

Using Doulos SIL Cipher - Reference Chart

First, install the "Doulos SIL Cipher" font, install InKey and the corresponding keyboard, and restart your word processor. (Writer works best here, although Microsoft Word can be used.) Select the font, turn on the keyboard, and start typing using the sequences described in the chart below.

Apart from the special symbols below, the font also includes ordinary text characters inherited unchanged from Doulos SIL, in order to support typing text and punctuation--this single font can be used for both music and lyrics. Using one font for both is recommended for ease of use, and also because changing the font size should then preserve horizontal alignment.

Because the keyboard needs to allow both music and lyrics to be typed, it does not "hijack" any of the standard text keys' characters by completely replacing them with other characters. Alas, this means that typing most musical symbols takes multiple keystrokes, but on the plus side, lyrics can be touch-typed at full speed without switching keyboards or fonts.

The Inkey keyboard: Each of the number keys from 1 to 9 is set up as a "rota", which means that pressing the key multiple times quickly will cycle through the various symbols associated with that key. For example, the rota for the 3 key is: 3 3̇ 3̈ 3̉ 3̊ 3̋ , which means that pressing 3 once outputs "3", pressing it twice quickly produces "3̇", and so forth. (Technically, the diacritics are separate unicode characters; so, for example, 3̈ is actually three characters that we've prepackaged in the proper sequence.) Pressing it twice slowly produces "33" (the rota is not activated). Here are the rotas for every key that has a rota:

1 : 1 1̇ 1̈ 1̉ 1̊ 1̋	5 : 5 5̇ 5̈ 5̉ 5̊ 5̋	^ : ^ ^̇
2 : 2 2̇ 2̈ 2̉ 2̊ 2̋	6 : 6 6̇ 6̈ 6̉ 6̊ 6̋	- : - 5̇ 5̈
3 : 3 3̇ 3̈ 3̉ 3̊ 3̋	7 : 7 7̇ 7̈ 7̉ 7̊ 7̋	= : = 5̇ 5̈
4 : 4 4̇ 4̈ 4̉ 4̊ 4̋	8 : 8 b # ¢ ↗ ↘	(where 5 is any note)

The other keys modified by this keyboard are:

{ :	_	(begin slur, use Ctrl { to type a {)
}	_	(end slur, use Ctrl } to type a })
Ctrl + Shift + . :	<u>5</u>	(Chinese: manually add an underdot when there is an underline)
Ctrl + Shift + 1 :		(single barline)
Ctrl + Shift + 2 :		(section-end double barline)
Ctrl + Shift + 3-6 :	other barlines (: :)	

For combinations, you must type the base + combining marks in the following order (and don't place both begin and end slur on a single base character):

Indonesian:

begin slur, base character, overlay (/ or \), underdot or overdot, underline(s), end slur

Chinese:

begin slur, base character, overlay (/ or \), underline(s), underdot or overdot, end slur

Warning: if you click your word processor's paragraph-mark button (¶) on the toolbar so you can see non-printing space characters, overlines and slurs will not display properly.

The chart below identifies each special character's unicode name and codepoint, gives a visual example, and explains what that character means musically.

Description	Codepoint	Char	Example	Meaning
numbers 1-7		1 etc.	1234567	do re mi fa so la ti
number 0		0	0 0 0	rest (i.e. don't sing or play)
text: a-z, etc.				type as usual; use for lyrics
period		.	. 5.. 5. 5.	extend duration of the preceding note
hyphen		-	- 5-- 5- 5-	Chinese: extend duration of the preceding note by an entire quarter note
underdot (Combining Dot Below)	U+0323	◌̣	ḡ	down one octave (Chinese: goes below any underlines)
overdot (Combining Dot Above)	U+0307	◌̇	ḡ	up one octave; goes below any overlines
overline (Combining Overline)	U+0305	◌̄	5̄ 5̄	eighth note; keystroke: - -
double overline (Combining Double Overline)	U+033F	◌̈́	5̈́ 5̈́	sixteenth note; keystroke: = =
underline (Combining Low Line)	U+0332	◌̵	5̵ 5̵	Chinese: eighth note; keystroke: - - -
double underline	U+0333	◌̶	5̶ 5̶	Chinese: sixteenth note; keystroke: = = =
forward-slash strike-through	U+0338	℀	1̄2̄3̄4̄5̄6̄	sharp
backslash strike-through	U+20E5	℁	7̄, not 7	sharp
begin slur below (Musical Symbol Begin Slur)	U+1D177	᷵	e.g. 123	in music , one syllable spans all these notes. In lyrics (not yet supported) , it means "diphthong": these neighboring vowels are pronounced as a single syllable. (E.g. in <i>tahu</i> 'know', the <i>h</i> is silent so <i>ahu</i> is usually slurred.) So, slurs in lyrics are usually only 2 or 3 characters wide. keystroke: {
end slur below (Musical Symbol End Slur)	U+1D178	᷶		the end of the slur
fermata	U+0352	᷹	᷹	"hold", or "grand pause"
Musical Symbol Single Barline	U+1D100			measure boundary; keystroke: Ctrl+Shift+1
Musical Symbol Double Barline	U+1D101			end of a section of music; keystroke: Ctrl+Shift+2

