

Keyboard layout for “IPA Unicode 6... MAC”

This is a keyboard for typing IPA (International Phonetic Alphabet) characters in your documents. It is a copy of the SIL MSKLC keyboard for Windows, adapted for Macintosh users.

Note that not all characters in this document will display properly since there is no OpenType support in Microsoft Word for Macintosh. Proper rendering of characters requires either OpenType or Graphite support in your Macintosh application. See **Fonts** below for recommended fonts.

Installing the Keyboard

The keyboard driver can only be installed on Macintosh X or higher. This Unicode keyboard will only work with Unicode applications.

To install the keyboard:

- Download the disk image and double-click.
- Drag the “IPA Unicode 6...MAC.keylayout” file to your Library\Keyboard Layouts folder.
- Log-off and back on.
- Go to System Preferences. Choose International.
- Click the Input Menu tab.
- Scroll down til you find the keyboard “IPA Unicode 6...MAC” and click to check-mark the box beside it.
- Close System Preferences.

Uninstalling the Keyboard

When you are ready to uninstall your keyboard:

- Go to System Preferences. Choose International.
- Scroll down til you find the keyboard “IPA Unicode 6...MAC” and click to un-check the box beside it.
- Close System Preferences.
- Log-off and back on.
- Go to your Library\Keyboard Layouts folder and remove the file “IPA Unicode 6...MAC.keylayout.”

The keyboard has been uninstalled. You may also wish to delete the disk image and folder to remove the files.

Feedback

Feedback on this keyboard is requested. Contact: nrsi@sil.org. Include details of your operating system, the exact name of the keyboard, and a description of the issue.

Fonts

The newest versions of Doulos SIL (<http://scripts.sil.org/DoulosSILfont>) and Charis SIL (<http://scripts.sil.org/CharisSILfont>) contain all of the characters used in this keyboard. Older versions may not have all of the characters. Upstep and Downstep were in SIL’s corporate PUA and will not likely be found in any other font, until those fonts have been updated for Unicode 6.1. The pitch contours (found on the number keys with the = deadkey) are also in SIL’s corporate PUA and will not likely be found in any other font. Ligation for the pitch contours will only work in applications which support Graphite. A description of the pitch contours can be found here: http://scripts.sil.org/DoulosSIL_download#pitch.

Source Files

The source files are available on the website <http://scripts.sil.org> if you wish to modify this keyboard.

“IPA KLM v#.txt” is the source for the KeyLayoutMaker program, also available at the same site.

“IPA Unicode 6...MAC Keyboardv#.doc” is the Microsoft Word source for this document. You may find this useful for creating your own IPA charts.

Keyboard Layout

This keyboard makes extensive use of “dead keys.” A “dead key” is a key that does not generate a character, but rather changes the character generated by a following keystroke. For example, in this keyboard, to get the “ñ”, you would type the dead key “>” followed by the “n” (>n). On the following charts, yellow shading indicates a deadkey:



In order to get the actual character where the dead key is, you should type a space after the dead key. For example, to get an “>” you must type “>” followed by a space.

The charts on the following pages show the layout of the different “states” of the keyboard. At the top of each page you will see the deadkey for that page. You will need to type the deadkey preceding the character on the chart.

State: NORMAL

1	2	3	4	5	6	7	8	9	0	-	=	Bksp	
1	2	3	4	5	6	7	8	9	0	-	=		
Tab	Q	W	E	R	T	Y	U	I	O	P	[]	\
	q	w	e	r	t	y	u	i	o	p	[]	\
Caps	A	S	D	F	G	H	J	K	L	;	'	Enter	
	a	s	d	f	g	h	j	k	l	;	'		
Shift	Z	X	C	V	B	N	M	,	.	/		Shift	
	z	x	c	v	b	n	m	,	.	/			
Ctrl	Alt										Alt	Ctrl	

State: SHIFT

~	1 !	2 @	3 #	4 \$	5 %	6 ^	7 &	8 *	9 (0)	-	_	= +	Bksp
Tab	Q Q	W W	E E	R R	T T	Y Y	U U	I I	O O	P P	[ {	] }	\\ |
Caps	A A	S S	D D	F F	G G	H H	J J	K K	L L	; :	' "	Enter		
Shift	Z Z	X X	C C	V V	B B	N N	M M	, <	. >	/ ?	Shift			
Ctrl	Alt										Alt	Ctrl		

For the following charts, top right of each key is *shifted* and bottom right is *unshifted*.

