

Stringing and Tuning the Renaissance Four-Course Guitar: Interpreting the Primary Sources

by Michael Fink

Over the past 85 years, the Renaissance four-course guitar has been researched and written about sporadically, and a few musical editions and facsimiles of the repertoire have been published. In the research, one of the chief issues has been the stringing and tuning of the instrument. The quality of investigations has varied from carefully detailed to somewhat superficial.

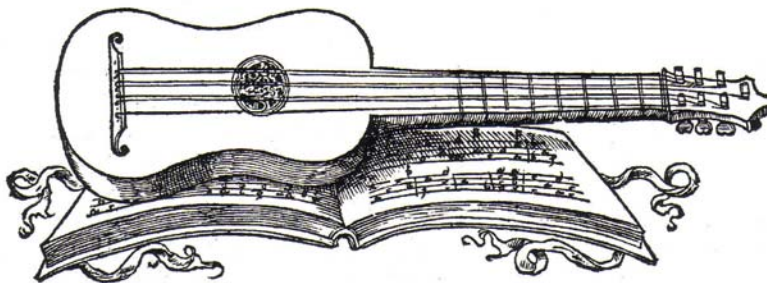
At the time of this writing (2007), the chief contributions to the issue of tuning the four-course guitar have been made by the estimable James Tyler¹ and Tyler in collaboration with others². With the exception of the 1974 article, which deals with a particular source on tuning, these writings have been general expositions on the Renaissance guitar with limited discussions about stringing/tuning. Their sources are almost exclusively Renaissance theorists and the few composers and redactors who included some instruction on stringing/tuning. These, in fact, are all we have, although in some cases, tablatures may suggest tuning preferences. The thrust of the present study is to review critically all the appropriate primary sources, including selected tablatures; to propose possible interpretations of them; and — crossing national lines — to tabulate the principal data.

STRINGING: ICONOGRAPHY FROM FRANCE, THE NETHERLANDS, AND ALSACE

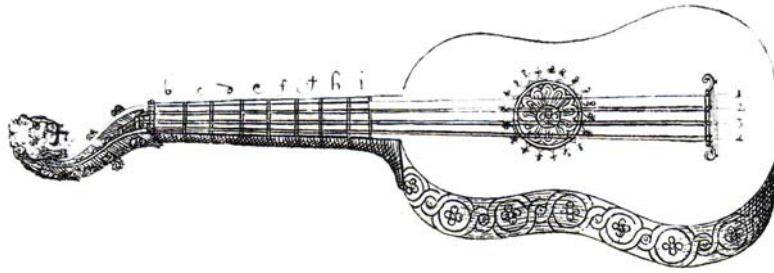
Interestingly, France — not Spain — furnishes us with the earliest indication of the guitar's stringing. Jean Gerson, in a sermon written around the year 1400, likens the Four Cardinal Virtues in Christianity to the "guiterne de quatre cordes," suggesting that it was a four-course instrument at least that early.³ At that time the guitar was only "tortoise" shaped, like a lute. The earliest images of a waisted flat-back four-course Renaissance guitar were also French, but few and from a later date. Figure 1 below represent those that most clearly show the instrument's shape and stringing:

Fig. 1

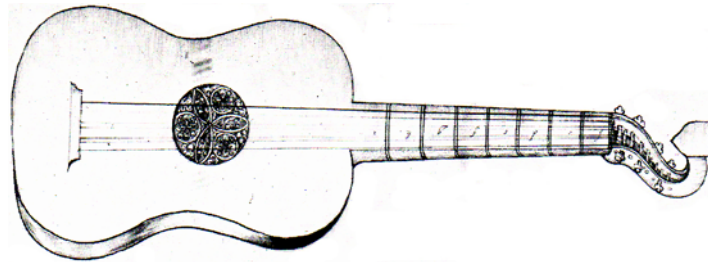
a.



b.



c.



d. and e.



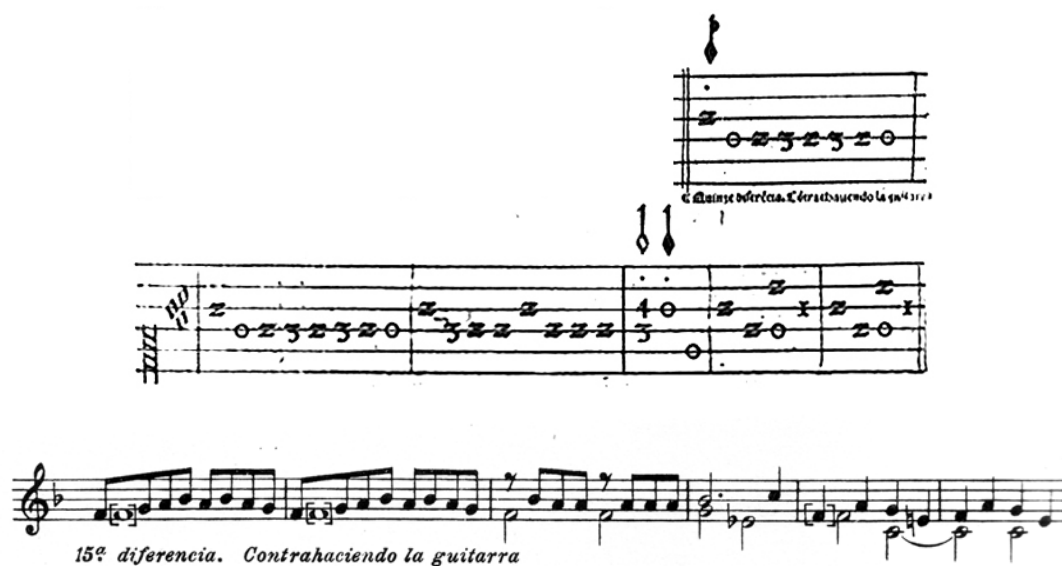
Fig. 1a, from the title page of Guillaume Morlaye's *Premiere livre . . . de Guiterne* (1552)⁴, is probably the most famous drawing of the Renaissance guitar. Its placement on an oblong tablature book emphasizes the smallness of the instrument. Four courses are clearly shown with the first course a single string. Seven tuning pegs on the flat peg head are also clear, supporting Barberis's 1549 reference to the instrument as the *Chitara da sette corde*.⁵ Fig. 1b is from 1570⁴, a guitar method printed in Antwerp but also containing reprints of four-course guitar pieces from French publications of the 1550s. As late as 1636, Marin Mersenne had this illustration redrawn for his encyclopedic *Harmonie universelle*. The picture shows the four courses as in Fig. 1a, but they terminate in a scrolled peg box. Fig. 1c, from a manuscript by

Jacques Cellier⁶ of ca. 1585, is similar but shows the seven tuning pegs in greater detail. Fig. 1d is French and Fig. 1e is probably from Alsace.⁷ They offer nothing new concerning stringing but do show the playing position.

