 13.

This pattern is a set of diminished seventh chords played in descending major thirds, but it's also a cycle V pattern that you could play over a progression like G7 / C7 / F7 / Bb7, for example. Try reversing the contour (start on the bottom note) and try permuting the notes in the group to generate different shapes. For any group of three notes, there are eight permutations, and for a group of four notes, sixteen.



Note: Most jazz players know that you can use diminished sevenths descending in half-steps over cycle V dominants. You can also use them *ascending* in whole steps. The same chords result, but this approach generates different contours and sounds a little more abstract and less obvious (at least, to me). Similarly, augmented triads in descending or ascending half-steps can be used over cycle V dominants. On M3 guitar, simply barring three adjacent strings gets you an augmented triad. It's not the most graceful fingering, though it lends itself to hybrid picking (pick plus fingers).

Trane Patterns in Position

A great way to get fluent at finding notes in position is to practice Coltrane-style 1 2 3 5 patterns and permutations. Gerry Bergonzi goes into detail in his books, but here's the essence: practice all the permutations of these notes through the transpositions generated by the equal divisions of the octave.

Permutations of 1235

1235	2134	3125	5123
1253	2143	3152	5132
1325	2341	3251	5213
1352	2314	3215	5231
1523	2314	3512	5312
1532	2341	3521	5321

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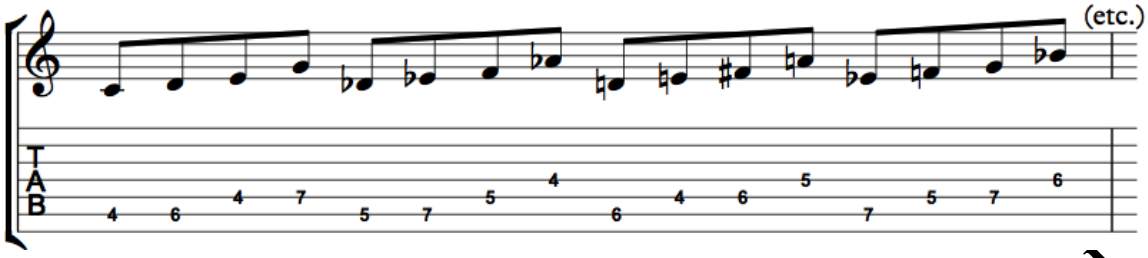
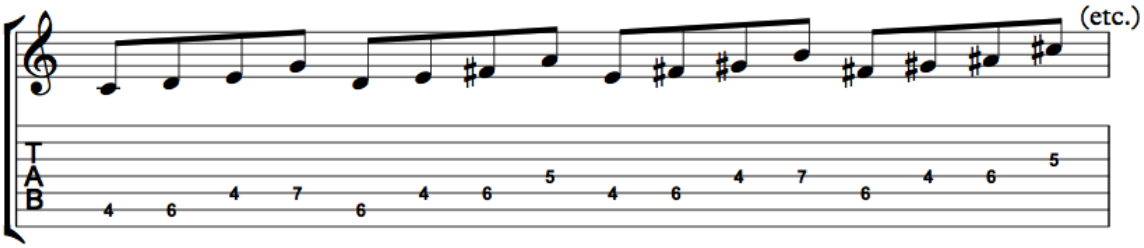
This method generates exercises like the following (1235 ascending chromatically):



…and this (1235 ascending in major seconds):



Continue through minor thirds, major thirds, and tritones. Start on every finger. It might seems like a lot of material to wade through, but it's very effective at teaching your fingers where the notes are and in relaxing into playing in position and it's musically useful material.

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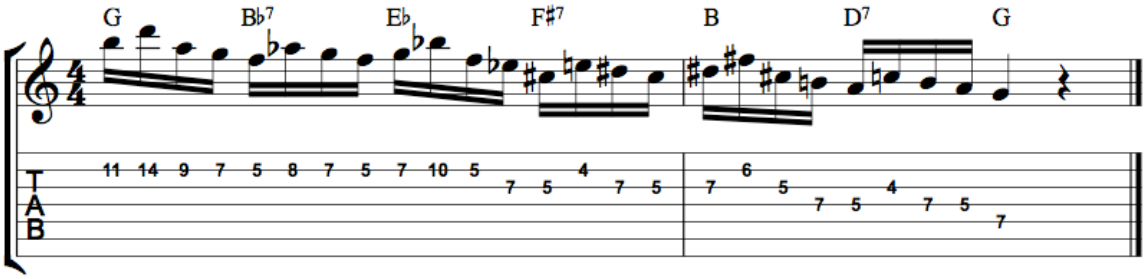
Exercise 14.

Here's a sequence based on Giant Steps. Again, fearful symmetry.



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Other Patterns

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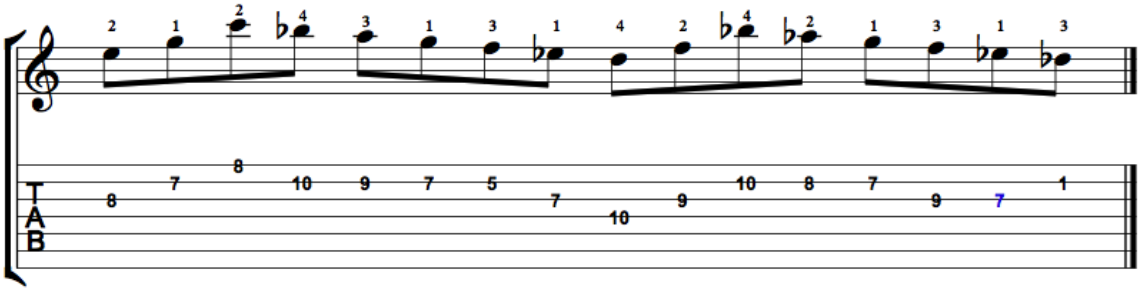
Exercise 15.

Cycle V dominants in position. Be sure to practice it starting on the other fingers. In some cases you'll have to skip strings to remain in position, but this is a great exercise for developing the ability to see what's available to you without shifting.



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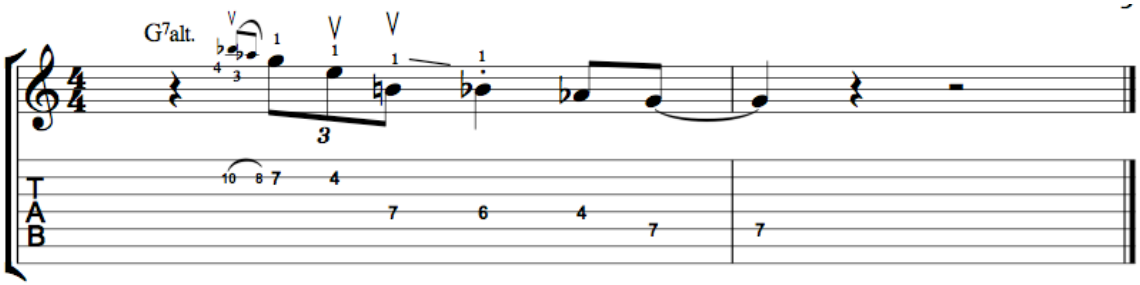
Exercise 16.

Pulloffs and sweep



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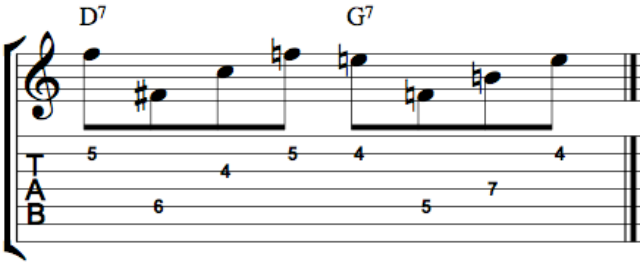
Exercise 17.

