

## PITCHES OF GERMAN, FRENCH, AND ENGLISH TRUMPETS IN THE 17th AND 18th CENTURIES

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*Editor's Note: The following article is an excerpt from Reine Dahlqvist's doctoral dissertation, Bidrag till trumpetten och trumpetspelets historia/ Fran 1500-talet till mitten av 1800-talet/ Med sarskild hansyn till perioden 1740-1830 (Contribution to the History of Trumpets and Trumpet Playing from the 16th through the 19th Centuries, Especially with Regard to the Period 1740 to 1830).<sup>1</sup>*

**M**usical scores and written sources refer to a bewildering variety of trumpet pitches in European music in the 17th and 18th centuries. The significance of these references can be understood only if account is taken of both the variation in general pitch level and the different systems of pitch designation that were in use. For this study, however, absolute pitch is considerably less important than the relationships among the various pitch standards.

The following somewhat simplified description of systems of pitch designation will suffice for our purposes: The terms *Chorton* and *Cammerton*, as encountered in reference to music of the first half of the 18th century, refer to two common pitch standards, the former a step above the latter (see the table below). But a very different situation existed in the 17th century. Michael Praetorius, writing in 1619, stated that in Prague and many other Catholic chapels the pitch was designated as either *Chorton* or *Cammerton*—the former being a whole tone lower than the latter. Most instruments—organs included—were pitched in *Cammerton*, while *Chorton* was used only in churches, for the ease of singers. (The organist then had to transpose when performing with singers.) However, the clarity of these terms is confused by other factors relating to pitch. Praetorius further stated that the higher pitch was called *Chorton* in most of those places where they did not use a lower pitch in the church, as was usually the case in the Protestant sections of Germany.<sup>2</sup> In order to avoid confusion we shall call Praetorius' pitch standards for Catholic areas *Cammerton*<sub>2</sub> and *Chorton*<sub>2</sub>. Praetorius offered an alternate name for the higher pitch, *Cornetton*, which also appeared later in the 17th century, especially in Austria, Bohemia, and south Germany.<sup>3</sup> It must be stated, however, that the pitch in Praetorius' time—and above all his procedure for obtaining the correct *Chormass* (= pitch) for organs—has been a matter of dispute.<sup>4</sup>

During the last decade of the 17th century, musicians in the German states, under the influence of French practice (and particularly with the introduction of the French woodwinds), began to perform at a pitch one to one and one-half steps lower than *Cornetton*. The higher pitch was now most often called *Chorton*, but occasionally also *Cornetton*. The lower pitch was then called, confusingly, *Cammerton* (here, *Cammerton*<sub>3</sub>), *tief* (= "low")

*Cammerton, or franziisich-Ton.*

A further complication arises from the fact that in the 18th century certain organs, especially in north Germany but also in Saxony, were pitched as much as a half-tone higher than the average for *Chorton*<sub>2</sub>. This higher pitch was "inherited" from the 17th century: Praetorius in fact criticized those who dared to raise the pitch a half-tone higher than the usual *Cammerton*<sub>2</sub>. During the latter part of the 18th century the higher *Chorton* was also called *Cornetton* (here, *Cornetton*<sub>2</sub>): the term *hoch* "high" *Chorton* is also recorded. These pitch standards are relative, so while it is impossible to express them in absolute terms (e.g., = 440 hz.), rough estimates can be made. Only with J.H. Scheibler's development of the *Tonmesser* in 1834 did frequency measurements become sufficiently accurate for most purposes.<sup>5</sup>

The following table is an attempt to present reasonable estimates for the average pitches in German-speaking lands during the 17th and 18th centuries:

Pitch designation 17th century	Pitch designation first half of 18th century	Pitch designation second half of 18th century	Relationship to a"=440
	<b>Chorton3 Cornetton2</b>	<b>Cornetton2, Feldton, hoch Chorton</b>	<b>B (slightly low) (a"=ca. 475-490)</b>
<b>Cammerton2, Chorton, Cornetton</b>	<b>Chorton, Cornetton</b>	<b>Chorton</b>	<b>B<sup>6</sup> (slightly low) (a"=ca. 455-465)</b>
<b>Chorton2</b>	<b>Cammerton franzosich-Ton</b>	<b>Cammerton</b>	<b>A<sup>6</sup> (slightly low) (a"=ca. 405-415)</b>
	<b>tief Cammerton (Cammerton3), franzosich-Ton</b>		<b>G (slightly low) (a"=ca. 390-395)</b>

The above table, of course, must be accepted only as a very general guide to pitch standards for the period in question. It does not show, for example that during the last decade—or perhaps the last two decades—of the 18th century, *Cammerton* began to rise slowly.

### **Trumpet Pitch in Germany, 1620-1800**

An uncritical reading of scores and contemporary texts suggests that from around 1620—when the instrument was first used in art music simultaneously with voices and other instruments—until around 1700, the pitch of the standard German trumpet was C, and that during the 18th century the pitch level rose to D. But it is important to interpret

these texts in light of the pitch designation employed by each author.

