Thirty-two experts from fifteen countries join three of the world's leading authorities on the design, manufacture, performance and history of brass musical instruments in this first major encyclopedia on the subject. It includes over 100 illustrations, and gives attention to every known brass instrument which has been regularly used, with information about the way they are played, the uses to which they have been put and the importance they have had in classical music, sacred rituals, popular music, jazz, brass bands and the bands of the military. There are specialist entries covering every inhabited region of the globe and essays on the methods that experts have used to study and understand brass instruments. The encyclopedia spans the entire period from antiquity to modern times, with new and unfamiliar material that takes advantage of the latest research. From *Abblasen* to Zorzi Trombeta da Modon, this is the definitive guide for students, academics, musicians and music lovers.

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The Cambridge Encyclopedia of Brass Instruments

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Contents

List of Figures vi
List of Tables xii
List of Contributors xiii
Guide to Using the Encyclopedia xv
Acknowledgements xxi

Introduction: Understanding Brass Instruments 1
Trevor Herbert

A–Z General Entries 7

Appendix 1 A Selective List of Vernacular Horns and Trumpets 460
Appendix 2 The Ranges of Labrosones 481
Appendix 3 A Selective List of Makers of Brass Instruments 495
Appendix 4 A Selective List of Collections of Brass Instruments 528
Appendix 5 Early Didactic and Theoretical Works Relevant to Brass Instruments 538

Bibliography 562
Index 596
Figures

Note: Pictures and figures (such as diagrams) are listed sequentially throughout.

1. The American Standard system used to describe note pitches. xvi
2. A cycle of motion of a brass player's lips (frontal view, obtained with a high-speed camera and transparent mouthpiece). 8
3. Measured impedance curve for a Conn 8H tenor trombone with the slide in first position. 9
4. The crest of a high amplitude wave inside a brass instrument travels faster than the trough, resulting in the steepening of the wavefront. 11
5. Brass band from the Boma training school for policemen, Congo Free State, 1897. Photograph courtesy of Royal Museum for Central Africa, Tervuren, Belgium. 14
8. Jean-Baptiste Arban, photograph by Mayer et Pierson (1870). Courtesy of Bibliothèque nationale de France. 35
12. The 26th North Carolina Regimental Band, home on leave in 1862. The band's leader, Samuel Mickey, is on the far right. Photo courtesy of Moravian Music Foundation. 50
16. Bicycle band: Nederlandsch Wielrijders Muziekorps, first half of twentieth century. Postcard, Bate Collection, University of Oxford. 68
17. Bore profiles of typical instruments in 8-ft C or 9-ft B♭. The x-axis is the distance along the bore from the mouthpiece to the bell end; the y-axis is the bore diameter. Cylindrical sections of tubing are represented by horizontal straight lines; conical sections of tubing are represented by straight lines at an angle to the x-axis. 73
## List of Figures

19 *Carnyx*, reconstruction by Jean Boisserie based on archaeological finds at Tintignac, France, made for the European Music Archaeology Project (EMAP). 94

20 *Cimbasso* in 8-ft C (Pietro Piana, Milan, c.1815). Courtesy of the National Music Museum, University of South Dakota (1275). 105


22 Side-blown conch, *Charonia tritonis* (Linnaeus), with the mouth-hole formed in the side wall, from the Trobriand Islands, Oceania. (Jeremy Montagu Collection). 116

23 *Trombone basso Verdi* (contrabass valve trombone) in 18-ft B♭, four valves (Wenzel Stowasser's Söhne, Graslitz, mid-twentieth century; made for sale in Italy). Edinburgh University Collection of Historic Musical Instruments (2532). 122


25 Cornet, two Stölzel valves; shown with the A shank inserted, other crooks not shown (Mériel Fils, Caen, mid-nineteenth century). Royal Conservatoire of Scotland Collection of Historic Musical Instruments (324). 124


27 Cornett (probably seventeenth century). Metropolitan Museum of Art, gift of the University Museum, University of Pennsylvania, 1953 (53.56.9). 127

28 Cornopean in B♭, clapper key model, with shanks for B♭ and A crooks for G and F, and bit, three Stölzel valves; the valve touchpieces are covered by their protective caps for safety in transportation (Charles Pace, London, c.1840). Royal Conservatoire of Scotland Collection of Historic Musical Instruments (307). 132