Down in half-steps for cycle V progressions of dominant 7 chords.



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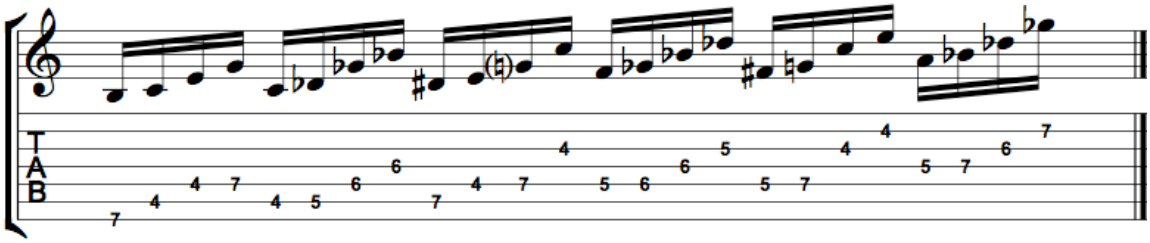
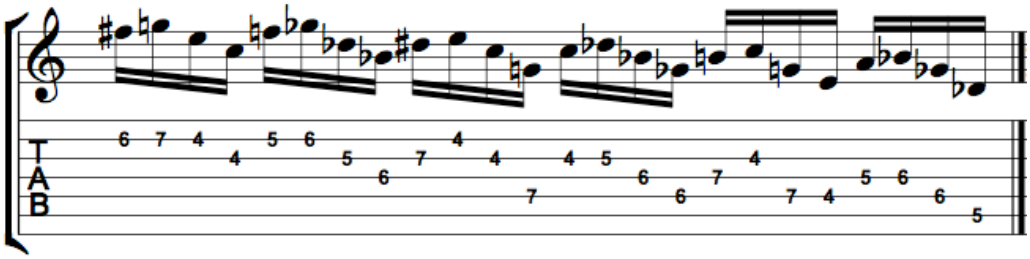
Exercise 18.

Triads in tritones, all inversions, with chromatic approach into first note on the beat.
Ascending:



…and descending:



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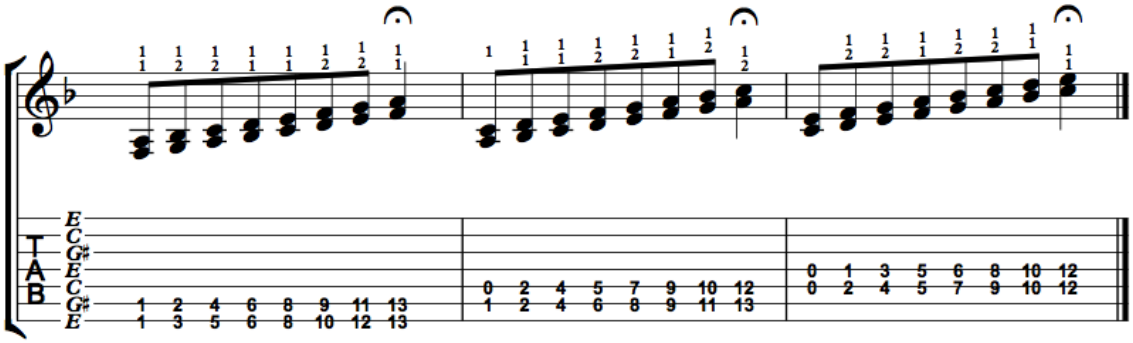
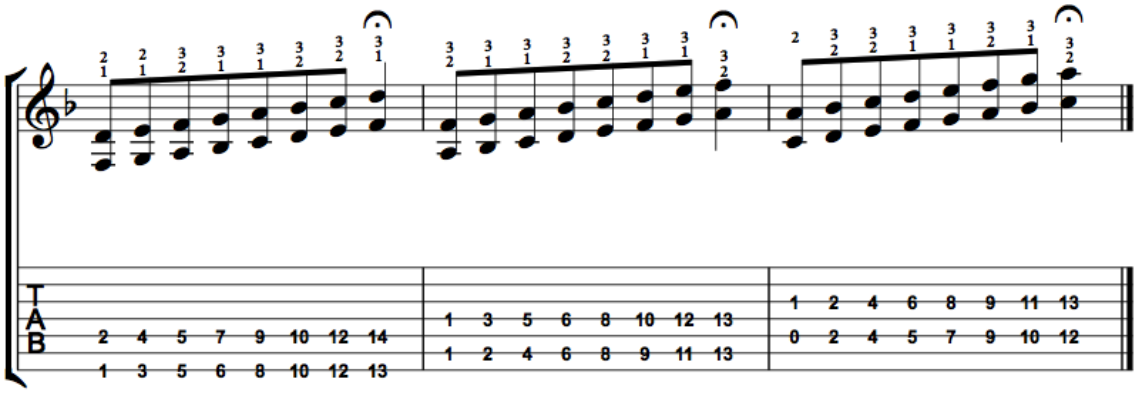
Intervals

I think it's essential to practice diatonic thirds, sixths and tenths in M3 tuning. It helps you to learn how the keys reside on the fret board and it's musically useful material. It's also a good prelude to practicing diatonic triads. In the following exercises, I omit the higher string sets because the fingerings simply repeat those from the octave below.

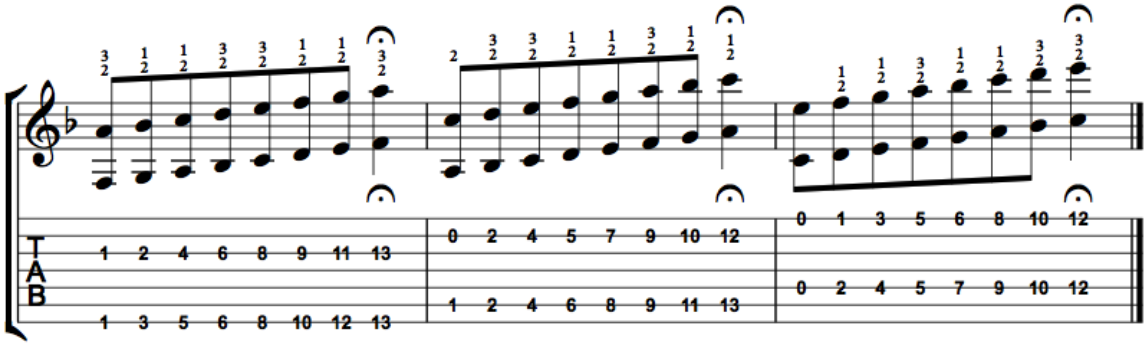
Diatonic thirds: To finger the major thirds, I use a two-string barre (1 or often 3). For the minor thirds, I use 2 on the bottom string and 1 on the top.



Diatonic sixths: For the top note, I always use 3. For the bottom note of major sixths, I use 2, and for the bottom note of minor sixths, I use 3.



Diatonic tenths: For the bottom note, I always use 2. For the top note of major tenths, I use 3, and for the top note of minor tenths, I use 1.