### Theoretical Sources

The earliest information on trumpet pitch is given by Praetorius (1619).<sup>6</sup> He states that up to his own time trumpets had been pitched in D *Cammerton*<sub>2</sub>, but that makers quite recently had begun to make trumpets in C or to supply trumpets with crooks. A few makers pitched their trumpets in B. Praetorius himself wrote for trumpets in C *Cammerton*<sub>2</sub> in a setting of *In Duk jubib* .-

The next author to mention trumpet pitches is C. Weigel in 1698, who writes:

Yet trumpets are made in various ways: namely the German and so-called "common" trumpets; the French, which are a tone higher than the former; and the English, which are pitched fully a third above the common trumpet.<sup>8</sup>

Weigel's remarks are confirmed by F. Friese (1709) and J. H. Zedler (1745).<sup>9</sup> Weigel does not identify a specific pitch for the German trumpet, but T. B. Janowka, in his dictionary from 1701, does. According to him there are three sorts of trumpets: (1) trumpets in *Chorton* (i.e., *Chorton*<sub>2</sub>), corresponding in pitch to French and Italian organs, according to German pitch in Bb; (2) ordinary trumpets in *Cornetton*, corresponding in pitch to German organs in C; and (3) and "breve" ("short") trumpets, which according to German organ pitch are in D, but are called "French." There are moreover a few pitched in E.<sup>10</sup>

As mentioned above, the higher pitch was in many locations called *Cammerton* (*Cammerton*<sub>2</sub>) or *Cornetton* during the 17th century; the lower, *Chorton* (*Chorton*<sub>2</sub>). But from about 1700 the higher pitch gradually became known as *Chorton*; the lower, *Cammerton*.<sup>11</sup> Johann Mattheson writes categorically that "all trumpets are in *Chorton*, thus in C *Chorton* or D *Cammerton*."<sup>12</sup> When dealing with pitch in general, J. F. Agricola writes *Chor- oder Trompetenton*.

Some German sources from the late 17th and 18th centuries inform us that trumpet pitches differ from one country to another. The best known of these sources is J. E. Altenburg's *Versuch einer Anleitung zur heroisch-musikalischen Trompeter- and Pauker-Kunst* (1795). Altenburg states that German trumpets are pitched in D; French trumpets, in F; English, in G.<sup>13</sup> But are these statements supported by other sources? As far as is known there is no music from 18th-century England requiring a trumpet in G. Altenburg groups the trumpets in two "classes;" of the first class, the ordinary folded trumpet, he writes:

1) Here indisputably the trumpet in C *Chorton* has the advantage for us Germans....The now commonplace *Chor-* and *Cammerton* [instruments] differ only one tone from one another, ...thus it is easy to see that these trumpets in *Cammerton* must be pitched in D. And therefore just as easily we could call it the D *Cammerton* trumpet, although many are pitched in D.

2) The *F-Cammerton* or "French" trumpet, which was introduced by the French, is somewhat shorter, thus a minor third (or one and one-half tones) higher than the former.

3) The *G-Cammerton* or "English" trumpet (It., *tromba piccola*) is so called because it is used by the English. It is yet a full tone higher than the previous one, and about a fourth higher than the first one.<sup>14</sup>

There was thus no change from the C- to the D-trumpet in the 18th century. The old trumpet in C *Cammerton*<sub>2</sub> or *Cornetton* now became the trumpet in D *Cammerton* or *El tief Cammertton*. But in church music it could still be regarded as pitched in *Chorton* (previously *Cammerton*<sub>2</sub> or *Cornetton*) and notated in C together with organ, voices and strings, while the woodwinds are notated a second or a minor third higher (*Cammerton* and *tief Cammertton*, respectively) as can be seen from J. S. Bach's cantatas from Mühlhausen and Weimar. The general trumpet pitch during the 17th century was thus C *Cammerton/Cornetton*, or as it was called from about the beginning of the 18th century, C *Chorton/Cornetton* or D *Cammerton* (13 *tiefCammerton*).

### Musical Sources

But German composers wrote for trumpets in a variety of other pitches as well, ranging from A up to F. In his *Requiem A 15*, H. I. F. Biber prescribes two *trombae bassae* in A;<sup>15</sup> these must be in *Cornetton*. Trumpets in A *Cornetton/Chorton* also occur in Johann Kuhnau's cantata *Nicht nur allein am frohen Morgen*.<sup>16</sup> In the score Kuhnau prescribes *Corni*, but the parts are designated for *Clarino* 1 and 2. Voices, trumpets/horns and organ continuo are notated in *Chorton* while strings and oboes are in *tiefCammerton*, thus notated in C.

