IPA-SIL keyboard layout for Mac OS X
v. 0.6 (alpha)
SIL International
18 February 2004

0.   Introduction

The "IPA-SIL" keyboard is an installable keyboard layout for Mac OS X 10.2.x and above. It is intended to provide a text input method for Unicode-based applications (including most Cocoa-based applications, as well as some others), in order to access IPA characters.

This software is provided as an alpha release for purposes of testing and evaluation. Feedback is welcomed, and should be addressed to SIL's Non-Roman Script Initiative, using the contact information that appears below.

The keyboard layout is based upon the keyboard layout adopted for the SIL IPA93 font family in its implementation for Mac OS 9 and previous.

The keyboard in its present state is specific to the "Doulos SIL" IPA font, version 0.6 (beta), in that it references characters in the private use area. In the full release of Doulos SIL, a number of these characters are expected to appear in standard positions according to the Unicode 4.0 specification, and the keyboard (and encodings of any documents created with SILDoulos IPA 0.6) will have to be changed accordingly.

1.   Installation

1. Copy the files "IPA-SIL.icns" and "IPA-SIL.keylayout" to the folder "Keyboard layouts" of the volume (/Library/Keyboard layouts), the network (/Network/Library/Keyboard Layouts), or your user account (~/Library/Keyboard/Layouts, where ~ is /Users/<your username>).
2. Open the International pane of the System Preferences application, select the "Input Menu" tab, and check the "On" checkbox for the "IPA-SIL" line.
3. You may have to re-launch any Unicode-aware applications that are running in order for them to recognize the new keyboard.

In order to access the keyboard, you may select it from the international menu in the menu bar (if it is turned on), or use Command-spacebar to change between input scripts. If you have other Unicode scripts activated, you may rotate between keyboard layouts within a script by pressing Option-Command-spacebar.

2. Keyboard snapshots for non-deadkey keystrokes

No modifier keys

Shift key

Option key

Outlined keys initiate deadkey sequences; following a deadkey initiator by a non-designated deadkey completing key gives the characters pictured.

(NOTE: Mac OS X 10.2 has an apparent bug in which a deadkey initiator followed by TAB or

RETURN does not return the expected default deadkey character. This problem has been resolved in Mac OS X 10.3.)

Shift-option key

3. Differences between this keyboard layout and the IPA93 keyboard layout under OS 9

Keystrokes for IPA93 codepoints which are not included in the Doulos SIL font

Due to the emphasis on semantics over form in the Unicode coding scheme, and the automatic positioning of diacritics available in the Doulos SIL font, a number of glyphs (in particular, i-width and raised diacritics) are not included in the Doulos SIL font. The keystrokes associated with these glyphs in the SIL IPA93 fonts are therefore not strictly necessary in a Unicode-enabled keyboard. However, such keystrokes are, in general, maintained for the sake of consistency of typing. Option and shift-option keystrokes for i-width diacritics are maintained, but deadkey keystrokes for extra-high diacritics are not.

Because of the lack of AAT tables in the Doulos SIL font, contour tone letters (which are treated as ligatures by Doulos SIL) are currently unavailable. See the documentation for Doulos SIL for details.

TABLE 1. Codepoints, IPA descriptions and keystrokes
for characters not included under Unicode

IPA93 Codepoint	IPA Description	Glyph	IPA93 Keystroke	SIL MacIPA keystroke
128	Low-mid rising tone bar	⅄	option-u-A	N/A
133	High-mid falling tone bar	⅄	option-u-O	N/A
134	High-low falling tone bar	⅄	option-u-U	N/A
136	Double Acute Accent (high o-width)	˝	option-`-a	shift-1
137	Double Acute Accent (high i-width)	˝	option-i-a	shift-1

Table 1 (continued)