30 *Cornu*: reconstruction of an Etruscan cornu by Peter Holmes, made for the European Music Archaeology Project (EMAP). 134

31 Schematic diagram of a brass instrument showing the player's vocal tract as an integral part of the coupled system. 146

32 Didgeridoo player. Australia. 147

33 Double horn in F十B♭, four-valves (Alexander, Mainz, first half of twentieth century). Edinburgh University Collection of Historic Musical Instruments (1804). 151

34 Double-belled euphonium in B♭, four playing valves + bell change valve (Buescher, Elkhart, Indiana, c. 1913; serial 20342). Edinburgh University Collection of Historic Musical Instruments (3489). 154

35 Echo cornet with shanks for B♭ (inserted) and A and crook for A♭ (F. Besson, London, c.1878; serial 22506). Royal Conservatoire of Scotland Collection of Historic Musical Instruments (394). 156

36 The muscles of the embouchure and the direction of the forces they apply to the *orbicularis oris* (oo). *Depressor anguli oris* (dao), *depressor labii inferioris* (dll), *levator anguli oris* (lao), *levator labii superioris* (lls), *mentalis* (m), *risorius* (r), *zygomaticus* (z). 157


38 Fiscorn (bell-forward baritone) in 8-ft C (probably Spain, probably early twentieth century). Edinburgh University Collection of Historic Musical Instruments (4083). 174


40 Flugelhorn in B♭, three rotary valves (Alexander, Mainz, mid-twentieth century). Royal Conservatoire of Scotland Collection of Historic Musical Instruments (286). 176
LIST OF FIGURES

42 Orchestral hand horn with terminal crook for F (Kretzschmann, Strasbourg, c.1830). Edinburgh University Collection of Historic Musical Instruments (531). 180
45 Cover of Turner’s Cornet Journal (1897) showing the cornet soloist Beatrice Pettit. 190
46 English engraving of 1872 caricaturing a German band. Trevor Herbert collection. 192
47 Music notation of pitches approximating to a harmonic series with fundamental C2. 201
50 Detail from an illustration in the Mittelalterliches Hausbuch (late fifteenth century). It has been suggested that the image shows an instrument with a moveable slide. In its own right it offers no such proof, but taken with a range of other iconographical sources the suggestion is valid. 217
51 George Scharf. At the Marine Officers Mess Room at Woolwich, during Dinner (1826). Graphite on paper, 117 × 228 mm. The medium and detail suggest the image is a matter of record. 219
52 Irish horns, side-blown and end-blown pair: reconstructions by Peter Holmes based on an archaeological find at Drumbest, Ireland, made for the European Music Archaeology Project (EMAP). 224
54 Keyed trumpet in 5½-ft G, layout for left-hand operation of keys (Franz Stöhr, Prague, c.1830). Edinburgh University Collection of Historic Musical Instruments (5782). 236
55 Koenig horn with shank for F (inserted), and crooks for E♭, D, D♭ and C (Antoine Courtois, Paris, 1866–7; serial 1956). Royal Conservatoire of Scotland Collection of Historic Musical Instruments (414). 238
56 Kuhlohorn (lugelhorn) in B♭, three rotary valves (August Clemens Glier, Markneukirchen, mid-twentieth century). Edinburgh University Collection of Historic Musical Instruments (4100). 239
57 Jules Levy, from the front cover of Hartmann’s Grand Fantasia ‘Alexis’. John Wallace collection. 244
58 Lit tus: reconstruction by Peter Holmes of an Etruscan litus excavated at Tarquinia, made for the European Music Archaeology Project (EMAP). 246
59 Pair of bronze lurs, one of the three pairs of lurs (Broholm Numbers 3 and 4) which were found on Brudevælde Moor in 1787, National Museum of Denmark (8115 and 8114), courtesy of the National Museum of Denmark. 249
60 Mellophone in F with quick-change valve for E♭ on tuning-slide, and with alternative tuning-slides for C (H. N. White, Cleveland, c.1924; serial 75137). Edinburgh University Collection of Historic Musical Instruments (4229). 260
61 Typical mouthpiece bore profiles. Left top to bottom: (a) cornett, c.1600; (b) cornet, c.1850; (c) cornet, c.2000; (d) trumpet, c.1800; (e) trumpet, c.2000; (f) french horn, c.1800; (g) french horn, c.2000. Right top to bottom: (h) bugle; (i) trombone, French, c.1850; (j) trombone, c.2000; (k) serpent, c.1800; (l) tuba. 281
62 Sketch of a trumpet mute from Mersenne (1636–7). 288
list of figures