In addition to the C- and D-trumpets noted above, Praetorius also mentions a trumpet in B1 *Cammerton*<sub>2</sub>/*Cornetton*, as does Janowka.<sup>17</sup> A trumpet part in this pitch is to be found in another cantata by Kuhnau, *Daran erkennen wir*.<sup>18</sup> T. Volckmar, in two cantatas (nos. 2 and 14) in the printed collection *Gott gefüllige Musik-Freude* (1723),<sup>19</sup> also prescribes a trumpet in B1 *Chorton*. (The parts for flutes and oboes are written in *Cammerton* and *tief Cammertton*, respectively).

According to Praetorius, the higher-pitched trumpets in D *Cornetton*—the general trumpet pitch up to the first decade of the 17th century—were still used as field trumpets about 1620. Janowka calls these trumpets *brevesm*—a name which appears in connection with instruments of the same pitch in a few works from the last decades of the 17th century. P. J. Vejvanovsk1', who otherwise wrote for the trumpet in C *Cornetton*, writes for two *trombae breves* in his *Offertorium pro omni tempore* from 1683.<sup>21</sup> Furthermore, we find the designation 2 *Clarini seu Tromba breva* on the title page of a *Sonata venatoria* from 1684, but simply *clarino* on the parts.<sup>22</sup> A *Sonata a 5* from 1689 also has 2 *Tromba breves*, but *Clarino* on the parts,<sup>23</sup> and in *Missa Clamantium* from 1689 two *clarini* in D are designated simply *ad libitum*.<sup>24</sup> In *Sonata Scti Mauritij* the trumpets are in C, though there is a section

in D which calls for mutes. The work was composed in 1666, by which time there probably were no trumpets in D in ICromWd, where Vejvanovskf worked.<sup>25</sup>

Two *trombe courte* are prescribed in a Kyrie performed in Weissenfels. The term *trombe francese* in another composition should refer to trumpets in the same pitch as the *trombe courte*.<sup>26</sup> T. Volckmar writes for *clarino S curta* in D *Chorton* in the eighth cantata in the aforementioned collection from 1723.

As the D trumpet (in *Cornetton*, later identical with *Chorton*) was pitched higher, it was also shorter than the trumpet in C, hence the name *tromba breva*. Another designation for the trumpet in D *Cornetton* was *Clarino piccolo* or *Tromba piccola*. The aforementioned sonatas by Vejvanosky from 1684 and 1689 are entered in an inventory from 1695 as *Sonata Venatoria con Trombae piculi* and *Sonata a 5 con trombae piculi*.<sup>27</sup> The D trumpet in J. Schelle's cantata *Salve solis orientis* has the designation *Clarino piccolo* on the part.<sup>28</sup> The D trumpets in a cantata by J. P. Erlebach, *Ich will euch wieder sehen*, preserved in the Bokemeyer collection, also have the same designation.<sup>29</sup>

In his previously mentioned collection from 1723, Volckmar has all parts but the woodwind in *Chorton* (*Cornetton*). This practice persisted to some extent, even into the late 18th century. In some of the Salzburg works of W. A. Mozart and Michael Haydn, the woodwind parts (player's parts) are notated a tone higher than voices and other instruments." The general custom from about 1715/1720 was otherwise to write all parts in *Cammerton* except for the continuo-organ, which was still in *Chorton*. In instrumental music all parts were of course notated in the same pitch, with the exception of horns and trumpets. The trumpet in D *Cornetton* or *Chorton* now became a trumpet in E *Cammerton* or F *tief Cammerton*. For F *Cammerton* an instrument a half-tone higher had to be made. The pitch E is rare until C. F. C. Fasch's Concerto for Trumpet, Oboe d'amore, Violin and Strings (ca. 1755-60) and G. Ph. Telemann's *Don Quichotte* (1761).<sup>31</sup>

More frequently used was the trumpet in F, often called *clari no piccolo*. It may be difficult or almost impossible to determine if the pitch in instrumental/orchestral music or opera was in *Cammerton* or *tief Cammerton*. In church music the pitch is evident from the organ transposition. The best-known work with a trumpet in F is of course the J.S. Bach's "Brandenburg" Concerto No. 2. Less familiar is Telemann's Concerto (or Suite) in F for Violin, with two *trombe piccole* (see below). But there are several other works with F trumpets.

The earliest known work in which a trumpet in F is used is J. H. von Wilderer's *Giocasta*, performed in Dusseldorf in 1696. In the aria "Spargi fama diletta" a *tromba alla quarto* is prescribed. The part is written at concert pitch, using the following notes: f, a', c", f", then diatonically to f", with b6" and b- natural". An aria in the first act requires a trumpet in D, notated at concert pitch, as well.<sup>32</sup> In his operas *Il Giorno di salute* (1697) and *La Monarchia stabilita* (1703) he writes for trumpets in D at concert pitch.