IPA93 Codepoint	IPA Description	Glyph	IPA93 Keystroke	SIL MacIPA keystroke
143	Acute Accent (high o-width)	´	option-`-e	shift-2
144	Acute Accent (high i-width)	´	option-i-e	shift-2
147	Macron (high o-width)	‾	option-`-i	shift-3
148	Macron (high i-width)	‾	option-i-i	shift-3
152	Grave Accent (high o-width)	`	option-`-o	shift-4
153	Grave Accent (high i-width)	`	option-i-o	shift-4
157	Double Grave Accent (high o-width)	˶	option-`-u	shift-5
158	Double Grave Accent (high i-width)	˶	option-i-u	shift-5
161	Over Ring (i-width)	°	shift-option-8	shift-8
162	Lowering Sign (i-width)	ˎ	option-4	4
163	Raising Sign (i-width)	ˏ	option-3	3
165	Under Ring (i-width)	˳	option-8	8
170	Retracting Sign (i-width)	ˌ	option-2	2
173	Under-bar (i-width)	_	option-=	=
174	(Undotted Barred I)	ɨ	option-"	N/A
177	Subscript Plus (i-width)	ˌ	shift-option-=	shift-=
187	Subscript Arch (i-width)	ˬ	option-9	9
188	Subscript Tilde (i-width)	˷	option-0	0
190	(Dotless J)	ȷ	option-'	N/A
193	Advancing Sign (i-width)	ˌ	option-1	1
202	(Minute Space)		option-space	N/A
208	Subscript Umlaut (i-width)	̤	option-hyphen	(hyphen)
216	Mid-high rising tone bar	˦	option-u-y	N/A
217	Mid-low falling tone bar	˧	option-u-Y	N/A
218	Double Acute Accent (i-width)	˝	shift-option-1	1
219	Acute Accent (i-width)	´	shift-option-2	2
220	Macron (i-width)	‾	shift-option-3	3
221	Grave Accent (i-width)	`	shift-option-4	4
222	Double Grave Accent (i-width)	˶	shift-option-5	5
223	Circumflex (i-width)	^	shift-option-6	6
224	Wedge (i-width)	ˇ	shift-option-7	7
225	Breve (i-width)	˘	shift-option-9	9
226	Superscript Tilde (i-width)	~	shift-option-0	0
230	Circumflex (high i-width)	^	option-i-E	6
232	Low-high rising tone bar	˩	option-u-E	N/A

Table 1 (continued)

233	Circumflex (high o-width)	ˆ	option-`-E	6
243	Wedge (high i-width)	ˇ	option-i-U	7
244	Wedge (high o-width)	ˇ	option-`-U	7

Table 2. Keystrokes for characters and codepoints not available in IPA93 but included in Unicode

Unicode code point	Glyph	Description	Keystroke
U+00B9	¹	Superscript one	Shift-option-1
U+00B2	²	Superscript two	Shift-option-2
U+00B3	³	Superscript three	Shift-option-3
U+2074	⁴	Superscript four	Shift-option-4
U+2075	⁵	Superscript five	Shift-option-5
U+0323	.	Combining dot below	Option-8
U+0307	·	Combining dot above	Shift-option-8
U+00FE	þ	Latin small letter thorn	Option-d

A number of additional deadkey keystrokes are provided.
- *Opt-a* keystrokes access common Americanist IPA symbols
- *Opt-r* keystrokes access common Roman symbols used in linguistic notations, but not included in IPA
- *Opt-z* keystrokes access IPA symbols common in Chinese phonetic transcriptions

Table 2. Additional deadkey keystrokes (not available in IPA93 keyboard)
Section 1: Option-a deadkeys

Code point	Glyph	Description	Keystroke
U+010D	č	Latin small letter c with caron	Opt-a-c
U+01F0	ǰ	Latin small letter j with caron	Opt-a-j
U+0161	š	Latin small letter s with caron	Opt-a-s
U+017E	ž	Latin small letter z with caron	Opt-a-z

Section 2: Option-r deadkeys

Code point	Glyph	Description	Keystroke
U+0023	$	Dollar sign	Opt-r-$
U+0028	(	Left parenthesis	Opt-r-(
U+0029	)	Right parenthesis	Opt-r-)
U+002A	*	Asterisk	Opt-r-*
U+002B	+	Plus sign	Opt-r-+
U+2190	←	Leftwards arrow	Opt-r-comma

