
BASICS

Intonation

The 'impossibility' of playing in tune

Part of the art of playing in tune is to adjust notes that are fractionally out of tune so quickly that nobody else notices. This makes it possible to give an *impression* of playing in tune.

Sometimes this instinctive, instant adjustment – which occurs at the very start of the note – is hidden in the vibrato, which may be wider than the pitch correction anyway. Sometimes the adjustment is made by fractionally altering the exact angle that the finger leans into the string – again at the very start of the note as the fingertip first begins to contact the string.

In *The Art of Violin Playing* (1924) Carl Flesch tried to prove that it is 'impossible' to play in tune by measuring the distance between A and B^b played halfway up the A string. The notes are 60 vibrations apart in pitch and 9 millimetres apart in actual distance, i.e. there is one vibration to each 1/6 of a millimetre.

Therefore, granting that I have played the A in tune, in order to play the B^b mathematically correct, I would have to place my third finger at so true a point as not to vary 1/6 of a millimetre, which would seem only possible with some implement which had a surface breadth of 1/6 of a millimetre, and not the finger, which is with some players 10 millimetres broad at its tip.

Even were I to assume, however, that some fortunate chance would make it possible for me to touch the exact spot at 1/6 of a millimetre it would be impossible to do so in a sequence of tones such as represented by the scale. Hence...*in the physical sense "playing in tune" is an impossibility.*

Hence what we call "playing in tune" is no more than an extremely rapid, skilfully carried out improvement of the originally inexactly located pitch. When playing "out of tune," on the other hand, the tone, as long as it sounds, remains as false as it was at the moment of its production.

In a famous anecdote about Jascha Heifetz, someone asked him: "How do you play so in tune? You play so incredibly in tune. How do you do it?"

Heifetz replied: "I don't. But I adjust the note before you notice it was out of tune in the first place."

Adjusting for out-of-tune strings

Instantaneous adjustment, and the ability to give an 'impression' of playing in tune, is so much part of playing that the Armenian-American violin teacher Ivan Galamian advised not to tune the violin too often while practising. You cannot stop in the middle of a performance to tune, if your strings have slipped, so within reason you have to be able to play in tune whatever happens to the open strings.

A less advanced violinist plays out of tune on an in-tune violin; a more advanced one plays in tune on an out-of-tune violin. It is a great party trick to be able to un-tune your strings but still play perfectly in tune

Playing with a soft hand

Since instantaneous adjustment is part of good intonation, the first condition for playing in tune is that the left hand is free, since these lightning-fast, microscopic adjustments are blocked if the hand is tense. The muscles have to be in a state of balance and freedom, so that any part of the hand or finger is free to move in any direction without initial resistance. The lightning-fast adjustments cannot happen if each resistance to movement lasts even one hundredth of a second, let alone if the hand is so tight that it takes an entire second to make one adjustment.

In sport and athletics it is at the 'big moments' that you are most at risk of tightening. It is common to see professional tennis players, just about to win or lose a game, unable to get the ball over the net because they keep tightening. Tightening in preparation for an action is something to guard against consciously all the time. Even an imperceptible amount of preparatory tightening has a disabling effect.

