

Representing Miao in Unicode - Unicode Technical Note (proposed draft)

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This is a work in progress. Additional information is most welcome.

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- Languages formerly using Miao/Pollard script
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 - Kaduo / Kado [ktp]
 - Lakkia [lbc]
 - Hmong Daw [mww]
 - Xiaohua Miao / Small Flowery Miao [sfm]
 - Gan Yi / Aluo [yna]
- References

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 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)V(V(V))(S/T), where N is the nasalizer (U+16F50), C is the obligatory consonant (U+16F00..U+16F4A), M is a modifier (U+16F51 is an aspiration mark in current use and U+16F52..U+16F53 are two archaic voicing marks), V is one obligatory vowel mark which may be followed by two more (U+16F54..U+16F87), S is a “shifting” character which controls the height of the vowel (U+16F8F..U+16F92), and T (U+16F93..U+16F9F) is a tone mark; **S and T do not co-occur on a syllable.**

Rendering Example

Setting	Sample
default	,ĲCĹΠϣIᵢY̆Z˘J̄TçΔLʔǪƧꞤGꞮJᵛRŠʷJₙT̃Tε†ₑŬVₙΛⁱŁncȚḐḑḒḕṽ
USV	

Setting	Sample
	U+16F10 U+16F4F U+16F7B U+16F91 U+16F50 U+16F2E U+16F54 U+16F91 U+16F07 U+16F79 U+16F26 U+16F58 U+16F8F U+16F28 U+16F51 U+16F7B U+16F43 U+16F66 U+16F91 U+16F3B U+16F7A U+16F90 U+16F1E U+16F59 U+16F7E U+16F91 U+16F21 U+16F60 U+16F1A U+16F5C U+16F91 U+16F16 U+16F73 U+16F90 U+16F18 U+16F61 U+16F90 U+16F04 U+16F77 U+16F10 U+16F75 U+16F91 U+16F23 U+16F71 U+16F90 U+16F00 U+16F6A U+16F8F U+16F35 U+16F62 U+16F91 U+16F3A U+16F6B U+16F90 U+16F33 U+16F68 U+16F0A U+16F6A U+16F57 U+16F91 U+16F0E U+16F5E U+16F8F U+16F37 U+16F5F U+16F42 U+16F61 U+16F79 U+16F91 U+16F08 U+16F64; U+16F3D U+16F61 U+16F7B U+16F91 U+16F2F U+16F61 U+16F5D U+16F8F U+16F1F U+16F61 U+16F73 U+16F91 U+16F01 U+16F6A U+16F90 U+16F0B U+16F6A U+16F58 U+16F91 U+16F38 U+16F6A U+16F5E

Punctuation and Digits

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

All languages use these: . , / " = + - ()

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

Word breaking occurs only before an initial consonant. Syllables of consonant, vowels and tone are never split. Line breaks at spaces or after punctuation. A line break may not be inserted between any syllable, or before punctuation.

When the Big Flowery Miao [hmd] Bible was typeset, the translation team introduced word breaks. Earlier texts were written without word breaks, and this caused problems in typesetting. Word breaks were introduced in trial editions and were well accepted. Based on this positive feedback, the team included word breaks in the Miao Bible (YU SUEE YAN).

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 required.

Setting	Sample
default	ᄡᄢᄣ
U+16F8F MIAO TONE RIGHT	ᄡᄢᄣ
U+16F90 MIAO TONE TOP RIGHT	ᄡᄢᄣ
U+16F91 MIAO TONE ABOVE	ᄡᄢᄣ
U+16F92 MIAO TONE BELOW	ᄡᄢᄣ

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

USV	default	sfm variant
U+16F90, U+16F8F, U+16F92, none	𐌺𐌻𐌼𐌽𐌾	𐌺𐌻𐌼𐌽𐌾

Ligatures

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

Setting	default	hmz, sfm, hmd
U+16F04 U+16F51	ᵯ	ᵯ
U+16F10 U+16F51	ᵮ	ᵮ
U+16F23 U+16F51	ᵯ	ᵯ

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.

Setting	default	variant	language
Final not kerned into initial	ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ	ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ	hmd normalised, sfm, ygp
Final not kerned into aspiration	ᄃᄅ ᄃᄅ	ᄃᄅ ᄃᄅ	sfm, ygp
Aspiration not kerned into initial	ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ	ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ ᄃᄅ	hmd normalised
Single final at foot position right-aligned with aspiration if enough space	ᄃᄅ ᄃᄅ	ᄃᄅ ᄃᄅ	hmd, yna

Glyph variants

“wart” vs “dot” variants are listed below this table.

Setting	default	variant	language
U+3001	、	、	lpo
U+16F02	⊥	⊥	ygp
U+16F04	ᳵ	ᳵ	hmd normalised
U+16F04	ᳵ	ᳵ	lpo
U+16F04	ᳵ	ᳵ	ygp, ywq normalized
U+16F05	ᳶ	ᳶ̇	hmd normalised
U+16F10	ᳺ	ᳺ	hmd normalised
U+16F10	ᳺ	ᳺ	lpo
U+16F10	ᳺ	ᳺ	ygp, ywq normalized
U+16F11	᳻	᳻̇	hmd normalised
U+16F14	᳼	᳼	hmd normalised
U+16F14	᳼	᳼	ygp
U+16F15	᳽	᳽̇	hmd normalised
U+16F23	᳾	᳾	hmd normalised
U+16F23	᳾	᳾	lpo
U+16F23	᳾	᳾	ygp
U+16F24	᳿	᳿̇	hmd normalised
U+16F2F	᳼	᳼	ywq normalized
U+16F33	᳼	᳼	lpo
U+16F35	R	᳼	ywq normalized

Currently there is a question of whether the default glyph in the codecharts should be the one in the **default** column here. It is the author's belief that this should be changed as most languages use that form.

There is a request to encode the glyph found in the **variant** column for U+16F35. Although both glyphs represent the same character, this is a significant variant, and that request should at least be considered.

Setting	default	variant	language
U+16F57	ꨀ	ꨀ (flat bottom)	hmd traditional, hmd normalized, hmz, lpo
U+16F58	ꨁ	ꨁ	lpo
U+16F5C	ꨂ	ꨂ (near-centre stem)	ygp
U+16F5E	ꨃ	ꨃ (flat top)	hmd normalised
U+16F5F	ꨄ	ꨄ (flat top)	hmd normalised
U+16F60	ꨅ	ꨅ (near-centre stem)	ygp
U+16F73	ꨆ	ꨆ (near-centre stem)	ygp
U+16F7A	ꨇ	ꨇ (pointed hook)	hmd traditional, hmd normalized, hmz, sfm

“wart” vs “dot”

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.