TUNING: DETAILS FROM SPAIN

Narváez and Bermudo. Interestingly, the earliest source of information on the stringing of the 4-course guitar is musical rather than expository. The vihuela tablature collection by Luis Narváez (1538₁), includes a set of 22 *diferencias* (variations) on the traditional romance, *Conde Claros*. The 15th variation bears the subtitle “*Contraheciendo la guitarra*” (Imitating the guitar). Fig. 2 is Narvaez’s tablature⁸ with Emilio Pujol’s transcription in guitar notation⁹:

Fig. 2



Notice that the passage uses mainly the third and fourth courses with only one note on the second course and just two on the fifth course. Juan Bermudo, writing before 1555, might have had this passage in mind when he wrote:

<p>... Si la vihuela quereys hazar guitarra a los nuevos: quitalde la prima y sexta, y las cuatro cuerdas que le quedan: son las de la guitarra. Y, si la guitarra quereys hazar vihuela poned le una sexta y una prima.¹⁰</p>	<p>... If you want to convert the vihuela into a guitar of the new way, remove its first and sixth strings [i.e., courses]. And if you want the guitar to be a vihuela, put on the sixth and first [courses].</p>
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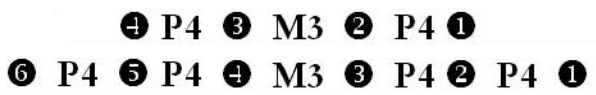
This statement is not to be taken literally, of course, but rather is a mental image to help the reader understand the relationship between the instruments regarding stringing and tuning. However, Narvaez’s music also corresponds to the comparison between the guitar and the vihuela given by Bermudo in another introductory remarks on the guitar:

<p>La guitarra co(n)mun tiene quatro ordenes de cuerdas: las quales cuerdas se pueden llamar quarta, tercera, segu(n)da, y prima. . . . Desde una cuerda a otra ay un diatessaron, que es una quarta: excepto de la tercera a la segunda que ay una tercera mayor. No es otra cosa esta guitarra: sino una vihuela quitada la sexta y la prima. Luego desde la quarta de la guitarra hasta la tercera, y desde la segunda a la prima ay un diatessaron: desde la tercera a la segunda ay un ditono.¹¹</p>	<p>The ordinary guitar has four courses of strings, the strings of which can be called fourth, third, second, and first. . . . Between one string [i.e., course] and another is a <i>diatessaron</i>, which is a fourth, except between the third and the second, which is a major third. This guitar is nothing other than a vihuela without the sixth and first [courses]. Further, on the guitar, between the fourth and third, and between the second and first is a <i>diatessaron</i>; between the third and the second a ditono [major third].</p>
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Seen graphically, here are the two tunings:

Fig. 3

**4-Course Guitar
VIHUELA**



In his introductory remarks on the vihuela, Bermudo describes its tuning:

<p>Dize pues la g que esta al principio de la sexta: que la tal cuerda en vazio es gamaut. La c que esta al principio de la quinta dize ser Cfaut la tal cuerda en vazio. La f en la quarta es Ffaut, y la a en la tercera alamire, y la d en la segunda es dlasolre, y la g en la prima es gsolreut agudo.¹²</p>	<p>So, the g at the beginning of the sixth: that open string is Gamma ut. The c at the beginning of the the fifth is said to be C fa-ut when the string is open. The f on the fourth is F fa-ut; and the a on the third [is] a la-mi-re; and the d on the second is d la-sol-re; and the g on the first is g sol-re-ut.</p>
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On the same page, above this text appears an illustration of the vihuela’s fingerboard, showing the nominal pitches of the instrument’s open strings and stopped notes:

Fig. 4

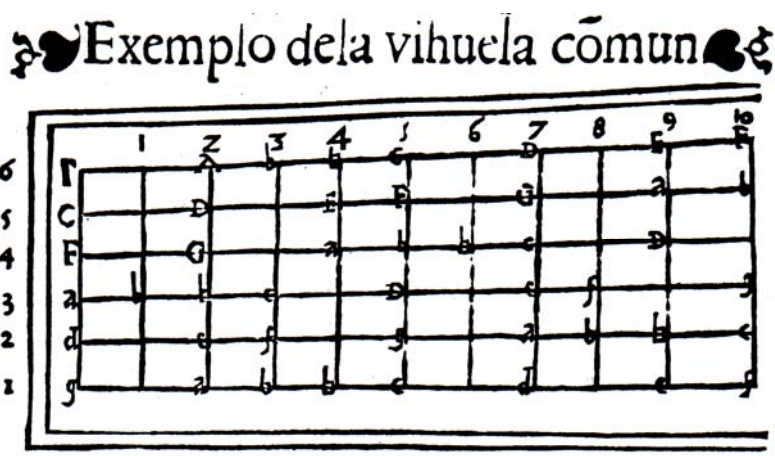


Fig. 5 shows (in guitar notation¹³) these open string pitches¹⁴:

Fig. 5



Elsewhere, Bermudo specifies nominal pitches for the four courses of the guitar:

<p>Desde la quarta a la tercera ay un diatessaro(n): por lo qual el tañedor que la quisiere pintar ha de poner en la quarta una g, que es gam[m]a ut, y en la tercera una c, que es C faut. Desde la tercera a la segu(n)da ay una tercera mayor: lo qual la segu(n)da terna una e, que significa E la mi. Desde la segu(n)da a la prima ay un diatessaro(n): y assi en la prima ha de ser puesta una a, que significa a lamire.¹⁵</p>	<p>Between the fourth and third is a <i>diatessaron</i>, for which the player will want to tune the fourth to g, which is Gamma ut, and the third to c, which is C fa ut. From the third to the second is a major third, of which the second is an e, which means E la mi. From the second to the first is a <i>diatessaron</i>, and thus on the first one has to put an a, which means A mi re.</p>
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This tuning is shown in Fig. 6a below, however, transposed up one octave. This is Bermudo’s intention, expressed in a later passage (shown below). The reference to Gamma ut (low G on a bass staff) here is undoubtedly theoretical, since it was the lowest pitch in common use at the time and traditionally a fundamental pitch for spelling hexachords, etc. Moreover, he emphasizes the size difference between these instruments in the same chapter:

<p>De mayor abilidad se puede mo(n)star un tañedor con la intelligenica, y uso de la guitarra: que con el de la vihuela, por ser instrumento mas corto.¹⁶</p>	<p>The most important characteristic of the guitar a player can show through intelligence and use is that [compared] with the vihuela, it is a smaller instrument.</p>
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In the light of Bermudo’s later remarks, the idea of tuning both strings of the guitar’s fourth course to a unison low pitch (Fig. 6a) may be strictly theoretical; however, this tuning seems to be confirmed in two later sources, Rowbotham and Praetorius. Bermudo’s purpose, however, could be to establish groundwork for a later discussion (see text around Fig. 6). In addition, he could be showing the reader a fundamental *theoretical* tuning, from which other theoretical tunings may be derived for the purpose of intabulating vocal music. In his treatise, he devotes much space to this transpositional “template” technique in relation to the vihuela, and directs the reader to do the same with the guitar.¹⁷

We must bear in mind that pitches described in this source (and those actually shown in some other sources) are *nominal*; actual pitches on these instruments were relative. That is, the courses of the instrument were not brought to particular fixed pitches. The *intervals* between the courses became the fixed standard, because (1) there was no fixed pitch standard in the Renaissance; and (2) guitars, lutes, and vihuelas were subject to certain vagaries, mostly outside the player’s control. As John M. Ward has so aptly put it, “Pitch, in other words, was dependent on the tensile strength of the string, the size and quality of the instrument, the ear of the performer, and most certainly the season of the year.”¹⁸ Thus, the important matters in tuning the strings of the lute, vihuela, or guitar are the intervals between the courses.

