Shimenkan Fonts

User Guide

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To find out more about the project see https://github.com/silnrsi/font-shimenkan
To contact us visit https://software.sil.org/about/contact/

Introduction

Shimenkan is a superfamily of Unicode fonts for rendering Miao (Pollard) characters[1] used by multiple language groups, some having multiple orthographies. At present eight font packages are available:

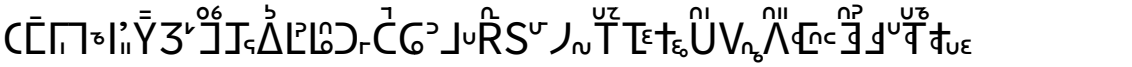
Font Name	Target Language-orthography	Language Tag
Salaowu	Wuding-Luquan Yi / Hei Yi / Nasu with glyph variant	ywqa
Sapushan	Large Flowery Miao / Dahua Miao / A-Hmao, traditional orthography	hmd
Shimenkan Guifan	Large Flowery Miao, normalised orthography	hmdd
Shimenkan GSM	Gepo / Bai Yi	ygp
Shimenkan MAS	Small Flowery Miao / Xiaohua Miao	sfm
Shimenkan MGS	Sinicized Miao / Waishu Miao / Hmong Shua	hmz
Shimenkan Zonghe	Aluo / Gan Yi	yna
Taogu	Lipo / Dong Lisu	lpo

For each language-orthography, four font families differing only in weight are provided for a wide range of uses. At present, each font family includes a regular and a bold typeface, resulting in a total of eight font files. It is hoped that an italic typeface will be added in the future.

Shown below are font samples for Sapushan grouped by font family and ordered by weight in descending order. In each font family, the first row shows the regular typeface and the second, bold:

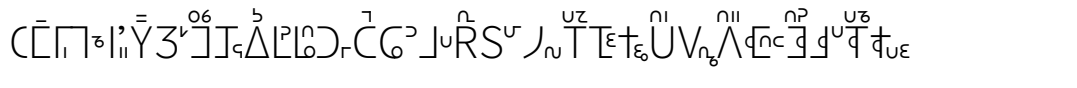
Sapushan Book

Sapushan

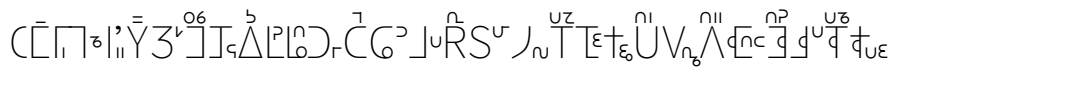


[1] The Miao block was first added to Unicode 6.1 and subsequently amended up through Unicode 12.0. See https://www.unicode.org/charts/PDF/U16F00.pdf for the latest code chart.

Sapushan Light



Sapushan Extra Light



The other font packages are based on the same design style and have the same weight distribution. Their primary differences lie in user preferences about glyph shapes and positions specific to each language-orthography. See **Language-specific Features** on page 9 for more details.

Installation

Microsoft Windows

For Windows 10, 8, and 7:

1. Select all the extracted font files (*.ttf).
2. Right-click on the selection.
3. Click “Install” (or “Install for all users” if available). If prompted to replace existing files, click “Yes”.

Alternatively, you can copy the extracted font files into the system Fonts folder (usually `C:\Windows\Fonts\`).

Macintosh

For Mac OS X v10.3 and later:

1. Open Font Book.
2. Go back to Finder and select all the extracted font files (*.ttf).
3. Drag and drop selection into Font Book.

Alternatively, you can copy the extracted font files into one of the predefined Fonts folders (e.g., `/Library/Fonts/`). See https://support.apple.com/en-ca/HT201722 for more information.

Linux

Copy the extracted font files (*.ttf) into `~/.fonts` for personal installation or into `/usr/share/fonts/` for system-wide installation. Then type `fc-cache -fv` to update the system font cache.

Note: Certain applications may not see the new fonts immediately. You may have to quit and restart the application for the fonts to become available.

Note: No keyboarding component is included. If you want to use the font to type Miao characters, you will need a separate keyboard manager.

Applications and Issues

The Shimenkan fonts are encoded in Unicode version 12.0 and generated in the TrueType font format. They contain sophisticated OpenType Layout logic to control:

- placement of vowels and finals at different tone positions
- positioning of modifiers
- kerning

To correctly render a run of text with these language-specific features enabled, you must be using applications and operating systems that provide an adequate level of support for OpenType as well as Unicode 12.0. At present, no known application fully supports both. Listed below are a few that exhibit reasonable rendering behaviours. Issues specific to each are also explained. Language-specific issues are preceded by the respective language tags (see **Introduction**).

