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978-0-521-63751-0 - Handbook of the International Phonetic Association: A Guide to the Use of the International Phonetic Alphabet

Corporate Author International Phonetic Association

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The *Handbook of the International Phonetic Association* is a comprehensive guide to the Association's 'International Phonetic Alphabet'. The aim of the International Phonetic Alphabet is to provide a universally agreed system of notation for the sounds of languages, and for over a century the Alphabet has been widely used by phoneticians and others concerned with language. The *Handbook* presents the basics of phonetic analysis so that the principles underlying the Alphabet can be readily understood, and exemplifies the use of each of the phonetic symbols comprising the Alphabet. The application of the Alphabet is then extensively demonstrated by the inclusion of over two dozen 'Illustrations' – concise analyses of the sound systems of languages accompanied by a phonetic transcription of a passage of speech. These Illustrations cover languages from all over the world. The *Handbook* also includes a range of other useful information. The 'Extensions' to the International Phonetic Alphabet cover speech sounds beyond the sound systems of languages, such as those with paralinguistic functions and those encountered in pathological speech. A full listing is given of internationally agreed computer codings for phonetic symbols, including not only those of the International Phonetic Alphabet but also those of other traditions. And there is extensive information on the history of the International Phonetic Association and its current activities. The *Handbook* is an essential reference work for all those involved in the analysis of speech.

The International Phonetic Association exists to promote the study of the science of phonetics and the applications of that science. The Association can trace its history back to 1886, and since that time the most widely known aspect of its work has been the International Phonetic Alphabet. The *Handbook* has been produced collaboratively by leading phoneticians who have been on the Executive of the Association, and it incorporates (for instance in the case of the Illustrations) material provided by numerous members of the Association world wide.

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# **Handbook of the International Phonetic Association**

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## Foreword

The *Handbook of the International Phonetic Association* is a resource containing concise information on the International Phonetic Alphabet and guidance on how to use it – a kind of ‘user’s manual’. It replaces the *Principles of the International Phonetic Association*, which has been out of print for some time and which had not been revised since 1949. But although the *Handbook* replaces some of the functions of the old *Principles*, it is a completely new work with wider objectives.

The old *Principles* contained a short tutorial on phonetic description, examples of the use of phonetic symbols, and a large number of ‘specimens’ consisting of very brief comments on the phonetics of a language and a transcription of the ‘North Wind and the Sun’ text translated into the language. Additionally, there was some information about the Association, and, printed on the inside covers, a brief history of it.

The new *Handbook* broadly speaking retains these components. It is divided into three parts: part 1 contains an introduction to phonetic description and exemplification of the use of the symbols; part 2 consists of ‘Illustrations’ of the use of the International Phonetic Alphabet for different languages (these Illustrations are ones which have appeared in the *Journal of the International Phonetic Association* since 1989); and part 3 contains appendices with a variety of reference material.

Beyond the basic similarity of structure, the *Handbook* is very different from the old *Principles*. Most superficially, perhaps, it reflects the changes which have been made in that most tangible and widely known product of the Association’s work, the IPA Chart. Discussion and exemplification is based on the most recent (1996) edition of the chart. More substantively, the *Handbook* acknowledges the fact that over the past half century the advance of techniques for acoustic analysis means that many readers will be familiar with, and quite possibly working with, speech as an acoustic signal. This means it now seems appropriate to use an acoustic display such as a spectrogram not only as a way of presenting one facet of speech, but also to discuss problems which arise in the relation between a segmentally based system of notation and the physical speech event. The *Handbook* will also contain practical information to do with the use of the IPA on computers, such as the computer codes for phonetic symbols.

The most fundamental differences between the old *Principles* and the new *Handbook* perhaps arise from the expectation that the readership of the new work will be much less homogeneous than that envisaged for the old one. The new *Handbook* is intended to be a reference work not only for language teachers and phoneticians interested in the sounds of different languages, but also for speech technologists, speech pathologists, theoretical phonologists, and others.