The earliest known example of a trumpet in F in orchestral music is Ph. Erlebach's *Ouvert.. ..ex F-Dur con Tromp. piccolo*, entered in an inventory from 1735<sup>33</sup> (Erlebach died in 1714). In 1716 G. Ph. Telemann composed a serenata, *Teuschland grunt and bliiht im Friede*, on the birth of Archduke Leopold of Austria. A copy is preserved in the hand of Ch.

Graupner.<sup>34</sup> In one aria three *aarini* in F are prescribed, and in another, two *alrini piccoli* in F together with two horns in F. Two *clarini piccoli* are also prescribed in Telemann's cantata *Nun komm der Heiden Heiland* (1721).<sup>35</sup>

Six cantatas in G. H. Stölzel's double cantata cycle for 1728/1729 require two F-trumpets, and were performed in *tief Cammerton* in Sondershausen. (The continuo is in D.)<sup>36</sup> Stölzel moreover writes for the F-trumpet (as well as D-trumpet) in two serenatas.<sup>37</sup> In the autograph score of the serenata of his *Kapitansmusiken* of 1728, Telemann labels the part for F-trumpet *tromba piccola*, and writes it at concert pitch.<sup>38</sup>

J.S. Endler in Darmstadt writes for two clarini in F in a sinfonia (or suite) from 1748, and in another from 1749 for one F-trumpet called *clarino piccolo* on the cover but simply *clarino* on the part.<sup>39</sup> Graupner also writes for a pair of F-trumpets (*clarini*) in a sinfonia from about the same time.<sup>40</sup>

In his later years Telemann used the F-trumpet in several works, now calling the instrument *kurze Trompete*. (From the middle of the 1730's he began to prefer German for instrument designations, though he occasionally reverted to Italian.) Copyists of scores or parts did not always follow the original terminology. In the cantatas *Auf !asset in Zions geheiligten Hallen* (1756), and *Heut schleusst er wieder auf die Tur* (1758)<sup>41</sup> each of the two parts are marked *kurze Trompete*. In *Er is auferstanden* the designation is *Garin° piccolo 1 & 2*;<sup>42</sup> the single trumpet in *Ich danke dem Herrn von ganzen Herzen* is similarly identified.<sup>43</sup> In *Gute Nacht vergangnes Jahr* (attributed to Telemann) the designations are *Trompette Imo ex F* and *Trompette 2 er.F*.<sup>44</sup> In the autograph score of Telemann's *Kapitansmusik* (1760) the F-trumpet is designated *kurze Trompete*.<sup>45</sup> This term also occurs in a copy of *Die Tageszeiten* (1757), in which oboe is given as an alternative for the trumpet.<sup>46</sup> In the cantata *Freut euch mit Jerusalem* (1762), two trumpets in F are combined with two in C,<sup>47</sup> and in the cantata *Alkin Gott in her Hoh* the pitch F is obtained by muting (apparently an E) trumpet.<sup>48</sup>

The examples presented here show the F-trumpet to have been more common than hitherto supposed. That the F-trumpet was not always accessible is evident from one of the sources of Telemann's cantata *Nun komm der Heiden HeiLanah* where horns are indicated as an alternative.<sup>49</sup> A similar situation obtains in J. L. Bach's cantata *Ich will meinen Geist in euch aufleben* (JLB 7), performed by J. S. Bach in Leipzig in 1726. On the cover the copyist has written 2 *azrini piccoli o Corni di Silva*. The parts are however designated *Corno (1 & 2)*, and J. S. Bach wrote *Corni* in his score (written seventeen to twenty years later). J. S. Bach had apparently no intention of using trumpets for the performance in Leipzig. The alternative probably was given by J. L. Bach in Meiningen.<sup>50</sup>

When the trumpet was introduced into art music in Germany during the 1620's the pitch used was C *Cornetton*, after 1700 generally called *Chorton*. This was then the most common pitch up to the end of the 18th century; it corresponded to D *Cammerton* or E1 *Cammerton*. During the second half of the 18th century the E1 *Cammerton* pitch became more widely used.<sup>51</sup> H.C. Koch states in his dictionary printed in 1802 that the E1 trumpet was the common instrument in trumpet choirs.<sup>52</sup> It is uncertain to what extent *tief Cammerton* was used after ca. 1750, if indeed it was used at all. In any case the "absolute"

pitch began to rise toward 1800.

The trumpet in D *Cornetton/Cammerton*<sub>2</sub> during the 17th century (and partly early 18th century) was called *tromba breva* (*brevis*), *clarino piccolo*, or *tromba piccola*. In the 18th century, especially during the first sixty years, *clarino piccolo*, *tromba piccola* and *kurze Trompete* were used to denote the trumpet in F, both in *Cammerton* and *tief Cammerton*.

