

# Musical Instruments Buying Guide



## Buying Basics

### Get Informed Before You Buy

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Our selection of musical instruments accommodates musicians of all skill levels, from novice student musicians to adults who want to perfect their skills. Before you purchase an instrument of any kind, use our buying guide to learn all the facts and make the best decision on which instrument is right for you.



Giving you a better way to buy

Getting Started

Guitars

Keyboards

Drums

Flute

Clarinet

Trumpet

Saxophone

Trombone

Violin

# At A Glance



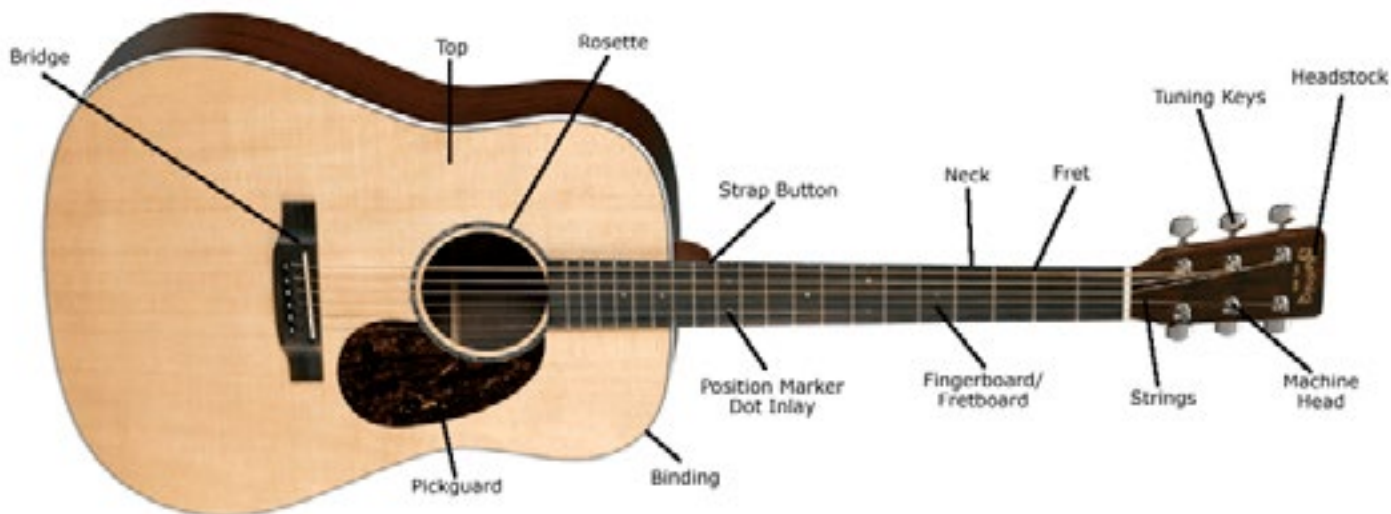
# Getting Started

Before you buy any instrument, you should consider how the instrument is going to be used as well as the skill level of the intended musician. Are you buying an instrument for a student who is just learning the basics or have they progressed to a senior level marching band or orchestra? Maybe you've been playing for a while and have decided to take your skills to a new performance level. Whatever your needs, that will determine the type of instrument that you will purchase (student, intermediate or professional).

## Guitars

### Acoustic

First decide how you really intend to use the instrument. Depending on whether you're playing at gigs, recording at home or looking for a fine collectible to accrue value over time, the way your guitar will be used can really help you narrow down what you're looking for.



### Body Style

The body style of an acoustic guitar determines its sound projection and tonal emphasis. Things to consider are tonal quality vs. playing comfort. Some acoustic guitar bodies come in a single cutaway design or even a double cutaway design. This gives easier access to the upper frets.



## Strings

Nylon strings offer a sound that's round and smooth, also described as warm and mellow, best suited for classical, Latin or folk. Nylon has more sound control, but they're not as loud as steel.

Steel strings carry a bold, strong, rich tone best for jazz, blues, rock and country. Steel strings are strummed more, while nylon strings are picked.

## Electronics

You only need to consider electronics if you plan to play in front of an audience or want to amplify your sound. Many acoustic guitars come with pickups and preamplifiers built in for playing larger venues where your acoustic sound needs to fill the room. Some instruments have preamps mounted in a hole cut in the side of the instrument, while others mount inside the soundhole. There are systems that combine preamplifier, microphone, piezo pickups, EQ, and tuners.