Mudarra and Bermudo. Between the publications of Narváez (1538) and Bermudo (1555) appeared the vihuela book of Alonso Mudarra, *Tres libros de musica* (1546)¹⁹. On folios 21-24 appears the first published guitar music in history. Printed in tablature, this consists of four fantasias, a pavana, and a romanesca (*Guárdame las vacas*). At the head of Mudarra’s group of guitar compositions (f.21), the composer gives important instructions on setting up the guitar for the tablatures that follow:

A de estar e[n] trastada como vihuela co[n] diez trastes[;] a de tener bordón e[n] la quarta.	[The guitar] has to be fretted like a vihuela with ten frets; it must have a <i>bourdon</i> on the fourth [course].
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A *bourdon* string is low pitched, and this is history’s first mention of it in relation to the guitar. Since we know nothing of the guitar’s tuning before Mudarra, and Bermudo had not yet published his remarks on tuning practices in the 1550s, it is possible to infer from Mudarra’s instruction that a high-octave tuning for both strings of the fourth course — a re-entrant tuning — was an option at the time.²⁰ This possibility is somewhat supported by a re-entrant tuning employed in Naples (Spain’s possession) at the beginning of the following century. (See information on Cerreto below.) Taking Mudarra’s instruction literally, the player is instructed to place **one** *bourdon* string on the fourth course. This results in a stringing model that quite possibly went on to dominate tuning practice for the instrument in Spain and elsewhere. No doubt Bermudo already knew Mudarra’s *Tres libros de musica* when he wrote:

Suelen poner a la quarta de la guitarra otra cuerda, que le llama(n) requinta. No se, si quando este nombre pusieron a la tal cuerda: formava con la dicha quarta un diape(n)te, que es quinta perfecta: y por esto tome nombre de requinta. Ahora no tienen este temple: mas forman ambas cuerdas una octava: segu(n) tiene el laud, o vihuela de Flandes. Este instrumento teniendo las tres, o quarto ordenes de cuerdas dobladas, que forman entre si octavas: dizen tener las cuerdas requintadas. Tiene esta guitarra a los nuevos en vazio nueve puntos. . . . ²¹	[People] customarily place on the fourth [course] of the guitar another string, which is called <i>requinta</i> . ²² I do not know whether they gave this name to that string because it made a <i>diapente</i> with the fourth, that is, a perfect fifth, and for that reason it takes the name of <i>requinta</i> . Nowadays [the strings] do not have that tuning, but both strings are an octave apart, as on the lute, or Flemish vihuela. This instrument, having three or four courses of paired strings that make octaves between them, is said to have <i>requintadas</i> strings. This guitar of the new way has between its open [strings a range of] nine scale degrees. . . .
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So, Bermudo, publishing only about nine years after Mudarra, is saying that *like the lute*, the Spanish four-course guitar usually employs a fourth course comprised of a fundamental low string and another tuned an octave higher. Note the expression, “otra cuerda” — “another” or “different” string, either (1) implying that a low fundamental string is there to begin with, or (2) merely making his statement read so as to relate the guitar to the vihuela (an obvious part of his agenda). Essentially, Mudarra and Bermudo are saying the same thing about the guitar’s fourth

course: one low-octave string and one high-octave string, but they say it in different ways. Mudarra the composer personalizes, whereas Bermudo the theorist generalizes.

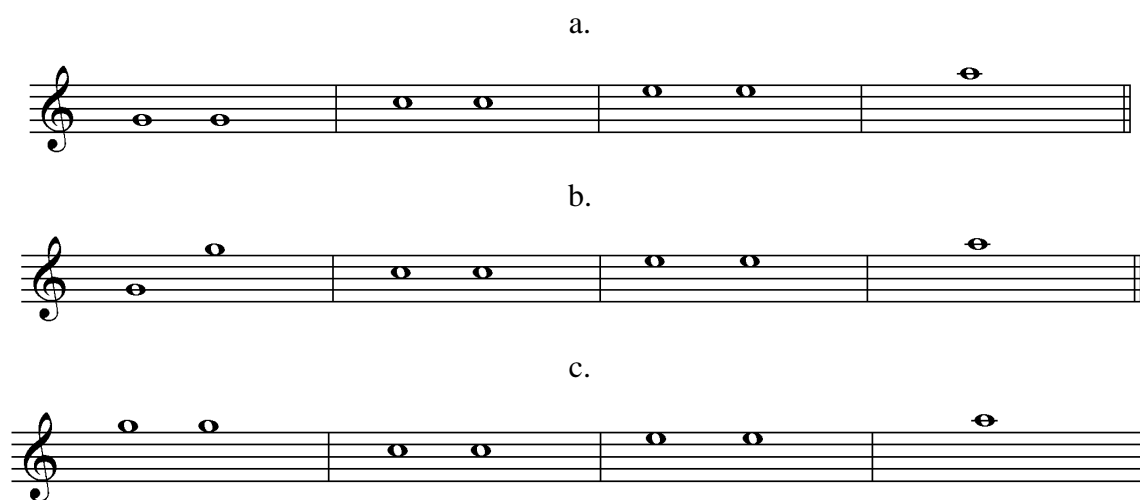
We can assume that, analogous to the lute, the high-octave string of the fourth course is on the inside.²³ He mentions this *requinta* string again a little later in his treatise, this time to clarify the guitar's tuning pitch in relation to the vihuela's (conforming to Fig. 6a below):

<p>. . . La guitarra en octava de la vihuela, que viniessse la quinta de la guitarra con el segundo traste de la quarta de la vihuela.²⁴</p>	<p>. . . The guitar [is pitched] an octave above the vihuela, so that the [<i>re</i>]quinta [string] would conform to the second fret of the fourth course of the vihuela.</p>
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Based on evidence from Narváez, Bermudo, and Mudarra, as many as three methods of stringing/tuning the guitar's fourth course might have been employed in Spain prior to 1555:

- (1) Bermudo's vihuela-like **double-bourdon tuning** (Fig. 6a), possibly only a theoretical tuning, but possibly implied in Fig. 2 above, and apparently later known outside Spain (Rowbotham and Praetorius, discussed below);
- (2) Bermudo's **requinta tuning**, emulating the European lute with a low-octave *bourdon* and a high-octave *requinta* string (Fig. 6b);
- (3) A **re-entrant tuning**, *inferred* from Mudarra's instruction, but possibly anticipating later developments in Italy (Fig. 6c).

Fig. 6



Guitar Music by Mudarra and Fuenllana. Following his brief instruction on fretting and tuning, Mudarra publishes six short works for the guitar. The first of these is a *fantasia* to be played in *temple viejo*, the older tuning (see below). The remaining four *fantasias*, a *Romanesca*, o *Guárdame las vacas*, and a *Pavana* are intended for the more usual *temple nuevo*, the newer tuning, which we have been discussing thus far.

Miguel de Fuenllana composed seven solo works for the four-course guitar, which he published in his 1554 collection of vihuela tablatures: a *Crucifixus a 3*, and six *fantasias*.²⁵ He

does not state a preference for stringing or tuning the guitar. However, the style of Fuenllana’s music is similar to Mudarra but with more complex counterpoint.

Considering final cadences, intermediate cadences, and linear context involving the fourth course, the music of both composers seems to slightly favor the double-*bourdon* tuning, although the *requinta* tuning would also be appropriate. In any case, at least one *bourdon* on the fourth course is required.

