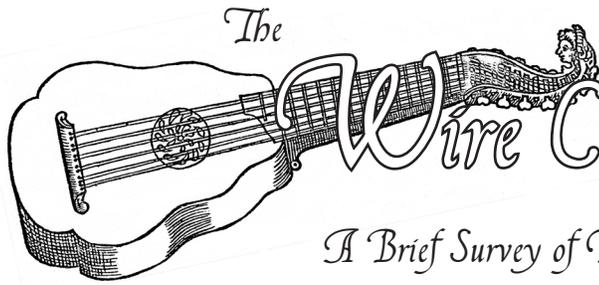


The *Wire Connection* By Andrew Hartig



# Wire Connection

By Andrew Hartig

## A Brief Survey of Plucked Wire-Stringed Instruments, 15th-18th Centuries

### Part Three

#### Wire-Stringed Instruments in the 17th Century

Nearly all of the wire-strung instruments developed in the 16th century continued to be used throughout the 17th century, though some of them had fallen into disuse by the close of the century. In some cases, as with the **cittern**, new tunings and/or changes to body design (both size and shape) kept the instrument evolving and in continual use, while in others (such as for the **orpharion**) changes in string technology or availability made old designs obsolete. Changes in musical tastes and styles built upon trends found in the latter part of the 16th century — continued experimentation in instrument size, the addition of courses to extend the bass range, and the use of chordal tunings — and strongly influenced the development and evolution of new instruments.

#### “With deepest sympathy...”

Rather than wire stringing sounding a death knell for gut strung instruments, wire stringing was embraced not only for its use on all-wire instruments but for enriching the sound of existing gut-strung instruments in the form of sympathetic stringing. In 1609, for example, a monopoly was granted to Peter Edney and George Gill for the “making of viols violins and Lutes with an addition of wyer stringes beside the ordinary stringes for the bettering of the sound being an invention of theirs not formerly practised or knowne.”<sup>1</sup> It is uncertain what became of this monopoly, but ten years later Praetorius gives us a clue and aptly described this practice of sympathetic stringing:

Now in England something new and strange has been invented that, to the effect that under the usual 6 strings another 8 strings made of steel or twisted brass are lying on a bridge, which have to be accurately tuned to the same pitch as the upper strings. If one of the upper gut strings is touched by the finger or bow, the lower brass or steel strings resonate *per consensum*, trembling and quavering so that thereby the sweetness of the harmony is increased and enlarged.<sup>2</sup>

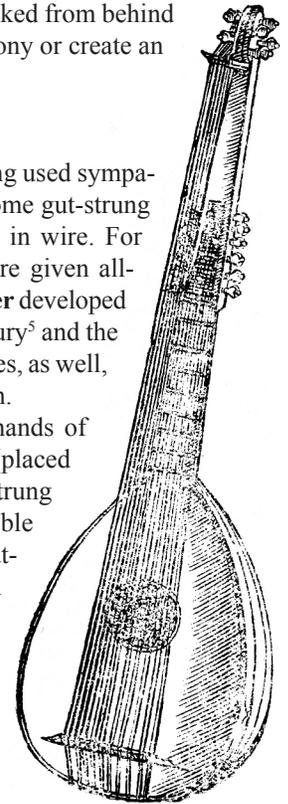
This method of stringing the **lyra viol** was also described by Sir Francis Bacon (1626) and John Playford (1661), but by Playford’s time, “Time and Disuse [had] set them aside.”<sup>3</sup> Other forms of sympathetic stringing with wire found their way into the use of the Norwegian **Hardanger fiddle** (the first instance of which is controversially dated 1651)<sup>4</sup> and the **baryton**, a type of bass viol played solo (“lyra style”) with six bowed gut strings and nine diatonically tuned metal sympathetic strings. The baryton, however, is unique in

that the metal strings could also be plucked from behind with the left hand in order to add harmony or create an additional independent line.