## Neck

When it comes to choosing a neck, the size of your hand is key. Generally the thickness and width of the neck is based on the size of the body of the instrument as well as how many frets the neck has. Usually, acoustic necks are listed as 12-fret or 14-fret. This refers to the number of frets clear of the body, not how many overall.

## Intonation

Intonation determines whether or not the notes play in tune as you move up the neck. If the distance between the frets is off, the guitar will be incapable of playing in tune and therefore useless as a recording or performance instrument.

## Tonewood

The choice of wood determines the sound of an acoustic

guitar. Different types of wood produce different tones, but most guitar makers believe that the top is the most important for determining tonal quality. Spruce is the standard material for tops. Cedar is a popular choice for classic acoustic guitars. The cost of an acoustic guitar increases dramatically based on the rarity of the tonewoods, such as rosewood, but due to decreasing supplies of certain tonewoods, guitar makers are successfully finding alternative materials to make great sounding instruments.

## Tuning Machines

The type of tuning machine your guitar has is very important. This is what allows you to fine tune and hold pitch. Enclosed machine heads resist rust and airborne corrosives, and therefore don't require as much maintenance or replacement as open tuning machines.

## Bridge and Fingerboard

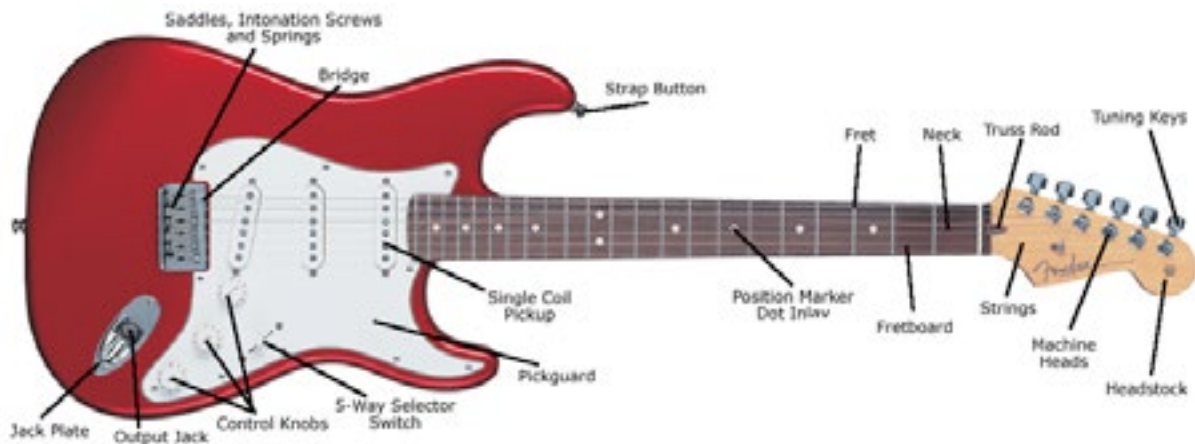
The materials used for bridge and fingerboard do have an effect on sound, but this is minimal compared to the body of the guitar. The effects of bridge and fingerboard materials cannot make or break a guitar's sound.

## Cutaway

Cutaways are something to consider if buying a steel-string guitar especially. A cutaway lets you reach the higher frets (near the sound hole) more easily. Your guitar will then produce those extra high notes, but at a loss of volume and bass.



# Electric



## Body Style

Electric guitars come in three basic body styles: Solid-body, Semi-hollow, and Hollow-body.

When sustain loud amplification and lots of effects are required, Solid-body guitars are a good choice. Semi-hollow body guitars are useful when the more of the acoustic sound of the guitar with high levels of amplification are needed. Hollow-body, or "jazz" guitars, provide the acoustic sound of the guitar but can be prone to feedback at high levels of amplification.

## Wood

Even with electric guitars, wood type influences the tone. Hard woods such as alder, ash, mahogany, maple, rosewood and basswood are the most common. They are often used in combination with one another to create unique tones.

## Neck

Choosing what type of neck your guitar should have is dependent on the size of your hand. Necks come in a number of shapes such as C-shaped, thin, wide-thin, etc. It's important you choose one that's a comfortable fit for your hand

## Scale Length

Most guitars have one of two scale lengths: 25-1/2" (provides a high tension and more trebly sound) and 24-3/4" (the lower string tension is slightly easier to play and provides a less trebly sound).

## Intonation

Intonation determines whether or not the notes play in tune as you move up the neck. If the distance between the frets (usually above the 12th fret) is off, the guitar will be incapable of playing in tune and therefore useless as a recording or performance instrument.