Notepad (Windows 10)

Most Miao characters are rendered right in the built-in Notepad of Windows 10. The only known issues are:

1. **[hmd, hmz]:** When U+16F51 ◌𖬑 MIAO SIGN ASPIRATION follows one of the following initials:

   U+16F16 𖬖 MIAO LETTER LA

   U+16F18 𖬘 MIAO LETTER LHA

   U+16F1A 𖬚 MIAO LETTER TLHA

   U+16F3D 𖬽 MIAO LETTER ZZA

   finals at head position (U+16F91) are shifted left instead of centred. In the cases of LA and LHA at the start of a line, finals may even shift so leftward beyond the margin that they become cut or invisible.

2. **[hmd]:** When U+16F64 ◌𖭤 MIAO VOWEL SIGN IANG is at head position, it clashes with the aspiration mark that follows one of the above 4 initials. When combined with other initials without the aspiration mark, it is shifted right by so much that it clashes with the next syllable.

3. It is impossible to place or advance the cursor inside the syllable.

All these are due to limitations of the operating system and not our fonts. In particular, Windows 10 fails to handle both aspiration kerning and head vowel placement at the same time. It also fails to recognise the special OpenType Layout logic assigned to U+16F64. We hope a patch or update will be available soon to address these issues.

WordPad (Windows 10)

Like Notepad, the built-in WordPad of Window 10 renders most characters right. The only known issues are:

1. All the issues of Windows 10 Notepad.
2. Cursor tracking is confusing. While before an initial, pressing <right-arrow> advances the cursor **visually** all the way past the final or the aspiration mark, whichever is more to the right. Subsequent presses of <right-arrow> only advances the cursor **logically** past each character in the syllable. It is not until it has advanced past the last character (final or tone) when visual movement resumes.

Issue #2 is WordPad's limitation and not a defect of our fonts. Until better handling is available in a newer version, the only workaround is to get used to this anomaly through practice and carefulness.

LibreOffice Writer 6.2 and later (cross-platform)

While Writer does not have the issues of Notepad and WordPad, it has its own:

1. When a plain text file of Miao characters is opened in Writer, no OpenType Layout is applied even after setting the font to one in the Shimenkan family. This is a defect not of our fonts but of Writer. To work around it, copy and paste the contents of the text file into Writer and set the appropriate font.
2. **[sfm, ywqa, ygp, yna]:** The following 16 characters do not have correct positioning in the syllable (and cannot be rendered at all on the Macintosh platform):

   U+16F45 𖽅 MIAO LETTER BRI

   U+16F46 𖽆 MIAO LETTER SYI

   U+16F47 𖽇 MIAO LETTER DZYI

   U+16F48 𖽈 MIAO LETTER TE

   U+16F49 𖽉 MIAO LETTER TSE

   U+16F4A 𖽊 MIAO LETTER RTE

   U+16F4F 𖽏 MIAO SIGN CONSONANT MODIFIER BAR

   U+16F7F 𖾿 MIAO VOWEL SIGN UOG

   U+16F80 𖾀 MIAO VOWEL SIGN YUI

   U+16F81 𖾁 MIAO VOWEL SIGN OG

   U+16F82 𖾂 MIAO VOWEL SIGN OER

U+16F83 ◌𖼃 MIAO VOWEL SIGN VW

U+16F84 ◌𖼄 MIAO VOWEL SIGN IG

U+16F85 ◌𖼅 MIAO VOWEL SIGN EA

U+16F86 ◌𖼆 MIAO VOWEL SIGN IONG

U+16F87 ◌𖼇 MIAO VOWEL SIGN UI

This is because even the latest Writer 6.3.0.4 only supports Unicode 11.0 but the characters above are ones added in Unicode 12.0.

We hope a newer version of LibreOffice will be released soon that will resolve these issues completely.

Microsoft Word 2013 and later (Windows 10)

Of the applications listed here, Word is undoubtedly the most used. Yet it is also the one with the most issues in rendering Miao characters:

1. All the issues of Windows 10 Notepad.
2. Issue #2 of LibreOffice Writer 6.2+.
3. Although the Shimenkan fonts contain glyphs for some characters in the CJK Symbols and Punctuation block and the Halfwidth and Fullwidth Forms block, Word automatically chooses a default Asian text font to display these characters instead. In other applications (e.g., LibreOffice Writer), this can usually be overridden by highlighting the whole run of Miao text and changing the font to one in the Shimenkan family, but Word insists in font-linking and there is no workaround. This is not a defect of our fonts but rather a failure of Word to recognise Shimenkan as containing Asian (CJK) glyphs.