63 Cross-section of an eighteenth-century trumpet mute inserted into the bell of a trumpet (mute National Music Museum BA-00102 with the J. L. Ehe II trumpet National Music Museum 7250). 288

64 Some trombone mutes: (1) straight fibre mute, secured to the inside of the bell by corks; (2) straight metal mute, similar to the fibre mute apart from its material; (3) cup mute; (4) Harmon or ‘wow-wow’ mute, the effect is produced by the player covering and uncovering the protruding section; (5) bucket mute, clips onto the bell of the instrument; (6) plunger, originally literally a sink plunger; (7) hat mute, favoured by dance band players. 289

65 Néocor with shank for F (inserted) and crooks for E, Eb and C, three Stölzel valves (Schneider, Strasbourg, c.1840). Edinburgh University Collection of Historic Musical Instruments (3350). 293

66 Swedish kornett in 3¾-ft Eb (Ahlberg & Ohlsson, Stockholm, c.1900; serial 573). Royal Conservatoire of Scotland Collection of Historic Musical Instruments (281). 299


69 Post-horn in 4½-ft Bb, formerly used for the postal service in Brno (Moravia) in 1866. National Music Museum, University of South Dakota (7140). 327

70 Quinticlave in Eb, nine keys (Halari, Paris, c.1840). Royal Conservatoire of Scotland Collection of Historic Musical Instruments (269). 333

71 Rkang-gling, trumpet made of human thighbone (femur), from Tibet or that area. (Jeremy Montagu Collection). 340

72 Russian Horn Band from the Royal Harmonic Institution concerts at the New Argyll Rooms, Regent Street, London, in the mid-1830s. John Wallace collection. 349

73 Alexandrian Salpinx (tuba) shown in a terracotta, first century BCE, Louvre Museum, Paris (CA6819). 351

74 Saxhorn contrebasse (bombardon) in Eb, three Sax-type Berlin valves (Adolphe Sax, Paris, 1845; serial 1834). Edinburgh University Collection of Historic Musical Instruments (5969). 358

75 Saxhorn nouveau basse (euphonium) in C/Bb, six-valve independent system; with Sax’s pavillon tournant, a bell which can be rotated to face different directions (Adolphe Sax, Paris, 1870; serial 35012). Edinburgh University Collection of Historic Musical Instruments (3115). 359

76 Saxhorn ténor (tenor horn) in Eb, three Sax-type Berlin valves (Adolphe Sax, Paris, 1855; serial 13247). Edinburgh University Collection of Historic Musical Instruments (4543). 362


78 Detail from an anonymous woodcut of the marriage procession of Queen Victoria and Prince Albert, at the Chapel Royal, St James’s, on Monday, 10 February 1840 showing the sergeant trumpeter at the right of the second row. John Wallace collection. 368

79 Serpent d’église, keyless (Baudouin, Paris, c.1820). Edinburgh University Collection of Historic Musical Instruments (3606). 372

80 Shofar, the ram’s horn of the Bible. Made in Israel, c.1968. (Jeremy Montagu Collection). 374


82 Sousaphone in Bb (Hawkes & Son, London, before 1932, probably 1920s). Edinburgh University Collection of Historic Musical Instruments (431). 386
LIST OF FIGURES