Deadkey >

`	1 ⌚	2	3	4	5	6	7	8	9	0 ⦿	-	=	Bksp
Tab	Q q	W w	E Ⓔ 3	R Ⓡ r	T t	Y	U Ⓤ Λ	I ı ι	O ø	P þ	[]	\ '
Caps	A Ⓐ Ⓡ	S σ	D Ⓓ ḏ	F	G Ḡ ḡ	H Ḥ ḥ	J ḵ f	K Ḷ ḷ k	L Ḹ ḹ l	;	' ,	Enter	
Shift	Z z	X	C c	V	B	N Ḣ ḣ	M Ḥ ḥ	,	.	/	Shift		
Ctrl	Alt										Alt	Ctrl	

Deadkey <

`	1	2	3	4	5	6	7	8	9	0	-	=	Bksp
Tab	Q	W	E	R	T	Y	U	I	O	P	[]	\
	q	w	e	r	t	y	u	i	o	p			
Caps	A	S	D	F	G	H	J	K	L	;	'		Enter
	a	s	d	f	g	h	j	k	l				
Shift	Z	X	C	V	B	N	M	,	.	/			Shift
	z	x	c	v	b	n	m						
Ctrl		Alt										Alt	Ctrl

Deadkey =

`	1 _	2 _	3 _	4 _	5 _	6 _	7 _	8 _	9 _	0 Ø	-	=	Bksp
Tab	Q q	W w	E e	R r	T t	Y y	U u	I i	O o	P p	[ {	] }	\ |
Caps	A a	S s	D d	F f	G g	H h	J j	K k	L l	; :	' "	Enter	
Shift	Z z	X x	C c	V v	B b	N n	M m	, ,	. →	/ ?	Shift		
Ctrl	Alt										Alt	Ctrl	

Deadkey I

`	1 !	2	3	4	5	6	7	8	9	0	-	=	Bksp
Tab	Q	W	E É ø	R	T ı ţ	Y ŷ ŷ	U ω	I ı	O	P	[ö	] ö´	\
Caps	A α	S	D đ	F	G	H ħ	J	K	L ł	;	'	Enter	
Shift	Z ı	X	C	V	B	N ņ	M	,	.	/	Shift		
Ctrl	Alt										Alt	Ctrl	

Deadkey ~ (velarized or pharyngealized)

`	1	2	3	4	5	6	7	8	9	0	-	=	Bksp
Tab	Q	W	E	R	T	Y	U	I	O	P	[]	\
				ƒ	ƒ	ƒ				p			
Caps	A	S	D	F	G	H	J	K	L	;	'	Enter	
		s	d	f					l				
Shift	Z	X	C	V	B	N	M	,	.	/	Shift		
	z				b	n	m						
Ctrl		Alt								Alt		Ctrl	

Deadkey @ (combining marks above and palatal hooks)

`	1	2	3	4	5	6	7	8	9	0	-	=	␣	Bksp	
	◌̃	◌̄	◌̅	◌̆	◌̇	◌̈	◌̉	◌̊	◌̋	◌̌	◌̍	◌̎	◌̏		
Tab	Q	W	E	R	T	Y	U	I	O	P	[]	\	◌̐	
				ɾ						ɓ	◌̃	◌̃			
Caps	A	S	Ḑ	D	F	G	H	J	K	L	;	◌̇	'	◌̈	Enter
			Ḑ	Ḑ	Ḑ	Ḑ			Ḑ	Ḑ		Ḑ			
Shift	Z	X	C	V	B	N	M	,	.	/			Shift		
	z	x		v	b	n	m		.						
Ctrl		Alt										Alt			Ctrl

Deadkey & (left tone bars, combining marks below and retroflex hooks)

`	1	2	3	4	5	6	7	8	9	0	-	=	Bksp
Tab	Q	W	E	R	T	Y	U	I	O	P	[]	\
Caps	A	S	D	F	G	H	J	K	L	;	'	Enter	
Shift	Z	X	C	V	B	N	M	,	.	/	Shift		
Ctrl	Alt										Alt		Ctrl