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Chords

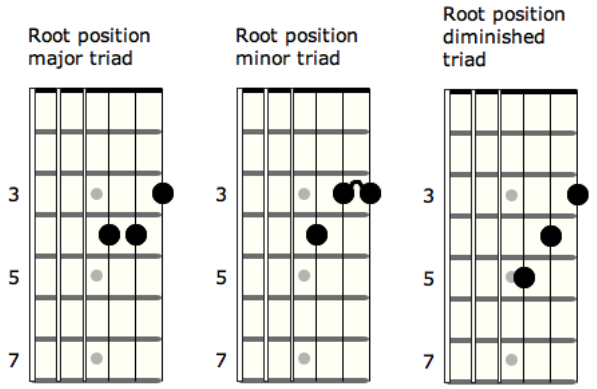
One of the beauties of chords in the M3 tuning is the fact that, unlike Spanish tuning, there's only one fingering for any voicing, regardless of string set. In the following sections, I provide useful voicings. Ralph Patt's web site has some good basic material along these lines too.

Diatonic Triads

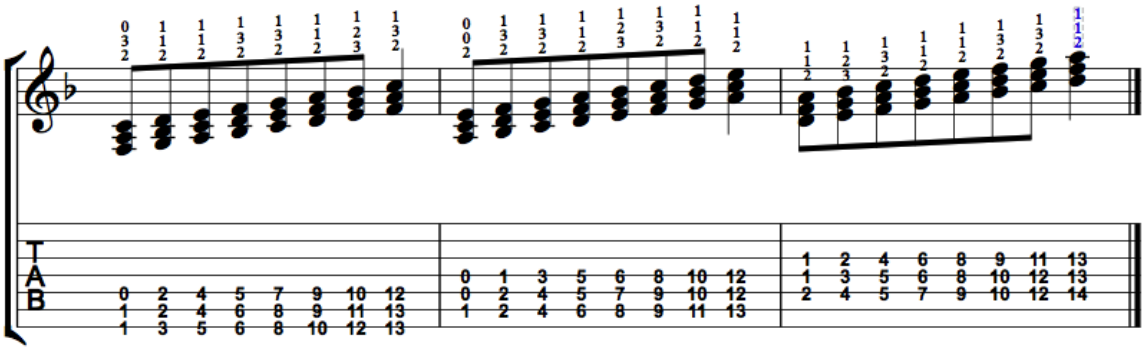
I consider this material essential for fluency in the M3 system, and practice close-position triads in all three inversions as follows. For an open-position triad, simply drop the middle note down an octave.

Root Position Diatonic Triads

Here are the shapes for root position diatonic triads.



…and here they are on the first three string sets, in the key of F. The shapes repeat on the higher string sets, of course.



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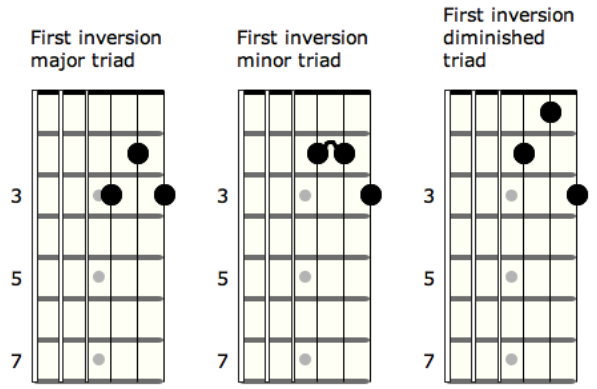
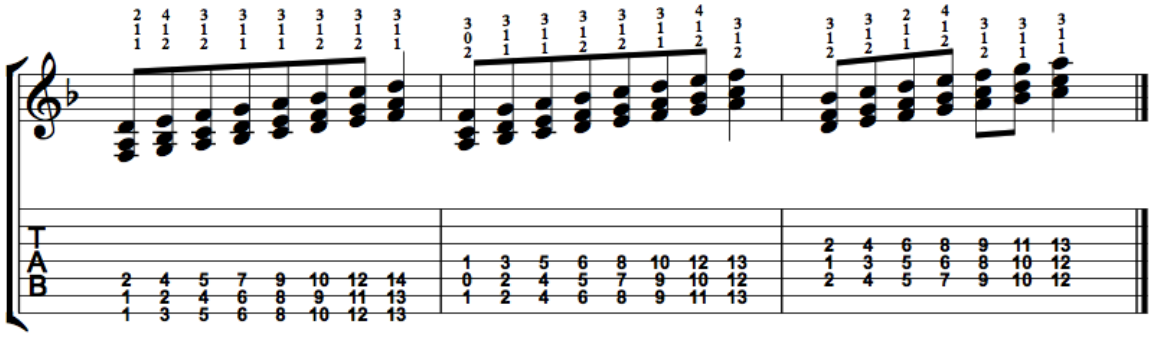
First Inversion Diatonic Triads

Here are the shapes for first-inversion triads:

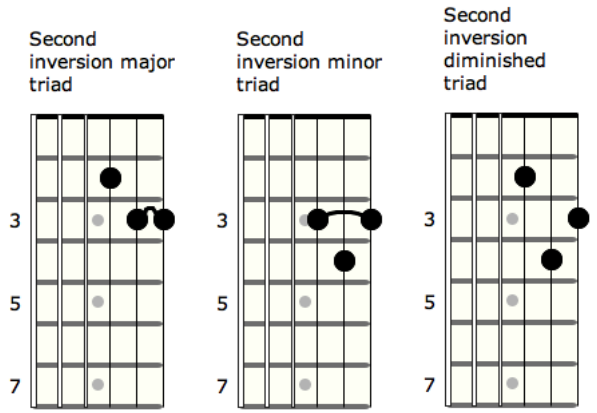


And here are the triads played diatonically in the key of F.

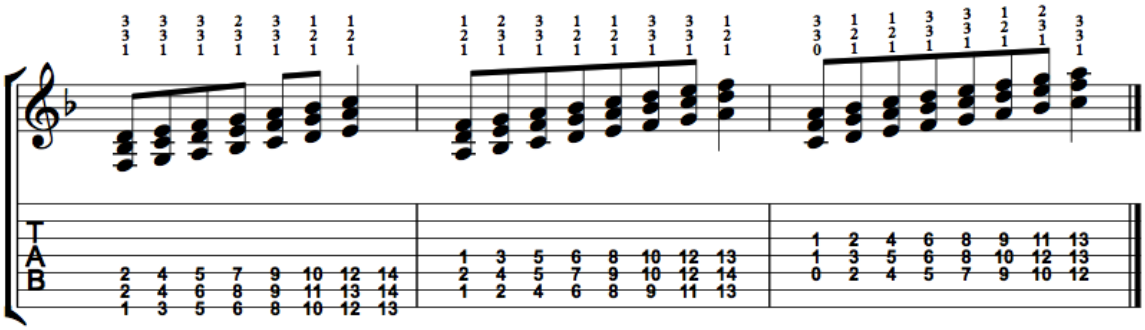


Second Inversion Diatonic Triads

Here are the shapes for second-inversion triads:

