Unicode Technical Note 56 - Representing Miao in Unicode

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Additional information is most welcome.

Overview

This document provides an introduction and overview on how to encode Miao/Pollard script text. It also gives information on the languages using the script and resources which are available.

Character storage

Each syllable is divided into an initial and a final. The initial is the initial consonant and the final consists of the vowel cluster[2] and the tone. The positioning of the vowels indicates the tone of a syllable. Nasalization and voicing are considered as initial rather than final.

The syllable structure is: $(N)C(M_1)(M_2)(M_3)V(V(V))(S/T)$:

- N is the nasalizer (16F50)
- C is the obligatory consonant (16F00..16F4A)
- M_1 is the nukta (16F4F)
- M_2 is either aspiration or reformed voicing (16F51 or 16F52)
- M_3 is reformed aspiration (16F53)
- V is one obligatory vowel mark which may be followed by two more (16F54..16F87)
- S is a "shifting" character which controls the height of the vowel (16F8F..16F92)
- T is a tone mark (16F93..16F9F)
- **S and T do not co-occur on a syllable.**

Rendering Example

Setting	Sample
default	꜀Ꮯ꜄ꞒꓧꞚꞈꞮ꞊ꞮꞚ�§ꞈꓵꞈᲨꞈꓓꞈ꜆Ꞔ꜂ꓘ꜆꜂꜀ᲬᲬ꜂ᲨꞈᲬ꜀ꝐᲧᲦꓓ꜀ꟄꞒᲦᲦꞈꓴᲦꞈᲦ꜀ꞈꝑꞈᲨᲨᲨ
Code Points	16F10 16F4F 16F7B 16F91 16F50 16F2E 16F54 16F91 16F07 16F79 16F26 16F58 16F8F 16F28 16F51 16F7B 16F43 16F66 16F91 16F3B 16F7A 16F90 16F1E 16F59 16F7E 16F91 16F21 16F60 16F1A 16F5C 16F91 16F16 16F73 16F90 16F18 16F61 16F90 16F04 16F77 16F10 16F75 16F91 16F23 16F71 16F90 16F00 16F6A 16F8F 16F35 16F62 16F91 16F3A 16F6B 16F90 16F33 16F68 16F0A 16F6A 16F57 16F91 16F0E 16F5E 16F8F 16F37 16F5F 16F42 16F61 16F79 16F91 16F08 16F64; 16F3D 16F61 16F7B 16F91 16F2F 16F61 16F5D 16F8F 16F1F 16F61 16F73 16F91 16F01 16F6A 16F90 16F0B 16F6A 16F58 16F91 16F38 16F6A 16F5E

Punctuation and Digits

Users of the Miao script freely use the same punctuation marks as Chinese and Latin.

Commonly used punctuation: . , : ; ? ! ' " - / = + - ( ) [ ] * / _ __ " "

、 3001 IDEOGRAPHIC COMMA (or FF64 HALFWIDTH IDEOGRAPHIC COMMA)

。 3002 IDEOGRAPHIC FULL STOP or (FF61 HALFWIDTH IDEOGRAPHIC FULL STOP)

Additionally, most Miao script users seem to follow the Chinese convention for indicating proper nouns:

- names of people -- single underline
- names of places -- double underline
- book titles -- wavy underline

Miao script users use Western-style digits 0-9.

Line breaking and word breaking

Earlier texts were written without spaces, but later texts may employ spaces as visible word breaks. Either way, a syllable of consonant, vowel(s) and tone is never split, and word breaks only occur at syllable boundaries. Line breaks can occur where words break, at spaces, or after non-open punctuation. A line break may not be inserted within a syllable or before non-open punctuation.

Rendering

Tone mark positioning

Four positioning tone marks are encoded. The default position for the vowels and finals is on the baseline. If another position is required, a tone positioning mark is utilized.

Setting	Sample	Code Points
default	Ꞇꞈ	16F23 16F6A 16F57
16F8F MIAO TONE RIGHT	Ꞇꞈ	16F23 16F6A 16F57 16F8F
16F90 MIAO TONE TOP RIGHT	Ꞇꞈ	16F23 16F6A 16F57 16F90
16F91 MIAO TONE ABOVE	Ꞇꞈ	16F23 16F6A 16F57 16F91
16F92 MIAO TONE BELOW	Ꞇꞈ	16F23 16F6A 16F57 16F92

For Xiaohua Miao / Small Flowery Miao [sfm] the four tone positions are used right of initial.

Code Points	default	sfm variant
16F90, 16F8F, 16F92, none	⅃ᵁ ⅃ᵁ ⅃ ⅃ᵤ	⅃ᵁ ⅃ᵁ ⅃ᵤ ⅃ᵤ

Aspiration mark

Sinicized Miao [hmz], Xiaohua Miao / Small Flowery Miao [sfm], and sometimes Large Flowery Miao / Dahua Miao / A-Hmao [hmd], put the aspiration mark (16F51) in front of the consonant rather than the default position of after. It is possible other languages would also do this.

