

Theory On The String(s)

Lesson 2

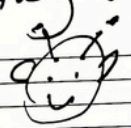
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Let's continue with our Theory On The String(s) with a look at Melodic and Harmonic Minor. Using "A" as our tonic we will cover interval relationships within the scales and the triads and 7th chords they generate. We will also explore root position triads on the 1,2,3 string set and some basic 7th chord voicing on the 2,3,4,5 string set.

Remember we are limiting this lesson to a few areas on the fingerboard. Try and expand these concepts to the entire instrument.

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Theory On The String(s) Lesson 2

Let's look at A Melodic Minor. We will use the "Jazz" version which is the same ascending and descending. It's like a Minor/Major scale 

A Melodic Minor

A	B	C	D	E	F#	G#	A
0	2	3	5	7	9	11	12
R	M2	-3	P4	P5	M6	M7	octave

This scale contains all 4 types of triads

Let's review Major $\overset{M3}{R} \overset{-3}{M3} P5$ or major 3rd plus a -3

Minor $\overset{-3}{R} \overset{M3}{P5}$ a minor 3rd plus a Major 3rd

Augmented $\overset{M3}{R} \overset{M3}{M3} \#5$ a major 3rd plus a Major 3rd

Diminished $\overset{-3}{R} \overset{-3}{b5}$ a minor 3rd plus a minor 3rd

Let's review these from a common tonic in Root position

MAJOR A MAJOR

5 4 2 $\overset{2}{\underset{5}{\cancel{4}}}$

minor A minor

5 3 2 $\overset{2}{\underset{5}{\cancel{4}}}$

A diminished

5 3 1 $\overset{1}{\underset{5}{\cancel{2}}}$

Augmented A Augmented

5 4 3 $\overset{3}{\underset{5}{\cancel{4}}}$

Here is melodic minor

from A on the 5th fret of the E string.

Diagram of the melodic minor scale from A on the 5th fret of the E string. The notes are A, B, C, D, E, F#, G#, A, B, C, D. The fret numbers are 5, 7, 8, 5, 7, 4, 5, 7, 4, 5, 7. The notes E, F#, G#, A are also written above the staff with fret numbers 5, 7, 4, 5.

Intervals within an octave from A to A

A to A

Diagram showing intervals from A to A. The notes are A, B, C, D, E, F#, G#, A. The intervals are M2 (-3), P4 (P4), P5 (P5), M6 (M6), M7 (M7), and OCTAVE (OCTAVE). The fret numbers are 5, 7, 5, 8, 5, 5, 5, 7, 5, 5, 5, 7.

Let's continue in one octave for the rest of the notes in the key

Diagram showing intervals from B to B. The notes are B, C, D, E, F, G, A, B. The intervals are -2, -3, P4 (P4), P5 (P5), M6 (M6), -7, and OCTAVE (OCTAVE). The fret numbers are 7, 8, 7, 5, 7, 7, 7, 7, 7, 7, 7, 7.

Diagram showing intervals from C to C. The notes are C, D, E, F, G, A, B, C. The intervals are M2 (M2), M3 (M3), #4 (#4), #5 (#5), M6 (M6), M7 (M7), and OCTAVE (OCTAVE). The fret numbers are 8, 5, 8, 7, 8, 8, 8, 8, 8, 8, 8, 8.

Diagram showing intervals from D to D. The notes are D, E, F, G, A, B, C, D. The intervals are M2 (M2), M3 (M3), #4 (#4), P5 (P5), M6 (M6), -7, and OCTAVE (OCTAVE). The fret numbers are 5, 7, 5, 4, 5, 6, 5, 7, 5, 4, 5, 5, 5, 5.

Diagram showing intervals from E to E. The notes are E, F, G, A, B, C, D, E. The intervals are M2 (M2), M3 (M3), P4 (P4), P5 (P5), -6, -7, and OCTAVE (OCTAVE). The fret numbers are 7, 4, 7, 6, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7.

A melodic minor intervals within an octave continued...

Handwritten musical notation on a staff with a key signature of two sharps (F# and C#). The notes are 4, 6, 4, 7, 4, 4, 4, 5, 4, 7, 4, 5, 7. Above the notes are interval markings: M2 (4-6), -3 (6-4), P4 (4-4), b5 (4-5), -6 (5-4), -7 (4-7), and OCTAVE (4-5). Arrows indicate the direction of the intervals.