We hope a patch or update will be available soon to resolve all these issues.

macOS Applications

Most macOS applications do not provide full support for the Miao script, or for the layout mechanisms used in these fonts. The only common application that is able to render Miao text properly with these fonts at the present time is LibreOffice Writer.

Language-specific Features

Each of the multiple language-orthographies that use the Miao script has its own specific requirements on glyph shapes and positions as listed below:

Language Tag	Behaviour	Example
hmd	U+16F57 MIAO VOWEL SIGN AN has flat bottom	
	U+16F7A MIAO VOWEL SIGN EI has pointed hook	
	Aspiration (U+16F51 MIAO SIGN ASPIRATION) is rendered left of U+16F10 MIAO LETTER NA	
	Single final at foot position is right-aligned with aspiration if space is enough on left	
	U+16F64 MIAO VOWEL SIGN IANG is shifted right from centre when at head position	
hmdd	Warted initials have upper-right dot in lieu of wart	
	U+16F04 MIAO LETTER MA, U+16F10 MIAO LETTER NA, U+16F14 MIAO LETTER NNA, and U+16F23 MIAO LETTER NGA have alternate shapes	
	U+16F57 MIAO VOWEL SIGN AN has flat bottom	
	U+16F5E MIAO VOWEL SIGN EN and U+16F5F MIAO VOWEL SIGN ENG have flat top	
	U+16F7A MIAO VOWEL SIGN EI has pointed hook	
	Aspiration is not kerned into initial	
	Finals are not kerned into initial	
hmz	Aspiration is rendered left of U+16F04 MIAO LETTER MA, U+16F10 MIAO LETTER NA, and U+16F23 MIAO LETTER NGA	
	U+16F57 MIAO VOWEL SIGN AN has flat bottom	
	U+16F7A MIAO VOWEL SIGN EI has pointed hook	
lpo	U+16F04 MIAO LETTER MA, U+16F10 MIAO LETTER NA, and U+16F23 MIAO LETTER NGA have alternate shapes	
	U+16F33 MIAO LETTER SHA has slanted straight stem	
	U+16F57 MIAO VOWEL SIGN AN has flat bottom	
	U+16F58 MIAO VOWEL SIGN ANG has alternate tail loop	
	U+3001 IDEOGRAPHIC COMMA is triangular	

Language Tag	Behaviour	Example
sfm	Aspiration is rendered left of U+16F04 MIAO LETTER MA and U+16F10 MIAO LETTER NA	
	U+16F7A MIAO VOWEL SIGN EI has pointed hook	
	Finals are not kerned into initial	
	Finals are not kerned under aspiration	
	Four tone positions are used right of initial with U+16F8F MIAO TONE RIGHT shifted up from waist level and U+16F92 MIAO TONE BELOW relocated to below waist	
ygp	U+16F02 MIAO LETTER YI PA has centred stem	
	U+16F04 MIAO LETTER MA, U+16F10 MIAO LETTER NA, U+16F14 MIAO LETTER NNA, and U+16F23 MIAO LETTER NGA have alternate shapes	
	U+16F5C MIAO VOWEL SIGN W, U+16F60 MIAO VOWEL SIGN OEY, and U+16F73 MIAO VOWEL SIGN AE have near-centre stem	
	Finals are not kerned into initial	
	Finals are not kerned under aspiration	
yna	Single final at foot position is right-aligned with aspiration if space is enough on left	
ywqa	U+16F04 MIAO LETTER MA and U+16F10 MIAO LETTER NA have alternate shapes	
	U+16F2F MIAO LETTER DZHA has middle dot in lieu of wart	
	U+16F35 MIAO LETTER ZHA has alternate shape	

Technical Support

As these fonts and utilities are distributed at no cost, we are unable to provide a commercial level of personal technical support. We will, however, try to resolve problems that are reported to us.

We do hope that you will report problems so they can be addressed in future releases. Even if you are not having any specific problems, but have an idea on how this system could be improved, we want to hear your ideas and suggestions.

Please note that these fonts are intended for use by experienced computer users. Installing and using these fonts is not a trivial matter. The most effective technical support is usually provided by an experienced computer user who can personally sit down with you at your computer to troubleshoot the problem.

To report problems please create a new issue on the project site at https://github.com/silnrsi/font-shimenkan/issues, or contact us at: https://software.sil.org/about/contact/