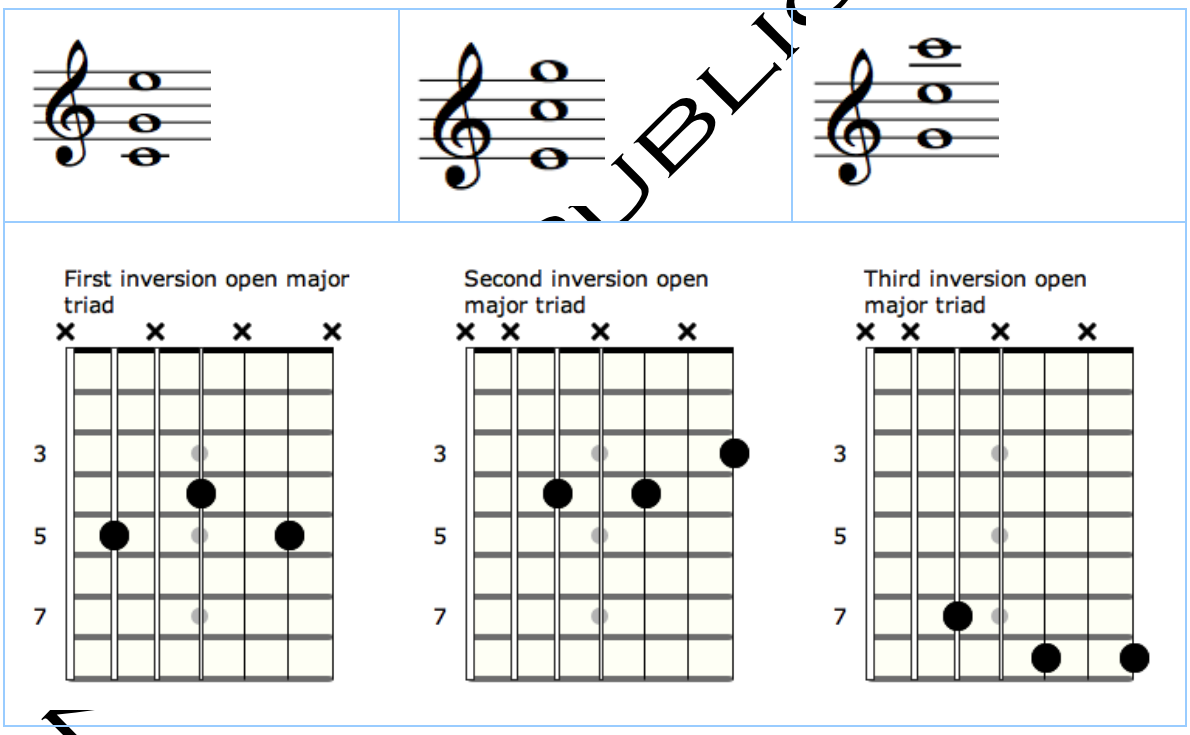


And here are the triads played diatonically in the key of F.



Open Triads

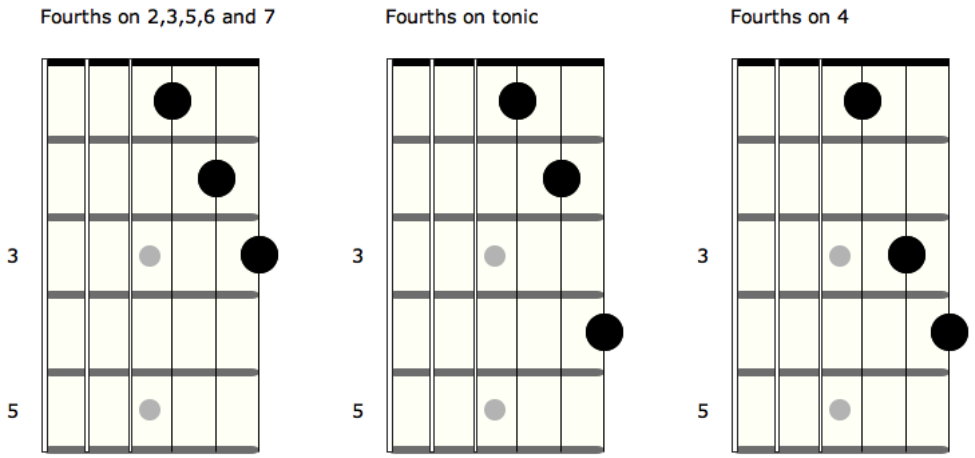
By "open" triads, I mean the voicing you obtain when you transpose the middle note of a close position voicing up or down an octave. Open triads are useful, airy and less obvious than close position. M3 makes it easy to open a triad voicing, and they lay comfortably for the hand. Following are open major triads.



Diatonic Voicings in Fourths

These sonorities are useful in jazz. I've provided the three-note forms. The diatonic four-note voicings, all of which are easy in Spanish tuning, include two voicings that are stretchy in M3: the voicings that start on the tonic and on the fourth degree of the scale. Both these voicings include the tritone, which renders them uncomfortably wide for most hands.

Following are the three shapes required to play close-position voicings in fourths:



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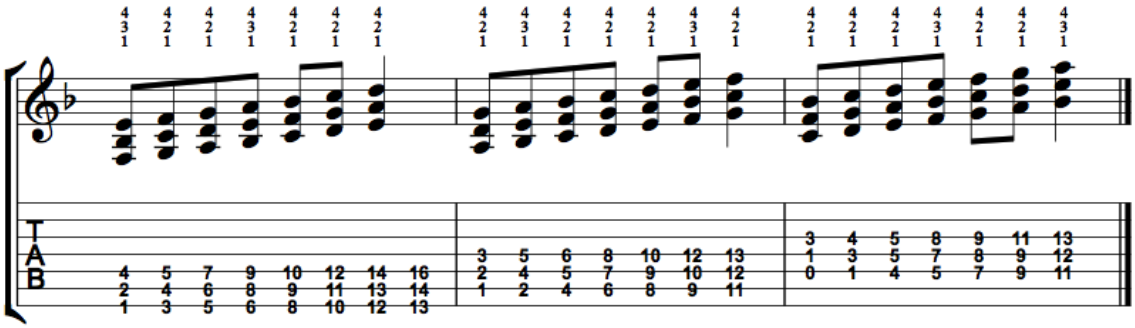
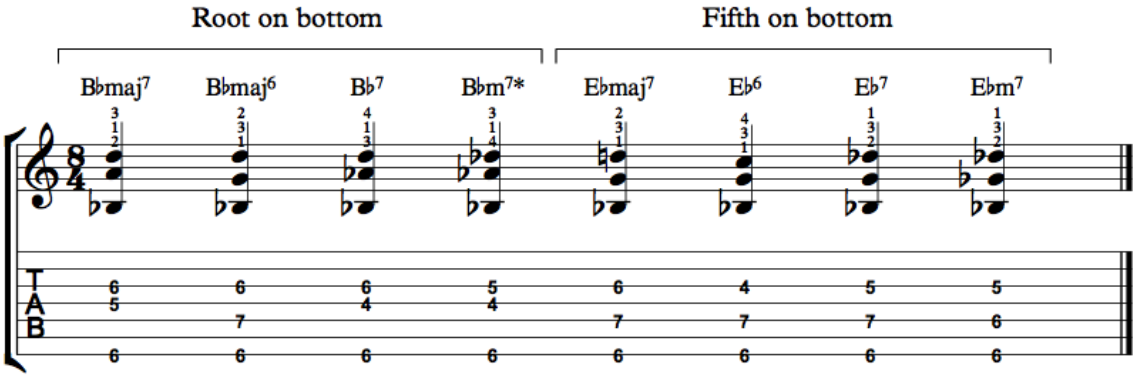
Here are close-position voicings in fourths in the key of F on the first three string sets.