This breadth of readership is to be encouraged, given the goal that the International Phonetic Alphabet (hereafter ‘the IPA’) should be a standard for the representation of speech. But it poses particular challenges for the writing of the ‘tutorial’ sections of the *Handbook*. The challenges are further increased by the vertical spread of readers from those who are experienced phoneticians to those who know nothing about phonetics. The

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breadth of readership has led perhaps to a more equivocal tone in the presentation of the premises behind the IPA than in the *Principles*. For instance, the way in which the IPA developed historically was closely bound up with a 'strictly segmented' phonemic view, and in section 10 the fact that there are alternatives in phonological theory is acknowledged. The vertical spread of readers poses the recurring question of how much or how little to say. The lower bound is presumably what a novice needs to pick up in order to have some idea of the principles governing the organization of the chart. The upper bound is the practical goal of a compact booklet, readily affordable by students, and concise enough to be easily digested by non-specialist readers.

The resulting text in part 1 is more discursive than that of the old *Principles*. It should be borne in mind, however, that it does not attempt the job either of a phonetics textbook, or of a critique of the IPA. Nowadays there are many good phonetics textbooks available, and it would be expected that students of phonetics would read one or more of these in conjunction with the *Handbook*. The purpose of the *Handbook* is not to provide a comprehensive or balanced education in phonetics, but to provide a concise summary of information needed for getting to grips with the IPA. Likewise, whilst a full-scale critique of the assumptions on which the IPA is founded is perhaps due, the practically-oriented *Handbook* is not the place for it. The IPA is a working tool for many, and whilst it may be possible to improve that tool, the role of the *Handbook* is that of an instruction manual for the tool which is currently available.

The creation of the *Handbook* has been in every sense a collaborative effort. The text in part 1 is largely the responsibility of Francis Nolan, and the exemplification of the use of sounds was provided by Peter Ladefoged and Ian Maddieson. Ian Maddieson, and Martin Barry, as successive editors of the *Journal of the International Phonetic Association*, have been responsible for overseeing and collating the rich and ever growing stock of Illustrations. Martin Ball was instrumental in formulating the Extensions to the IPA (appendix 3), and Mike MacMahon wrote appendix 4 on the history of the Association. John Esling is responsible for appendix 2 on the computer coding of symbols, and for most of the work involved in the final stages of preparing the *Handbook* including the final editing of the Illustrations. And, of course, particular thanks are due to the authors of the Illustrations, and to the large number of members of the International Phonetic Association who responded with suggestions and corrections when a draft of parts of the *Handbook* was published in the *Journal of the International Phonetic Association*.

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THE INTERNATIONAL PHONETIC ALPHABET (revised to 1993, updated 1996)

CONSONANTS (PULMONIC)

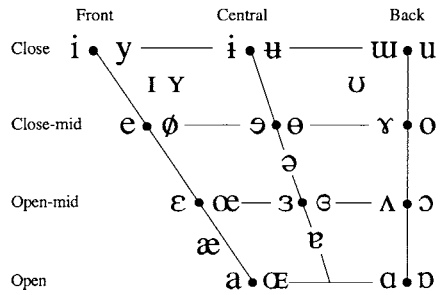
	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	<b>p b</b>			<b>t d</b>		<b>ʈ ɖ</b>	<b>c ɟ</b>	<b>k ɡ</b>	<b>q ɢ</b>		<b>ʔ</b>
Nasal	<b>m</b>	<b>ɱ</b>		<b>n</b>		<b>ɳ</b>	<b>ɲ</b>	<b>ŋ</b>	<b>ɴ</b>		
Trill	<b>ʙ</b>			<b>r</b>					<b>ʀ</b>		
Tap or Flap				<b>ɾ</b>		<b>ɽ</b>					
Fricative	<b>ɸ β</b>	<b>f v</b>	<b>θ ð</b>	<b>s z</b>	<b>ʃ ʒ</b>	<b>ʂ ʐ</b>	<b>ç ʝ</b>	<b>x ɣ</b>	<b>χ ʁ</b>	<b>ħ ʕ</b>	<b>h ɦ</b>
Lateral fricative				<b>ɬ ɮ</b>							
Approximant		<b>ʋ</b>		<b>ɹ</b>		<b>ɻ</b>	<b>j</b>	<b>ɰ</b>			
Lateral approximant				<b>l</b>		<b>ɭ</b>	<b>ʎ</b>	<b>ʟ</b>			

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

CONSONANTS (NON-PULMONIC)

Clicks	Voiced implosives	Ejectives
<b>ɸ</b> Bilabial	<b>ɓ</b> Bilabial	<b>ʼ</b> Examples:
<b>ǀ</b> Dental	<b>ɗ</b> Dental/alveolar	<b>ɸ</b> Bilabial
<b>ǃ</b> (Post)alveolar	<b>ɟ</b> Palatal	<b>ʈ</b> Dental/alveolar
<b>ǂ</b> Palatoalveolar	<b>ɡ</b> Velar	<b>k</b> Velar
<b>ǁ</b> Alveolar lateral	<b>ɠ</b> Uvular	<b>s</b> Alveolar fricative

VOWELS



Where symbols appear in pairs, the one to the right represents a rounded vowel.