Code Points	default	variant	language
16F04 16F51	Ɔ'	'Ɔ	hmz, sfm
16F10 16F51	Ϲ'	'Ϲ	hmd, hmz, sfm
16F23 16F51	Ɣ'	'Ɣ	hmz

Kerning

In general, aspiration and finals are kerned into the initial. Additionally, finals are usually kerned under aspiration. There are some languages which do not follow this behavior. These are listed in the table below.

default	variant	language
⅃̄ ⅃ᵁ ⅃ᵤ ꝉᵤ ⅃⸲ Vᵤ Yₙ	⅃ₒ⸗ ⅃ᵁ ⅃ᵁ ꝉᵤ ⅃⸲ Vᵤ Yₙ (final not kerned into initial)	hmd normalised
⅃̄ ⅃ᵁ ⅃ᵤ Гᵤ ꝉᵤ ⅃⸲ Vᵤ Yₙ	⅃ₒ⸗ ⅃ᵁ ⅃ᵁ Гᵤ ꝉᵤ ⅃⸲ Vᵤ Yₙ (final not kerned into initial)	sfm, ygp
⅃⸲ₒ ⅃⸲ᵋ	⅃⸲ₒ ⅃⸲ᵋ (final not kerned into aspiration)	sfm, ygp
Ḷ'Ь∧'Δ'Ḷ'Ь∧'Δ'	Ḷ' Ь' ∧' Δ' Ḷ' Ь' ∧' Δ' (aspiration not kerned into initial)	hmd normalised
ꝉᵤ ⅃⸲	ꝉᵤ ⅃⸲ (single final at foot position right-aligned with aspiration if enough space)	hmd, yna

Glyph variants

The recommendation on whether or not to encode variants, and especially the "wart" and "dot" separately or as variants, was made in the Miao Ad-Hoc Meeting Report L2/09-415.

"wart" vs "dot" variants

Some Miao consonants appear in the code charts with a "wart" attached to the glyph, usually on the left-hand side. In the Chuxiong orthography, a dot appears instead of the wart on these consonants. Because the user communities consider the appearance of the wart or dot to be a different way to write the same characters and not a difference of the character's identity, the differences in appearance are a matter of font style. There is one other variant for 16F2F MIAO LETTER DZHA in the **Other variants** table below.

This "wart" represents a pronunciation which may be voicing or half voicing or lenition or some other sort of "reduced tension".

The dot-like mark containing characters and "wart" characters are never used together.

Affects: 16F01 16F05 16F09 16F0B 16F0F 16F11 16F15 16F17 16F19 16F1B 16F1D 16F1F 16F22 16F24 16F29 16F2B 16F2D 16F2F 16F36 16F38 16F3C 16F3E 16F41 16F44 16F45 16F46 16F47

Setting	Sample
default (wart)	⅃ƷV⏉⏉Ⅽℂ⅃ᒶ⅄⅄ƷꞨꞨↃↃↃƷⅭꞦ†ƷΛ⅄Ɏ⅃⅃Ⅎ
alternate (dot)	⅃⅃V⏉⏉Ⅽⴹ⅃ᒶ⅄⅄⅃⅃ꞨↃↃↃƷⅭꞦ†ƷΛ⅄Ɏ⅃⅃Ⅎ

Other variants

Code Points	default	variant	language
3001	、	`	lpo
16F02	⏊	⏊	ygp
16F04	Ɔ	Ⅽ	hmd normalised
16F04	Ɔ	Ⅽ	lpo
16F04	Ɔ	)	ygp, ywq
16F05	Ɜ	⅃˙	hmd normalised
16F10	Ⅽ	Ⅽ	hmd normalised
16F10	Ⅽ	Ⅽ	lpo
16F10	Ⅽ	ⅭѴ	ygp, ywq
16F11	ⅭⅭ	Ⅽ˙	hmd normalised
16F14	ℂ	e	hmd normalised
16F14	ℂ	℮	ygp
16F15	ℂℂ	℮˙	hmd normalised
16F23	Ⴑ	Ⴑ	hmd normalised
16F23	Ⴑ	Ⴑ	lpo
16F23	Ⴑ	Ⴑ	ygp
16F24	Ⴑℂ	Ⴑ˙	hmd normalised
16F2F	ℂ⏉	Ⅎ⁝	ywq
16F33	Ɉ[3]	Ɉ	lpo
16F35	R	⅀[4]	one subgroup of ywq

Code Points	default	variant	language
16F57			hmd traditional, hmd normalized, hmz, lpo

Code Points	default	variant	language
	◌ᱺ	◌ᱹ (flat bottom)	
16F58	◌᱘	◌᱘	lpo
16F5C	◌ᱜ	◌ᱜ (near-centre stem)	ygp
16F5E	◌ᱞ	◌ᱞ (flat top)	hmd normalised
16F5F	◌ᱟ	◌ᱟ (flat top)	hmd normalised
16F60	◌ᱠ	◌ᱠ (near-centre stem)	ygp
16F73	◌ᱳ	◌ᱳ (near-centre stem)	ygp
16F74	◌ᱴ	◌ᱴ (near-centre stem)[5]	ygp
16F7A	◌ᱺ	◌ᱺ (pointed hook)	hmd traditional, hmd normalized, hmz, sfm

Languages currently using Miao/Pollard script

Large Flowery Miao / Dahua Miao / A-Hmao [hmd]

The Large Flowery Miao / Dahua Miao / A-Hmao language is the primary language that uses the Miao script.

