

The TimesPinyin font

version 1.0

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TimesPinyin is a TrueType font, based on Times, designed for typing in the *pinyin* orthographic system for Chinese. It includes roman, bold, italic, and bold-italic faces. The font has been designed with the following general principles in mind:

- All tone-marked vowels are composed of a single, rather than a composite, graph. This improves the spacing and appearance of the characters, reduces the number of keystrokes, and simplifies cursor placement in word processors.
- The font sorts properly under ordinary Macintosh English sorting rules. For example, **ā á ǎ à** all sort with **a**. This improves database searching in programs like FileMaker Pro.
- The keystrokes are easy to remember since the font varies from ordinary Times in a logical and consistent fashion.
- The font is as similar to Times as possible. There is a minimum of differences so that TimesPinyin can function in almost all the same environments as ordinary Times (especially in environments which are limited to a single font). Entire text documents could be in the single font TimesPinyin.

The font was created by modifying a small subset of Times characters. Since Times already has vowels with acute and grave accents, e.g. **á ì Ó**, these serve for second- and fourth-tone syllables. The unlauded vowels, e.g. **ë ü Ī**, have been modified so that they can serve for first-tone syllables. The circumflex vowels, e.g. **â ô Ê**, have been modified so that they can serve for third-tone syllables. The correspondences are as follows:

<u>Times</u>	<u>TimesPinyin</u>	<u>Times</u>	<u>TimesPinyin</u>
ā á â à	ā á ǎ à	Ä Á Â À	Ā Á ǎ À
ë é ê è	ē é ǎ è	Ë É Ê È	Ē É ǎ È
ī í î ì	ī í ǎ ì		
ö ó ô ò	ō ó ǎ ò	Ö Ó Ô Ò	Ō Ó ǎ Ò
ü ú û ù	ū ú ǎ ù		

The general rule for keystrokes is quite simple, and will be familiar to anyone who regularly types accented vowels on a Macintosh:

- First tone: option-u + vowel
- Second tone: option-e + vowel
- Third tone: option-i + vowel
- Fourth tone: option-` + vowel

Since the toned vowel characters have the same ASCII codes as the accented vowels of Times, they will sort with the simple vowels in most applications (e.g. Word, FileMaker Pro).

Note that of the upper-case vowels, only **A**, **E**, and **O** have the four tone marks in TimesPinyin. This is because under the *pinyin* spelling rules, syllables may not begin with the letters **I** or **U**. It is therefore usually not necessary to have toned versions of these capital letters. Instead, the capital-**U** series has been adapted for representing toned versions of the vowel **ü**, and the capital-**I** series for the exclamatory vowel **ê**:

<u>Times</u>	<u>TimesPinyin</u>
Û Ú Ũ Û	ū ú ŭ ù
Ï Í Î Ï	ē é ě è

The umlaut-**u** series will properly sort with plain **u**. The circumflex-**e** series will not sort properly, but it is rarely used.

There are two additional changes. Recall that original Times **ü** has been modified to **ū** in TimesPinyin, and original **ê** has been modified to **ě**. But TimesPinyin also needs untoned versions of the vowels **ü** and **ê**. Unadorned **ü** may appear as a medial after **n-** and **l-** in such syllables as *liùè* and *nüè*. Furthermore, plain **ü** and **ê** may both be needed in a chart of Mandarin vowels or in a list of Mandarin syllable types. The Times characters **ÿ** and **Ÿ** have been used for this purpose:

<u>Times</u>	<u>TimesPinyin</u>	<u>Keystroke</u>
ÿ	ü	option-u + y
Ÿ	ê	option-u + Y

Since **y** is close to **u** in the alphabet, TimesPinyin **ü** will in most cases sort properly.

Finally, the existing Times font diacritic marks representing the four tones have remained unchanged: **ˉ ˊ ˋ ˋ**. These may be used alone to illustrate the *pinyin* tone-marking conventions, or may be placed after **m**, **n**, or **ng** to indicate toned syllabic nasal interjections, e.g. *mˉ*?

The vowels in Times pinyin are summarized below:

<u>Lower-case vowels</u>	<u>Times</u>	<u>TimesPinyin</u>	
plain series	a e i o u ÿ Ÿ	a e i o u ü ê	no tone
option-u series	ā ē ĭ ö ü Ũ Ĩ	ā ē ī ō ū ŭ ě	first tone
option-e series	á é í ó ú Ú Í	á é í ó ú ú é	second tone (unchanged)
option-i series	â ê î ô û Ũ Î	ǎ ě ĭ ǒ ŭ ě ě	third tone
option-` series	à è ì ò ù Û Ì	à è ì ò ù ù è	fourth tone (unchanged)

<u>Upper-case vowels</u>	<u>Times</u>	<u>TimesPinyin</u>	
plain series	A E O	A E O	no tone
option-u series	Ä Ê Ö	Ä Ê Ö	first tone
option-e series	Á É Ó	Á É Ó	second tone (unchanged)
option-i series	Â Ê Ô	Ä Ẻ Ỗ	third tone
option-` series	À È Ò	À È Ò	fourth tone (unchanged)

A note on SMALL CAPS:

When a font is put into small caps style, all the lower case letters are replaced with what is essentially the equivalent upper case letter in a smaller font size. In Times font, the results for vowels with diacritics are as follows (an upper-case letter is given for comparison of size):

<u>lower case</u>	<u>lower case small caps</u>
Aääää	AAÄÄÄ
Aúüü	AÚÜÜÜ

In the case of **a**, **e**, and **o**, small caps work fine in TimesPinyin. But in the case of **u** and **i**, they don't, because the upper-case equivalents of toned **u** and toned **i** are toned **ü** and toned **ê** rather than toned **U** and toned **I**. So while Zhāng placed in small caps yields ZHĀNG, Lín placed in small caps yields LĒN. Unfortunately, this means that small caps cannot consistently be used with TimesPinyin. In practice, by juggling between the Times and TimesPinyin fonts, you can get a small caps version of any toned vowel except **ü**, **ǔ**, **ī**, **ǐ**. For example, if I put Lín into Times font and small caps, I get LĒN, which is what I want.

Examples of TimesPinyin in roman, italic, bold, and bold italic faces:

ā	á	ǎ	à	ā	á	ǎ	à	ā	á	ǎ	à	ā	á	ǎ	à
ē	é	ě	è	ē	é	ě	è	ē	é	ě	è	ē	é	ě	è
ī	í	ǐ	ì	ī	í	ǐ	ì	ī	í	ǐ	ì	ī	í	ǐ	ì
ō	ó	ǒ	ò	ō	ó	ǒ	ò	ō	ó	ǒ	ò	ō	ó	ǒ	ò
ū	ú	ǔ	ù	ū	ú	ǔ	ù	ū	ú	ǔ	ù	ū	ú	ǔ	ù
ū	ú	ǔ	ù	ū	ú	ǔ	ù	ū	ú	ǔ	ù	ū	ú	ǔ	ù
ē	é	ě	è	ē	é	ě	è	ē	é	ě	è	ē	é	ě	è
Ā	Á	Ǻ	À	Ā	Á	Ǻ	À	Ā	Á	Ǻ	À	Ā	Á	Ǻ	À
Ē	É	Ĕ	È	Ē	É	Ĕ	È	Ē	É	Ĕ	È	Ē	É	Ĕ	È
Ō	Ó	Ǫ	Ò	Ō	Ó	Ǫ	Ò	Ō	Ó	Ǫ	Ò	Ō	Ó	Ǫ	Ò

Zhè shì yòng TimesPinyin xiě de. Měige zì dōu yǒu shēngdiào biāoji.
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