

# Corrette on Stringing and Tuning

by Edgar Hunt

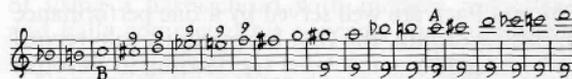
Michel Corrette's *Le Maître de Clavecin* is devoted mainly to instructions in accompanying from the figured bass, but at the end there are two chapters which may be of particular interest to harpsichord makers, for *Chapitre XXI* concerns the gauges of strings which should be used for harpsichord and spinet, while *Chapitre XXII* gives instructions for tuning the harpsichord and organ. The following is a free translation from the French:

## Chapter XXI

### *The gauges of the strings which should be used for Harpsichords and Spinets*

The choice of strings does much for the resonance of the harpsichord in so much as they are sounded as open strings, making the sounds more sonorous and brilliant — something which other instruments can't do. If the strings are too slack they give a dull sound: too thick, and they are liable to break. So they have to be proportioned according to the pitch of the instrument. I will explain what is known of the proportions of the harpsichord as follows: The best strings used for harpsichords come from Germany, the cities of Niimberg, Hamburg etc. Quite good ones are also made in Geneva. Those on bobbins, numbered according to gauge, are the most convenient and of these there are three kinds: red, yellow and white, the red ones being for the *ravallements*, yellow for the basses, and white for the middle and upper registers. One can see from the table below that the same gauge serves a number of notes. There are some nervous people who use No. 10 for the upper notes of the (8') lower and upper keyboards, and No. 11 for the upper notes of the octave (4'). One should not use No. 10 unless No. 9 won't go above e", which is rare when the proportions have been well worked out. As for No. 11 — it's only fit for making wigs.

### Gauges for the lower and upper keyboards



### The proportions of the most usual harpsichords

French and German	Jean Ruckers
c''' in alt (A) should be 6½"	c''' in alt 6½"
treble c'' (B) 1 foot 1½"	treble c'' 1 foot 1"
middle c' (C) 26½ inches	middle c' 2 foot 1½"
tenor c (D) 3 foot 1 inch	tenor c 3 foot ½ inch
cello C (E) 5 foot 1½"	cello C 5 foot 1 inch
for the FF of ravalemens	
5 foot 7" 3 lines or more	

The basses are strung with yellow strings and from the C (marked E), and with red ones as far as the last key of the *ravalemens*. If one had to string the whole harpsichord with white strings, the C (marked E) would be 8 foot long, and for the FF of the *ravalemens* the harpsichord would need to be at least 12 foot long. This would be an embarrassment without being an improvement. When the high c''' (A) is only 5 inches, the harpsichord must be strung with yellow strings such as those of Geronimo, de la Couture, Roze. For the Jacquets, Denis, Barbier, Dufour, Dumont, Richard, Rigault, Dastenet, Verjure, Rastoin follow in a few ways the same proportions as those of the skilled makers of this century. The same applies to spinets of the same pitch.

When the harpsichords are not long and the G (G), A (H) and B (L) do not sound well with red strings or these do not go up, we use spun strings, which are good enough on the clavecins brises of Marius, of Galand and the little harpsichord with two strings to a note of Bellot, and for the harpsichords of Mrs Vater, Goujpn and Hemsch they are good enough without this help.

In England I have played harpsichords and Good strings are joined without flaws and silver-gilt (*vermeilles*). To take care of them, they should be kept in a dry place.

**Gauges for the octave (4')**

The same gauges for octave spinets Nervous people use No. 11 here

organs which go up to G. Mr. Handel has composed organ pieces in which the high f<sup>''</sup> is used — see his 5th book.

## Chapter XXII

### How to tune the Harpsichord and Organ

Most harpsichordists don't know how to fit a quill, put on a string or to tune, and it seems to me ridiculous to play an instrument without being able to adjust it when necessary — one cannot always get hold of a technician, particularly in the country — and through lack of knowing how to adjust it, the poor harpsichord is put away in a cupboard where rats can play with it as they like. This does not happen if one learns how to tune in a few months. It is true that up to now something of a mystery has been made of tuning. I am going to give you the tuning which artists call temperament (*partition*) which is the most used among skilled makers for over 200 years. Father Mersenne gave us almost the same in 1646, but he omitted to mention that the fourth 5th should make a major third with the first note (A), which is useful to test to see if the temperament has started well. The temperament is established in the middle of the upper manual — it cannot be done as well on the side of the lower notes, nor on the side of the higher ones. This temperament consists in tempering 11 fifths, eight of which are made a quarter of a comma smaller, the ninth a little more exact and the 10th and 11th a little stronger (*plus forte*) than the others. As for the octaves, they must be in tune. The word 'Temperament' means to modify, diminish or alter the intervals.

