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# Stringed instrument tunings

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This is a chart of **stringed instrument tunings**. Instruments are listed alphabetically by their most commonly known name.<sup>[1]</sup>

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## Terminology

A course may consist of one or more strings.<sup>[2]</sup>

Courses are listed reading from left to right facing the front of the instrument, with the instrument standing vertically. On a majority of instruments, this places the notes from low to high pitch. Exceptions exist:

- Instruments using reentrant tuning (e.g., the charango) may have a high string before a low string.
- Instruments strung in the reverse direction (e.g. mountain dulcimer) will be noted with the highest sounding courses on the left and the lowest to the right.
- A few instruments exist in "right-hand" and "left-hand" versions; left-handed instruments are not included here as separate entries, as their tuning is identical to the right-hand version, but with the strings in reverse order (e.g., a left-handed guitar).

Strings within a course are also given from left to right, facing the front of the instrument, with it standing vertically. Single-string courses are separated by spaces; multiple-string courses (i.e. paired or tripled strings) are shown with courses separated by bullet characters (\*).

Pitch: Unless otherwise noted, contemporary western standard pitch ( $A_4 = 440$  Hz) and 12-tone equal temperament are assumed.<sup>[3]</sup>

Octaves are given in scientific pitch notation, with Middle C written as "C<sub>4</sub>". (The 'A' above Middle C would then be written as "A<sub>4</sub>"; the next higher octave begins on "C<sub>5</sub>"; the next lower octave on "C<sub>3</sub>"; etc.)<sup>[4]</sup>

Because stringed instruments are easily re-tuned, the concept of a "standard tuning" is somewhat flexible. Some instruments:

- have a designated standard tuning (e.g., violin; guitar)
- have more than one tuning considered "standard" (e.g. mejorana, ukulele)
- do not have a standard tuning but rather a "common" tuning that is used more frequently than others (e.g., banjo; lap steel guitar)
- are typically re-tuned to suit the music being played or the voice being accompanied and have no set "standard" at all (e.g., *dàn nguyệt*; Appalachian dulcimer)

Where more than one common tuning exists, the most common is given first and labeled "Standard" or "Standard/common". Other tunings will then be given under the heading "Alternates".

## A



Scientific pitch notation

| Instrument | Strings & Courses        | Tuning(s)   | Alternative Names                              | Origin   | Notes   | Picture   |
|------------|--------------------------|---|--|--|---|---|
| Ahenk      | 12 strings<br>6 courses  | Standard/Common:<br><b>A<sub>3</sub> A<sub>3</sub>•B<sub>3</sub> B<sub>3</sub>•E<sub>4</sub> E<sub>4</sub>•A<sub>4</sub> A<sub>4</sub>•D<sub>5</sub> D<sub>5</sub>•G<sub>5</sub> G<sub>5</sub></b><br>Alternates: May also use various <u>oud</u> tunings   |  | Turkey   |   |   |
| Ajayu      | 12 strings<br>5 courses  | Standard/Common:<br><b>A A•E E•A A•C# C#•F# F# F#</b><br>Alternate:<br>▪ C C•G G•C C•E E E•A A A  |  | Chile  | A very recent instrument, invented in 2007  |   |
| Akkordolia | 4 strings<br>4 courses   | <b>F<sub>2</sub> A<sub>2</sub> C<sub>3</sub> F<sub>3</sub></b>  | Taishogoto,<br>Bulbul-tarang, Benju            | Germany &<br>Austria /<br>Japan /<br>India /<br>Pakistan | There are also a number of drone strings, the number and tuning of which vary widely.     |                                    |
| Akonting   | 3 courses<br>3 strings   | Common:<br>Casamance: <b>D<sub>3</sub> G<sub>3</sub> F<sub>4</sub></b><br>Gambian: <b>C<sub>3</sub> F<sub>3</sub> E<sub>4</sub></b>   | Ekonting,<br>Bunchundo,<br>Econtin,<br>Konting | Senegal  | Often strung with fishing line.<br>A rare 4-string version also exists.                   |   |
| Amzad      | 1 string<br>1 course     | No standard tuning; tuned to any convenient note.   | Imzad  | Niger, Mali,<br>Algeria                                  | Horse hair string.  |                                    |
| Archlute   | 27 strings<br>14 courses | <b>F<sub>1</sub> F<sub>2</sub>•G<sub>1</sub> G<sub>2</sub>•A<sub>1</sub> A<sub>2</sub>•B<sub>1</sub> B<sub>2</sub>•C<sub>2</sub> C<sub>3</sub>• D<sub>2</sub> D<sub>3</sub>•E<sub>2</sub> E<sub>3</sub>•F<sub>2</sub> F<sub>3</sub>•G<sub>2</sub> G<sub>2</sub>•C<sub>2</sub> C<sub>2</sub>• F<sub>3</sub> F<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•D<sub>4</sub> D<sub>4</sub>•G<sub>4</sub></b>  | Arciliuto,<br>Erzlaute.                        | Europe   | Number of courses could vary from 11–14, and the number of strings from 21–27.            | 12-course, 23-string archlute:<br> |
| Armonico   | 7 strings<br>6 courses   | <b>E<sub>3</sub>•A<sub>3</sub>•D<sub>4</sub>•G<sub>4</sub> G<sub>4</sub>•B<sub>3</sub>•E<sub>4</sub></b>  |  | Cuba   |   |                                   |
| Arpeggione | 6 strings<br>6 courses   | <b>E<sub>2</sub> A<sub>2</sub> D<sub>3</sub> G<sub>3</sub> B<sub>3</sub> E<sub>4</sub></b>  |  | Vienna,<br>Austria                                       | Rare.<br>Tuning is same as guitar.  |   |
| Autoharp   | 36 strings<br>36 courses | <b>F<sub>2</sub> G<sub>2</sub> C<sub>3</sub> D<sub>3</sub> E<sub>3</sub> F<sub>3</sub> F<sub>3</sub>•G<sub>3</sub> A<sub>3</sub> A#<sub>3</sub> B<sub>3</sub> C<sub>4</sub> C#<sub>4</sub> D<sub>4</sub> D#<sub>4</sub> E<sub>4</sub> F<sub>4</sub> F#<sub>4</sub> G<sub>4</sub> G#<sub>4</sub> A<sub>4</sub> A#<sub>4</sub> B<sub>4</sub> C<sub>5</sub> C#<sub>5</sub> D<sub>5</sub> D#<sub>5</sub> E<sub>5</sub> F<sub>5</sub> F#<sub>5</sub> G<sub>5</sub> G#<sub>5</sub> A<sub>5</sub> A#<sub>5</sub> B<sub>5</sub> C<sub>6</sub></b> | Chord zither                                   | USA  | Instruments with additional strings exist (from 37 – 48 totalstrings), but are very rare. |                                  |

**B**

| Instrument                 | Strings & Courses       | Tuning(s)   | Alternative Names                          | Origin      | Notes   | Picture   |
|----------------------------|-------------------------|---|--|-------------|---|---|
| Baglamas                   | 6 strings<br>3 courses  | <b>D<sub>4</sub> D<sub>5</sub> A<sub>4</sub> A<sub>4</sub> D<sub>5</sub> D<sub>5</sub></b>  | Baglama,<br>Baglama<br>Saz,<br>Baglamadaki | Greece      | Standard AKA "Modal D"  |    |
| Bajo quinto                | 10 strings<br>5 courses | <b>A<sub>2</sub> A<sub>1</sub> D<sub>3</sub> D<sub>2</sub> G<sub>2</sub> G<sub>2</sub> C<sub>3</sub> C<sub>3</sub> F<sub>3</sub> F<sub>3</sub></b>  |  | Mexico      | True 10-string bajo quintos are made, but many so-called "bajo quintos" are really <i>bajo sextos</i> with the lowest course removed. |    |
| Bajo Sexto                 | 12 strings<br>6 courses | Standard/Common (All fourths):<br><b>E<sub>2</sub> E<sub>1</sub> A<sub>2</sub> A<sub>1</sub> D<sub>3</sub> D<sub>2</sub> G<sub>2</sub> G<sub>2</sub> C<sub>3</sub> C<sub>3</sub> F<sub>3</sub> F<sub>3</sub></b><br>Alternate: <ul style="list-style-type: none"><li>▪ Guitar:<br/><b>E<sub>2</sub> E<sub>1</sub> A<sub>2</sub> A<sub>1</sub> D<sub>3</sub> D<sub>2</sub> G<sub>2</sub> G<sub>2</sub> B<sub>2</sub> E<sub>3</sub> E<sub>3</sub></b></li></ul> |  | Mexico      | In practice the bottom course is often removed(2 strings), making the instrument effectively a <i>bajo quinto</i> .                   |    |
| Balalaika, Alto            | 3 strings<br>3 courses  | <b>E<sub>3</sub> E<sub>3</sub> A<sub>3</sub></b>  | Alto                                       | Russia      | See Ekkel (1997) for all Balalaika tunings. <sup>[5]</sup>  |   |
| Balalaika, Bass            | 3 strings<br>3 courses  | Standard:<br><b>E<sub>2</sub> A<sub>2</sub> D<sub>3</sub></b><br>Old Orchestral: <ul style="list-style-type: none"><li>▪ <b>E<sub>2</sub> A<sub>2</sub> E<sub>3</sub></b></li></ul>   | Bass                                       | Russia      |   |    |
| Balalaika, Contrabass      | 3 strings<br>3 courses  | Standard:<br><b>E<sub>1</sub> A<sub>1</sub> D<sub>2</sub></b><br>Old Orchestral: <ul style="list-style-type: none"><li>▪ <b>E<sub>1</sub> A<sub>1</sub> E<sub>2</sub></b></li></ul>   | Contrabass                                 | Russia      |   |    |
| Balalaika, Descant         | 3 strings<br>3 courses  | <b>E<sub>5</sub> E<sub>5</sub> A<sub>5</sub></b>  | Descant                                    | Russia      | Obsolete  |   |
| Balalaika, Piccolo         | 3 strings<br>3 courses  | Standard:<br><b>B<sub>4</sub> E<sub>5</sub> A<sub>5</sub></b><br>Old Orchestral: <ul style="list-style-type: none"><li>▪ <b>E<sub>4</sub> A<sub>4</sub> E<sub>5</sub></b></li></ul>   | Piccolo                                    | Russia      | Rare  |   |
| Balalaika, Prima           | 3 strings<br>3 courses  | Standard/Common:<br><b>E<sub>4</sub> E<sub>4</sub> A<sub>4</sub></b><br>Alternates: <ul style="list-style-type: none"><li>▪ Folk: <b>C<sub>4</sub> E<sub>4</sub> G<sub>4</sub></b></li><li>▪ Russian guitar: <b>G<sub>3</sub> B<sub>3</sub> D<sub>4</sub></b></li></ul>   | Prima                                      | Russia      | This is the standard instrument of the balalaika family   |  |
| Balalaika, Prima, 6-string | 6 strings<br>3 courses  | Standard:<br><b>E<sub>4</sub> E<sub>4</sub> • E<sub>4</sub> E<sub>4</sub> • A<sub>4</sub> A<sub>4</sub></b><br>Alternates: <ul style="list-style-type: none"><li>▪ Same as for 3-string prima</li></ul>   | Prima                                      | Russia      | A more recent development, professionals consider these inferior to 3-string instruments.   |   |
| Balalaika, Secunda         | 3 strings<br>3 courses  | <b>A<sub>3</sub> A<sub>3</sub> D<sub>4</sub></b>  | Secunda                                    | Russia      | Often just a <i>prima</i> with altered tuning, though slightly larger <i>secundas</i> are also made.                                  |  |
| Balalaika, Tenor           | 3 strings<br>3 courses  | <b>A<sub>2</sub> A<sub>2</sub> D<sub>3</sub></b>  | Tenor                                      | Russia      | Obsolete  |  |
| Bandola Andina Colombiana  | 16 strings<br>6 courses | <b>F#<sub>3</sub> F#<sub>3</sub> B<sub>3</sub> B<sub>3</sub> E<sub>4</sub> E<sub>4</sub> A<sub>4</sub> A<sub>4</sub> A<sub>4</sub> A<sub>4</sub></b><br><b>A<sub>4</sub> D<sub>5</sub> D<sub>5</sub> D<sub>5</sub> G<sub>5</sub> G<sub>5</sub> G<sub>5</sub></b>  |  | Colombia    |   |  |
| Bandola Llanera            | 4 strings<br>4 courses  | <b>A<sub>2</sub> D<sub>3</sub> A<sub>3</sub> E<sub>4</sub></b>  |  | Venezuela   |   |  |
| Bandola Oriental           | 8 strings<br>4 courses  | <b>G<sub>3</sub> G<sub>3</sub> D<sub>4</sub> D<sub>4</sub> A<sub>4</sub> A<sub>4</sub> E<sub>5</sub> E<sub>5</sub></b>  |  | Venezuela   |   |   |
| Bandolin                   | 15 strings<br>5 courses | <b>E<sub>5</sub> E<sub>4</sub> E<sub>5</sub> A<sub>5</sub> A<sub>4</sub> A<sub>5</sub> D<sub>5</sub> D<sub>5</sub> D<sub>5</sub> F#<sub>5</sub></b><br><b>F#<sub>5</sub> F#<sub>5</sub> B<sub>5</sub> B<sub>5</sub> B<sub>5</sub></b>   |  | Ecuador     |   |   |
| Bandurria, Philippine      | 14 strings              | <b>F#<sub>3</sub> B<sub>3</sub> B<sub>3</sub> E<sub>4</sub> E<sub>4</sub> A<sub>4</sub> A<sub>4</sub> D<sub>5</sub> D<sub>5</sub></b>   |  | Philippines | One octave higher than the Philippine laud.   |   |

|                    |                                    |  |  |                                  |  |   |
|--------------------|------------------------------------|--|--|----------------------------------|--|---|
|                    | <b>6 courses</b>                   | <b>D<sub>5</sub> G<sub>5</sub> G<sub>5</sub> G<sub>5</sub></b>   |  |                                  |  |   |
| Bandurria, Spanish | 12 strings<br>6 courses            | G <sub>#3</sub> G <sub>#3</sub> C <sub>#4</sub> C <sub>#4</sub> F <sub>#4</sub> F <sub>#4</sub> B <sub>4</sub><br>B <sub>4</sub> E <sub>5</sub> E <sub>5</sub> A <sub>5</sub> A <sub>5</sub>   |  | Spain                            | Standard tuning AKA "Spanish tuning", one octave higher than the laud.   |    |
| Banjo, Bass        | 4 strings<br>4 courses             | <b>E<sub>1</sub> A<sub>1</sub> D<sub>2</sub> G<sub>2</sub></b>   |  | US                               | The Cello banjo is sometimes called "bass banjo", but it is tuned differently, and there are true bass banjos as well.   |    |
| Banjo, Cello       | 4 strings<br>4 courses             | <b>C<sub>2</sub> G<sub>2</sub> D<sub>3</sub> A<sub>3</sub></b>   | "bass" banjo                                       | US                               | Same as used for the <a href="#">cello</a> .   |    |
| Banjo, Cello       | 5 strings<br>5 courses             | <b>G<sub>3</sub> D<sub>2</sub> G<sub>2</sub> B<sub>2</sub> D<sub>3</sub></b>   | banjo cello  | US                               | One octave lower than 5-string Bluegrass Banjo.  |   |
| Banjo, Contrabass  | 3 strings<br>3 courses             | Standard/Common:<br><b>E<sub>1</sub> A<sub>1</sub> D<sub>2</sub></b><br>Alternates: <ul style="list-style-type: none"><li>▪ D<sub>1</sub> G<sub>1</sub> C<sub>2</sub></li><li>▪ D<sub>1</sub> A<sub>1</sub> D<sub>2</sub></li><li>▪ C<sub>1</sub> G<sub>1</sub> C<sub>2</sub></li></ul>  |  | US                               | Essentially in the same range as the bass banjo, but with a much larger resonator. These instruments are very rare, and tuning is not standardized.  | [6][7]  |
| Banjo (5-string)   | 5 strings<br>5 courses             | Standard/Common:<br><b>G<sub>4</sub> D<sub>3</sub> G<sub>3</sub> B<sub>3</sub> D<sub>4</sub></b><br>Alternates: <ul style="list-style-type: none"><li>▪ C tuning: G<sub>4</sub> C<sub>3</sub> G<sub>3</sub> B<sub>3</sub> D<sub>4</sub></li><li>▪ Double C: G<sub>4</sub> C<sub>3</sub> G<sub>3</sub> C<sub>4</sub> D<sub>4</sub></li><li>▪ Sawmill: G<sub>4</sub> D<sub>3</sub> G<sub>3</sub> C<sub>4</sub> D<sub>4</sub></li><li>▪ Open D: F<sub>#4</sub> D<sub>3</sub> F<sub>#4</sub> A<sub>3</sub> D<sub>4</sub></li><li>▪ Guitar: G<sub>4</sub> D<sub>3</sub> G<sub>3</sub> B<sub>3</sub> E<sub>4</sub></li><li>▪ Willie Moore: G<sub>4</sub> D<sub>3</sub> G<sub>3</sub> A<sub>3</sub> D<sub>4</sub></li><li>▪ Doc Bog's D: F<sub>#4</sub> D<sub>3</sub> G<sub>3</sub> A<sub>3</sub> D<sub>4</sub></li><li>▪ Cumberland Gap: G<sub>4</sub> E<sub>3</sub> A<sub>3</sub> D<sub>4</sub> E<sub>4</sub></li><li>▪ G Minor: G<sub>4</sub> D<sub>3</sub> G<sub>3</sub> B<sub>#3</sub> D<sub>4</sub></li><li>▪ Open C: G<sub>4</sub> C<sub>3</sub> G<sub>3</sub> C<sub>4</sub> E<sub>4</sub></li></ul> | Bluegrass Banjo                                    | US via Africa                    | <ul style="list-style-type: none"><li>▪ Standard AKA "Open G"</li><li>▪ Sawmill AKA "Mountain Modal"</li><li>▪ Open D AKA "Graveyard," "Reuben"</li><li>▪ Guitar AKA "Old G," "Sandy River Belle"</li></ul> <p>There are dozens of other, less common tunings.</p> |   |
| Banjolele          | 4 strings<br>4 courses             | Standard/Common:<br><b>G<sub>4</sub> C<sub>4</sub> E<sub>4</sub> A<sub>4</sub></b><br>Alternate (traditional): <ul style="list-style-type: none"><li>▪ A<sub>4</sub> D<sub>4</sub> F<sub>#4</sub> B<sub>4</sub></li></ul> Baritone <ul style="list-style-type: none"><li>▪ D<sub>3</sub>: G<sub>3</sub>: B<sub>3</sub>: E<sub>4</sub></li></ul>  | Banjo ukulele, banjo uke, banjolele, banjulele     | US                               | Hybrid of banjo and ukulele. Same tuning as a ukulele of the same scale.   |  |
| Banjolin           | 4 strings<br>4 courses             | <b>G<sub>3</sub> D<sub>4</sub> A<sub>4</sub> E<sub>5</sub></b>   | Mandolin-banjo, Melody Banjo, banjoline, bandoline | US                               | Hybrid of mandolin and banjo but with only one string per course   |  |
| Banjo, Long Neck   | 5 strings<br>5 courses             | <b>E<sub>4</sub> B<sub>2</sub> E<sub>3</sub> G<sub>#3</sub> B<sub>3</sub></b>  | "Pete Seeger" Banjo                                | US (commissioned by Pete Seeger) | Open string tuning; often played with capo on 3rd fret   |  |
| Banjo, Tenor       | 4 strings<br>4 courses             | Standard/Common (all fifths):<br><b>C<sub>3</sub> G<sub>3</sub> D<sub>4</sub> A<sub>4</sub></b><br>Alternate: <ul style="list-style-type: none"><li>▪ Irish (all fifths): G<sub>2</sub> D<sub>3</sub> A<sub>3</sub> E<sub>4</sub></li></ul>  |  | US via Africa                    | Irish tuning same as octave mandolin tuning  |  |
| Banjo, Plectrum    | 4 strings<br>4 courses             | <b>C<sub>3</sub> G<sub>3</sub> B<sub>3</sub> D<sub>4</sub></b><br>Chicago Tuning: D <sub>3</sub> G <sub>3</sub> B <sub>3</sub> E <sub>4</sub>  |  | US via Africa                    |  |  |
| Baryton            | 17 strings<br>17 courses Two ranks | Bowed rank: <b>A<sub>1</sub> D<sub>2</sub> G<sub>3</sub> C<sub>3</sub> E<sub>3</sub> A<sub>3</sub> D<sub>4</sub></b>   |  | Europe (Germany?)                | Seven bowed strings, and 10 resonating strings, also plucked with the left thumb   |   |

