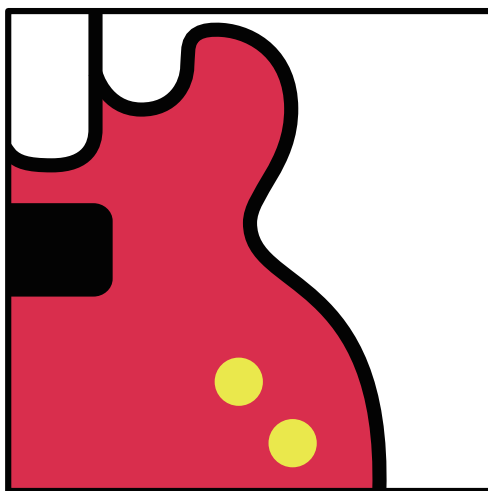


Basic Guitar

Harmonizing Scales with Triads

by
Takeshi Yamada



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"Takeshi's books are a great source of information" - Joe Diorio



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Melodic minor scales

When ascending, the melodic minor scale also decreases the distance between the 7th note and the 8th note by a half a step to provide a pull to the final note, but avoids the awkward interval between the sixth and seventh notes by also decreasing the distance between them by a half a step.

Where in the A natural minor scale:

- A-B is a whole step
- B-C is a half step
- C-D is a whole step
- D-E is a whole step
- E-F# is a whole step
- F#-G# is a whole step
- G#-A is a half step

This creates a more melodic transition to end the scale. When a melodic minor scale is descending, it uses the same notes as the natural minor scale, using the same sharps and flats as found in the related Major scale.

Example:

A melodic minor scale:

A melodic minor scale ascending A B C D E F# G#A

A melodic minor scale descending A B C D E F G A

Figure 4: The A natural minor scale and the A melodic minor scale

A natural minor scale

A melodic minor scale

Introduction to triads

How triads are built

A triad is created using three notes from a scale. You can start on any note of a scale, and create a triad by skipping every other note. For an example, let's take the C Major scale, and start on the first note, C. When we skip every other note, we get CEG:

C = the root of the triad (lowest note).

E = the 3rd of the triad (count three, starting with C).

G = the 5th of the triad (count five, starting with C).

Next, we will build a triad starting on the note D in the C Major scale.

When we skip every other note, we get DFA:

D = the root of the triad (lowest note).

F = the 3rd of the triad (count three, starting with D).

A = the 5th of the triad (count five, starting with D).

Major and minor triads

If you play the C triad notes together as a chord, and then the D triad, you will notice the two triads have a different sound:

- The C triad sounds bright, and is called a major triad.
- The D triad sounds a bit melancholy, and is called a minor triad.

The reason the major and minor triads have a different sound is because the intervals between the root and the 3rd are different:

- The C triad has two steps between the root and the 3rd. This interval is called a major third.
- The D triad has one-and-a-half steps between the root and the 3rd. This interval is called a minor third.

The interval from the root to the 5th note is the same for both, three-and-a-half steps.

This interval is called a *perfect fifth*.

Note: If you look at the intervals from note to note (from the root to the 3rd, and from the 3rd to the 5th) you can say:

- The major triad is built from a major 3rd followed by a minor 3rd.
- The minor triad is built from a minor 3rd followed by a major 3rd.

Diminished triad

If you continue to build a triad starting on each of the rest of the notes on the C Major scale, you will see that they are either a major triad (with a major 3rd), or a minor triad (with a minor 3rd). Until you get to B, the last note in the scale. When you build a triad starting with B, the result is BDF.

From the root (B) to the 3rd (D), is a minor third. Nothing new there. But unlike all the other C Major scale triads, the interval from the root to the 5th is only three steps, instead of the perfect three-and-a half steps. The smaller three-step interval is called a *diminished fifth*. The intervals of diminished triads are constructed by minor thirds. The triad is called a diminished triad. A diminished triad has a dark, uncomfortable sound.

Note: If you look at the intervals from note to note (from the root to the 3rd, and from the 3rd to the 5th) you can say that the diminished triad is built from two minor 3rds.

Augmented triads

You will find one more type of triad in the harmonic and melodic minor scales, the augmented triad. The augmented triad has a major third (two steps) and instead of an interval of three-and-a-half steps from the root to the 5th (perfect 5th), it has four steps, called an augmented 5th. An augmented triad has a mysterious or scientific sound.

Note: If you look at the intervals from note to note (from the root to the 3rd, and from the 3rd to the 5th) you can say that the augmented triad is built from two major 3rds.

