

The Quartet

History, guitar, violin & strings

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String Instruments



String instruments have been some of the most important instruments throughout history. The earliest identified string instruments found in archaeological digs of Ancient Mesopotamian sites are over three thousand years old. These instruments are known as *chordophones*, from the Greek words *khorde*, which means "string", and *phonos*, which means "sound" or "voice". The development of these instruments varied from country to country.

The importance of the violin and the guitar increased as they went through various design changes until it reached to what it is known today. These two instruments are currently two of the most played string instruments.

Classification

String instruments can be divided depending on how the strings are set on the instrument or according to the way it is played. In both cases, there are three main groups:

String setting

- Lutes - the strings of these instruments are supported by a neck and a bout.
- Harps - the strings are contained within a frame.
- Zithers - in this case, the strings are mounted in a body.

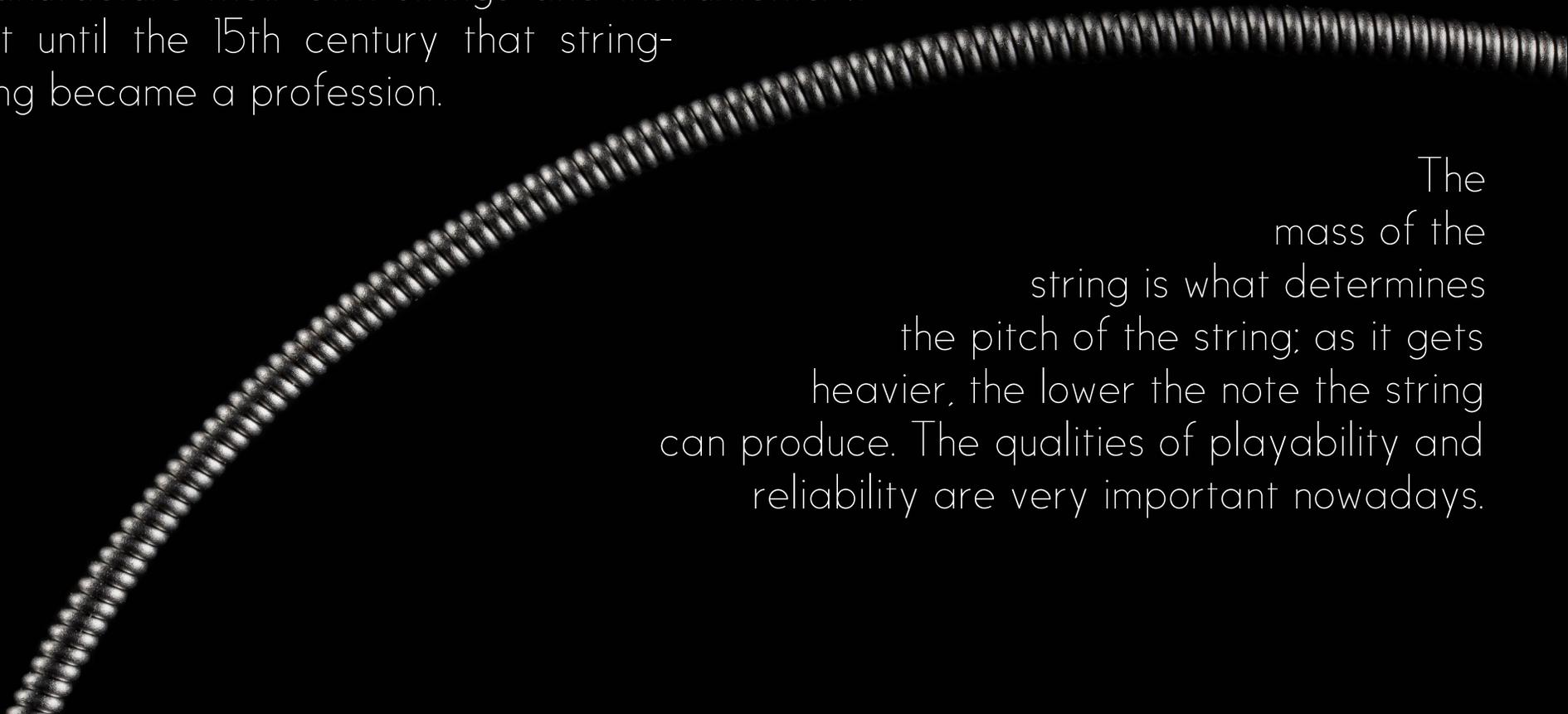
Playing methods

- Plucking - the instrument is played by using either the fingers or a pick, like a guitar or banjo.
- Bowing - the instrument is played using a bow, like the violin.
- Striking - the instrument is played similarly to percussion instruments, like the piano.