Resources

Language tag: `hmd`

Opentype language system tag: `HMD`

SLDR: hmd

A-Hmao (draft): Pollard/Miao script orthography notes

Keyman keyboard: hmd

Picker: A-Hmao picker

Keyboard.cool: Miao block

Font: Sapushan - traditional orthography

Font: Shimenkan Guifan - normalised orthography

Generic Miao fonts: Noto Miao and Miao Unicode

Augmented Traditional character set (Enwall version plus wart with minor changes)

Consonant onsets									
ꓪ	�序	ꓚ	ꓼ	�	V	Ʌ̌	ꓔ	ꓔ̌	ꓓ
16F00	16F01	16F04	16F05	16F07	16F08	16F09	16F0A	16F0B	16F0E
ꓔ̣	ꓛ	ꓛ̌	ꓡ	ꓡ̌	ꓡ̦	ꓡ̦̌	Δ	Δ̌	ꓫ
16F0F	16F10	16F11	16F16	16F17	16F18	16F19	16F1A	16F1B	16F1E
ꓱ	ꓕ	ꓕ̌	ꓖ	ꓖ̌	ꓶ	I	ꓴ	ꓦ	ꓦ̌
16F1F	16F21	16F22	16F23	16F24	16F26	16F28	16F29	16F2E	16F2F
ꓳ	R	†	ꓷ	S	ꓝ	ꓝ̌	Λ	Λ̌	U
16F33	16F35	16F37	16F38	16F3A	16F3B	16F3C	16F3D	16F3E	16F42
Y									
16F43									

Modifiers	Nasalization	Aspiration
	ꓹ	◌ʼ
	16F50	16F51

Vowels and finals									
◌̱	◌ᴢ	◌ᴅ	◌ₒ	◌ᴆ	◌ᴄ	◌ᴇ	◌ᴇ̦	◌ᴄ̧	◌ᴨ
16F54	16F57	16F58	16F59	16F5C	16F5D	16F5E	16F5F	16F60	16F61
◌ᴧ	◌ᴧ̦	◌₌	◌ᴎ	◌ᴜ	◌ᴜ̃	◌ᴐ	◌ᴩ	◌ᴚ	◌ᴦ
16F62	16F64	16F66	16F68	16F6A	16F6B	16F71	16F73	16F75	16F77
◌ᴵ	◌ᵛ	◌ᴫ	◌₆						
16F79	16F7A	16F7B	16F7E						

Positioning tone marks		
MIAO TONE RIGHT	MIAO TONE TOP RIGHT	MIAO TONE ABOVE
16F8F	16F90	16F91

Normalised character set (L2/10-093, figure 1)

Consonant onsets									
⅃	⅃˙	Ɔ	Ɔ˙	Γ	V	V˙	T	T˙	Ⴀ
16F00	16F01	16F04	16F05	16F07	16F08	16F09	16F0A	16F0B	16F0E
Ⴀ˙	C	C˙	e	e˙	L	L˙	Lo	Lo˙	Δ
16F0F	16F10	16F11	16F14	16F15	16F16	16F17	16F18	16F19	16F1A
Δ˙	A	A˙	⅃	⅃˙	T	T˙	Ⴚ	Ⴚ˙	Ⴈ
16F1B	16F1C	16F1D	16F1E	16F1F	16F21	16F22	16F23	16F24	16F26
I	I˙	⊥	⊥˙	Ɛ	Ɛ˙	C	C˙	J	J
16F28	16F29	16F2A	16F2B	16F2C	16F2D	16F2E	16F2F	16F33	16F34
R	†	†˙	S	Ʒ	Ʒ˙	Λ	Λ˙	A	A˙
16F35	16F37	16F38	16F3A	16F3B	16F3C	16F3D	16F3E	16F40	16F41
U	Y	Y˙							
16F42	16F43	16F44							

Modifiers	Nasalization	Aspiration
	C	○ʼ
	16F50	16F51

Vowels and finals									
○˗	○ᴢ	○ᵭ	○ₒ	○ᵬ	○ᵋ	○ᵹ	○ᵠ	○ₙ	○ₙ
16F54	16F57	16F58	16F59	16F5C	16F5E	16F5F	16F60	16F61	16F62
○₌	○ᴻ	○ᵤ	○ᵤ	○ᴐ	○ᴘ	○ᴛ	○ᵣ	○ᵢ	○ᵥ
16F66	16F68	16F6A	16F6B	16F71	16F73	16F75	16F77	16F79	16F7A
○ǁ	○₆								
16F7B	16F7E								

Baseline tone marks						
T	з	M	Γ	s	L	t
16F93	16F94	16F95	16F96	16F97	16F98	16F99

Sorting (L2/10-093, figure 1)

&⌐ < ⌐˙ << ⌐' << Ć⌐ << Ć⌐˙ << Ć⌐'

&T < T˙ << T' << ĆT << ĆT˙ << ĆT'

&⌐ < ⌐˙ << ⌐' << Ć⌐ << Ć⌐˙ << Ć⌐'

&Ĺ < Ĺ˙ << Ĺ' << ĆĹ << ĆĹ˙ << ĆĹ'

&1 < 1˙ << 1' << Ć1 << Ć1˙ << Ć1'

&Δ < Δ˙ << Δ' << ĆΔ << ĆΔ˙ << ĆΔ'

&Ă < Ă˙ << Ă' << ĆĂ << ĆĂ˙ << ĆĂ'

&† < †˙ << †' << Ć† << Ć†˙ << Ć†'

&Ĺ < Ĺ˙ << Ĺ' << ĆĹ << ĆĹ˙ << ĆĹ'

&⅃ < ⅃˙ << ⅃' << Ć⅃ << Ć⅃˙ << Ć⅃'

&Y < Y˙ << Y' << ĆY << ĆY˙ << ĆY'

&V < V˙ << V'

&Λ < Λ˙ << Λ'

&A < A˙ << A'

&L < L˙ << L'

&ᒫ < ᒫ˙ << ᒫ'

&⅃ < ⅃˙ << ⅃'

&Ĺ < Ĺ˙ << Ĺ'

&Ʒ < Ʒ˙ << Ʒ'

&Ɛ < Ɛ˙ << Ɛ'

&Ə < Ə˙ << Ə'

&Ɓ < Ɓ˙ << Ɓ'

&I < I˙ << I'