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

Setting	Sample
default (wart)	ꨀꨁꨂꨃꨄꨅꨆꨇꨈꨉꨊꨋꨌꨍꨎꨏꨐꨑꨒꨓꨔꨕꨖꨗꨘꨙꨚꨛꨜꨝꨞꨟꨠꨡꨢꨣꨤꨥꨦꨧꨨꨩꨪꨫꨬꨭꨮꨯꨰꨱꨲꨳꨴꨵꨶ꨷꨸꨹꨺꨻꨼꨽꨾꨿ꩀꩁꩂꩃꩄꩅꩆꩇꩈꩉꩊꩋꩌꩍ꩎꩏꩐꩑꩒꩓꩔꩕꩖꩗꩘꩙꩚꩛꩜꩝꩞꩟ꩠꩡꩢꩣꩤꩥꩦꩧꩨꩩꩪꩫꩬꩭꩮꩯꩰꩱꩲꩳꩴꩵꩶ꩷꩸꩹ꩺꩻꩼꩽꩾꩿꪀꪁꪂꪃꪄꪅꪆꪇꪈꪉꪊꪋꪌꪍꪎꪏꪐꪑꪒꪓꪔꪕꪖꪗꪘꪙꪚꪛꪜꪝꪞꪟꪠꪡꪢꪣꪤꪥꪦꪧꪨꪩꪪꪫꪬꪭꪮꪯꪰꪱꪴꪲꪳꪵꪶꪷꪸꪹꪺꪻꪼꪽꪾ꪿ꫀ꫁ꫂ꫃꫄꫅꫆꫇꫈꫉꫊꫋꫌꫍꫎꫏꫐꫑꫒꫓꫔꫕꫖꫗꫘꫙꫚ꫛꫜꫝ꫞꫟ꫠꫡꫢꫣꫤꫥꫦꫧꫨꫩꫪꫫꫬꫭꫮꫯ꫰꫱ꫲꫳꫴꫵ꫶꫷꫸꫹꫺꫻꫼꫽꫾꫿꬀ꬁꬂꬃꬄꬅꬆ꬇꬈ꬉꬊꬋꬌꬍꬎ꬏꬐ꬑꬒꬓꬔꬕꬖ꬗꬘꬙꬚꬛꬜꬝꬞꬟ꬠꬡꬢꬣꬤꬥꬦ꬧ꬨꬩꬪꬫꬬꬭꬮ꬯ꬰꬱꬲꬳꬴꬵꬶꬷꬸꬹꬺꬻꬼꬽꬾꬿꭀꭁꭂꭃꭄꭅꭆꭇꭈꭉꭊꭋꭌꭍꭎꭏꭐꭑꭒꭓꭔꭕꭖꭗꭘꭙꭚ꭛ꭜꭝꭞꭟꭠꭡꭢꭣꭤꭥꭦꭧꭨꭩ꭪꭫꭬꭭꭮꭯ꭰꭱꭲꭳꭴꭵꭶꭷꭸꭹꭺꭻꭼꭽꭾꭿꮀꮁꮂꮃꮄꮅꮆꮇꮈꮉꮊꮋꮌꮍꮎꮏꮐꮑꮒꮓꮔꮕꮖꮗꮘꮙꮚꮛꮜꮝꮞꮟꮠꮡꮢꮣꮤꮥꮦꮧꮨꮩꮪꮫꮬꮭꮮꮯꮰꮱꮲꮳꮴꮵꮶꮷꮸꮹꮺꮻꮼꮽꮾꮿꯀꯁꯂꯃꯄꯅꯆꯇꯈꯉꯊꯋꯌꯍꯎꯏꯐꯑꯒꯓꯔꯕꯖꯗꯘꯙꯚꯛꯜꯝꯞꯟꯠꯡꯢꯣꯤꯥꯦꯧꯨꯩꯪ꯫꯬꯭꯮꯯꯰꯱꯲꯳꯴꯵꯶꯷꯸꯹꯺꯻꯼꯽꯾꯿가각갂갃간갅갆갇갈갉갊갋갌갍갎갏감갑값갓갔강갖갗갘같갚갛개객갞갟갠갡갢갣갤갥갦갧갨갩갪갫갬갭갮갯갰갱갲갳갴갵갶갷갸갹갺갻갼갽갾갿걀걁걂걃걄걅걆걇걈걉걊걋걌걍걎걏걐걑걒걓걔걕걖걗걘걙걚걛걜걝걞걟걠걡걢걣걤걥걦걧걨걩걪걫걬걭걮걯거걱걲걳건걵걶걷걸걹걺걻걼걽걾걿검겁겂것겄겅겆겇겈겉겊겋게겍겎겏겐겑겒겓겔겕겖겗겘겙겚겛겜겝겞겟겠겡겢겣겤겥겦겧겨격겪겫견겭겮겯결겱겲겳겴겵겶겷겸겹겺겻겼경겾겿곀곁곂곃계곅곆곇곈곉곊곋곌곍곎곏곐곑곒곓곔곕곖곗곘곙곚곛곜곝곞곟고곡곢곣곤곥곦곧골곩곪곫곬곭곮곯곰곱곲곳곴공곶곷곸곹곺곻과곽곾곿관괁괂괃괄괅괆괇괈괉괊괋괌괍괎괏괐광괒괓괔괕괖괗괘괙괚괛괜괝괞괟괠괡괢괣괤괥괦괧괨괩괪괫괬괭괮괯괰괱괲괳괴괵괶괷괸괹괺괻괼괽괾괿굀굁굂굃굄굅굆굇굈굉굊굋굌굍굎굏교굑굒굓굔굕굖굗굘굙굚굛굜굝굞굟굠굡굢굣굤굥굦굧굨굩굪굫구국굮굯군굱굲굳굴굵굶굷굸굹굺굻굼굽굾굿궀궁궂궃궄궅궆궇궈궉궊궋권궍궎궏궐궑궒궓궔궕궖궗궘궙궚궛궜궝궞궟궠궡궢궣궤궥궦궧궨궩궪궫궬궭궮궯궰궱궲궳궴궵궶궷궸궹궺궻궼궽궾궿귀귁귂귃귄귅귆귇귈귉귊귋귌귍귎귏귐귑귒귓귔귕귖귗귘귙귚귛규귝귞귟균귡귢귣귤귥귦귧귨귩귪귫귬귭귮귯귰귱귲귳귴귵귶귷그극귺귻근귽귾귿글긁긂긃긄긅긆긇금급긊긋긌긍긎긏긐긑긒긓긔긕긖긗긘긙긚긛긜긝긞긟긠긡긢긣긤긥긦긧긨긩긪긫긬긭긮긯기긱긲긳긴긵긶긷길긹긺긻긼긽긾긿김깁깂깃깄깅깆깇깈깉깊깋까깍깎깏깐깑깒깓깔깕깖깗깘깙깚깛깜깝깞깟깠깡깢깣깤깥깦깧깨깩깪깫깬깭깮깯깰깱깲깳깴깵깶깷깸깹깺깻깼깽깾깿꺀꺁꺂꺃꺄꺅꺆꺇꺈꺉꺊꺋꺌꺍꺎꺏꺐꺑꺒꺓꺔꺕꺖꺗꺘꺙꺚꺛꺜꺝꺞꺟꺠꺡꺢꺣꺤꺥꺦꺧꺨꺩꺪꺫꺬꺭꺮꺯꺰꺱꺲꺳꺴꺵꺶꺷꺸꺹꺺꺻꺼꺽꺾꺿껀껁껂껃껄껅껆껇껈껉껊껋껌껍껎껏껐껑껒껓껔껕껖껗께껙껚껛껜껝껞껟껠껡껢껣껤껥껦껧껨껩껪껫껬껭껮껯껰껱껲껳껴껵껶껷껸껹껺껻껼껽껾껿꼀꼁꼂꼃꼄꼅꼆꼇꼈꼉꼊꼋꼌꼍꼎꼏꼐꼑꼒꼓꼔꼕꼖꼗꼘꼙꼚꼛꼜꼝꼞꼟꼠꼡꼢꼣꼤꼥꼦꼧꼨꼩꼪꼫꼬꼭꼮꼯꼰꼱꼲꼳꼴꼵꼶꼷꼸꼹꼺꼻꼼꼽꼾꼿꽀꽁꽂꽃꽄꽅꽆꽇꽈꽉꽊꽋꽌꽍꽎꽏꽐꽑꽒꽓꽔꽕꽖꽗꽘꽙꽚꽛꽜꽝꽞꽟꽠꽡꽢꽣꽤꽥꽦꽧꽨꽩꽪꽫꽬꽭꽮꽯꽰꽱꽲꽳꽴꽵꽶꽷꽸꽹꽺꽻꽼꽽꽾꽿궀궁궂궃궄궅궆궇궈궉궊궋권궍궎궏궐궑궒궓궔궕궖궗궘궙궚궛궜궝궞궟궠궡궢궣궤궥궦궧궨궩궪궫궬궭궮궯궰궱궲궳궴궵궶궷궸궹궺궻궼궽궾궿귀귁귂귃귄귅귆귇귈귉귊귋귌귍귎귏귐귑귒귓귔귕귖귗귘귙귚귛규귝귞귟균귡귢귣귤귥귦귧귨귩귪귫귬귭귮귯귰귱귲귳귴귵귶귷그극귺귻근귽귾귿글긁긂긃긄긅긆긇금급긊긋긌긍긎긏긐긑긒긓긔긕긖긗긘긙긚긛긜긝긞긟긠긡긢긣긤긥긦긧긨긩긪긫긬긭긮긯기긱긲긳긴긵긶긷길긹긺긻긼긽긾긿김깁깂깃깄깅깆깇깈깉깊깋까깍깎깏깐깑깒깓깔깕깖깗깘깙깚깛깜깝깞깟깠깡깢깣깤깥깦깧깨깩깪깫깬깭깮깯깰깱깲깳깴깵깶깷깸깹깺깻깼깽깾깿꺀꺁꺂꺃꺄꺅꺆꺇꺈꺉꺊꺋꺌꺍꺎꺏꺐꺑꺒꺓꺔꺕꺖꺗꺘꺙꺚꺛꺜꺝꺞꺟꺠꺡꺢꺣꺤꺥꺦꺧꺨꺩꺪꺫꺬꺭꺮꺯꺰꺱꺲꺳꺴꺵꺶꺷꺸꺹꺺꺻꺼꺽꺾꺿껀껁껂껃껄껅껆껇껈껉껊껋껌껍껎껏껐껑껒껓껔껕껖껗께껙껚껛껜껝껞껟껠껡껢껣껤껥껆껇껈껉껊껋껌껍껎껏껐껑껒껓껔껕껖껗께껙껚껛껜껝껞껟껠껡껢껣껤껥껦껧껨껩껪껫껬껭껮껯껰껱껲껳껴껵껶껷껸껹껺껻껼껽껾껿꼀꼁꼂꼃꼄꼅꼆꼇꼈꼉꼊꼋꼌꼍꼎꼏꼐꼑꼒꼓꼔꼕꼖꼗꼘꼙꼚꼛꼜꼝꼞꼟꼠꼡꼢꼣꼤꼥꼦꼧꼨