|                             |                         |  |  |   |   |  |                               |
|-----------------------------|-------------------------|--|--|---|---|--|-------------------------------|
|                             |                         | Plucked rank: $A_2 D_3 E_3 F\sharp_3 G_3$<br>$A_3 B_3 C\sharp_3 D_4 E_4$   |  |   |   |  |                               |
| <u>Basprin</u>              |                         | (See <i>Brac, 5 string</i> )   |  |   |   |  | (See <i>Brac, 5 string</i> )  |
| Bass Guitar                 |                         | (See <i>Guitar, Bass</i> )   |  |   |   |  | (See <i>Guitar, Bass</i> )    |
| <u>Berimbau</u>             | 1 string<br>1 course    | [*]  |  | Brazil                                      | * No standard tuning.   |  |                               |
| <u>Biscernica, 5 string</u> | 5 strings<br>4 courses  | $C\sharp_3 F\sharp_3 B_3 E_4 E_4$  | Bisernica                                    | Balkans                                     | The <i>prim</i> has 5 strings; there is another <i>bisernica</i> which has 6 strings. |  |                               |
| <u>Bisernica, 6 string</u>  | 6 strings<br>4 courses  | $E_3 A_3 D_4 D_4 G_4 G_4$  | Tamburitza                                   | Croatia,<br>Serbia,<br>Hungary,<br>Slovenia | Other courses are sometimes doubled.  |  |                               |
| <u>Bordonua</u>             | 10 strings<br>5 courses | $A_2 A_3 D_4 D_3 F\sharp_3 F\sharp_4 B_3 B_3 E_4 E_4$  |  | Puerto Rico                                 |   |  |                               |
| <u>Bouzouki</u>             | 8 strings<br>4 courses  | $C_3 C_4 F_3 F_4 A_3 A_3 D_4 D_4$  | Tetrachordo bouzouki                         | Greece                                      | Standard AKA "F6 tuning"  |  |                               |
| <u>Bouzouki</u>             | 6 strings<br>3 courses  | $D_3 D_4 A_3 A_3 D_4 D_4$  | Trichordobouzouki                            | Greece                                      | Standard AKA "F6 tuning"  |  |                               |
| <u>Bouzouki, Irish</u>      |                         | ( See <i>Irish bouzouki</i> )  |  |   |   |  | ( See <i>Irish bouzouki</i> ) |
| <u>Brac, 5 string</u>       | 5 strings<br>4 courses  | Standard/Common:<br>$E_3 A_3 D_4 G_4 G_4$<br>Alternate:<br>▪ $F\sharp_3 B_3 E_4 A_4 A_4$   | Basprin,<br>Brach                            | Croatia,<br>Serbia,<br>Slovenia             |   |  |                               |
| <u>Brac, 6 string</u>       | 6 strings<br>4 courses  | $G_3 G_3 D_4 D_4 A_4 A_4$  | Brach  | Croatia,<br>Serbia,<br>Slovenia             |   |  |                               |
| <u>Braguinha</u>            | 4 strings<br>4 courses  | $D_4 G_4 B_4 D_5$  | Braguinã,<br>Cavaquinho,<br>Machete de braga | Madeira,<br>Portugal                        | Standard AKA "Banjo tuning" (octave higher than the plectrum banjo)                   |  |                               |
| <u>Bugarija, 5 string</u>   | 5 strings<br>4 courses  | Standard/Common:<br>$G_2 B_2 D_3 G_3 G_3$<br>Alternates:<br>▪ $D_2 F\sharp_2 A_2 D_3 D_3$<br>▪ $E_2 G\sharp_2 B_2 E_3 E_3$             | Kontra                                       | Croatia,<br>Serbia,<br>Slovenia             | First course is sometimes not doubled.  |  |                               |
| <u>Bugarija, 6 string</u>   | 6 strings<br>4 courses  | Standard/Common:<br>$G_2 B_2 D_3 D_3 G_3 G_3$<br>Alternates:<br>▪ $D_2 F\sharp_2 A_2 A_2 D_3 D_3$<br>▪ $E_2 G\sharp_2 B_2 B_2 E_3 E_3$ | Kontra                                       | Croatia,<br>Serbia,<br>Slovenia             |   |  |                               |

**C**

| Instrument                        | Strings & Courses                | Tuning(s)  | Alternative Names                                 | Origin                                     | Notes   | Picture   |
|-----------------------------------|----------------------------------|--|---|--|---|---|
| <u>Cak</u>                        | 4 strings<br>3 courses           | $D_5 D_5 \cdot G_4 \cdot B_4$  | Steel kromong guitar                              | Indonesia                                  |   |    |
| <u>Cavaquinho</u>                 | 4 strings<br>4 courses           | Standard/Common:<br>$D_4 G_4 B_4 D_5$<br>Alternates:<br>▪ 'Guitar': $D_4 G_4 B_4 E_5$<br>▪ Alternative: $G_4 C_5 B_4 D_5$<br>▪ Alternative: $A_4 A_4 C\#_5 E_5$  | Cavaco, Manchete, Machimbo                        | Portugal                                   |   |    |
| <u>Cello</u>                      | 4 strings<br>4 courses           | Standard/Common:<br>$C_2 G_2 D_3 A_3$<br>Alternates:<br>▪ "5th Suite" tuning: $C_2 G_2 D_3 G_3$  | Violoncello                                       | Europe                                     | Many scordatura tunings have been employed by various composers for individual pieces, for example:<br>▪ " <u>Zoltán Kodály</u> " tuning:<br>$B_1 F\#_2 D_3 A_3$<br>▪ "Whole step down" tuning:<br>$B_{\flat}1 F_2 C_3 G_3$ |    |
| <u>Celo</u>                       |                                  | (See <u>Čelovič, 4 string</u> )  |   |  |   | (See <u>Čelovič, 4 string</u> )   |
| <u>Čelovič, 4 string</u>          | 4 strings<br>4 courses           | $E_2 A_2 D_3 G_3$  | Celo, Csello, Cselo                               | Croatia, Serbia, Slovenia                  | This is the modern instrument   |   |
| <u>Čelovič, Farkas</u>            | 6 strings<br>4 courses           | $D_2 \cdot G_2 \cdot C_3 \cdot C_3 \cdot G_3 \cdot G_3$  | Celo, Csello, Cselo                               | Croatia, Serbia, Slovenia                  | The traditional 19th century instrument, developed by Jankovic Farkas, now virtually obsolete.  |    |
| <u>Cetera</u>                     | 16 strings<br>8 courses          | Standard/Common:<br>$C_3 C_3 \cdot D_3 D_3 \cdot E_b_3 E_b_3 \cdot F_3 F_3 \cdot G_3 G_3 \cdot G_3 G_3 \cdot D_4 D_4 \cdot G_4 G_4$<br>Alternate:<br>▪ Renaissance:<br>$G_2 G_2 \cdot A_2 A_2 \cdot C_3 C_3 \cdot D_3 D_3 \cdot A_3 A_3 \cdot G_3 G_3 \cdot D_4 D_4 \cdot E_4 E_4$                   |   | Corsica, France.                           |   |    |
| <u>Chanzy</u>                     | 3 strings<br>3 courses           | Standard/Common:<br>$F_2 C_3 F_3$<br>Alternates:<br>▪ $D_2 A_2 D_3$<br>▪ $C_2 G_2 C_3$   | Chanzy, Tyanzi                                    | Tuva, Russia                               |   |   |
| <u>Chapey</u>                     | 3 strings<br>2 courses           | $F_3 F_3 \cdot B_3$  | Chapei, Chapei Dong Veng                          | Cambodia                                   |   |  |
| <u>Chapman Stick</u>              | 10 strings<br>10 courses         | $E_3 A_2 D_2 G_1 C_1 F\#_2 B_2 E_3 A_3 D_4$  | Stick, The Stick, Classic Stick                   | United States                              | There are many alternate tunings, which vary from individual to individual  |  |
| <u>Chapman Stick, Grand Stick</u> | 12 strings<br>12 courses         | $B_3 E_3 A_2 D_2 G_1 C_1 C\#_2 F\#_2 B_2 E_3 A_3 D_4$  | Stick, The Stick, Grand Stick                     | United States                              | There are many alternates, which vary from individual to individual   |  |
| <u>Charango</u>                   | 10 strings<br>5 courses          | Standard/Common:<br>$G_4 G_4 \cdot C_5 C_5 \cdot E_5 E_5 \cdot A_4 A_4 \cdot E_5 E_5$<br>Alternates:<br>▪ Argentine tuning:<br>$C_4 C_4 \cdot F_4 F_4 \cdot A_4 A_3 \cdot D_4 D_4 \cdot A_4 A_4$<br>▪ Gm7/Bb6 Tuning:<br>$F_4 F_4 \cdot B\flat_5 B\flat_5 \cdot C_5 C_4 \cdot G_4 G_4 \cdot D_5 D_5$ | Quirquincho, Mulita, Tatu, Kirki                  | Bolivia, Peru, Argentina<br>Chile, Ecuador | Common C6/Am7 or "Bolivian" tuning, but there are many variants. 3rd course is an octave pair.  |  |
| <u>Charango, Hatun</u>            | 7 or 8 strings<br>6 or 7 courses | $(A_3) \cdot D_4 \cdot G_4 \cdot C_5 \cdot E_5 E_4 \cdot A_4 \cdot E_5$  | Grand Charango, Hatun Charango, Peruvian Charango | Peru                                       | A recent addition to the charango family.   |   |
| <u>Charangón</u>                  | 10 strings<br>5 courses          | Standard/Common:<br>$D_4 D_4 \cdot G_4 G_4 \cdot B_4 B_3 \cdot E_4 E_4 \cdot B_4 B_4$<br>Alternates:   | Tenor Charango,<br>"Bass" Charango                | Andean Region                              | Standard AKA "Argentine tuning" or "G6 tuning", one fourth lower than the charango.<br>Very similar in appearance to the charango, but slightly larger.   |   |

|                        |   |   |  |                         |  |   |
|------------------------|---|---|--|-------------------------|--|---|
|                        |   | <ul style="list-style-type: none"> <li>C<sub>6</sub> Tuning<br/>G<sub>3</sub> G<sub>3</sub>*C<sub>4</sub> C<sub>4</sub>*E<sub>4</sub> E<sub>3</sub>*A<sub>3</sub> A<sub>3</sub>*E<sub>4</sub><br/>E<sub>4</sub></li> <li>Bass G<br/>G<sub>3</sub> G<sub>2</sub>*C<sub>4</sub> C<sub>3</sub>*E<sub>4</sub> E<sub>3</sub>*A<sub>3</sub> A<sub>3</sub>*E<sub>4</sub><br/>E<sub>4</sub></li> <li>Bolivian tuning:<br/>C<sub>4</sub> C<sub>4</sub>*F<sub>4</sub> F<sub>4</sub>*A<sub>4</sub> A<sub>3</sub>*D<sub>4</sub> D<sub>4</sub>*A<sub>4</sub> A<sub>4</sub></li> </ul>                          |  |                         |  |   |
| Charango, Ranka        | 11 strings<br>5 courses                   | G <sub>4</sub> G <sub>4</sub> *C <sub>5</sub> C <sub>5</sub> *E <sub>5</sub> E <sub>4</sub> *A <sub>4</sub> A <sub>4</sub> *E <sub>5</sub> E <sub>5</sub><br>E <sub>5</sub> *D <sub>4</sub> D <sub>4</sub> *A <sub>4</sub> A <sub>4</sub> *G <sub>5</sub> G <sub>4</sub> *C <sub>5</sub> C <sub>5</sub> *G <sub>5</sub><br>G <sub>5</sub> G <sub>6</sub>  | Patasi Charango,<br>Ranqua Charango  | Cochabamba, Bolivia     |  |   |
| Chillador              | 10 strings<br>5 courses                   | Standard/Common:<br><br>G <sub>3</sub> G <sub>3</sub> *C <sub>4</sub> C <sub>4</sub> *E <sub>4</sub> E <sub>3</sub> *A <sub>3</sub> A <sub>3</sub> *E <sub>4</sub><br>E <sub>4</sub><br>Alternates: Same as charango  |  | Andean mountains        | Essentially a flat-backed charango   |    |
| Chitara battente       | 10 strings<br>5 courses                   | A <sub>3</sub> A <sub>3</sub> *D <sub>4</sub> D <sub>4</sub> *G <sub>3</sub> G <sub>3</sub> *B <sub>3</sub> B <sub>3</sub> *E <sub>4</sub><br>E <sub>4</sub>  |  | Italy                   |  |    |
| Chonguri               | 4 strings<br>4 courses                    | Standard/Common:<br><br>D <sub>2</sub> F <sub>2</sub> D <sub>3</sub> A <sub>2</sub><br>Alternate:[*]<br><br>▪ F <sub>3</sub> A <sub>3</sub> F <sub>4</sub> C <sub>4</sub>   | Chaghry, Chagur,<br>Chugur, Choghur,<br>Chungur, Chunguri                                      | Georgia                 | [*]There are many tuning variations. Note that both examples here are re-entrant.  |    |
| Çiftelia               | 2 strings<br>2 courses                    | B <sub>3</sub> E <sub>3</sub>   |  | Albania                 | Common tuning, there are variants.   |    |
| Cimbalom               | [*] about 125 strings<br>about 53 courses | A <sub>2</sub> A <sub>#2</sub> B <sub>2</sub> C <sub>3</sub> C <sub>#3</sub> D <sub>3</sub> D <sub>#3</sub> E <sub>3</sub> F <sub>3</sub><br>F <sub>#3</sub> G <sub>3</sub> G <sub>#3</sub> [...] * A <sub>#5</sub> B <sub>5</sub> C <sub>6</sub> C <sub>#6</sub><br>D <sub>6</sub> D <sub>#6</sub> E <sub>6</sub> F <sub>6</sub> F <sub>#6</sub> G <sub>6</sub> G <sub>#6</sub> A <sub>6</sub>   | Cimbál, cymbalom,<br>cymbalum, tāmbal,<br>tsimbal and tsimbl,<br>santur, santouri,<br>sandouri | Hungary                 | * String number varies with size of instrument; bass courses are usually triple strung and higher courses typically quadruple strung. Range given is for a Concert Grand; other sizes with smaller, and with more extended ranges exist. Only lowest and highest octaves are given; intervening notes are tuned chromatically. |   |
| Cinco Cuatro           | 5 strings<br>4 courses                    | G <sub>3</sub> *D <sub>4</sub> D <sub>3</sub> *F <sub>#4</sub> *B <sub>4</sub>  |  | North-western Venezuela |  |   |
| Cinco Y Medio          | 5 strings<br>5 courses                    | Standard/Common:<br><br>E <sub>4</sub> *G <sub>3</sub> *D <sub>4</sub> *F <sub>#4</sub> *B <sub>4</sub><br>Alternates:<br><br>▪ "El Tocuyo tuning":<br>A <sub>4</sub> *D <sub>3</sub> *F <sub>#4</sub> *B <sub>4</sub> *E <sub>4</sub>  |  | North-western Venezuela |  |   |
| Cinco y Medio          | 6 strings<br>6 courses                    | Standard/Common:<br><br>E <sub>3</sub> *A <sub>3</sub> *D <sub>3</sub> *F <sub>#4</sub> *B <sub>4</sub> *E <sub>4</sub><br>Alternate:<br><br>▪ "El Tocuyo tuning":<br>A <sub>4</sub> *A <sub>3</sub> *D <sub>3</sub> *F <sub>#4</sub> *B <sub>4</sub> *E <sub>4</sub>   |  | North-western Venezuela | Standard a.k.a. "Sanara tuning"  |   |
| Cinco Seis             |   | ( See Seis Cinco )  |  |                         |  | ( See Seis Cinco )  |
| Cittern (long scale)   | 10 strings<br>5 courses                   | Standard/Common (aka "Irish"):<br><br>D <sub>2</sub> D <sub>2</sub> *G <sub>2</sub> G <sub>2</sub> *D <sub>3</sub> D <sub>3</sub> *A <sub>3</sub> A <sub>3</sub> *D <sub>4</sub><br>D <sub>4</sub><br>Alternates:<br><br>▪ Low 'C'<br>C <sub>2</sub> C <sub>2</sub> *G <sub>2</sub> G <sub>2</sub> *D <sub>3</sub> D <sub>3</sub> *A <sub>3</sub> A <sub>3</sub> *D <sub>4</sub><br>D <sub>4</sub><br><br>▪ Mandolin(All fifths):<br>C <sub>2</sub> C <sub>2</sub> *G <sub>2</sub> G <sub>2</sub> *D <sub>3</sub> D <sub>3</sub> *A <sub>3</sub> A <sub>3</sub> *E <sub>4</sub><br>E <sub>4</sub> | Celtic or Flatback Cittern   | Europe                  | Long Scale <sup>[8]</sup> ~ 25.25" (64.1cm)<br><br>Many other modal tunings have been described for cittersns.   |  |
| Cittern<br>(mid scale) | 10 strings<br>5 courses                   | Standard/Common:<br><br>D <sub>2</sub> D <sub>2</sub> *G <sub>2</sub> G <sub>2</sub> *D <sub>3</sub> D <sub>3</sub> *A <sub>3</sub> A <sub>3</sub> *E <sub>4</sub><br>E <sub>4</sub><br>Alternates:<br><br>▪ Irish:   | Celtic or Flatback Cittern   | Europe                  | Mid Scale <sup>[9]</sup> ~ 22.5" (57.2cm)<br><br>Many other modal tunings have been described for cittersns.   |  |