Deadkey ^ (superscript)

`	1	2	3	4	5	6	7	8	9	0	-	=	Bksp
Tab	Q	W	E	R	T	Y	U	I	O	P	[]	\
Caps	A	S	D	F	G	H	J	K	L	;	'	Enter	
Shift	Z	X	C	V	B	N	M	,	.	/	Shift		
Ctrl	Alt										Alt		Ctrl

Deadkey # (right tone bars, arrows and superscript)

`	1	2	3	4	5	6	7	8	9	0	-	=	Bksp
Tab	Q	W	E	R	T	Y	U	I	O	P	[]	\
Caps	A	S	D	F	G	H	J	K	L	;	'	Enter	
Shift	Z	X	C	V	B	N	M	,	.	/	Shift		
Ctrl	Alt										Alt		Ctrl

IPA Keyboard Layout

The keyboard layout is described in terms of an IPA chart rather than a keyboard. This is because many base characters are typed as a sequence of a letter followed by one of <, >, = or | which are characters used to change a base character to another base character. Diacritics are typed as sequences of an appropriate key.

Blue denotes non-IPA sanctioned phonetic symbols (they may be used by other traditions such as Americanist, Chinese or Russian).

Consonants

	Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p p b b			t t d d		ʈ <t ɖ <d	c c ɟ =j	k k g <g	q q ɢ =G		ʔ =?
Nasal	m m	ɱ >m		n n		ɳ <n	ɲ =n	ŋ >n	ɴ =N		
Trill	ʙ =B			r r					ʀ =R		
Tap or Flap		ʋ ¹ <v		ɾ >r		ɽ <r					
Fricative	ɸ =f β =b	f f v v	θ =t ð =d	s s z z	ʃ =s ʒ =z	ʂ <s ʐ <z	ç =c j <j	x x ɣ =g	χ =x ʁ >R	ħ >h ʕ <?	h h ɦ <h
Lateral Fricative				ɬ =l ɮ >l							
Approximate		ʋ =v		ɹ =r		ɻ <R	j j	ɰ >w			
Lateral Approximate				ɭ l		ɻ <l	ʎ <L	ɮ =L			

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

¹ This requires the use of Charis SIL (<http://scripts.sil.org/CharisSILfont>) or Doulos SIL (<http://scripts.sil.org/DoulosSILfont>).

Other Consonants

Clicks			Voiced implosives		
◌ ɸ	=p	Bilabial	◌ ɓ	>b	Bilabial
◌ ǀ	<!	Dental	◌ ɗ	>d	Dental/alveolar
◌ ǃ	|!	(Post)alveolar	◌ ɟ	>j	Palatal
◌ ɗ͡	>!	Palatoalveolar	◌ ɠ	>g	Velar
◌ ǁ	=!	Alveolar lateral	◌ ʛ	>G	Uvular

Other Symbols

◌ ʋ	=w	Vl labial-velar fricative	◌ ɕ	<c	vd alveolo-palatal fricative
◌ ʋ̥	w	Vd labial-velar approximant	◌ ɕ̥	>z	Vd alveolo-palatal fricative
◌ ɥ	<y or =h	Vd labial-palatal approximant	◌ ɭ	>L	Vd alveolar lateral flap
◌ ɦ	=H	Vl epiglottal fricative	◌ ɥ̥	>H	Simultaneous ʃ and x
◌ ɕ̥	<Q	Vd epiglottal fricative			
◌ ʔ	=Q	Vd epiglottal plosive			

Vowels

	Front		Central		Back	
	Unrounded	Rounded	Unrounded	Rounded	Unrounded	Rounded
Close	◌ i i	◌ y y	◌ ɨ =I	◌ ɯ =U	◌ ɯ =u	◌ ɯ u
Near-close	◌ ɪ =i	◌ ʏ =y				◌ ʊ <u
Close-mid	◌ e e	◌ ø >o	◌ ə =E	◌ ɵ =O	◌ ɤ >O	◌ ɔ o
Mid			◌ ə =e			
Open-mid	◌ ɛ <e	◌ œ <E	◌ ɜ >e	◌ ɞ <O	◌ ʌ >u	◌ ɔ <o
Near-open	◌ æ <a		◌ ɐ >a			
Open	◌ a a	◌ ɶ >E			◌ ɑ =a	◌ ɒ =o