Shell Voicings

By "shell" voicings, I mean the Freddie Greene-style chords (the third and seventh plus root or fifth) that are so essential to comping for jazz guitarists. Shell voicings lay better in Spanish tuning but are eminently achievable in M3 tuning:



* **This fingering is a little less natural than 2/1/4 but enables you to move the index finger down to G, if the next chord is the related dominant.**

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Rich Chords

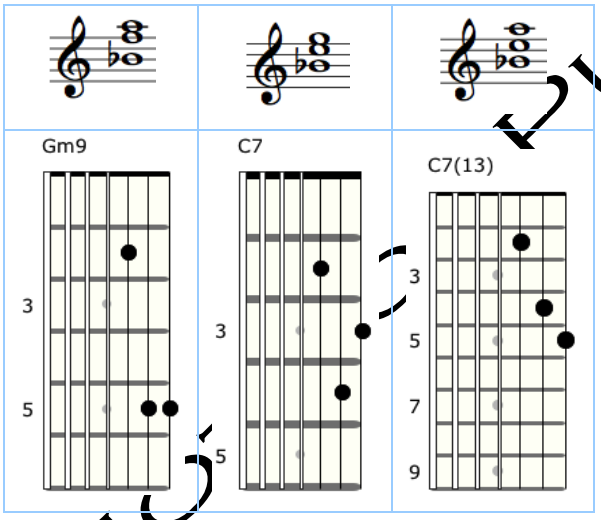
A big part of playing jazz guitar (or any chordal instrument) is understanding how a particular voicing might be applied to several different chords symbols. Typical chord reuses:

- **Dim 7 for Dom7b9**
- **Min7b5 for Dom 9th and min6**
- **Min7 for Dom7(sus4)**
- **Augmented triad for minor(maj 7) and maj7#5**
- **Dom7(#11) for Dom7(b13) a tritone away (Bb7#11 for E7b13 or vice versa)**

I've categorized the following voicings as best I can, according to the primary sonority that I hear, but most of them have at least one alternative usage, and many have more.

One of the big advantages of M3 tuning is the panoply of rich voicings that are readily available. Close-position voicings are easier than in Spanish tuning (less stretching required), and when you thrown in an extra string and open strings in thirds, there are lots of possibilities. Following are voicings that I find useful and beautiful.

Three-Note Voicings



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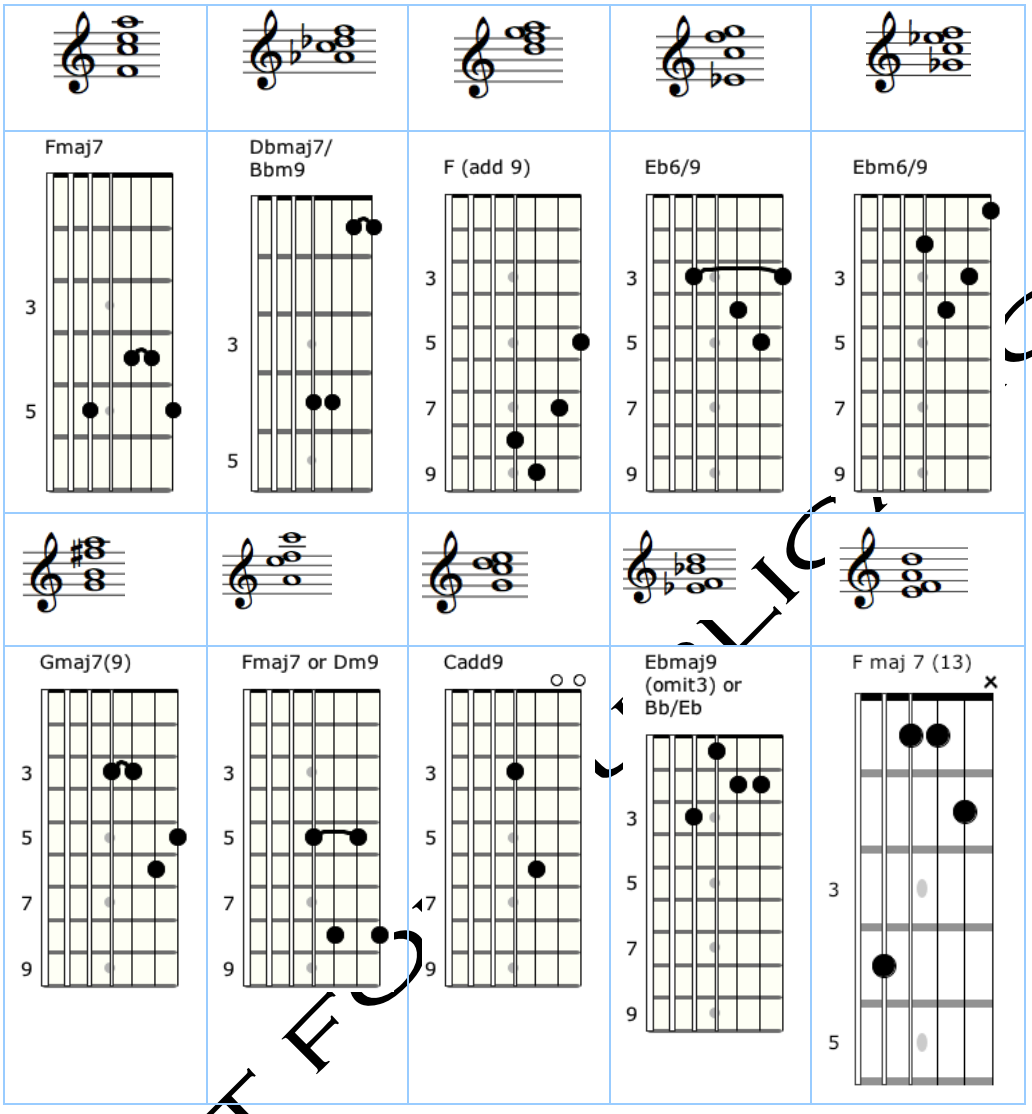
Four-Note Voicings

Major/Maj7



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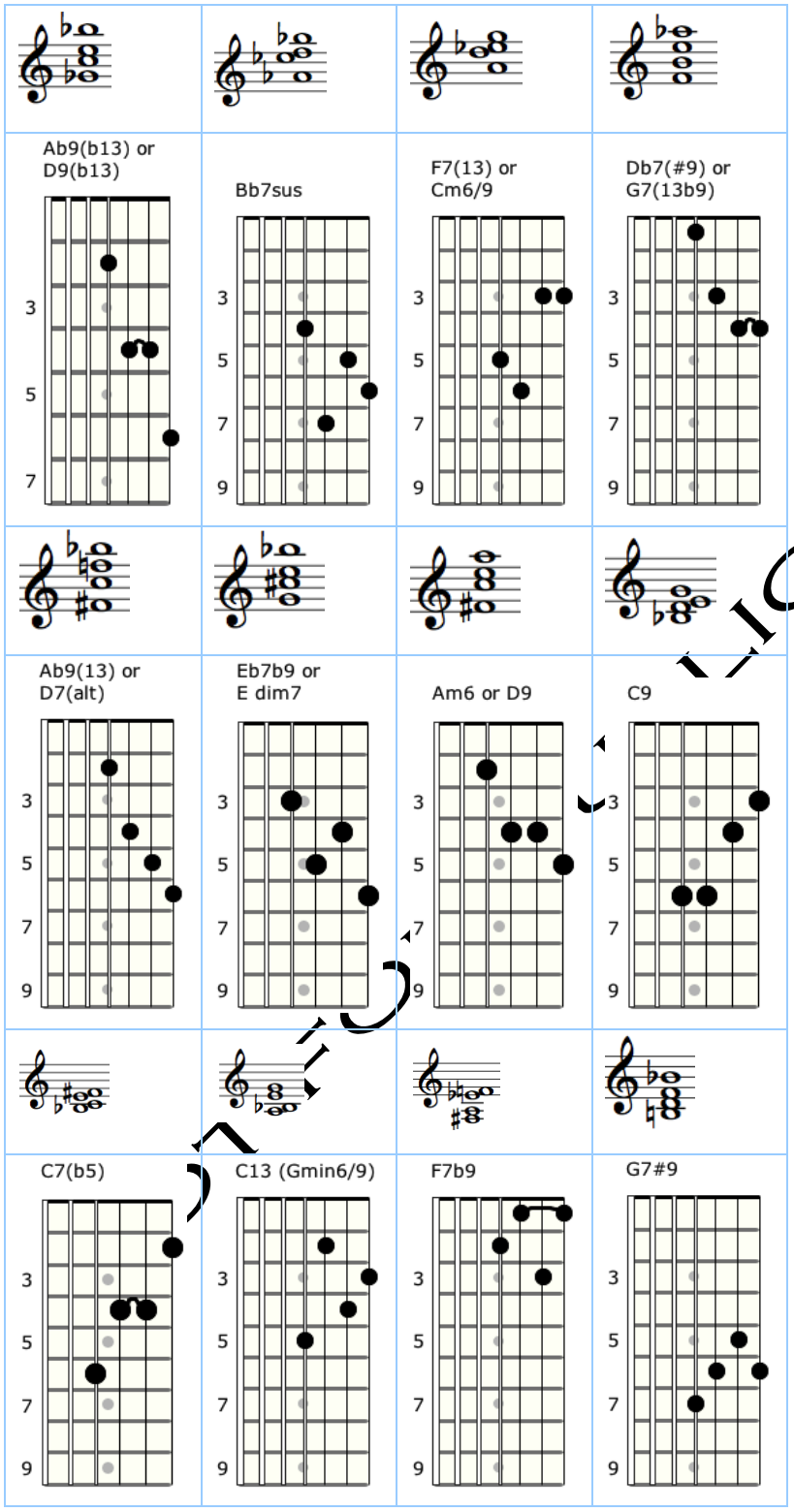
Dom7