|                       |                         |  |  |             |   |   |
|-----------------------|-------------------------|--|--|-------------|---|---|
|                       |                         | D <sub>2</sub> D <sub>2</sub> •G <sub>2</sub> G <sub>2</sub> •D <sub>3</sub> D <sub>3</sub> •A <sub>3</sub> A <sub>3</sub> •D <sub>4</sub><br>D <sub>4</sub><br>▪ Modal D:<br>D <sub>2</sub> D <sub>2</sub> •A <sub>2</sub> A <sub>2</sub> •D <sub>3</sub> D <sub>3</sub> •A <sub>3</sub> A <sub>3</sub> •D <sub>4</sub><br>D <sub>4</sub>   |  |             |   |   |
| Cittern (short scale) | 10 strings<br>5 courses | Standard/Common:<br><b>G<sub>2</sub> G<sub>2</sub>•D<sub>3</sub> D<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•D<sub>4</sub> D<sub>4</sub>•A<sub>4</sub><br/>A<sub>4</sub></b><br>Alternates:<br>▪ Modal G:<br>G <sub>2</sub> G <sub>2</sub> •D <sub>3</sub> D <sub>3</sub> •G <sub>3</sub> G <sub>3</sub> •D <sub>4</sub> D <sub>4</sub> •G <sub>4</sub><br>G <sub>4</sub><br>▪ Mandolin High 'B':<br>G <sub>2</sub> G <sub>2</sub> •D <sub>3</sub> D <sub>3</sub> •A <sub>3</sub> A <sub>3</sub> •E <sub>4</sub> E <sub>4</sub> •B <sub>4</sub><br>B <sub>4</sub>  | Celtic or Flatback Cittern   | Europe      | Short Scale <sup>[10]</sup> ~ 20.0" (51.0cm)<br>Many other modal tunings have been described for cittersns.   |    |
| Crwth                 | 5 strings<br>5 courses  | <b>G<sub>2</sub>•C<sub>3</sub>•C<sub>2</sub>•D<sub>2</sub>•D<sub>3</sub></b>   | Croud, Rote  | Wales       | Traditional Welsh tuning  |    |
| Cuatro Alto           | 10 strings<br>5 courses | <b>F♯<sub>4</sub> F♯<sub>3</sub>•B<sub>3</sub> B<sub>4</sub>•E<sub>4</sub> E<sub>4</sub>•A<sub>4</sub> A<sub>4</sub>•D<sub>5</sub><br/>D<sub>5</sub></b>   | Alto Cuatro  | Puerto Rico | Rare. <sup>[11]</sup>   |   |
| Cuatro Antiguo        | 8 strings<br>4 courses  | <b>A<sub>3</sub> A<sub>3</sub>•E<sub>4</sub> E<sub>4</sub>•A<sub>4</sub> A<sub>4</sub>•D<sub>5</sub> D<sub>5</sub></b>   |  | Puerto Rico | A 4 string/4 course version exists, tuned the same  |   |
| Cuatro Bajo           | 10 strings<br>5 courses | <b>E<sub>3</sub> E<sub>2</sub>•A<sub>3</sub> A<sub>2</sub>•D<sub>3</sub> D<sub>3</sub>•G<sub>3</sub> G<sub>3</sub>•C<sub>4</sub><br/>C<sub>4</sub></b>   | Bass Cuatro  | Puerto Rico | Rare. <sup>[12]</sup>   |   |
| Cuatro Cubano         | 8 strings<br>4 courses  | Standard/Common:<br><b>G<sub>4</sub> G<sub>3</sub>•C<sub>4</sub> C<sub>4</sub>•E<sub>4</sub> E<sub>4</sub>•A<sub>4</sub> A<sub>4</sub></b><br>Alternates:<br>▪ G <sub>4</sub> G <sub>3</sub> •C <sub>4</sub> C <sub>4</sub> •E <sub>4</sub> E <sub>4</sub> •G <sub>4</sub> G <sub>4</sub><br>▪ A <sub>4</sub> A <sub>3</sub> •D <sub>4</sub> D <sub>4</sub> •F♯ <sub>4</sub> F♯ <sub>4</sub> •B <sub>4</sub> B <sub>4</sub>  | Cuban Cuatro, Tres-Cuatro  | Cuba        |   |   |
| Cuatro, Puerto Rican  | 10 strings<br>5 courses | <b>B<sub>3</sub> B<sub>2</sub>•E<sub>4</sub> E<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•D<sub>4</sub> D<sub>4</sub>•G<sub>4</sub><br/>G<sub>4</sub></b>   | Cuatro Tradicional, Cuatro Tenor, Cuatro Puertorriqueño, Cuatro Aviolinado, Cuatro Moderno, Tenor Cuatro | Puerto Rico | The Tenor Cuatro is the standard instrument of the Puerto Rican Cuatro Family. <sup>[13]</sup><br><i>Cuatro Aviolinado</i> means 'violin-shaped cuatro'; <i>Cuatro Moderno</i> is to distinguish from the <i>Cuatro Antiguo</i>   |  |
| Cuatro, Venezuelan    | 4 strings<br>4 courses  | <b>A<sub>3</sub>•D<sub>4</sub>•F♯<sub>4</sub>•B<sub>3</sub></b>  | Cuatro Venezolano  | Venezuela   | Standard AKA "D <sub>6</sub> tuning"  |  |
| Cuatro Soprano        | 10 strings<br>5 courses | <b>C♯<sub>5</sub> C♯<sub>4</sub>•F♯<sub>4</sub> F♯<sub>5</sub>•B<sub>4</sub> B<sub>4</sub>•E<sub>5</sub><br/>E<sub>5</sub>•A<sub>5</sub> A<sub>5</sub></b>   | Soprano Cuatro   | Puerto Rico | Rare. <sup>[14]</sup>   |   |
| Cuk                   | 3 strings<br>3 courses  | <b>G<sub>4</sub> • B<sub>3</sub> • E<sub>3</sub></b>   | Kroncong Cuk, Nylon kroncong guitar  | Indonesia   |   |  |
| Cümbüş                | 12 strings<br>6 courses | Standard/Common:<br><b>A<sub>2</sub> A<sub>2</sub>•B<sub>2</sub> B<sub>2</sub>•E<sub>3</sub> E<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•D<sub>4</sub><br/>D<sub>4</sub>•G<sub>4</sub> G<sub>4</sub></b><br>Alternates:<br>▪ Alternative Standard: D <sub>2</sub> D <sub>2</sub> •E <sub>2</sub> E <sub>2</sub> •A <sub>2</sub> A <sub>2</sub> •D <sub>3</sub> D <sub>3</sub> •G <sub>3</sub> G <sub>3</sub> •C <sub>4</sub> C <sub>4</sub><br>▪ Egypt/Arab: D <sub>2</sub> D <sub>2</sub> •G <sub>2</sub> G <sub>2</sub> •A <sub>2</sub> A <sub>2</sub> •D <sub>3</sub> D <sub>3</sub> •G <sub>3</sub> G <sub>3</sub> •C <sub>4</sub> C <sub>4</sub><br>▪ Turkish/Armenian:<br>E <sub>2</sub> E <sub>2</sub> •A <sub>2</sub> A <sub>2</sub> •B <sub>2</sub> B <sub>2</sub> •E <sub>3</sub> E <sub>3</sub> •A <sub>3</sub> A <sub>3</sub> •D <sub>4</sub> D <sub>4</sub> |  | Turkey      | Tunings are highly variable, other common alternates include:<br>▪ Turkish Armenian alt.: C♯ <sub>2</sub> C♯ <sub>2</sub> •F♯ <sub>2</sub> F♯ <sub>2</sub> •B <sub>2</sub> B <sub>2</sub> •E <sub>3</sub><br>E <sub>3</sub> •A <sub>3</sub> A <sub>3</sub> •D <sub>4</sub> D <sub>4</sub><br>▪ New Turkish classical: F♯ <sub>2</sub> F♯ <sub>2</sub> •B <sub>2</sub> B <sub>2</sub> •E <sub>3</sub> E <sub>3</sub> •A <sub>3</sub><br>A <sub>3</sub> •D <sub>4</sub> D <sub>4</sub> •G <sub>4</sub> G <sub>4</sub><br>▪ Old Turkish classical:<br>A <sub>2</sub> A <sub>2</sub> •D <sub>3</sub> D <sub>3</sub> •E <sub>3</sub> E <sub>3</sub> •A <sub>3</sub> A <sub>3</sub> •D <sub>4</sub> D <sub>4</sub> •G <sub>4</sub> G <sub>4</sub> |  |
| Cümbüş, Tambur        | 6 strings<br>3 courses  | <b>D<sub>2</sub> D<sub>2</sub>•A<sub>2</sub> A<sub>2</sub>•D<sub>3</sub> D<sub>3</sub></b>   |  | Turkey      |   |   |
| Cura                  | 6 strings<br>3 courses  | <b>D<sub>4</sub> D<sub>4</sub>•A<sub>4</sub> A<sub>4</sub>•E<sub>5</sub> E<sub>5</sub></b>   | Cura saz   | Turkey      |   |  |
| Cura                  | 7 strings               |  | Cura saz   | Turkey      |   |   |

|      |                        |  |          |        |                  |  |
|------|------------------------|--|----------|--------|------------------|--|
|      | 3 courses              | <b>G<sub>3</sub> G<sub>3</sub>•D<sub>4</sub> D<sub>4</sub>•A<sub>4</sub> A<sub>4</sub> A<sub>4</sub></b>               |          |        |                  |  |
| Cura | 8 strings<br>4 courses | <b>G<sub>3</sub> G<sub>3</sub>•D<sub>4</sub> D<sub>4</sub>•A<sub>4</sub> A<sub>4</sub>•E<sub>5</sub> E<sub>5</sub></b> | Cura saz | Turkey | Same as Mandolin |  |

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| Instrument           | Strings & Courses            | Tuning(s)   | Alternative Names                               | Origin                | Notes  | Picture   |
|----------------------|------------------------------|---|---|-----------------------|--|---|
| Đàn bầu              | 1 string/<br>1 course        | C <sub>3</sub> ["]  | Đàn đốc huyền, Độc huyền cầm                    | Vietnam               | * Tuning is approximate, and frequently varies   |    |
| Đàn dây              | 3 strings<br>3 courses       | G <sub>3</sub> •C <sub>4</sub> •F <sub>4</sub>  | Vo de cam,<br>Đàn dây                           | Vietnam               |  |    |
| Đàn nguyệt           | 2 strings<br>2 courses       | [ * ]   | Nguyệt cầm,<br>Đàn kim                          | Vietnam               | * There is no fixed tuning: one string is tuned to a convenient vocal pitch, the other is tuned a 4th, a 5th or (rarely) an octave above that. |    |
| Đàn nhị              | 2 strings<br>2 courses       | Standard/Common:<br><b>F C</b><br>Alternates:<br>▪ cheo: C G<br>▪ hoy bac: G D  | Đàn cõ  | Vietnam               |  |    |
| Đàn tranh            | 17 strings,<br>17 courses["] | G <sub>3</sub> A <sub>3</sub> C <sub>4</sub> D <sub>4</sub> E <sub>4</sub> G <sub>4</sub> A <sub>4</sub> C <sub>5</sub> D <sub>5</sub><br>E <sub>5</sub> G <sub>5</sub> A <sub>5</sub> C <sub>6</sub> D <sub>6</sub> E <sub>6</sub> G <sub>7</sub> A <sub>7</sub> |   | Vietnam               | *Instruments with from 14–25 strings/courses have been made;<br>17 is considered the current standard (2014)                                   |    |
| Daruan               | 4 strings<br>4 courses       | D <sub>2</sub> A <sub>2</sub> D <sub>3</sub> A <sub>3</sub> '   | Bass Ruan                                       | China                 | lit. "large Ruan"  |   |
| Dihu                 | 2 strings<br>2 courses       | ▪ G <sub>2</sub> D <sub>3</sub><br>▪ D <sub>3</sub> A <sub>3</sub>  | Dadihu, Dahu, Ziaodihu,<br>Zhongdihu            | China                 | A larger version of the Erhu.<br>Either tuning may be considered standard.   |    |
| Diyinruan            | 4 strings<br>4 courses       | G <sub>1</sub> D <sub>2</sub> G <sub>2</sub> D <sub>3</sub> '   | Contraass Ruan                                  | China                 | lit. "low pitched Ruan"  |   |
| Dombra               | 2 strings<br>2 courses       | Standard:<br><b>D<sub>4</sub>•G<sub>4</sub></b>   | Dambura, Dumbyra,<br>Tumpyra, Tumra,<br>Danbura | North<br>central Asia |  |  |
| Domra, Alto          | 3 strings<br>3 courses       | E <sub>3</sub> •A <sub>3</sub> •D <sub>4</sub>  |   | Russia                |  |   |
| Domra, Alto          | 4 strings<br>4 courses       | C <sub>3</sub> •G <sub>3</sub> •D <sub>4</sub> •A <sub>4</sub>  |   | Ukraine               | Same as mandola tuning   |   |
| Domra, Bass          | 3 strings<br>3 courses       | E <sub>2</sub> •A <sub>2</sub> •D <sub>3</sub>  |   | Russia                |  |   |
| Domra, Bass          | 4 strings<br>4 courses       | C <sub>2</sub> •G <sub>2</sub> •D <sub>3</sub> •A <sub>3</sub>  |   | Ukraine               | Same as mandocello tuning  |   |
| Domra, Contrabass    | 3 strings<br>3 courses       | Standard:<br><b>E<sub>1</sub>•A<sub>1</sub>•D<sub>2</sub></b><br>Alternate:<br>▪ A <sub>1</sub> •D <sub>2</sub> •G <sub>2</sub>   |   | Russia                |  |   |
| Domra, Contrabass    | 4 strings<br>4 courses       | E <sub>1</sub> •A <sub>1</sub> •D <sub>2</sub> •G <sub>2</sub>  |   | Ukraine               | Same as the orchestral double bass   |   |
| Domra, Mezzo-soprano | 3 strings<br>3 courses       | B <sub>3</sub> •E <sub>4</sub> •A <sub>4</sub>  |   | Russia                | Rare   |   |
| Domra, Piccolo       | 3 strings<br>3 courses       | B <sub>4</sub> •E <sub>5</sub> •A <sub>5</sub>  |   | Russia                |  |   |
| Domra, Piccolo       | 4 strings<br>4 courses       | C <sub>4</sub> •G <sub>4</sub> •D <sub>5</sub> •A <sub>5</sub>  |   | Ukraine               | Octave higher than the mandola   |   |
| Domra, Prima         | 3 strings<br>3 courses       | E <sub>4</sub> •A <sub>4</sub> •D <sub>5</sub>  | The main instrument of<br>the domra family      | Russia                |  |  |
| Domra, Prima         | 4 strings                    | G <sub>3</sub> •D <sub>4</sub> •A <sub>4</sub> •E <sub>5</sub>  |   | Ukraine               | Same as mandolin tuning  |   |

|                       |                                 |  |   |                  |  |   |
|-----------------------|---------------------------------|--|---|------------------|--|---|
|                       | <u>4 courses</u>                |  |   |                  |  |   |
| Domra, Tenor          | 3 strings<br><u>3 courses</u>   | $B_2 \cdot E_3 \cdot A_3$  |   | Russia           |  |   |
| Domra, Tenor          | 4 strings<br><u>4 courses</u>   | $G_2 \cdot D_3 \cdot A_3 \cdot E_4$  |   | Ukraine          | Same as octave-mandolin tuning   |   |
| Dotar                 | 2 strings<br><u>2 courses</u>   | Standard/Common:<br>$D_3 \cdot G_3$<br>Alternate:<br>▪ $D_3 \cdot A_3$   | Dutar   | Uzbekistan       | This instrument is found in many forms throughout central Asia.  |                                    |
| Dotara                | 4 strings<br><u>4 courses</u>   | $F\sharp_3 \cdot C\sharp_3 \cdot F\sharp_4 \cdot B_4$  |   | India            |  |                                    |
| Dotara                | 6 strings<br><u>5 courses</u>   | $G_2 \cdot G_3 \cdot C_4 \cdot G_4 \cdot G_4 \cdot C_5$  |   | Bangladesh       |  |   |
| Double bass           | 4 strings<br><u>4 courses</u>   | Standard/Common:<br>$E_1 \cdot A_1 \cdot D_2 \cdot G_2$<br>Alternates:<br>▪ Drop D: $D_1 \cdot A_1 \cdot D_2 \cdot G_2$<br>▪ Solo Tuning: $F\sharp_1 \cdot B_1 \cdot E_2 \cdot A_2$<br>▪ With low 'C' machine:<br>$C_1 \cdot A_1 \cdot D_2 \cdot G_2$<br>▪ 'C' Machine "Legion":<br>$B_0 \cdot A_1 \cdot D_2 \cdot G_2$  | Bass, bass fiddle, contrabass, string bass, standup bass, doghouse                    | Europe           | Standard AKA "orchestral tuning"   |                                    |
| Double bass, 5-string | 5 strings<br><u>5 courses</u>   | Standard/Common:<br>$C_1 \cdot E_1 \cdot A_1 \cdot D_2 \cdot G_2$<br>Alternates:<br>▪ Modern 4th tuning:<br>$B_0 \cdot E_1 \cdot A_1 \cdot D_2 \cdot G_2$  | Bass, bass fiddle, contrabass, string bass, standup bass, doghouse                    | Europe           | Standard AKA "orchestral tuning"   |                                   |
| Dranyen               | 7 strings<br><u>3 courses</u>   | $A_3 \cdot A_3 \cdot D_4 \cdot D_3 \cdot D_3 \cdot G_3 \cdot G_3$  | Dramyin, Dramnyen   | Bhutan and Tibet | Standard AKA "Bhutanese tuning"  |                                  |
| Dranyen               | 6 strings<br><u>3 courses</u>   | $A_3 \cdot A_3 \cdot D_3 \cdot D_3 \cdot G_3 \cdot G_3$  | Dramyin, Dramnyen   | Bhutan and Tibet | Standard AKA "Tibetan tuning"  |                                  |
| Dulcimer,<br>3 course | 3–6 strings<br><u>3 courses</u> | Standard/Common:<br>▪ 3-string: $A_3 \cdot A_3 \cdot D_3$<br>▪ 4-string: $A_3 \cdot A_3 \cdot A_3 \cdot D_3$<br>▪ 5-string: $A_3 \cdot A_3 \cdot A_3 \cdot D_3 \cdot D_3$<br>▪ 6-string: $A_3 \cdot A_3 \cdot A_3 \cdot A_3 \cdot D_3 \cdot D_3$<br>Alternates (see notes):<br>▪ Mixolydian: $D_4 \cdot A_3 \cdot D_3$<br>▪ Dorian: $G_3 \cdot A_3 \cdot D_3$<br>▪ Aeolian: $C_4 \cdot A_3 \cdot D_3$<br>▪ Galax ("Unison"): $D_4 \cdot D_4 \cdot D_3$   | Mountain Dulcimer, Appalachian Dulcimer, Lap Dulcimer, Dulcimore, Delcimore, Delcimer | US               |  | 3-course, 4-string dulcimer:<br> |
| Dulcimer,<br>4 course | 4–8 strings<br><u>4 courses</u> | Common*:<br>▪ 4-string: $D_4 \cdot D_4 \cdot A_3 \cdot D_3$<br>▪ 5-string: $D_4 \cdot D_4 \cdot D_4 \cdot A_3 \cdot D_3$<br>▪ 6-string: $D_4 \cdot D_4 \cdot D_4 \cdot A_3 \cdot D_3 \cdot D_3$<br>▪ 8-string: $D_4 \cdot D_4 \cdot D_4 \cdot D_4 \cdot A_3 \cdot A_3 \cdot D_3 \cdot D_3$<br>Alternates (see notes):<br>▪ G-tuning: $D_4 \cdot B_3 \cdot G_3 \cdot D_3$<br>▪ Dorian: $D_4 \cdot C_4 \cdot G_3 \cdot D_3$<br>▪ Ragtime: $D_4 \cdot A\sharp_3 \cdot A_3 \cdot D_3$<br>▪ D-tuning: $F\sharp_4 \cdot D_4 \cdot A_3 \cdot D_3$ | Mountain Dulcimer, Appalachian Dulcimer, Lap Dulcimer, Dulcimore, Delcimore, Delcimer | US               | <ul style="list-style-type: none"> <li>▪ Most dulcimers are either 3 or 4 course; any or all courses may be doubled with a second, unison string—hence the number of different stringing possibilities.</li> <li>▪ Alternates listed here give a pitch for each whole course, regardless of number of strings.</li> <li>▪ Many variants are used; there is no fixed "standard" for the four-course.</li> <li>▪ Chromatic instruments exist, but traditionally dulcimers are fretted in diatonic intervals: whole (step), whole, half, whole, whole, whole, half.<sup>[15]</sup></li> </ul> |                                  |

| Instrument          | Strings & Courses          | Tuning(s)   | Alternative Names                | Origin | Notes  | Picture   |
|---------------------|----------------------------|---|----------------------------------|--------|--|---|
| Ektara              | 1 string<br>1 course       | No standard; string is tuned to any convenient pitch. | Ektar, Iktar, Gopichand, Gobijeu | India  |  |  |
| Epinette Des Vosges | 6 strings [*]<br>6 courses | Common:<br><b>G C G</b>                               |                                  | France | Typically three fretted strings; three drones, but the number of drones may vary widely.<br>Similar in concept to the Apalacian Dulcimer |  |
| Erhu                | 2 strings<br>2 courses     | <b>D4 A4</b>  | Nanhu                            | China  |  |  |

**F**

| Instrument | Strings & Courses      | Tuning(s)  | Alternative Names   | Origin         | Notes   | Picture  |
|------------|------------------------|--|---|----------------|---|--|
| Fegereng   | 2 strings<br>2 courses | [*]  | Faglong, Fuglung, Hegelong, Kutyapi, Kutiapi, Kotyapi, Kudapi, Kudyapi, Kuglong, Kadlong, Kudlong, Kudlung, Kusyapi | Southeast Asia | [*] There is no "standard" tuning. One string is tuned to any convenient pitch, and the other is tuned one octave higher.   |   |
| Fiddle     | 4 strings<br>4 courses | Standard/common:<br><b>G3 D4 A4 E5</b><br>Alternates: <ul style="list-style-type: none"><li>▪ Cajun: F3 C4 G4 D5</li><li>▪ Open G: G3 D4 G4 B4</li><li>▪ Sawmill: G3 D4 G4 D5</li><li>▪ Gee-dad: G3 D4 A4 D5</li><li>▪ Open D: D3 D4 A4 D5</li><li>▪ High bass: A3 D4 A4 E5</li><li>▪ Cross tuning: A3 E4 A4 E5</li><li>▪ Calico: A3 E4 A4 C#5</li></ul> | Violin, Kit, Pochette   | Europe, USA    | "Fiddle" describes a playing style more than a unique instrument; a fiddle is just a violin with a slightly different "set-up".<br>Standard AKA "Italian" or "orchestral" tuning, High Bass AKA "Old-time D tuning", Cross tuning AKA "High counter", Calico AKA "Black Mountain Rag" or the Swedish tunings: Trollstämning, or Näckastämning |  |