## Number of Frets

Most electric guitars come with 22 frets, however, if you like to play in the high register, a 24-fret neck will give you the full octave above the twelfth fret.

## Finish

With electrics, the type of finish does not affect sound as much as it does on acoustics, but you needn't worry about it in either case. Guitar makers take this into account when they build the instrument.

## Bridge

A tremolo and a stoptail are the two main types of bridges for electric guitars. Also called a whammy bar, a tremolo bridge lets you bend all the strings at once. It's good for metal styles of play but can throw strings out of tune.

A stoptail bridge is more stable for tune because it's fixed onto the body of the guitar. Many players prefer the stoptail feeling as it provides more sustain.

## Pickups

Most guitars have two pickups, one close to the neck, which provides a thicker sound, and one close to the bridge, which produces a more treble "twangy" sound. A 3-position switch allows you to choose between pickups or blend them. Some guitars have a five-position switch, which blends the pickups and changes their phase relationship to produce "glassy" tones. A third or middle pickup is also available on some guitars for more sound blending options.

## Tuning machines

The type of tuning machine your guitar has is very important. This is what allows you to fine tune and hold pitch. Enclosed machine heads resist rust and airborne corrosives, and therefore don't require as much maintenance or replacement as open tuning machines.



# Keyboards



Keyboards are available with various numbers of keys, starting from only 25 keys all the way up to 88. Models with 88 keys offer the same full range of a piano. Smaller keyboards like 25 and 33 note ones are popular because they are portable.

## Digital Piano

### Console vs. Stage

You have two options when buying a digital piano. Console pianos are typically used in your home and look a lot like acoustic pianos. Stage pianos, look like a keyboard and are designed for players who need something more portable. Both styles share the same features and sounds; the big difference is the size and the design.

### Action

Most digital pianos have 88-note keybeds similar to acoustic pianos. Weighted keybeds have a realistic piano feel and hammer action simulates a real piano even better.

### Sound Quality

Most brands get their digital samples from high-end acoustic pianos, so they typically produce good quality.

### Amplification

Although most digital pianos have amplifiers and speakers built in, the quality varies from brand to brand. Before you buy, think about how and where you will use it. Ensure the internal speakers are loud enough for your environment. Keep in mind that speakers add to the weight of a piano. If you need to move the piano and have a PA system or amplifier, there is no need to carry the additional weight.

## Portable Keyboard

If you're just learning to play, a portable keyboard is a good choice. It's easy to travel with and easy on your wallet; and if you get more serious about playing down the road, you can always upgrade to a digital piano later.

### Transportation

Portable keyboards can go most anywhere you can. Because they are lightweight, they are easy to commute with and are easy to play while sitting on your lap. And since portable keyboards come with built-in speakers, you won't need to carry any extra equipment to produce sound.

### Capabilities

Features vary from portable to portable with some offering more advanced functionality than others. Most can produce dozens of instrument sounds and percussion rhythms and include basic sequencer options. Some also offer sampling functions allowing you to record and play back sounds.

### Connectivity

USB connectivity gives you more flexibility in how you can use your keyboard. With a USB connection you can transfer sounds to and from your computer or the Internet, save projects, or even download songs for a karaoke session. Overall, this feature opens your keyboard up to many possibilities.



# Drums

## Components

Although there can be dozens of different drum kit configurations, most begin with these components:

<b>Kick drum (bass drum)</b>	The lowest-pitched drum in the kit. Generally used to provide the rhythmic foundation of the piece of music.
<b>Snare drum</b>	The distinctly snappy counterpoint to the kick drum. The snare drum assists in outlining the rhythmic framework, and it also serves to highlight accents in the music.
<b>Tom(s)</b>	Ranging in pitch from high to low, toms provide tonal color and are often used to play “fills” that bridge two sections of a song. A drum kit may contain one, two, three, or more toms.
<b>Cymbals</b>	The metallic “soprano” voices of the drum kit. A basic set includes ride, crash, and hi-hat.
<b>Hardware</b>	The essential gear that makes a drum kit playable. Includes a kick (bass) pedal, snare stand, cymbal stands (including a hi-hat stand), tom holders and legs, and other items as needed.

## Size

The diameter of a drum affects its tone and pitches more so than anything else, the wider the drum, the lower the tone.

The depth of the drum shell is responsible for the duration of the note and its volume. There’s more articulation in a shallow drum but more volume and less stick rebound in a deeper drum.