OTHER SYMBOLS

- ɸ** Voiceless labial-velar fricative
- ʋ** Voiced labial-velar approximant
- ɰ** Voiced labial-palatal approximant
- ħ** Voiceless epiglottal fricative
- ʕ** Voiced epiglottal fricative
- ʔ** Epiglottal plosive
- ɕ ʑ** Alveolo-palatal fricatives
- ɻ** Alveolar lateral flap
- ɥ** Simultaneous **ʃ** and **x**
- Affricates and double articulations can be represented by two symbols joined by a tie bar if necessary.



SUPRASEGMENTALS

- ˈ** Primary stress
- ˌ** Secondary stress
- ː** Long
- ˑ** Half-long
- ˑ̚** Extra-short
- ◌̚** Minor (foot) group
- ◌̚̚** Major (intonation) group
- ˌ.ˌ** Syllable break
- ◌̚◌̚** Linking (absence of a break)

DIACRITICS Diacritics may be placed above a symbol with a descender, e.g.  $\underset{̂}{j}$

◌̊ Voiceless	<b>ɲ̊ ɖ̊</b>	◌̋ Breathily voiced	<b>ɸ̋ ʈ̋</b>	◌̍ Dental	<b>t̍ d̍</b>
◌̌ Voiced	<b>ɲ̌ ɖ̌</b>	◌̎ Creaky voiced	<b>ɸ̎ ʈ̎</b>	◌̏ Apical	<b>t̏ d̏</b>
◌̍ Aspirated	<b>t̍ʰ d̍ʰ</b>	◌̐ Linguolabial	<b>t̐ d̐</b>	◌̑ Laminar	<b>t̑ d̑</b>
◌̎ More rounded	<b>ɶ̎</b>	◌̒ Labialized	<b>t̒ʷ d̒ʷ</b>	◌̓ Nasalized	<b>ẽ̓</b>
◌̏ Less rounded	<b>ɶ̏</b>	◌̔ Palatalized	<b>t̔ʲ d̔ʲ</b>	◌̕ Nasal release	<b>d̕ⁿ</b>
◌̐ Advanced	<b>ɥ̐</b>	◌̖ Velarized	<b>t̖ʷ d̖ʷ</b>	◌̗ Lateral release	<b>d̗ˡ</b>
◌̑ Retracted	<b>ɤ̑</b>	◌̘ Pharyngealized	<b>t̘ˠ d̘ˠ</b>	◌̙ No audible release	<b>d̙˞</b>
◌̒ Centralized	<b>ɛ̒</b>	◌̚ Velarized or pharyngealized	<b>t̚ ʈ̚</b>		
◌̓ Mid-centralized	<b>ẽ̓</b>	◌̚̚ Raised	<b>e̚̚ (ɹ̚̚ = voiced alveolar fricative)</b>		
◌̔ Syllabic	<b>ɲ̔</b>	◌̚̚ Lowered	<b>ɐ̚̚ (ɸ̚̚ = voiced bilabial approximant)</b>		
◌̕ Non-syllabic	<b>e̕</b>	◌̚̚ Advanced Tongue Root	<b>e̚̚̚</b>		
◌̗ Rhoticity	<b>ɤ̗ ɶ̗</b>	◌̚̚ Retracted Tongue Root	<b>e̚̚̚̚</b>		

TONES AND WORD ACCENTS LEVEL

- é̂** or **˩** Extra high
- é̃** or **˨** High
- ē̄** or **˨˩** Mid
- ē̄̇** or **˨̇** Low
- ē̄̇̇** or **˨̇̇** Extra low
- ˩̜** Downstep
- ˩̚** Upstep
- é̂** or **˨̜** Rising
- é̃** or **˨̚** Falling
- ē̄** or **˨̜̚** High rising
- ē̄̇** or **˨̚̚** Low rising
- ē̄̇̇** or **˨̚̚̚** Rising-falling
- ˩̜̚** Global rise
- ˩̚̚̚** Global fall