&⌐ < ⅃ < S < Γ < ⅂ < R < U

& ◯˷

& ◯ᵒ << ◯ᵒ◯ᵁ << ◯ᵒ◯₆

& ◯ᵖ

& ◯ᴺ << ◯ᴺ◯ᵒ << ◯ᴺ◯ᴢ << ◯ᴺ◯ᵋ << ◯ᴺ◯ᴢ◯₆ << ◯ᴺ◯ᵒ◯₆ << ◯ᴺ◯ᵢᵢ << ◯ᴺ◯ᶜ

& ◯ᵁ << ◯ᵁ◯ᵒ << ◯ᵁ◯ᵢ << ◯ᵁ◯ᵥ << ◯ᵁ◯ᴢ << ◯ᵁ◯ᵋ << ◯ᵁ◯ᴢ◯₆ << ◯ᵁ◯ᵃ

& ◯ᵓ << ◯ᵓ◯ᴢ << ◯ᵓ◯₆ << ◯ᵓ◯ᵥ

& ◯ᵢ < ◯ᵥ < ◯ᵢᵢ < ◯ᶜ < ◯ᵇ

& ◯ᴢ << ◯ᴢ◯₆

& ◯ᵇ < ◯₌ < ◯ᴺ < ◯ᵧ < ◯ᵣ < ◯ᴧ < ◯ᵤ < ◯ᵋ < ◯ᵃ

Rendering

See also "wart" vs "dot" for special behavior. The traditional orthography uses the "wart" and the normalised orthography uses the "dot".

See also Kerning for special behavior.

See also Aspiration mark for special behavior.

Glyph variants (see also Glyph variants)

Setting	Sample
default	ꓳꓴꓚꓻꓚꓗꓖ ꓛꓜꓝꓽ
hmd alternates	ꓳꓴꓚꓻꓚꓗꓖ ꓛꓜꓝ꓾
normalized orthography alternates	ꓴꓴꓚꓚeeꓖꓖ ꓛꓜꓝ꓾

Sample graphic (traditional orthography)

Mark 1:1-4 (UBS).

Sinicized Miao / Waishu Miao / Hmong Shua [hmz]

Language tag: `hmz-Plrd`

Opentype language system tag: `HMZ`

SLDR: none

Keyboard: none

Font: Shimenkan MGS

Character set

Consonant onsets									
⅃	⅃	Ɔ	Γ	Ѵ	T	Ⲧ	C	L	Ⴑ
16F00	16F03	16F04	16F07	16F08	16F0A	16F0E	16F10	16F16	16F18
Δ	⅂	⊥	Ƅ	⅂	I	⊏	⌐	R	†
16F1A	16F1E	16F21	16F23	16F26	16F28	16F2E	16F33	16F35	16F37
S	Ʒ	Λ	U	Y					
16F3A	16F3B	16F3D	16F42	16F43					

Vowels and finals									
◌_	◌ｚ	◌ᴆ	◌o	◌c	◌ε	◌ε	◌ϛ	◌n	◌ᴖ
16F54	16F57	16F58	16F59	16F5D	16F5E	16F5F	16F60	16F61	16F62
◌=	◌ᴨ	◌ʊ	◌ʊ	◌ɔ	◌ꓔ	◌ᴦ	◌ᴠ	◌ıı	◌ᴅ
16F66	16F68	16F6A	16F6B	16F71	16F75	16F77	16F7A	16F7B	16F7E

Modifiers	Nasalization	Aspiration
	C	◌ʼ
	16F50	16F51

Positioning tone marks		
MIAO TONE RIGHT	MIAO TONE TOP RIGHT	MIAO TONE ABOVE
16F8F	16F90	16F91

Rendering

See also Aspiration mark for special behavior.

Glyph variants (see also Glyph variants)

Setting	Sample
default	◌ｚʊ
alternate	◌ｚʋ

Lipo / Dong Lisu / Eastern Lisu [lpo]

Language tag: `lpo`

Opentype language system tag: `LP0`

SLDR: lpo

Keyman keyboard: lpo

Font: Taogu

Character set

Consonant onsets									
⌐	⊥	Ɔ	Γ	V	T	Ⲧ	C	L	ᴌ
16F00	16F02	16F04	16F07	16F08	16F0A	16F0D	16F10	16F16	16F18
⅃	Ⅎ	Ɓ	⅂	I	Ⲉ	Ⲧ	⌡	R	†
16F1E	16F20	16F23	16F26	16F28	16F2E	16F30	16F33	16F35	16F37
ŧ	S	Ʒ	Λ	U	Y				
16F39	16F3A	16F3B	16F3D	16F42	16F43				

Modifiers	Aspiration
	◌’
	16F51

Vowels and finals									
◌˗	◌ᴜ	◌ᴢ	◌ᴛ	◌o	◌σ	◌ᴅ	◌c	◌n	◌ᴨ
16F54	16F55	16F57	16F58	16F59	16F5A	16F5C	16F5D	16F61	16F62
◌=	◌m	◌ᴎ	◌ᴜ	◌ᴜ	◌w	◌ᴐ	◌₉	◌ᴘ	◌ᴅ
16F66	16F67	16F68	16F6A	16F6B	16F6E	16F71	16F72	16F73	16F74
◌ᴨ	◌ᴦ	◌ı	◌ᴜ	◌ıı	◌₆				
16F76	16F78	16F79	16F7A	16F7B	16F7E				

Positioning tone marks	
MIAO TONE TOP RIGHT	MIAO TONE ABOVE
16F90	16F91

Rendering

Glyph variants (see also Glyph variants)

Setting	Sample
default	ƆⲤƁⳑᴢᴛ⟍
alternate	ƆⲤƁⳑᴢᴛ⟍

Sample graphic

LISU: EASTERN   **735**

POLLARD SYLLABIC SCRIPT

Mark 1:1-4 (UBS).

