

# General Maintenance of Violins, Violas and Cellos

## Strings

Normal winding patterns are shown in figure 1. Windings should be neat, with each turn adjacent to the previous one. Strings should not be wound up to the edge of the pegbox, since this will cause the peg to stick.

## Pegs

Pegs should be a good fit on both sides of the pegbox, with no gaps, and should move easily.

Sticking or slipping pegs can be helped by coating the contact area of the peg shaft with peg paste, jeweller's rouge, soap (for very sticky pegs, but be sparing!), chalk, or pencil lead.

Remove the pegs one at a time, so that each peg remains matched to its own hole. The contact areas of the peg should be visible as two shiny rings around the peg shaft.

If the shiny rings do not go all of the way around, the peg shaft is not round. Hold the peg in the normal place, with the other end resting on a tabletop. With a knife blade or file, gently scrape off the shiny area in strokes down the peg shaft. Keep the peg turning slowly as you do this, to create a round surface. Do not scrape the non shiny areas. Re-insert the peg, work backwards and forwards a few times to seat it in, and re-examine the shiny rings. Repeat as necessary.

To apply peg paste, hold the peg as above. Taking the peg paste, carefully "colour in" the contact areas, turning the peg slowly so that the coverage is all the way around. Do this for both contact rings (i.e. the nearside one, and the far side one).

Once complete, replace the peg, "work" it backwards and forwards a few times to seat it in, and move on to the next one.

## Tail piece and tail gut

To fit the tail gut, remove one brass ferule, and thread the gut from the inside of the tail piece through one of the holes at the base towards the outside. Pull it through until the other ferule stops it. Thread the first end back through the other hole, and replace the ferule. Ensure that the ferules are about 1 cm onto the tail gut.

The tail gut is looped over the button. Protect the front of the instrument with a cloth, to avoid the tail piece scratching the instrument during string fitting.

Separate metal adjusters dampen sound, so better quality instruments should have wittner style tailpieces with integral adjusters.

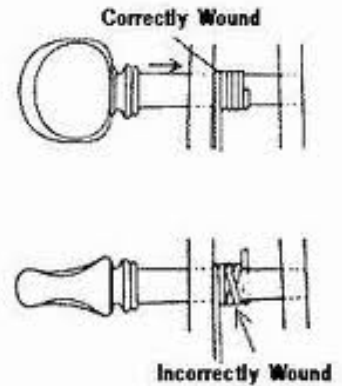


Figure 1

## Bridge position and preparation

The bridge position is established by measuring from the top shoulder of the instrument to the middle of the bridge foot. These measurements are established using a ratio of the distance from the **top nut to shoulder** : **shoulder to bridge** (as shown in figure 2 as A:B). This ratio is different for violins/violas and cellos;

- For violins and violas, the ratio is 2:3. This generally equates to 13:19.5 (cm) for violins.
- For cellos, the ratio is 7:10. This generally equates to 28:40 (cm).

When in position, the side of the bridge closest to the tail piece should be at 90 degrees to the front edge of the instrument, when viewed from the side (as shown in figure 3).

Usually, the bridge position is marked by the notches on the “f” holes, but beware, this is not always the case! Marks on the front of the instrument can also be misleading. It is always best to measure.

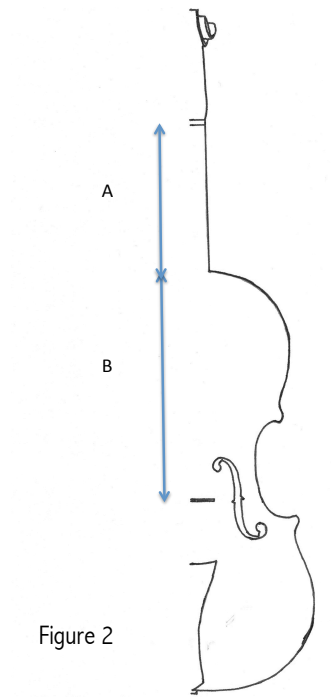


Figure 2

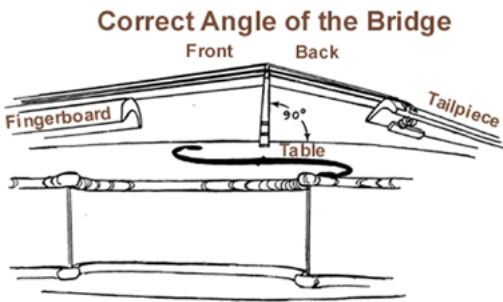


Figure 3

The bridge feet should be a good fit against the front of the instrument.