**G**

| Instrument             | Strings & Courses        | Tuning(s)  | Alternative Names  | Origin                             | Notes  | Picture  |
|------------------------|--------------------------|--|--|------------------------------------|--|--|
| Gabusi                 | 6 strings<br>4 courses   | D g bb dd  | Gaboussi   | Comoros Islands                    |  |   |
| Gadulka                | 3 strings<br>3 courses   | A3 E3 A4   |  | The Balkans                        | 3 playing strings, with up to 10 sympathetic strings.  |   |
| Gambus Hadhramaut      | 11 strings<br>6 courses  | C • G G • B B • A A • E E • D D  |  | Malaysia, Indonesia                | Related to oud   | <br>Musician playing gambus Hadhramaut.   |
| Gaoyinruan             | 4 strings<br>4 courses   | G3 D4 G4 D5  | Soprano Ruan   | China                              | Literally "high pitched Ruan"  |  |
| Gehu                   | 4 strings<br>4 courses   | C2 G2 D3 A3  | Erhu-cello,  | China                              | Same tunings as cello  |  |
| Gekkin                 | 4 strings<br>2 courses   | C3 C3 G3 G3 [*]  | Gekin  | Japan                              | * Tuning is <i>not</i> western equal temperament   |   |
| Gekkin                 | 4 strings<br>4 courses   | A3 D4 D4 D5  | Japanese Yueqin  | Japan                              |  |  |
| Geyerleier             | 8 strings<br>4 courses   | E3 E2-B3 B2-E3 E3-B3 B3<br>Alternate:<br>▪ D3 D2-A3 A2-D3 D3-A3 A3   |  | Hamburg, Germany                   |  |   |
| Grajappi               | 4 strings<br>2 courses   | F2 F2 • B2 B2  | Krachappi, Krachap pi  | Thailand                           |  |  |
| Guitalele              | 6 strings<br>6 courses   | Standard/Common:<br>A2 D3 G3 C4 E4 A4<br>Alternate:<br>▪ B2 E3 A3 D4 F#4 B4  | Ukutar   | US, Japan                          | Tuned a 4th or a 5th higher than the standard guitar.  |   |
| Guitar                 | 6 strings<br>6 courses   | Standard:<br>E2 A2 D3 G3 B3 E4<br>Common Alternates:<br>▪ Drop D: D2 A2 D3 G3 B3 E4<br>▪ Open D: D2 A2 D3 F#3 A3 D4<br>▪ Open G: D2 G2 D2 G2 B3 D4<br>▪ Open A: E2 A2 E3 A3 C#4 E4<br>▪ Lute: E2 A2 D3 F#3 B3 E4<br>▪ Irish: D2 A2 D3 G3 A3 D4<br>▪ Nashville: E3 A3 D4 G4 B3 E4 | Classical guitar, 6-string guitar, Spanish guitar, Steel-string guitar | Spain (acoustic)<br>USA (electric) | "classical" = guitar with gut, nylon, or other synthetic strings;<br>"acoustic"/"steel-string" = guitar with metal strings;<br>Open G AKA "bottleneck," "taro patch";<br>Open A AKA "Spanish";<br>"Lute tuning" is usually capoed on 3rd fret to give G2 C3 F3 A3 D4 G4, and E2 is often dropped to D2 (F2 with capo).<br><i>There are hundreds of alternate guitar tunings;</i> whole books have been written on the subject. <sup>[16]</sup> | <br>Steel String Guitar:<br> |
| Guitar, Alto           | 11 strings<br>11 courses | Bb1 C2 D2 Eb2 F2 G2 C3 F3 Bb3<br>D4 G4   | Archguitar, altgitarren, Bolin guitar                                  | Sweden                             |  |   |
| Guitar, Alto           | 13 strings<br>13 courses | A1 Bb1 C2 D2 E2 F2 G2 A2 D3 F3<br>A3 D4 F4   | Archguitar, altgitarren, Bolin guitar                                  | Sweden                             | This instrument is very rare.  |  |
| Guitar, Alto (Niibori) | 6 strings<br>6 courses   | Standard/Common:<br>B2 E3 A3 D4 F#4 B4   | G Guitar   | Japan                              | Transposing guitar in the key of G, developed for the Niibori Guitar Orchestra   |  |
| Guitar, 7              | 7 strings                | Standard/Common:   | 7 string classical guitar,   | US                                 | Van Eps AKA "Jazz tuning"  |  |

|                                 |        |                          |   |   |       |  |  |
|---------------------------------|--------|--------------------------|---|---|-------|--|--|
|                                 | string | 7 courses                | <b>B<sub>1</sub> E<sub>2</sub> A<sub>2</sub> D<sub>3</sub> G<sub>3</sub> B<sub>3</sub> E<sub>4</sub></b><br>Alternate: <ul style="list-style-type: none"><li>▪ Van Eps: A<sub>1</sub> E<sub>2</sub> A<sub>2</sub> D<sub>3</sub> G<sub>3</sub> B<sub>3</sub> E<sub>4</sub></li><li>▪ Choro: C<sub>2</sub> E<sub>2</sub> A<sub>2</sub> D<sub>3</sub> G<sub>3</sub> B<sub>3</sub> E<sub>4</sub></li></ul>  | "Brazilian" guitar,<br>7 string electric guitar       |       | "Choro" is popular in Brazil<br>6-string alternates may be adapted for the 7-string  |    |
| Guitar, 8 string (low/high)     |        | 8 strings<br>8 courses   | <b>B<sub>1</sub> E<sub>2</sub> A<sub>2</sub> D<sub>3</sub> G<sub>3</sub> B<sub>3</sub> E<sub>4</sub> A<sub>4</sub></b>  | 8 string classical guitar                             | Spain | AKA "Galbraith tuning"   |  |
| Guitar, 8 string (added basses) |        | 8 strings<br>8 courses   | [B <sub>1</sub> , D <sub>2</sub> ] E <sub>2</sub> A <sub>2</sub> D <sub>3</sub> G <sub>3</sub> B <sub>3</sub> E <sub>4</sub>  | 8 string classical guitar<br>8 string electric guitar | Spain | Tuning of two lowest strings varies with player and music  |   |
| Guitar, 9 string                |        | 9 strings<br>6 courses   | <b>E<sub>3</sub> E<sub>2</sub>•A<sub>3</sub> A<sub>2</sub>•D<sub>4</sub> D<sub>3</sub>•G<sub>3</sub> B<sub>3</sub> E<sub>4</sub></b>  |   | US    | 12-string guitar variant with doubled bases  |  |
| Guitar, 9 string                |        | 9 strings<br>6 courses   | <b>E<sub>2</sub>• A<sub>2</sub>• D<sub>3</sub>• G<sub>4</sub> G<sub>3</sub>•B<sub>3</sub> B<sub>3</sub>•E<sub>4</sub> E<sub>4</sub></b>   |   | US    | 12-string guitar variant with doubled trebles  |  |
| Guitar, 9 string                |        | 9 strings<br>9 courses   | <b>F#<sub>1</sub> B<sub>1</sub> E<sub>2</sub> A<sub>2</sub> D<sub>3</sub> G<sub>3</sub> B<sub>3</sub> E<sub>4</sub> A<sub>4</sub> [^]</b>   |   | US    | * These short-scale, extended range instruments are uncommon, and tuning hasn't really been standardized for them.                     |   |
| Guitar, 10 string               |        | 10 strings<br>10 courses | <b>F#<sub>2</sub> G#<sub>2</sub> A#<sub>2</sub> C<sub>2</sub> E<sub>2</sub> A<sub>2</sub> D<sub>3</sub> G<sub>3</sub> B<sub>3</sub> E<sub>4</sub></b>   | 10 String classical guitar                            | Spain | Standard tuning, developed by luthier José Ramírez III in collaboration with guitarist Narciso Yepes                                   |   |
| Guitar, 12 string               |        | 12 strings<br>6 courses  | Standard/Common:<br><b>E<sub>3</sub> E<sub>2</sub>•A<sub>3</sub> A<sub>2</sub>•D<sub>4</sub> D<sub>3</sub>•G<sub>4</sub> G<sub>3</sub>•B<sub>3</sub> B<sub>3</sub>•E<sub>4</sub> E<sub>4</sub></b><br>Alternates: <ul style="list-style-type: none"><li>▪ Variant: E<sub>4</sub> E<sub>2</sub>•A<sub>3</sub> A<sub>2</sub>•D<sub>4</sub> D<sub>3</sub>•G<sub>4</sub> G<sub>3</sub>•B<sub>3</sub> B<sub>3</sub>•E<sub>4</sub> E<sub>4</sub></li></ul> All 6-string alternates may be adapted to 12-string. | Twelve-stringed Guitar                                | US?   | Some players tune the third course to unison G <sub>3</sub> 's to minimize breakage of the high G string.                              |    |
| Guitar, baritone                |        | 6 strings<br>6 courses   | Common tunings: <ul style="list-style-type: none"><li>▪ 4th lower: B<sub>1</sub> E<sub>2</sub> A<sub>2</sub> D<sub>3</sub> F#<sub>3</sub> B<sub>3</sub></li><li>▪ 5th lower: A<sub>1</sub> D<sub>2</sub> G<sub>2</sub> C<sub>3</sub> E<sub>3</sub> A<sub>3</sub></li><li>▪ Octave lower: E<sub>1</sub> A<sub>1</sub> D<sub>2</sub> G<sub>2</sub> B<sub>2</sub> E<sub>3</sub></li></ul>  |   | US    | There really is no "standard" tuning for baritone guitar; choice of tuning depends on instrument, stringing, and player's preferences. |   |
| Guitar, bass                    |        | 4 strings<br>4 courses   | Standard/Common:<br><b>E<sub>1</sub> A<sub>1</sub> D<sub>2</sub> G<sub>2</sub></b><br>Alternates: <ul style="list-style-type: none"><li>▪ D<sub>1</sub> A<sub>1</sub> D<sub>2</sub> G<sub>2</sub></li><li>▪ D<sub>1</sub> G<sub>1</sub> C<sub>2</sub> F<sub>2</sub></li></ul>   | Bass, electric bass, 4-string bass, Fender bass       | USA   | First U.S. patent filed by Leo Fender on November 21, 1952.  | <br>Acoustic Bass:<br> |
| Guitar, bass (5-string)         |        | 5 strings<br>5 courses   | Standard/Common: <ul style="list-style-type: none"><li>▪ B<sub>0</sub> E<sub>1</sub> A<sub>1</sub> D<sub>2</sub> G<sub>2</sub></li><li>▪ E<sub>1</sub> A<sub>1</sub> D<sub>2</sub> G<sub>2</sub> C<sub>3</sub></li></ul>  | Bass, electric bass, 5-string bass                    |       | Essentially a 4-string bass with one added high or low string. Choice of tuning depends whether the added string is low or high.       |   |
| Guitar, bass (6-string)         |        | 6 strings<br>6 courses   | Standard/Common:<br><b>B<sub>0</sub> E<sub>1</sub> A<sub>1</sub> D<sub>2</sub> G<sub>2</sub> C<sub>3</sub></b><br>Alternate:<br><b>E<sub>1</sub> A<sub>1</sub> D<sub>2</sub> G<sub>2</sub> B<sub>2</sub> E<sub>3</sub></b>  | Bass, electric bass, 6-string bass, Contrabass Guitar |       | Essentially a 4-string bass with either added high and low strings.  |   |
| Guitar, bass (8-string)         |        | 8 strings<br>4 courses   | <b>E<sub>2</sub> E<sub>1</sub>•A<sub>2</sub> A<sub>1</sub>•D<sub>3</sub> D<sub>2</sub>•G<sub>3</sub> G<sub>2</sub></b>  | Eight-string bass guitar,<br>8-string bass            | US    | Essentially a 4-string bass with each string doubled at the upper octave.  |  |

|                             |  |  |  |                |  |   |
|-----------------------------|--|--|--|----------------|--|---|
|                             |  |  |  |                |  |     |
| Guitar, bass<br>(12-string) | 12 strings<br>4 courses                                  | <b>E<sub>2</sub> E<sub>2</sub> E<sub>1</sub>•A<sub>2</sub> A<sub>2</sub> A<sub>1</sub>•D<sub>3</sub> D<sub>3</sub> D<sub>2</sub>•G<sub>3</sub><br/>G<sub>3</sub> G<sub>2</sub></b>   | Twelve-string bass guitar, 12-string bass      | US             | Similar to an 8-string bass with doubled upper octaves.  |   |
| Guitar, octave              | 6 strings<br>6 courses                                   | <b>E<sub>3</sub>•A<sub>3</sub>•D<sub>4</sub>•G<sub>4</sub>•B<sub>4</sub>•E<sub>5</sub></b>   | Piccolo Guitar, Soprano Guitar                 | Germany        | One octave higher than the standard guitar.  |   |
| Guitarra De Golpe           | 5 strings<br>5 courses                                   | Standard/Common:<br><b>D<sub>3</sub>•G<sub>3</sub>•C<sub>4</sub>•E<sub>3</sub>•A<sub>3</sub></b><br>Alternates: <ul style="list-style-type: none"><li>▪ Tecalitan: D<sub>3</sub>•G<sub>3</sub>•B<sub>4</sub>•E<sub>3</sub>•A<sub>3</sub></li><li>▪ Urbana: G<sub>3</sub>•C<sub>4</sub>•E<sub>4</sub>•A<sub>3</sub>•D<sub>4</sub></li><li>▪ Urbana alt: G<sub>3</sub>•C<sub>4</sub>•E<sub>3</sub>•A<sub>3</sub>•D<sub>4</sub></li></ul>   | Guitarra Colorada, Quinta De Golpe, Mariachera | Mexico         | Note re-entrant tunings  |   |
| Lute guitar                 | 6 strings<br>6 courses                                   | Standard/Common:<br><b>E<sub>2</sub>•A<sub>2</sub>•D<sub>3</sub>•G<sub>3</sub>•B<sub>3</sub>•E<sub>4</sub></b><br>Alternates are the same as the Guitar  | Gitarren laute, Gitar-lute, Lute-guitar        | Germany        | Basically this is a lute-shaped guitar; a guitar neck on a lute body.  |    |
| Guitarro                    | 6 strings<br>6 courses                                   | <b>B<sub>4</sub> F♯<sub>4</sub> D<sub>5</sub> A<sub>5</sub> E<sub>5</sub></b>  | Guitarrico, Spanish Tiple                      | Spain          |  |   |
| Guitarrón                   | 6 strings<br>6 courses                                   | <b>A<sub>1</sub> D<sub>2</sub> G<sub>2</sub> C<sub>3</sub> E<sub>3</sub> A<sub>2</sub></b>   | Guitarrón de Toloche                           | Mexico         |  |    |
| Guitarrón Argentino         | 6 strings<br>6 courses                                   | <b>B<sub>1</sub> E<sub>2</sub> A<sub>2</sub> D<sub>3</sub> G<sub>3</sub> B<sub>3</sub></b>   |  | Argentina      | A 6-string acoustic bass guitar.   |   |
| Guitarrón chileno           | 24 or 25 strings total<br>5 courses + 4 open "diablitos" | <i>diablitos</i> , top: F♯ <sub>5</sub> A <sub>4</sub><br><b>(D<sub>4</sub>) D<sub>4</sub> D<sub>3</sub> D<sub>3</sub> D<sub>2</sub> •<br/>(G<sub>4</sub>) G<sub>4</sub> G<sub>4</sub> G<sub>4</sub> G<sub>3</sub> G<sub>3</sub> •<br/>(C<sub>4</sub>) C<sub>4</sub> C<sub>4</sub> C<sub>3</sub> C<sub>2</sub> •<br/>E<sub>4</sub> E<sub>4</sub> E<sub>4</sub> •<br/>A<sub>4</sub> A<sub>4</sub> A<sub>4</sub></b><br><i>diablitos</i> , bottom: G <sub>4</sub> B <sub>4</sub> |  | Chile          | 4 short, unfretted strings are known as <i>diablitos</i> (little devils).<br>Number of strings in 3rd, 4th, & 5th courses may vary.  |  |
| Guitar, tenor               | 4 strings<br>4 courses                                   | Standard<br><b>C<sub>3</sub> • G<sub>3</sub> • D<sub>4</sub> • A<sub>4</sub></b><br>Common Alternates <ul style="list-style-type: none"><li>▪ G<sub>2</sub> D<sub>3</sub> A<sub>3</sub> E<sub>4</sub></li><li>▪ G<sub>2</sub> D<sub>3</sub> A<sub>3</sub> D<sub>4</sub></li></ul>  |  | US             | Same tuning as tenor banjo, mandola.   |  |
| Guitar, terz                | 6 strings<br>6 courses                                   | <b>G<sub>2</sub> C<sub>3</sub> F<sub>3</sub> B♭<sub>3</sub> D<sub>4</sub> G<sub>4</sub></b>  | Tertz Guitar, Tierce Guitar, Third Guitar      | Italy, Germany | A minor third higher than standard guitar tuning.  |   |
| Guqin                       | 7 strings<br>7 courses                                   | <i>sol la do re mi sol la</i>  |  | China          | Guqin music uses no absolute pitch so tuning varies.<br>The common <i>Zheng Diao</i> tuning sets "do" to approx. "F <sub>3</sub> " and tunes other strings relative to that to give <b>C<sub>3</sub> D<sub>3</sub> F<sub>3</sub> G<sub>3</sub> A<sub>3</sub> C<sub>4</sub> D<sub>4</sub></b> |  |
| Gusli                       | 9 strings<br>9 courses                                   | Standard/Common:<br><b>E<sub>3</sub> A<sub>3</sub> B<sub>3</sub> C<sub>4</sub> D<sub>4</sub> E<sub>4</sub> F<sub>4</sub> G<sub>4</sub> A<sub>4</sub></b>   | Крыловидные гусли                              | Russia         | Tuning varies; this is a common traditional tuning   |  |

**H**

| Instrument    | Strings & Courses                                     | Tuning(s)  | Alternative Names  | Origin               | Notes   | Picture   |
|---------------|---|--|--|----------------------|---|---|
| Halszither    | 9 strings<br>5 courses                                | $G_2 \cdot D_3 D_3 \cdot G_3 G_3 \cdot B_3 B_3 \cdot D_4 D_4$  | Krienser Halszither  | Switzerland          |   |   |
| Hardingfele   | 4 strings<br>4 courses<br>plus 4–5 resonating strings | Standard/Common:<br>$A_3 D_4 A_4 E_5$<br>res. strings: $(B_3) D_4 E_4 F\#_4 A_4$<br>Common alternates:<br>▪ Kolagutstille: $A_3 C_4 A_4 E_5$<br>res.: $(A_3) D_4 E_4 G_4 A_4$<br>▪ Seljekvatstille: $A_3 D_4 F\#_4 E_5$<br>res.: $(B_3) D_4 E_4 F\#_4 A_4$<br>▪ Trollstilt: $A_3 E_4 A_4 C\#_5$<br>res.: $(A_3) C\#_4 E_4 F\#_4 A_4$<br>▪ Forstelt: $A_3 E_4 A_4 E_5$<br>res.: $(A_3) C\#_4 E_4 F\#_4 A_4$<br>▪ Gorraus: $F_3 D_4 A_4 E_5$<br>res.: $(F_3) B_3 D_4 G_4 A_4$<br>▪ Bas: $G_3 D_4 A_4 E_5$<br>res.: $(B_3) D_4 E_4 G_4 A_4$ | Hardanger violin,<br>Hardanger fiddle  | Norway               | <ul style="list-style-type: none"> <li>▪ Standard AKA "Oppstilt bas": More than 80% of music written for this instrument uses this tuning.</li> <li>▪ Trollstilt AKA "Devil's Tuning"</li> <li>▪ Bas AKA "Violin tuning"</li> </ul> <p>There are many other variant tunings, most of them uncommon.</p>   |    |
| Harp, Concert | 47 strings<br>47 courses                              | $C_b1 D_b1 E_b1 F_b1 G_b1 A_b1 B_b1$<br>[ . . . ] * $C_b7 D_b7 E_b7 F_b7 G_b7$   | Pedal Harp,<br>Double-action<br>Harp, Diatonic<br>Double-action<br>Harp  | France               | * Only lowest and highest octaves shown. Tuning proceeds through 6½ octaves using the C <sub>b</sub> diatonic scale   |   |
| Harp, Celtic  | 34 strings<br>34 courses[*]                           | $C_2 D_2 E_2 F_2 G_2 A_2 B_2$<br>[ . . . ] * $C_6 D_6 E_6 F_6 G_6 A_6$   | Clàrsach, Folk<br>Harp, Lever<br>Harp  | British Isles        | * Number of strings varies, generally between 19 and 40; 34 strings is typical. Not all models have levers. Only lowest and highest octaves shown. Tuning proceeds through 4½ octaves using the C diatonic scale.   |  |
| Harpsichord   | Varies[*]   | [*]Typical:<br>$C_2 C\#_2 D_2 D\#_2 E_2 F_2 F\#_2 G_2 G\#_2 A_2 A\#_2 B_2 [ . . . ] * C\#_6 D_6 D\#_6 E_6 F_6 F\#_6 G_6 G\#_6 A_6 A\#_6 B_6 C_7$   | Virginal,<br>Spinet,<br>Clavicytherium,<br>Ottavino, Pedal<br>Harpsichord, et<br>al                                    | Europe<br>(Belgium?) | Many variants exist having differing number of keys, multiple keyboards, pedal boards, choirs of strings, etc., and they may have anywhere from about 120 to many hundreds of strings. Tuning is given for a typical single-keyboard, 5-octave instrument, for the main choir of strings. Only lowest and highest octaves are shown; intervening notes are tuned chromatically. Often tuning is in some musical temperament other than 12-tone equal temperament (common on modern pianos). |  |
| Harzither     | 8 strings<br>4 courses                                | $GG \cdot CC \cdot EE \cdot GG$  | Bergzither   | Germany              |   |   |
| Huapanguera   | 8 strings<br>5 courses                                | $G_2 \cdot D_3 D_4 \cdot G_3 G_3 \cdot B_3 B_3 \cdot E_3$  |  | Mexico               |   |  |
| Huobosi       | 4 strings<br>4 courses                                | $E_2 A_2 D_3 G_3$  | Hubo, Sugudu   | China                |   |  |
| Hurdy Gurdy   | 5 or 6 strings<br>5 courses                           | Traditional:<br>$(G_4)G_4 C_4 G_3 C_3 C_2$<br>Alternates:<br>▪ Altered Traditional:<br>$(G_4)G_4 C_4 G_3 C_3 G_2$<br>▪ Bourbonnais:<br>$(D_5)D_4 D_4 G_3 D_3 D_2$<br>▪ Altered Bourbonnais:<br>$(D_5)D_4 D_4 A_3 D_3 G_2$<br>▪ Vendée:<br>$(A_5)A_5 D_4 A_3 D_3 D_2$   | Beggar's lyre,<br>Crank lyre,<br>Cymphan,<br>Forgolant,<br>Organistrum,<br>Symphonia,<br>Wheel fiddle,<br>Wheel vielle | France               | Stringing is given in reverse order, owing to the orientation of the instrument while playing. The first one (or two) strings are melody strings; others are drone strings. Other regional tuning variants exist.   |  |