The sound producing element

The string is what produces the sound in a string instrument through vibration. The body of the instrument is what amplifies the sound produced by the string vibrations. In the case of electric instruments, an amplifier is used. Woven vines, stretched sinews, and animal guts were the first materials used to manufacture early strings for instruments. Some other materials were brass, silver, horsehair, leather, and silk. Currently, strings are made of a flexible material that is held under tension. At first, the musicians had to manufacture their own strings and instruments. It wasn't until the 15th century that string-making became a profession.



The mass of the string is what determines the pitch of the string; as it gets heavier, the lower the note the string can produce. The qualities of playability and reliability are very important nowadays.

The Guitar

The guitar is a very popular string instrument. Its history can be traced to over four thousand years ago. The English word "guitar" comes from the Spanish word *guitarra*, which comes from the Latin word *cithara*. The guitar usually has six strings, but can range between four and sixteen strings. The two main classifications of the guitars are electric and acoustic guitars. The acoustic guitars can have either metal or nylon strings; electric guitar strings are only made of metal.



Some music genres where the guitar is used are blues, bluegrass, pop, punk, rock, jazz, mariachi, flamenco, and reggae.

Guitar Strings

There are two different types of guitar strings, metal and nylon. Metal strings tend to be more common. Nylon strings are characteristic of the classical guitars. There are many ways to identify each string in a set. One way is by color coding each end of the string and have a description of the string color code in the package. The six strings are e, B, G, D, A, and E.



String Winding

Strings are usually made with a steel wire core and are wound with various types metals, like brass and copper. The higher pitch notes are made up of only the core part that varies in mass to change the pitch. Besides the material from which the string is made of, it is important to take into account the winding shape when it comes to tone and playability.

Round wound

Round wound strings are made of a round core inside with round-winding wire around it. These strings are the easiest to manufacture, which makes them the least expensive type of strings. One problem with these strings is that they tend to produce a "squeaking" sound when the player's fingers slide over them.



Half wound

Like the round wound strings, half wound strings are also composed of a round core, but the winding wire has a rounded square cross-section, which makes the strings less rough, so they do not damage the frets of the guitar as much and it is easier for the player's fingers to slide through the string. The downside of these strings is that the sound is not as bright as the round-wound strings. This technique is only used for strings used in electric guitars or electric bass.

Flat wound

Flat wound strings are also known as ground-wound or pressure-wound strings. These strings are a mixture between round-wound and half-round strings. It combines the tonal characteristic of the round wound strings and the absence of "squeak" from the half wound strings. The winding round wire is polished until it is made almost flat after winding it around the core. Because this process removes almost half of the winding wire mass, a heavier wire is used.



Classical Guitar Strings

Nylon strings were introduced in the 20th century, when they replaced gut and silk strings. Nylon strings are more resistant than the gut strings and they tend to hold the tune better. For these strings, the E, A, and D strings have a wound of silver plate, bronze, or copper wire. The G, B, and e strings are plain nylon.



The Violin



Another popular name for the violin is the *fiddler*. It is usually made up of four strings which are tuned in perfect fifths. The violin was first made during the 16th century in Italy and only had three strings. During the Renaissance, the violin production involved elaborate woodwork and stringing. This instrument is played with a bow, which consists of a stick with horsehair between both ends. Some bows use synthetic fiber instead of the horsehair. The word violin comes from the Italian word *violino*, which means "small violin".

The violin is commonly used in classical music, Baroque music, jazz, rock, and others.

The oldest surviving violin is named after its owner, the king of France Charles IX. This violin was made in 1560.

Violin Strings

Like the rest of the historic string instruments, violin strings were made out of animal gut. Currently, they are made out of solid steel, synthetic materials and wound with various metals. Although gut strings are sometimes still used by some performers. Some strings are coated with silver or gold. Each pitch is identified with a color code that is specified in the package of the strings. The four strings' pitch are G, D, A, and E.



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