

# STRINGED INSTRUMENTS WITH REFERENCE TO VIOLIN AND THE DOUBLE VIOLIN

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Though the language and vocal music might have come later, the construction of musical instruments dates with human ingenuity. A string instrument (or stringed instrument) is a musical instrument that produces sound by means of vibrating strings. There are many kinds of stringed instruments that are represented in South Indian sculptures, and a variety of instruments are mentioned in classical literature.

A stringed instrument may have one or many strings as vibrators. Other things being equal, the shorter the string the higher the pitch. Polychords or the harp-like instruments have many strings with a one-string-to-one-note relationship. The sound is amplified by a resonator to which the strings convey their vibrations. Another kind of instrument is like a lute in which each string can produce more than one note. This is made possible by pressing a string on the stem or fingerboard, thereby shortening the length of the vibrating string for generating different notes. The string may transmit its vibrations to a resonator through a bridge as is done in a Guitar. Otherwise, the stem itself may act like a hollow resonator as in a Zither and the sound may be amplified by an additional resonator attached to the stem. The string may be plucked by the finger or a plectrum or a bow may be used to vibrate the string. The *ravanahatha* (literally, the hand of Ravana) is a primitive musical instrument, an ancient bowed fiddle that, according to the Hindu epic, the Ramayana and the Ravana legends of our country, was played by the mighty demon king himself.

Known by other names such as *ravanhatta*, *ravanastron*, or *Ravana hasta veena*, it was an almost forgotten artifact of our country's ancient history, which is strongly intertwined with mythology.

The *Ramayana* also mentions that after the war between Rama and Ravana, Hanuman returned to the kingdom of Ayodhya with the *ravanahatha*.

After the *ravanahatha* came to India, it became a favorite with musicians in the areas of present-day Rajasthan, Gujarat and other territories of North India.

“Even at present, the instrument is common among the North Indian gypsy tribes. The playing and making of this instrument are passed down through each generation of traditional musicians,”

String instruments are mainly plucked and produce sound using vibrating strings. The most common string instruments in the string family are guitar, violin, viola, cello, double bass, banjo, mandolin, ukulele, and harp.

Here is a description of the history of stringed instruments:

During the medieval era, stringed and bowed instruments began to emerge around several designs in the Middle East, the rebec used a half pear shape and three strings for vertical playing and acted as an important precursor to the violin. The fiddle also originated during this period as a three to the five-string instrument with a larger body than the contemporary fiddle and violin.

### **Imzad:**

The imzad is a single-string bowed instrument used by the Tuareg people in Africa. Its body is made from a calabash or wood, which is covered by animal skin. The strings are made from horsehair and are connected near the neck and run over a two-part bridge. The round bow is also equipped with horsehair. The imzad is only played by the women, for example, to accompany songs, often during an evening ceremony called takket.

### **Arpeggione:**

This is a six-stringed musical instrument, fretted and tuned like a guitar, but bowed like a cello, similar to the bass viola da gamba. Also called, the guitar violoncello. The body shape of the instrument is, however, more like a medieval fiddle than either the guitar or the bass viol. The instrument was mainly a bass viol with a guitar-type tuning, E-A-D-G-B-E.

### **Baritone violin:**

The baritone violin is a member of the violin family, tuned an octave below the standard GDAE. This was a common tuning for both viol-type instruments and under-the-chin models before the violin-violoncello forms were standardized. In the late 1960s, the Barcus-Berry electric violin manufacturers began to market an instrument called the "violectra," which was simply an electric violin with extremely thick strings, tuned an octave low. That was an inspiration to develop explore more ranges.

When the instrument strung up with the low strings, the clangorous brassy sound is transformed to a clear, bright and harsh sound which results in extra clarity and penetration of the low register notes emerging from a small sound chamber which cannot compete with a good violin or viola in carrying power in a good-size hall, but for microphone-aided, attention-getting sound which has improved over the last twenty years and proved as an alternate voice.

### **Types of playing techniques:**

All string instruments produce sound from one or more vibrating strings, transferred to the air by the body of the instrument (or by a pickup in the case of electronically amplified instruments). They are usually categorized by the technique used to make the strings vibrate (or by the primary technique, in the case of instruments where more than one may apply.) The three most common techniques are plucking, bowing and striking.

**Plucking:** Plucking is used as the sole method of playing on instruments such as the banjo, guitar, harp, lute, mandolin, oud, sitar, and either by a finger or thumb or by some type of plectrum. This category includes the keyboard instrument the harpsichord, which formerly used feather quills (now plastic plectra) to pluck the strings.

Instruments usually played by bowing may also be plucked, a technique referred to by the Italian term *pizzicato*.