#### Wire-Stringed Lutes

In addition to wire strings being used sympathetically on gut-strung instruments, some gut-strung instruments were completely restrung in wire. For instance, some bowed instruments were given all-wire stringing, such as the **violen-cythaer** developed by Michael Vreedman early in the century<sup>5</sup> and the **viola d’amore** later in the century.<sup>6</sup> Lutes, as well, were not immune to this transformation.

The four lutes found in the hands of statues of angels in Freiberg Cathedral (placed there between 1585 and 1594) were strung with metal strings, indicating a possible practice of stringing lutes with wire dating back to the last quarter of the 16th century.<sup>7</sup> Praetorius mentions that two-necked lutes and regular lutes could be restrung with a combination of iron and brass. Included in his woodcuts is an illustration of a wire-strung theorbo. Similarly, Alessandro Piccinini (1623) mentioned a type of theorbo or chitarrone with silver strings. However, despite these references, the practice of stringing plucked gut-strung instruments in wire does not seem to have been that common nor long-lived.



Woodcut from Michael Praetorius’s *Syntagma Musicum*, 1619.

#### Citara Tiorbata / Arch-Cittern

At the turn of the 17th century, a new understanding of music was taking place with the development of the *seconda pratica*, which gave precedence to the text over counterpoint and rhythm (following what composers of the time believed was ancient Greek practice). With this emphasis on the text, instead of polyphony a greater emphasis was placed on harmony to accompany the single voice. This may or may not have been the cause for the creation of accompaniment instruments like the theorbo and chitarrone, but it certainly allowed them to flourish in this new musical environment. Wire-strung instruments were not exempt from this change. There are numerous references to extended bass-range citterns, though

what differentiates the types from one another is not entirely clear and is ripe for further research.

In Italy, it appears that there were a number of types of standard-sized citterns with a second pegbox and extended bass strings, though exactly how these instruments were tuned and how many courses they had is uncertain. Mersenne mentions that the Italians would add strings to their citterns to total 9 or 10 courses.<sup>8</sup> Several paintings<sup>9</sup> and possibly an altered instrument<sup>10</sup> survive, but how many courses and how these were tuned is not known. The scant surviving iconography suggests their use to accompany solo voice, and one of the two surviving prints suggests use in ensembles.

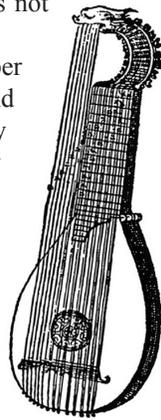
Pietro Paolo Melii's *Intavolatura di Liuto Attiorbato, Libro Quarto* of 1616 contains a Balletto for nine instruments,<sup>11</sup> including a **Citara Tiorbata** of at least nine courses, the first seven of which were fretted and tuned *G-d-f-b-g-d'-e'*.<sup>12</sup> That Melii makes the point of labeling the Citara Tiorbata part as "Cordatura del Signor Paolo Virgo" indicates that Paolo Virchi's tunings<sup>13</sup> were well known and that other tunings for the citara tiorbata were also possible.

Perhaps the example of an **arch-cittern** with which people today are most familiar is the "Citharen with fourteene course of strings" from Thomas Robinson's *New Citharen Lessons* of 1609.

Of this type, Robinson says it was an "invention [that] was first begun by an Italian in Italy, but altered, and strings augmented by me."<sup>14</sup> Robinson's instrument had 7 fingered courses and 7 diapasos, as can be seen in his woodcut, but had to have been of a small size due to the types of stretches required of the left hand. The tuning is a combination of diatonic basses combined with Paolo Virchi's 7-course cittern tuning, but modified ("altered") for the 4th course for a nominal tuning, low to high, of *G<sub>1</sub>-A<sub>1</sub>-Bb<sub>1</sub>-C-D-E-F-G-d-f-bb-g-d'-e'*.<sup>15</sup>

### Ceterone

In addition to the standard-sized citterns with extended bass strings, instruments in imitation of the chitarrone were invented, with large bodies, long stopped-string lengths, and extended bass strings on a second pegbox. This type of instrument is probably what is referred to in surviving documents as a **ceterone**. The first recorded reference in print to the extended-range instrument is likely to have been Agostino Agazzari's 1607 citation of the ceterone as a useful instrument for a continuo ensemble.<sup>16</sup> Monteverdi also in the same year called for two ceteroni for his production of



From Thomas Robinson's *New Citharen Lessons*, 1609.