We shall now investigate the substance of Altenburg's statements that the French trumpet was pitched in F and the English in G (*Cammerton*). Around 1700 the pitches for the French and English trumpets were given as D and E *Cornetton* respectively. We shall also examine trumpet pitches in Italy, although it must be kept in mind that pitch varied considerably there. We have reports from German writers who described pitch in Italy only in relative terms, by reference to German standards. J.J. Quanta stated that the pitch in Venice was almost as high as German *Chorton*, while in Rome (and also Paris) the standard was about that of *tief Cammerton*.

### Italy

The Italian trumpeter G. Fantini writes exclusively for the trumpet in C in his *Modo per imparare a sonare di tromba* (1638). The earliest known Italian compositions for trumpet and a string ensemble, M. Cazzati's *Sonata a due, tre, quattro, e cinque, con alcune per tromba*,<sup>53</sup> are written for a trumpets in C—one of them a muted trumpet, thus sounding in D. In Bologna, Cazzati's example of composing (trumpet) sonatas was probably first taken up by P. Franceschini in 1680 and continued by D. Gabrielli, G. Torelli, and G. M. Alberti, all of whom wrote for the trumpet in D. (Torelli on one occasion used four trumpets in C.) G. P. Colonna wrote for trumpet in D in his church music (with the exception of his first composition with trumpet a *Luadate pueri*, dated 1676, which requires a trumpet in C).

Some duets for trumpets in D with the designation *tromba tedescha*, preserved in Modena,<sup>54</sup> invite the conclusion that they were intended for trumpets from Germany, which were pitched in D according to Italian pitch standard. The designations on the parts (not the later ones on the covers) are, however *Sonate da Tromba tedesche* and *Sonate Tedesche da Tromba*; thus "German trumpet sonatas."

A. Scarlatti writes for the 13 trumpet in *La caduta de' decemviri* from 1697,<sup>55</sup> as does F. Mancini in *Turno aricino* from 1708. In the latter work the trumpet is muted, however.

From the 1720's there is some evidence that a trumpet in F was also used in Italy. This instrument—called *trombino*—is first met with in the *sinfonia* of L. Vinci's *Astianatte* (1725), and later in a *marchia militare* from N. Porpora's  *Davide e Bersabea*.

### France

In France we find a range of trumpet pitches similar to that in Italy. J.B. Lully, who introduced the trumpet into art music in France, writes for both C- and D-trumpets, though the former is the most common. After 1700, D becomes the most common pitch. L. J. Francoeur writes in 1772 that the trumpet pitch in France is E and that it can be lowered to C, D, and E<sub>1</sub> by using crooks. He also mentions F, but finds this pitch too shrill.<sup>56</sup> J. Ph. Rameau began to write for the trumpet in E during the 1740's; E-trumpets must therefore

have been introduced in France around 1740. J. B. Laborde repeats in his treatise published in 1780 that the French trumpet is pitched in E and that the F-trumpet must be made to order.<sup>57</sup>

#### England

J. Talbot stated at the end of the 17th century that the English trumpet was pitched in E and that it could be lowered by the use of crooks.<sup>58</sup> When the trumpet was introduced in art music in England during the last decades of the 17th century, the pitches used were C and D. From about 1700, D became the common pitch. In his trumpet tutor *A New and Complete Preceptor for the Trumpet and Bugle Horn* (1798), J.H. Hyde still writes for the trumpet in D. At the beginning of the 19th century the F-trumpet was the highest pitch in England.<sup>59</sup>

#### Conclusion

Around 1700 Weigel and others stated that the "French" trumpet was pitched in D *Cornetton* and the "English" in E *Cornetton*, thus in E/F and F#/G in *Cammertonitief* *Cammerton* respectively. There is in fact no evidence that these pitches were used in France and England at that time. Altenburg's statement that the G-trumpet (in *Cammerton*) "is used by the English" is similarly unsubstantiated, as is his statement regarding the F-trumpet in France. It is true that the trumpet in F was available in France, but it was not common; it was in fact used in Germany long before it appeared in France.<sup>60</sup> From the 1780s even the G trumpet was required in isolated cases. As to why the German writers mentioned here associated certain specific pitches with French and English trumpets, we can only speculate.

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#### NOTES

1.2 vols., University of Goteborg, 1988. See Sven Iiansell's review in this issue of *Historic Brass Society Journal*. The dissertation is planned to be published by Musikverlag David McNaughtan, Coburg, Germany.

2. M. Praetorius, *Syntagma musicum*, vol. 2 (Wolfenbattel, 1619; facsimile reprint, Kassel and Basel, 1958), pp. 14ff.

3. *Ibid.*, p. 41.

4. As organ pitch often varied, being frequently either too high or too low, Praetorius wanted to fix the most suitable *Chormass* for this instrument. To this end he illustrated dimensions of pipes for the entire octave c''' - c'''' in a woodcut (in *Syntagma musicum*). This rather rough drawing is probably meant to be full scale, but Praetorius offers no reference scale on the page against which these measurements can be judged.

