THE INTERNATIONAL PHONETIC ALPHABET (revised to 1993) Alt+ (dec.)

CONSONANTS (PULMONIC) — WITH X-SAMPA EQUIVALENTS IN BLUE

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p 112 p b 98 b			t 116 t d 100 d		ʈ 593 t` d` 599	c 99 c ɟ 607 J\	k 107 k g 103 g	q 113 q ɢ 610 G\		ʔ 660 ?
Nasal	m 109 m	ɱ 625 F		n 110 n		ɳ 627 n`	ɲ 626 J	ŋ 331 N	ɴ 628 N\		
Trill	ʙ 665 B\			r 114 r					ʀ 640 R\		
Tap or Flap				ɾ 638 r4		ɽ 639 r`					
Fricative	ɸ 632 p\ β 946 B	f 102 f v 118 v	θ 952 T ð 240 D	s 115 s z 122 z	ʃ 643 S ʒ 658 Z	ʂ 642 s` ʐ 656 z`	ç 231 C ʝ 669 j\	x 120 x ɣ 611 G	χ 967 X ʁ 641 R	ħ 295 X\ ʕ 661 ?\	h 104 h ɦ 614 h\
Lateral fricative				ɬ 620 K ɮ 622 K\							
Approximant		ʋ 651 P (or v\)		ɹ 633 r\		ɻ 635 r\`	j 106 j	ɰ 624 M\			
Lateral approximant				l 108 l		ɭ 621 l`	ʎ 654 L	ʟ 671 L\			

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
ʘ 664 O\ Bilabial	ɓ 595 Bilabial b_<	’ 700 _> as in:
| 448 | Dental	ɗ 599 Dental/alveolar d_<	pʼ Bilabial p_>
! 451 !\ (Post)alveolar	ʄ 644 Palatal J_<	tʼ Dental/alveolar t_>
ǂ 450 =\ Palatoalveolar	ɠ 608 Velar g_<	kʼ Velar k_>
ǁ 449 || Alveolar lateral	ʛ 667 Uvular G_<	sʼ Alveolar fricative s_>

SUPRASEGMENTALS

ˈ 712	Primary stress	%foUn@"tIS@n → ˌfounəˈtɪʃən
% 716	Secondary stress	
ː 720 :	Long	eː e:
ˑ 721 :\	Half-long	eˑ e:\
̆ 774 _X	Extra-short	ĕ e_X
.	Syllable break	ɹi.ækt → r\i.{kt
| 448 |	Minor (foot) group	
‖ 449 ||	Major (intonation) group	
‿ 860 -\	Linking (absence of a break)	

TONES & WORD ACCENTS

LEVEL		CONTOUR	
779 ȅ or ˥ 741	Extra high _T	ě 780 or ˧˥	Rising _R
769 é ˦ 742	High _H	ê 770 ˥˧	Falling _F
772 ē ˧ 743	Mid _M	e᷄	High rising _H_T
768 è ˨ 744	Low _L	e᷅	Low rising _B_L
783 ȇ ˩ 745	Extra low _B	e᷈	Rising-falling _R_F
8595 ↓ !	Downstep	8599 ↗	Global rise <R>
8593 ↑ ^	Upstep	8600 ↘	Global fall <F>
		8594 →	etc.

VOWELS

	Front	Central	Back
Close	i 105 y 121 ɪ 616 I ʏ 649 Y	ɨ 1 ʉ 125 }	ɯ 623 M u 117 u
Near-close	I 618 Y 655		ʊ 650 U
Close-mid	e 101 ø 248 2	ɘ 600 @\ ɵ 629 8	ɤ 612 7 o 111 o
Mid		ə 601 @	
Open-mid	ɛ 603 E œ 339 9	ɜ 604 3 ɞ 606 3\	ʌ 652 V ɔ 596 O
Near-open	æ 230 {	ɐ 592 6	
Open	a 97 a œ 630 &		ɑ 593 A ɒ 594 Q

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

DIACRITICS — X-SAMPA diacritics come after symbols, e.g. n_0

Diacritics may be placed above a symbol with a descender, e.g. ŋ̊

_0 above=778 below=805	Voiceless	n̥ d̥	_t 804	Breathy voiced	b̤ a̤	_d 810	Dental	t̪ d̪
_v above=813 below=812	Voiced	s̬ t̬	_k 816	Creaky voiced	b̰ a̰	_a 826	Apical	t̺ d̺
h 688 _h	Aspirated	tʰ dʰ	_N 828	Linguolabial	t̼ d̼	_m 827	Laminal	t̻ d̻
_O 825	More rounded	ɔ̹	w 695 _w	Labialized	tʷ dʷ	~ 771 (or _~)	Nasalized	e~ or ẽ
_c 796	Less rounded	ɔ̜	j 690 (or _j)	Palatalized	tʲ dʲ	n 207F _n	Nasal release	dⁿ
_+ 799	Advanced	u̟	Y 736 _G	Velarized	tˠ dˠ	l 737 _l	Lateral release	dˡ
_- 800	Retracted	i̠	ʕ 740 _?\	Pharyngealized	tˤ dˤ	˺ 794 _}	No audible release	d˺
_" 776	Centralized	ë	~ 820 _e	Velarized or pharyngealized	ɫ 619 (or velarized l: 5)			
_x 829	Mid-centralized	e̽	_r 797	Raised	e̝ (ɹ̝ = voiced alveolar fricative)			
= 809 (or _=)	Syllabic	n̩	_o 798	Lowered	e̞ (β̞ = voiced bilabial approximant)			
_^ 815	Non-syllabic	e̯	_A 792	Advanced Tongue Root	e̘			
˞ 734 ɹ 692 @`	Rhoticity	ə˞	_q 793	Retracted Tongue Root	e̙			

3` 605 ɜ˞ @` 602 ɾ 691 ɻ 692 ɭ 693 ʁ 694 ʏ 696 ˠ 738 ˣ 739

OTHER SYMBOLS

- ʍ 653 W\ Voiceless labial-velar fricative
- w W Voiced labial-velar approximant
- ɥ 613 H Voiced labial-palatal approximant
- ʜ 230 H\ Voiceless epiglottal fricative
- ʢ 230 <\ Voiced epiglottal fricative
- ʡ 230 >\ Epiglottal plosive

- ɕ 642 s\ ʑ 656 z\ Alveolo-palatal fricatives
- ɺ 634 l\ Alveolar lateral flap
- ʩ 615 x\ Simultaneous ʃ and x

Affricates and double articulations can be represented by two symbols joined by a tie bar if necessary.

- ʦ 678 ts
- ʣ 675 dz
- ʧ 679 tS
- ʤ 676 dZ
- ʨ 680 tC
- ʥ 677 dZ
- ʪ 682 ls
- ʫ 683 lz
- ʬ 684 W
- ʭ 685
- k͡p 865 k_p
- t͡s t_s

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