Suprasegmentals

◌ ˈ	> |	Primary stress
◌ ˌ	< |	Secondary stress
◌ eː	= :	Long
◌ eˑ	< :	Half long
◌ eːː	= : = :	Extra long
◌ ẽ	@ *	Extra short
◌ ˌ	< .	Minor (foot) group
◌ ˌˌ	= .	Major (intonation) group
◌ ˌ	•	Syllable break
◌ ˌ	=#	Linking (absence of a break)

Other (non-IPA) Vowels

æ	>A	α	|a	open central unrounded vowel
ɪ	|i	Λ	|A	open central unrounded
ɨ	>I	ɿ	|z	unrounded alveolar apical
ɤ	<I	ʌ	|Z	unrounded retroflex apical
	lower-high central unrounded or high back unrounded	ʏ	|y	rounded alveolar apical
ʉ	>U	ʘ	|Y	rounded retroflex apical
ɯ	|u			
ɛ	|E			
ø	|e			

Tone and Word accents

Level ²				Contour ³		
⌈ #4	ě @ 4	Extra high	⋈ #0#4	ě @ 5	Rising	
┤ #3	é @ 3	High	∨ #4#0	ê @ ^	Falling	
└ #2	ē @ 2	Mid	⌈ #2#4	ě @ 6	High rising	
└ #1	è @ 1	Low	└ #1#2	ě @ 7	Low rising	
└ #0	è @ 0	Extra low	⋈ #1#4#1	ě @ [	Rising-falling
				è @ 8	Mid falling	
				ē @ 9	Mid rising	
				ě @]	Falling-rising	
	↓4 # [	Downstep		↗ # }	Global rise
	↑5 #]	Upstep		↘ # {	Global fall	

Tone numbers and pitch contours (non-IPA)

— — — — —	##1 ##2 ##3 ##4 ##5 ##6	Level pitch contours from 1 to 9 ⁶
	##7 ##8 ##9	
3	^3 (0–9)	superscript number
-	^_	superscript hyphen

Other (non-IPA) Symbols

ɕ	>c	vi palatal implosive
ɖ	|d	alveolo-palatal vd plosive
ɥ	|h	vd pharyngeal nasal
ɟ	>k	vi velar implosive
ɭ	|l	front-palatal vd lateral approximate
ɹ	|n	front-palatal vd nasal
ɸ	>p	vi bilabial implosive
ɗ	>q	vi uvular implosive
ɟ	=s	vi retroflex postalveolar fricative
ɟ	>t	vi dental or alveolar implosive
ɟ	|t	front-palatal vi plosive
ɟ	|T	dental click
w ⁷	<w	bilabial flap
ɟ	=z	vd retroflex postalveolar fricative
+	=+	

² Use “&” for Left-stem level tones, e.g. “&0” becomes A712 (f).

³ Glides to and from any level (e.g. “#3#2” becomes ɿ) and any sequence of any two glides (e.g. “#3#1#4” becomes ɿ).

⁴ This requires the use of Charis SIL (<http://scripts.sil.org/CharisSILfont>) or Doulos SIL (<http://scripts.sil.org/DoulosSILfont>).

⁵ This requires the use of Charis SIL (<http://scripts.sil.org/CharisSILfont>) or Doulos SIL (<http://scripts.sil.org/DoulosSILfont>).

⁶ These require the use of Charis SIL (<http://scripts.sil.org/CharisSILfont>) or Doulos SIL (<http://scripts.sil.org/DoulosSILfont>) version 4.1 or greater. They will turn into contours if used in Graphite applications.

⁷ This requires the use of Charis SIL (<http://scripts.sil.org/CharisSILfont>) or Doulos SIL (<http://scripts.sil.org/DoulosSILfont>).

Appendix: IPA number chart

Green denotes IPA characters unsupported by this keyboard.