Inverted triads

So far we have looked at root position triads, where the lowest note is the note from the scale the triad is built from. Any root position triad can be inverted. In an inverted triad, the root note of the triad, for example C in CEG, is moved to another position in the triad, such as EGC. So now, the lowest-sounding note is E, instead of C, and the highest sounding note is C, an octave higher.

- The first inversion is formed by moving the second note in a triad to the bottom position, and becomes the lowest note. For example: The triad CEG becomes EGC.
- The second inversion is formed by moving the highest note in a triad to the lowest note. For example: The triad CEG becomes GCE.

The diagram illustrates the fretboard patterns for three positions of a triad (Root, 3rd, 5th) on a guitar fretboard:

- Root position:** The root note is on the 3rd fret (circled), the 3rd is on the 5th fret (circled), and the 5th is on the 7th fret (circled).
- First inversion:** The 3rd note (E) is on the 3rd fret (circled), the root (C) is on the 5th fret (circled), and the 5th (G) is on the 7th fret (circled).
- Second inversion:** The 5th note (G) is on the 3rd fret (circled), the root (C) is on the 5th fret (circled), and the 3rd (E) is on the 7th fret (circled).

Below the fretboards is a musical staff showing the notes for each position: Root position (C, E, G), First inversion (E, G, C), and Second inversion (G, C, E). Arrows indicate the movement of notes between positions. Below the staff is a fingerings chart:

			3
	R	—	R
5	—	5	—
3	—	3	—
R	—		

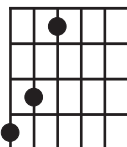
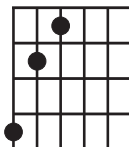
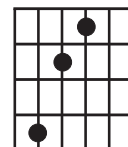
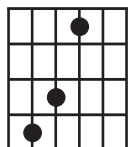
Note: This book focuses on patterns for the root position.

B \flat Major scale

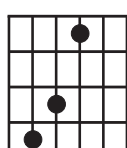
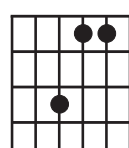
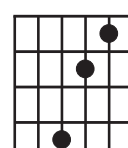
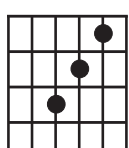
Musical notation for the B \flat Major scale, including a treble clef staff with notes and a TAB staff with fret numbers.

Notes: B \flat (2), D \flat (4), E \flat (1), F \flat (2), G \flat (4), A \flat (1), B \flat (3), C \flat (1), D \flat (4), E \flat (2), F \flat (4), G \flat (2), A \flat (1), B \flat (4), C \flat (2).

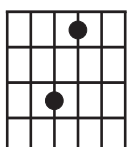
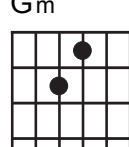
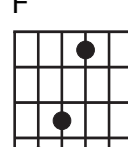
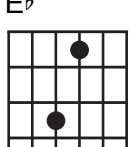
TAB: 6 8 | 5 6 | 8 5 | 7 8 | 12 10 | 8 6 | 5 8 | 6

<p>B\flat</p>  <p>3fr.</p> <p>④ ③ ①</p>	<p>Cm</p>  <p>5fr.</p> <p>④ ② ①</p>	<p>Dm</p>  <p>2fr.</p> <p>④ ② ①</p>	<p>E\flat</p>  <p>3fr.</p> <p>④ ③ ①</p>
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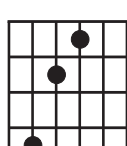
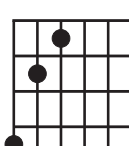
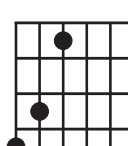
Musical notation showing the chords B \flat , Cm, Dm, and E \flat on a treble clef staff.

<p>F</p>  <p>5fr.</p> <p>④ ③ ①</p>	<p>Gm</p>  <p>3fr.</p> <p>③ ① ①</p>	<p>A\dim</p>  <p>4fr.</p> <p>④ ② ①</p>	<p>B\flat</p>  <p>6fr.</p> <p>③ ② ①</p>
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Musical notation showing the chords F, Gm, A \dim , and B \flat on a treble clef staff.

<p>A\dim</p>  <p>8fr.</p> <p>④ ② ①</p>	<p>Gm</p>  <p>7fr.</p> <p>④ ② ①</p>	<p>F</p>  <p>5fr.</p> <p>④ ③ ①</p>	<p>E\flat</p>  <p>3fr.</p> <p>④ ③ ①</p>
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Musical notation showing the chords A \dim , Gm, F, and E \flat on a treble clef staff.