83  Sudrophone basse (bass sudrophone), four valves in C with tuning-slide extension for B♭ (Sudre, Paris, early twentieth century). Arnold Myers collection (1623). 395
84  Tornistertuba (knapsack tuba) in 18-ft B♭, three rotary valves (Wenzel Tomschik, Vienna, c.1910). Edinburgh University Collection of Historic Musical Instruments (2339). 404
85  Tenor trombone (Anton Schnitzer, Nuremberg, 1594). Edinburgh University Collection of Historic Musical Instruments (2165). 410
90  Valve trumpet with shank for F (inserted) and crooks for E♭, D and C, three Périnet valves (Hawkes & Son, London, c.1905). Edinburgh University Collection of Historic Musical Instruments (6402). 417
91  Trumpet in B♭, the tuning-slide can be pulled for A, three rotary valves (Ahlberg & Ohlsson, Stockholm, probably early twentieth century; serial 5064). Royal Conservatoire of Scotland Collection of Historic Musical Instruments (446). 418
92  Bafli-Tuba in F, five Berlin valves, Moritz system (C. F. Zetsche Söhne, Berlin, probably third quarter nineteenth century). Edinburgh University Collection of Historic Musical Instruments (4091). 422
93  Bombardon in F, three double-piston valves (Gross & Brambach, Innsbruck, mid-nineteenth century). Edinburgh University Collection of Historic Musical Instruments (3844). 424
95  Roman tuba (left) and two cornua (right) being played with a hydraulis (organ), from a Roman floor mosaic, c.2nd century CE, Zliten, Libya. 426
96  Tutankhamun trumpet: approximate copies by Peter Holmes of the Tutankhamun trumpets, the originals dating from c.1350 BCE. These would have been similar to the ḥatsotserah, the silver trumpets of the Bible (Numbers X). Jeremy Montagu Collection. 429
97  (a) Box valve, (b) Sölzel valve, (c) double-piston valve with push rods, and (d) Leopold Uhlmann’s 1830 patent for the Vienna valve with clock-spring return. 432
98  (a) Mechanical-linkage rotary valve, (b) top-action string-operated rotary valve and (c) side-action string-operated rotary valve. 434
99  (a) Berlin piston valve, (b) disc valve and (c) Périnet valve (modern piston valve). 435
100  Valve tenor trombone in B♭, three valves (Julius Heinrich Zimmermann, St Petersburg, c.1905; serial 7973). Edinburgh University Collection of Historic Musical Instruments (3830). 438
102  Diagram of cornett fingerings and trombone slide positions from Virgiliano’s Il Dolcimelo, pp. 51v–52r. Museo internazionale e biblioteca della musica di Bologna. 445
103  Wagner tuba in F, four-valve (Alexander, Mainz, early 1930s). Edinburgh University Collection of Historic Musical Instruments (2516). 449
LIST OF FIGURES

Cover mosaic

Upper row, left to right:


Jamestown and Vale of Leven Brass Band, c.1900. Photograph: Trevor Herbert collection.


Lower row, left to right:


Tables

1 Typical B♭ (or A) trombone bore diameters. 74
2 A selective list of nineteenth- and twentieth-century original works for brass ensemble. 79
3 Standard British brass band instrumentation. 87
4 Selective list of modern Chinese brass instrument manufacturers. 102
5 Examples of instrumentations of infantry bands in the nineteenth century (different instrumentations were used in cavalry regiments). 269
6 Names of parts for trumpets in trumpet ensembles. 296
7 Selective list of patents, including those for some of the most important brasswind inventions. 313
8 Selective list of pitch standards and prevalent pitch clusters (ordered from highest to lowest). 324
9 Adolphe Sax’s nomenclature for his family of saxhorns. 357
10 Equivalent cone lengths and examples of instruments in common nominal pitches. 384
11 Typical values of brassiness potential. 402
12 Instrumentation for the Traditional Finnish Torviseitsikko. 404
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Guide to Using the Encyclopedia

This book is aimed at specialists and non-specialists: anyone who has an interest in increasing their knowledge of brass instruments, the way they are and have been made, played and understood in different places and times. We have encouraged clarity from our contributors, but have not discouraged the use of technical language where it is needed. We have been aware that the book will be used by readers throughout the world and that they will need to search for information from different starting points; this has been foremost in our minds when designing the way the book is organised and for that reason a following section headed ‘Navigating the Book’ is especially important.

After an introductory overview essay, the bulk of the content is made up of a series of entries arranged in a single alphabetical sequence. This is followed by five appendices: respectively, composite lists of instruments that seem to have been restricted to local use and the regions in which they are found, the pitch ranges of brass instruments, a compendium of information about makers of brass instruments, a list of major collections in which brass instruments are important and a bibliography of older didactic and theoretical works that are significant to brass instruments.