Alph sorting key	Glyph	Key- strokes	IPA No.		USV	Symbol Name
1.	a	a	304	0061		Lowercase A
2.	ɐ	>a	324	0250		Turned A
3.	ɑ	=a	305	0251		Script A
4.	ɒ	=o	313	0252		Turned Script A
5.	æ	<a	325	00E6		Ash; Lowercase A-E ligature
6.	A	A	701	0041		Upper-case A
7.	b	b	102	0062		Lowercase B
8.	ḃ	>b	160	0253		Hooktop B
9.	B	=B	121	0299		Small Capital B
10.	β	=b	127	03B2		Beta
11.	B	B	702	0042		Upper-case B
12.	c	c	107	0063		Lowercase C
13.	ḥ	>c	163	0188		Hooktop C
14.	č		299	010D		C wedge
15.	ç	=c	138	00E7		C Cedilla
16.	ḑ	<c	182	0255		Curly-tail C
17.	Ĉ		202	0297		Stretched C
18.	C	C	624 (=703)	0043		Upper-case C
19.	C	C	703 (use 624)	0043		Upper-case C
20.	d	d	104	0064		Lowercase D
21.	ḏ	>d	162	0257		Hooktop D
22.	ḑ	<d	106	0256		Right-tail D
23.	ḑ	&d	219	1D91		Hooktop right-tail D
24.	ḏ		212	02A3		D-Z ligature
25.	ḏ		214	02A4		D-Ezh ligature
26.	ḏ		216	02A5		D-Curly-tail-Z ligature
27.	ð	=d	131	00F0		Eth
28.	D	D	704	0044		Upper-case D
29.	e	e	302	0065		Lowercase E
30.	◌ [◌]	^E	218	1D4A		Superscript schwa

Alph sorting key	Glyph	Key- strokes	IPA No.		USV	Symbol Name
31.	ə	=e	322	0259		Schwa
32.	ɜ̣		327	025A		Right-hook schwa
33.	ɐ	=E	397	0258		Reversed E
34.	ɛ	<e	303	025B		Epsilon
35.	ə̤	| e	396	029A		Closed epsilon
36.	ɜ	>e	326	025C		Reversed epsilon
37.	ɐ̤	<O	395	025E		Closed reversed epsilon
38.	E	E	705	0045		Upper-case E
39.	f	f	128	0066		Lowercase F
40.	fɪ̯		602	02A9		F-Eng ligature
41.	F	F	622 (=706)	0046		Upper-case F
42.	F	F	706 (use 622)	0046		Upper-case F
43.	g	<g	110	0261		Opentail G
44.	ɡ̊	>g	166	0260		Hooktop G
45.	g	g	210	0067		Looptail G
46.	G	=G	112	0262		Small Capital G
47.	ɡ̊	>G	168	029B		Hooktop Small Capital G
48.	G	G	707	0047		Upper-case G
49.	γ	=g	141	0263		Gamma
50.	γ̣	#g	422	02E0		Superscript Gamma
51.	ʁ	>O	315	0264		Ram's Horns
52.	h	h	146	0068		Lowercase H
53.	h	^ h	404 (=671)	02B0		Superscript H
54.	h	^ h	671 (use 404)	02B0		Left-sited superscript H
55.	ħ	>h	144	0127		Crossed H
56.	ɦ	<h	147	0266		Hooktop H
57.	ḥ	>H	175	0267		Hooked Heng
58.	ɥ	<y or =h	171	0265		Turned H
59.	ʜ	=H	173	029C		Small Capital H
60.	H	H	708	0048		Upper-case H
61.	i	i	301	0069		Lowercase I

Alph sorting key	Glyph	Key- strokes	IPA No.		USV	Symbol Name
62.	ı		394	0131		Undotted I
63.	İ	=I	317	0268		Barred I
64.	ı	|ı	399	0269		Iota
65.	ı	=ı	319	026A		Small Capital I
66.	I	I	709	0049		Upper-case I
67.	j	j	153	006A		Lowercase J
68.	j	^j	421	02B2		Superscript J
69.	ȝ	<j	139	029D		Curly-tail J
70.	ǰ		298	01F0		J wedge
71.	ȝ	=j	108	025F		Barred Dotless J
72.	ƒ	>j	164	0284		Hooktop Barred Dotless J
73.	J	J	626 (=710)	004A		Upper-case J
74.	J	J	710 (use 626)	004A		Upper-case J
75.	k	k	109	006B		Lowercase K
76.	ƀ	>k	165	0199		Hooktop K
77.	Ꝛ		291	029E		Turned K
78.	K	K	711	004B		Upper-case K
79.	l	l	155	006C		Lowercase L
80.	ˆ	^l	426	02E1		Superscript L
81.	ł	~l	209	026B		L with tilde
82.	ł	=l	148	026C		Belted L
83.	ł	<l	156	026D		Right-tail L
84.	Ł	=L	158	029F		Small Capital L
85.	Ł	>l	149	026E		L-Ezh ligature
86.	ls		603	02AA		L-S ligature
87.	lz		604	02AB		L-Z ligature
88.	λ		295	03BB		Lambda
89.	λ̄		294	019B		Barred lambda
90.	L	L	625 (=712)	004C		Upper-case L
91.	L	L	712 (use 625)	004C		Upper-case L
92.	m	m	114	006D		Lowercase M
93.	ḿ	>m	115	0271		Left-tail M (at right)





