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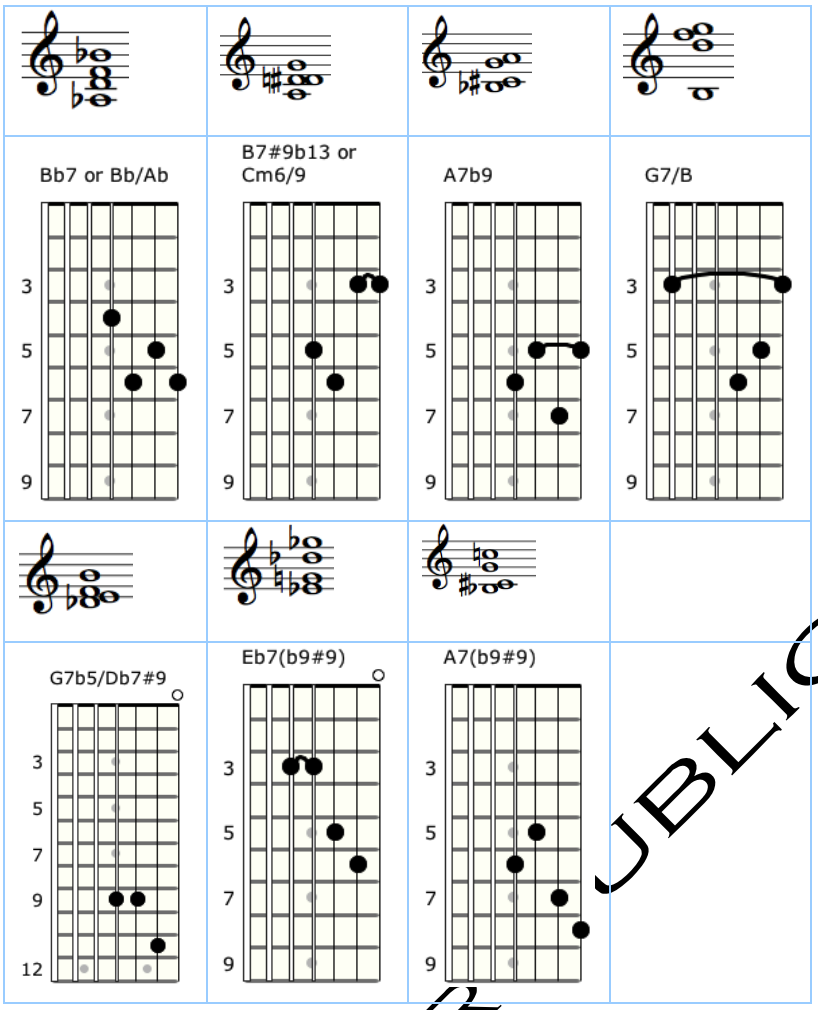
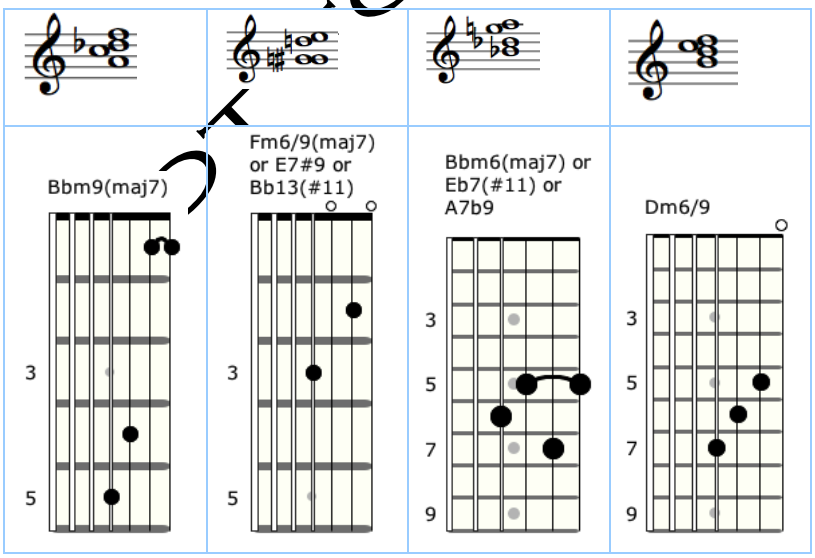


Minor (Tonic)



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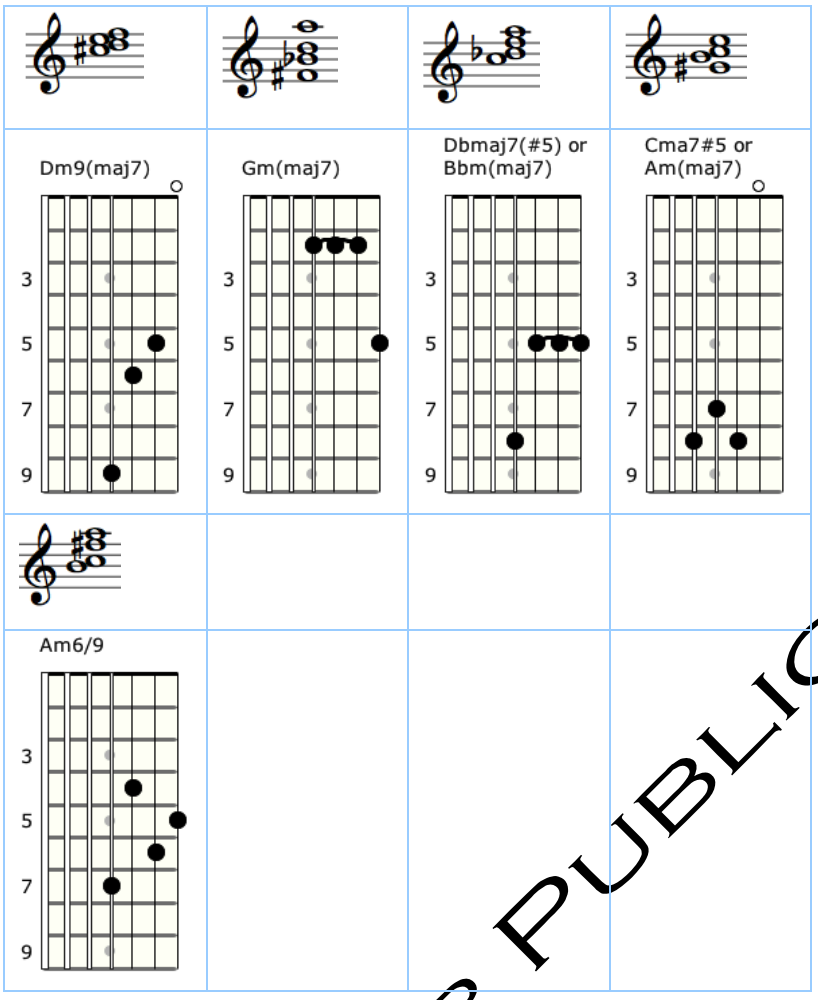