SELECTION OF ENTRIES

Though the entries are in a single sequence, we selected items for inclusion by considering four broad categories from which they could be drawn: instruments, topics and themes that cast light on the way brass instruments are used in the present and have been in the past, biographical entries and entries on works of music. We feel we have covered the most obvious items that will be expected of the book, and by also including several overview essays on historical and other themes, we hope to have minimised major oversights. The following additional information will clarify the structure of the book and how its various parts have been brought together.

INSTRUMENTS

We have included entries on all brass instruments in modern use and most others that have been, or were intended for use, in Western music. Also included are entries on several lip-vibrated instruments that are fabricated from natural objects such as animal tusks and horns, instruments that are known to have been used in antiquity and those made solely for ceremonial or devotional use. Many instruments that are not the subject of individual entries are mentioned and described in alternative entries such as those devoted to regions of the world. Additionally Appendix 1 contains a list of instrument names that appear to have only very local uses.

Just three instruments that do not fit into our brass instrument classification are given entries: Tromba marina, Mock trumpet and Shawm. The first two are included to clarify why they are associated with words meaning trumpet, the third because of the frequency with which this instrument was linked with the trombone and probably its players in the sixteenth century.

TOPICS AND THEMES

This category contains entries relevant to performance, items relating to parts of instruments, the acoustics of brass instruments and topics such as jazz which have been influential on brass playing.
We have also included entries on major fields of enquiry relevant to brass instruments and the methods their researchers use including Iconography, Anthropology, Performance practice, Acoustics and Organology. We have been keen to ensure that the scope of the book is not restricted geographically and culturally to Europe and North America. For this reason we commissioned substantial articles on Nordic countries, Russia, South America, China, Japan, India, Africa and Australasia. There are also shorter articles on musical practices that are exclusive to particular parts of the world such as Balkan Bands and Banda Sinaloense. To help the book be more than a sum of its parts, the entries on the main style-periods of Western music discuss brass instruments in wider historic and aesthetic contexts: Antiquity, Medieval and Renaissance, Baroque, Classical, Romantic and Modernism.

BIографICAL ENTRIES AND WORKS OF MUSIC
Entries are included on performers, instrument makers, scholars and others who have been important to the development and understanding of brass instruments and their repertoires. Limiting the number of biographical entries on performers has been taxing because there have been so many brilliant virtuosi. For this reason we had to settle on a different way of selecting players for inclusion other than their stellar abilities. Our criterion has been simple: we have included entries only on players who have caused a major and discernible change or extension to the idiom of the instrument they play. We have stuck to this rule even though many great players have been omitted, but in so doing we have been aware of the many other biographical reference works in which great brass players are listed.

MUSICAL INSTRUMENT MAKERS
The standard reference work on brasswind instrument makers is The New Langwill Index edited by William Waterhouse (1993). Time has passed and more information has come to light since the publication of what remains a central text in brass instrument scholarship. We had neither the space nor the desire to replace that text within this book, but we felt a need to present as much up-to-date information as is possible about makers. This has been done through the provision of an extensive appendix (Appendix 3) supplemented by a general entry on Manufacturing and a small number of entries on particularly important makers in the main alphabetical sequence of the book.

EARLY LITERATURE
Didactic and theoretical literature (along with surviving instruments and repertoire) constitutes the largest body of primary source information on musical performance for brasswind instruments before the twentieth century. Many of these sources are cited in entries in the Encyclopedia. Additionally a very extensive list of sources of this type is included as Appendix 5.

NAVIGATING THE BOOK
The main tools used for linking related topics of information are the cross-referencing system, the index and the bibliography.

Cross-references between entries are given within parentheses at appropriate points in the text using the format (see Sackbut).

Where appropriate, cross-referencing extends to the appendices using the same process (see Appendix 2).

The Index is extensive and brings together words and terms from the book as a whole in a single alphabetical sequence. A preface to the Index provides more information about how it is presented.