5. Space does not permit a comprehensive survey of research on musical pitch, but the most important research on the subject should be mentioned. The first major studies were those of A.J. Ellis, who published a catalogue of documents on pitch dating from the 17th century to his own time ("On the History of Musical Pitch," *Journal of the Society of Arts* [1880], pp. 293-336, 400-03; [1881], pp. 109-13). Arthur Mendel published several important studies, beginning with "Pitch in the 16th and Early 17th Centuries," *Musical Quarterly* 34 (1948): 28-45, 1990-221, 336-57; 575-93. This was followed just a few years later by "On the Pitch in Use in Bach's Time," *Musical Quarterly* 41 (1955): 332-54, 466-80. Subsequently Mendel reprinted his own earlier studies and those of Ellis with annotations, additions, and corrections, in a volume entitled *Studies in the History of Musical Pitch* (Amsterdam, 1968) that also includes a review of Ellis' work by Guido Adler, originally printed in *Vierteljahrsschrift für Musikwissenschaft* 4 (1888): 122-46. Mendel's final contribution on this topic was "Pitch in Western Music since 1500: A Re-examination," *Acta Musicologica* 50 (1978): 1-93. Other important studies in pitch include C. Karp, "The Pitches of 18th-Century Strung Keyboard Instruments, with Particular Reference to Swedish Material," SMS-Musikmet, Technical Report no. 1 (also printed in "Studies in the Documentation and Technology of Musical Instruments," PhD diss., University of Uppsala, 1984); and Bruce Haynes, "Johann Sebastian Bach's Pitch Standards: The Woodwind Perspective," *Journal of the American Musical Instrument Society* 11 (1985): 55-114. Haynes demonstrated that Mendel was mistaken in supposing that a *Cammerton* pitch of approximately a" = 440 existed in Bach's time.

6. Praetorius, *Syntagma musicum* 2: 32ff.

7. M. Praetorius, *Polyhymnia Panegyrica et Cadeatrix* (1619). Modern ed. in M. Praetorius, *Gesamtausgabe der musikalischen Werke* 17: 2, ed. Willibald Gurlitt (Wolfenbüttel-Berlin, 1933), p. xiv.

8. C. Weigel, *Abbildung der gemein-nützlichen Haupt-Sande*, (Regensburg, 1698), p. 232. "Doch gleichwohl sind die Trompeten unterschiedl icher Arten/ neml ich Teutsche/ und so genannte Ordinari-Trompeten/ FrantzOsische/ so einen Thon hoher sind als jene/ Englische/ welche die Ordinari-Trompeten um eine ganzte Terz an der Hohe ubertreffen."

9. F. Friese, *Ceremoniel und Privilegia derer Trompeter und Paucker* (Dresden, 1709), p. 8; J.H. Zedler, *Grosses vollständiges Universal-Lexicon* (Leipzig & Halle, 1745), vol. 45, col. 1105.

10. T.B. Janowka, *C/avis ad thesaurum magnae antis musicae* (Prague, 1701; facsimile reprint, Amsterdam, 1973), pp. 314ff.

11. Janowka, through writing in 1701, follows 17th-century practice in this regard. See main text, previous paragraph.

12. J. Mattheson, *Das neu erofftaete Orchestre* (Hamburg, 1713), p. 267.

13. J.E. Altenburg, *Versuch einer Anleitung zur heroisch-musikalischen Trompeter- und Pauker-Kunst* (Halle, 1795; facsimile reprint, Leipzig, 1972), p. 11.

14. *Ibid.*

"1) Hier hat nun wohl ohnstreitig die chortonige C. Trompete bey uns Deutschen den Vorzug. ...Da nun gewöhnlich der Chor- und Kammerton nur um einen Ton von einander differiren, ...so ist leicht einzusehen, class diese Trompete nach Kammerton in D einstimmen muss. Und deswegen kann sie eben so gut die kammertonige D-Trompete heissen, wiewohl manche in Es stimmen.

"2) Die kammertonige F-Trompete oder die französische; well sie bey den Franzosen eingeführt ist, ist schon etwas kurzer, folglich um eine kleine Terzie oder anderthalb Ton hoher als die vorige.

"3) Die kammertonige G- oder englische Trompete (Ital. Tromba piccola) heisst deswegen so, well sie bey den Engländern üblich ist. Sie ist noch einen ganzen Ton hoher als die vorige, und um eine Quarte hoher, als die erste."

15. E. Chafe, "The Church Music of Heinrich Biber," PhD. diss., University of Toronto, 1975, p. 229.

16. Leipzig, Musikbibliothek der Stadt Leipzig, Sign. 111.2.121.

17. Janowka, *Clavis*, p. 314.

18. Berlin, Staatsbibliothek, Preussischer Kulturbesitz, Musikabteilung, Mus. ms. 12 260.

19. Printed in Hirschberg (Saxony).

20. Janowka, *Clods ad thesarum*, p. 315.

21. Kromel<sup>1</sup><sub>II</sub> / Syracuse N. Y., Syracuse University, Music Library, Liechtenstein Music Collection IV.9.