Before fitting the strings, apply a small amount of soap to each string notch on top of the bridge. The strings will then pass smoothly over the bridge during tuning.

One string (usually a middle one) is fitted first with no bridge in place. When the string is nearly pulled up to tension, the bridge will be able to be inserted, and the feet moved to the correct position. Once one string and the bridge are in place, the remaining strings can be fitted.

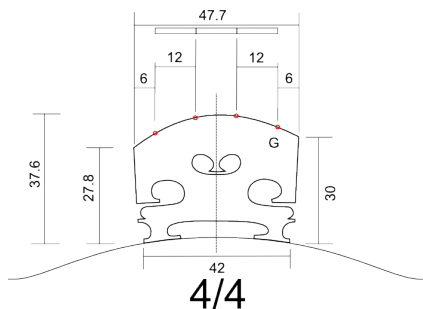


Figure 4

During tuning of an instrument, periodically check that the bridge is upright. If not, carefully pull the bridge top back into alignment, making sure to support the tailpiece side as well, so that it does not fall all the way over.

## Soundpost setting

The soundpost is made of straight grained spruce, with the grain lines running top to bottom, and across the instrument from side to side.

It is positioned just behind the treble foot of the bridge, and just inside the outer edge of the bridge foot. It should be a good fit to the front and back of the instrument, and should be upright. The fit of the sound post should not be excessively tight. The position of the soundpost is shown in figure 5.

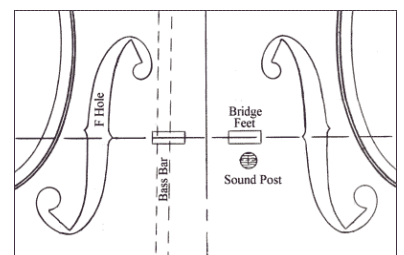


Figure 5

Instrument specific measurements for the position of the sound post are shown in the table below (figure 6).

	Violin	Viola	Cello
Approximate distance of post inside the edge of bridge foot	1.5mm	1.5 – 2mm	3 – 5mm
Approximate distance of post behind bridge foot	2 – 2.5mm	2.5 – 3mm	8 – 12mm
Thickness of soundpost	6 – 6.5mm	6.5 – 7mm	11mm

Figure 6

To place the post inside the instrument, impale the sharp end of the setter into the post 1/3 of the way down and lower the post into the instrument through the treble f-hole. Place the bottom of the soundpost onto the back in the approximate place it will be and pull the top end upright creating a slight wedging sensation.

Once wedged in, the top and bottom of the post can be adjusted by pulling or pushing with the other end of the setter. Be careful not to damage the edges of the f-holes. Be careful not to knock the post over during adjustment – that means starting again!

A good view of the sound post can be obtained by removing the tail piece and the button or end pin, and looking through the hole, as shown in figure 7.

If a post is too long, it will be very difficult to get it to stand up. The post can be shortened using a knife or a small file. Be very cautious about the amount of wood removed. If the post is too short, it will keep falling over, and the only solution is to make a new one.

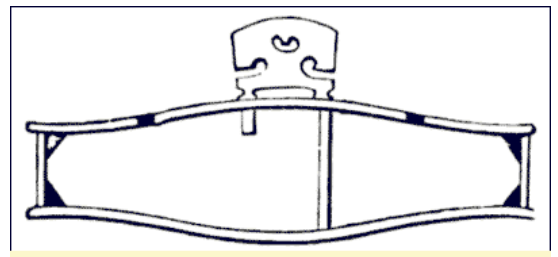


Figure 7