

Harmonics on the Cello

This is a catalog of fingerings for harmonics on the cello.

For each string, and each of the first three octaves on that string, there is a double staff. For each of the first 16 harmonics (multiples of the open string pitch) one bar is shown, with the harmonic note in the upper staff and all the possible fingerings in the lower staff.

Each bar corresponds to one harmonic note. The number of the harmonic (*i.e.* multiple of the string pitch) is shown above the bar. Below the bar (on upper staff) is indicated the number of cents sharp (+) or flat (-) that the harmonic sounds relative to tempered tuning.

The lower staff shows all the possible locations to play that harmonic, within the particular octave. Below each note is indicated the number of cents above (+) or below (-) that note where the actual harmonic node is located.

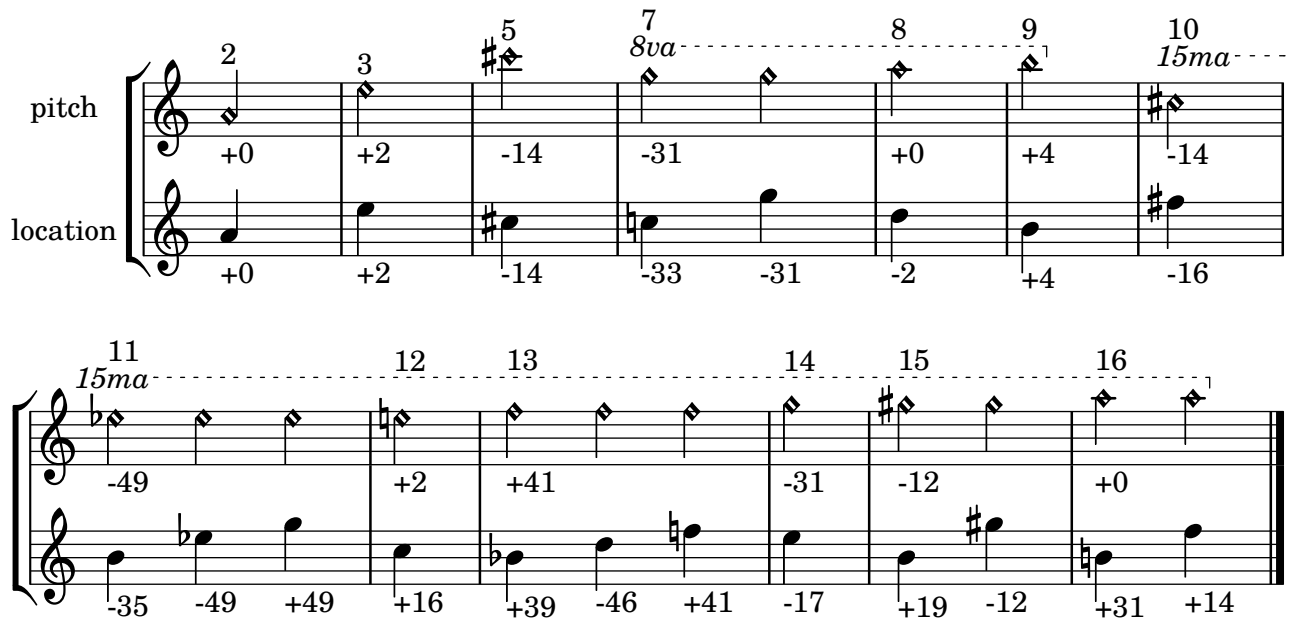
For example, referring to the next page, for the 1st octave on the A string, the 5th harmonic sounds as a C# but is 14 cents flat. It can be fingered at 14 cents below the C# in 1st position, or at 16 cents below the F-sharp in 4th position.

Cello A-string, 1st octave

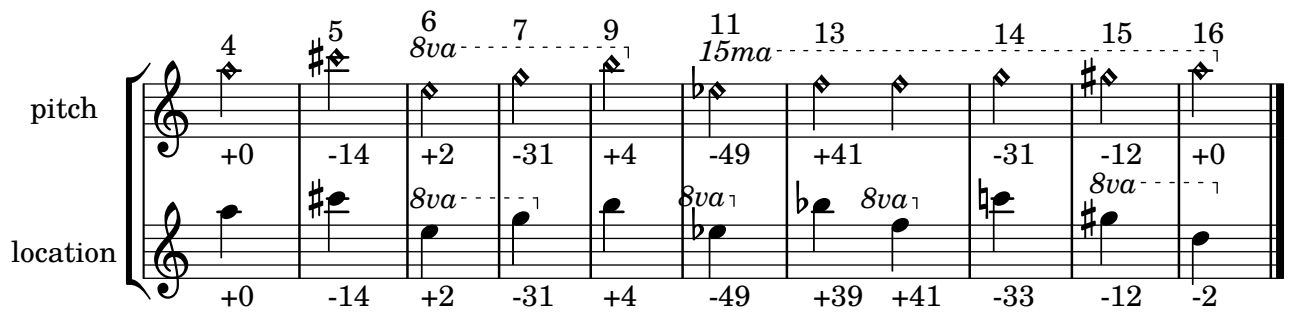
The musical score for the Cello A-string, 1st octave, is presented in five systems. Each system contains two staves: a treble staff for pitch and a bass staff for location. The measures are numbered 3 through 16. Fingering numbers are indicated above the notes in the treble staff. Octave markings (8va and 15ma) are used to indicate notes outside the standard staff range. Location values are provided below the bass staff for each measure.