TEMPLE VIEJO AND A CORDE AVALLÉE

Mudarra’s first guitar *fantasia* employs the *temple viejo*, the “old” tuning, which Bermudo explains:

<p>Esta guitarra tiene co(n)munmente dos temples. Uno se llama a los nuevos y otro a los viejos. La guitarra a los nuevos tiene en vazio una novena mayor. . . .</p> <p>El temple de la guitarra a los viejos no diffiere de esta a los nuevos: sino que la quarta cuerda suelen abaxar un tono. Avia desde la quarta a la tercera a los nuevos un diatessaron: y a los viejos ay un diapente, que es quinta perfecta. Pues queda esta guitarra a los viejos una dezena mayor. Este te(m)ple mas es para roma(n)ces viejos, y Musica golpeada: que para Musica de el tiempo.²⁶</p>	<p>This guitar ordinarily has two tunings. One is called the new way and the other the old way.²⁷ The “new” guitar has a major ninth [range between open strings]. . . .</p> <p>Tuning of the guitar the old way is no different than the new, except that the fourth string is normally lowered by a [whole] tone. The new way has a <i>diatessaron</i> between the fourth and the third [strings], and in the old way there is a <i>diapente</i>, which is a perfect fifth. So, this guitar in the old way yields a major tenth.²⁸ This tuning is more for old romances and strummed²⁹ music than for present-day music.</p>
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Using the *requinta* method, this tuning would be notated:

Fig. 7



Art and religious music of Bermudo’s “present-day” (the mid-16th century) was generally contrapuntal. (For instrumental examples, see Mudarra, Fuenllana, and other vihuela books.) One strong indicator that Mudarra esteemed the guitar is his inclusion of a contrapuntal *fantasia* in *temple viejo*, the tuning usually associated with more popular types of music. In contrapuntal music, the advantage of this tuning was (1) widening the range of the instrument and (2) expanding the possible mode transpositions.

Outside Spain, the only known examples of guitar music in *temple viejo* are found in French publications of the 1550s. There the tuning is designated *a corde avallée*. Adrian Le Roy’s two books of solo vocal music with guitar accompaniment contain four pieces so marked. In Le Roy’s *Second livre de guiterre* (1551/1552?; 1555), “Maintenant c’est un cas estrange” (f. 22) and “On dieu vostre pitié” (f.24) are designated thus. The same is true of “Si ce nest amour

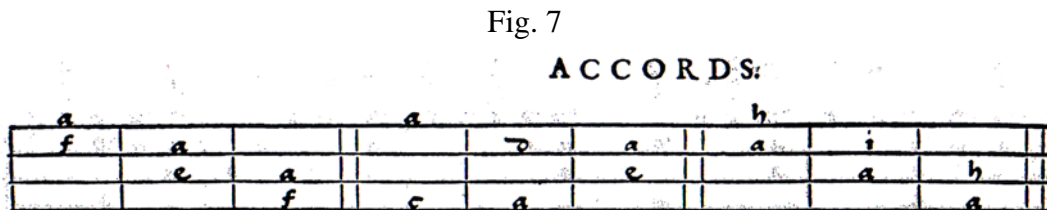
qu'est-ce" (f.16) and "Margot labourez les vinges" (f.21) from his *Cinquiesme livre de guiterre* (1554).

The guitar books of Guillaume Morlaye are entirely for solo guitar. His *Quatriesme livre contenant pluiers fantasies* (Paris, 1552), *a corde avallée* tuning is designated for "Fantasie [II] d'Albert [de Rippe]" (f.4v), "La Seraphine" (f.15v), and "Contreclare" (f.18v). In the same print, "Si son esperit" (f.11) and "Non é pien fedé" (f.13v) are in *temple nuevo*, except that they require the third course to be tuned down a half step, making the intervals between the four courses analogous to the highest four courses of the lute or vihuela.

TUNING CHARTS FROM FRANCE, FLANDERS, AND ENGLAND

Although the guitar's origins were in Spain, where also its stringing and tuning were first codified, it was France that hosted the guitar's efflorescence during the central Renaissance. Between 1551 and 1556, two publishers in Paris generated nine books of pieces in French tablature³⁰ and one of instruction plus tablatures by Le Roy, now lost.³¹ The composers whose works are contained in the known publications reads like a who's who of lutenists active in France around that time, among whom were: Adrian Le Roy, Albert de Rippe, Guillaume Morlaye, and Gregoire Brayssing. The popularity of the four-course guitar in France, possibly led by King Henry II himself, reached a fever pitch in the 1550s, causing one anonymous writer to declare in 1556: "We used to play the lute more than the guitar, but for 12 or 15 years now, everyone has been guitaring, and the lute is nearly forgotten in favor of heaven knows what kind of music on the guitar, which is much easier than that for the lute."³²

Le Roy, Phalèse, and Rowbotham. On the last page of Le Roy's first guitar book,³³ we encounter the first graphic representation of the instrument's tuning (fourth course on the lowest line):



This chart shows three ways of tuning open courses: in unison with a stopped fret on an adjacent string; in octaves (open 1 with 4c, 2d with open 4, and open 2 with 3e); and in octaves on adjacent strings. No verbal explanation accompanies the chart. Therefore, at face value, the fourth course tuning is double-*bourdon*, since no provision is made for tuning a high octave string. However, we cannot preclude the *requinta* tuning, since a possible common practice of tuning the fourth-course strings an octave apart might have been obvious to anyone with a guitar, especially in a country used to the lute.

The chart alone does not give us any nominal pitches for the strings. However, comparing a few *voix de ville* adaptations from Le Roy's fifth book (1554₄) with their original chansons by Arcadelt³⁴ suggests d¹ and a¹ as possible nominal pitches for the first course.

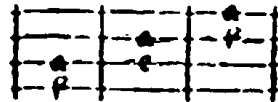
Le Roy's chart (Fig. 7) corresponds closely to the two shown in a 1570 print brought out by the Antwerp publisher Pierre Phalèse. That substantial publication for the Renaissance

guitar,³⁵ consisted of a tutorial section in Latin together with a large collection of pieces in four-course French tablature drawn mostly from the Paris publications mentioned above. The tutorial gives verbal instructions for tuning the guitar followed by illustrative charts³⁶ showing unison and octave tuning methods:

Fig. 8

Modus tendendi nervos in Guiterna.

Postremo vt Musices amatoribus omnibus quibus potuimus modis succurramus, modos aliquot subiunximus qua quisque facile nervos seu fides ipsius Guiternæ ad suam quam debet habere intentionem tendere poterit. In primis itaque minores chordæ primi Bassi ita tendi debent quatum sine earum lésione fieri potest commodissime, maior vero nervus ad octauam infra à prædictis parius distet. Proxime deinde sequentes chordas ita concordaueris si digitem sinistræ manus applicas ad F spacium quarti nerui primi Bassi ac ita attraxeris minores nervos vt par sit sonus illi qui à præcedentibus minoribus èditur in neruo tertio nullo applicato digito. Maior vero per octauam à minoribus distungantur quemadmodum de præcedentibus dictum est. Deinde vero secundum neruum sic tendes vt rursum digito in E spacio super tertium neruum collocato sonus fiat tertii nerui sono, maxime vero illi qui à minoribus èditur. Primum denique neruum F spacium secundi nerui posito parem reddat sonum secundo neruo. His rite obseruatis Guiternam quam perfectissime intentionem reperies secundum figuram hic proxime iunctam.



Alius modus tendendi per octauas.