**Bowing:** Bowing is a method used in some string instruments, including the violin, viola, cello, and the double bass (of the violin family) and the old viol family. The bow consists of a stick with many hairs stretched between its ends. Bowing the instrument's string causes a stick-slip phenomenon to occur, which makes the string vibrate.

Ancestors of the modern bowed string instruments are the rebab of the Islamic Empires, the Persian kamancheh and the Byzantine lira. Other bowed instruments are the rebec, hardingfele, nyckelharpa, kokyū, erhu, igil, sarangi, and K'ni. The hurdy-gurdy is bowed by a wheel. Rarely, the guitar is played with a bow (rather than plucked) for unique effects.

### **Striking:**

The third common method of sound production in stringed instruments is to strike the string. Violin family string instrument players are occasionally instructed to strike the string with the side of the bow, a technique called *col legno*. This creates a percussive sound along with the pitch of the note.

### **The String Family:** Violin • Viola • Cello • Double Bass

A string is a stretched piece of wire or gut on a wooden piece that produces a musical note, is called a string instrument. The body of a string instrument is hollow inside to allow sound to vibrate within them, are made of different kinds of wood, but the part of the instrument that makes the sound is the strings. The strings are played most often by drawing a *bow* across them. The handle of the bow is made of wood and the strings of the bow are horsehair from horses' tails. Sometimes the musicians will use their fingers to pluck the strings, and occasionally they will turn the bow upside down and play the strings with the wooden handle.

The strings are the largest family of instruments in the orchestra and they come in four sizes: the violin, which is the smallest, viola, cello, and the biggest, the double bass, sometimes called the contrabass. The smaller instruments, the violin, and viola make higher-pitched sounds, while the larger cello and double bass produce low rich sounds. They are all similarly shaped, with curvy wooden bodies and wooden necks. The strings stretch over the body and neck and attach to small decorative heads, where they are tuned with small tuning pegs.

Joe Venuti, a jazz violin player of the '1935 to 43, had a thing that attached to his acoustic instrument called a DeArmond [slightly different than what guitarists think of]. It was sort of a microphone that attached to the instrument. That was the most commonly used electric technology."

Since these instruments weren't a solid bodies, they suffered from the same unwieldy feedback and inferior tone that plagued the recently electrified hollow-body guitars of the time.

## Electric Violin

Rare electric 1935 Rickenbacker Bakelite Violin with horseshoe magnetic pick with a pole for each string. Only 12 violins were made in 1935 and 31 in 1936, 1939 the design has changed.



### National Vio-Lectric Electric Violin 1936

Electric violins first entered the market in the 1930s and 1940s, manufactured by companies such as the Electro Stringed Instrument Corporation (founded by George Beauchamp who invented the Bakelite Electro Violin), National, and Vega, who released a solid body in 1939.

Skeleton-framed electric violins, somewhat like the ones made today, were manufactured in the early 1930s as well.

"In the 1930s, there was an electric violin built by GE. It was obviously unplayable. It had this megaphone attached to it to amplify the sound.

### Octave Violin and Octave Viola

An Octave Violin is an instrument tuned one octave below a standard violin and is sometimes called a baritone violin. An Octave Viola is tuned one octave below a standard viola, which is the same tuning as a Cello.

### The double-bodied violin - JON ROSE

"A failure. I started with an idea of taking off half the belly and discovered that with a cheap violin, it often sounded louder, better not be an option. It had eight strings, I added an extra neck, then I couldn't figure out how or what to play on it. After one performance, I realized that I had arrived at a HUP situation (Hopeless, Useless, Pointless). I never got further with it."



## ELECTRIC DOUBLE VIOLIN

L.Shankar conceptualized and created the **10 String Stereophonic Double Violin**, built by Ken Parker. The Double Violin covers the entire range of an orchestra. L. Shankar's double violin is the answer to his questing forbears. But Shankar's is no Guarneri, the renowned 18th-century violin maker, although he has invented a new kind of violin. Not quite a violin in the conventional sense since Shankar's violin is a mutant: a branched contraption with no sounding board as it is electric.

His Double violin is really two violin stems growing out of a horizontal rib which is tucked under the chin or propped against the chest Indian fashion while being played. The fingerboards have clear plastic supports.

L Shankar and the author with double violin



According to history, it is believed that ravanstram is the first-ever instrument with strings to play on with the help of a bow. In later centuries, that instrument evolved and took different forms all over the world. The reason for the change in the structure or method playing is as simple as the saying goes. Necessity is the mother of invention. Among all the instruments, the violin happens to be a distinct one. Since it is related to a man's heart when it crossed its strings and creates musical sound. Overall, in conclusion, the development of musical stringed instruments occurred are limitless possibilities.