Handwritten musical notation on a staff with a key signature of two sharps (F# and C#). The notes are 6, 7, 6, 4, 6, 5, 6, 7, 6, 5, 6, 7, 6, 6, 6. Above the notes are interval markings: -3 (6-7), M4 (7-6), b5 (6-4), -6 (6-5), -7 (5-6), and OCTAVE (6-7). A circled '9' is written below the final '6'.

Handwritten musical notation for triads. The first triad is A- (notes 5, 8, 7) with intervals -3 (5-8) and M3 (8-7), and a P5 interval (5-7). The second triad is B- (notes 7, 5, 4) with intervals -3 (7-5) and M3 (5-4), and a P5 interval (7-4). The third triad is C+ (notes 8, 7, 6) with intervals M3 (8-7) and M3 (7-6), and a P5 interval (8-6).

Handwritten musical notation for triads. The first triad is D (notes 5, 4, 7) with intervals M3 (5-4) and -3 (4-7), and a P5 interval (5-7). The second triad is E (notes 7, 6, 4) with intervals M3 (7-6) and -3 (6-4), and a P5 interval (7-4). The third triad is F#0 (notes 4, 7, 5) with intervals -3 (4-7) and -3 (7-5), and a b5 interval (4-5).

let's continue through the next octave

Handwritten musical notation for triads. The first triad is G#0 (notes 6, 4, 7) with intervals -3 (6-4) and -3 (4-7), and a b5 interval (6-7). The second triad is A- (notes 7, 5, 5) with intervals -3 (7-5) and M3 (5-5), and a P5 interval (7-5).

Handwritten musical notation for triads. The first triad is B- (notes 4, 7, 8) with intervals -3 (4-7) and M3 (7-8), and a P5 interval (4-8). The second triad is C# (notes 5, 5, 4) with intervals M3 (5-5) and M3 (5-4), and a P5 interval (5-4). The third triad is D (notes 7, 7, 5) with intervals M3 (7-7) and -3 (7-5), and a P5 interval (7-5). The fourth triad is E (notes 5, 4, 7) with intervals M3 (5-4) and -3 (4-7), and a P5 interval (5-7).

A melodic minor triads in intervals continued...

(4)

Handwritten musical notation on a staff. It shows three measures separated by double bar lines. The first measure is in F# major (F#0) and contains notes 7, 5, 8 with triplets over 7-5 and 5-8, and a bracket under 7-5. The second measure is in G# major (G#0) and contains notes 9, 7, 10 with triplets over 9-7 and 7-10, and a bracket under 9-7. The third measure contains notes 10, 5 and a circled 'A'.

A Melodic Minor triad chords arpeggios

Handwritten musical notation on a staff. The first measure is labeled A-Δ7 and contains notes 5, 8, 7, 6. The second measure is labeled B-7 and contains notes 7, 5, 4, 7.

Handwritten musical notation on a staff. The first measure is labeled CΔ7#5 and contains notes 8, 7, 6, 4. The second measure is labeled D7 and contains notes 5, 4, 7, 5.

(-745) or (half diminished)

Handwritten musical notation on a staff. The first measure is labeled E7 and contains notes 7, 6, 4, 7. The second measure is labeled F#0 and contains notes 4, 7, 5, 5.

Handwritten musical notation on a staff. The first measure is labeled G#0 and contains notes 6, 4, 7, 7. The second measure is labeled A-Δ7 and contains notes 7, 5, 5, 4.

Handwritten musical notation on a staff. The first measure is labeled 'OK' and contains notes 7, 5, 5, 4.

A melodic Minor 3rds and 5ths The foundation 5

A Δ^7 $\begin{array}{l} \text{3} \quad \text{M3} \quad \text{M3} \\ \text{5} \quad \text{8} \quad \text{7} \quad \text{6} \end{array}$ || $\begin{array}{l} \text{P5} \quad \text{+5} \\ \text{5} \quad \text{7} \quad \text{8} \quad \text{6} \end{array}$

B ~~$\begin{array}{l} \text{3} \quad \text{M3} \quad \text{3} \\ \text{5} \quad \text{4} \quad \text{7} \end{array}$~~ 1
2
3
4
5
6
7

B Δ^7 $\begin{array}{l} \text{3} \quad \text{M3} \quad \text{3} \\ \text{7} \quad \text{5} \quad \text{4} \quad \text{7} \end{array}$ || $\begin{array}{l} \text{P5} \quad \text{P5} \\ \text{7} \quad \text{4} \quad \text{5} \quad \text{7} \end{array}$