| Instrument     | Strings & Courses      | Tuning(s)   | Alternative Names  | Origin            | Notes  | Picture   |
|----------------|------------------------|---|--|-------------------|--|---|
| Ichigenkin     | 1 string<br>1 course   | no standard [*]   |  | Japan             | [*]<br>string is tuned to any note convenient for the vocalist   |   |
| Igil           | 2 strings<br>2 courses | (E • B)   | Ikili  | Tuva,<br>Mongolia | Pitch varies depending what other instruments the Igil is playing with, but the two strings are always tuned a 5th apart.                                |  |
| Irish bouzouki | 8 strings<br>4 courses | Standard/Common:<br><b>G<sub>3</sub> G<sub>2</sub>•D<sub>4</sub> D<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•E<sub>4</sub> E<sub>4</sub></b><br>Alternates: <ul style="list-style-type: none"><li>▪ Mandolin:<br/>G<sub>2</sub> G<sub>2</sub>•D<sub>3</sub> D<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•E<sub>4</sub> E<sub>4</sub></li><li>▪ Irish:<br/>G<sub>3</sub> G<sub>2</sub>•D<sub>4</sub> D<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•D<sub>4</sub> D<sub>4</sub></li><li>▪ Modal D:<br/>A<sub>3</sub> A<sub>2</sub>•D<sub>4</sub> D<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•D<sub>4</sub> D<sub>4</sub></li></ul> | Bouzouki,<br>Octave<br>Mandolin,<br>Tenor Mandolin<br>(US), Tenor<br>Mandola (UK),<br>Zouk | Ireland           | Irish bouzouki is an octave mandolin with the two lowest courses tuned in octaves instead of unisons.<br>"Modal D" octaves can also be tuned in unisons. |  |

**J**

| Instrument              | Strings & Courses      | Tuning(s)   | Alternative Names  | Origin  | Notes   | Picture   |
|-------------------------|------------------------|---|--|---------|---|---|
| Jarana huasteca         | 5 strings<br>5 courses | G <sub>3</sub> • B <sub>3</sub> • D <sub>4</sub> • F♯ <sub>4</sub> • A <sub>4</sub>   |  | Mexico  |   |    |
| Jarana jaroche          | 8 strings<br>5 courses | ▪ Modern or "Commercial"<br>A <sub>3</sub> • D <sub>4</sub> D <sub>4</sub> • G <sub>3</sub> G <sub>4</sub> • B <sub>3</sub> B <sub>3</sub> • E <sub>4</sub><br>▪ Traditional<br>G <sub>3</sub> •C <sub>4</sub> C <sub>4</sub> •E <sub>3</sub> E <sub>3</sub> •A <sub>3</sub> A <sub>3</sub> •G <sub>4</sub>                                     |  | Mexico  | Part of their name usually describes their size, for example:<br>Jarana Chaquiste, Jarana Primera, Jarana Segunda, Jarana Tercera, Jarana Tercerola<br>Where octave doublings occur will often differ depending on the size of the instrument. The larger instruments commonly double the middle courses at the octave. |   |
| Jarana Jaroche Requinto | 4 strings<br>4 courses | Standard/Common:<br><b>G<sub>2</sub>•A<sub>2</sub>•D<sub>2</sub>•G<sub>3</sub></b><br>Alternates: <ul style="list-style-type: none"><li>▪ C<sub>2</sub>•D<sub>2</sub>•G<sub>2</sub>•C<sub>3</sub></li><li>▪ C<sub>2</sub>•D<sub>2</sub>•G<sub>3</sub>•C<sub>3</sub></li><li>▪ A<sub>2</sub>•D<sub>3</sub>•G<sub>3</sub>•C<sub>3</sub></li></ul> | Jaroche<br>Requinto,<br>Requinto<br>Jaroche,<br>Guitarra De<br>Son | Mexico  |   |   |
| Jarana Leona            | 4 strings<br>4 courses | <b>G<sub>2</sub>•A<sub>2</sub>•D<sub>3</sub>•G<sub>3</sub></b>  |  | Mexico  |   |  |
| Jouhikko                | 3 strings<br>3 courses | D A E   | Jouhikannel  | Finland | Absolute pitch is not fixed on this instrument  |  |

**K**

| Instrument           | Strings & Courses          | Tuning(s)  | Alternative Names                            | Origin  | Notes   | Picture   |
|----------------------|----------------------------|--|--|---|---|---|
| <u>Kabosy</u>        | 6 strings<br>4 courses     | G • G • B B • D D  |  | Madagascar  |   |    |
| <u>Kacapi</u>        | 6 strings<br>3 courses     | A♯ • B • C♯ • F • F♯   |  | Indonesia   | Uses a gamelan pelog scale. Tuning is approximated to western notation.   |    |
| <u>Kamancheh</u>     | 4 strings<br>4 courses     | D5•A5•D4•A4  |  | Iran,<br>Armenia,<br>Azerbaijan,<br>Uzbekistan,<br>Turkmenistan |   |    |
| <u>Khonkhota</u>     | 8 strings<br>5 courses [1] | G4 G3•C4•D4 D3•A3•D4 D4  | Qonghota,<br>Ponputu,<br>Mokholos,<br>Machus | South America   | Strings/courses are usually 8/5 but 7/5, 9/5, 10/5 or 11/5 variations exist.  |   |
| <u>Kithara Sarda</u> | 6 strings<br>6 courses     | B2 E2 A2 D3 F3 B3  |  | Sardinia,<br>Italy.   |   |   |
| <u>Kobza</u>         | 8 strings<br>4 courses     | Standard/Common:<br><b>GG • DD • GG • CC</b><br>Alternate: DD • AA • DD • GG   | Kobuz,<br>Kobsa                              | Moldavia,<br>Romania,<br>Hungary                                |   |    |
| <u>Kokles</u>        | 11 strings<br>11 courses   | G3 A3 C3 D3 E3 F3 G4 A4 B4 C4<br>G3 A3 C3 D3 E3 F3 G4 A4 B♭4 C4  | Kokle,<br>Kükles,<br>Kükle                   | Latvia  | Since the 1980s the most common tunings for 11-stringed kokles among kokles players.  |    |
| <u>Komuz</u>         | 3 strings<br>3 courses     | A E A  | Qomuz,<br>Gopuz,<br>Kopuz,<br>Kopus          | Kyrgyzstan  |   |    |
| <u>Kora</u>          | 21 strings<br>21 courses   | Traditional Tunings:<br><ul style="list-style-type: none"><li>▪ Tomora Ba/Silala: F2 C3 D3 E3 F3 G3 A3 B3 C4 D4 E4 F4 G4 A4 B4 C5 D5 E5 F5 G5 A5</li><li>▪ Tomora Mesengo: F2 C3 +D3 +E♭3 F3 G3 +A3 +B♭3 C4 +D4 +E♭4 F4 G4 +A4 +B♭4 C5 +D5 +E♭5 F5 G5 +A5</li><li>▪ Hardino: F2 C3 -D3 +E3 F3 G3 -A3 +B3 C4 -D4 +E4 F4 G4 -A4 +B4 C5 -D5 +E5 F5 G5 -A5</li><li>▪ Sauta: F#2 C3 D3 E3 F#3 G3 A3 B3 C4 D4 E4 F#4 G4 A4 B4 C5 D5 E5 F#5 G5 A5</li></ul>   |  | West Africa   | Scales roughly correspond to Western major, minor, and lydian scales, but are not in equal temperament. Any of the scales may be considered "standard".   |   |
| <u>Koto</u>          | 13 strings<br>13 courses   | Traditional tunings:<br><ul style="list-style-type: none"><li>▪ Itsikotchu-chō:<br/>D4 D4 A3 B3 D4 E4 F♯4 A4 B4 D5 E5 F♯5 A5</li><li>▪ Oshiki-chō:<br/>E4 A3 B3 D4 E3 F♯3 A3 B3 C♯4 E4 F♯4 A4 B4</li><li>▪ Sui-chō:<br/>E4 A3 B3 C♯4 E3 F♯3 A3 B3 C♯4 E4 F♯4 A4 B4</li><li>▪ Hyō-jō:<br/>B3 E3 F♯3 A3 B3 C♯4/D4 E4 F♯4 A4 B4 C♯5/D5 E5 F♯5</li><li>▪ Taishiki-chō:<br/>B3 E3 F♯3 G♯3 B3 C♯4 E4 F♯4 G♯4 B4 C♯4 E4 F♯4</li><li>▪ Banshiki-chō:<br/>F♯3 B3 C♯3 E3 F♯3 G♯3/A3 B3 C♯4 E4 F♯4 G♯4/A4 B4 C♯5</li><li>▪ Sōjō:<br/>G3 G3 D3 E3 G3 A3 B3 D4 E4 G4 A4 B4 D5</li></ul> | 箏, 琴   | Japan   | <ul style="list-style-type: none"><li>▪ Tuning depends on the piece being played.</li><li>▪ A4 is closer to 430 Hz than to the western standard (440 Hz), and intervals are in just intonation and not equal temperament.</li><li>▪ In some tunings alternate choices are available for strings 6 and 11 (indicated with a slash); whatever note is chosen these strings are always tuned one octave apart.</li></ul> |  |
| <u>Kwitra</u>        | 8 strings<br>4 courses     | GG • EE • AA • DD  | Kuitra,<br>Kouitra,<br>Quwaytara             | Algeria   |   |   |

**L**

| Instrument          | Strings & Courses       | Tuning(s)  | Alternative Names                                | Origin           | Notes  | Picture   |
|---------------------|-------------------------|--|--|------------------|--|---|
| Laouto              | 8 strings<br>4 courses  | Standard/Common:<br><b>C<sub>2</sub> C<sub>3</sub>•G<sub>2</sub> G<sub>3</sub>•D<sub>2</sub> D<sub>3</sub>•A<sub>3</sub> A<sub>3</sub></b><br>Alternate:<br>▪ Cretan: G <sub>2</sub> G <sub>3</sub> •D <sub>2</sub> D <sub>3</sub> •A <sub>2</sub> A <sub>3</sub> •E <sub>3</sub> E <sub>3</sub>   | Laghouto   | Greece           | Standard a.k.a. "Mainland"   |    |
| Laúd                | 12 strings<br>6 courses | Standard/Common:<br><b>G♯<sub>2</sub> G♯<sub>2</sub>•C♯<sub>3</sub> C♯<sub>3</sub>•F♯<sub>3</sub> F♯<sub>3</sub>•B<sub>3</sub> B<sub>3</sub>•E<sub>4</sub></b><br>E <sub>4</sub> •A <sub>4</sub> A <sub>4</sub><br>Alternates:<br>▪ Cuban:<br>D <sub>2</sub> D <sub>2</sub> •A <sub>2</sub> A <sub>2</sub> •E <sub>3</sub> E <sub>3</sub> •B <sub>3</sub> B <sub>3</sub> •F♯ <sub>4</sub><br>F♯ <sub>4</sub> •C♯ <sub>5</sub> C♯ <sub>5</sub><br>▪ Alt. Cuban:<br>D <sub>2</sub> D <sub>2</sub> •A <sub>2</sub> A <sub>2</sub> •E <sub>3</sub> E <sub>3</sub> •B <sub>3</sub> B <sub>3</sub> •F♯ <sub>4</sub><br>F♯ <sub>4</sub> •D <sub>5</sub> D <sub>5</sub>  | Spanish laud                                     | Spain            | Standard AKA Spanish Tuning;<br>one octave lower than the Spanish Bandurria  |    |
| Laúd,<br>Cuban      | 12 strings<br>6 courses | <b>D<sub>3</sub> D<sub>3</sub>•F♯<sub>3</sub> F♯<sub>3</sub>•B<sub>3</sub> B<sub>3</sub>•E<sub>4</sub> E<sub>4</sub>•A<sub>4</sub> A<sub>4</sub>•D<sub>5</sub></b><br>D <sub>5</sub>   | Laud Cubano                                      | Cuba             |  |   |
| Laúd,<br>Philippine | 14 strings<br>6 courses | <b>F♯<sub>2</sub>•B<sub>2</sub> B<sub>2</sub>•E<sub>3</sub> E<sub>3</sub>•A<sub>3</sub> A<sub>3</sub> A<sub>3</sub>•D<sub>4</sub> D<sub>4</sub></b><br>D <sub>4</sub> •G <sub>4</sub> G <sub>4</sub> G <sub>4</sub>  | Laud   | Philippines      | Same tuning as the Octavina  |   |
| Lili'u              | 6 strings<br>4 courses  | <b>G<sub>4</sub> • C<sub>3</sub> C<sub>4</sub> • E<sub>4</sub> • A<sub>3</sub> A<sub>4</sub></b>   | 6 string Tenor Ukulele                           | Hawaii           | Invented by Sam Kamaka to celebrate the 50th anniversary of Hawaii's Statehood. The name comes from the last queen of Hawaii, Queen Lili'uokalani  |    |
| Liuqin              | 4 strings<br>4 courses  | <b>G<sub>3</sub> • D<sub>4</sub> • G<sub>4</sub> • D<sub>5</sub></b><br>Alternate<br>▪ G <sub>3</sub> • D <sub>4</sub> • A <sub>4</sub> • E <sub>5</sub>   | liuyeqin, willow leaf instrument                 | China            |  |    |
| Liuto<br>cantabile  | 10 strings<br>5 courses | <b>C<sub>2</sub> C<sub>2</sub>•G<sub>2</sub> G<sub>2</sub>•D<sub>3</sub> D<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•E<sub>4</sub> E<sub>4</sub></b>   | Liuto moderno                                    | Naples,<br>Italy | Some courses are occasionally single-strung  |   |
| Luc huyen<br>cam    | 5 strings<br>5 courses  | Standard/Common:<br><b>C<sub>3</sub> • F<sub>3</sub> • C<sub>4</sub> • G<sub>4</sub> • C<sub>5</sub></b><br>Alternate:<br>▪ Hu ai Cam: G <sub>2</sub> • D <sub>3</sub> • G <sub>3</sub> • B <sub>4</sub> • D <sub>5</sub><br>(a.k.a. "slide guitar tuning")  | Đàn Ghita, Ghita, Phím Lõm,<br>Vietnamese guitar | Vietnam          | Originally a 4- or 5-string instrument; today often nearly identical to a 6-string western guitar, except for having a scalloped fingerboard and one less string.<br>(See below.)                                  |   |
| Luc huyen<br>cam    | 6 strings<br>6 courses  | Standard/Common:<br><b>E<sub>2</sub> • A<sub>2</sub> • D<sub>3</sub> • G<sub>3</sub> • B<sub>3</sub> • E<sub>4</sub></b><br>Alternates:<br>▪ Day Rach-Gia: E <sub>2</sub> • A <sub>2</sub> • D <sub>3</sub> • G <sub>3</sub> • D <sub>4</sub> • G <sub>4</sub><br>▪ Day Lai: D <sub>2</sub> • A <sub>2</sub> • D <sub>3</sub> • G <sub>3</sub> • D <sub>4</sub> • G <sub>4</sub><br>▪ Day Sai Gon: D <sub>2</sub> • G <sub>2</sub> • D <sub>3</sub> • G <sub>3</sub> • D <sub>4</sub> • G <sub>4</sub>   | Đàn Ghita, Ghita, Phím Lõm,<br>Vietnamese guitar | Vietnam          | ▪ "Standard" identical with the common western guitar.<br>▪ Day Lai a.k.a. "aculturated tuning"<br>▪ Day Sai Gon a.k.a. "Saigon Tuning"  |   |
| Lute                | [ * ]                   | ▪ Medieval 12 string/6 course:<br><b>G<sub>2</sub> G<sub>2</sub> • C<sub>3</sub> C<sub>3</sub> • F<sub>3</sub> F<sub>3</sub> • A<sub>3</sub> A<sub>3</sub> • D<sub>4</sub> D<sub>4</sub> • G<sub>4</sub> G<sub>4</sub></b><br>▪ Medieval 13 string/7 course:<br><b>D<sub>2</sub> D<sub>3</sub>•G<sub>2</sub> G<sub>3</sub>•C<sub>3</sub> C<sub>4</sub>•F<sub>3</sub> F<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•D<sub>4</sub> D<sub>4</sub>•G<sub>4</sub></b><br>▪ Renaissance 15 string/8 course<br><b>D<sub>2</sub> D<sub>3</sub>•F<sub>2</sub> F<sub>3</sub>•G<sub>2</sub> G<sub>3</sub>•C<sub>3</sub> C<sub>4</sub>•F<sub>3</sub> F<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•D<sub>4</sub> D<sub>4</sub>•G<sub>4</sub></b><br>▪ Renaissance 19 string/10 course<br><b>C<sub>2</sub> C<sub>3</sub>•D<sub>2</sub> D<sub>3</sub>•E b<sub>2</sub> E b<sub>3</sub> F<sub>2</sub> F<sub>3</sub>•G<sub>2</sub> G<sub>3</sub>•C<sub>3</sub> C<sub>4</sub>•F<sub>3</sub> F<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•D<sub>4</sub> D<sub>4</sub>•G<sub>4</sub></b><br>▪ Baroque 24 string/13 course<br><b>A<sub>1</sub> A<sub>2</sub>•B<sub>1</sub> B<sub>2</sub>•C<sub>2</sub> C<sub>3</sub>•D<sub>2</sub> D<sub>3</sub>•E<sub>2</sub> E<sub>3</sub>•F<sub>2</sub> F<sub>3</sub>•G<sub>2</sub> G<sub>3</sub>•A<sub>2</sub> A<sub>2</sub>•D<sub>3</sub> D<sub>3</sub>•F<sub>3</sub> F<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•D<sub>4</sub> D<sub>4</sub>•F<sub>4</sub></b> |  | Europe           | [ * ] The number of strings and courses on a lute can vary widely depending on period and geographical region. Among the more common forms are 6, 7, 8, 10, and 13 courses. (Pictured: 8 course Renaissance Lute.) |  |
| Cretan lyra         | 3 strings               | <b>D<sub>3</sub> • A<sub>3</sub> • E<sub>5</sub></b>   |  | Crete,<br>Greece |  |   |

|  |           |  |  |  |  |  |
|--|-----------|--|--|--|--|--|
|  | 3 courses |  |  |  |  |  |
|--|-----------|--|--|--|--|--|