Measure	Fingering	Octave	Pitch	Location
3	3		+2	+2
4	4		+0	-2
5	5		-14	-14
6	6	8va	+2	-16
7	7		-31	+16
8	8	8va	+0	-33
9	9		+4	-17
10	10	15ma	-14	-31
11	11	15ma	-49	+31
12	12		+2	+14
13	13	15ma	+41	+4
14	14		-31	+35
15	15	15ma	-12	+18
16	16		+0	-18

Cello A-string, 2nd octave



Cello A-string, 3rd octave



Cello D-string, 1st octave

The musical score for the Cello D-string, 1st octave, is presented in four systems. Each system contains a treble staff (pitch) and a bass staff (location). The measures are numbered 3 through 16. The pitch values are indicated by diamond notes on the treble staff, and the location values are indicated by solid notes on the bass staff. The score is divided into four systems, each with a treble and bass staff. The measures are numbered 3 through 16. The pitch values are indicated by diamond notes on the treble staff, and the location values are indicated by solid notes on the bass staff. The score is divided into four systems, each with a treble and bass staff. The measures are numbered 3 through 16. The pitch values are indicated by diamond notes on the treble staff, and the location values are indicated by solid notes on the bass staff.

Measure	Pitch (Treble)	Location (Bass)
3	+2	+2
4	+0	-2
5	-14	-14
6	+2	-16
7	-31	+16
8	+0	-33
9	+4	-17
10	-14	-31
11	-49	+31
12	+2	+14
13	+41	
14	-31	
15	-12	
16	+0	

Cello D-string, 2nd octave

pitch

location

Measure	Fingering	Octave	Interval
2	2		+0
3	3		+2
4	5		-14
5	7		-31
6	8	8va	+0
7	9		+4
8	10		-14
9			
10			
11	11	8va	-49
12	12		+2
13	13		+41
14	14	15ma	-31
15	15		-12
16	16		+0

Cello D-string, 3rd octave

pitch

location

Measure	Fingering	Octave	Interval
4	4		+0
5	5		-14
6	6		+2
7	7		-31
8	9	8va	+4
9	11		-49
10			+41
11			
12			
13	13		+41
14	14	15ma	-31
15	15		-12
16	16		+0

Cello G-string, 1st octave

The musical score is divided into four systems, each containing a treble and bass staff. The treble staff is labeled 'pitch' and the bass staff is labeled 'location'. Each measure is numbered from 3 to 16. The notes in the treble staff are diamond-shaped, and the notes in the bass staff are standard circular. The pitch and location values are indicated by numbers below the notes.

System 1 (Measures 3-8):

Measure	Pitch	Location
3	+2	+2
4	+0	-2
5	-14	-14
6	+2	-16
7	-31	+16
8	+0	-33

System 2 (Measures 9-11):