Alph sorting key	Glyph	Key- strokes	IPA No.		USV	Symbol Name
94.	ʍ	=u	316	026F		Turned M
95.	ʋ	>w	154	0270		Turned M, Right Leg
96.	M	M	713	004D		Upper-case M
97.	n	n	116	006E		Lowercase N
98.	ⁿ	^n	425	207F		Superscript N
99.	ɳ		293	019E		N, right leg
100.	ɲ	=n	118	0272		Left-tail N (at left)
101.	ŋ	>n	119	014B		Eng
102.	ɳ	<n	117	0273		Right-tail N
103.	ɴ	=N	120	0274		Small Capital N
104.	N	N	714	004E		Upper-case N
105.	o	o	307	006F		Lowercase O
106.	⊙	=p	176	0298		Bull's Eye
107.	ø	=O	323	0275		Barred O
108.	ø	>o	310	00F8		Slashed O
109.	œ	<E	311	0153		Lowercase O-E ligature
110.	Œ	>E	312	0276		Small Capital O-E ligature
111.	Œ		627	0152		Upper-case O-E ligature
112.	ɔ̞	<o	306	0254		Open O
113.	ω	u |	398	0277		Closed omega
114.	O	O	715	004F		Upper-case O
115.	p	p	101	0070		Lowercase P
116.	ɸ	>p	159	01A5		Hooktop p
117.	P	P	716	0050		Upper-case P
118.	φ	=f	126	0278		Phi
119.	q	q	111	0071		Lowercase Q
120.	q̣	>q	167	02A0		Hooktop q
121.	Q	Q	717	0051		Upper-case Q
122.	r	r	122	0072		Lowercase R
123.	ɾ	>r	124	027E		Fish-hook R
124.	ɹ		206	027C		Long-leg r
125.	ɽ	>L	181	027A		Turned Long-leg R
126.	ɿ	<r	125	027D		Right-tail R

Alph sorting key	Glyph	Key- strokes	IPA No.		USV	Symbol Name
127.	ɹ	=ɹ	151	0279		Turned R
128.	ɹ̥	<R	152	027B		Turned R, Right Tail
129.	ʀ	=R	123	0280		Small Capital R
130.	R	R	718	0052		Upper-case R
131.	ɻ	>R	143	0281		Inverted Small Capital R
132.	ʀ̥	^R	676	02B6		Superscript inverted small capital R
133.	s	S	132	0073		Lowercase S
134.	ˢ	^S	207	02E2		Superscript S
135.	ſ̸		297	0161		S wedge
136.	ɤ	<S	136	0282		Right-Tail S (at left)
137.	S	S	719	0053		Upper-case S
138.	ʃ	=S	134	0283		Esh
139.	ʃ̣		204	0286		Curly-tail esh
140.	t	t	103	0074		Lowercase T
141.	ʈ	>t	161	01AD		Hooktop T
142.	ʈ̣		208	01AB		Left-hook T
143.	Ɉ	<t	105	0288		Right-tail T
144.	ts		211	02A6		T-S ligature
145.	tʃ		213	02A7		T-Esh ligature
146.	tʃ̣		215	02A8		T-Curly-tail-C ligature
147.	ɿ	| T	201	0287		Turned T
148.	T	T	720	0054		Upper-case T
149.	θ	=t	130	03B8		Theta
150.	θ̥	#t	217	1DBF		Superscript theta
151.	Θ		628	0398		Upper-case Greek Theta
152.	u	u	308	0075		Lowercase U
153.	u̯	=U	318	0289		Barred U
154.	υ	<u	321	028A		Upsilon
155.	U	U	721	0055		Upper-case U
156.	v	v	129	0076		Lowercase V
157.	ɸ	<v	184	2C71 (Unicode 6.1. Was F25F)		Labiodental flap
158.	ʋ	=v	150	028B		Cursive V
159.	ʋ̥	#v	673	1DB9		Superscript cursive V