꼩꼪꼫꼬꼭꼮꼯꼰꼱꼲꼳꼴꼵꼶꼷꼸꼹꼺꼻꼼꼽꼾꼿꽀꽁꽂꽃꽄꽅꽆꽇꽈꽉꽊꽋꽌꽍꽎꽏꽐꽑꽒꽓꽔꽕꽖꽗꽘꽙꽚꽛꽜꽝꽞꽟꽠꽡꽢꽣꽤꽥꽦꽧꽨꽩꽪꽫꽬꽭꽮꽯꽰꽱꽲꽳꽴꽵꽶꽷꽸꽹꽺꽻꽼꽽꽾꽿궀궁궂궃궄궅궆궇궈궉궊궋권궍궎궏궐궑궒궓궔궕궖궗궘궙궚궛궜궝궞궟궠궡궢궣궤궥궦궧궨궩궪궫궬궭궮궯궰궱궲궳궴궵궶궷궸궹궺궻궼궽궾궿귀귁귂귃귄귅귆귇귈귉귊귋귌귍귎귏귐귑귒귓귔귕귖귗귘귙귚귛규귝귞귟균귡귢귣귤귥귦귧귨귩귪귫귬귭귮귯귰귱귲귳귴귵귶귷그극귺귻근귽귾귿글긁긂긃긄긅긆긇금급긊긋긌긍긎긏긐긑긒긓긔긕긖긗긘긙긚긛긜긝긞긟긠긡긢긣긤긥긦긧긨긩긪긫긬긭긮긯기긱긲긳긴긵긶긷길긹긺긻긼긽긾긿김깁깂깃깄깅깆깇깈깉깊깋까깍깎깏깐깑깒깓깔깕깖깗깘깙깚깛깜깝깞깟깠깡깢깣깤깥깦깧깨깩깪깫깬깭깮깯깰깱깲깳깴깵깶깷깸깹깺깻깼깽깾깿꺀꺁꺂꺃꺄꺅꺆꺇꺈꺉꺊꺋꺌꺍꺎꺏꺐꺑꺒꺓꺔꺕꺖꺗꺘꺙꺚꺛꺜꺝꺞꺟꺠꺡꺢꺣꺤꺥꺦꺧꺨꺩꺪꺫꺬꺭꺮꺯꺰꺱꺲꺳꺴꺵꺶꺷꺸꺹꺺꺻꺼꺽꺾꺿껀껁껂껃껄껅껆껇껈껉껊껋껌껍껎껏껐껑껒껓껔껕껖껗께껙껚껛껜껝껞껟껠껡껢껣껤껥껆껇껈껉껊껋껌껍껎껏껐껑껒껓껔껕껖껗께껙껚껛껜껝껞껟껠껡껢껣껤껥껦껧껨껩껪껫껬껭껮껯껰껱껲껳껴껵껶껷껸껹껺껻껼껽껾껿꼀꼁꼂꼃꼄꼅꼆꼇꼈꼉꼊꼋꼌꼍꼎꼏꼐꼑꼒꼓꼔꼕꼖꼗꼘꼙꼚꼛꼜꼝꼞꼟꼠꼡꼢꼣꼤꼥꼦꼧꼨꼩꼪꼫꼬꼭꼮꼯꼰꼱꼲꼳꼴꼵꼶꼷꼸꼹꼺꼻꼼꼽꼾꼿꽀꽁꽂꽃꽄꽅꽆꽇꽈꽉꽊꽋꽌꽍꽎꽏꽐꽑꽒꽓꽔꽕꽖꽗꽘꽙꽚꽛꽜꽝꽞꽟꽠꽡꽢꽣꽤꽥꽦꽧꽨꽩꽪꽫꽬꽭꽮꽯꽰꽱꽲꽳꽴꽵꽶꽷꽸꽹꽺꽻꽼꽽꽾꽿궀궁궂궃궄궅궆궇궈궉궊궋권궍궎궏궐궑궒궓궔궕궖궗궘궙궚궛궜궝궞궟궠궡궢궣궤궥궦궧궨궩궪궫궬궭궮궯궰궱궲궳궴궵궶궷궸궹궺궻궼궽궾궿귀귁귂귃귄귅귆귇귈귉귊귋귌귍귎귏귐귑귒귓귔귕귖귗귘귙귚귛규귝귞귟균귡귢귣귤귥귦귧귨귩귪귫귬귭귮귯귰귱귲귳귴귵귶귷그극귺귻근귽귾귿글긁긂긃긄긅긆긇금급긊긋긌긍긎긏긐긑긒긓긔긕긖긗긘긙긚긛긜긝긞긟긠긡긢긣긤긥긦긧긨긩긪긫긬긭긮긯기긱긲긳긴긵긶긷길긹긺긻긼긽긾긿김깁깂깃깄깅깆깇깈깉깊깋까깍깎깏깐깑깒깓깔깕깖깗깘깙깚깛깜깝깞깟깠깡깢깣깤깥깦깧깨깩깪깫깬깭깮깯깰깱깲깳깴깵깶깷깸깹깺깻깼깽깾깿꺀꺁꺂꺃꺄꺅꺆꺇꺈꺉꺊꺋꺌꺍꺎꺏꺐꺑꺒꺓꺔꺕꺖꺗꺘꺙꺚꺛꺜꺝꺞꺟꺠꺡꺢꺣꺤꺥꺦꺧꺨꺩꺪꺫꺬꺭꺮꺯꺰꺱꺲꺳꺴꺵꺶꺷꺸꺹꺺꺻꺼꺽꺾꺿껀껁껂껃껄껅껆껇껈껉껊껋껌껍껎껏껐껑껒껓껔껕껖껗께껙껚껛껜껝껞껟껠껡껢껣껤껥껆껇껈껉껊껋껌껍껎껏껐껑껒껓껔껕껖껗께껙껚껛껜껝껞껟껠껡껢껣껤껥껦껧껨껩껪껫껬껭껮껯껰껱껲껳껴껵껶껷껸껹껺껻껼껽껾껿꼀꼁꼂꼃꼄꼅꼆꼇꼈꼉꼊꼋꼌꼍꼎꼏꼐꼑꼒꼓꼔꼕꼖꼗꼘꼙꼚꼛꼜꼝꼞꼟꼠꼡꼢꼣꼤꼥꼦꼧꼨꼩꼪꼫꼬꼭꼮꼯꼰꼱꼲꼳꼴꼵꼶꼷꼸꼹꼺꼻꼼꼽꼾꼿꽀꽁꽂꽃꽄꽅꽆꽇꽈꽉꽊꽋꽌꽍꽎꽏꽐꽑꽒꽓꽔꽕꽖꽗꽘꽙꽚꽛꽜꽝꽞꽟꽠꽡꽢꽣꽤꽥꽦꽧꽨꽩꽪꽫꽬꽭꽮꽯꽰꽱꽲꽳꽴꽵꽶꽷꽸꽹꽺꽻꽼꽽꽾꽿궀궁궂궃궄궅궆궇궈궉궊궋권궍궎궏궐궑궒궓궔궕궖궗궘궙궚궛궜궝궞궟궠궡궢궣궤궥궦궧궨궩궪궫궬궭궮궯궰궱궲궳궴궵궶궷궸궹궺궻궼궽궾궿귀귁귂귃귄귅귆귇귈귉귊귋귌귍귎귏귐귑귒귓귔귕귖귗귘귙귚귛규귝귞귟균귡귢귣귤귥귦귧귨귩귪귫귬귭귮귯귰귱귲귳귴귵귶귷그극귺귻근귽귾귿글긁긂긃긄긅긆긇금급긊긋긌긍긎긏긐긑긒긓긔긕긖긗긘긙긚긛긜긝긞긟긠긡긢긣긤긥긦긧긨긩긪긫긬긭긮긯기긱긲긳긴긵긶긷길긹긺긻긼긽긾긿김깁깂깃깄깅깆깇깈깉깊깋까깍깎깏깐깑깒깓깔깕깖깗깘깙깚깛깜깝깞깟깠깡깢깣깤깥깦깧깨깩깪깫깬깭깮깯깰깱깲깳깴깵깶깷깸깹깺깻깼깽깾깿꺀꺁꺂꺃꺄꺅꺆꺇꺈꺉꺊꺋꺌꺍꺎꺏꺐꺑꺒꺓꺔꺕꺖꺗꺘꺙꺚꺛꺜꺝꺞꺟꺠꺡꺢꺣꺤꺥꺦꺧꺨꺩꺪꺫꺬꺭꺮꺯꺰꺱꺲꺳꺴꺵꺶꺷꺸꺹꺺꺻꺼꺽꺾꺿껀껁껂껃껄껅껆껇껈껉껊껋껌껍껎껏껐껑껒껓껔껕껖껗께껙껚껛껜껝껞껟껠껡껢껣껤껥껆껇껈껉껊껋껌껍껎껏껐껑껒껓껔껕껖껗께껙껚껛껜껝껞껟껠껡껢껣껤껥껦껧껨껩껪껫껬껭껮껯껰껱껲껳껴껵껶껷껸껹껺껻껼껽껾껿꼀꼁꼂꼃꼄꼅꼆꼇꼈꼉꼊꼋꼌꼍꼎꼏꼐꼑꼒꼓꼔꼕꼖꼗꼘꼙꼚꼛꼜꼝꼞꼟꼠꼡꼢꼣꼤꼥꼦꼧꼨꼩꼪꼫꼬꼭꼮꼯꼰꼱꼲꼳꼴꼵꼶꼷꼸꼹꼺꼻꼼꼽꼾꼿꽀꽁꽂꽃꽄꽅꽆꽇꽈꽉꽊꽋꽌꽍꽎꽏꽐꽑꽒꽓꽔꽕꽖꽗꽘꽙꽚꽛꽜꽝꽞꽟꽠꽡꽢꽣꽤꽥꽦꽧꽨꽩꽪꽫꽬꽭꽮꽯꽰꽱꽲꽳꽴꽵꽶꽷꽸꽹꽺꽻꽼꽽꽾꽿궀궁궂궃궄궅궆궇궈궉궊궋권궍궎궏궐궑궒궓궔궕궖궗궘궙궚궛궜궝궞궟궠궡궢궣궤궥궦궧궨궩궪궫궬궭궮궯궰궱궲궳궴궵궶궷궸궹궺궻궼궽궾궿귀귁귂귃귄귅귆귇귈귉귊귋귌귍귎귏귐귑귒귓귔귕귖귗귘귙귚귛규귝귞귟균귡귢귣귤귥귦귧귨귩귪귫귬귭귮귯귰귱귲귳귴귵귶귷그극귺귻근귽귾귿글긁긂긃긄긅긆긇금급긊긋긌긍긎긏긐긑긒긓긔긕긖긗긘긙긚긛긜긝긞긟긠긡긢긣긤긥긦긧긨긩긪긫긬긭긮긯기긱긲긳긴긵긶긷길긹긺긻긼긽긾긿김깁깂깃깄깅깆깇깈깉깊깋까깍깎깏깐깑깒깓깔깕깖깗깘깙깚깛깜깝깞깟깠깡깢깣