## Drumheads

The heads on the top of a drum are batter heads, while the heads on the bottom (or front of a bass drum) are called resonant heads. There are two main types: coated (subtle sound with less ring, best for brushwork) or clear (bright sound that carries well through the mix). For both coated and clear drumheads you have the choice between single ply (lively sound and quick response, suited to jazz) or double ply (more controlled and durable, favored in rock circles).

## Woods

Maple has been the most popular drum kit choice for years, as it provides a balanced sound at low, mid and high frequencies. Birch offers a harder sound and more volume; walnut has a deep tone and rich sounds; basswood and luan are less expensive options (they emulate maple with

slightly less warmth and resonance). Other considerations are mahogany, poplar and oak.

## Construction

The texture and thickness of a drum’s shell is another contributor to its sound. A thick shell (double ply) sounds best when tuned to a higher range, while a thinner shell (single ply) has a more resonant sound and lower fundamental note. The rougher the interior of the drum, the less resonant the sound.

## Bearing Edges

Bearing edges, where the drumhead meets the shell, come at different angles depending on the drum. Sharp edges (45°) produce bright tones and a lingering sustain. Rounder edges (30°) are slightly more controlled in tone and softer sounding; these are found more on older drum sets, and players look for them when wanting a vintage sound.

## Snares

No drum set is complete without a snare. Metal snares carry a bright, cutting tone while wood snares have a warmer, mellower sound. They are generally 14” in diameter and between 3-1/2” to 8” in depth.



# Flute



When buying a flute the most important question to ask is what level are you at. From that you should be able to determine what configuration you need.

## Plateau (closed-hole) keys or open-hole (French model) keys



A. Closed Hole (Plateau)



Open Hole (French Model)



Most student flutes feature plateau keys because they're easier to play. Open-hole flutes feature a small hole in the center of each key and are used by the majority of professional players because they make it easier to produce tonal nuances.

## Body material—nickel silver, silver, or a combination of the two

Nickel silver is very durable and more resistant to denting than silver, yet it still produces a nice tone. For this reason, student flutes usually feature nickel silver on the head, body, and footjoint.

The headjoint is the heart of a flute's tone production and the logical place to start upgrading a flute. A sterling silver headjoint produces a warmer and richer tone while improving the flute's response. For this reason, many intermediate models feature a silver headjoint with a nickel silver body and footjoint.

Most professional flautists use flutes made entirely of silver because they provide warm, rich tone with clean, crisp response. An all-silver flute requires careful handling and so is usually not the best choice for a young student.

## The G key-offset or in-line

The G key is controlled by the ring finger of the left hand. Offsetting this key from the rest makes it much easier to finger, particularly for small hands.

Until recently offset G keys have been found almost exclusively on plateau (closed-hole) student model flutes. But today many open-hole flutes are configured with an offset G key in order to make it easier to cover the hole.



D. In-Line Keys



Offset Keys

# Clarinet

## Body material

Materials used for the clarinet's body have a huge impact on the instrument's tone and projection.

<b>Plastic (Resin)</b>	Plastic is used exclusively for student-level clarinets. Plastic proves durable and does not change with humidity or temperature.
<b>Ebonite (Hard Rubber)</b>	Ebonite clarinets are rare but offer a material that is the best of both worlds. Hard rubber is stable and durable like plastic, but the dense rubber offers a dark sound and projection favored by professional musicians.
<b>Grenadilla (African Blackwood)</b>	The choice of more advanced and professional clarinet players, Grenadilla produces sound that is focused and possesses a "ring" that cannot be found in synthetic instruments. To insure long life, it's essential to properly break-in and care for a wood clarinet.
<b>Greenline</b>	A blend of grenadilla dust and epoxy. Greenline clarinets offer the density and tone of a grenadilla clarinet but add the stability of good synthetic materials.
<b>Rosewood</b>	Rosewood clarinets offer darker, more mellow sound than grenadilla. Rosewood clarinets are quickly finding favor among chamber players and soloists.

## Key material

<b>Nickel Plated</b>	Nickel plate is shiny, extremely durable and does not easily tarnish. It is found on most student and intermediate level clarinets, and is preferred by many professionals.
<b>Silver Plated</b>	Silver plating is warmer in appearance and softer to the touch. It also adds a minute amount of weight to the clarinet and thus slightly darkens the tone.
<b>Hamilton Plated</b>	This blend presents a warm, slightly golden look to the clarinet, and the added weight provides a darker and more liquid sound.