the bass a little higher a little more in tune than the others the rest going up in octaves the rest going down in octaves The fault in the temperament

One begins with the key of the F clef (A) (one could equally well begin with some other note) then the upper octave above this F and then the C a flat (*foible*) fifth (B) above the F. After that the octave above the C. The G a flat fifth from the C (C), then the octave below G. Then the D as a flat fifth from the G (D) and, after the octave above the D, the A as a flat fifth from the D (E). At this point one makes a first trial of the A and the F which should make a major third (F). If this third is too sharp (*forte*) it shows that the first four fifths have not been made small enough, in which case one has to go over the tempering again until the third from the F (F) is satisfactorily in tune. Then tune the lower octave from the A, and the E a flat fifth from the A (G). This E must make a major third with the C (H) which is the second test of the tempering. After the octave above E, tune the B as a flat fifth from the E (I) which must make a major third from the G with which you make the third test (K). After the lower octave from B tune the F sharp as a flat fifth from B, and this F sharp with the D gives a major third, which is the fourth test (M). Then after the lower octave from F sharp, tune the C sharp a flat fifth above it (N). Then you can make the fifth test by playing the major third A and C sharp (P). Continue tuning the octave of C sharp and G sharp as a fifth from C sharp (P), make this a little more in tune than the preceding ones and test the major third from E to G sharp (the 6th test) and go on to tune the octave below the G sharp. Here one stops and tunes the B flat below the F (R). One must make this fifth a little sharper than the others, then make the seventh test of the major third between B flat and D (S), and then after you have tuned the octave above B flat you can tune the E flat below the B flat as a fifth, also better in tune than the others. Finally you can make the 8th test, sounding the major third

E flat and G. It must be said that this third is a little sharper than the others and that the fault of this temperament falls most often on the fifth between G sharp and D sharp (X) which one seldom plays. Then tune the rest of the keyboard in octaves above and below, and after that play the lower octaves against the upper ones to test the temperament before tuning the lower manual (8') to the upper one, and then finish with the 4' which players sometimes inappropriately call the 'little octave' (*petite octave*) since it is equally in the proportion of 1 to 2 like the lower octaves. One must tune the strings up or down gently, and avoid hitting the keys more than once or twice while the strings are vibrating. One can then raise the fifths in tune before lowering them a little, more easily after the ear has been gradually trained. For the greater perfection in tuning the harpsichord one must keep the octaves of the upper notes a little sharper than the others and the opposite for the *ravalemens* below, although this would be imperceptible. This skilled makers observe very well. As for the quills which one fits to the jacks one uses only the tips of the wings and the tail of the crow, and for the return spring of the tongue one uses the hair of a boar; and a small piece of cloth which is generally scarlet is fitted to the head of the jack to damp the sound. This same temperament is also used for the *Manicordion* (? = clavichord) which is a kind of muffled spinet.

*The temperament used by Sr. Vincent famous organ builder at Rouen in 1712*



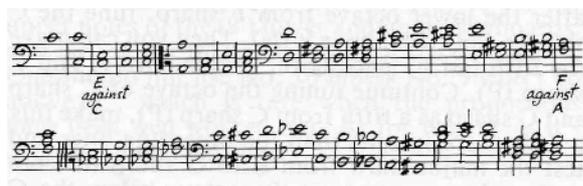
The d means a flat (*foible*) fifth, and F means a sharper (*forte*) fifth. The octaves in tune (*juste*)

This is followed by *Chapitre XXIII* which is a dissertation on a new temperament in which all fifths are diminished equally by a quarter of a comma...but all practitioners in Paris and abroad follow the old temperament as among them tuning had its perfection: we must follow our old ones as they had as good ears as we have.

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*The Temperament of Keller: an English author*

Rules for tuning a Harpsichord or Spinett. Tune the C sol-fa-ut by a Consort pitch pipe or Flute.



Observe all the sharp thirds must be as sharp as ye ear will permit, and all fifths as flat as the Ear will permit. Now and then by way of Tryall touch Unison third and fifth & eights and afterwards unison fourth and sixth.

One can only remark in reference to this laconic author that the tempered tuning depends more on