Generic Miao fonts: [Noto Miao](#) and [Miao Unicode](#)

Character set

Consonant onsets									
ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ
16F00	16F01	16F04	16F05	16F07	16F08	16F09	16F0A	16F0B	16F0E
ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ
16F0F	16F10	16F11	16F14	16F15	16F16	16F17	16F18	16F19	16F1A
ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ
16F1B	16F1C	16F1D	16F1E	16F1F	16F21	16F22	16F23	16F24	16F26
ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ
16F28	16F29	16F2A	16F2B	16F2C	16F2D	16F2E	16F2F	16F33	16F34
ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ
16F35	16F37	16F38	16F3A	16F3B	16F3C	16F3D	16F3E	16F40	16F41
ᵿ	ᵿ	ᵿ							
16F42	16F43	16F44							

Modifiers	Nasalization	Aspiration
	ᵿ	ᵿ
	16F50	16F51

The keyboard includes U+16F5D ᵿ and U+16F74 ᵿ although they are not in Figure 1 [L2/10-093](#).

Vowels and finals									
ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ
16F54	16F57	16F58	16F59	16F5C	16F5E	16F5F	16F60	16F61	16F62
ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ
16F66	16F68	16F6A	16F6B	16F71	16F73	16F75	16F77	16F79	16F7A
ᵿ									
16F7B									

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

Punctuation

See also [Punctuation and Digits](#).

Additional punctuation: : ; ? [] _ _ _

Sorting (China, Ireland, and UK. Figure 1)

&J < J << J' << CJ << Cj << CJ'

&T < T << T' << CT << Ct << CT'

&J < J << J' << CJ << Cj << CJ'

&L < L << L' << CL << Cl << CL'

&I < I << I' << CI << Ci << CI'

&Δ < Δ << Δ' << CΔ << CΔ << CΔ'

&A < A << A' << CA << CA << CA'

&† < † << †' << C† << C† << C†'

&T < T << T' << CT << Ct << CT'

&J < J << J' << CJ << Cj << CJ'

&Y < Y << Y' << CY << Cy << CY'

&V < V << V'

&Λ < Λ << Λ'

&A < A << A'

&L < L << L'

&L < L << L'

&J < J << J'

&C < C << C'

&Z < Z << Z'

&E < E << E'

&C < C << C'

&G < G << G'

&I < I << I'

&J < J < S < Γ < 7 < R < U

&_ < o < p < n < u < v < l < v < u < b < z < t < = < n < 7 < r < n < u < e <

ε

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 [Ligatures](#) for special behavior.

Glyph variants

Setting	Sample
default	ᠳᠤᠴᠡᠳᠦᠭᠦ ᠰᠤᠶ᠋ᠢᠨ ᠵᠣᠯᠤᠮᠤ ᠲᠤᠩᠭ᠎ᠠ ᠪᠠᠭᠠᠨ ᠬᠠᠭᠠᠨ ᠶᠤᠸᠠᠨ ᠶᠤᠨᠵᠢᠨ
hmd alternates	ᠳᠤᠴᠡᠳᠦᠭᠦ ᠰᠤᠶ᠋ᠢᠨ ᠵᠣᠯᠤᠮᠤ ᠲᠤᠩᠭ᠎ᠠ ᠪᠠᠭᠠᠨ ᠬᠠᠭᠠᠨ ᠶᠤᠸᠠᠨ ᠶᠤᠨᠵᠢᠨ
normalized orthography alternates	ᠳᠤᠴᠡᠳᠦᠭᠦ ᠰᠤᠶ᠋ᠢᠨ ᠵᠣᠯᠤᠮᠤ ᠲᠤᠩᠭ᠎ᠠ ᠪᠠᠭᠠᠨ ᠬᠠᠭᠠᠨ ᠶᠤᠸᠠᠨ ᠶᠤᠨᠵᠢᠨ

Sample graphic

MIAO: HWA

861

POLLARD SYLLABIC SCRIPT

1 (T^u J^u J^u T^u \bar{A} \bar{S} \bar{C} T^u, C^u J^u Z^u J^u Y^u J^u, ² Y^u L^u J^u T^u
 S^u J^u Y^u S^u A^u (T^u S^u C^u T^u, [J^u C^u, J^u \bar{A} +^u J^u T^u T^u J^u
 3 C^u C^u T^u, C^u \bar{A} J^u +^u C^u C^u J^u J^u. ³ C^u T^u C^u C^u C^u J^u T^u C^u C^u
 J^u Y^u J^u J^u T^u T^u, \bar{A} J^u +^u C^u C^u J^u J^u, T^u L^u C^u C^u J^u (J^u J^u.)
 4 T^u L^u J^u T^u L^u C^u, J^u A^u T^u T^u, C^u T^u C^u C^u C^u (T^u, T^u J^u J^u J^u
 5 C^u J^u T^u C^u C^u (T^u J^u L^u T^u C^u, J^u A^u T^u C^u. ⁵ A^u T^u T^u T^u

Mk I. I-4 1936

Mark 1:1-4 (UBS).

Sinicized Miao / Waishu Miao / Hmong Shua [hmz]

Language tag: `hmz-P1rd`

Opentype language system tag: HMZ

SLDR: none

Keyboard: none

Font: Shimenkan MGS



Character set

Unknown

Rendering

See also [Ligatures](#) for special behavior.