Xiaohua Miao / Small Flowery Miao [sfm]

Resources

Language tag: `sfm`

Opentype language system tag: `SFM`

SLDR: none

Keyman keyboard: none

Font: Shimenkan MAS

Character set (L2/17-345, figure 11)

Consonant onsets									
⅃	ⅎ	⅃	Ɔ	Γ	V	T	Ŧ	⊺	Ŧ
16F00	16F01	16F03	16F04	16F07	16F08	16F0A	16F0B	16F0E	16F0F
C	Ϲ	L	⅃	⅃ₒ	⅃ₒ	⅂	Ⅎ	⅂	Ⅎ
16F10	16F11	16F16	16F17	16F18	16F19	16F1E	16F1F	16F21	16F22
ᣟ	⅂	I	⅃	Ⅼ	Ⅎ	Ⅼ	Ɉ	R	†
16F23	16F26	16F28	16F29	16F2E	16F2F	16F32	16F33	16F35	16F37
ⱦ	S	Λ	U	Y	⅊	ⅉ	⅏		
16F38	16F3A	16F3D	16F42	16F43	16F45	16F46	16F47		

Modifiers	Nasalization	Aspiration
	Ϲ	◌’
	16F50	16F51

Vowels and finals									
◌_	◌ᴜ	◌ᴆ	◌ₒ	◌ᖯ	◌ᴄ	◌ᴇ	◌ᴇ	◌ᴨ	◌ᴧ
16F54	16F57	16F58	16F59	16F5C	16F5D	16F5E	16F5F	16F61	16F62
◌ᴧᵤ	◌ᴧᵦ	◌=	◌ᴎ	◌ᴎᵦ	◌ᵤ	◌ᴕ	◌ᴜᴜ	◌ᴜᴆ	◌ᴝ
16F63	16F64	16F66	16F68	16F69	16F6A	16F6B	16F6C	16F6D	16F70
◌ᴐ	◌ᴨ	◌ᴦ	◌ᴨ	◌ᵢ	◌ᵥ	◌�	◌ᴑ	◌ᴌ	◌ᵥ
16F71	16F75	16F77	16F78	16F79	16F7A	16F7B	16F7E	16F82	16F83

Positioning tone marks		
MIAO TONE RIGHT	MIAO TONE TOP RIGHT	MIAO TONE ABOVE
16F8F	16F90	16F91

Sorting (L2/17-345, figure 11)

Ordering of vowel digraphs is not the same as the chart, but it seemed to make the most sense to the author.

&Ⅼ <<Ⅼ’ << Ⅎ <<CⅬ << CⅬ’ << Cⅎ

&Γ

&⅂ << ⅂’

&I <<I’ << ⅃ << CI

&Y < R

&⅂ << ⅂’ << Ⅎ << C⅂ << C⅂’ << CℲ

&⅂ << ⅂’ << (⅂ << (⅂’ << (⅊

&ɿ << ɿ’ << ᑯ << (ɿ << (ɿ’ << (ᑯ

&Ꮮ << ᑲ << ᘁ << ᕹ

&ꓔ << ’ꓔ

&Ꮯ << ’Ꮯ << ᑕ

&Ꮆ << Ꮆ’

&⅃ << ⅃’ << ᒑ << (⅃ << (⅃’ << (ᒑ

&ᒍ << ᒯ

&Ꮪ

&T << T’ << ꓔ << (T << (T’ << (ꟻ

&Ꮀ << Ꮀ’ << ꓕ << (Ꮀ << (Ꮀ’ << (ꟼ

&† << †’ << ꓞ << († << (†’ << (ꓞ

&U < V < Λ

&⅃ << ⅃’ << ꓝ << (⅃ << (⅃’ << (ꓝ

&◌͏ < ◌ı < ◌ıı

&◌c₌

&◌ᴠ < ◌ᖯ

&◌ɳ << ◌ɳ̖ (◌ɳᴆ) << ◌ɳ̗ (◌ɳᴛ) << ◌ɳı << ◌ɳıı << ◌ɳc << ◌ɳᖯ << ◌ɳ̖(◌ɳo) << ◌ɳᴠ << ◌ɳᴡ << ◌ɳ6 << ◌ɳᴇ << ◌ɳᴇ̖

&◌ɾ < ◌ᴦ < ◌ᴒ

&◌ₒ << ◌ₒᴜ

&◌ᴜ << ◌ᴜᴇ << ◌ᴜᴇ̖ << ◌ᴜ6 << ◌ᴜᖯ

&◌ᴠ << ◌ᴠ6

&◌ᴐ << ◌ᴐᴄ << ◌ᴐᴡ << ◌ᴐ6 << ◌ᴐᴇ

&◌ʟ < ◌ɲ < ◌ᴎ < ◌ᴢ < ◌ᴅ̄ < ◌ᴇ < ◌ᴇ̖

&◌ᴜᴦ << ◌ᴜᴛ << ◌ᴜᴆ

Rendering

See also Tone mark positioning for unusual positioning in this language.

See also Kerning for special behavior.

See also Aspiration mark for special behavior.