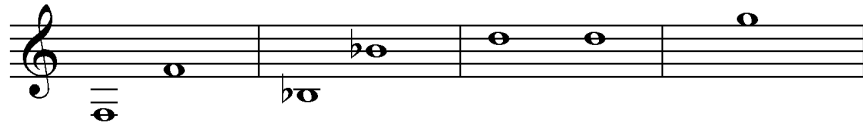
The unison method is identical with that of Fig. 7 (in reverse order), and the octave method relates to those in the same chart. Since it is well known that Phalèse “borrowed” or adapted everything he published, this guitar tutor has raised the question whether it might actually be the lost guitar tutor of Le Roy, merely translated into Latin. Daniel Hertz published a paper asserting that hypothesis.³⁷ Hertz’s translation of the verbal tuning instructions in Phalèse runs as follows:

. . . In the first place the smaller strings [sic] of the First Bass ought to be stretched as high as possible and comfortable without breaking, then the larger string is stretched to the octave below the previous. Next the adjacent string you should so tune that if you apply the finger of the left hand on the f fret of the fourth course or First Bass, you will draw out the smaller strings so that the sound will be equal to that given forth from the preceding smaller string when no finger is applied. The larger is separated from the smaller in the manner previously stated. Then you will stretch the second course so that when the finger is moved back to the e fret of the third course, the sound shall be like the sound of the third course, especially in fact like that which is given forth from the smaller ones. The first string will then give back a unison when the f fret of the second course is

stopped. These things properly observed, you will find the guitar as perfectly tuned as possible. . . .³⁸

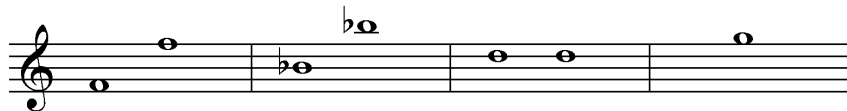
According to Hertz's interpretation, this text yields the following tuning³⁹:

Fig. 9



Dobson, Segerman, and Tyler (1974) dispute the original Latin as well as Hertz's interpretation and tuning chart (Fig. 9). They argue convincingly that the Latin text was an adaptation of cittern tuning instructions by Sebastian Vreedman published by Phalèse two years earlier but badly garbled in this version. They show that Hertz's tuning would be impossibly low for the fourth course of an instrument as small as the guitar. However, they agree that both the third and fourth courses contained low and high octave strings, yielding the following nominal tuning⁴⁰:

Fig. 10



We must be cautious about accepting these conclusions without question. After all, Phalèse's adaptation of Vreedman's cittern instructions are garbled and may have transferred re-entrant cittern stringing methods over to the guitar wholesale and in complete ignorance. The conclusion that octave strings were placed on both the third and fourth courses may be correct, though that on the third course seems abnormally high. In any case, there is no suggestion of this stringing in any known texts or tablatures.

The real thrust of Hertz's article was his theory that the lost guitar tutor by Le Roy had been translated as *A briefe and plaine instruction for to learne the Tablature to Conduct and dispose the hand unto the Gitterne*, published by James Rowbotham in 1569. Although the Rowbotham print was entirely missing at the time of Hertz's article, it turned out that he was correct. Around 1977, a few pages from the Rowbotham publication were discovered.⁴¹ Tyler was able to collate these findings, discovering some pieces of music having concordances with the Phalèse print of 1570, and nowhere else. Something like a tuning chart found in the Rowbotham fragments is shown in facsimile by Ward (1979-1981)⁴²:

Fig. 11



Tyler discusses this, pointing out that it is a demonstration of intervals on the guitar associated with “flattened” (minor) modes. A *Petite fantasia dessus l’accord* follows, seemingly to demonstrate this tuning.⁴³ On the chart, pitches can be associated with their tablature positions by connecting the “barlines” of the staff with those of the tablature. By this method, we can extrapolate the following tuning chart:

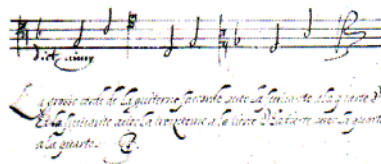
Fig. 12



This familiar-looking series of nominal pitches is, in fact, the same as that given by Bermudo for guitar when its tuning is considered to be the same as the inner courses of a G-tuned vihuela; i.e., double-*bourdon* tuning.

Cellier. The only other tuning method for the guitar shown in staff notation during the Renaissance comes from a manuscript containing an illustration of the guitar drawn by Jacques Cellier (Fig. 1c, above, cited in note 5). Next to the guitar, the drawing shows:

Fig. 13



In guitar notation, the pitches are:

Fig. 14



The text below the staff gives tuning instructions:

The thick string [of the lowest pitched course] of the guitar is tuned with the following [course] at [the interval of] a fourth [higher]. And the following [course] with the third [course] at [the interval of] a third and the third [course]

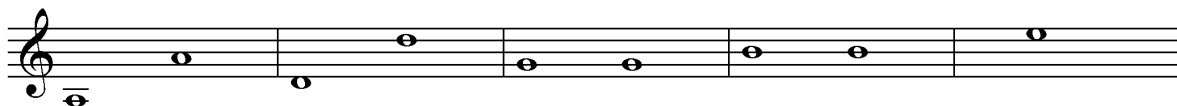
with the fourth [or highest course] at [the interval of] a fourth. (transl. by James Tyler)⁴⁴

Tyler (2002) explains that the notation most likely represents the *intervals* between the strings — fourth, third, fourth — rather than actual pitches. Except for a minor third (rather than major) as the middle interval, this is plausible.⁴⁵ There is little evidence to support a theory that the chart actually represents a five-course guitar.⁴⁶ The text yields the correct standard intervals of four-course tuning, ordered from low to high. However, Tyler presupposes the *requinta* tuning when he renders the opening of his translation, “The thick string [of the lowest pitched course]. . . .” The French “*corde*” is the equivalent of the Spanish *cuerda*, that is, “string” in English. Several times in Bermudo’s quotations given above, He uses *cuerda* (string) in place of the more precise *orden* (course) when the course contains two unison strings. Cellier may be doing the same thing here, that is, assuming a unison course. Thus, the opening might just as easily read: “The thick string [= lowest course] of the guitar. . . .”

LATER TUNING INSTRUCTIONS

Amat. In Spain, we find no more evidence of the four-course guitar after Fuenllana (1554) until the first edition of Joan Carles Amat’s *Guitarra española* ([1586]₁)⁴⁷. This tiny tutor was written for the newer five-course guitar with examples entirely in the rasgueado (strummed) chordal style. In the first chapter, Amat’s description of that instrument’s tuning could be notated:

Fig. 15



The book includes a two-page chapter at the end (as an apologetic afterthought) on the four-course guitar. Regarding the tuning of this instrument, Amat now adds:

<p>La Guitarra de quarto ordenes se templada de la misma manera. . . . que todo lo que se toca en la Guitarra de cinco, se tocará tambien en la de quarto. . . .</p> <p>. . . Finalmente el que quisiere saber tocar la Guitarra de quarto ordenes siga todas las reglas, y el mismo estilo desta Guitarra de cinco ordenes, y haga cuenta que el orden quinto estuviesse borrado de este librito.⁴⁸</p>	<p>The four-course guitar is tuned the same way . . . so that everything played on the guitar of five will be played also one that of four. . . .</p> <p>. . . Finally, whoever wishes to know how to play the four-course guitar will follow all the rules and style of the five-course guitar, and will disregard the fifth course as if it had been erased from this little book.</p>
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Amat’s description corresponds, of course, to the *requinta* tuning. He thus confirms that by 1596 this tuning was well established for the four-course guitar. However, he also states that principles (*reglas*) of chords and *style* are the same as for the five-course instrument. That is, the four-course instrument was strummed. We may conclude that, lacking any polyphonic guitar music since Fuenllana (1554), the strummed style (probably identified by Bermudo over 40 years earlier as *musica golpeada*) was by 1596 the *exclusive* style for guitar playing. We might further conclude that in Spain, strumming was closely associated with *requinta* tuning.