## Bore

Bore Size:

The size of the clarinet's bore (the inside of the clarinet) affects the general playing feel of the clarinet.

Larger-bore clarinets are preferred by jazz players and are more free-blowing with greater flexibility and projection.

Medium-bore clarinets are the most common and offer a balance between flexibility and focus.

Smaller-bore clarinets are the most resistant clarinets and provide a very compact and focused sound. These clarinets are usually preferred by students

Bore Shape:

The Bore shape also has a great impact on overall clarinet playability.

Cylindrical-bore clarinets are more free-blowing and flexible and offer a large sound with great volume. Polycylindrical-bore clarinets are slightly more resistant, their sound has more ring and offer superior intonation.



# Trumpet



The trumpet is the highest voice in the brass family. Within the trumpet family there's the cornet, flugelhorn and several specialty instruments such as "C" trumpets and piccolo trumpets (mainly used in symphony orchestras and chamber ensembles). For students, the most common is the Bb (B-flat) trumpet. This is the horn that is most commonly used for jazz, concert and marching bands

## **Bore:**

Bore is the inside diameter of the horn's tubing measured at the second valve slide. Most players use a bore from around .458" to .460". Horns with larger bores can be played with more power, but require more effort. They are usually used by advanced or professional musicians. For new and especially young players, a horn with a small bore is more appropriate because the small bore makes it easier to support a good tone.

## **Mouthpipe:**

A mouthpipe (also called a lead pipe) is the pipe that goes from the mouthpiece to the main tuning slide. It can be made of yellow brass, red brass, or sterling silver. Red brass is often preferred for student horns because it is less susceptible to corrosion. Yellow brass requires more frequent cleaning. A silver mouthpipe is a step-up feature found on intermediate and pro-level trumpets. There is also a reversed mouthpipe where the tuning slide goes over, rather than into the mouthpipe. It is a step-up feature, desirable because it makes an instrument offer less resistance.

## **Valves:**

Valves, or rather the valve pistons, come in a variety of metals. Nickel plated pistons are often found in student horns because they are hard, durable, and tolerant of infrequent cleaning. Monel pistons are another kind. Monel is an alloy that is softer than nickel plate and requires frequent cleaning and lubrication to perform at its best. It is super-resistant to corrosion so it can last longer, and it wears in for a great feel. Many professional instruments have Monel pistons and so do some student instruments. More often it is considered a step-up feature of an intermediate horn. Stainless steel pistons are yet another type. They are quite good and occasionally are found in intermediate and professional horns.

## **Bell:**

Bell materials also vary. Yellow brass is most common and is used in horns from student models to professional instruments. Rose brass bells are also common and impart a warmer, darker quality to the tone. Silver bells are less common and usually only found in high-grade horns. Nickel plate is another finish that once was common but is now seldom seen.

Bells also vary in size and taper, both of which can affect the sound of the instrument in subtle ways.

## **Finishes:**

Trumpets usually have a clear lacquer finish on a buffed brass surface. Another kind of finish is silver plate which is considered better than lacquer because it dampens vibration less than lacquer does.

# Saxophone

In choosing a saxophone, you need to consider your musician's age, skill level and the kind of use (school band, marching band, orchestra, etc.).



## Body material

Materials used for the saxophone's body have a huge impact on the instrument's tone and projection.

<b>Lacquered Brass</b>	By far, the majority of saxophones worldwide are constructed of clear or gold lacquered brass.
<b>Black Lacquer / Matte Finish</b>	Black or Matte lacquer is heavier than clear or gold and adds weight to the body of the instrument. This finish is extremely popular for tenor saxophones for producing a thick, husky sound.
<b>Silver Plating</b>	Like black lacquer, silver plating adds weight to the saxophone to darken and center the tone. Because the plating is harder than lacquer, this option adds greater volume and projection.
<b>Nickel Plating</b>	Due to its extreme hardness, nickel plating offers the greatest projection and brightest sound. Nickel plating is a favorite among jazz players.
<b>Copper / Bronze</b>	Being heavier and softer than brass, copper and bronze saxophones offer the darkest and most covered timbres.

## Body Construction

Saxophones have either ribbed or non-ribbed construction with most modern instruments being ribbed. This refers to how the posts (the knobs that protrude from the body to hold the keys) attach to the body. Student saxes and vintage U.S.-made horns are traditionally non-ribbed. This isn't necessarily a negative as the instrument is a little lighter and may be easier for the student to blow.