Glyph variants (see also Glyph variants)

Setting	Sample
default	◌ᴜ
alternate	◌ᴠ

Sample graphic
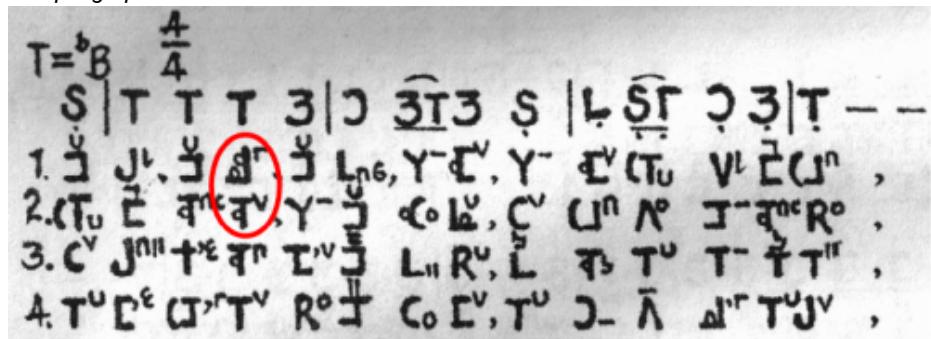
John (Figure 14, L2/17-345).

Bai Yi / Gepo [ygp]

Language tag: ygp

Opentype language system tag: YGP

SLDR: none

Keyman keyboard: ygp

Font: Shimenkan GSM

Character set (L2/17-345, figure 2)

Consonant onsets									
⅃	⊥	⊂	Γ	V	⊤	Ⴀ	ᴄ	ᴢ	Ⴒ
16F00	16F02	16F04	16F07	16F08	16F0A	16F0E	16F10	16F12	16F14
L	Ⴑ	⊐	Ϭ	⊓	I	⊥	Ⴀ	⊥	♩
16F16	16F18	16F1E	16F23	16F26	16F28	16F2A	16F2E	16F32	16F33
R	†	S	Ʒ	Λ	U	Y	Ϯ	♯	Ϯ
16F35	16F37	16F3A	16F3B	16F3D	16F42	16F43	16F48	16F49	16F4A

Modifiers	Nasalization	Aspiration
	ᴄ	○’
	16F50	16F51

Vowels and finals								
○̲	○ᴢ	○ᴆ	○ₒ	○ᴅ	○ᴄ	○ᴦ	○ₙ	○₌
16F54	16F57	16F58	16F59	16F5C	16F5D	16F60	16F61	16F66
○ᴎ	○ᴜ	○ɔ	○ʔ	○ᴛ	○ᴨ	○ᴦ	○ᵢ	○ᴜ
16F68	16F6A	16F71	16F73	16F75	16F76	16F77	16F79	16F7A
○ᴨ	○₆	○ₑ	○ᵥ	○ᴧ	○ᴆ	○ᴴ	○ᴕ	
16F7B	16F7E	16F81	16F83	16F84	16F85	16F86	16F87	

Positioning tone marks		
MIAO TONE RIGHT	MIAO TONE TOP RIGHT	MIAO TONE ABOVE
16F8F	16F90	16F91

Sorting (L2/17-345, figure 2)

&Y < L

&⅃ << ⅃’ << ᴄ⅃

&⊥ < Ϯ

&⊤ << ⊤’ << ᴄ⊤

&♯

&† << †’ << ᴄ†

&Γ < Ⴑ < ⊥

&Ⴀ << Ⴀ’ << ᴄႠ

&⊥

&⊐ << ⊐’ << ᴄ⊐

&�'ᑦ

&ᑦ << ᑦ' << ᑕᑦ

&ᐴ ‹ ᐱ ‹ ᑌ ‹ ᑐ ‹ ᑕ ‹ ᑖ ‹ ᑤ ‹ ᑛ ‹ ᔕ ‹ ᑐ

&ᑕ << ᑕ'

&ᓴ ‹ ᑕ ‹ ᖇ

&◌ᷓ ‹ ◌ᷖ

&◌ᷠ << ◌ᷠᷓ << ◌ᷠᷖ << ◌ᷠᷓ << ◌ᷠᷡ << ◌ᷠᷢ << ◌ᷠᷣ << ◌ᷠᷤ << ◌ᷠᷥ << ◌ᷠᷦ

&◌ᷧ

&◌ᷨ << ◌ᷨᷦ

&◌ᷩ << ◌ᷩᷓ << ◌ᷩᷖ << ◌ᷩᷡ << ◌ᷩᷢ << ◌ᷩᷣ << ◌ᷩᷤ << ◌ᷩᷥ << ◌ᷩᷦ

&◌ᷪ ‹ ◌ᷫ

&◌ᷬ << ◌ᷬᷫ

&◌ᷭ ‹ ◌ᷮ ‹ ◌ᷯ ‹ ◌ᷰ ‹ ◌ᷱ ‹ ◌ᷲ ‹ ◌ᷳ ‹ ◌ᷴ ‹ ◌᷵ ‹ ◌᷶ ‹ ◌᷷ ‹ ◌᷸ ‹ ◌᷹ ‹ ◌᷺ ‹ ◌᷻ ‹ ◌᷼ ‹ ◌᷽

Rendering

See also Kerning for special behavior.

Glyph variants (see also Glyph variants)

Setting	Sample
default	ᒧᑐᑕᑖᒡᐦᐢ
alternate	ᒧᑐᑕᑖᒡᐦᐢ

Sample text taken from L2/17-345, figure 1.

Setting	Sample	Code Points
ygp	ᑕᷗᷓᐃ᷒ᑕᷜᑖᷓᷖ'ᒪᷠᷡ	16F48 16F66 16F90 0020 16F2A 16F5C 16F91 0020 16F48 16F85 0020 16F2E 16F51 16F5C 16F91 0020 16F32 16F61 16F7B 16F90

Sample graphic

KOPU　　　　　　　　　　　　**674**

POLLARD SYLLABIC SCRIPT

Mark 1:1-4 (UBS).