Code point	Glyph	Description	Keystroke
U+002D	-	Hyphen-minus	Opt-r-hyphen
U+2192	→	Rightwards arrow	Opt-r-period
U+003C	<	Less-than sign	Opt-r-<
U+003D	=	Equals sign	Opt-r-=
U+003E	>	Greater-than sign	Opt-r->
U+003F	?	Question mark	Opt-r-?
U+0067	g	Latin small letter g	Opt-r-g
		(i.e., plain roman text, not the IPA script g [ɡ])	
U+007B	{	Left curly bracket	Opt-r-{
U+007D	}	Right curly bracket	Opt-r-{
U+007E	~	Tilde	Opt-r-~
U+00B1	±	Plus-minus sign	Opt-r-± (shift-option-=)

Section 3: Option-z deadkeys

Code point	Glyph	Description	Keystroke
U+027F	ɻ	Latin small letter reversed r with fishhook	Opt-z-r
U+0285	ɕ	Latin small letter squat reversed esh	Opt-z-R
U+F205	ȶ	Latin small letter t with curl	Opt-z-t
U+F203	ȴ	Latin small letter l with curl	Opt-z-l
U+F204	ȵ	Latin small letter n with curl	Opt-z-n
U+F201	ȡ	Latin small letter d with curl	Opt-z-d
U+0255	ɕ	Latin small letter c with curl	Opt-z-c
U+0291	ʑ	Latin small letter z with curl	Opt-z-z
U+F206	ɥ	Latin small letter turned h with fishhook	Opt-z-h
U+F207	ɧ	Latin small letter turned h with fishhook and tail	Opt-z-H

4.   General listing of keystrokes for IPA characters

Table 4. General listing of keystrokes for IPA characters

Codepoint	IPA Description	Glyph	Keystroke(s)
U + 0020	Space		(space)
U + 0023	Dollar sign	$	Opt-r-$
U + 0028	Left parenthesis	(	Opt-r-(
U + 0029	Right parenthesis	)	Opt-r-)
U + 002A	Asterisk	*	Opt-r-*
U + 002B	Plus sign	+	Opt-r-+
U + 002D	Hyphen-minus	-	Opt-r-hyphen

Table 4. General listing of keystrokes for IPA characters (continued)

Codepoint	IPA Description	Glyph	Keystroke(s)
U+003C	Less-than sign	<	Opt-r-<
U+003D	Equals sign	=	Opt-r-=
U+003E	Greater-than sign	>	Opt-r->
U+003F	Question mark	?	Opt-r-?
U+002C	Comma	,	,
U+002D	Hyphen-minus	-	option-/
U+002E	Full stop	.	.
U+002F	Solidus	/	/
U+005B	Left square bracket	[	[
U+005C	Reverse solidus	\	\
U+005D	Right square bracket	]	]
U+0061	Latin small letter a	a	a
U+0062	Latin small letter b	b	b
U+0063	Latin small letter c	c	c
U+0064	Latin small letter d	d	d
U+0065	Latin small letter e	e	e
U+0066	Latin small letter f	f	f
U+0067	Latin small letter g	g	Opt-g-g
U+0068	Latin small letter h	h	h
U+0069	Latin small letter i	i	i
U+006A	Latin small letter j	j	shift-j
U+006B	Latin small letter k	k	k
U+006C	Latin small letter l	l	l
U+006D	Latin small letter m	m	m
U+006E	Latin small letter n	n	n
U+006F	Latin small letter o	o	o
U+0070	Latin small letter p	p	p
U+0071	Latin small letter q	q	q
U+0072	Latin small letter r	r	r
U+0073	Latin small letter s	s	s
U+0074	Latin small letter t	t	t
U+0075	Latin small letter u	u	u
U+0076	Latin small letter v	v	v
U+0077	Latin small letter w	w	w
U+0078	Latin small letter x	x	x
U+0079	Latin small letter y	y	y
U+007A	Latin small letter z	z	z
U+007B	Left curly bracket	{	Opt-r-{

Table 4. General listing of keystrokes for IPA characters (continued)