Musical Symbol Final Barline	U+1D102			very end of a piece of music; keystroke: Ctrl+Shift+4
Musical Symbol Reverse Final Barline	U+1D103			keystroke: Ctrl+Shift+3
Musical Symbol Left Repeat Sign	U+1D106	:	:	this section will be repeated; keystroke: Ctrl+Shift+5
Musical Symbol Right Repeat Sign	U+1D107	:	:	go back to the left repeat sign; keystroke: Ctrl+Shift+6
Musical Symbol Breath Mark	U+1D112	’	’	singers, breathe now; keystroke: Ctrl+Shift+'
North East Arrow	U+2197	↗	↗	?? (Chinese: glissandi, but s/b wavy)
South East Arrow	U+2198	↘	↘	?? (Chinese: glissandi; s/b wavy)
Chinese: flat	U+266D	♭	♭	Chinese: make the note flat
Chinese: sharp	U+266F	♯	♯	Chinese: make the note sharp
natural (not needed?)	U+266E	♮	♮	restore to natural (non-sharp/flat)

All of the characters documented above are either of "full" width (1224) or "half" width (612). As long as you don't mix in other characters, you should therefore be able to align harmony lines with the melody line by adding spaces (which are "half" width) appropriately. Lyrics characters have proportional widths and cannot be precisely aligned unless you use tabs, but this is generally less important.

Note: those characters which overlap with western musical notation are also documented at unicode.org/charts/PDF/U1D100.pdf.

Sample sequences of characters/keystrokes (cf: [KepatihanPro Font Keystroke Samples.pdf](#)) :

for this:	$\overline{35}$	$\overline{3\ 5}$	$\overline{\dot{3}\ 4}$
type this:	3 - - 5 - -	3 - - space - - 5 - -	3 3 - - space - - 4 - -

for this:	$\overline{3\ 5}$	$\overline{3\ 5}$	$\overline{3\ 4\ 5}$
type this:	{ 3 5 }	{ 3 space 5 }	{ 3 space 4 space 5 }

for this:	$\overline{6\ 5\ 4}$	$\overline{\dot{1}\ \dot{1}\ 7}$	$\overline{1\ 7}$
type this:	{ 6 - - 5 - - } 4 - -	1 1 - - space - - { 1 1 - - 7 - - }	1 . - - Ctrl + "

for this:	$\overline{6.\dot{3}}$	$\overline{\overline{2\ 3\ 4\ 5}\ 4\ 3}$
type this:	6 - - . = = 3 3 = =	{ 2 = = 3 = = space - - 4 = = 5 = = space 4 - - }

		space -- 3 --
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There is also an older (and much different) keyboard available for use with Keyman. Sample sequences of keystrokes for that keyboard:


for this:	$\overline{35}$	$\overline{3\ 5}$	$\overline{\acute{3}\ 4}$
type this:	<code>3 _ 5 _</code>	<code>3 _ space _ 5 _</code>	<code>3 \. _ space _ 4 _</code>

for this:	$\underline{35}$	$\underline{3\ 5}$	$\underline{3\ 4\ 5}$
type this:	<code>\{ 3 5 \}</code>	<code>\{ 3 space 5 \}</code>	<code>\{ 3 space 4 space 5 \}</code>

for this:	$\overline{654}$	$\overline{\acute{i}\ \acute{i}7}$	$\overline{1.}'$
type this:	<code>\{ 6 _ 5 _ \} 4 _</code>	<code>1 \. _ space _ \{ 1 \. _ 7 _ \}</code>	<code>1 \. _ \'</code>

for this:	$\overline{6.\acute{3}}$	$\overline{\overline{23\ 45}\ 4\ 3}$
type this:	<code>6 _ spc ← . \ = 3 \. \ =</code>	<code>\{ 2 \ = 3 \ = spc _ 4 \ = 5 \ = spc 4 _ \} spc _ 3 _</code>

Workarounds: In some cases, the built in characters may not be able to do what you need, so you'll need a workaround. For example, to place a fermata above an overline, you can use a fermata in a text box. Or, to nest a (tie bar) slur inside of a (true) slur, consider using a "moon" drawing object for the smaller (less noticeable) slur. In both cases, getting the object anchor () right is important.

- a "moon" drawing object can look like a slur: 
- $\overline{\overline{5\ 5}\ 5}$ ← fermata workaround: use a text box (anchored to a character) containing a fermata.

Tests:

555555 555555 ← neighboring overlines should align (and link) at top; overdots belong under the overlines

555555 555555 ← Chinese: neighboring underlines should align (and link) at ??; underdots belong **under** the underlines

' 5' 5' 5' ← breath mark gets overlined just like a musical note does (though it's narrower)

5'5 5'5 ← breath mark spacing test (breath mark should be wide enough to not get overlined here)

5'5 5'5 ← Chinese: breath mark spacing test (breath mark should be wide enough to not get underlined here)

5.. 5.. ← periods should have distinct overlining; the middle period's double underline should only cover it and not its neighbors

5-- 5-- ← Chinese: hyphens should have distinct underlining; the middle hyphen's double underline should only cover it and not its neighbors

1234567 ← 1-6 should all be slashed, and 7 backslashed

1. 3̇ 1 2 5 5̇ ← single overlines, should all align (and link at top) except over the 2

77 77 77 77 44 44 ← The overlines should connect and align at the tops; the overdots should fit nicely below them. Chinese: underdots go under underlines.

77 77 77 ← Similar test, but unrealistic because the last pair of 7's uses both Indonesian and Chinese notations simultaneously. So, it's okay if this is garbled.

underlined text ← vertical spacing test (realistic)

555555⁵

5⁵ 55 ← fermata test: 1) above note, 2) above overdot, 3-4) above overlines. Only 1-2 are especially essential, so it's okay that 3-4 fail.

555555 ← vertical spacing test (realistic, Chinese system)

PLÁIÑ TÉXT (diacritics shouldn't overlap with previous line)

55555 ← vertical spacing test (unrealistically tough; one document really shouldn't mix overlines and underlines)

55555