All secondary and primary sources cited in the book are referenced in the bibliography which is organised (for ease of reference) so that the author/date key appears at the front of each bibliographical record.
ALPHABETICAL LISTINGS AND CROSS-REFERENCING BY ALTERNATIVE DESCRIPTORS

The entry titles (the headers) in the main A–Z sequence of the Encyclopedia are in alphabetical order. There are no definite articles in the header phrases, so for example, it is Black Dyke Band rather than The Black Dyke Band.

Works of music are usually given by title, as in Fanfare for the Common Man, but certain works are most helpfully described as a group, in which case the first word in the header is the name of the composer, as in Mozart’s horn concertos and Handel’s trumpet parts.

Some entries could have been put under more than one header. A case in point is the entry on Breathing, which covers most of the physiological issues of playing. In this case the main entry is under Breathing in the main sequence, but a separate header Anatomy of playing is also included in the sequence carrying no more than a cross-reference to the main entry. The Index also highlights all entries that are the subject of an entry in the main sequence in the composite list of instrument makers.

REFERENCING AND THE BIBLIOGRAPHY

In-text referencing is restricted to the author/date as in (Dietrich 2005).

Early texts are cited by the name of the original author rather than that of a subsequent translator or editor, for example (Mersenne 1636–7) rather than (Chapman 1957) and, as is the case in this example, where a work has been published in parts or incrementally, are usually cited by the range of dates of the original publication. Citations of other reference works and major learned journals are indicated by abbreviations which are explained later in this section and in a preface to the general bibliography.

The list of early theoretical and didactic works (Appendix 5) identifies some of the institutions that hold copies of the works cited using the standard RISM Sigla. A key to the RISM Sigla used in this book is given at the end of Appendix 5.


Up to three further reading recommendations are given at the conclusion of most entries. The bibliography gives full details of all cited works.

Major reference works and academic journal titles are abbreviated in the running text as follows (this list also appears as a preface to the main bibliography):

AmZ    Allgemeine musikalische Zeitung
ANB    American National Biography Online
BB     Brass Bulletin
BWQ    Brass and Woodwind Quarterly
EM     Early Music
FoMRHI Fellowship of Makers and Researchers of Historical Instruments Quarterly
GMO    Grove Music Online
GSJ    Galpin Society Journal
HBSJ   Historic Brass Society Journal
ITEAJ  International Tuba Euphonium Association Journal
ITSJ   International Trombone Society Journal
JASA   Journal of the Acoustical Society of America
JAMS  Journal of the American Musical Instrument Society
JIHS  The Horn Call, Journal of the International Horn Society
GUIDE TO USING THE ENCYCLOPEDIA

JITG  Journal of the International Trumpeters’ Guild
KDG  Komponisten der Gegenwart
MIMO  Musical Instrument Museums Online
ML  Music and Letters
MT  The Musical Times
PMA  Proceedings of the Musical Association
PRMA  Proceedings of the Royal Musical Association

AUDIO RECORDINGS
Sound recordings are mentioned in a small number of entries, the entry on Jazz for example. The details of these recordings are dealt with in-text and sufficient contextual information is always provided for them to be traced.

SCIENTIFIC TERMS AND MEASUREMENTS
Almost invariably entries on musical instruments contain scientific descriptors. The following conventions are used consistently:

- **Frequencies** are given in hertz (Hz), that is, cycles per second.
- **Lengths** given in millimetres are measured lengths. The traditional convention to denote the nominal sizes of instruments in feet (ft) which serves to distinguish one instrument from another at the same nominal pitch, but of half or double the tube length is also used. For example, a natural trumpet might be in 7-ft D while a small orchestral trumpet playing the same repertoire could be in 3½-ft D.

NOTE PITCHES
The American Standard system is used to describe note pitches. In this system middle C is called C4 and A4 = 440 Hz (Figure 1).

Figure 1  The American Standard system used to describe note pitches.

\[ \begin{align*}
C_4 & \quad B_4 \quad C_5 \quad B_5 \\
C_5 & \quad B_5 \quad C_6 \quad B_6 \\
C_6 & \quad D_6 \quad E_6 \quad F_6 \quad etc.
\end{align*} \]
MUSICAL TERMS AND CONVENTIONS

UK musical terms and conventions are used throughout. So, crotchet and quaver rather than quarter and eighth note, and bar rather than measure.