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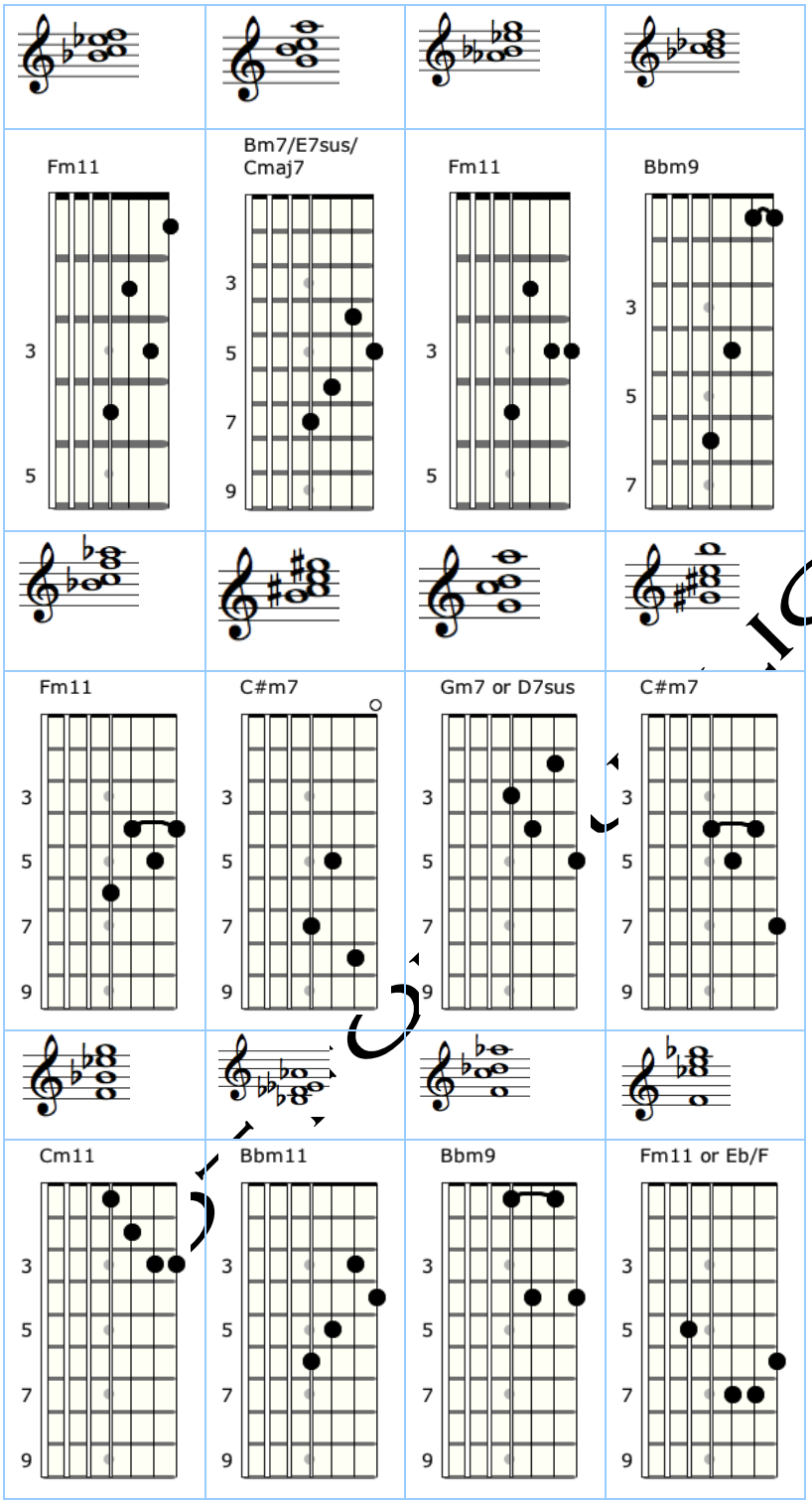
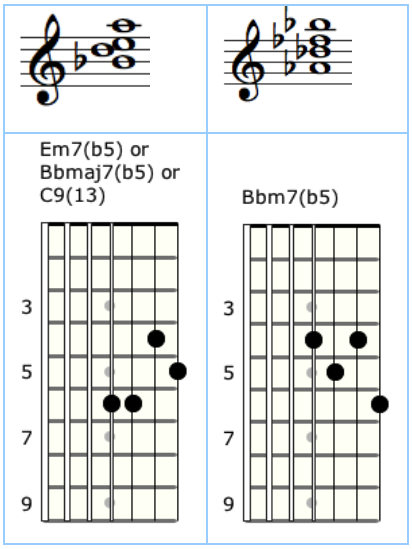
Minor 7

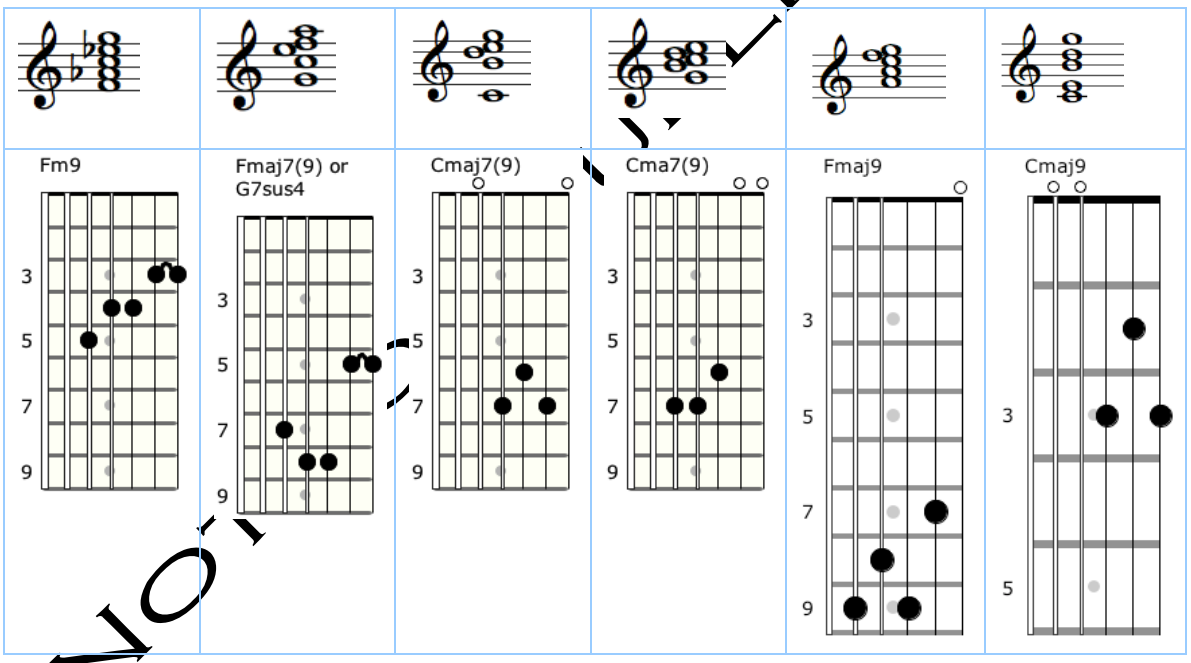

Fm11
Bm7/E7sus/
Cmaj7
Fm11
Bbm9
Fm11
C#m7
Gm7 or D7sus
C#m7
Cm11
Bbm11
Bbm9
Fm11 or Eb/F