*Orfeo*, a term which, until not that long ago, many had believed referred to the gut-strung chitarrone. One surviving instrument by Giralamo Campi in the Museo Bardini in Florence possesses 7 fingered courses and 5 diapasos. It is notable that the diapasos of this instrument are nearly twice the length of the fingerboard strings.

Ceteroni of some type were also known in areas beyond Italy. Mersenne compares the "Cisteron, ou Guiterron" to the theorbo and describes them as having flat backs and possessing either 14 or 15 courses of strings.<sup>17</sup> Praetorius also mentions an instrument of 12 courses played by Dominici of Prague, and he gives an illustration — though given its slanted nut and bridge and slightly shorter diapasos, it is hard to say whether this should be categorized as a citara tiorbata or a ceterone. In either case, Praetorius also provides us a tuning of (low to high) *eb-Bb-f-c-g-d-a-e-b-g-d'-e'*.<sup>18</sup> No known music in tablature for ceterone survives.

### Gittern / Bell Gittern

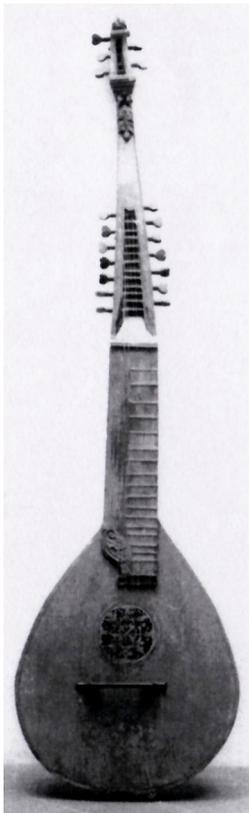
On the smaller scale of things, instruments like the cittern continued to be used throughout the century, though sometimes with altered tunings. While the term **gittern** (also sometimes quintern and gitterne) was used for both a small 15th century gut-strung bowl-backed instrument and the small 16th century waisted flat-backed instrument (i.e. "Renaissance guitar"), in his article on the 17th century gittern<sup>19</sup> Donald Gill has shown that by the middle of the 17th century the term had come to mean a small wire-strung cittern tuned after the manner of the 4-course guitar. In this form, it appears to have continued to have been played with a plectrum like the cittern, and it is this instrument for which John Playford published his collection of pieces in the second part of *A Booke of New Lessons for the Cithern & Gittern* in 1652. At least one mid-century woodcut and two written descriptions of the instrument indicate that the gittern may also have come in a "bell" or triangular shape.<sup>20</sup>



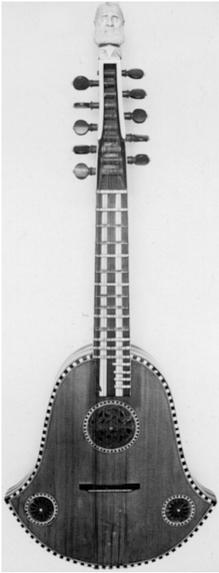
Title page of the gittern section of John Playford's *Booke of New Lessons for the Cithern & Gittern*, 1652.

### Cithrinchen

It has not been completely substantiated, but it appears that there is some sort of a relation between the bell gittern and the **Hamburg cithrinchen**, an instrument of five courses with three soundholes, a bell-shaped body, chromatic fretting, and a string length of about 36-38 cm. The cithrinchen was played from the middle of the 17th century through middle of the 18th century and appears to have been very popular based on the number of surviving instruments, the most numerous of which come from the workshop



Ceterone by Gieronimo Campi or Canpi, Museo Bardini, Florence. Photo courtesy of Stephen Gottlieb.