Covarrubias. A brief yet important reference for the four- (and five-) course guitar in Spain comes not from a musical source but from a dictionary: Sebastián de Covarrubias Orozco, *Tesoro de la lengua castellana, o española . . .* (Madrid, 1611).⁴⁹ The entry under “*Guitarra*” reads:

<p>Instrumento bien conocido y ejercitado muy en perjuicio de la música; que antes se tañía en la vihuela, instrumento de seis y algunas veces de más órdenes. Es la guitarra, vihuela pequeña en el tamaño, y también en las cuerdas, porque no tiene más que cinco cuerdas, y algunas son de solas las cuatro órdenes. Tienen estas cuerdas requintadas, que no son unísonas, como las de vihuela, sino templadas en quintas; fuera de la prima que está en ambos instrumentos, es una cuerda sola.</p>	<p>A widely known and performed instrument, much to the detriment of [cultivated] music, which previously was played on the vihuela, an instrument of six or at times more courses. The guitar is smaller in size than the vihuela, and with fewer strings, because it has no more than five strings, and some with only four courses. These strings have <i>requintadas</i>, which are not unisons like the vihuela, but tuned in fifths, aside from the first, which on both instruments is a single string.</p>
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Before discussing this quotation, it is impossible to resist conveying a famous Covarrúbias quotation coming from near the end of his definition of the vihuela, which shows even more colorfully his low opinion of the guitar:

<p>Este instrumento ha sido hasta nuestros tiempos muy estimado, y ha habido excelentísimos músicos; pero después que se inventaron las guitarras, son muy pocos los que se dan al estudio de la vihuela. Ha sido una gran pérdida, porque en ella se ponía todo género de música puntada, y ahora la guitarra no es más que un cencerro, tan fácil de tañer, especialmente en lo rasgado, que no hay mozo de caballos que no sea músico de guitarra.</p>	<p>Up to our time, this instrument [the vihuela] has been highly esteemed, and it has had most excellent musicians. However, since guitars were invented, very few have devoted themselves to studying the vihuela. [This] has been a great loss, for on it all types of plucked [i.e., polyphonic] music was played. But now the guitar is no more than a cowbell, so easy to play, especially when strummed, that there is nary a stable boy who is not a guitar player.</p>
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Covarrubias gives us no new information on the stringing/tuning of the guitar during his period. The first quotation even conveys some very questionable information: that *all* courses except the first had *requinta* strings, and that each of these was tuned a fifth above the fundamental string. If only the third and fourth courses actually had octave *requintas* by 1611, we would possess some confirmation of the tuning description in Phalèse (1570₄) — In Spain, of all places. However, it is unlikely that Amat, a compatriot of Covarrubias, would have overlooked this practice when writing his book. The end of the second quotation confirms the decline of the vihuela and the dramatic rise in popularity of the guitar, especially played in *rasgueado* style.

Cerreto. Closely following the turn of the 17th century, the Neapolitan composer/theorist/lutenist Scipione Cerreto (c.1551-c.1633) published his *Della pratica musicale* (Naples, 1601)⁵⁰. It is a 335-page treatise in four “books,” mainly concerning the rudiments of music and the art of strict counterpoint. It belongs to the late Renaissance rather than the early Baroque period.⁵¹ The final book contains brief sections that introduce the lute, a type of four-course guitar, the lira [da gamba], and the viola da gamba. The shape of the four-

course “chitarra à sette corde” or “bordlletto alla Taliana” was that of a small lute, as illustrated in the frontispiece to the treatise and confirmed by subsequent research.⁵²

Cerreto describes the tuning of the four-course guitar and shows it in staff notation (shown in guitar notation here):

Fig. 16



Tyler has pointed out two unusual features of this tuning: (1) it is re-entrant; and (2) the interval between the fourth and third courses is the same as Bermudo’s *temple viejo* but without the low *bourdon* string.⁵³ Cerreto himself remarks:

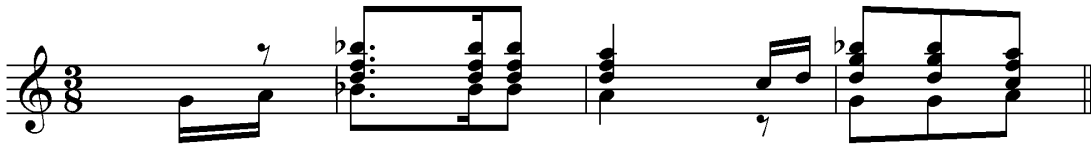
<p>Per essere la Chitarra à sette Corde Strumento imperfetto, per causa che in esso non vi sono tutti le voci grave, come habbiamo nel Strumento del Liuto: Ma tuttavolta volendosi intavolare potrassi trasportare le Notule gravi per Ottava, ò Quintadecima alta. . . .⁵⁴</p>	<p>The guitar of seven strings is imperfect, because there are no low notes on it, as on the lute. However, when you want to intabulate [part music], the low notes can be transposed up an octave or a fifteenth.⁵⁵</p>
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He goes on to illustrate with an example of four-voice music (S-A-T-B) accompanied by his somewhat simplified intabulation of the passage for four-course guitar. As a notated transcription of this in Tyler (2002)⁵⁶ shows, several chord voicings are peculiar, including 6-4 chords at the beginning and end. Also, the bass part (usually the foundation of a polyphonic texture) is entirely swallowed up by the other voices. It is odd and unexplained in a book stressing strict, traditional Renaissance counterpoint, that the author tells us in such a matter-of-fact manner that a bass part may be transposed up by one or two octaves.

A re-entrant tuning similar to that given by Cerreto may or may not be supported by an Italian guitar tablature of the (early?) 17th century. This is a 12 folio manuscript, part of the Spencer Collection now housed in the library of the Royal Academy of Music, but as yet not catalogued. The tuning is *temple nuevo*. In this miscellaneous collection, involving much strummed music, the means of discovering the intended fourth-course tuning seems to be the *melodic* use of the fourth course in relation to other courses, chiefly the third. Only four places in the manuscript afford an opportunity to clearly observe this relationship. The notation in Figures 17-20 (fourth course = g) shows these transcribed (a) with a lower-octave fourth course and (b) with a re-entrant upper octave fourth course. Notes on the fourth course are shown with stems down.

Fig. 17 (f.3, line 2)

a.



b.



Fig. 18 (f.4v, line 1)

a.



b.

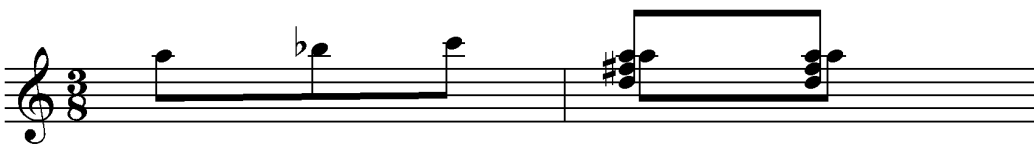


Fig. 19 (f. 6, line 1)

a.



b.



<p>Das XXVI. Capitel. QUINTERNA.</p>	<p>XXVI The Quintern</p>
<p>Quinterna oder Chiterna, ist ein Instrument mit vier Choren / welche gleich wie die allerelteste Lauten (deren Num. 24. gedacht worden) gestimmt warden: Hat aber seinen runden Bauch / kaum zween oder dreh Finger hoch. Dere Abriß in Sciagraph. Col. XVI zu finden.⁵⁷</p>	<p>The Quintern or Chiterna is an instrument with four choirs of string tuned like the very earliest lutes (treated in chapter XXIV). It does not have a round belly, but like a pandora is quite flat, and hardly two or three fingers in depth. A drawing of it may be found on plate XVI.⁵⁸</p>

The drawing in plate XVI resembles Figs. 1b and 1c above, except that it has ten tuning pegs, making it a five-course guitar. The referenced chapter on the lute begins, “The lute . . . had only four choirs of doubled strings originally — namely c f a d' like the quintern. . . .”⁵⁹ This familiar series of pitches is identical with Fig. 6a above: the nominal pitches of both Bermudo’s double-*bourdon* tuning and those extrapolated from the Rowbotham fragment. No mention of upper-octave tuning in the fourth course is given. Thus, Praetorius offers us no new information on tuning, but his text does seem to reinforce our information on the double-*bourdon* tuning, suggesting that it (1) was a very old form of tuning, and (2) was still in use into the 17th century.