INSTRUMENT NAMES AND ABBREVIATIONS

‘Horn’ is used to signify any one of the many types of instrument that might be properly described by that name (tenor horn, hunting horn, etc. but not ‘horn’ as used in jazz parlance for any wind instrument). Consistently ‘french horn’ (lower case ‘f’) is used for the orchestral horn.

‘Trombone’ is used to describe that instrument in all periods of music, unless a more antiquated expression (such as ‘sagbut’) is used in quotation.

Cornet/s refers to the nineteenth-century valve instrument, cornett/s to the Renaissance instrument.

Several instruments are known by different names in different countries even if the common language is English. Alternative names are indicated in parenthesis (Euphonium (or euphonion, tenor tuba; Fr. saxhorn basse; Ger. Baryton, Tenorbasshorn; lt. euphonio, bombardino, flicorno basso; Sp. eufonio)). The Index provides an alternative to the main alphabetical sequence for finding an instrument that has more than one name.

Where it has been necessary to use abbreviated names for musical instruments, we have used the following conventions:

<table>
<thead>
<tr>
<th>Abbreviation</th>
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<td>French horn</td>
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<td>Hand-horn</td>
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<td>Valve horn</td>
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<thead>
<tr>
<th>Abbreviation</th>
<th>Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>k trpt</td>
<td>Keyed trumpet</td>
</tr>
<tr>
<td>cnt</td>
<td>Cornet</td>
</tr>
<tr>
<td>trbn</td>
<td>Trombone</td>
</tr>
<tr>
<td>b trbn</td>
<td>Bass trombone</td>
</tr>
<tr>
<td>euph</td>
<td>Euphonium</td>
</tr>
<tr>
<td>opf</td>
<td>Ophicleide</td>
</tr>
<tr>
<td>serp</td>
<td>Serpent</td>
</tr>
<tr>
<td>saxh</td>
<td>Bass saxhorn</td>
</tr>
<tr>
<td>saxtrba</td>
<td>Saxotromba</td>
</tr>
</tbody>
</table>

BIographical Entries

The following conventions are applied consistently for biographical entries:

- Surnames are followed by given names; titles and honorifics are not used.
- The name by which a subject was known is not bracketed but other given names are, as in Berlioz, (Louis) Hector.
- If a subject was also known by a nickname or alias that name is included in quotation marks, as in Gillespie, (John Birks) 'Dizzy'.
- Where there is more than one given name and no reason to do otherwise, each given name is provided without privilege to any one in particular as in Queisser, Carl Traugott.
- A feature of brass instrument performance is the frequency with which family dynasties have been important. In such cases the headers indicate the family (such as Bassano family) rather than its individual members.
GUIDE TO USING THE ENCYCLOPEDIA

DATES AND MATTERS OF ACCURACY
Birth and death dates of persons are usually given in parentheses where such details are known. It has not been consistently possible for all such information to be provided, or provided with a level of accuracy of which we are entirely confident: some birth and death dates are open to doubt. Where we are unsure we have deferred to other major reference works such as the *Oxford Dictionary of National Biography*, the *American Biographical Dictionary* and *Oxford Music Online*. However, many of the subjects mentioned in this book are important to the story of brass instruments, but did not gain a wider celebrity and as such have evaded the main works of record. Where necessary we have taken one of the usual measures to indicate our uncertainty; for example, *Il Dolcemoelo c.1600* and *Joseph Halliday (Haliday) c.1772–1827(?)*.

Dates of works of music are the dates of composition rather than dates of first performance unless explained otherwise.

Chronological eras are described as *CE* (the Common Era) and *BCE* (Before the Common Era).

ILLUSTRATIONS OF INSTRUMENTS
Most brass instruments have detachable mouthpieces. Instruments have been photographed with a mouthpiece if there is a reasonable likelihood that the mouthpiece was originally supplied by the maker of the instrument shown. Otherwise, they have been photographed without a mouthpiece.
Acknowledgements

Acknowledgements of copyright permissions for photographs and other media are given in captions at the point at which they are used. However, we would like to record our gratitude to the many people and organisations who have made such material available to us.

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