22. P.J. Vejvanovskt *Serenate e senate per orchestra*, ed. J. Pohanka, *Musica antiqua Bohemica*, vol. 36 (Prague, 1958), p. iv.

23. P.J. Vejvanovskt *Composizioni per orchestra*, ed. J. Pohanka, *Musica antiqua Bohemica*, vol. 49 (Prague, 1961), p. viii.

24. Kromel<sup>2</sup><sub>III</sub>/Syracuse N. Y., Syracuse University, Music Library, Liechtenstein Music collection, IV.9.

25. Ibid.

26. A. Werner, *Städtische undfürstliche Musikpflege in Weissenfels bis zum Ende des 18. Jahrhunderts* (Leipzig, 1911), pp. 68, 132. Cf. Weigel, Janowka, above.

27. CA. Otto, *Seventeenth-Century Music fi-om Kromel, Czechodovakia: A Catalog ofthe Liechtenstein Music Collection on Microfilm at Syracuse University* (Syracuse, N. Y.), p. 123.

28. Oxford, Bodleian Library. MS.Mus.Sch. 31. On the inside of the wrapper-title page there is the following note: "NB Der Clarin bey diesem Stuck ist auf einer kleinen Italienischen Trompette gesetzt, welche einen Ton holler, wovon aber diese Stimme auf einem andren Instrument soli

geblasen werden, muss es ein Ton höher geschehen, als in das Stück ausser d[er] R[egel]" ("NB: The clarino [pan] in this piece is written for a small Italian trumpet, which is a tone higher; but if this part must be played on another instrument, it must be done a tone higher than this piece otherwise [would be played])."

We have seen that according to Weigel and Janowka, the trumpet in D *Cornetton* was called the "French trumpet" in Germany, and apparently Bohemia as well. But in Schelle's composition the D-trumpet is called "small Italian trumpet." As coiled trumpets were called "Italian" in certain German sources (see below), some modern scholars have supposed that Schelle's "small Italian trumpet" refers to an instrument similar to the one in the famous portrait of Gottfried Reiche—particularly since both Schelle and Reich worked in Leipzig.

The problem with manuscript copies of scores and parts is that we do not know how faithful they are to the originals. That the reference to the *kleine italienische Trompette* is not in Schelle's hand is evident if one compares this inscription with his autographs (cf. F. Graupner, "Das Werk des Thomaskantors Johann Schelle," PhD diss., University of Berlin, 1929, plates II and IV.) The author of the note may well have been mistaken about the terminology. We have no evidence that the parts were copied in Leipzig, but even if they were, the reference to the "Italian trumpet" may have been added elsewhere.

The term *clarino piccolo* is not remarkable; it is a natural term for a higher-pitched instrument.

29. Berlin, Staatsbibliothek zu Berlin, Preussischer Kulturbesitz, Musikabteilung, Mus. ms. 5659.

30. This concerns the oboe parts (not in the score) in the following works by W. A. Mozart: KV 66 (also with two flute parts in D in the Gloria; remaining parts in C; *Neue Ausgabe sämtlicher Werke*, Ser. 1, Werkgruppe 1, Abt. 1, vol. 1, p. xii); KV 167, 262 (idem, Ser. 1, Werkgruppe 1, Abt. 1, vol. 2, *Kritischer Bericht*) KV257, 258, 259 (Ser. 1, Werkgruppe 1, Abt. 1, vol. 3, p. xviff., xxiii, xxv). Concerning Michael Haydn, see A. Mendel, "Pitch in Western Music since 1500: A Re-examination," *Acta Musicologica* 50 (1978): 13ff.

31. The pitch E could also be reached by using a mute, as in Telemann's cantata *Dennoch blieb ich immer Stille* (Frankfurt am Main, Stadt- und Universitätsbibliothek, Musiksammlung, Ms. Ff. Mus. 854.)

32. Vienna, Oesterreichische Nationalbibliothek, Musiksammlung, cod. 17 927.

33. B. Baselt, "Die Musikaliensammlung der Schwarzburg-Rudolstadtischen Hofkapelle unter P. H. Erlebach (1657-1714)," in *Traditionen und Aufgaben der Historischen Musikwissenschaft: Eine Sammlung von Aufsätzen anlässlich des 50-jährigen Bestehens des Instituts für Musikwissenschaft. Wissenschaftliche Zeitschrift der Martin-Luther-Universität Halle-Wittenberg*, 1963 (Sonderband), p. 127.