C $\Delta^7 \#5$ $\begin{array}{l} \text{M3} \quad \text{M3} \quad \text{3} \\ \text{8} \quad \text{7} \quad \text{6} \quad \text{4} \end{array}$ || $\begin{array}{l} \text{+5} \quad \text{P5} \\ \text{8} \quad \text{6} \quad \text{7} \quad \text{4} \end{array}$

D Δ^7 $\begin{array}{l} \text{M3} \quad \text{3} \quad \text{3} \\ \text{5} \quad \text{4} \quad \text{7} \quad \text{5} \end{array}$ || $\begin{array}{l} \text{P5} \quad \text{b5} \\ \text{5} \quad \text{7} \quad \text{4} \quad \text{5} \end{array}$

E Δ^7 $\begin{array}{l} \text{M3} \quad \text{3} \quad \text{3} \\ \text{7} \quad \text{6} \quad \text{4} \quad \text{7} \end{array}$ || $\begin{array}{l} \text{P5} \quad \text{b5} \\ \text{7} \quad \text{4} \quad \text{6} \quad \text{7} \end{array}$

F $\#0$ $\begin{array}{l} \text{3} \quad \text{M3} \\ \text{4} \quad \text{7} \quad \text{5} \quad \text{5} \end{array}$ || $\begin{array}{l} \text{b5} \quad \text{P5} \\ \text{4} \quad \text{5} \quad \text{7} \quad \text{5} \end{array}$

G $\#0$ $\begin{array}{l} \text{3} \quad \text{3} \quad \text{M3} \\ \text{6} \quad \text{4} \quad \text{7} \quad \text{7} \end{array}$ || $\begin{array}{l} \text{b5} \quad \text{P5} \\ \text{6} \quad \text{7} \quad \text{4} \quad \text{7} \end{array}$

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A melodic minor

(6)

Root position triads on strings 1, 2, 3 (E)(B)(G)

0 1 2	3 3 4	4 5 5	5 7 7	7 9 9	8 10 11	10 12 13	12 13 14
A-	B-	C+	D	E	F#0	G#0	A-

7th chords on strings 2, 3, 4, 5

1 2 0	3 4 2	5 6 3	7 7 5	9 9 7	10 9 9	12 12 11	13 13 12
A-Δ7	B-7	CΔ7#5	D7	E7	F#Δ7	G#Δ7	A-Δ7

* Remember - This is just a small slice of the fingerboard that we have been exploring. Expand all this material to every position and every direction across the neck -

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Let's do the same thing with A Harmonic MINOR