**M**

| Instrument               | Strings & Courses       | Tuning(s)  | Alternative Names  | Origin             | Notes   | Picture   |
|--------------------------|-------------------------|--|--|--------------------|---|---|
| <u>Mandobass</u>         | 4 strings<br>4 courses  | Standard/Common:<br><b>E<sub>1</sub> A<sub>1</sub> D<sub>2</sub> G<sub>2</sub></b><br>Alternate: G <sub>1</sub> D <sub>2</sub> A <sub>2</sub> E <sub>3</sub><br>Alternate: C <sub>1</sub> G <sub>1</sub> D <sub>2</sub> A <sub>2</sub>   | Bass Mandolin  | Europe             | The alternate tuning (2 octaves below the mandolin) is usually applied to a smaller-scale instrument (see <a href="#">Mandobass</a> ).<br><br>The alternate tuning (2 octaves below the mandola) is usually applied to a smaller-scale instrument (see <a href="#">Mandobass</a> ). |    |
| <u>Mandobass</u>         | 8 strings<br>4 courses  | Standard/Common:<br><b>G<sub>1</sub> G<sub>1</sub>•D<sub>2</sub> D<sub>2</sub>•A<sub>2</sub> A<sub>2</sub>•E<sub>3</sub> E<sub>3</sub></b><br>Alternate:<br>▪ "Mandola": C <sub>1</sub> C <sub>1</sub> •G <sub>1</sub><br>G <sub>1</sub> •D <sub>2</sub> D <sub>2</sub> •A <sub>2</sub> A <sub>2</sub>   | Tremolo-bass   | Europe             | Relatively rare; larger than the standard mandobass.<br><br>Standard tuning is 2 octaves below the mandolin.<br><br>Alternate tuning is 2 octaves below the mandola.  |   |
| <u>Mandocello</u>        | 8 strings<br>4 courses  | C <sub>2</sub> C <sub>2</sub> •G <sub>2</sub> G <sub>2</sub> •D <sub>3</sub> D <sub>3</sub> •A <sub>3</sub> A <sub>3</sub>   | mandolincello,<br>mandolocello   |                    | Standard tuning is 1 octave below the mandola.  |    |
| <u>Mandola</u>           | 8 strings<br>4 courses  | <b>C<sub>3</sub> C<sub>3</sub>•G<sub>3</sub> G<sub>3</sub>•D<sub>4</sub> D<sub>4</sub>•A<sub>4</sub> A<sub>4</sub></b>   | Tenor mandola<br>(Europe)  |                    | A 5th below mandolin tuning.  |    |
| <u>Mandolin</u>          | 8 strings<br>4 courses  | <b>G<sub>3</sub> G<sub>3</sub>•D<sub>4</sub> D<sub>4</sub>•A<sub>4</sub> A<sub>4</sub>•E<sub>5</sub> E<sub>5</sub></b><br>Alternates: "Get Up John Tuning": F <sub>#</sub> G <sub>3</sub> A <sub>3</sub> •D <sub>4</sub> D <sub>4</sub> •A <sub>4</sub><br>A <sub>4</sub> •A <sub>5</sub> D <sub>5</sub><br>All violin alternate tunings may be adapted for the mandolin |  |                    | Standard instrument of the mandolin family.   |   |
| <u>Mandolinetto</u>      | 8 strings<br>4 courses  | <b>G<sub>3</sub> G<sub>3</sub>•D<sub>4</sub> D<sub>4</sub>•A<sub>4</sub> A<sub>4</sub>•E<sub>5</sub> E<sub>5</sub></b>   |  | USA and Canada     | A guitar-shaped mandolin, or mandolin neck on ukulele body.   |  |
| <u>Mandolin, Octave</u>  | 8 strings<br>4 courses  | Standard/Common:<br><b>G<sub>2</sub> G<sub>2</sub>•D<sub>3</sub> D<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•E<sub>4</sub> E<sub>4</sub></b><br>Alternate:<br>▪ <i>Irish Bouzouki</i> :<br><b>G<sub>2</sub> G<sub>2</sub>•D<sub>3</sub> D<sub>3</sub>•A<sub>3</sub> A<sub>3</sub>•D<sub>4</sub> D<sub>4</sub></b>  | Tenor<br>Mandolin, Irish<br>Bouzouki,<br>Octave<br>mandola<br>(Europe) |                    | Pitched 1 octave below the mandolin.  |  |
| <u>Mandolin, Piccolo</u> | 8 strings<br>4 courses  | C <sub>4</sub> C <sub>4</sub> •G <sub>4</sub> G <sub>4</sub> •D <sub>5</sub> D <sub>5</sub> •A <sub>5</sub> A <sub>5</sub>   | Brilliant tone<br>mandolin   |                    | Tuned a 4th above the mandolin; 1 octave above the mandola.   |  |
| <u>Mandriola</u>         | 12 strings<br>4 courses | <b>G<sub>3</sub> G<sub>3</sub> G<sub>3</sub>•D<sub>4</sub> D<sub>4</sub> D<sub>4</sub>•A<sub>4</sub> A<sub>4</sub> A<sub>4</sub>•E<sub>5</sub> E<sub>5</sub> E<sub>5</sub></b>   | Tricordia  | Europe             | Tricordia is also a similar instrument tuned differently; both instruments are known by both names.<br>(see <a href="#">Trichordia</a> )  |  |
| <u>Manguerito</u>        | 7 strings<br>5 courses  | D <sub>4</sub> •G <sub>4</sub> •B <sub>4</sub> B <sub>3</sub> •E <sub>4</sub> •B <sub>4</sub> B <sub>4</sub>   |  | La Paz,<br>Bolivia |   |   |
| <u>Mejorana</u>          | 5 strings<br>5 courses  | ▪ "Por veinticinco":<br><b>D<sub>4</sub>•A<sub>4</sub>•A<sub>3</sub>•B<sub>3</sub>•E<sub>4</sub></b><br>▪ "Por seis":<br><b>D<sub>4</sub>•G<sub>4</sub>•G<sub>3</sub>•B<sub>3</sub>•E<sub>4</sub></b>  | Mejorana,<br>Rumbo   | Panama             | Either tuning may be considered "standard."   |  |

**N**

| Instrument         | Strings & Courses                              | Tuning(s)   | Alternative Names                  | Origin | Notes  | Picture   |
|--------------------|--|---|------------------------------------|--------|--|---|
| Nevoud             | 11 strings<br>6 courses                        | C♯₂•F♯₂ F♯₂•B₂ B₂•E₃ E₃•A₃<br>A₃•D₄ D₄  | Nevud, New Oud                     | Turkey |  |   |
| Nigenkin           | 2 strings<br>2 courses                         | No standard [*]   | Yakumogoto                         | Japan  | [*] Strings are tuned in unison, to any pitch convenient for vocalist. |   |
| Nyckelharpa        | 4 strings<br>4 courses + 12 resonating strings | C₃ • G₃ • C₄ • A₄<br>res.strings: G♯₃ A₃ B♭₃ B₃<br>C₄ C♯₄ D₄ E♭₄ E₄ F₄ F♯₄ G₄ | Key-harp,<br>Chromatic Nyckelharpa | Sweden | Number of sympathetic strings may vary.                                |  |
| Nyckelharpa, Tenor | 4 strings<br>4 courses + 12 resonating strings | G₂ • D₃ • G₃ • E₄<br>res.strings: G♯₂ A₂ B♭₂ B₂<br>C₃ C♯₃ D₃ E♭₃ E₃ F₃ F♯₃ G₃ |                                    | Sweden | This instrument is of very recent invention.                           |   |

**O**

| Instrument | Strings & Courses       | Tuning(s)  | Alternative Names             | Origin      | Notes   | Picture   |
|------------|-------------------------|--|-------------------------------|-------------|---|---|
| Octavina   | 14 strings<br>6 courses | F ♯ 1•B₁ B₁•E₂ E₂•A₂ A₂<br>A₂•D₃ D₃ D₃•G₃ G₃ G₃  | Philippine Laúd               | Philippines | One octave lower than the Philippine Bandurria                              |    |
| Octobass   | 3 strings<br>3 courses  | Berlioz/Musée de la Musique:<br><b>C₁ G₁ C₂</b><br>▪ Musical Instrument Museum: C₀ G₀ D₁<br>▪ Montreal Symphony Orchestra: A₀ E₁ B₁  | Subcontrabass,<br>triple bass | France      | Extremely rare. Extant instruments tuned variously.                         |    |
| Octofone   | 8 strings<br>4 courses  | * C₂ C₂•G₂ G₂•D₃ D₃•A₃ A₃<br>▪ G₂ G₂•D₃ D₃•A₃ A₃•E₄ E₄<br>▪ D₂ D₂•G₂ G₂•B₂ B₂•E₃ E₃  |                               | USA         | Any of the tunings may be considered "standard".                            |   |
| Oud        | 11 strings<br>6 courses | ▪ Arabic tuning:<br><b>C₂ F₂ A₂ D₃ G₃ C₄</b><br>▪ Alt. Arabic:<br>F₂ A₂ D₃ G₃ C₄ F₄<br>▪ Alternate bass:<br><b>D₂ G₂ A₂ D₃ G₃ C₄</b><br>▪ Ottoman Turkish/Armenian/Greek:<br>E₂ A₂ B₂ E₃ A₃ D₄<br>▪ New Turkish Classical:<br>C♯₂ F♯₂ B₂ E₃ A₃ D₄<br>▪ Alt. New Turkish Classical:<br>D₂ F♯₂ B₂ E₃ A₃ D₄ | Ud, Al-Ud, Oud Arbi           | Middle East | notated a 4th higher in ME notation; one octave higher in western notation. |  |

**P**

| Instrument            | Strings & Courses              | Tuning(s)  | Alternative Names  | Origin            | Notes   | Picture                                |
|-----------------------|--------------------------------|--|--|-------------------|---|--|
| Palida                | 4 strings<br>4 courses         | D <sub>3</sub> • A <sub>3</sub> • E <sub>4</sub> • B <sub>4</sub>  |  | Europe            |   |  |
| Panduri               | 3 strings<br>3 courses         | Standard/Common:<br><b>G<sub>3</sub> • A<sub>3</sub> • C<sub>4</sub></b><br>Alternate:<br>▪ E <sub>3</sub> • B <sub>3</sub> • A <sub>4</sub>   |  | Phanduri          | Georgia (Asia)  |  |
| Pardessus de Viole    | 5 strings<br>5 courses         | Standard:<br><b>C<sub>4</sub> • E<sub>4</sub> • A<sub>4</sub> • D<sub>5</sub> • G<sub>5</sub></b>  | Soprano Viol   | Europe            | A member of the <u>viol</u> family.<br>A rare 6-string version adds a <b>G<sub>3</sub></b> below the low C string.  |  |
| Pedal Steel Guitar    | [ * ]<br>10 strings 10 courses | Standard/Common:<br>▪ E9th: B <sub>2</sub> D <sub>3</sub> E <sub>3</sub> F♯ <sub>3</sub> G♯ <sub>3</sub> B <sub>3</sub> E <sub>4</sub> G♯ <sub>4</sub> D♯ <sub>4</sub> F♯ <sub>4</sub><br>▪ C <sub>6</sub> th: C <sub>2</sub> F <sub>2</sub> A <sub>2</sub> C <sub>3</sub> E <sub>3</sub> G <sub>3</sub> A <sub>3</sub> C <sub>4</sub> E <sub>4</sub> D <sub>4</sub><br>Alternates:<br>▪ A <sub>7</sub> th: A <sub>1</sub> E <sub>2</sub> G <sub>2</sub> A <sub>2</sub> C♯ <sub>3</sub> E <sub>3</sub> G <sub>3</sub> A <sub>3</sub> C♯ <sub>4</sub> E <sub>4</sub><br>▪ C Diatonic: G <sub>2</sub> A <sub>2</sub> C <sub>3</sub> E <sub>3</sub> F <sub>3</sub> G <sub>3</sub> A <sub>3</sub> B <sub>3</sub> C <sub>4</sub> E <sub>4</sub> | Steel guitar   | United States     | [ * ] 10 strings is more or less standard now, but instruments with 6, 8, 12, and other numbers of strings, and 2, 3, or 4 necks exist. A different tuning is usually applied to each neck, but setups vary from player to player.  | 2-Neck Pedal Steel Guitar<br>          |
| Phin                  | 3 strings<br>3 courses         | A <sub>3</sub> E <sub>4</sub> A <sub>4</sub>   |  | Thailand          |   |  |
| Piano                 | 230 strings[*]<br>88 courses   | A <sub>0</sub> A♯ <sub>0</sub> B <sub>0</sub> C <sub>1</sub> C♯ <sub>1</sub> D <sub>1</sub> D♯ <sub>1</sub> E <sub>1</sub> F <sub>1</sub> F♯ <sub>1</sub><br>G <sub>1</sub> G♯ <sub>1</sub><br>[...] *C♯ <sub>7</sub> D <sub>7</sub> D♯ <sub>7</sub> E <sub>7</sub> F <sub>7</sub> F♯ <sub>7</sub> G <sub>7</sub><br>G♯ <sub>7</sub> A <sub>7</sub> A♯ <sub>7</sub> B <sub>7</sub> C <sub>8</sub>  | Pianoforte,<br>Grand, Grand<br>Piano, Concert<br>Grand, Upright,<br>Upright Piano,<br>Spinet | Europe<br>(Italy) | * About $\frac{2}{3}$ of courses are triple strung; some lower courses are double strung; the remaining bases are single strung. All multi-strung courses are tuned to unisons. Exact number of strings varies by manufacturer and model, 220 – 240 is typical. <sup>[17]</sup><br>Only lowest and highest octaves are shown; tuning of the intervening notes is chromatic. | Upright Piano:<br><br>Grand Piano:<br> |
| Piano, Imperial Grand | 249 strings[*]<br>97 courses   | C <sub>0</sub> C♯ <sub>0</sub> D <sub>0</sub> D♯ <sub>0</sub> E <sub>0</sub> F <sub>0</sub> F♯ <sub>0</sub> G <sub>0</sub> G♯ <sub>0</sub><br>A <sub>0</sub> A♯ <sub>0</sub> B <sub>0</sub><br>[...] *C♯ <sub>7</sub> D <sub>7</sub> D♯ <sub>7</sub> E <sub>7</sub> F <sub>7</sub> F♯ <sub>7</sub> G <sub>7</sub><br>G♯ <sub>7</sub> A <sub>7</sub> A♯ <sub>7</sub> B <sub>7</sub> C <sub>8</sub>  | Imperial Grand,<br>290,<br>Bösendorfer   | Austria           | * About $\frac{2}{3}$ of courses are triple strung; some lower courses are double strung; the remaining bases are single strung. All multi-strung courses are tuned to unisons. Only lowest and highest octaves are shown; tuning of the intervening notes is chromatic.<br>These extended-range pianos are very expensive and uncommon.                                    |  |
| Pipa                  | 4 strings<br>4 courses         | A <sub>2</sub> D <sub>3</sub> E <sub>3</sub> A <sub>3</sub>  | Pi p'a   | China             |   |  |
| Portuguese guitar     | 12 strings<br>6 courses        | ▪ Lisbon / Lisboa tuning:<br><br>D <sub>3</sub> D <sub>2</sub> A <sub>3</sub> A <sub>2</sub> B <sub>3</sub> B <sub>2</sub> E <sub>3</sub> E <sub>3</sub> A <sub>3</sub><br>A <sub>3</sub> B <sub>3</sub> B <sub>3</sub><br>▪ Coimbra tuning:<br><br>C <sub>3</sub> C <sub>2</sub> G <sub>3</sub> G <sub>2</sub> A <sub>3</sub> A <sub>2</sub> D <sub>3</sub> D <sub>3</sub><br>G <sub>3</sub> G <sub>3</sub> A <sub>3</sub> A <sub>3</sub>   | Guitarra<br>Portuguesa   | Portugal          | Either tuning may be considered "standard".   |  |
| Prim                  |                                | (See Bisernica, 5 string)  |  |                   |   | (See Bisernica, 5 string)              |

## Q

| Instrument | Strings & Courses      | Tuning(s)                                    | Alternative Names | Origin | Notes | Picture |
|------------|------------------------|--|-------------------|--------|-------|---------|
| Qanbūs     | 7 strings<br>4 courses | C • D D • G G • C C                          | gambus            | Yemen  |       |         |
| Qinqin     | 3 strings<br>3 courses | G <sub>3</sub> D <sub>4</sub> A <sub>5</sub> |                   | China  |       |         |

**R**

| Instrument     | Strings & Courses       | Tuning(s)  | Alternative Names                    | Origin        | Notes   | Picture   |
|----------------|-------------------------|--|--------------------------------------|---------------|---|---|
| Rajao          | 6 strings<br>5 courses  | D <sub>4</sub> •G <sub>4</sub> •C <sub>4</sub> •E <sub>4</sub> •A <sub>4</sub> (A <sub>4</sub> )   | Rajão                                | Portugal      | Sometimes the top course is not doubled, so there are only 5 strings  |   |
| Ramkie         | 4 strings<br>4 courses  | C <sub>3</sub> F <sub>3</sub> A <sub>3</sub> C <sub>4</sub>  | Afri-can, Kitaar                     | South Africa  | Typically these are homemade, and therefore quite variable.   |    |
| Rebab          | 2 strings<br>2 courses  | D <sub>3</sub> A <sub>3</sub> [*]  |                                      | Java          | * Tuning given is approximate: does not follow western equal temperament  |    |
| Requinto       | 6 strings<br>6 courses  | A <sub>2</sub> D <sub>3</sub> G <sub>3</sub> C <sub>4</sub> E <sub>4</sub> A <sub>4</sub>  | Requinto guitar                      | Mexico        | 4th above the standard guitar   |   |
| Ronroco        | 10 strings<br>5 courses | Standard Argentine (G <sub>6</sub> /Em7):<br><br>D <sub>4</sub> D <sub>4</sub> •G <sub>4</sub> G <sub>4</sub> •B <sub>4</sub> B <sub>3</sub> •E <sub>4</sub><br>E <sub>4</sub> •B <sub>4</sub> B <sub>4</sub><br><br>Standard Bolivian (F <sub>6</sub> /Dm7):<br><br>C <sub>4</sub> C <sub>4</sub> •F <sub>4</sub> F <sub>4</sub> •A <sub>4</sub> A <sub>3</sub> •D <sub>4</sub><br>D <sub>4</sub> •A <sub>4</sub> A <sub>4</sub><br><br>Standard Chilean (C <sub>6</sub> /Am7):<br><br>G <sub>3</sub> G <sub>3</sub> •C <sub>4</sub> C <sub>4</sub> •E <sub>4</sub> E <sub>3</sub> •A <sub>3</sub><br>A <sub>3</sub> •E <sub>4</sub> E <sub>4</sub><br><br>Common Variants: [*]<br>▪ G <sub>4</sub> G <sub>3</sub> •C <sub>5</sub> C <sub>4</sub> •E <sub>4</sub> E <sub>3</sub> •A <sub>3</sub><br>A <sub>3</sub> •E <sub>4</sub> E <sub>4</sub><br>▪ G <sub>4</sub> G <sub>3</sub> •C <sub>5</sub> C <sub>4</sub> •E <sub>3</sub> E <sub>3</sub> •A <sub>3</sub><br>A <sub>3</sub> •E <sub>4</sub> E <sub>4</sub> | Baritone Charango,<br>Ronrroco       | Andean Region | [*] Instrument is still new enough that no one "standard" tuning has emerged. Chilean tuning (also a variant in Bolivia), one octave below the charango, is very common. Chilean variants (various octave doublings on courses 3, 4, and 5) depend on stringing —thinner strings are required for the high octaves in doubled courses. Argentine G <sub>6</sub> /Em7 tuning is also popular, which basically raises the pitch to that of the charangón. |   |
| Ruan           |                         | See under individual sizes   | Ruanqin                              |               | See listing for individual sizes:<br><br>▪ soprano: <i>Gaoyinruan</i><br>▪ alto: <i>Xiaoruan</i><br>▪ tenor: <i>Zhongruan</i><br>▪ bass: <i>Daruan</i><br>▪ contrabass: <i>Diyinruan</i>  | See under individual sizes  |
| Ruanqin        |                         | See <i>Ruan</i>  |                                      |               |   | See <i>Ruan</i>   |
| Russian guitar | 7 strings<br>7 courses  | Standard/Common:<br><br>D <sub>2</sub> G <sub>2</sub> B <sub>2</sub> D <sub>3</sub> G <sub>3</sub> B <sub>3</sub> D <sub>4</sub><br>Alternates:<br>▪ Drop C: C <sub>2</sub> G <sub>2</sub> B <sub>2</sub> D <sub>3</sub> G <sub>3</sub> B <sub>4</sub><br>D <sub>4</sub><br>▪ French: D <sub>2</sub> G <sub>2</sub> C <sub>2</sub> D <sub>3</sub> G <sub>3</sub> B <sub>4</sub><br>D <sub>4</sub>  | semistrunnaya gitara,<br>semistrunka | Russia        | There are many variant tunings, mostly idiosyncratic to individual performers.  |  |