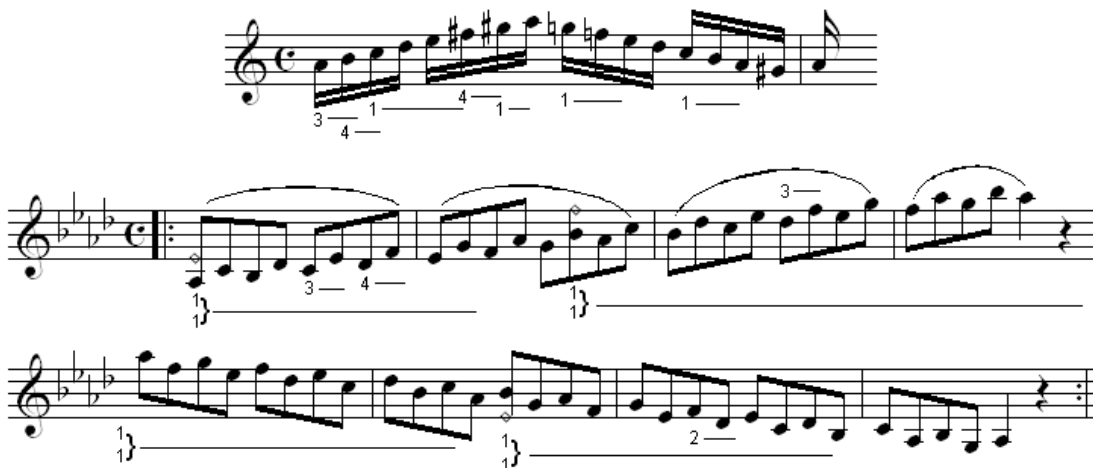
The Russian violinist Nathan Milstein liked to let his strings down slightly, overnight, to allow his violin time to breathe. A favourite trick of his was to arrive in front of the orchestra the next morning for the rehearsal, take the violin out of its case without tuning it, and play a few difficult passages from various concertos or show-pieces. The members of the orchestra would look on and admire his effortless and perfect playing. Then, smiling, he would play the open strings, and everyone would realise for the first time that the violin was completely out of tune. Yet nobody had noticed while he was playing. One might wonder what he was doing going to a rehearsal in the morning without having first practised, but that is another matter.

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Playing a string instrument, every note may be a ‘big moment’. The left hand is always at risk of tightening and needs constant care to see that it remains soft and responsive. One key essential is not to over-press the fingers on the string.

Holding fingers down on the string

Intonation becomes more stable if you keep certain fingers down on the string to give the hand a point on which to balance, and from which to measure other fingers. Look at the trouble Léonarde went to throughout his Violin Method (1911), to mark all the held-down fingers in simple scales or broken thirds:

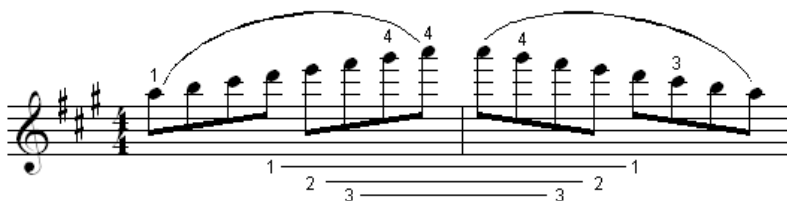


The ‘diamond head’ notes are Léonarde’s instruction to place the first finger on two strings, rather than placing it only on one string and then picking it up and replacing it on the next.

In recent times holding fingers down is sometimes seen as a rather old-fashioned and unnecessary discipline. One argument against it is that vibrato is freer if you have fewer fingers on the string. A single stop is seen as easier to vibrate than a double stop, which is easier than a triple stop; and holding fingers down in faster passages may lose the hand its lightness and alacrity.

The answer must be that sometimes fingers are kept down and sometimes not, depending on the tempo and the type of passage. However, it is often useful to go to an extreme and practise passages with a general rule of holding fingers down – so that lifting is the exception – rather than the other way round. When you then play the passage normally, allowing more of the fingers to lift, it may feel remarkably more secure.

- One finger to leave down whenever you can is the first finger, which gives a great feeling of stability. Playing a three-octave scale the first finger can stay on the string the whole time, except for the brief moment before it is needed on a new string.
- In an ascending scale, the fourth finger should stay on the string while you cross to the next higher string. This is called overlapping, and applies to other finger combinations in string crossing as well.
- At the top of a scale (so long as it is not too high up, when you are forced to lift the fingers), it makes sense not to lift the fingers to avoid having to find each of the notes again as you come back down.



- In moderately fast passages, holding fingers down is one of the secrets of continuous vibrato. Although you may be playing, say, semiquavers, the fingers that are momentarily held down longer are in effect longer-value notes. While you may not be able to vibrate semiquavers at that tempo, you can easily vibrate the held-down fingers, and then the other fingers have a little vibrato too.

Next month's BASICS looks at tone production.