SUMMARY

Our investigation of evidence concerning Renaissance four-course guitar stringing/tuning practices has taken us from the 1530s almost to 1620. We have learned that the chief variable or controversial issues are (1) the nominal pitch of the first course, and (2) the tuning/stringing of the fourth course. In the process of the study, we have explored three source-types of information or instruction:

- **Verbal descriptions/instructions:** Bermudo provides the most extensive information, which, when coupled with Mudarra’s terse instruction on tuning, yields a picture of tuning practices in Spain at the mid-15th century. Verbal descriptions in French/Belgian sources are only marginally informative. The suspect instructions given by Phalèse (1570) indicates a *bourdon* string on the third course as well as the fourth; however, this is not confirmed in any other source. Later descriptions by Amat and Praetorius merely underline earlier reliable sources.
- **Tuning charts:** Illustrations on tuning in tablature and notation are more helpful in some ways, since they confirm the basic intervals between courses. However, charts from French, Belgian, and English sources show the relationship between courses as if both strings of the fourth course were always tuned low (double-*bourdon* tuning). The notational chart by Cerreto (1601) shows a re-entrant tuning.
- **Musical contexts:** Music by Spanish, French, and Italian composers bear out the *temple nuevo* tuning descriptions given by Bermudo (shown in Fig. 6 above), analogous to the inner courses of the vihuela, as well as their *temple viejo* equivalents.

From these, we may summarize in the following tables:

NOMINAL PITCH FOR COURSE 1

b ¹	Cerreto (1601)
a ¹	Le Roy (1554) Bermudo (1555)
g ¹	Phalèse (1570)
e ¹	Amat (1596)
d ¹	Le Roy (1554) Rowbotham (1569) Cellier (ca. 1585)

TEMPLE NUEVO STRINGING/TUNING

Type & Intervals	Source of Information
<u>Double-bourdon</u> ④ P4 ③ M3 ② P4 ①	(inferred from:) Narváez (1538) Bermudo (1555) Rowbotham (1569) Praetorius (1618-1619)
<u>Requinta</u> ④ P4/P5 [^] ③ M3 ② P4 ①	Mudarra (1546) Bermudo (1555) (probable:) Barberiis (1549) Cellier (ca. 1585) Amat (1596) (probable:) Spenser MS. (17 th c.)
<u>Re-entrant</u> ④ P5 [^] ③ M3 ② P4 ①	(inferred from:) Mudarra (1546) (probable:) Spenser MS. (17 th c.)
<u>Modified temple nuevo</u> ④ M3 ③ P4 ② P4 ①	Morlaye (1552)

TEMPLE VIEJO STRINGING/TUNING

Type & Intervals	Source of Information
<u>Double-bourdon</u> ④ P5 ③ M3 ② P4 ①	(probable:) Bermudo (1555)
<u>Requinta</u> ④ P5/P4 [^] ③ M3 ② P4 ①	(all probable:) Mudarra (1546) Le Roy (1551/52?) Morlaye (1552) Le Roy (1554) Bermudo (1555)
<u>Re-entrant</u> ④ P4 [^] ③ M3 ② P4 ①	(:inferred from:) Mudarra (1546) Cerreto (1601)

Applying these data, the first-course tuning most often given is a¹ (three instances) with d¹ (two instances) being the second most frequent.

The fourth-course issue favors the octave *requinta* stringing as a solution internationally, both in *temple nuevo* and *temple viejo*. Since *requinta* stringing is analogous to lute stringing, it is also likely that this tuning was preferred in France, England, and Italy (where the lute reigned supreme), and that the high octave string was placed on the inside.

Double-*bourdon* stringing, which Bermudo differentiates from *requinta* tuning, is validated later by Rowbotham and Praetorius, who indicate course pitches without any reference to an octave string on the fourth course.

Attention must also be given to re-entrant tuning, especially in late Italian music for the four-course guitar, but possibly also in un-notated Spanish music of the early Renaissance.

For most extant music, the *requinta* stringing is the most universal choice in modern performance, especially since it was the apparent preference in most sources. Although we have no historical sources that instruct in right-hand techniques, it is possible — using *requinta* tuning — to obtain varied chord voicings and effects by judiciously applying known right-hand techniques to the abundant tablatures from the rich legacy of the Renaissance guitar.

Notes

- 1 Notably: (1975a) “The Renaissance Guitar,” *Early Music* 3: 341-347;
(1975b) “Further Remarks on the Four-Course Guitar,” *Lute Society Journal* 17: 60-62;
(1979) Introduction to the facsimile ed., *Adrian Le Roy & Robert Ballard: Five Guitar Books (1551-1555)* (Monaco: Éditions Chanterelle);
(1980a) *The Early Guitar: A History and Handbook* (London: Oxford University Press);
(1980b) Introduction to the facsimile ed., *Simon Gorlier & Guillaume Morlaye: Four Guitar Books (1551-1553)* (Monaco: Éditions Chanterelle);
(1980c) Introduction to the facsimile ed., *Alonso Mudarra: Tres libros de musica encifras (1546)* (Monaco: Éditions Chanterelle);
(2000) “Guitar” (3)-(4) in *New Grove Dictionary of Music and Musicians II*; and
(2003) “The Role of the Guitar in the Rise of Monody: The Earliest Manuscripts” *Journal of Seventeenth-Century Music* 9/1 (online journal):
<http://sscm-jscm.press.uiuc.edu/jscm/v9/no1/tyler.html>.
- 2 (1974) Charles Dobson, Ephraim Segerman, and James Tyler, “The Tunings of the Four-Course French Cittern and of the Four-Course Guitar in the 16th Century,” *Lute Society Journal* 16: 17-23; and (2002) James Tyler and Paul Sparks, *The Guitar and Its Music: From the Renaissance to the Classical Era* (London: Oxford University Press).
- 3 Laurence Wright, “The Medieval Gittern and Citole: A Case of Mistaken Identity,” *Galpin Society Journal*, 30 (1977): 18; cited in Antonio Corona-Alcalde, “The Vihuela and the Guitar in Sixteenth-Century Spain: A Critical Appraisal of Some of the Existing Evidence,” *The Lute* 30 (1990): 7.
- 4 Described in detail in Howard Mayer Brown, *Instrumental Music Printed before 1600: A Bibliography* (Cambridge: Harvard University Press, 1965; reprinted 2000), entry 1549₅. (In the present paper, date references in this format refer to Brown’s bibliography entries.)
- 5 1549₂: Melchior de Barberiis, *Opera intitolata continua*. . . . (Venice, 1549), f.Gg4v.
- 6 Pen drawing by Jacques Cellier (c.1550-1620) in *Recherche de plusieurs singularités par François Merlin . . . Portraictés et écrites par Jacques Cellier*. . . . (Bibliothèque Nationale, Paris, Ms. Fr. 9152, f.190). Next to the guitar drawing, Cellier gives a tuning in staff notation and instructions for tuning, discussed below. Cellier was organist at Rheims, but his claim to fame was as calligrapher and musical expert for this commonplace book prepared for presentation to Henry III.
- 7 Bibliothèque Nationale, Paris; (e) attributed to Tobias Stimmer (1539-1584), probably completed in Strasbourg during the 1570s. New York Public Library.
- 8 1538₁: Luis Narváez, *Los seis libros del Delphin de música de cifra para tañer vihuela* (Valladolid, 1538), f.80v (89v).