Codepoint	IPA Description	Glyph	Keystroke(s)
U+007D	Right curly bracket	}	Opt-r-{
U+007E	Tilde	~	Opt-r-~
U+00B1	Plus-minus sign	±	Opt-r-± (s-o-=)
U+007C	Vertical line	|	option-n-n
U+00B2	Superscript two	^{2}	shift-option-2
U+00B3	Superscript three	^{3}	shift-option-3
U+00B9	Superscript one	^{1}	shift-option-1
U+00E6	Latin small letter ae	æ	shift-q
U+00E7	Latin small letter c with cedilla	ç	shift-c
U+00F0	Latin small letter eth	ð	shift-d
U+00F8	Latin small letter o with stroke	ø	shift-o
U+00FE	Latin small letter thorn	þ	option-d
U+010D	Latin small letter c with caron	č	option-a-c
U+0127	Latin small letter h with stroke	ħ	shift-option-k
U+0131	Latin small letter dotless i	ɪ	shift-'
U+014B	Latin small letter eng	ŋ	shift-n
U+0153	Latin small ligature oe	œ	option-o
U+0161	Latin small letter s with caron	š	option-a-s
U+017E	Latin small letter z with caron	ž	option-a-z
U+01C0	Latin letter dental click	ǀ	option-e-e
U+01C1	Latin letter lateral click	ǁ	option-e-i
U+01C2	Latin letter alveolar click	ǂ	option-e-u
U+01C3	Latin letter retroflex click	ǃ	option-e-o
U+01F0	Latin small letter j with caron	ǰ	option-a-j
U+2190	Leftwards arrow	←	Opt-r-comma
U+2192	Rightwards arrow	→	Opt-r-period
U+0250	Latin small letter turned a	ɐ	option-a
U+0251	Latin small letter alpha	ɑ	shift-a
U+0252	Latin small letter turned alpha	ɒ	shift-option-a
U+0253	Latin small letter b with hook	ɓ	option-b
U+0254	Latin small letter open o	ɔ	option-c
U+0255	Latin small letter c with curl	ɕ	option-z-c
U+0255	Latin small letter c with curl	ɕ	shift-option-x
U+0256	Latin small letter d with tail	ɖ	shift-option-s
U+0257	Latin small letter d with hook	ɗ	shift-option-d
U+0258	Latin small letter reversed e	ɘ	shift-option-c
U+0259	Latin small letter schwa	ə	shift-option-e
U+025B	Latin small letter open e	ɛ	shift-e

Table 4. General listing of keystrokes for IPA characters (continued)

Codepoint	IPA Description	Glyph	Keystroke(s)
U+025C	Latin small letter reversed open e	ɜ	shift-option-q
U+025E	Latin small letter closed reversed open e	ɞ	option-q
U+025F	Latin small letter dotless j with stroke	ɟ	shift-option-j
U+0260	Latin small letter g with hook	ɠ	option-g
U+0261	Latin small letter script g	g	g
U+0262	Latin letter small capital g	ɢ	shift-g
U+0263	Latin small letter gamma	ɣ	option-f
U+0264	Latin small letter rams horn	ɤ	shift-f
U+0265	Latin small letter turned h	ɥ	shift-option-y
U+0266	Latin small letter h with hook	ɦ	option-h
U+0267	Latin small letter heng with hook	ɧ	shift-option-h
U+0268	Latin small letter i with stroke	ɨ	shift-option-i
U+026A	Latin letter small capital i	ɪ	shift-i
U+026C	Latin small letter l with belt	ɬ	option-l
U+026D	Latin small letter l with retroflex hook	ɭ	shift-option-l
U+026E	Latin small letter lezh	ɮ	shift-l
U+026F	Latin small letter turned m	ɯ	option-m
U+0270	Latin small letter turned m with long leg	ɰ	shift-option-m
U+0271	Latin small letter m with hook	ɱ	shift-m
U+0272	Latin small letter n with left hook	ɲ	shift-option-,
U+0273	Latin small letter n with retroflex hook	ɳ	option-n
U+0274	Latin letter small capital n	ɴ	option-,
U+0275	Latin small letter barred o	ɵ	shift-p
U+0276	Latin letter small capital oe	ɶ	shift-option-o
U+0278	Latin small letter phi	ɸ	shift-option-p
U+0279	Latin small letter turned r	ɹ	option-r
U+027A	Latin small letter turned r with long leg	ɺ	shift-option-r
U+027B	Latin small letter turned r with hook	ɻ	shift-option-[
U+027D	Latin small letter r with tail	ɽ	shift-]
U+027E	Latin small letter r with fishhook	ɾ	shift-r
U+027F	Latin small letter reversed r with fishhook	ɿ	Opt-z-r
U+0280	Latin letter small capital r	ʀ	shift-[
U+0281	Latin letter small capital inverted r	ʁ	option-[
U+0282	Latin small letter s with hook	ʂ	option-s
U+0283	Latin small letter esh	ʃ	shift-s
U+0284	Latin small letter dotless j with stroke and hook	ʄ	shift-option-v
U+0285	Latin small letter squat reversed esh	ʅ	option-z-R
U+0288	Latin small letter t with retroflex hook	ʈ	shift-option-t