Glyph variants

Setting	Sample
default	
alternate	

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									
ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ
16F00	16F02	16F04	16F07	16F08	16F0A	16F0D	16F0E	16F10	16F13
ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ
16F16	16F18	16F1E	16F21	16F23	16F26	16F28	16F2F	16F30	16F33
ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ			
16F35	16F37	16F39	16F3A	16F3B	16F3D	16F43			

Modifiers	Aspiration
ᵿ	
16F51	

Vowels and finals									
ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ
16F54	16F55	16F57	16F58	16F59	16F5A	16F5C	16F5D	16F61	16F62
ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ	ᵿ
16F67	16F68	16F6A	16F6B	16F6E	16F71	16F73	16F74	16F76	16F78
ᵿ	ᵿ	ᵿ	ᵿ	ᵿ					
16F79	16F7A	16F7B	16F7C	16F7E					

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

Punctuation

See also [Punctuation and Digits](#).

Additional punctuation: ' - : ; = ?

The keyboard includes U+16F0B 𐍪, U+16F0F 𐍫, U+16F2F 𐍽, and U+16F38 𐍨 although they are not in Figure 2 L2/17-345. These are wanted characters, and it may make sense to include them.

Consonant onsets									
𐍪	𐍫	𐍬	𐍭	𐍮	𐍯	𐍰	𐍱	𐍲	𐍳
16F00	16F02	16F04	16F07	16F08	16F0A	16F0E	16F10	16F12	16F14
𐍴	𐍵	𐍶	𐍷	𐍸	𐍹	𐍺	𐍻	𐍼	𐍽
16F16	16F18	16F1E	16F23	16F26	16F28	16F2A	16F2E	16F32	16F33
𐍾	𐍿	𐎀	𐎁	𐎂	𐎃	𐎄	𐎅	𐎆	𐎇
16F35	16F37	16F3A	16F3B	16F3D	16F42	16F43	16F48	16F49	16F4A

Modifiers	Nasalization	Aspiration
	𐎈	𐎉
	16F50	16F51

The keyboard includes U+16F5B 𐎊, U+16F5E 𐎋, U+16F5F 𐎌, U+16F62 𐎍, and U+16F63 𐎎 although they are not in Figure 2 L2/17-345.

Vowels and finals								
𐎏	𐎐	𐎑	𐎒	𐎓	𐎔	𐎕	𐎖	𐎗
16F54	16F57	16F58	16F59	16F5C	16F5D	16F60	16F61	16F66
𐎘	𐎙	𐎚	𐎛	𐎜	𐎝	𐎞	𐎟	𐎠
16F68	16F6A	16F71	16F73	16F75	16F76	16F77	16F79	16F7A
𐎡	𐎢	𐎣	𐎤	𐎥	𐎦	𐎧	𐎨	
16F7B	16F7E	16F81	16F83	16F84	16F85	16F86	16F87	

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

Punctuation

See also [Punctuation and Digits](#).

Additional punctuation: ' ; : - *

Sorting ([Cheuk](#), figure 2)

&Y < L

&𐍪 << 𐍪' << 𐍪

&𐍫 < 𐍫

POLLARD SYLLABIC SCRIPT

[illegible]

Mk I. 1-4 1913

Mark 1:1-4 (UBS).

Hei 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

The keyboard includes U+16F05 Ɔ, U+16F13 Ɔ, U+16F1A Δ, U+16F1C Δ, U+16F2A 1, and U+16F2D Ǝ although they are not in Figure 5 [L2/17-345](#).

Consonant onsets									
Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ
16F00	16F02	16F04	16F07	16F08	16F0A	16F0C	16F0D	16F0E	16F10
Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ
16F12	16F14	16F16	16F18	16F1E	16F21	16F23	16F26	16F28	16F2E
Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ	Ɔ
16F2F	16F30	16F31	16F33	16F34	16F35	16F37	16F39	16F3A	16F3B
Ɔ	Ɔ	Ɔ							
16F3D	16F42	16F43							

Modifiers	Nasalization	Aspiration
	Ɔ	Ɔ'
	16F50	16F51

The keyboard includes U+16F57 Ɔ, U+16F5F Ɔ, and U+16F7E Ɔ although they are not in Figure 5 [L2/17-345](#).

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

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

Punctuation

See also [Punctuation and Digits](#).

Sorting ([Cheuk](#), figure 5)

Red signifies unsure of sorting as it seems to be a digraph and should sort elsewhere. Some of the vowel "digraphs" are what made sense to the author, not as the chart listed them.

&Y < I
&J < J << CJ << J'
&F < F << F'
&L < L
&E < CE << E'
&J << CJ << J'
&J < J
&E << E'
&T << CT << T'
&t
&t << Ct << t'
&T << CT << T'
&I < T < E < Z < J < C < Z < C < J < G < S < U < V < A < Z < R
&O_ < O_i < O_ = < O_ii < O_5
&O_o << O_o5
&O_o < O_p < O_r < O_n
&O_n << O_nii << O_no << O_nv << O_n= << O_nó << O_nõ
&O_u << O_u5 << O_uu << O_uo << O_uc << O_u= << O_uõ
&O_u < O_p < O_v < O_5
&O_c << O_c5
&O_n < O_v < O_nv < O_w < O_õ

Rendering

Glyph variants

Setting	Sample
default	ㄅㄅㄅㄅ
traditional	ㄅㄅㄅㄅ
normalized	ㄅㄅㄅㄅ

Sample text taken from Figure 7 of [Cheuk](#).

Setting	Sample	USV
ywq	I [?] J ₅ ⁱⁱ ㄅ ^{ob} ㄅ	U+16F0D U+16F73 U+16F90 U+0020 U+16F21 U+16F58 U+0020 U+16F12 U+16F7B U+16F91 U+0020 U+16F30 U+16F59 U+16F5C U+16F91

Sample graphic

POLLARD SYLLABIC SCRIPT

[illegible]

Mark 1:1-4 (UBS).

Languages formerly using Miao/Pollard script

Chuangqiandian Cluster Miao [cqd]

Resources

Language tag: cqd-Pɫrd

Character set

Consonant onsets

Not listed

Modifiers	Nasalization	Aspiration
	◌̃	◌ʰ
	16F50	16F51

Vowels and finals

Not listed

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

Punctuation

See also [Punctuation and Digits](#).

Additional punctuation: []