Alph sorting key	Glyph	Key- strokes	IPA No.		USV	Symbol Name
160.	ʌ	>u	314	028C		Turned V
161.	V	V	621 (=722)	0056		Upper-case V
162.	V	V	722 (use 621)	0056		Upper-case V
163.	w	w	170	0077		Lowercase W
164.	w	^w	420	02B7		Superscript W
165.	ʍ	=w	169	028D		Turned W
166.	W	W	623 (=723)	0057		Upper-case W
167.	W	W	723 (use 623)	0057		Upper-case W
168.	x	x	140	0078		Lowercase X
169.	x	^x	292	02E3		Superscript X
170.	χ	=x	142	03C7		Chi
171.	X	X	724	0058		Upper-case X
172.	y	Y	309	0079		Lowercase Y
173.	y	^y	496	02B8		Superscript Y
174.	ʎ	<L	157	028E		Turned Y
175.	Y	=Y	320	028F		Small Capital Y
176.	Y	Y	725	0059		Upper-case Y
177.	z	z	133	007A		Lowercase Z
178.	ž		296	017E		Z wedge
179.	z̸	>z	183	0291		Curly-tail Z
180.	zᵣ	<z	137	0290		Right-tail Z
181.	ẓ	=z	135	0292		Ezh; Tailed Z
182.	z̸		205	0293		Curly-tail ezh
183.	Z	Z	726	005A		Upper-case Z
184.	ʔ	=?	113	0294		Glottal Stop
185.	ʀ	<?	145	0295		Reversed Glottal Stop
186.	ʔ̄	=Q	172	02A1		Barred Glottal Stop
187.	ʀ̄	<Q	174	02A2		Barred Reversed Glottal Stop
188.	|	<!	177	01C0		Pipe
189.	!	|!	178	01C3		Exclamation Point
190.	‡	>!	179	01C2		Double-barred Pipe
191.	||	=!	180	01C1		Double Vertical Line

Alph sorting key	Glyph	Key- strokes	IPA No.	USV	Symbol Name
192.	ɀ		203	0296	Inverted glottal stop
193.	2̲		290	01BB	Barred two
194.	’	> ’	401	02BC	Apostrophe
195.	◌̘	& %	402a	0325	Under-ring
196.	◌̙	@ %	402b	030A	Over-ring
197.	◌̜	& 5	403 (=663, 664)	032C	Subscript Wedge
198.	◌̝	& ”	405	0324	Subscript Umlaut
199.	◌̞	& ~	406	0330	Subscript Tilde
200.	◌̟	& }	407	033C	Subscript Seagull
201.	◌̠	& [	408	032A	Subscript Bridge
202.	◌̡	&]	409	033A	Inverted Subscript Bridge
203.	◌̢	& {	410	033B	Subscript Square
204.	◌̣	&)	411	0339	Subscript Right Half-ring
205.	◌̤	& 9	412	031C	Subscript Left Half-ring
206.	◌̥	& +	413	031F	Subscript Plus
207.	◌̦	& _	414	0320	Under-bar
208.	◌̧	@ ”	415	0308	Umlaut
209.	◌̨	@ +	416	033D	Over-cross
210.	◌̩	& 8	417	0318	Advancing Sign
211.	◌̪	& 9	418	0319	Retracting Sign
212.	◌̫	| [	419	02DE	Right Hook
213.	Ɂ	# ?	423	02E4	Superscript reversed glottal stop
214.	◌̬	@ ~	424	0303	Superscript Tilde
215.	◌̭	| ]	427	031A	Corner
216.	◌̮		428	0334	Superimposed tilde
217.	◌̯	& 6	429	031D	Raising Sign
218.	◌̰	& 7	430	031E	Lowering Sign
219.	◌̱	& |	431	0329	Syllabicity Mark
220.	◌̲	& *	432	032F	Subscript Arch
221.	◌̳	& #	433	0361	Top Tie Bar
222.	◌̴	& @	433	035C	Bottom Tie Bar
223.	◌̵		489	0322	Subscript right hook