34. Darmstadt, Hessische Landes- und Hochschulbibliothek, Musikabteilung, Mus. ms. 1039.

35. Frankfurt am Main, Stadt- und Universitätsbibliothek, Musiksammlung, Ms. Ff. Mus. 1285. Judging from the parts the work appears to have been performed at least once in low *Cammerton* in Frankfurt. Vocal parts and continuo in D, instrumental parts in F. There are also continuo parts in B and F, and colascione parts in both E and F. Two scores are preserved: in the first score the designation for the first movement is *clarino piccolo o corni*; in the other no alternative is indicated.

36. F. Hennenberg, "Das Kantatenshaffen von Gottfried Heinrich Stölzel," PhD diss., Leipzig, 1965, vol. 2, cantatas nn. 4, 50, 86, 96, 133, and 286.
37. Ibid., Serenatas nn. 1 and 7.
38. Berlin. Staatsbibliothek, Preussischer Kulturbesitz, Musikabteilung, Mus. ms. autogr. G. Ph. Telemann 28.
39. Darmstadt, Hessische Landes- und Hochschulbibliothek, Musikabteilung, Mus. ms. 1213/15.
40. Darmstadt, Hessische Landes- und Hochschulbibliothek, Musikabteilung, Mus. ms. 470/9. The trumpet part is written in the score in bass clef two octaves below concert pitch (parts transposed to C).
41. Berlin, Staatsbibliothek zu Berlin, Preussischer Kulturbesitz, Musikabteilung, Mus. mss. 21 736/196 and 21 736/365.
42. W. Menke, *Thematisches Verzeichnis der Vokalwerke von Georg Philipp Telemann, vol. I* (Frankfurt am Main, 1982), p. 44.
43. Frankfurt am Main, Stadt- und Universitätsbibliothek, Musiksammlung, Ms. Ff. Mus. 1148.
44. Ibid.
45. Berlin, Staatsbibliothek zu Berlin, Preussischer Kulturbesitz, Musikabteilung, Mus. ms. autogr. G. Ph. Telemann 23. In the *Kapitansmusik* from 1763 (performed 1764), the designations for the trumpets are *erste Trompete* and *zweyte Trompete* for the trumpets in F (Berlin, Staatsbibliothek, Preussischer Kulturbesitz, Musikabteilung, Mus. mss. 21 755/18 and 21 755/19). Telemann's autograph score for the later *Kapitansmusik*, however, is not preserved, so we do not know if here he wrote *kurze Trompete*, his usual term for the F-trumpet from about the middle of the 18th century.
46. Ibid., Mus. ms. 21 781/6+8.
47. Ibid., Mus. ms. 21 737/230.
48. Brussels, Bibliotheque du Conservatoire Royal de Musique, Sign. 811/11.
49. See above, n. 28.
50. Berlin, Staatsbibliothek zu Berlin, Preussischer Kulturbesitz, Musikabteilung, Mus. ms. Bach P 397, pp. 89-103; Mus. ms. Bach St. 313. It could be added that J.S. Bach's contemporary J.D. Zelenka in Dresden added a trumpet in F to the "Quoniam" of the Gloria in his arrangement of A. Caldara's *Missa Divi Xaverii*. (Dresden, Sächsische Landesbibliothek, Musikabteilung, Mus. 2170-D-9; This is the only known use of an F-trumpet in Dresden from the first part of the 18th century.

51. See Altenburg's remark, above.
52. H.C. Koch, *Musikalisches Lexikon* (Frankfurt am Main, 1802), vol. 2, col. 1603.
53. Bologna, 1665.
54. Modena, Biblioteca **Esterase**, F 1529, G 312, G 314.
55. See D.J. Grout, gen. ed., *The operas of Alessandro Scarlatti*, vol. 6 (Cambridge, MA, 1980): 168-170.
56. L.J. Francoeur, *Diapason ginerak de taus les instruments .I vent* (Paris, 1772), p. 62.
57. J.B. de Laborde, *Essai sur la musique ancienne et moderne* (Paris, 1780), 1: 277.
58. A. Baines, "James Talbot's manuscript," *The Capin Society Journal 1* (1948): 20.
59. J. Marsh *says* of the trumpet in *Hints to Young Composers* (ca. 1807; reprinted in *Galpin Society Journal 18* [1965], p. 66) that " its highest pitch being F, it cannot play in that of G, and in the orchestra-music, choruses, & c. is generally confined to the keys of C. and D. and sometimes Eb. . In military music however it is frequently brought down to the key of Bb."
60. Altenburg's treatise was finished at the end of the 1760s. In 1770 J. A. Hiller recommended the treatise in *Musikalische Nachrichten undAnmerkungen aufdasJahr 1770* (pp. 3981), but there was too little interest for a publication then. The work is up-to-date to 1770, with apparendy some additions and a reorganization of the chapters by the time of publication in 1795. In 1789 Altenburg attempted to have it published by Breitkopf in Leipzig. It is doubtful what Altenburg in fact knew about trumpets and their use in other countries.

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