Min7b5



Five-Note Voicings

Major7



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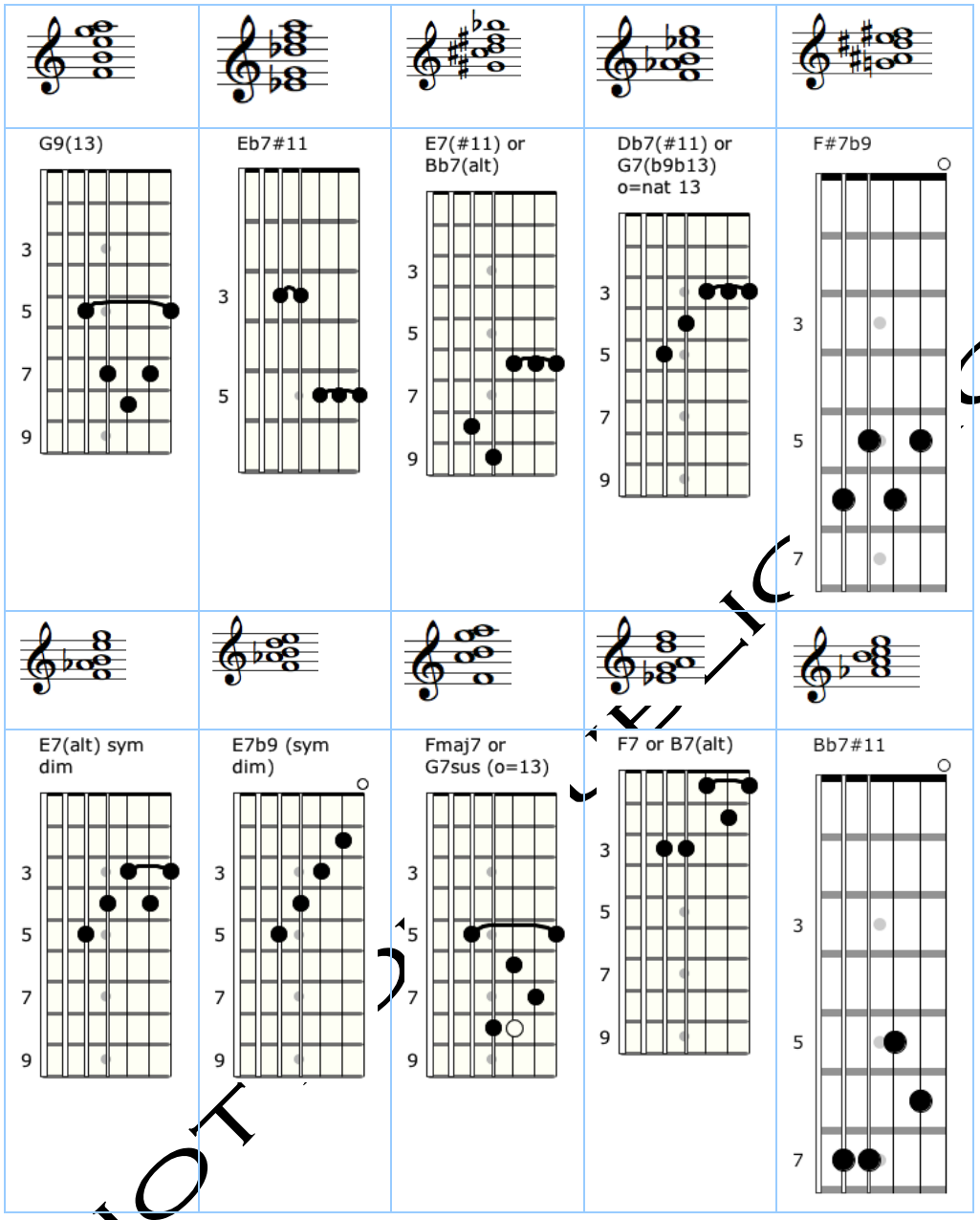
Dom7



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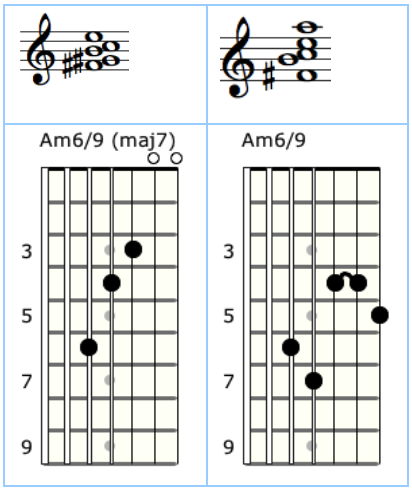
Minor (Tonic)



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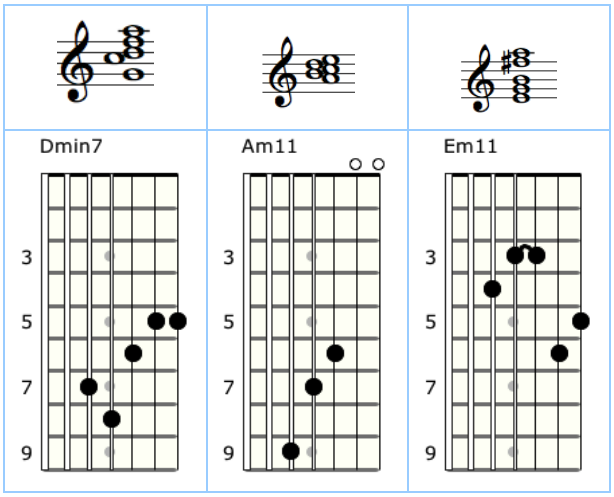
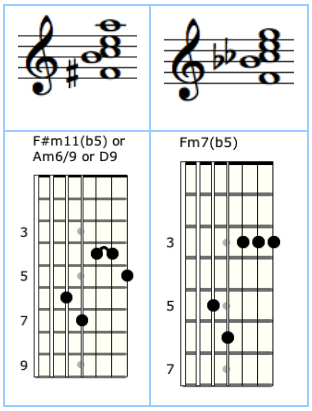
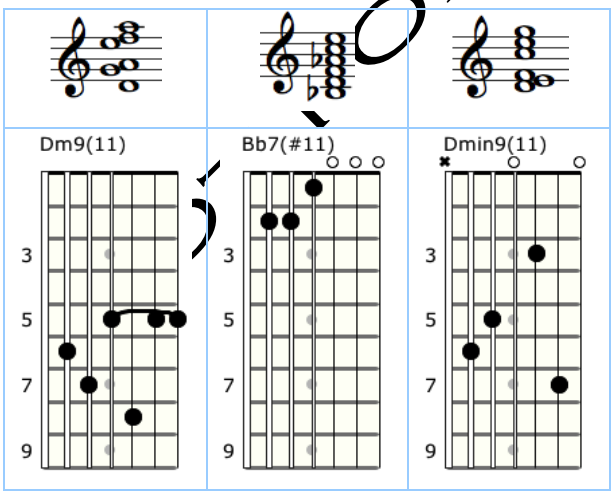
Min7



Min7b5



Six-Note Voicings



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