Cithrinchen by Joachim Tielke, 1694. University of Leipzig, Inv.Nr. 639 [war loss]. Image courtesy of Andreas Michel.

of Joachim Tielke. Though evidence points to it having been played mostly in Germanic regions, its influence may have extended to both England and the Netherlands. The cithrinchen was probably tuned in the chordal tuning  $f-a-c'-e'-a'$ , though several other tunings are documented<sup>21</sup> and at least one source indicates that the instrument could be tuned like the 5-course guitar and played with the fingers.<sup>22</sup> There are currently only four surviving sources of music, all in the form of manuscripts.<sup>23</sup>

### Polyphont

Sir Francis Prujeane in his letter to the Countess of Rutland in 1655 describes the unusual instrument known as the **polyphont** or **polyphon**, which appears to have been an attempt to combine qualities of the lute, cittern, bandora, and harp:

The polyphon is an instrument of so different a stringing and tuning that it's impossible to play what is sett to it on any other hand instrument. There are three rows of strings one under another, eight or ten small short trebles which ly under the frets, there are onely five strings stopped, and there are on it above forty single strings. Nothing can resemble the harp so much as it.<sup>24</sup>

Other sources<sup>25</sup> indicate that it was a flat-backed instrument with a scalloped outline, possessing two necks and possibly four sets of strings: one chromatic harp-like set on the body to the treble side of the right-most neck, plucked by the fingers of the right hand; a set on the fingerboard of only 3-5 courses; a long harp-like set running from a beam between the two necks to the body and plucked by the left hand (much like on the baryton); and a last set of long bass strings running on the second neck, plucked by the right hand thumb.

The polyphont does not appear to have been very popular and may have been limited in use to England. John Playford in his *Introduction to the Skill of Musick* (1687) claims that the polyphont was invented by musician and instrument maker Daniel Farrant (b. 1575) and that Queen Elizabeth I "did often recreate herself upon an excellent Instrument called the Polyphant." The last description of the polyphont comes from James Talbot (c. 1694), though diarist John Evelyn's mention of it in 1661 suggests that even at that date it was something of a rare instrument.<sup>26</sup>



Instruments like the polyphont demonstrate the inventive ingenuity that musicians and instrument makers possessed and the possible opportunities they felt wire stringing afforded, from in-tune high position playing, to deep bass for harmonization and continuo, to sympathetic stringing, to a possibility of independent left- and right-hand parts. While the relative obscurity of the polyphont does indicate that it was not an overall success, the ideas behind

its conception are characteristic of the ideas that drove wire-strung instrument development in the 17th century. Some of these ideas continued with the development of new wire-strung instruments in the 18th century, but in a more moderate and conservative form, which will be addressed in part four, the final installment of this brief history of wire-strung instruments.

*Special thanks to Viet Heller from the University of Leipzig for information on the stringing of the Freiberg instruments, to Peter Forrester for providing information and sources on the citara tiorbata, to Stephen Gottlieb for permission to publish his pictures of the Campi ceterone, and to Andreas Michel for providing the image of the Tielke cithrinchen.*

### Sources and Additional Reading

- ◆ Gill, Donald. "Wire-strung Plucked Instruments Contemporary with the Lute." *Lute Society Booklet No.3* (1977)
- ◆ *Groves Dictionary of Music and Musicians* [Available online: <http://www.oxfordmusiconline.com>]
- ◆ Hartig, Andrew. *The Renaissance Cittern Site*: <http://www.cittern.theaterofmusic.com>
- ◆ Michel, Andreas. *Studia Instrumentorum Musicae*: <http://www.studia-instrumentorum.de> [Site in German]
- ◆ Segerman, Ephraim. *The Development of Western European Stringed Instruments*. [Available for purchase online: <http://www.lulu.com>]
- ◆ Ward, John. "Sprightly and Cheerful Musick: notes on the cittern, gittern and guitar in 16th- and 17th-century England." *Lute Society Journal* XXI (1979-81).