Alph sorting key	Glyph	Key- strokes	IPA No.	USV	Symbol Name
224.	┐		490	?	Open corner
225.	,	,	491	002C	Comma
226.	‘	< ’	492	02BB	Reversed apostrophe
227.	◌̇	@ .	493	0307	Over-dot
228.	-		494	02D7	Minus sign
229.	+		495	02D6	Plus sign
230.	◌̣	& .	497	0323	Under-dot
231.	◌̣̣		498	0321	Subscript left hook
232.	◌̣̣̣		499	032B	Subscript W
233.	|	> |	501	02C8	Vertical Stroke (Superior)
234.	|	< |	502	02CC	Vertical Stroke (Inferior)
235.	:	= :	503	02D0	Length Mark
236.	ː	< :	504	02D1	Half-length Mark
237.	◌̆	@ *	505	0306	Breve
238.	.		506 (631, 632, 633)	002E	Period
239.	|	< .	507	007C	Vertical Line
240.	||	= .	508	2016	Double vertical line (thick)
241.	~	=#	509	203F	Bottom Tie Bar
242.	↗	#}	510	2197	Upward Diagonal Arrow
243.	↘	#{	511	2198	Downward Diagonal Arrow
244.	◌̂̂	@ 4	512	030B	Double Acute Accent (over)
245.	◌̂	@ 3	513	0301	Acute Accent (over)
246.	◌̄	@ 2	514	0304	Macron
247.	◌̀	@ 1	515	0300	Grave Accent (over)
248.	◌̈́	@ 0	516	030F	Double Grave Accent (over)
249.	↓	# [	517	A71C (Unicode 6.1. Was F19D)	Down Arrow
250.	↑	#]	518	A71B (Unicode 6.1. Was F19C)	Up Arrow
251.	┘	# 4	519	02E5	Extra-high Tone Bar
252.	┘	# 3	520	02E6	High Tone Bar
253.	┘	# 2	521	02E7	Mid Tone Bar
254.	┘	# 1	522	02E8	Low Tone Bar
255.	┘	# 0	523	02E9	Extra-low Tone Bar

Alph sorting key	Glyph	Key- strokes	IPA No.	USV	Symbol Name
288.			653	032A 0346	Superscript+subscript bridge
289.			654	034A	Superscript slashed tilde
290.			655	034B	Superscript dotted tilde
291.			656	034C	Superscript double tilde
292.			657	0348	Subscript double syllabicity mark
293.			658	0349	Subscript corner
294.			659	005C	Backslash
295.			660	034E	Subscript upward arrow-head
296.			661	2193	Down full arrow
297.			662	2191	Up full arrow
298.			663 (use 403)	02EC	Left-sided subscript wedge
299.			664 (=403)	02EC	Right-sided subscript wedge
300.			665		Bracketed subscript wedge
301.			666		Left-bracketed subscript wedge
302.			667		Right-bracketed subscript wedge
303.			668		Bracketed under-ring
304.			669		Left-bracketed under-ring
305.			670		Right-bracketed under-ring
306.			672	01C3 01C3	Right-sided double exclamation point
307.			674	0362	Subscript right arrow
308.			675	0347	Subscript equals sign
309.			677		Superscript double-barred H
310.			678		Superscript O-E ligature
311.			679	01C3	Right-sided exclamation point
312.			680	033F	Superscript equals sign
313.			681	0354	Subscript left pointer
314.			682	0355	Subscript right pointer
315.			683 (=406)	0330	Right-sided subscript tilde
316.	[	[	901	005B	Left Square Bracket
317.	]	]	902	005D	Right Square Bracket
318.	/	/	903	002F	Forward Slash
319.	(	(	906	0028	Left parenthesis

Alph sorting key	Glyph	Key- strokes	IPA No.	USV	Symbol Name
320.	)	)	907	0029	Right parenthesis
321.	((	((	908	0028 0028	Left double parenthesis
322.	))	))	909	0029 0029	Right double parenthesis
323.	{	{	910	007B	Left brace
324.	}	}	911	007D	Right brace