Rendering

Sample graphic

1 𐄠𐄡𐄢𐄣𐄤𐄥𐄦𐄧𐄨𐄩𐄪𐄫𐄬𐄭𐄮𐄯𐄰𐄱𐄲𐄳𐄴𐄵𐄶𐄷𐄸𐄹𐄺𐄻𐄼𐄽𐄾𐄿𐅀𐅁𐅂𐅃𐅄𐅅𐅆𐅇𐅈𐅉𐅊𐅋𐅌𐅍𐅎𐅏𐅐𐅑𐅒𐅓𐅔𐅕𐅖𐅗𐅘𐅙𐅚𐅛𐅜𐅝𐅞𐅟𐅠𐅡𐅢𐅣𐅤𐅥𐅦𐅧𐅨𐅩𐅪𐅫𐅬𐅭𐅮𐅯𐅰𐅱𐅲𐅳𐅴𐅵𐅶𐅷𐅸𐅹𐅺𐅻𐅼𐅽𐅾𐅿𐆀𐆁𐆂𐆃𐆄𐆅𐆆𐆇𐆈𐆉𐆊𐆋𐆌𐆍𐆎𐆏𐆐𐆑𐆒𐆓𐆔𐆕𐆖𐆗𐆘𐆙𐆚𐆛𐆜𐆝𐆞𐆟𐆠𐆡𐆢𐆣𐆤𐆥𐆦𐆧𐆨𐆩𐆪𐆫𐆬𐆭𐆮𐆯𐆰𐆱𐆲𐆳𐆴𐆵𐆶𐆷𐆸𐆹𐆺𐆻𐆼𐆽𐆾𐆿𐇀𐇁𐇂𐇃𐇄𐇅𐇆𐇇𐇈𐇉𐇊𐇋𐇌𐇍𐇎𐇏𐇐𐇑𐇒𐇓𐇔𐇕𐇖𐇗𐇘𐇙𐇚𐇛𐇜𐇝𐇞𐇟𐇠𐇡𐇢𐇣𐇤𐇥𐇦𐇧𐇨𐇩𐇪𐇫𐇬𐇭𐇮𐇯𐇰𐇱𐇲𐇳𐇴𐇵𐇶𐇷𐇸𐇹𐇺𐇻𐇼𐇽𐇾𐇿𐈀𐈁𐈂𐈃𐈄𐈅𐈆𐈇𐈈𐈉𐈊𐈋𐈌𐈍𐈎𐈏𐈐𐈑𐈒𐈓𐈔𐈕𐈖𐈗𐈘𐈙𐈚𐈛𐈜𐈝𐈞𐈟𐈠𐈡𐈢𐈣𐈤𐈥𐈦𐈧𐈨𐈩𐈪𐈫𐈬𐈭𐈮𐈯𐈰𐈱𐈲𐈳𐈴𐈵𐈶𐈷𐈸𐈹𐈺𐈻𐈼𐈽𐈾𐈿𐉀𐉁𐉂𐉃𐉄𐉅𐉆𐉇𐉈𐉉𐉊𐉋𐉌𐉍𐉎𐉏𐉐𐉑𐉒𐉓𐉔𐉕𐉖𐉗𐉘𐉙𐉚𐉛𐉜𐉝𐉞𐉟𐉠𐉡𐉢𐉣𐉤𐉥𐉦𐉧𐉨𐉩𐉪𐉫𐉬𐉭𐉮𐉯𐉰𐉱𐉲𐉳𐉴𐉵𐉶𐉷𐉸𐉹𐉺𐉻𐉼𐉽𐉾𐉿𐊀𐊁𐊂𐊃𐊄𐊅𐊆𐊇𐊈𐊉𐊊𐊋𐊌𐊍𐊎𐊏𐊐𐊑𐊒𐊓𐊔𐊕𐊖𐊗𐊘𐊙𐊚𐊛𐊜𐊝𐊞𐊟𐊠𐊡𐊢𐊣𐊤𐊥𐊦𐊧𐊨𐊩𐊪𐊫𐊬𐊭𐊮𐊯𐊰𐊱𐊲𐊳𐊴𐊵𐊶𐊷𐊸𐊹𐊺𐊻𐊼𐊽𐊾𐊿𐋀𐋁𐋂𐋃𐋄𐋅𐋆𐋇𐋈𐋉𐋊𐋋𐋌𐋍𐋎𐋏𐋐𐋑𐋒𐋓𐋔𐋕𐋖𐋗𐋘𐋙𐋚𐋛𐋜𐋝𐋞𐋟𐋠𐋡𐋢𐋣𐋤𐋥𐋦𐋧𐋨𐋩𐋪𐋫𐋬𐋭𐋮𐋯𐋰𐋱𐋲𐋳𐋴𐋵𐋶𐋷𐋸𐋹𐋺𐋻𐋼𐋽𐋾𐋿𐌀𐌁𐌂𐌃𐌄𐌅𐌆𐌇𐌈𐌉𐌊𐌋𐌌𐌍𐌎𐌏𐌐𐌑𐌒𐌓𐌔𐌕𐌖𐌗𐌘𐌙𐌚𐌛𐌜𐌝𐌞𐌟𐌠𐌡𐌢𐌣𐌤𐌥𐌦𐌧𐌨𐌩𐌪𐌫𐌬𐌭𐌮𐌯𐌰𐌱𐌲𐌳𐌴𐌵𐌶𐌷𐌸𐌹𐌺𐌻𐌼𐌽𐌾𐌿𐍀𐍁𐍂𐍃𐍄𐍅𐍆𐍇𐍈𐍉𐍊𐍋𐍌𐍍𐍎𐍏𐍐𐍑𐍒𐍓𐍔𐍕𐍖𐍗𐍘𐍙𐍚𐍛𐍜𐍝𐍞𐍟𐍠𐍡𐍢𐍣𐍤𐍥𐍦𐍧𐍨𐍩𐍪𐍫𐍬𐍭𐍮𐍯𐍰𐍱𐍲𐍳𐍴𐍵𐍶𐍷𐍸𐍹𐍺𐍻𐍼𐍽𐍾𐍿𐎀𐎁𐎂𐎃𐎄𐎅𐎆𐎇𐎈𐎉𐎊𐎋𐎌𐎍𐎎𐎏𐎐𐎑𐎒𐎓𐎔𐎕𐎖𐎗𐎘𐎙𐎚𐎛𐎜𐎝𐎞𐎟𐎠𐎡𐎢𐎣𐎤𐎥𐎦𐎧𐎨𐎩𐎪𐎫𐎬𐎭𐎮𐎯𐎰𐎱𐎲𐎳𐎴𐎵𐎶𐎷𐎸𐎹𐎺𐎻𐎼𐎽𐎾𐎿𐏀𐏁𐏂𐏃𐏄𐏅𐏆𐏇𐏈𐏉𐏊𐏋𐏌𐏍𐏎𐏏𐏐𐏑𐏒𐏓𐏔𐏕𐏖𐏗𐏘𐏙𐏚𐏛𐏜𐏝𐏞𐏟𐏠𐏡𐏢𐏣𐏤𐏥𐏦𐏧𐏨𐏩𐏪𐏫𐏬𐏭𐏮𐏯𐏰𐏱𐏲𐏳𐏴𐏵𐏶𐏷𐏸𐏹𐏺𐏻𐏼𐏽𐏾𐏿𐐀𐐁𐐂𐐃𐐄𐐅𐐆𐐇𐐈𐐉𐐊𐐋𐐌𐐍𐐎𐐏𐐐𐐑𐐒𐐓𐐔𐐕𐐖𐐗𐐘𐐙𐐚𐐛𐐜𐐝𐐞𐐟𐐠𐐡𐐢𐐣𐐤𐐥𐐦𐐧𐐨𐐩𐐪𐐫𐐬𐐭𐐮𐐯𐐰𐐱𐐲𐐳𐐴𐐵𐐶𐐷𐐸𐐹𐐺𐐻𐐼𐐽𐐾𐐿𐑀𐑁𐑂𐑃𐑄𐑅𐑆𐑇𐑈𐑉𐑊𐑋𐑌𐑍𐑎𐑏𐑐𐑑𐑒𐑓𐑔𐑕𐑖𐑗𐑘𐑙𐑚𐑛𐑜𐑝𐑞𐑟𐑠𐑡𐑢𐑣𐑤𐑥𐑦𐑧𐑨𐑩𐑪𐑫𐑬𐑭𐑮𐑯𐑰𐑱𐑲𐑳𐑴𐑵𐑶𐑷𐑸𐑹𐑺𐑻𐑼𐑽𐑾𐑿𐒀𐒁𐒂𐒃𐒄𐒅𐒆𐒇𐒈𐒉𐒊𐒋𐒌𐒍𐒎𐒏𐒐𐒑𐒒𐒓𐒔𐒕𐒖𐒗𐒘𐒙𐒚𐒛𐒜𐒝𐒞𐒟𐒠𐒡𐒢𐒣𐒤𐒥𐒦𐒧𐒨𐒩𐒪𐒫𐒬𐒭𐒮𐒯𐒰𐒱𐒲𐒳𐒴𐒵𐒶𐒷𐒸𐒹𐒺𐒻𐒼𐒽𐒾𐒿𐓀𐓁𐓂𐓃𐓄