**S**

| Instrument               | Strings & Courses  | Tuning(s)  | Alternative Names   | Origin                         | Notes  | Picture |
|--------------------------|--|--|---|--------------------------------|--|---------|
| Samica                   | 4 strings<br>2 courses                                     | Standard/Common:<br><b>B<sub>3</sub> • E<sub>4</sub></b><br>Alternate:<br>A <sub>3</sub> • D <sub>4</sub>  | Dangubica,<br>tambura   | Balkans                        | Tuning is flexible, but the courses are always a fourth apart.                                     |         |
| Sanshin                  | 3 strings<br>3 courses                                     | Standard/Common:<br><b>C<sub>3</sub> • F<sub>3</sub> • C<sub>4</sub></b><br>Alternates:<br>▪ Ichi-agī chōshī: E <sub>b3</sub> • F <sub>3</sub> • C <sub>4</sub><br>▪ Ni-agī chōshī: C <sub>3</sub> • G <sub>3</sub> • C <sub>4</sub><br>▪ Ichi, ni-agī chōshī: D <sub>3</sub> • G <sub>3</sub> • C <sub>4</sub><br>▪ San-sage chōshī: C <sub>3</sub> • F <sub>3</sub> • B <sub>b3</sub>  | Okinawa<br>shamisen,<br>jabisen   | Ryukyu<br>Islands,<br>Japan    | Standard AKA Hon chōshī  |         |
| Santur                   | 72 strings<br>18 courses                                   | Golden strings (right)<br><b>E<sub>b3</sub>•F<sub>3</sub>•G<sub>3</sub>•A<sub>b3</sub>•B<sub>b3</sub>•C<sub>4</sub>•D<sub>4</sub>•E<sub>b4</sub>•F<sub>4</sub></b><br>Silver strings (left)<br><b>E<sub>b4</sub>•F<sub>4</sub>•G<sub>4</sub>•A<sub>b4</sub>•B<sub>b4</sub>•C<sub>5</sub>•D<sub>5</sub>•E<sub>b5</sub>•F<sub>5</sub></b><br>Silver strings (behind bridges)<br><b>E<sub>b5</sub>•F<sub>5</sub>•G<sub>5</sub>•A<sub>b5</sub>•B<sub>b5</sub>•C<sub>6</sub>•D<sub>6</sub>•E<sub>b6</sub>•F<sub>6</sub></b> |   | Iran,<br>Turkey                | This is common tuning for Dastgāh-e Šur  |         |
| Sanxian                  | 3 strings<br>3 courses                                     | Standard/Common:<br><b>A<sub>2</sub> • D<sub>3</sub> • A<sub>3</sub></b><br>Alternate: <b>D<sub>3</sub> A<sub>3</sub> D<sub>4</sub></b>  | Sanhsien,<br>Small Sanxian,<br>Xianzi, Quxian,<br>Shuxian,<br>Chinese Banjo | China                          |  |         |
| Sanxian, Large           | 3 strings<br>3 courses                                     | <b>G<sub>2</sub> • D<sub>3</sub> • G<sub>3</sub></b>   | Sanhsien,<br>Large Sanxian,<br>Xianzi, Quxian,<br>Shuxian,<br>Chinese Banjo | China                          | Other size variants exist, but are uncommon.   |         |
| Sarangi,<br>Nepalese     | 4 strings<br>4 courses                                     | <b>G<sub>4</sub>•C<sub>5</sub>•C<sub>5</sub>•G<sub>5</sub></b>   |   | Nepal                          |  |         |
| Sargija                  | 6 strings<br>3 courses                                     | <b>C<sub>3</sub> C<sub>3</sub> • G<sub>3</sub> G<sub>3</sub> • D<sub>3</sub> D<sub>3</sub></b>   | Sharkia,<br>Sharki,<br>Shargija   | Albania                        |  |         |
| Seis Cinco               | 6 strings<br>5 courses                                     | <b>E<sub>3</sub>•A<sub>4</sub> A<sub>3</sub>•D<sub>3</sub>•F<sub>#4</sub>•B<sub>4</sub></b>  | Seis Cinco  | North-<br>western<br>Venezuela |  |         |
| Setar                    | 4 strings<br>3 courses                                     | <b>C<sub>3</sub> C<sub>4</sub> • G<sub>3</sub> • C<sub>4</sub></b>   |   | Iran                           |  |         |
| Shamisen                 | 3 strings<br>3 courses                                     | Standard/Common:<br><b>D G D</b><br>Alternates:<br>▪ San sagari: D G C<br>▪ Ni agari: D A D  | Samisen,<br>Sangen  | Japan                          | Standard = "Honchoshi" tuning  |         |
| Sitar                    | 7 strings<br>(3 are drones)<br>plus 13 sympathetic strings | <b>C<sub>2</sub> G<sub>2</sub> C<sub>3</sub> F<sub>3</sub></b><br>drones: C <sub>5</sub> C <sub>4</sub> G <sub>3</sub>   |   | North<br>India                 | 4th string can be tuned to C. Sympathetic (resonating) strings are tuned to the raga being played. |         |
| Socavon                  | 4 strings<br>4 courses                                     | <b>G<sub>3</sub> D<sub>4</sub> A<sub>4</sub> B<sub>2</sub></b>   | Bocona  | Panama                         |  |         |
| Strumstick               | 3 strings<br>3 courses                                     | Standard/Common:<br><b>G<sub>3</sub> D<sub>4</sub> G<sub>4</sub></b><br>Alternate:<br>▪ F <sub>3</sub> C <sub>4</sub> F <sub>4</sub>   | Dulcitar,<br>Dulcimer stick,<br>Strumby,<br>Standard<br>Strumstick          | US                             | Other sizes exist. General tuning is Root-5th-Octave, but the variations used are endless.         |         |
| Swedish lute<br>(modern) | 12 strings<br>12 courses                                   | Standard/Common:<br><b>F<sub>1</sub> G<sub>1</sub> A<sub>1</sub> B<sub>1</sub> C<sub>2</sub> D<sub>2</sub> open</b><br><b>E<sub>2</sub> A<sub>2</sub> D<sub>3</sub> G<sub>3</sub> B<sub>3</sub> E<sub>4</sub> over</b><br>fretboard  | Scholander<br>lute  | Sweden                         | Other versions exist, mainly differing in the number of bass strings.                              |         |

| Instrument          | Strings & Courses       | Tuning(s)   | Alternative Names                             | Origin                      | Notes  | Picture   |
|---------------------|-------------------------|---|---|-----------------------------|--|---|
| Tambura             | 8 strings<br>4 courses  | $D_3 D_3 \cdot G_3 G_3 \cdot B_3 B_3 \cdot E_4 E_4$   | Tamboura                                      | Bulgaria                    |  |    |
| Tambura             | 4 strings<br>4 courses  | <i>sol do' do' do'</i> *  | Tanpura,<br>Tampuri,<br>Tamboura,<br>Taanpura | India                       | *Classical Indian music has no absolute pitch. "Do" is tuned to a convenient note for any singers, or for the Raga being played, and the other strings are tuned relative to that reference.   |    |
| Tambura             | 4 strings<br>2 courses  | <b>D D • A A</b>  | Tamboura                                      | Macedonia                   |  |   |
| Tar                 | 6 strings<br>3 courses  | Common (for <i>Dastgāh-e Šur</i> )<br>$C_4 C_4 \cdot G_3 G_3 \cdot C_4 \cdot C_3$   |   | Iran                        |  |    |
| Tarica              | 5 strings<br>3 courses  | Standard/Common:<br>$C_2 \cdot G_2 G_2 \cdot C_3 C_3$<br>Alternate:<br>▪ Ionian: $D_2 \cdot A_2 A_2 \cdot D_3 D_3$  | Tarika, Tricord,<br>Trichord                  | Europe                      |  |    |
| Taropatch           | 8 strings<br>4 courses  | Standard:<br>$G_3 G_4 \cdot C_3 C_4 \cdot E_4 E_4 \cdot A_4 A_4$<br>Alternates:<br>▪ original:<br>$G_4 G_4 \cdot C_3 C_3 \cdot E_4 E_4 \cdot A_4 A_4$<br>▪ or Low G:<br>$G_3 G_3 \cdot C_3 C_3 \cdot E_4 E_4 \cdot A_4 A_4$ | 8 string Tenor<br>Ukulele                     | Hawaii                      | The name comes from "Taropatch Fiddle" an early Hawaiian, slightly derogatory name for all Ukuleles used by the "Landed" Anglo Settlers however it came over to Mainland U.S.A. with the fiddle part dropped to describe an 8 string Ukulele |   |
| Tembor              | 5 strings<br>3 courses  | A A•D•G G   |   | China                       |  |   |
| Terzin Kitarra      | 6 strings<br>6 courses  | $G\sharp_2 B_2 E_3 A_3 C\sharp_4 E_4$   |   | Malta                       |  |   |
| Timple              | 5 strings<br>5 courses  | $G_4 C_5 E_4 A_4 D_5$   | Canary Island<br>Tiple                        | Canary<br>Islands,<br>Spain |  |  |
| Tiple, American     | 10 strings<br>4 courses | $A_4 A_3 \cdot D_4 D_3 D_4 \cdot F\sharp_4 F\sharp_3 F\sharp_4 \cdot B_3 B_3$   | Tiple ukulele,<br>Martin Tiple                | US                          | The D and F♯ are triple-strung; the other strings are paired.  |  |
| Tiple, Columbian    | 12 strings<br>4 courses | Standard/Traditional:<br>$C_4 C_3 C_4 \cdot E_4 E_3 E_4 \cdot A_4 A_3 A_4 \cdot D_4 D_4 D_4$<br>Alternate:<br>▪ 'Guitar'/Modern G6: $D_4 D_3 D_4 \cdot G_4 G_3 G_4 \cdot B_4 B_3 B_4 \cdot E_4 E_4 E_4$                     | Tiple<br>Colombiano                           | Colombia                    | Triple strung  |  |
| Tiple de Menorca    | 5 strings<br>5 courses  | $D_4 \cdot G_4 \cdot C_5 \cdot E_5 \cdot A_5$   |   | Menorca,<br>Spain           |  |   |
| Tiple, Puerto Rican | 5 strings<br>5 courses  | $E_3 \cdot A_3 \cdot D_4 \cdot G_4 \cdot C_5$   | Tiple Doliente                                | Puerto<br>Rico              |  |  |
| Tiple Requinto      | 12 strings<br>4 courses | Standard/Traditional:<br>$C_4 C_4 C_4 \cdot E_4 E_4 E_4 \cdot A_4 A_4 A_4 \cdot D_4 D_4 D_4$<br>Alternate:<br>▪ 'Guitar'/Modern G6: $D_4 D_4 D_4 \cdot G_4 G_4 G_4 \cdot B_4 B_4 B_4 \cdot E_4 E_4 E_4$                     | Tiple Requinto<br>Colombiano                  | Colombia                    | Triple strung: smaller than Tiple Colombiano, and central lower octave strings are replaced with unisons.  |  |

|                       |                         |   |                           |                |  |   |
|-----------------------|-------------------------|---|---------------------------|----------------|--|---|
| Tres,<br>Cuban        | 6 strings<br>3 courses  | Standard/Common:<br><b>G<sub>4</sub> G<sub>3</sub> C<sub>4</sub> C<sub>4</sub> E<sub>3</sub> E<sub>4</sub></b><br>Alternate: <ul style="list-style-type: none"><li>▪ New D major:<br/>A<sub>4</sub> A<sub>3</sub> D<sub>4</sub> D<sub>4</sub> • F♯<sub>3</sub> F♯<sub>4</sub></li></ul>   | Tres, Tres<br>Cubano      | Cuba           |  |   |
| Tres,<br>Puerto Rican | 9 strings<br>3 courses  | Standard/Common:<br><b>G<sub>4</sub> G<sub>3</sub> G<sub>4</sub> • C<sub>4</sub> C<sub>4</sub> C<sub>4</sub> • E<sub>4</sub> E<sub>3</sub> E<sub>4</sub></b><br>Alternates: <ul style="list-style-type: none"><li>▪ G<sub>3</sub> G<sub>4</sub> G<sub>4</sub> • C<sub>4</sub> C<sub>4</sub> C<sub>4</sub> • E<sub>4</sub> E<sub>3</sub></li><li>▪ G<sub>4</sub> G<sub>4</sub> G<sub>3</sub> • C<sub>4</sub> C<sub>4</sub> C<sub>4</sub> • E<sub>3</sub> E<sub>4</sub></li></ul> | Tres, Tres<br>Puerto Rico | Puerto<br>Rico | Note that alternates simply change the location of the octave doublings.               |   |
| Tricordia             | 12 strings<br>4 courses | <b>G<sub>2</sub> G<sub>3</sub> G<sub>3</sub> • D<sub>3</sub> D<sub>4</sub> D<sub>4</sub> • A<sub>3</sub> A<sub>4</sub> A<sub>4</sub> • E<sub>4</sub> E<sub>5</sub> E<sub>5</sub></b>  | Mandriola                 | Mexico         | Although tuned differently from the mandiola, both instruments are known by both names |  |
| Tzouras               | 6 strings<br>3 courses  | <b>D<sub>3</sub> D<sub>4</sub> • A<sub>3</sub> A<sub>3</sub> • D<sub>4</sub> D<sub>4</sub></b>  | 6 strings/3<br>courses    | Tzouras        | Greece   |  |

**U**

| Instrument                          | Strings & Courses      | Tuning(s)   | Alternative Names  | Origin | Notes   | Picture   |
|-------------------------------------|------------------------|---|--|--------|---|---|
| Ukulele,<br>Baritone                | 4 strings<br>4 courses | Standard/Common:<br><b>D<sub>3</sub> G<sub>3</sub> B<sub>3</sub> E<sub>4</sub></b><br>Alternate (rare): <ul style="list-style-type: none"><li>▪ High D: D<sub>4</sub> G<sub>3</sub> B<sub>3</sub> E<sub>4</sub></li></ul>   | Baritone Uke, Bari Uke   | Hawaii | Same as 4 highest-pitched guitar strings.   |    |
| Ukulele,<br>Bass                    | 4 strings<br>4 courses | <b>E<sub>2</sub> A<sub>2</sub> D<sub>3</sub> G<sub>3</sub></b>  | Bass Ukulele, Bass Uke   | US     | Same as bottom four strings of the guitar. A relatively new instrument; unlike the UBass (see below) it has sufficient volume to be played acoustically, and sounds more like a uke than a bass.  |   |
| Ukulele,<br>Contrabass<br>("UBass") | 4 strings<br>4 courses | <b>E<sub>1</sub> A<sub>1</sub> D<sub>2</sub> G<sub>2</sub></b>  | Bass Uke, Contrabass<br>Ukulele, Rubber Bass,<br>Travel Bass, U-Bass | US     | Same as bass guitar. A relatively new instrument that has to be amplified to be heard; tone is much like a double bass. Compared to the acoustic bass uke (see above), this is really a contrabass instrument.  |  |
| Ukulele,<br>Concert                 | 4 strings<br>4 courses | Standard/Common:<br><b>G<sub>4</sub> C<sub>4</sub> E<sub>4</sub> A<sub>4</sub></b><br>Alternate: <ul style="list-style-type: none"><li>▪ D<sub>6</sub>: A<sub>4</sub> D<sub>4</sub> F♯<sub>4</sub> B<sub>4</sub></li></ul>  | Uke,<br>Alto Ukulele   | U.S.A  | The size up from a Soprano. The original name was used to try and convey that the Ukulele in question was a better and more professional than the standard model. The current size comes from when C. F. Martin & Co. started making a 4 string version of their Taropatch. |  |
| Ukulele,<br>Pocket                  | 4 strings<br>4 courses | Standard/Common:<br><b>D<sub>5</sub> G<sub>4</sub> B<sub>4</sub> E<sub>5</sub></b>  | Pocket Uke, Mini Uke,<br>Soprano Ukulele,<br>Sopranoissimo Ukulele   | Hawaii | a miniature ukulele first produced by the Hawaiian maker Jonah Kumalae very early in the 20th century which he referred to as a Mini  |  |
| Ukulele,<br>Soprano                 | 4 strings<br>4 courses | Standard/Common:<br><b>G<sub>4</sub> C<sub>4</sub> E<sub>4</sub> A<sub>4</sub></b><br>Alternate (traditional): <ul style="list-style-type: none"><li>▪ D<sub>6</sub>: A<sub>4</sub> D<sub>4</sub> F♯<sub>4</sub> B<sub>4</sub></li><li>▪ Low G: G<sub>3</sub> C<sub>4</sub> E<sub>4</sub> A<sub>4</sub></li></ul> | Uke  | Hawaii | The standard, basic ukulele. Traditionally, D <sub>6</sub> tuning was used though C <sub>6</sub> tuning is now most common.   |  |
| Ukulele,<br>Tahitian                | 8 strings<br>4 courses | <b>G<sub>4</sub> G<sub>4</sub> • C<sub>5</sub> C<sub>5</sub> • E<sub>5</sub> E<sub>5</sub> • A<sub>4</sub> A<sub>4</sub></b>  | Tahitian banjo, Tahitian<br>Ukulele, Ukulélé<br>Tahitian, Youke      | Tahiti | This is a fairly modern instrument that was developed in the last quarter of the 20th century   |  |
| Ukulele,<br>Tenor                   | 4 strings<br>4 courses | Standard/Common:<br><b>G<sub>4</sub> C<sub>4</sub> E<sub>4</sub> A<sub>4</sub></b><br>Alternate: <ul style="list-style-type: none"><li>▪ Low G: G<sub>3</sub> C<sub>4</sub> E<sub>4</sub> A<sub>4</sub></li></ul>   | Uke, Tenor Uke   | Hawaii | 5-, 6- and 8- string versions exist: 5-string has 4th (lowest) course doubled; 6-string has 1st (highest) and 3rd courses doubled (see Taropatch); 8-string has all 4 courses doubled (see Lili'u)  |  |