- 9 *El Delphin de música, transcripción y estudio por Emilio Pujol*. Monumentos de la música española, vol. 3 (1945). Barcelona: Consejo Superior de Investigaciones Científicas, Instituto Español de Musicología (reprint, 1971), p. 84.
- 10 *Juan Bermudo, . . . Declaración de inst(r)umentos musicales. . . .* (Ossuna, 1555; reprint 1957), Book IV, Ch. 65
- 11 *Ibid.*, Book II, Ch. 32. All translations are by the author unless otherwise indicated.
- 12 *Ibid.*, Book IV, f.91.
- 13 All notated examples in this paper are shown in guitar notation, that is, sounding one octave below notated pitch.
- 14 Since Bermudo mentions and illustrates only a single pitch for each course of the vihuela, we can assume that the two strings in each course were tuned at the unison. Donald Gill's research supports this inference in his "Vihuelas, Violas and the Spanish Guitar," *Early Music* (9/4, Oct. 1981): 458. One scholar has questioned this "standard" by proposing that the vihuela might have employed upper-octave strings on its lower courses like the lute optionally did. See Bill Hearn, "Playing Devil's Advocate: The Shaky Case for Unison-Course Vihuela Stringing," *LSA Quarterly* (May/August 1993): 4-10. Hearn's reasoning is somewhat circular and convoluted; he also takes texts entirely out of context and gives them unobvious interpretations when obvious ones are quite clear.
- 15 *Ibid.*, Book IV, Ch. 65.
- 16 *Ibid.*, Book IV, Ch. 65.
- 17 *Ibid.*, f.96. This topic is discussed thoroughly in Maria Therese Annoni, "Tuning, temperament and pedagogy for the vihuela in Juan Bermudo's 'Declaration de Instrumentos Musicales' (1555)," Ph.D. dissertation, Ohio State University, 1989.
- 18 John M. Ward, "The vihuela de mano and its music (1536-1576)," Ph.D. dissertation, New York University, 1953, p. 41.
- 19 1546₁₄: Alonso Mudarra, *Tres libros de música en cifra para vihuela, intitulado Orphénica lyra* (Naples, 1546).
- 20 The re-entrant theory was probably first proposed by Gill, *op. cit.*, p. 461.
- 21 *Ibid.*, Book IV, Ch. 65.
- 22 *Requintar* means to raise or lower a pitch by five steps.
- 23 The usual understanding is that the *bourdon* string goes on the outside. However, Tyler (1979) and (1980b) prefaces introduced the notion of placing the *requinta* string on the outside in an attempt to solve certain chord-voicing problems in the French repertoire. Since Tyler and Sparks (2002) makes no mention of this stringing, we may assume that Tyler has abandoned the idea.
- 24 *Ibid.*, Book IV, Ch.69
- 25 1554₃: Miguel de Fuenllana, *Orphénica lyra* (Seville, 1554), f.165v and 163v-165v.
- 26 *Ibid.*, Book II, Ch. 32.

- 27 Literally, “for the new ones” and “for the old ones,” implying new or old pieces or types of music, as Bermudo soon explains.
- 28 That is, the interval between the open fourth and open first course is a major tenth.
- 29 “Strummed music” is the obvious interpretation of *musica golpeada*. Since Bermudo has already mentioned old romances, which we may assume to have been accompanied by strumming, perhaps he now means dance music similarly accompanied. Music involving tapping is also possible. In Martín Alonso, *Enciclopedia del idioma: Diccionario histórico y moderno de la lengua española (siglos xii al xx)*, (Madrid: Aguilar, 1958), one definition of *Golpe* reads: “18. MÚS. AND. Pieza de Madera adosada en la caja de la guitarra a la izquierda del agujero de resonancia, para que el tocador dé con los dedos acompasando el cante. (18. MUSIC. ANDALUCIAN. A piece of wood attached to the body of the guitar to the left of the sound-hole for the player, with his fingers, to keep time with singing.)
- 30 Not counting the two collections of chansons cited above, these comprise 1551₁; 1551₃; 1552₃; 1552₅; 1552₆; 1553₃; and 1553₄;
- 31 [1551]₄ : Adrian Le Roy, *Briefve et facile instruction pour apprendre la tablature à bien accorder, conduire et disposer la main sur la guiterne* (Paris, 1551, reprinted 1578).
- 32 Translation by Frederic V. Grunfeld in his *Art and Times of the Guitar* (New York: MacMillan, 1969), p. 91.
- 33 1551₃, f.24v.
- 34 *The chansons of Jacques Arcadelt*, ed. by Everett B. Helm. Smith College Music Archives, Vol. 5 (c1942), nos. 3, 4, 5, and 9.
- 35 1570₄.
- 36 *Ibid.*, f.*5=4v.
- 37 Daniel Hertz, “An Elizabethan Tutor for the Guitar,” *Galpin Society Journal*, 16 (1963): 3-21.
- 38 *Ibid.*, p. 12.
- 39 *Ibid.*, p. 14.
- 40 Dobson, Segerman, and Tyler (1974), p. 23.
- 41 John M. Ward, *Sprightly & Cheerful Musik*, *Lute Society Journal* 21 (1979-1981), p.16; and Tyler (2002), p. 26-27.
- 42 Ward, *ibid.*, Plate VII. Source: Van Pelt Library, University of Pennsylvania.
- 43 Tyler (2002), p. 27-29.
- 44 *Ibid.*, p. 23.
- 45 The written description of the interval as merely a “third” is vague. According to Howard Mayer Brown biography (*New Grove Dictionary*, 1980), some of Cellier’s many detailed

drawings in the manuscript are incorrect. So his knowledge of the guitar may be incomplete as well.

- 46 Ibid. and Harvey Turnbull, *The Guitar: From the Renaissance to the Present Day* (New York: Charles Scribner's Sons, 1974), p. 141.
- 47 Joan Carles Amat, *Guitarra Española, Y Vandola . . .* (Barcelona, 1586 [sic]). Facsimile edition of the 1639 version with an introduction by Monica Hall (Monaco: Editions Chanterelle, 1980). No copy of the original edition is known to exist. Hall points out that the imprimatur and dedication found in certain later editions are both dated 1596 and that in 1586, Amat would have been only 14 years old (Introduction [p. i-ii]).
- 48 Ibid., p. 37-38.
- 49 Modern ed. by Felipe C.R. Maldonado, rev. by Manuel Camarero, 2nd corrected ed. (Madrid: Editorial Caltalia, 1995).
- 50 Modern facsimile: Scipione Cerreto, *Della prattica musica vocale, et stumentale* (Bologna, Forni Editore, 1969).
- 51 There is no instruction concerning monody or *basso continuo*. Cerreto's conservative posture is also show by his reference to a "false opinion" on the part of "Moderni Compositori" regarding consonance and dissonance. This appears in the prologue to the fourth book, p. 241.
- 52 Renato Meucci, "Da 'citarra italiana' a 'chitarone': una nuova interpretazione," in *Enrico Radesca di Foggia e il suo tempo; atti del convegno di studi, Foggia, 7-8 aprile 2000*, p. 37-57.
- 53 Discussions of Cerreto appear in Tyler (1980), p. 30 and Tyler (2002), p.33-35.
- .
- 54 Cerreto, p. 321
- 55 Tranlation (slightly edited) from Tyler (2002), p. 35
- 56 P. 34.
- 57 Michael Praetorius, *Syntagma musicum*, facsimile, ed. by Wilibald Gurlitt (Kassel: Bärenreiter, 1958-1959), vol. 2.
- 58 *The syntagma musicum of Michael Praetorius, Volume two . . .* English translation by Harold Blumenfeld (New York: Da Capo Press, 1980), p. 53.
- 59 Ibid., p. 49.