

violin

The **violin**, sometimes known as a fiddle, is a wooden string instrument in the **violin** family. Most violins have a hollow wooden body. It is the smallest and highest-pitched instrument (soprano) in the family in regular use. The violin typically has four strings, usually tuned in perfect fifths with notes G3, D4, A4, E5, and is most commonly played by drawing a bow across its strings. It can also be played by plucking the strings with the fingers (pizzicato) and, in specialized cases, by striking the strings with the wooden side of the bow (col legno).

Violins are important instruments in a wide variety of musical genres. They are most prominent in the Western classical tradition, both in ensembles (from chamber music to orchestras) and as solo instruments. Violins are also important in many varieties of folk music, including country music, bluegrass music and in jazz. Electric violins with solid bodies and piezoelectric pickups are used in some forms of rock music and jazz fusion, with the pickups plugged into instrument amplifiers and speakers to produce sound. The violin has come to be incorporated in many non-Western music cultures, including Indian music and Iranian music. The name fiddle is often used regardless of the type of music played on it.

The violin was first known in 16th-century Italy, with some further modifications occurring in the 18th and 19th centuries to give the instrument a more powerful sound and projection. In Europe, it served as the basis for the development of other stringed instruments used in Western classical music, such as the viola. [from Wikipedia](#) ↗

Electric Violin - a review

<https://beginnerguitarhq.com/best-electric-violin/> ↗

Keely

"In [organ pipes](#), of a certain calibre, very sensitive [waves](#) occur at intervals; as according to the [character](#) of the [sound](#) evolved; but on a combination of [resonators](#) composed of brass tubes of more than [nine](#) in number, a [wave](#) of [sound](#), induced by certain [chords](#) passing over them, produces high [vortex action](#) of the [air](#) enclosed in them. The [vibration](#) of [tuning forks](#) induces alternate condition of the [air](#) that surrounds them, if in open [atmosphere](#); but quite a different [action](#) presents itself when the forks are exercised in [resonating tubes](#), set to [thirds](#) of the ((mass chord) they represent. Then high [vortex action](#) is the instant result. [Vibrators](#) cannot be set promiscuously in tubes, and get such results, any more than a musician can render a musical [composition](#) on the **violin** before tuning it." [[Appendix I](#)]

Ramsay

Guiseppe Tartini, 200 years ago, while practicing on his **violin**, observed a very interesting phenomenon in [music](#) in the matter of [notes](#) or [sounds](#), [[Scientific Basis and Build of Music](#), page 59]

which seems to show that not only has one part of a vibrating [string sympathy](#) with another part of it so as to go into [harmonic partials](#), as we have just seen, but as if the very air itself had [sympathy](#) with harmoniously vibrating [strings](#); for Tartini observed that two harmonious sounds being produced and sustained as they can be, for example, by a strong [bow](#) on the **violin**, a [third sound](#) will be heard. Tartini's name for it was simply "a [third sound](#)." This is not an [overtone](#), as [Helmholtz](#) has called the [harmonic partials](#) of one sounding string, but an [undertone](#), because it is a "[grave harmonic](#)," away below the sounds of the two strings which awaken it. The subject of these [undertones](#) has been carefully studied since Tartini's day, and more insight has been obtained since we are now able to count and register the [vibration](#) of any [musical sound](#). [Helmholtz](#) has called these [third sounds](#) of Tartini's "[difference sounds](#)," because when awakened by two strings, for example, the [vibration-number](#) of the third tone is the difference of the [vibrations-numbers](#) of the two tones which awaken it. The [note](#) C with [vibration-number](#) 512, and another C whose [vibration-number](#) is 256, the [octave](#), awakened no third sound, because there is no difference between the two [numbers](#) - the one is just the doubled or halved; but if we

take C256 and G381, its [fifth](#), the difference number is 128; this being a low octave of C256, it has the effect of strengthening the upper one. [Helmholtz](#) found this to be the *law of the third sound* as to its producing, and the effect of it when produced. This [third sound](#), mysteriously arising in the air through the [sympathy](#) it has with all [concordant](#) things, is another among many more suggestions that the whole [Creation](#) is measured and numbered to be in [sympathy](#) one part with another. The [Creation](#) is a universe. [[Scientific Basis and Build of Music, page 60](#)]

A very important thing in the making of a **violin**, after a good form, a right balancing of part against part, and all of wood in skillful condition, is the [violin varnish](#). Composition:-

[Linseed oil](#) boiled,... .. 1 part.

[Isinglass](#), 1/2 part.

[Turpentine](#), Quantum suf.

Give two coats with this, then rub down with fine sandpaper. Then, best [copal varnish](#), one coat. Finish then with boiled [linseed oil](#), thickened with sifted '[rotten stone](#).' This gives a fine, smooth, and dull surface. [Ramsay's violins](#) are of surpassing [tone](#); and he considered the [varnish](#) an important [element](#) in **violin-making**. [[Scientific Basis and Build of Music, page 85](#)]

HARMONICS ON THE **VIOLIN**.

At the [middle](#) of the [string](#) the [stopped note](#) and the [harmonic notes](#) are the same; but corresponding places above and below the [middle](#) give the same [harmonic](#), although these places when [stopped](#) give different [notes](#). [[Scientific Basis and Build of Music, page 92](#)]

VIOLIN-FINGERING - Whenever the third finger is normally fourth for its own open [string](#), then the passage from the third finger to the next higher open [string](#) is always in the [ratio](#) of 8:9; and if the [key](#) requires that such passage should be a 9:10 [interval](#), it requires to be done by the little finger on the same [string](#), because the next higher open [string](#) is a [comma](#) too high, as would be the case with the [E string](#) in the [key of G](#).

In the [key of C](#) on the **violin** you cannot play on the open [A](#) and [E strings](#); you must [pitch](#) all the [notes](#) in the [scale](#) higher if you want to get [[Scientific Basis and Build of Music, page 99](#)]