**V**

| Instrument              | Strings & Courses       | Tuning(s)   | Alternative Names  | Origin                            | Notes  | Picture   |
|-------------------------|-------------------------|---|--|-----------------------------------|--|---|
| <u>Veena</u>            | 7 strings<br>7 courses  | $C_3 \cdot D_3 \cdot E_3 \cdot F_3 \cdot G_3 \cdot A_3 \cdot B_3$                     | Vina, Saraswati Veena; Saraswati Vina                                    | South India                       | Pitches are approximate: does not use the western equal tempered tuning system.  |    |
| <u>Vihuela</u>          | 5 strings<br>5 courses  | $A_3 \cdot D_4 \cdot G_4 \cdot B_3 \cdot E_4$   |  | Mexico                            | This is the modern Mariachi instrument. <i>Vihuela</i> also refers to many historic antecedents of the guitar, in various configurations, most of them currently obsolete. |    |
| <u>Viol, alto</u>       | 6 strings<br>6 courses  | $C_3 F_3 A_3 D_4 G_4 C_5$   |  | Europe                            |  |   |
| <u>Viol, baritone</u>   | 6 strings<br>6 courses  | $F_2 A_2 D_3 G_3 C_4 F_4$   | Alto-Tenor Viola da Gamba (Fidel) named by Wulf                          | Europe                            |  |   |
| <u>Viol, bass</u>       | 6 strings<br>6 courses  | $D_2 G_2 C_3 E_3 A_3 D_4$   | Tenor Viola da Gamba (Fidel) named by Wulf                               | Europe                            |  |    |
| <u>Viol, bass</u>       | 7 strings<br>7 courses  | $A_1 D_2 G_2 C_3 E_3 A_3 D_4$   |  | Europe                            |  |    |
| <u>Viol, contrabass</u> | 6 strings<br>6 courses  | $D_1 G_1 C_2 E_2 A_2 D_3$   | violone, D'violone   | Europe                            | octave lower than the 6-string bass viol   |    |
| <u>Viol, Soprano</u>    |                         | See <u>Pardessus de Viole</u>   |  |                                   |  | See <u>Pardessus de Viole</u>   |
| <u>Viol, Tenor</u>      | 6 strings<br>6 courses  | $G_2 C_3 F_3 A_3 D_4 G_4$   | Viol da Gamba, Viola da Gamba, Alto Viola da Gamba (Fidel) named by Wulf | Europe                            |  |   |
| <u>Viol, Treble</u>     | 6 strings<br>6 courses  | $D_3 G_3 C_4 E_4 A_4 D_5$   | Soprano Viola da Gamba (Fidel) named by Wulf                             | Europe                            |  |   |
| <u>Viola</u>            | 4 strings<br>4 courses  | $C_3 G_3 D_4 A_4$   |  | Europe                            | Pitched a 5th below the violin.  |  |
| <u>Viola Amarantina</u> | 10 strings<br>5 courses | $D_3 D_2 \cdot A_3 A_2 \cdot B_3 B_2 \cdot E_3 E_3 \cdot A_3 A_3$                     | Viola Aramante, Viola de dois coracos                                    | Amarante, Portugal                |  |   |
| <u>Viola Beira</u>      | 12 strings<br>7 courses | $D_3 \cdot D_3 \cdot A_3 A_2 \cdot D_3 D_2 \cdot G_3 G_2 \cdot B_3 B_3 \cdot D_3 D_3$ |  | Portugal                          |  |   |
| <u>Viola Braguesa</u>   | 10 strings<br>5 courses | $C_4 C_3 \cdot G_4 G_3 \cdot A_4 A_3 \cdot D_4 D_4 \cdot G_4 G_4$                     | Viola Da Braga   | Portugal                          |  |   |
| <u>Viola caipira</u>    | 10 strings<br>5 courses | $A_3 A_2 \cdot D_4 D_3 \cdot F \#_4 F \#_3 \cdot A_3 A_3 \cdot D_4 D_4$               | Viola de dez cordes, Viola sertaneja                                     | Brazil                            |  |  |
| <u>Viola Campanica</u>  | 10 strings<br>5 courses | $C_3 C_2 \cdot F_3 F_2 \cdot C_3 C_3 \cdot E_3 E_3 \cdot G_3 G_3$                     | Viola de Beja  | Portugal                          |  |   |
| <u>Viola da Gamba</u>   |                         | See <u>Viol, Tenor</u>  |  |                                   |  | See <u>Viol, Tenor</u>  |
| <u>Viola Da Terra</u>   | 12 strings<br>5 courses | $A_3 A_3 A_2 \cdot D_4 D_4 D_3 \cdot G_3 \cdot B_3 B_3 \cdot D_4 D_4$                 |  | Azores (Portugal)                 |  |   |
| <u>Viola De Arame</u>   | 9 strings<br>5 courses  | $G_3 G_2 \cdot D_3 D_2 \cdot G_3 G_3 \cdot B_3 B_3 \cdot D_3 D_3$                     | Viola de Madeira   | Madeira, Portugal                 |  |  |
| <u>Viola de cocho</u>   | 5 strings<br>5 courses  | $G_3 \cdot D_3 \cdot E_3 \cdot A_3 \cdot D_4$   |  | Mato Grosso, South-western Brazil |  |  |
| <u>Violao De</u>        | 7 strings               | Standard/Common:  |  | Brazil                            |  |   |

|                 |                         |   |   |                                    |  |   |
|-----------------|-------------------------|---|---|------------------------------------|--|---|
| Sete Cordas     | 7 courses               | $C_2 \cdot E_2 \cdot A_2 \cdot D_3 \cdot G_3 \cdot B_3 \cdot E_4$<br>Alternate:<br>▪ $B_2 \cdot E_2 \cdot A_2 \cdot D_3 \cdot G_3 \cdot B_3 \cdot E_4$                          |   |                                    |  |   |
| Viola Sertaneja | 10 strings<br>5 courses | [*]<br>$A_3 \ A_2 \cdot D_4 \ D_2 \cdot F\#_4 \ F\#_3 \cdot B_3 \cdot A_3$<br>$A_3$<br>$A_3 \cdot D_4 \cdot G_4 \ G_4 \cdot B_3 \cdot B_3 \ B_3$<br>$B_3 \cdot E_4 \ E_4 \ E_4$ | Viola Nordestina  | Brazil                             | Two different arrangements are employed for the courses:<br>2-2-2-2-2 (1st tuning) or 1-1-2-3-3 (2nd tuning) |   |
| Viola Terceira  | 15 strings<br>6 courses | $E_3 \ E_3 \ E_2 \cdot A_3 \ A_3 \ A_2 \cdot D_4 \ D_4$<br>$D_3 \cdot G_4 \ G_3 \cdot B_3 \ B_3 \cdot E_4 \ E_4$  | Viola Da Terceira, Viola Terceirense                          | Azores (Portugal)                  |  |   |
| Viola Toeira    | 12 strings<br>5 courses | $A_3 \ A_3 \ A_2 \cdot D_4 \ D_4 \ D_3 \cdot G_4$<br>$G_3 \cdot B_3 \ B_3 \cdot E_3 \ E_3$  |   | Portugal                           |  |   |
| Violin          | 4 Strings<br>4 courses  | $G_3 \ D_4 \ A_4 \ E_5$   | Fiddle (colloquial)   | Lombardy                           | For other tunings see fiddle   |  |
| Violin, Tenor   | 4 Strings<br>4 courses  | Standard/Common:<br>$G_2 \ D_3 \ A_3 \ E_4$<br>Alternate:<br>▪ $F_2 \ C_3 \ G_3 \ D_4$  | Tenor violin,<br>baritone violin,<br>violotta, tenor<br>cello | Italy (acoustic)<br>USA (electric) | Standard is one octave below the violin;<br>4th below the viola.<br>Rare.                                    |   |

**W**

| Instrument          | Strings & Courses       | Tuning(s)  | Alternative Names                    | Origin        | Notes   | Picture   |
|---------------------|-------------------------|--|--------------------------------------|---------------|---|---|
| Walaycho            | 10 strings<br>5 courses | *Bolivian ( $F_6$ ):<br>$C_5 \ C_5 \cdot F_5 \ F_5 \cdot A_5 \ A_4 \cdot D_5$<br>$D_5 \cdot A_5 \ A_5$<br>▪ Argentine ( $G_6$ ):<br>$D_5 \ D_5 \cdot G_5 \ G_5 \cdot B_5 \ B_4 \cdot E_5$<br>$E_5 \cdot B_5 \ B_5$   | Waylacho,<br>hualaycho,<br>maulincho | Andean region | $F_6$ = 4th higher than the charango<br>$G_6$ = 5th higher than the charango                              |    |
| Waldzither, bass    | 9 strings<br>5 courses  | Standard/Common:<br>$A_2 \cdot E_3 \ E_3 \cdot A_3 \ A_3 \cdot C \ \sharp \ 4$<br>$C \sharp_4 \cdot E_4 \ E_4$   |                                      | Germany       |   |   |
| Waldzither, descant | 9 strings<br>5 courses  | Standard/Common:<br>$G_3 \cdot D_4 \ D_4 \cdot G_4 \ G_4 \cdot B_4 \ B_4 \cdot D_5$<br>$D_5$   | Bergmannszither,<br>Walddoline       | Germany       |   |   |
| Waldzither, Heym    | 14 strings<br>6 courses | Standard/Common:<br>$C_2 \ C_2 \cdot G_3 \ G_3 \ G_3 \cdot C_4 \ C_4$<br>$C_4 \cdot E_4 \ E_4 \cdot G_4 \ G_4 \ G_4$   |                                      | Germany       | Very rare, and possibly obsolete  |   |
| Waldzither, piccolo | 9 strings<br>5 courses  | Standard/Common:<br>$C_4 \cdot G_4 \ G_4 \cdot C_5 \ C_5 \cdot E_5 \ E_5 \cdot G_5$<br>Alternates:<br>▪ D tuning: $D_4 \cdot A_4 \ A_4 \cdot D_5$<br>$D_5 \cdot F\#_5 \ F\#_5 \cdot A_5 \ A_5$   |                                      | Germany       |   |   |
| Waldzither, tenor   | 9 strings<br>5 courses  | Standard/Common:<br>$C_3 \cdot G_3 \ G_3 \cdot C_4 \ C_4 \cdot E_4 \ E_4 \cdot G_4$<br>$G_4$<br>Alternates:<br>▪ D tuning: $D_3 \cdot A_3 \ A_3 \cdot D_4$<br>$D_4 \cdot F\#_4 \ F\#_4 \cdot A_4 \ A_4$<br>▪ Open G major: $G_2 \cdot D_3 \ D_3 \cdot G_3 \ G_3 \cdot B_3 \ B_3 \cdot D_4 \ D_4$ | Waldzither,<br>Forest zither         | Germany       | The tenor is the standard waldzither;<br>several other, less common tunings are also used <sup>[18]</sup> |  |

**X**

| Instrument | Strings & Courses        | Tuning(s)   | Alternative Names                    | Origin  | Notes   | Picture |
|------------|--------------------------|---|--------------------------------------|---------|---|---------|
| Xenorphica | 73 strings<br>73 courses | F <sub>1</sub> F♯ <sub>2</sub> G <sub>1</sub> G♯ <sub>1</sub> A <sub>1</sub> A♯ <sub>1</sub> B <sub>1</sub> C <sub>2</sub> C♯ <sub>2</sub><br>D <sub>2</sub> D♯ <sub>2</sub> E <sub>2</sub> [...]*<br><br>F♯ <sub>6</sub> G <sub>6</sub> G♯ <sub>6</sub> A <sub>6</sub> A♯ <sub>6</sub> B <sub>6</sub> C <sub>7</sub> C♯ <sub>7</sub><br>D <sub>7</sub> D♯ <sub>7</sub> E <sub>7</sub> F <sub>7</sub> | claviharp, harp piano,<br>keyed harp | Austria | Only lowest and highest octaves are shown; tuning of the intervening notes is chromatic.<br><br>Rare. |         |
| Xiaoruan   | 4 strings<br>4 courses   | D <sub>3</sub> A <sub>3</sub> D <sub>4</sub> A <sub>4</sub> *   | Alto Ruan                            | China   | lit. "small Ruan"   |         |

**Y**

| Instrument           | Strings & Courses      | Tuning(s)   | Alternative Names                                    | Origin | Notes  | Picture             |
|----------------------|------------------------|---|--|--------|--|---------------------|
| Yakumogoto           |                        | See <i>Nigenkin</i>   |  |        |  | See <i>Nigenkin</i> |
| Yayli tambur         | 6 strings<br>3 courses | D <sub>2</sub> D <sub>2</sub> *A <sub>2</sub> A <sub>2</sub> *D <sub>3</sub> D <sub>3</sub> | Turkish tambur                                       | Turkey | the <u>bowed</u> variant (versus the <u>mizraplı</u> tambur, the <u>plucked</u> variant) of the Turkish tambur |                     |
| Yueqin               | 4 strings<br>4 courses | G <sub>3</sub> *D <sub>4</sub> *G <sub>4</sub> *D <sub>5</sub>                              | Yueh qin,<br>Yueh chin, Moon guitar                  | China  |  |                     |
| Yueqin,<br>Taiwanese | 2 strings<br>2 courses | D <sub>3</sub> *A <sub>4</sub>  | Hengchun yueqin,<br>Yueh qin, Yueh chin, Moon guitar | Taiwan |  |                     |

**Z**

| Instrument         | Strings & Courses  | Tuning(s)  | Alternative Names                                  | Origin                             | Notes  | Picture |
|--------------------|--|--|--|------------------------------------|--|---------|
| Zheng              | 18 strings<br>18 courses   | Common:<br><br>C <sub>2</sub> D <sub>2</sub> E <sub>2</sub> G <sub>2</sub> A <sub>2</sub> C <sub>3</sub> D <sub>4</sub> E <sub>4</sub><br>G <sub>4</sub> A <sub>4</sub> C <sub>4</sub> D <sub>4</sub> E <sub>4</sub> G <sub>4</sub> A <sub>4</sub><br>C <sub>5</sub> D <sub>5</sub> E <sub>5</sub> | Guzheng, Gu Zheng, Pinyin                          | China                              | Tuning is not absolute, and is not limited by Western equal temperament.<br><br>Zhengs also come with varying numbers of strings, typically from 16–26; the pentatonic tuning is extended to accommodate these extra (high and low) strings. |         |
| Zhonghu            | 2 strings<br>2 courses   | ▪ G <sub>3</sub> D <sub>4</sub><br>▪ A <sub>3</sub> E <sub>4</sub>   |  | China                              | Either tuning may be considered "standard".  |         |
| Zhongruan          | 4 strings<br>4 courses   | Standard/Common:<br><br>G <sub>2</sub> D <sub>3</sub> G <sub>3</sub> D <sub>4</sub><br>Alternates:<br>▪ G <sub>2</sub> D <sub>3</sub> A <sub>3</sub> E <sub>4</sub> (Mandolin)<br>▪ A <sub>2</sub> E <sub>3</sub> A <sub>3</sub> E <sub>4</sub>  | Tenor Ruan, ruanjian, ruanqin                      | China                              | lit. "medium Ruan";<br><br>This is the standard/most common instrument of the five-member ruan family.   |         |
| Zither,<br>Alpine  | 5 fretted strings[*]<br>5 courses<br>plus<br>37 open<br>accompaniment &<br>bass strings      | Fretted Strings<br>Standard/Common:<br><br>A <sub>4</sub> A <sub>4</sub> D <sub>4</sub> G <sub>3</sub> C <sub>3</sub><br>Alternate:<br>▪ Vienna: A <sub>4</sub> D <sub>4</sub> G <sub>3</sub> G <sub>3</sub> C <sub>3</sub><br>[See ZITHER TUNING CHART, below, for unfretted string tunings]      | Alpine Zither, Harp Zither                         | Austria,<br>Germany,<br>elsewhere. | Standard Tuning AKA "Munich"<br><br>[*]<br>▪ 5 fretted melody strings<br>▪ 12 unfretted accompaniment strings<br>▪ 12 unfretted bass strings<br>▪ 13 unfretted contrabass strings  |         |
| Zither,<br>Concert | 5 fretted strings[*]<br>5 courses<br>plus<br>29 – 30 open<br>accompaniment &<br>bass strings | Fretted Strings<br>Standard/Common:<br><br>A <sub>4</sub> A <sub>4</sub> D <sub>4</sub> G <sub>3</sub> C <sub>3</sub><br>Alternate:<br>▪ Vienna: A <sub>4</sub> D <sub>4</sub> G <sub>3</sub> G <sub>3</sub> C <sub>3</sub><br>[See ZITHER TUNING CHART, below, for unfretted string tunings]      | Concert Zither,<br>Fretted Zither                  | America,<br>Germany,<br>elsewhere. | Standard AKA "Munich"<br><br>[*]<br>▪ 5 fretted melody strings<br>▪ 12 unfretted accompaniment strings<br>▪ 12 unfretted bass strings<br>▪ up to 13 unfretted contrabass strings (5 or 6 is the most common)                                 |         |
| Zither,<br>Guitar  | Varies   | Varied open string chord sets and chromatic or diatonic tuning of additional open strings. The string tuning is often printed on the instrument itself. See the picture. No frets nor fingerboard.   | Guitar zither,<br>Chord zither,<br>Fretless Zither | Austria,<br>Germany,<br>elsewhere. | May have from 12 to 50 strings, or more, depending on design<br><br>▪ See also Autoharp which has diatonic and chromatic open strings, and a stop mechanism to produce chords.   |         |

## Zither Tuning Chart

|          |                | ZITHER TUNING CHART |                |                |                |                             |                             |                             |                |                |                |                |                |                |                             |                             |                             |                             |                             |                             |                |                |                |                |                |                |                             |                             |                             |                             |                |                             |                             |                             |                             |                |                             |                             |                             |                             |                             |                             |                |
|----------|----------------|---------------------|----------------|----------------|----------------|-----------------------------|-----------------------------|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|----------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|----------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|----------------|
|          |                | FRETTED             |                |                |                |                             | UNFRETTED                   |                             |                |                |                |                |                |                |                             |                             |                             |                             |                             | COURTBASSES                 |                |                |                |                |                |                |                             |                             |                             |                             |                |                             |                             |                             |                             |                |                             |                             |                             |                             |                             |                             |                |
| STRING   |                | Melody              |                |                |                |                             | Accompaniment               |                             |                |                |                |                |                |                | Basses                      |                             |                             |                             |                             | Concert                     |                |                |                |                |                |                |                             |                             |                             |                             |                |                             |                             |                             |                             |                |                             |                             |                             |                             |                             |                             |                |
| PITCH    |                | 1                   | 2              | 3              | 4              | 5                           | 6                           | 7                           | 8              | 9              | 10             | 11             | 12             | 13             | 14                          | 15                          | 16                          | 17                          | 18                          | 19                          | 20             | 21             | 22             | 23             | 24             | 25             | 26                          | 27                          | 28                          | 29                          |                |                             |                             |                             |                             |                |                             |                             |                             |                             |                             |                             |                |
| Munich   | A <sub>4</sub> | A <sub>4</sub>      | D <sub>4</sub> | G <sub>3</sub> | C <sub>3</sub> | E <sup>b</sup> <sub>4</sub> | B <sup>b</sup> <sub>3</sub> | F <sub>4</sub>              | C <sub>4</sub> | G <sub>3</sub> | D <sub>4</sub> | A <sub>3</sub> | E <sub>4</sub> | B <sub>3</sub> | F <sup>#</sup> <sub>3</sub> | C <sup>#</sup> <sub>4</sub> | G <sup>#</sup> <sub>3</sub> | E <sup>b</sup> <sub>3</sub> | B <sup>b</sup> <sub>2</sub> | F <sub>3</sub>              | C <sub>3</sub> | G <sub>2</sub> | D <sub>3</sub> | A <sub>2</sub> | E <sub>3</sub> | B <sub>2</sub> | F <sup>#</sup> <sub>2</sub> | C <sup>#</sup> <sub>3</sub> | G <sup>#</sup> <sub>2</sub> | F <sub>2</sub>              | E <sub>2</sub> | E <sup>b</sup> <sub>2</sub> | D <sub>2</sub>              | C <sup>#</sup> <sub>2</sub> | C <sub>2</sub>              | B <sub>1</sub> | B <sup>b</sup> <sub>1</sub> | A <sub>1</sub>              | G <sup>#</sup> <sub>1</sub> | G <sub>1</sub>              | F <sup>#</sup> <sub>1</sub> | F <sub>1</sub>              |                |
| Viennese | A <sub>4</sub> | D <sub>4</sub>      | G <sub>3</sub> | G <sub>3</sub> | C <sub>3</sub> | Ab <sub>4</sub>             | E <sup>b</sup> <sub>4</sub> | B <sup>b</sup> <sub>3</sub> | F <sub>4</sub> | C <sub>4</sub> | G <sub>4</sub> | D <sub>4</sub> | A <sub>3</sub> | E <sub>4</sub> | B <sub>3</sub>              | F <sup>#</sup> <sub>4</sub> | C <sup>#</sup> <sub>4</sub> | G <sup>#</sup> <sub>3</sub> | E <sup>b</sup> <sub>3</sub> | B <sup>b</sup> <sub>2</sub> | F <sub>2</sub> | C <sub>3</sub> | G <sub>2</sub> | D <sub>2</sub> | A <sub>2</sub> | E <sub>2</sub> | B <sub>2</sub>              | F <sup>#</sup> <sub>2</sub> | C <sup>#</sup> <sub>2</sub> | G <sup>#</sup> <sub>2</sub> | F <sub>2</sub> | E <sub>2</sub>              | E <sup>b</sup> <sub>2</sub> | D <sub>2</sub>              | C <sup>#</sup> <sub>2</sub> | C <sub>2</sub> | B <sub>1</sub>              | B <sup>b</sup> <sub>1</sub> | A <sub>1</sub>              | G <sup>#</sup> <sub>1</sub> | G <sub>1</sub>              | F <sup>#</sup> <sub>1</sub> | F <sub>1</sub> |
| Notes:   | Basic          |                     |                |                |                |                             |                             |                             |                |                |                |                |                |                |                             |                             |                             |                             | Alpine                      |                             |                |                |                |                |                |                |                             |                             |                             |                             |                |                             |                             |                             |                             |                |                             |                             |                             |                             |                             |                             |                |

## Notes

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7. Man Playing Contrabass Banjo ([https://24.media.tumblr.com/tmb1\\_lmcphDYxr1gb106y01\\_400.jpg](https://24.media.tumblr.com/tmb1_lmcphDYxr1gb106y01_400.jpg))
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## See also

- Bass Guitar Tunings
- Guitar Tunings
- Plucked string instrument list
- Scale (string instruments)
- Scordatura
- Violin Tuning

## References

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## External links

- Atlas of Plucked Instruments (<http://www.atlasofpluckedinstruments.com/index.htm>)
- A Case Study of the Zheng Concerto ([http://etd.lib.fsu.edu/theses/available/etd-04122004-223541/unrestricted/Yiu\\_Thesis.pdf](http://etd.lib.fsu.edu/theses/available/etd-04122004-223541/unrestricted/Yiu_Thesis.pdf))
- Chapman Stick Tunings (<http://www.chapstick.com/instruments/tunings/all/>)
- Hurdy-gurdy Tuning (<http://xaime.pagesperso-orange.fr/vieille/descrip/evieille4.html>)
- Koto Tunings (<https://ccrma.stanford.edu/groups/gagaku/strings/koto.html>)
- Zither Tuning (<http://www.zither.us/?q=zither.tuning>)

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