Table 4. General listing of keystrokes for IPA characters (continued)

Codepoint	IPA Description	Glyph	Keystroke(s)
U+0289	Latin small letter u bar	ʉ	shift-option-u
U+028A	Latin small letter upsilon	ʊ	shift-u
U+028B	Latin small letter v with hook	ʋ	shift-v
U+028C	Latin small letter turned v	ʌ	option-v
U+028D	Latin small letter turned w	ʍ	shift-option-w
U+028E	Latin small letter turned y	ʎ	option-y
U+028F	Latin letter small capital y	ʏ	shift-y
U+0290	Latin small letter z with retroflex hook	ʐ	option-z
U+0291	Latin small letter z with curl	ʑ	option-z-z
U+0291	Latin small letter z with curl	ʑ	shift-option-z
U+0292	Latin small letter ezh	ʒ	shift-z
U+0294	Latin letter glottal stop	ʔ	shift-/
U+0295	Latin letter pharyngeal voiced fricative	ʕ	shift-option-/
U+0298	Latin letter bilabial click	ʘ	option-e-a
U+0299	Latin letter small capital b	ʙ	shift-option-b
U+029B	Latin letter small capital g with hook	ʛ	shift-option-g
U+029C	Latin letter small capital h	ʜ	shift-k
U+029D	Latin small letter j with crossed-tail	ʝ	option-j
U+029F	Latin letter small capital l	ʟ	;
U+02A1	Latin letter glottal stop with stroke	ʡ	option-k
U+02A2	Latin letter reversed glottal stop with stroke	ʢ	option-p
U+02B0	Modifier letter small h	ʰ	shift-h
U+02B2	Modifier letter small j	ʲ	shift-j
U+02B7	Modifier letter small w	ʷ	shift-w
U+02BC	Modifier letter apostrophe	ʼ	'
U+02C8	Modifier letter vertical line	ˈ	shift-option-\
U+02CC	Modifier letter low vertical line	ˌ	option-\
U+02D0	Modifier letter triangular colon	ː	shift-option-.
U+02D1	Modifier letter half triangular colon	ˑ	shift-.
U+02DE	Modifier letter rhotic hook	˞	shift-option-]
U+02E0	Modifier letter small gamma	ˠ	shift-option-f
U+02E1	Modifier letter small l	ˡ	shift-;
U+02E4	Modifier letter small reversed glottal stop	ˤ	option-.
U+02E5	Modifier letter extra-high tone bar	˥	option-u-a
U+02E6	Modifier letter high tone bar	˦	option-u-e
U+02E7	Modifier letter mid tone bar	˧	option-u-i
U+02E8	Modifier letter low tone bar	˨	option-u-o
U+02E9	Modifier letter extra-low tone bar	˩	option-u-u

Table 4. General listing of keystrokes for IPA characters (continued)