𐓅𐓆𐓇𐓈𐓉𐓊𐓋𐓌𐓍𐓎𐓏𐓐𐓑𐓒𐓓𐓔𐓕𐓖𐓗𐓘𐓙𐓚𐓛𐓜𐓝𐓞𐓟𐓠𐓡𐓢𐓣𐓤𐓥𐓦𐓧𐓨𐓩𐓪𐓫𐓬𐓭𐓮𐓯𐓰𐓱𐓲𐓳𐓴𐓵𐓶𐓷𐓸𐓹𐓺𐓻𐓼𐓽𐓾𐓿𐔀𐔁𐔂𐔃𐔄𐔅𐔆𐔇𐔈𐔉𐔊𐔋𐔌𐔍𐔎𐔏𐔐𐔑𐔒𐔓𐔔𐔕𐔖𐔗𐔘𐔙𐔚𐔛𐔜𐔝𐔞𐔟𐔠𐔡𐔢𐔣𐔤𐔥𐔦𐔧𐔨𐔩𐔪𐔫𐔬𐔭𐔮𐔯𐔰𐔱𐔲𐔳𐔴𐔵𐔶𐔷𐔸𐔹𐔺𐔻𐔼𐔽𐔾𐔿𐕀𐕁𐕂𐕃𐕄𐕅𐕆𐕇𐕈𐕉𐕊𐕋𐕌𐕍𐕎𐕏𐕐𐕑𐕒𐕓𐕔𐕕𐕖𐕗𐕘𐕙𐕚𐕛𐕜𐕝𐕞𐕟𐕠𐕡𐕢𐕣𐕤𐕥𐕦𐕧𐕨𐕩𐕪𐕫𐕬𐕭𐕮𐕯𐕰𐕱𐕲𐕳𐕴𐕵𐕶𐕷𐕸𐕹𐕺𐕻𐕼𐕽𐕾𐕿𐖀𐖁𐖂𐖃𐖄𐖅𐖆𐖇𐖈𐖉𐖊𐖋𐖌𐖍𐖎𐖏𐖐𐖑𐖒𐖓𐖔𐖕𐖖𐖗𐖘𐖙𐖚𐖛𐖜𐖝𐖞𐖟𐖠𐖡𐖢𐖣𐖤𐖥𐖦𐖧𐖨𐖩𐖪𐖫𐖬𐖭𐖮𐖯𐖰𐖱𐖲𐖳𐖴𐖵𐖶𐖷𐖸𐖹𐖺𐖻𐖼𐖽𐖾𐖿𐗀𐗁𐗂𐗃𐗄𐗅𐗆𐗇𐗈𐗉𐗊𐗋𐗌𐗍𐗎𐗏𐗐𐗑𐗒𐗓𐗔𐗕𐗖𐗗𐗘𐗙𐗚𐗛𐗜𐗝𐗞𐗟𐗠𐗡𐗢𐗣𐗤𐗥𐗦𐗧𐗨𐗩𐗪𐗫𐗬𐗭𐗮𐗯𐗰𐗱𐗲𐗳𐗴𐗵𐗶𐗷𐗸𐗹𐗺𐗻𐗼𐗽𐗾𐗿𐘀𐘁𐘂𐘃𐘄𐘅𐘆𐘇𐘈𐘉𐘊𐘋𐘌𐘍𐘎𐘏𐘐𐘑𐘒𐘓𐘔𐘕𐘖𐘗𐘘𐘙𐘚𐘛𐘜𐘝𐘞𐘟𐘠𐘡𐘢𐘣𐘤𐘥𐘦𐘧𐘨𐘩𐘪𐘫𐘬𐘭𐘮𐘯𐘰𐘱𐘲𐘳𐘴𐘵𐘶𐘷𐘸𐘹𐘺𐘻𐘼𐘽𐘾𐘿𐙀𐙁𐙂𐙃𐙄𐙅𐙆𐙇𐙈𐙉𐙊𐙋𐙌𐙍𐙎𐙏𐙐𐙑𐙒𐙓𐙔𐙕𐙖𐙗𐙘𐙙𐙚𐙛𐙜𐙝𐙞𐙟𐙠𐙡𐙢𐙣𐙤𐙥𐙦𐙧𐙨𐙩𐙪𐙫𐙬𐙭𐙮𐙯𐙰𐙱𐙲𐙳𐙴𐙵𐙶𐙷𐙸𐙹𐙺𐙻𐙼𐙽𐙾𐙿𐚀𐚁𐚂𐚃𐚄𐚅𐚆𐚇𐚈𐚉𐚊𐚋𐚌𐚍𐚎𐚏𐚐𐚑𐚒𐚓𐚔𐚕𐚖𐚗𐚘𐚙𐚚𐚛𐚜𐚝𐚞𐚟𐚠𐚡𐚢𐚣𐚤𐚥𐚦𐚧𐚨𐚩𐚪𐚫𐚬𐚭𐚮𐚯𐚰𐚱𐚲𐚳𐚴𐚵𐚶𐚷𐚸𐚹𐚺𐚻𐚼𐚽𐚾𐚿𐛀𐛁𐛂𐛃𐛄𐛅𐛆𐛇𐛈𐛉𐛊𐛋𐛌𐛍𐛎𐛏𐛐𐛑𐛒𐛓𐛔𐛕𐛖𐛗𐛘𐛙𐛚𐛛𐛜𐛝𐛞𐛟𐛠𐛡𐛢𐛣𐛤𐛥𐛦𐛧𐛨𐛩𐛪𐛫𐛬𐛭𐛮𐛯𐛰𐛱𐛲𐛳𐛴𐛵𐛶𐛷𐛸𐛹𐛺𐛻𐛼𐛽𐛾𐛿𐜀𐜁𐜂𐜃𐜄𐜅𐜆𐜇𐜈𐜉𐜊𐜋𐜌𐜍𐜎𐜏𐜐𐜑𐜒𐜓𐜔𐜕𐜖𐜗𐜘𐜙𐜚𐜛𐜜𐜝𐜞𐜟𐜠𐜡𐜢𐜣𐜤𐜥𐜦𐜧𐜨𐜩𐜪𐜫𐜬𐜭𐜮𐜯𐜰𐜱𐜲𐜳𐜴𐜵𐜶𐜷𐜸𐜹𐜺𐜻𐜼𐜽𐜾𐜿𐝀𐝁𐝂𐝃𐝄𐝅𐝆𐝇𐝈𐝉𐝊𐝋𐝌𐝍𐝎𐝏𐝐𐝑𐝒𐝓𐝔𐝕𐝖𐝗𐝘𐝙𐝚𐝛𐝜𐝝𐝞𐝟𐝠𐝡𐝢𐝣𐝤𐝥𐝦𐝧𐝨𐝩𐝪𐝫𐝬𐝭𐝮𐝯𐝰𐝱𐝲𐝳𐝴𐝵𐝶𐝷𐝸𐝹𐝺𐝻𐝼𐝽𐝾𐝿𐞀𐞁𐞂𐞃𐞄𐞅𐞆𐞇𐞈𐞉𐞊𐞋𐞌𐞍𐞎𐞏𐞐𐞑𐞒𐞓𐞔𐞕𐞖𐞗𐞘𐞙𐞚𐞛𐞜𐞝𐞞𐞟𐞠𐞡𐞢𐞣𐞤𐞥𐞦𐞧𐞨𐞩𐞪𐞫𐞬𐞭𐞮𐞯𐞰𐞱𐞲𐞳𐞴𐞵𐞶𐞷𐞸𐞹𐞺𐞻𐞼𐞽𐞾𐞿𐟀𐟁𐟂𐟃𐟄𐟅𐟆𐟇𐟈𐟉𐟊𐟋𐟌𐟍𐟎𐟏𐟐𐟑𐟒𐟓𐟔𐟕𐟖𐟗𐟘𐟙𐟚𐟛𐟜𐟝𐟞𐟟𐟠𐟡𐟢𐟣𐟤𐟥𐟦𐟧𐟨𐟩𐟪𐟫𐟬𐟭𐟮𐟯𐟰𐟱𐟲𐟳𐟴𐟵𐟶𐟷𐟸𐟹𐟺𐟻𐟼𐟽𐟾𐟿𐠀𐠁𐠂𐠃𐠄𐠅𐠆𐠇𐠈𐠉𐠊𐠋𐠌𐠍𐠎𐠏𐠐𐠑𐠒𐠓𐠔𐠕𐠖𐠗𐠘𐠙𐠚𐠛𐠜𐠝𐠞𐠟𐠠𐠡𐠢𐠣𐠤𐠥𐠦𐠧𐠨𐠩𐠪𐠫𐠬𐠭𐠮𐠯𐠰𐠱𐠲𐠳𐠴𐠵𐠶𐠷𐠸𐠹𐠺𐠻𐠼𐠽𐠾𐠿𐡀𐡁𐡂𐡃𐡄𐡅𐡆𐡇𐡈𐡉𐡊𐡋𐡌𐡍𐡎𐡏𐡐𐡑𐡒𐡓𐡔𐡕𐡖𐡗𐡘𐡙𐡚𐡛𐡜𐡝𐡞𐡟𐡠𐡡𐡢𐡣𐡤𐡥𐡦𐡧𐡨𐡩𐡪𐡫𐡬𐡭𐡮𐡯𐡰𐡱𐡲𐡳𐡴𐡵𐡶𐡷𐡸𐡹𐡺𐡻𐡼𐡽𐡾𐡿𐢀𐢁𐢂𐢃𐢄𐢅