

The specification of stringed instrument string configurations

During my research into bowed stringed instrument history I have developed a method of describing the number and configuration of the strings. This string configuration specification is in a compact human readable form, that may be readily understood and can be queried programmatically if stored in a database. Over the last three years I have used this specification to classify and analyse iconography. It has proven useful during discussions with makers when commissioning instruments, and with other players and researchers, particularly when discussing the *vielle* tunings of Jerome of Moravia.

Any specification of string configuration relies on the instrument being appropriately orientated to ensure consistency of meaning. A configuration is made up of one or more specifiers, and each specifier describes a string or set of strings. Specifiers are ordered to describe the strings from left to right when viewing the front of the instrument with the neck vertically upwards and the bridge/saddle towards the floor.

Specifier	Meaning
<i>n</i>	Multiple strings forming a course. <i>n</i> is the number of strings. All strings in the course are considered to be stopped and sounded together. Where a course consists of a single string “1s” should be used instead.
<i>nb</i>	A bourdon/drone; actively played but generally not stopped. <i>n</i> is the number of strings.
<i>n*</i>	Special case. Multiple strings forming a course. <i>n</i> is the number of strings. <i>n</i> must be > 1. All strings in the course are considered to be stopped together but sounded separately.
<i>ns</i>	Single string courses individually stopped. <i>n</i> is the number of single strings there are.
+	Separation between courses.
<i>/nv</i>	Sympathetic vibration strings. Not actively played. <i>n</i> is the number of strings.
<i>nx</i>	Multiple courses. This is a shorthand to reduce the size of the specification. It is particularly useful with instruments with significant numbers of courses such as lutes. This should only be used to replace more than 2 repetitions of a specifier.

The shortest, most compact description should be used with + notation preferred to x notation. For instance

4s rather than 4x1s
 2+2 rather than 2x2
 3x2 rather than 2+2+2

The specification allows for grouping of sympathetic strings. To show that the twelve sympathetic strings are placed in two groups of six one would use the specifier */6v+6v*.

Here are some example specifications along with suggestions of the typical instruments that the string configuration may be found on:

1s	A monochord such as early tromba marina, some early vielles.
3s	Rebec.
4s	Violin family with four strings, ukulele, tenor guitar.
5s	Vielle with 5 strings over the fingerboard, 5 string violin, early cello/bass violin, 5 string bass guitar.
6s	6 string guitar, viola da gamba.
7s	7 string guitar.
1b+4s	Vielle with a bourdon and 4 separate strings on the fingerboard.
2b+5s	Lira da braccio.
2b+11s	Lirone.
1b+2+2	Early vielle with a bourdon and 2 courses of each with a pair of strings.
2b+3+2b	Hurdy gurdy.
1s/24v	18 th century tromba marina.
4s/4v	Hardanger fiddle.
1b+3s/12v	Nyckelharpa (modern chromatic)
6x2	12 string guitar.
7x2+1s	8 course Renaissance lute.
11x2+2s	13 course Baroque lute.
1b+3s/24v+6v+5v	Sarangi.
2*	Huqin

I hope this will be particularly useful for those involved with renaissance and medieval instruments where several string configurations may be found.