<p>Dm</p>  <p>2fr.</p> <p>④ ② ①</p>	<p>Cm</p>  <p>5fr.</p> <p>④ ② ①</p>	<p>B\flat</p>  <p>3fr.</p> <p>④ ③ ①</p>
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Musical notation showing the chords Dm, Cm, and B \flat on a treble clef staff.

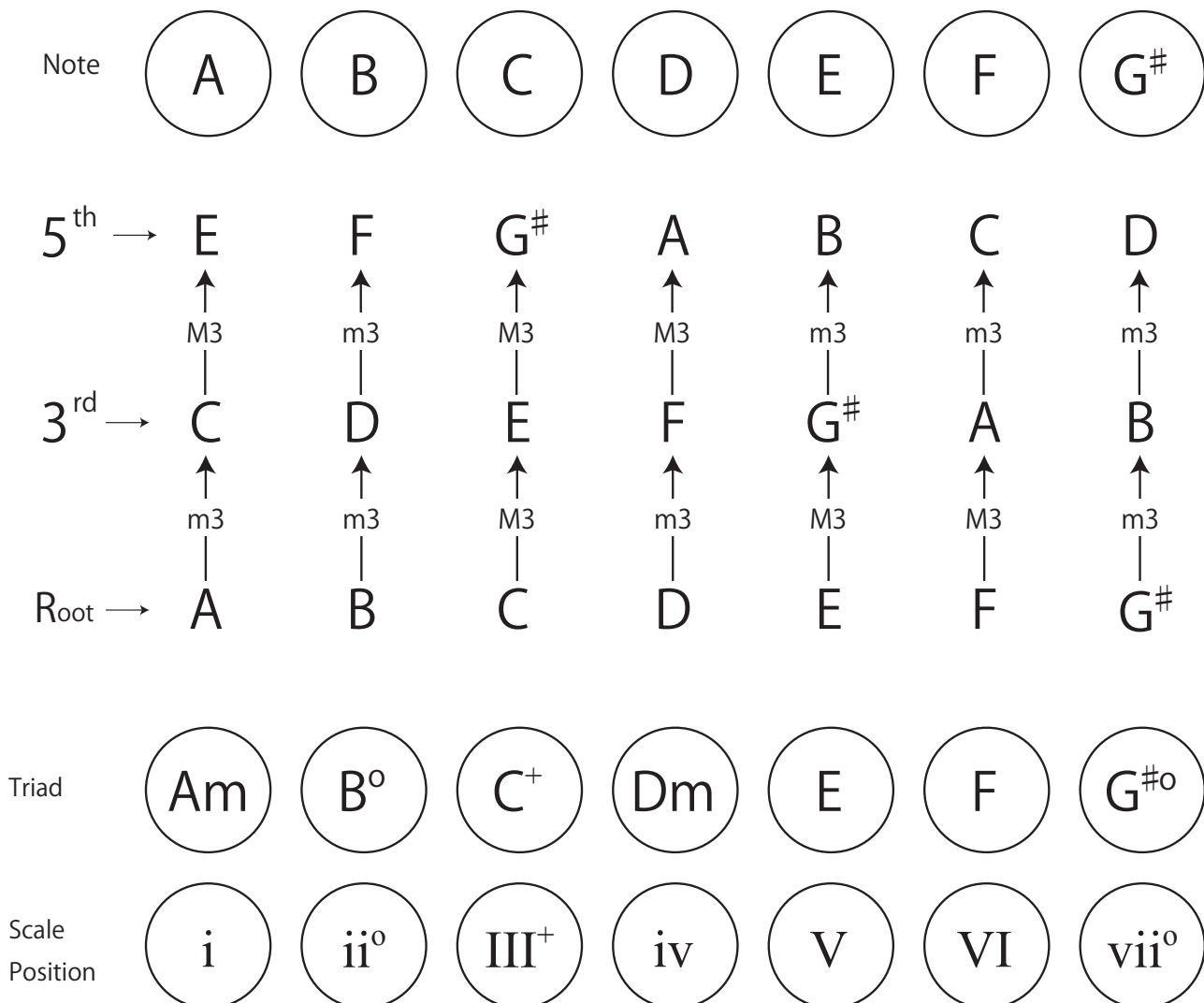
Harmonizing the harmonic minor scale

The example diagram in Figure 8 shows the root, 3rd, and 5th for each note in the harmonic minor scale for the key of A minor. The difference between a harmonic minor scale and a natural minor scale is that the harmonic minor raises the seventh note in the scale up one half step. (See the G# in the example shown in Figure 8.) Similar triads can be created from the notes in each harmonic minor key. The triads in a natural minor scale may be major, minor, diminished, or augmented (the III position triad).