Gan Yi / Dry Yi / Aluo / Laka [yna]

Resources

Language tag: yna

Opentype language system tag: YNA

SLDR: none

Keyman keyboard: yna

Font: Shimenkan Zonghe

Character set (L2/17-345, figure 10)

Consonant onsets									
⅃	⊥	Ɔ	Γ	V	T	Ɪ	Ⴀ	C	L
16F00	16F02	16F04	16F07	16F08	16F0A	16F0D	16F0E	16F10	16F16
Lₒ	⅃	⅃	ɢ	⅂	I	Ⅽ	ノ	R	†
16F18	16F1E	16F20	16F23	16F26	16F28	16F2E	16F33	16F35	16F37
ŧ	S	Ʒ	Λ	U	Y				
16F39	16F3A	16F3B	16F3D	16F42	16F43				

Modifiers	Consonant modifier bar	Nasalization	Aspiration
	○ı	Ϲ	○'
	16F4F	16F50	16F51

Vowels and finals									
○_	○ᴆ	○o	○ʮ	○c	○ε	○ᴨ	○ᴫ	○=	○m
16F54	16F58	16F59	16F5C	16F5D	16F5E	16F61	16F62	16F66	16F67
○ᴎ	○ᴜ	○ᴗ	○ω	○ɔ	○ʔ	○ɗ	○ᴨ	○ᴧ	○ᴦ
16F68	16F6A	16F6B	16F6E	16F71	16F73	16F74	16F75	16F76	16F77
○ı	○ıı	○ᴓ	○e	○ʟ					
16F79	16F7B	16F7E	16F81	16F82					

Positioning tone marks			
MIAO TONE RIGHT	MIAO TONE TOP RIGHT	MIAO TONE ABOVE	MIAO TONE BELOW
16F8F	16F90	16F91	16F92

Sorting (L2/17-345, figure 10)

&⅃ << ⊥ << ⅃'

&T << Ɪ << T'

&⅃ << ⅃ << ⅃'

&Ⅽ << Ⴀ << Ⅽ'

&† << ŧ << †'

&V

&Γ

&⅂ << ⅂'

&Ɔ

&Ⴎ << Ⴎ' << ₁Ⴎ

&Ⴑ < Ⴑₒ < Ⴑ < U < R < Ⴑ < Ʒ < S < Ʌ < Y < I

&₁Ⴎ << ᴄⴛ << Ⴒ'

&Ꝺ_ < Ꝺıı < Ꝺь < Ꝺc < Ꝺₑ < Ꝺₚ < Ꝺₙ

&Ꝺɔ << Ꝺɔm << Ꝺɔⱔ << Ꝺɔ=

&Ꝺn << Ꝺnm << Ꝺnıı << Ꝺnⱔ << Ꝺnₚ << Ꝺnₑ << Ꝺnc << Ꝺnw << Ꝺno << Ꝺn6 << Ꝺnь << Ꝺn= << Ꝺne

&Ꝺu << Ꝺuı << Ꝺuⱔ << Ꝺu=

&Ꝺⱔ < Ꝺꓶ < Ꝺᵣ

&Ꝺₒ << Ꝺₒь

&Ꝺₙ < Ꝺᵤ < Ꝺᵶ < Ꝺꓶ < Ꝺ6 < Ꝺₑ < Ꝺw < Ꝺm < Ꝺε < Ꝺı < Ꝺ=

Rendering

See also Kerning for special behavior.

Sample text taken from L2/17-345, figure 8.

Setting	Sample	Code Points
yna	₁Č̎Ⴑ'ьⴑno	16F10 16F4F 16F7B 16F91 0020 16F2E 16F51 16F5C 16F90 0020 16F2E 16F61 16F59

Sample graphic
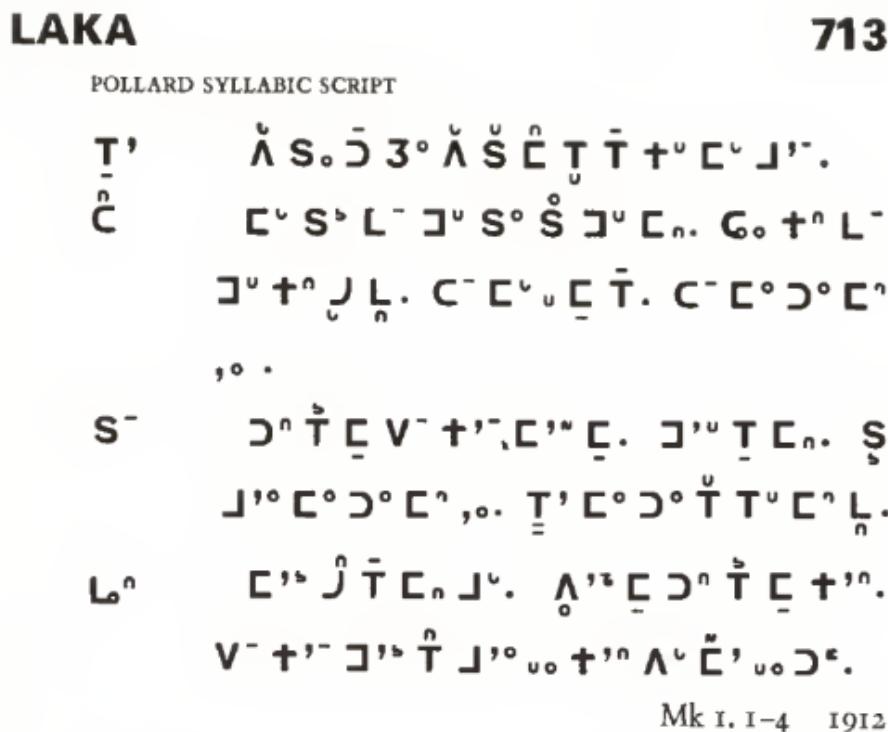
Mark 1:1-4 (UBS).