A Harmonic	A	B	C	D	E	F	G#	A
MINOR	0	2	3	5	7	8	11	12
	R	-2	-3	P4	P5	-6	M7	OCTAVE

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~~A to A~~

A	B	C	D	E	F	G#	A	B	C	D	E	F	G#	A
5	7	8	5	7	8	6	7	4	5	7	5	6	4	5

A to A

M2	-3	P4	P5	-6	M7	OCTAVE
5 7	5 8	5 5	5 7	5 8	5 6	5 7

B to B

-2	-3	P4	b5	M6	-7	OCTAVE
7 8	7 5	7 7	7 8	7 6	7 7	7 4

C to C

M2	M3	P4	+5	M6	M7	OCTAVE
8 5	8 7	8 8	8 6	8 7	8 4	8 5

D to D

M2	-3	#4	P5	M6	-7	OCTAVE
5 7	5 8	5 6	5 7	5 4	5 5	5 7

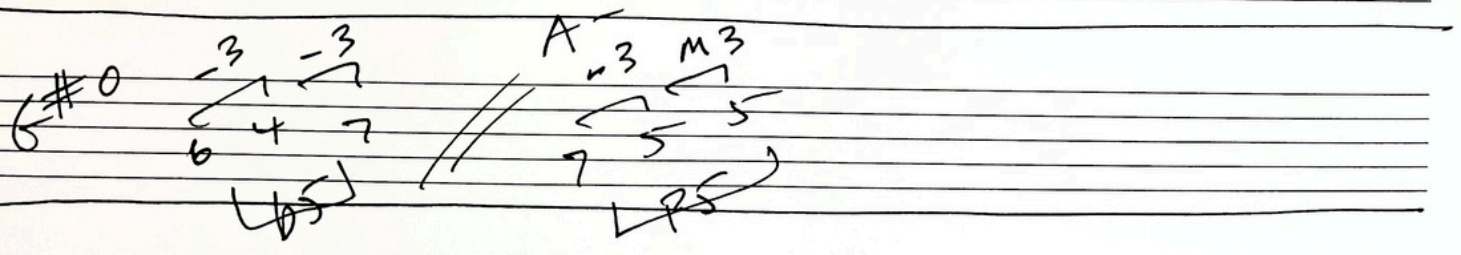
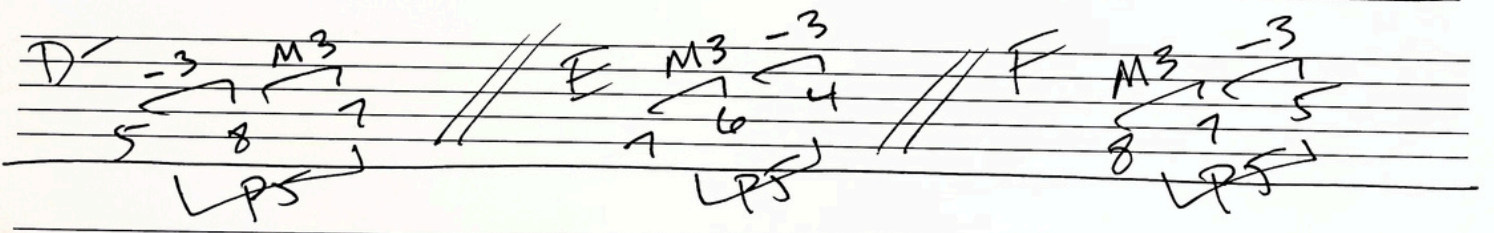
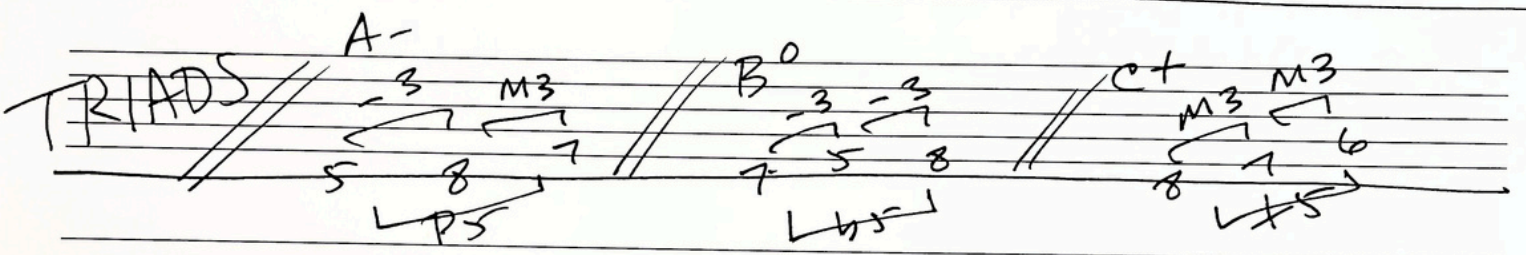
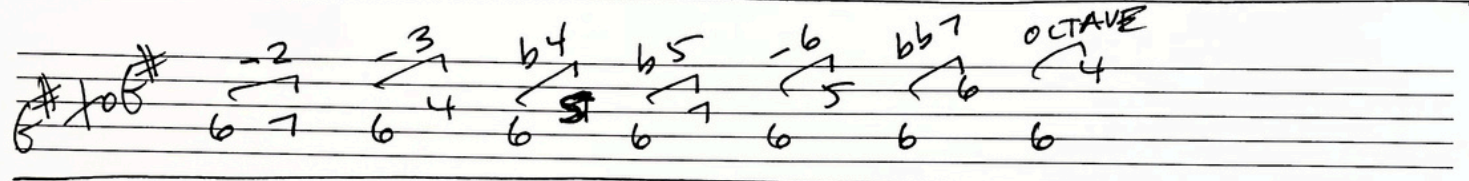
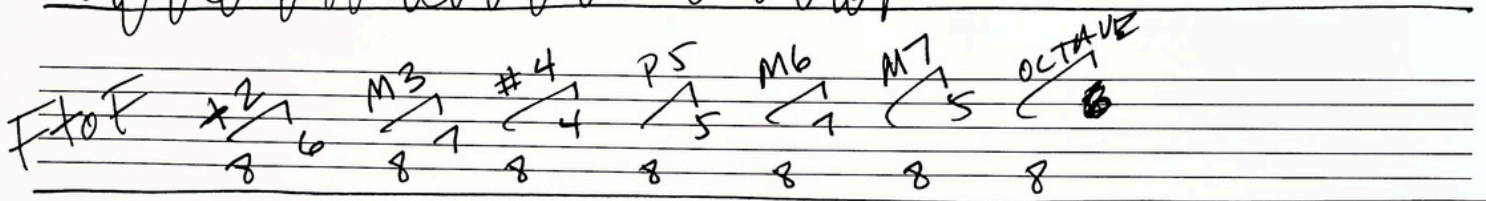
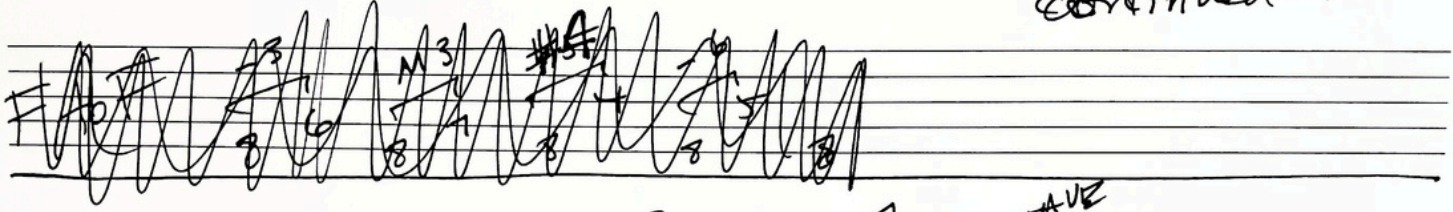
~~E to E~~