Note: For more information about the structure of harmonic minor scales, see *The harmonic minor scales* on Page 8.

Example triad diagram: Key of A harmonic minor

(Fig.8)



E harmonic minor scale

Musical notation for the E harmonic minor scale. The treble clef has a key signature of one sharp (F#). The scale is written as a sequence of notes: E4, F#4, G4, A4, B4, C#5, D5, E5. Below the notes are the following fingering numbers: ④ ① ② ④ ① ② ① ① ④ ② ① ④ ② ① ①. Below the notes are the fret numbers for the strings: T (7), A (4), B (5 7) | 4 5 | 8 9 | 13 10 | 9 | 12 | 10 9 | 7.

Em 4fr.	F#dim 1fr.	Gaug 4fr.	Am 5fr.
④ ② ①	④ ② ①	② ① ①	③ ① ①

Musical notation for the first row of chords: Em (4fr), F#dim (1fr), Gaug (4fr), and Am (5fr).

Bm 2fr.	C 3fr.	D#dim 5fr.	Em 7fr.
③ ② ①	③ ④ ①	④ ③ ①	③ ② ①

Musical notation for the second row of chords: Bm (2fr), C (3fr), D#dim (5fr), and Em (7fr).

D#dim 10fr.	C 8fr.	Bm 7fr.	Am 9fr.
④ ② ①	③ ② ①	③ ① ①	④ ② ①

Musical notation for the third row of chords: D#dim (10fr), C (8fr), Bm (7fr), and Am (9fr).

Gaug 8fr.	F#dim 5fr.	Em 4fr.
③ ② ①	④ ② ①	④ ② ①

Musical notation for the fourth row of chords: Gaug (8fr), F#dim (5fr), and Em (4fr).

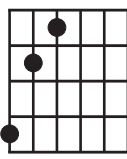
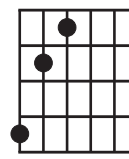
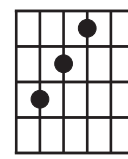
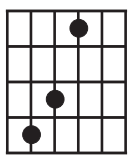
A melodic minor scale

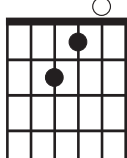
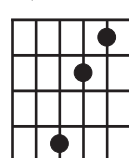
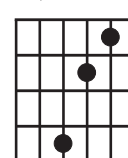
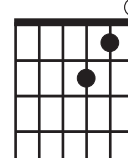
Melodic minor scale notation (treble clef):

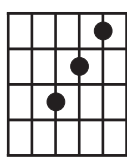
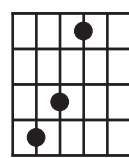
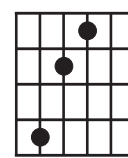
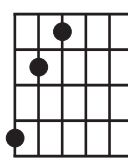
Notes: A2, B2, C3, D3, E3, F#3, G#3, A3, B3, C4, D4, E4, F#4, G#4, A4, B4, C5

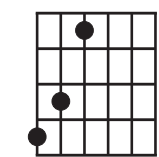
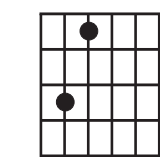
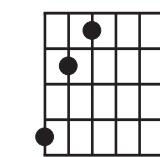
Fingering: ② ④ ① ③ ① ② ④ ① ① ④ ① ④ ② ① ①

TAB: 5 7 3 5 2 4 6 2 5 8 7 10 8 7 5

<p>Am</p>  <p>2fr.</p> <p>④ ② ①</p>	<p>Bm</p>  <p>4fr.</p> <p>④ ② ①</p>	<p>Caug</p>  <p>1fr.</p> <p>③ ② ①</p>	<p>D</p>  <p>2fr.</p> <p>④ ③ ①</p>
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<p>E</p>  <p>② ①</p>	<p>F#dim</p>  <p>1fr.</p> <p>④ ② ①</p>	<p>G#dim</p>  <p>3fr.</p> <p>④ ② ①</p>	<p>Am</p>  <p>② ①</p>
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<p>G</p>  <p>3fr.</p> <p>③ ② ①</p>	<p>F</p>  <p>5fr.</p> <p>④ ③ ①</p>	<p>Em</p>  <p>4fr.</p> <p>④ ② ①</p>	<p>Dm</p>  <p>7fr.</p> <p>④ ② ①</p>
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<p>C</p>  <p>5fr.</p> <p>④ ③ ①</p>	<p>Bdim</p>  <p>3fr.</p> <p>④ ② ①</p>	<p>Am</p>  <p>2fr.</p> <p>④ ② ①</p>
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Final chord progression notation (treble clef):

Notes: C4, F#4, G#4, A4, B4, C5