Hei Yi / Black Yi / Wuding-Luquan Yi / Nasu [ywq]
Resources

Language tag: ywq

Opentype language system tag: `YWQ`

SLDR: none

Keyman keyboard: ywq

Font: Salaowu - normalised orthography

Character set (L2/17-345, figure 5)

Consonant onsets									
꜀	꜂	꜄	꜇	Ⅴ	꜊	꜌	꜍	꜎	꜐
16F00	16F02	16F04	16F07	16F08	16F0A	16F0C	16F0D	16F0E	16F10
꜒	꜔	꜖	ꜘ	ꜞ	꜡	ꜣ	Ꜧ	Ꜩ	Ꜯ
16F12	16F14	16F16	16F18	16F1E	16F21	16F23	16F26	16F28	16F2E
ꜯ	ꜰ	ꜱ	ꜳ	Ꜵ	R	ꜷ	ꜹ	S	Ɜ
16F2F	16F30	16F31	16F33	16F34	16F35	16F37	16F39	16F3A	16F3B
Λ	U	Y							
16F3D	16F42	16F43							

Modifiers		Nasalization		Aspiration	
		꜐		◌꜑	
		16F50		16F51	

Vowels and finals									
◌	◌	◌	◌	◌	◌	◌	◌	◌	◌
16F54	16F58	16F59	16F5B	16F5C	16F5D	16F61	16F62	16F66	16F68
◌	◌	◌	◌	◌	◌	◌	◌	◌	◌
16F6A	16F6B	16F6E	16F71	16F73	16F76	16F78	16F79	16F7A	16F7B
◌	◌								
16F7F	16F80								

Positioning tone marks		
MIAO TONE RIGHT	MIAO TONE TOP RIGHT	MIAO TONE ABOVE
16F8F	16F90	16F91

Sorting (L2/17-345, figure 5)

Some of the vowel "digraphs" are what made sense to the author, not as the chart listed them.

&Y < Ꜩ

&꜀ < ꜂ << ꜐꜀ << ꜀꜑

&Γ < ˥ << ˥'

&L < ᒉ

&Ɛ < (Ɛ << Ɛ'

&ᒍ << (ᒍ << ᒍ'

&ᒑ < Ꮓ

&Ɛ << Ɛ'

&Ꮓ << (Ꮓ << Ꮓ'

&ŧ

&ŧ << (ŧ << ŧ'

&Т << (Т << Т'

&Ꮖ < Т < Ɛ < ᘔƐ < ᒍ < C < ᘔ < Ⴀ < ᒍ < ᒍ < Ꮐ < S < U < V < Ʌ < Ꮞ < R

&◯₋ < ◯ᵢ < ◯₌ < ◯ᵢᵢ < ◯ᵇ

&◯ₒ << ◯ₒᵇ

&◯ᵟ < ◯ᴩ < ◯ᵣ < ◯ᵣ

&◯ₙ << ◯ₙᵢᵢ << ◯ₙₒ << ◯ₙᵤ << ◯ₙ₌ << ◯ₙᵟ << ◯ₙᵇ

&◯ᵤ << ◯ᵤᵇ << ◯ᵤᵤ << ◯ᵤₒ << ◯ᵤc << ◯ᵤ₌ << ◯ᵤᵇ

&◯ᵤ < ◯ᴩ < ◯ᵤ < ◯ᵇ

&◯c << ◯cᵇ

&◯ₙ < ◯ᵤ < ◯ₙ < ◯w < ◯ᵇ

Rendering

Glyph variants (see also Glyph variants)

Setting	Sample
default	⊃Ⅽ⊏R
traditional	⊃Ⅽ⊏R
normalized	⊃Ⅽ⊏ᴽ

Sample text taken from L2/17-345, figure 7.

Setting	Sample	Code Points
ywq	Ꮖᵖ Ꮖᵇ Ꮓ Ⅼ	16F0D 16F73 16F90 0020 16F21 16F58 0020 16F12 16F7B 16F91 0020 16F30 16F59 16F5C 16F91

Sample graphic

NOSU   **972**

POLLARD SYLLABIC SCRIPT

Mark 1:1-4 (UBS).

Languages formerly using Miao/Pollard script

Kaduo / Kado [ktp]

Resources

Language tag: `ktp`

Character set

Unknown

Modifiers	Nasalization	Aspiration
	Ϲ	○ʼ
	16F50	16F51

Positioning tone marks	
MIAO TONE TOP RIGHT	MIAO TONE ABOVE
16F90	16F91

Rendering

Unknown

Sample graphic

Luke 3:1-4 (UBS).

Hmong Daw / White Miao / Sichuan Miao [mww]

Resources

Language tag: `mww-Plrd`

Opentype language system tag: `MWW`

No further information

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1 The distinctions made here for languages with "current" use and "former" use are based on information found in The Uses and Users of the Miao Script. However, that document wrongly indicates that `sfm` and `yna` are not in modern use.

2 A *vowel cluster* may include a nasal coda (the third V), but for rendering purposes it is treated the same as a vowel.

3 This variant glyph is more common than the one in the Unicode codecharts.

4 This rare, but distinctive, variant glyph is so different, perhaps it could be considered for encoding.

5 Current fonts do not support this variant glyph.