### Notes

<sup>1</sup> Ward, John. "Sprightly and Cheerful Musick: notes on the cittern, gittern and guitar in 16th- and 17th-century England." *Lute Society Journal* XXI (1979-81), p. 25, note 97.

<sup>2</sup> Translation as provided in Harry Danks, *The viola d'amore*. Theodore Front Music (1979), p. 12.

<sup>3</sup> *Ibid.*, p. 13.

<sup>4</sup> For more information, see the *New Grove* entry "Hardanger fiddle [Harding fiddle]."

<sup>5</sup> Michael Vreedman was the son of citternist Sebastian Vreedman and published a now lost work in 1612, *Der Violen-Cythaer mit vyf Snaaren, en nieuwe Sorte melodieuse inventie, twe Naturen hebbende, vier Parthyen spelende, licht de leeren, half Violens half Cyther...* For more information about the Vreedmans and this publication, see the entry for *Der Violen-Cythaer* at <http://cittern.theaterofmusic.com/printed/index.html>

<sup>6</sup> The *viola d'amore* of the 18th century was strung with sympathetic wire strings, but in 1679 the diarist John Evelyn reported seeing "the viol d'Amore of 5 wyre-strings, plaid on with a bow, being but an ordinary Violin play'd on Lyra way." *Ibid.*, note 2, above, p. 14.

<sup>7</sup> Peter Forrester has suggested that one possible explanation for the wire stringing of the lutes is so that the strings could survive throughout the ages, given their difficult-to-reach location within the cathedral. However, according to Veit Heller at the University of Leipzig, "We believe or are convinced that the metal strings are original and that they indicate a practice of playing. The metal strings are made with care and also all four citterns are strung in

wire in the same way. Indeed, the tuning with [these] strings is different from the most usual tunings.” Additionally, only one instrument in the collection shows the remains of gut strings: the Kleindiskantgeige or Violino piccolo. For more information on the instruments from the Freiberg Cathedral, see [http://mfim.uni-leipzig.de/\\_dt/Forschung/ProjektFreiberg.php](http://mfim.uni-leipzig.de/_dt/Forschung/ProjektFreiberg.php).

<sup>8</sup> Mersenne, Marin. *Harmonie Universelle*, 1636, Book 2, proposition XV, f. 98v.

<sup>9</sup> There is one painting by Evaristo Baschensis and several copies of another (lost) Baschensis painting that show a partially-hidden cittern with two pegboxes, which can be seen in *Baschensis, Bettera & Co*, Gorlich editore, Milano (1971) and *Evaristo Baschensis*, Banca Popolare di Bergamo (1985), both by Marco Rosci. Also, a painting of a large cittern with a couple of courses running outside of the main pegbox to an extension, attributed to Rutilio Manetti (Rome, Spiridon collection), which is illustrated in *Michaelsteiner Konferenzberichte 66: Gittare und Zister — Bauweise, Spieltechnik und Geschichte bis 1800*. (2005).

<sup>10</sup> Instrument E.46, Paris, Musée de la Musique. Information about this instrument can also be found in *Michaelsteiner Konferenzberichte 66* (see previous note).

<sup>11</sup> The other instruments include three different sizes of lute, violin, bass viol, flute, double harp, and clavicembalo.

<sup>12</sup> The 9th course is used only once; the 8th course not at all. Based on the music it appears that the 9th course should be tuned to the A above the 7th course, but this does not make sense in light of the possible extended length of the string (“Tiorbata”), nor does it allow a convenient solution for the tuning of the 8th course. One possibility suggested by the music is that the 9th course is meant to have the F a tone below the 7th course, but this still yields no satisfactory solution for the tuning of the 8th course. This problem underscores much of the confusion and ambiguity concerning the tuning and use of the citara tiorbata and the ceterone.