Codepoint	IPA Description	Glyph	Keystroke(s)
U+0301	Combining acute accent	́	shift-2
U+0302	Combining circumflex accent	̂	shift-6
U+0303	Combining tilde	̃	shift-0
U+0304	Combining macron	̄	shift-3
U+0306	Combining breve	̆	shift-9
U+0307	Combining dot above	̇	shift-option-8
U+0308	Combining diaeresis	̈	shift-(hyphen)
U+030A	Combining ring above	̊	shift-8
U+030B	Combining double acute accent	̋	shift-1
U+030C	Combining caron	̌	shift-7
U+030F	Combining double grave accent	̏	shift-5
U+0316	Combining grave accent	̖	shift-4
U+0318	Combining left tack below	̘	1
U+0319	Combining right tack below	̙	2
U+031A	Combining left angle above	̚	shift-\
U+031C	Combining left half ring below	̜	7
U+031D	Combining up tack below	̝	3
U+031E	Combining down tack below	̞	4
U+031F	Combining plus sign below	̟	shift-=
U+0320	Combining minus sign below	̠	=
U+0323	Combining dot below	̣	Option-8
U+0324	Combining diaeresis below	̤	(hyphen)
U+0325	Combining ring below	̥	8
U+0329	Combining vertical line below	̩	`
U+032A	Combining bridge below	̪	5
U+032C	Combining caron below	̬	option-6
U+032F	Combining inverted breve below	̯	9
U+0330	Combining tilde below	̰	0
U+0334	Combining tilde overlay	̴	shift-option-;
U+0339	Combining right half ring below	̹	option-7
U+033A	Combining inverted bridge below	̺	option-5
U+033B	Combining square below	̻	6
U+033C	Combining seagull below	̼	shift-option-(hyphen)
U+033D	Combining x above	̽	shift-`
U+0361	Combining double inverted breve	͡	option-e-E
U+03B2	Greek small letter beta	β	shift-b
U+03B8	Greek small letter theta	θ	shift-t
U+03C7	Greek small letter chi	χ	shift-x

Table 4. General listing of keystrokes for IPA characters (continued)

Codepoint	IPA Description	Glyph	Keystroke(s)
U+2016	Double vertical line	‖	option-n-N
U+203F	Undertie	‿	option-`-I
U+2074	Superscript four	^{4}	Shift-option-4
U+2075	Superscript five	^{5}	Shift-option-5
U+207F	Superscript latin small letter n	^{n}	shift-,
U+2191	Upwards arrow	↑	option-n-a
U+2193	Downwards arrow	↓	option-n-o
U+2197	North east arrow	↗	option-n-A
U+2198	South east arrow	↘	option-n-O
U+F180	Modifier letter small m	^{m}	option-;
U+F181	Modifier letter small n with left hook	^{ɲ}	option-`-A
U+F182	Modifier letter small letter eng	^{ŋ}	option-]
U+F201	Latin small letter d with curl	ȡ	Opt-z-d
U+F203	Latin small letter l with curl	ȴ	Opt-z-l
U+F204	Latin small letter n with curl	ȵ	Opt-z-n
U+F205	Latin small letter t with curl	ȶ	Opt-z-t
U+F206	Latin small letter reversed h with fishhook	ɧ	Opt-z-h
U+F207	Latin small letter reversed h with fishhook and tail	ɧ	Opt-z-H

5. Copyright and license

6. Distribution

This keyboard package consists of the IPA-SIL keyboard file and icon, plus this documentation. This is a pre-release version that is being made available primarily for the purpose of testing. Insofar as this font is an alpha version, users should be advised that it may not yield acceptable results in all situations. This factor should be considered in any usage or redistribution.

SIL International (SIL) is an organization of linguists dedicated to the study and promotion of the thousands of languages around the world. We are happy to make this keyboard available at no charge. You may share this keyboard with your friends and co-workers, but with the following restrictions:

1. All files must be copied together, including this one.
2. No fee may be charged for the keyboard.
3. They may not be used as a basis for other keyboards. As this is a alpha version, the following additional restrictions also apply:

4. It must be clearly communicated to recipients that this is a alpha release that has not undergone thorough testing, and that it has been made available as is with no guarantees or warrantees, implied or explicit.
5. It may not be redistributed by any broadcast means, such as Web sites or CD-ROMs without specific permission.

7.   Feedback and bug reports

This software is offered as-is, with no guarantee of ongoing support; however, as possible, we will make bug fixes and add features. Please send bug reports and feature requests, either by surface mail or e-mail, to:

Non-Roman Script Initiative
SIL International
7500 W. Camp Wisdom Road
Dallas, TX 75236 USA
email: nrsi@sil.org

A bug report form is included below.

Feedback on IPA-SIL v0.6 keyboard for Macintosh OS X

Your name:

Organization:

Contact info (email / address / phone):

Operating system used:
  Version: Update:

Applications used:
  Name:
  Version: Service pack/update:

  Name:
  Version: Service pack/update:

For the following, please mention specific keystrokes as relevant:

What worked well?

What did not work well?

Other comments?

Thank you for your comments.