-2	M3	P#4	P5	-6	-7	OCTAVE
7 8	7 6	7 7	7 4	7 5	7 7	7 5

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A Harmonic Minor Intervals within an octave continued...

8



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A Harmonic Minor 7th chord arpeggios

A-Δ7

5 8 7 6 || ~~BΔ~~ || CΔ7#

7 5 8 7 || 8 7 6 4

D-7

5 8 7 5 || E7 || ~~FΔ7~~

7 6 4 7 || 8 6 5 4

E7#9

6 4 7 6 || A-Δ7

7 5 5 4

3rds and 5ths

A-Δ7

3 M3 M3 || P5 +5

5 8 7 6 || 5 7 8 6

~~BΔ~~

3 3 M3 || b5 P5

7 5 8 7 || 7 8 5 7

CΔ7#9

M3 M3 -3 || +5 P5

8 7 6 4 || 8 6 7 4

D-7

3 M3 -3 || P5 P5

5 8 7 5 || 5 7 8 5

E7

M3 -3 -3 || P5 b5

7 6 4 7 || 7 5 6 7

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A Harmonic Minor 3rds and 5ths continued...

F^{Δ7} $\begin{matrix} \text{M3} & \text{3} & \text{M3} \\ \swarrow & \nearrow & \swarrow \\ 8 & 7 & 5 \end{matrix}$ $\begin{matrix} \text{P5} & \text{P5} \\ \swarrow & \swarrow \\ 8 & 7 \end{matrix}$

G^{#0} $\begin{matrix} -3 & -3 & -3 \\ \swarrow & \swarrow & \swarrow \\ 6 & 4 & 7 \end{matrix}$ $\begin{matrix} \text{b5} & \text{b5} \\ \swarrow & \swarrow \\ 6 & 4 \end{matrix}$

A^{-Δ7} $\begin{matrix} \text{3} & \text{M3} & \text{M3} \\ \swarrow & \swarrow & \swarrow \\ 7 & 5 & 4 \end{matrix}$ $\begin{matrix} \text{P5} & +5 \\ \swarrow & \swarrow \\ 7 & 5 \end{matrix}$

Triads on strings 1, 2, 3

0	1	4	5	7	8	10	12
2	4	5	7	9	10	13	14
A-	B ⁰	C ⁺	D-	E	F	G ^{#0}	A-

7th chords on strings 2, 3, 4, 5

1	3	5	6	9	10	11	13
2	2	3	4	7	8	11	12
A ^{-Δ7}	B ⁰	C ^{Δ#5}	D ⁻⁷	E ⁷	F ^{Δ7}	G ^{#0}	A ^{-Δ7}

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