Measure	Pitch	Location
9	+4	+35
10	-14	+18
11	-49	-18

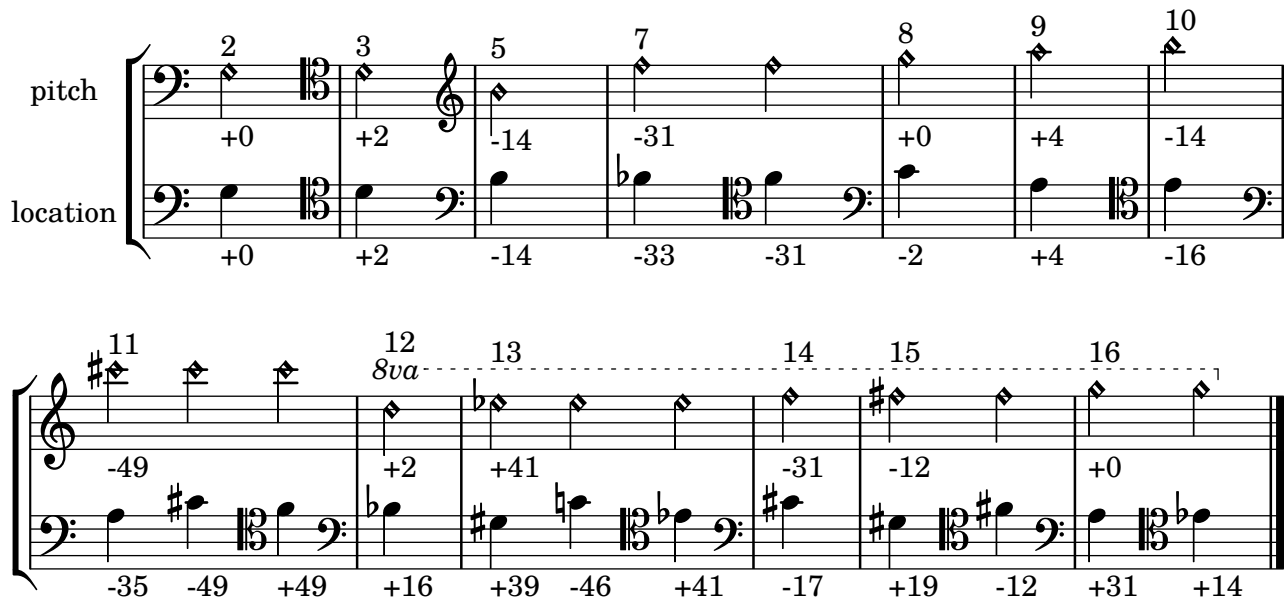
System 3 (Measures 12-14):

Measure	Pitch	Location
12	+2	+33
13	+41	+39
14	-31	-11

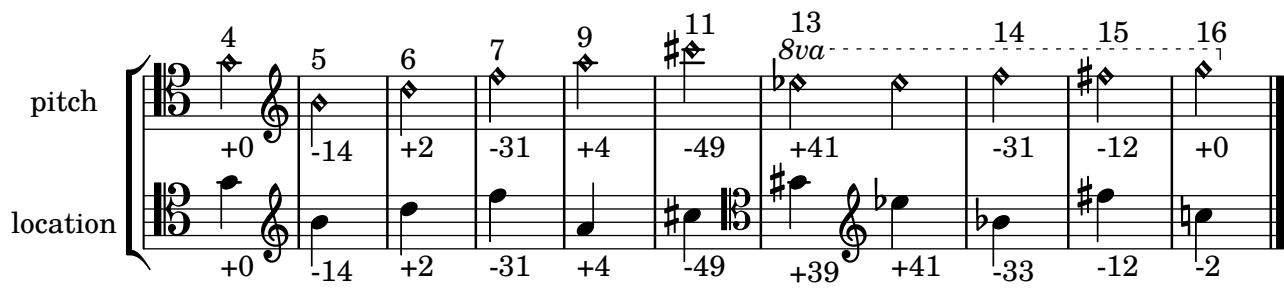
System 4 (Measures 15-16):

Measure	Pitch	Location
15	-12	+48
16	+0	+37

Cello G-string, 2nd octave



Cello G-string, 3rd octave



Cello C-string, 1st octave

The image displays a musical score for the Cello C-string, 1st octave, consisting of 16 notes. The score is organized into four systems, each with a 'pitch' staff (treble clef) and a 'location' staff (bass clef). The notes are numbered 1 through 16. The pitch staff shows the note name and its position on the staff, while the location staff shows the note's position on the staff and its corresponding fret number. The fret numbers are indicated by a '+' sign for natural or sharp and a '-' sign for flat.

Note	Pitch	Location	Fret
1	C2	C2	+2
2	C2	C2	+0
3	C2	C2	-14
4	C2	C2	-16
5	C2	C2	+16
6	C2	C2	-33
7	C2	C2	-17
8	C2	C2	-31
9	C2	C2	+31
10	C2	C2	+14
11	C2	C2	+4
12	C2	C2	+35
13	C2	C2	+18
14	C2	C2	-18
15	C2	C2	+17
16	C2	C2	-35

Cello C-string, 2nd octave

pitch

location

Fret	Pitch	Location
2	F2	+0
3	F#2	+2
5	A2	-14
7	Bb2	-33
8	B2	-31
9	C3	-2
10	C#3	+4
11	D3	-16
12	D#3	-35
13	E3	-49
14	F3	+49
15	F#3	+16
16	G3	+39

Cello C-string, 3rd octave

pitch

location

Fret	Pitch	Location
4	A2	+0
5	Bb2	-14
6	B2	+2
7	C3	-31
9	C#3	+4
11	D3	-49
13	D#3	+41
14	E3	-31
15	F3	-12
16	F#3	+0