

Maestro[®]

W O R K S H O P

ARTIFICIAL HARMONICS

Level 3

ARTIFICIAL HARMONICS

This technique enables the guitarist to create and play harmonics that either do not exist, or are of poor quality, as natural harmonics - and also to play passages which would be impractical or impossible in natural harmonics.

Of course, the harmonics are real and the word 'artificial' merely serves to describe this way of producing them.

The harmonics are produced by the right hand, which both touches the string at the point where the harmonics are (*the node*) and also plays the string to sound the harmonics.¹

This allows the RH hand to follow the notes/frets that the LH hand is playing and play the harmonics for those notes.²

Usually, it follows the LH at the octave above, i.e. playing the harmonic that is 12 frets above the LH note.

Notation

There is no standardised notation for artificial harmonics and at times the guitarist has to try various options and work out exactly what is required.

The more common forms of notation are explained in the exercises below.

Other ways of writing artificial harmonics are shown at the end of this tutorial.

harm. (abbrev. for *harmonics*) or ***arm.*** (abbrev. for *armonici*) is often followed by ***nat.*** (abbrev. for *natural*) to indicate the resumption of normal playing

The instruction δ^{va} (abbrev. for *ottava*) indicates that the note or passage should sound an octave higher than written. It is used for both natural notes and harmonics and does not, by itself, denote that the passage should be in harmonics. It is placed above the affected notes.

For info:

δ^{vb} (abbrev. for *ottava bassa*) is written below the affected notes to indicate that they should sound an octave lower than notated.

Both the above indications are a way of avoiding too many leger lines and they are usually followed by the word ***loco*** to indicate a return to the written pitch.

¹It follows that the RH can also play natural harmonics this way - e.g. at fret 19, 16, etc.

²The LH notes on the frets have now themselves become fundamentals, generating their own series of overtones, which the RH can play as harmonics.

3. Although the harmonic at the octave is by far the most common, it is also possible to play other intervals - e.g. 7 frets from the LH note would produce the $8ve+5^{th}$ - in exactly the same way as in natural harmonics, where the 7th fret produces the $8ve+5^{th}$ above the open string

Right hand over the fingerboard

This is the first step for all the methods/techniques shown

Angle the right hand at the wrist to point somewhere between the fingerboard and the left knee.
Move the hand from its usual position to over fingerboard, between the sound hole and the 12th fret.

The position of the hand over the fingerboard is fluid, and will be determined
by the harmonics to be played.

Technique A

Playing the harmonics with *i* and *a*

On the 1st string - hold down the 1st fret, F.

The octave above this F is fret 13.

The octave harmonic is found directly over the metal bar itself at fret 13

With the hand over the fingerboard,

Rest the *a* finger on the first string

and extend the *i* finger fully.¹

Lightly touch the 1st string directly over the metal bar at fret 13

with the pad of the extended *i* finger (not the fingernail)

(you should still be holding down F, 1st fret, with the LH)

With the pad of *i* touching the string,

play the 1st string with *a*

and

at the same time, lift the *i* finger from the string,

thereby 'releasing' the harmonic to sound.

For the harmonic to sound, it is the timing between the *a* finger playing and the *i* finger
lifting that is important – a knack which will come with practice

Once you have been successful in playing the octave harmonic for F, try the following:

Hold down F# - 2nd fret - 1st string, with LH.

The harmonic is now at the octave above F#, at fret 14.

Move the right hand so that *i* is touching the string directly over the metal bar at fret 14.

Play the F# harmonic.

Experiment on different frets and different strings. Play the exercise 1.

¹. see **Dos and Don'ts**

Technique A

Exercise 1 - 8ve harmonics with *i* and *a*

8^{va} harm.

Notation: The left hand holds down the notes written and the RH plays the harmonics at the octave (*8ve harm*)

Technique B

Playing the harmonics with *i* and *p* can be very useful, especially on the basses

With LH hold down F - 1st fret - 6th string.

Extend *i* finger to touch the 6th string over fret 13

Play the string with *p* - note that *p* plays *inside* the *i* finger

Exercise 2 - 8ve harmonics with *i* and *p*

8^{va} harm.

Notation: The :LH plays the notes as written, the diamond noteheads indicate that the notes are to be played as harmonics, the *8ve* indicates that the harmonics are at the octave above the written notes.

Technique C:

Natural notes played with the thumb at the same time as the harmonics

Play the harmonic with technique A (*i/a*) and play a natural note on a lower string with *p* at the same time as the harmonic.

Technique D

Chords with the upper note played in harmonics

With the RH in position to play artificial harmonics, rest *pma* on the required strings, ready to play a chord, for example, on the 4th, 2nd and 1st strings.

Extend the *i* finger to touch the 1st string directly over the fret for the harmonic, Play the chord, *pma*, with the top note as a harmonic.

MODEST SKETCH

A Study

8^{va} harm. -----

mf

the melody in 8ve harmonics -----

Dos and Don'ts

- ✗ Do not have a bent *i* finger when touching the string over the metal bar. A bent 1st finger tends to move inwards towards the string, when the *a* finger plays. This can bring problems of coordination and clean contact is more difficult.
- ✓ Having a fully extended *i* finger touching the string over the metal fret - even if at first it feels stiff - helps produce the right action, because it is more natural for it to counteract the inward movement of *a* by moving outwards and clearing the string.

NOTATION

Both natural and artificial harmonics are sometimes notated at sounding pitch, with little or no technical direction. The player needs a thorough knowledge of the pitches produced by both forms of harmonics to be able to decide how to play them.

The small \circ indicates the notes are harmonics



The diamond noteheads indicate harmonics