<sup>13</sup> For more information on Paolo Virchi’s tunings for chromatic cittern, see my article “A Brief Survey of Plucked Wire-Strung Instruments, 15th-18th Centuries – Part Two: Wire-Strung Instruments in the 16th Century,” *LSA Quarterly* Volume XLIV, No. 4, Winter 2009.

<sup>14</sup> From Robinson’s statement “To the Reader.” For a complete modern edition with transcription, see that edited by Doc Rossi, <http://www.cetrublishing.com>.

<sup>15</sup> At its small size, Robinson’s instrument was likely strung either a fourth or an octave higher than listed here.

<sup>16</sup> Agazzari, Agostino. *Del Sonare Sopra'l Basso Con Tutti Li Stromenti*, 1607. Though the first recorded reference to an instrument called “ceterone” can be found in Gioseffo Zarlino’s *Le institutioni harmoniche* of 1558 (“Vsa lo Italiano, et anco il Francese grandemente il Leuto, et lo Spagnolo vsa il Ceterone; ancora che varia poco dal Leuto; et altri popoli vsano il Piffero.”), nothing else is known about his instrument in this context, and it is unlikely that it refers to the later instrument.

<sup>17</sup> Mersenne, Marin. *Harmonie Universelle*, 1636, Book 2, proposition XI, f. 88 and proposition XII, f.92.

<sup>18</sup> One may immediately notice that the lower 8 courses are tuned in a series of fourths and fifths, a tuning, Peter Forrester has pointed out, that was also used on the *lirone*, indicating a possible connection between the two instruments.

<sup>19</sup> Gill, Donald. “The seventeenth century gittern and the English Zitterlein.” *The Lute*, Vol. XXXV (1995).

<sup>20</sup> A woodcut by John Dunstall from c. 1660 shows a bell-shaped instrument with a single sound hole as part of a garland of musical instruments. Sir Peter Leycester in his 1667 catalogue of his instruments lists “one Gittyrne with Wyre-Strings of a Triangular fforme.” The *Talbot MS* (c. 1694) has two entries about a “Bell Guittern” with 5 courses. For more information, see Gill’s article (see previous note).

<sup>21</sup> Other tunings (some of which may be erroneous) include *d-g-c'-e'-a'*, *f-bb-d'-f'-bb*, and *c-e-g-b-e'* for five courses, and *c-f-a-c'-e'-a'*, *A-d-a-b-e'-a'*, and *E-G-B-d-f#-b-d'* for six courses. For further informa-

tion and a discussion of the legitimacy of these tunings, see James Tyler’s entry “Cithrinen” in the *New Grove*.

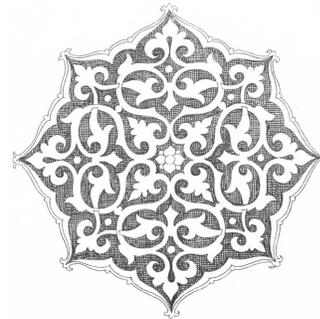
<sup>22</sup> Kremberg, Jakob. *Musicalische Gemüths-Ergötzung*, 1689.

<sup>23</sup> A fifth manuscript source, Hamburg, Staats- und Universitätsbibliothek Carl von Ossietzky, Musiksammlung, Mus.ND VI 3241 (c.1700), was destroyed in 1944.

<sup>24</sup> Quoted in Ward, “Sprightly and Cheerful Musicke.” (See note 1, above.)

<sup>25</sup> Descriptions by James Talbot, Christ Church (Oxford) *MS 1187* (c. 1694) and Randle Holme, *British Library MS Harl. 2034*. For more complete information, see Segerman’s “Comm. 1821: Notes on the Polyphont” *FoMRHI* No. 110, 2008.

<sup>26</sup> Evelyn writes, “the Polyphone, an instrument having something of the Harp, Lute, Theorbo &c; it was a sweete Instrument, by none known in England, or described by any Author.” Quoted in Ian Harwood’s entry “Poliphant” in the *New Grove*.



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