

# MAPPING OUT HARMONICS

## 12th, 7th & 5th Frets

The easiest harmonics to produce are positioned at the 12th, 7th and 5th frets.

12th = Octave	7th = Perfect 5th 8va	5th = Second Octave	
1st string	E	B	E
2nd string	B	F#	B
3rd string	G	D	G
4th string	D	A	D
5th string	A	E	A
6th string	E	B	E

## 4th & 9th Frets

The 4th & 9th frets produces the Major 3rd based upon the open fundamental note.

1st string	G#	(Ab)
2nd string	D#	(Eb)
3rd string	B	(Ab)
4th string	F#	(Gb)
5th string	C#	(Db)
6th string	G#	(Ab)

## Other Frets

12th Fret	Root
9th Fret	Major 3rd
7th Fret	Perfect 5th
6th Fret	b7th (just before 6th Fret 5:9)
5th Fret	Root
4th Fret	Major 3rd
3:2 Fret	Perfect 5th
2:8 Fret	b7th
2:3 Fret	Root
2:0 Fret	Major 9th
1:5 Fret	#4/11th

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## Ways to Use Harmonics

### 1. Chords

Visualize the chord shape an octave above where you fret, or 12 frets higher than it is. Next, you can either fret or tap the harmonic to produce an octave above the original pitch. Make sure that you place the tip of your index finger exactly above the actual fret, and not in between the frets.

### 2. Scales

This involves fretting or tapping out multiple harmonics on one string. As your left hand moves through the scale, the right hand must move accordingly 12 frets higher.

- Note that the above ways are examples only for octaves. You can use other intervals based on the distance between the left and right hands (i.e. 5 frets compared to 12).

## Types of Harmonics

### 1. Open Harmonics

These are harmonics that use open strings as the fundamental note and are picked normally with the left hand producing the harmonic.

### 2. Fretted Harmonics

Play a fretted note below the 5th fret and with your picking hand point to the fret 12 frets higher than the note you are playing on the same string. Touch the string at this point with your pointer finger and pluck the string underneath with your thumb to produce a natural harmonic from the fretted note.

### 2. Tapped harmonics

These are produced in the same manner of the fretted harmonic but this time you tap the fret that is 12 frets above the note you are playing. You can get other tapped harmonics by using the harmonic map. Remember that the fundamental note will be the one your fret board hand is playing.

### 3. Pinched Harmonics

Pinched harmonics are produced with the technique of the pick or plectrum.

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E fundamental note

A fundamental note

D fundamental note

Diagram showing the fundamental notes E, A, and D on a treble clef staff. Below the staff, the fretboard is shown with diamond markers indicating the 12th, 5th, 7th, and 9th frets on the 6th string.

G fundamental note

B fundamental note

Top E fundamental note

Diagram showing the fundamental notes G, B, and Top E on a treble clef staff. The notes are marked with '8va...' above them. Below the staff, the fretboard is shown with diamond markers indicating the 12th, 5th, 7th, and 9th frets on the 6th string.

Em

Bm

Em

Em

Bm

Em

Diagram showing the chords Em and Bm on a treble clef staff. The notes are marked with '8va...' above them. Below the staff, the fretboard is shown with diamond markers indicating the 12th, 5th, 7th, and 9th frets on the 6th string.

6th string

5th string

4th string

3rd string

2nd string

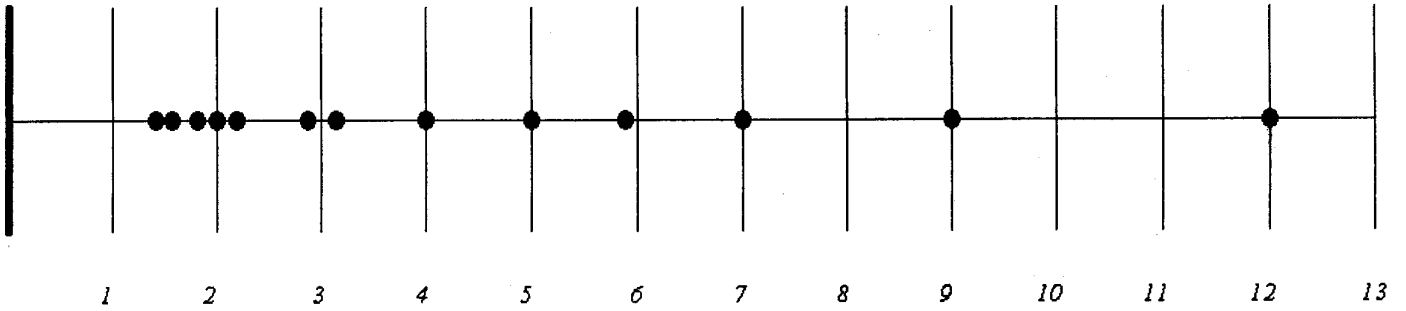
1st string

Diagram showing the string harmonics for the 6th, 5th, 4th, 3rd, 2nd, and 1st strings on a treble clef staff. The notes are marked with '8va...' above them. Below the staff, the fretboard is shown with diamond markers indicating the 12th, 5th, 7th, and 9th frets on the 6th string.

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Harmonic

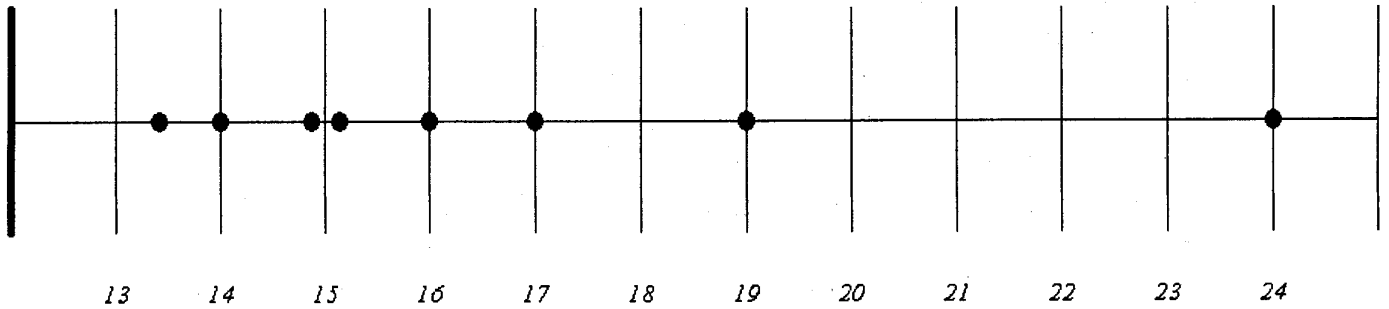
5 #11 3 9 R b7 5 3 Root b7 5 3 Root



Fret

Harmonic

#11 9 b7 5 3 R 5 R



Fret

Em Pentatonic Scale

8va.....