## Finish

The standard finish for most saxophones is a clear lacquer. Today, the saxophonist can choose from an array of alternate finishes including colored or pigmented lacquers, silver plate, "antiqued" or "vintage" finishes, nickel-plate, or black nickel-plate.



# Trombone

There are 3 major types of trombones: straight tenor, trigger-type tenor (also referred to as F-rotor or F-attachment), and bass trombones. The straight tenor trombone is the simplest, with no tubing inside the main section. The F-rotor trombone has extra tubing within the main loop. It's a straight trombone until this tubing is activated with a trigger. This makes the horn longer, changing its tuning from Bb to F. The bass trombone is a larger bore version of the F-rotor trombone that adds a second rotor to extend the horn's low-end even further.

## Bell

**Yellow Brass:** This is the most common brass used in making brass instruments. It produces a rich, full sound. Most student horns are made of yellow brass.

**Rose Brass:** Also referred to as red brass or gold brass, rose brass produces a darker, warmer tone compared to yellow brass. Most intermediate horns are made of Rose Brass.

**Silver/Nickel or Sterling Silver:** Used primarily for professional instruments and some intermediate, this material produces a very rich sound.

## Bore

The bore of a trombone is the inner diameter of the inner slide and is expressed in thousandths of an inch. The range is from about .481" (for students) to .547" (for symphonic use), on up to .562" (for bass trombone). Smaller bore horns have a brighter, more focused sound; while larger bores tend toward a darker or warmer and bigger sound.

Bore size also effects a horn's resistance or back pressure. A smaller bore creates more resistance, a larger bore less. More resistance is usually better for student players because it makes it easier to support a tone. Amount of resistance is also a matter of taste. Some players prefer more resistance, some less.

Another variation is the dual-bore trombone. This simply means that the slide is smaller on one side and expands to a larger diameter on the other. It gives the player more initial resistance from the narrower bore, but then opens up for a bigger sound. Student level trombones will seldom if ever have a double bore. It is a step-up feature.

For the beginning player — especially young players — it is best to choose a smaller bore horn, somewhere in the range from .481" to .525" because it takes less air to support a usable tone. Intermediate players may want a medium or larger bore instrument for a fuller and potentially more forceful sound, but this isn't a hard and fast rule. Symphonic trombonists tend to use the larger bore trombones, typically around .547". Bass trombones usually have a bore up around .562".

## Bells

Trombone bells can be made of yellow brass, red brass, or silver. Yellow brass is most common. The other metals color the sound in subtle ways. Rose brass is warmer and silver warmer yet.



# Violin

The violin is the highest voice in the orchestral-string instrument family.



## Body material

<b>Spruce</b>	Straight-grained spruce is the only material used for the top of a violin. Most of the sound is produced by the top, and straight-grained spruce is the only material strong enough to handle the heavy tension of the strings and ensure a resonant sound. Natural-aged, straight-grained spruce is preferred. The longer the natural aging, the better - five years is the minimum preference of violin makers.
<b>Maple</b>	Violin necks, sides and backs are generally constructed from maple which strengthens stability and enhances beauty.
<b>Ebony</b>	The fingerboard, pegs, tailpiece and chinrest are usually made from ebony. This dense, dark wood is strong but light enough that it will not make the violin feel top-heavy.
<b>Nickel Plating</b>	Due to its extreme hardness, nickel plating offers the greatest projection and brightest sound. Nickel plating is a favorite among jazz players.
<b>Other Woods</b>	Rosewood, boxwood and a few other exotic woods are also used for violin pegs, tailpieces and chinrests. These woods are chosen as much for their beauty as they are for their individual sound characteristic.

## Size

Adults will want a full-size 4/4 violin. If buying for a child you want to make sure it is sized correctly.

You can get a good idea by measuring the child's outstretched arm from neck to mid-palm.

The following chart will then identify the correct size for your student:

Length	Size
23	4/4
22	3/4
20	1/2
18-1/2	1/4
16-1/2	1/8

## Bow

Wooden bows are generally made from tropical hardwoods such as brazilwood, or a softwood known as Pernambuco. This special softwood is more expensive than other bow types and is highly prized, because it produces a richer, fuller sound. Fiberglass and carbon fiber bows are much less expensive than wooden bows. While they are more resistant to wear and tear, they are considerably heavier than wooden models and do not produce a rich, smooth sound.

The bow hair is either made from horsehair or from nylon. Large numbers of violinists prefer horsehair because they feel it produces a richer sound.