𐢆𐢇𐢈𐢉𐢊𐢋𐢌𐢍𐢎𐢏𐢐𐢑𐢒𐢓𐢔𐢕𐢖𐢗𐢘𐢙𐢚𐢛𐢜𐢝𐢞𐢟𐢠𐢡𐢢𐢣𐢤𐢥𐢦𐢧𐢨𐢩𐢪𐢫𐢬𐢭𐢮𐢯𐢰𐢱𐢲𐢳𐢴𐢵𐢶𐢷𐢸𐢹𐢺𐢻𐢼𐢽𐢾𐢿𐣀𐣁𐣂𐣃𐣄𐣅𐣆𐣇𐣈𐣉𐣊𐣋𐣌𐣍𐣎𐣏𐣐𐣑𐣒𐣓𐣔𐣕𐣖𐣗𐣘𐣙𐣚𐣛𐣜𐣝𐣞𐣟𐣠𐣡𐣢𐣣𐣤𐣥𐣦𐣧𐣨𐣩𐣪𐣫𐣬𐣭𐣮𐣯𐣰𐣱𐣲𐣳𐣴𐣵𐣶𐣷𐣸𐣹𐣺𐣻𐣼𐣽𐣾𐣿𐤀𐤁𐤂𐤃𐤄𐤅𐤆𐤇𐤈𐤉𐤊𐤋𐤌𐤍𐤎𐤏𐤐𐤑𐤒𐤓𐤔𐤕𐤖𐤗𐤘𐤙𐤚𐤛𐤜𐤝𐤞𐤟𐤠𐤡𐤢𐤣𐤤𐤥𐤦𐤧𐤨𐤩𐤪𐤫𐤬𐤭𐤮𐤯𐤰𐤱𐤲𐤳𐤴𐤵𐤶𐤷𐤸𐤹𐤺𐤻𐤼𐤽𐤾𐤿𐥀𐥁𐥂𐥃𐥄𐥅𐥆𐥇𐥈𐥉𐥊𐥋𐥌𐥍𐥎𐥏𐥐𐥑𐥒𐥓𐥔𐥕𐥖𐥗𐥘𐥙𐥚𐥛𐥜𐥝𐥞𐥟𐥠𐥡𐥢𐥣𐥤𐥥𐥦𐥧𐥨𐥩𐥪𐥫𐥬𐥭𐥮𐥯𐥰𐥱𐥲𐥳𐥴𐥵𐥶𐥷𐥸𐥹𐥺𐥻𐥼𐥽𐥾𐥿𐦀𐦁𐦂𐦃𐦄𐦅𐦆𐦇𐦈𐦉𐦊𐦋𐦌𐦍𐦎𐦏𐦐𐦑𐦒𐦓𐦔𐦕𐦖𐦗𐦘𐦙𐦚𐦛𐦜𐦝𐦞𐦟𐦠𐦡𐦢𐦣𐦤𐦥𐦦𐦧𐦨𐦩𐦪𐦫𐦬𐦭𐦮𐦯𐦰𐦱𐦲𐦳𐦴𐦵𐦶𐦷𐦸𐦹𐦺𐦻𐦼𐦽𐦾𐦿𐧀𐧁𐧂𐧃𐧄𐧅𐧆𐧇𐧈𐧉𐧊𐧋𐧌𐧍𐧎𐧏𐧐𐧑𐧒𐧓𐧔𐧕𐧖𐧗𐧘𐧙𐧚𐧛𐧜𐧝𐧞𐧟𐧠𐧡𐧢𐧣𐧤𐧥𐧦𐧧𐧨𐧩𐧪𐧫𐧬𐧭𐧮𐧯𐧰𐧱𐧲𐧳𐧴𐧵𐧶𐧷𐧸𐧹𐧺𐧻𐧼𐧽𐧾𐧿𐨀𐨁𐨂𐨃𐨄𐨅𐨆𐨇𐨈𐨉𐨊𐨋𐨌𐨍𐨎𐨏𐨐𐨑𐨒𐨓𐨔𐨕𐨖𐨗𐨘𐨙𐨚𐨛𐨜𐨝𐨞𐨟𐨠𐨡𐨢𐨣𐨤𐨥𐨦𐨧𐨨𐨩𐨪𐨫𐨬𐨭𐨮𐨯𐨰𐨱𐨲𐨳𐨴𐨵𐨶𐨷𐨹𐨺𐨸𐨻𐨼𐨽𐨾𐨿𐩀𐩁𐩂𐩃𐩄𐩅𐩆𐩇𐩈𐩉𐩊𐩋𐩌𐩍𐩎𐩏𐩐𐩑𐩒𐩓𐩔𐩕𐩖𐩗𐩘𐩙𐩚𐩛𐩜𐩝𐩞𐩟𐩠𐩡𐩢𐩣𐩤𐩥𐩦𐩧𐩨𐩩𐩪𐩫𐩬𐩭𐩮𐩯𐩰𐩱𐩲𐩳𐩴𐩵𐩶𐩷𐩸𐩹𐩺𐩻𐩼𐩽𐩾𐩿𐪀𐪁𐪂𐪃𐪄𐪅𐪆𐪇𐪈𐪉𐪊𐪋𐪌𐪍𐪎𐪏𐪐𐪑𐪒𐪓𐪔𐪕𐪖𐪗𐪘𐪙𐪚𐪛𐪜𐪝𐪞𐪟𐪠𐪡𐪢𐪣𐪤𐪥𐪦𐪧𐪨𐪩𐪪𐪫𐪬𐪭𐪮𐪯𐪰𐪱𐪲𐪳𐪴𐪵𐪶𐪷𐪸𐪹𐪺𐪻𐪼𐪽𐪾𐪿𐫀𐫁𐫂𐫃𐫄𐫅𐫆𐫇𐫈𐫉𐫊𐫋𐫌𐫍𐫎𐫏𐫐𐫑𐫒𐫓𐫔𐫕𐫖𐫗𐫘𐫙𐫚𐫛𐫜𐫝𐫞𐫟𐫠𐫡𐫢𐫣𐫤𐫦𐫥𐫧𐫨𐫩𐫪𐫫𐫬𐫭𐫮𐫯𐫰𐫱𐫲𐫳𐫴𐫵𐫶𐫷𐫸𐫹𐫺𐫻𐫼𐫽𐫾𐫿𐬀𐬁𐬂𐬃𐬄𐬅𐬆𐬇𐬈𐬉𐬊𐬋𐬌𐬍𐬎𐬏𐬐𐬑𐬒𐬓𐬔𐬕𐬖𐬗𐬘𐬙𐬚𐬛𐬜𐬝𐬞𐬟𐬠𐬡𐬢𐬣𐬤𐬥𐬦𐬧𐬨𐬩𐬪𐬫𐬬𐬭𐬮𐬯𐬰𐬱𐬲𐬳𐬴𐬵𐬶𐬷𐬸𐬹𐬺𐬻𐬼𐬽𐬾𐬿𐭀𐭁𐭂𐭃𐭄𐭅𐭆𐭇𐭈𐭉𐭊𐭋𐭌𐭍𐭎𐭏𐭐𐭑𐭒𐭓𐭔𐭕𐭖𐭗𐭘𐭙𐭚𐭛𐭜𐭝𐭞𐭟𐭠𐭡𐭢𐭣𐭤𐭥𐭦𐭧𐭨𐭩𐭪𐭫𐭬𐭭𐭮𐭯𐭰𐭱𐭲𐭳𐭴𐭵𐭶𐭷𐭸𐭹𐭺𐭻𐭼𐭽𐭾𐭿𐮀𐮁𐮂𐮃𐮄𐮅𐮆𐮇𐮈𐮉𐮊𐮋𐮌𐮍𐮎𐮏𐮐𐮑𐮒𐮓𐮔𐮕𐮖𐮗𐮘𐮙𐮚𐮛𐮜𐮝𐮞𐮟𐮠𐮡𐮢𐮣𐮤𐮥𐮦𐮧𐮨𐮩𐮪𐮫𐮬𐮭𐮮𐮯𐮰𐮱𐮲𐮳𐮴𐮵𐮶𐮷𐮸𐮹𐮺𐮻𐮼𐮽𐮾𐮿𐯀𐯁𐯂𐯃𐯄𐯅𐯆𐯇𐯈𐯉𐯊𐯋𐯌𐯍𐯎𐯏𐯐𐯑𐯒𐯓𐯔𐯕𐯖𐯗𐯘𐯙𐯚𐯛𐯜𐯝𐯞𐯟𐯠𐯡𐯢𐯣𐯤𐯥𐯦𐯧𐯨𐯩𐯪𐯫𐯬𐯭𐯮𐯯𐯰𐯱𐯲𐯳𐯴𐯵𐯶𐯷𐯸𐯹𐯺𐯻𐯼𐯽𐯾𐯿𐰀𐰁𐰂𐰃𐰄𐰅𐰆𐰇𐰈𐰉𐰊𐰋𐰌𐰍𐰎𐰏𐰐𐰑𐰒𐰓𐰔𐰕𐰖𐰗𐰘𐰙𐰚𐰛𐰜𐰝𐰞𐰟𐰠𐰡𐰢𐰣𐰤𐰥𐰦𐰧𐰨𐰩𐰪𐰫𐰬𐰭𐰮𐰯𐰰𐰱𐰲𐰳𐰴𐰵𐰶𐰷𐰸𐰹𐰺𐰻𐰼𐰽𐰾𐰿𐱀𐱁𐱂𐱃𐱄𐱅𐱆𐱇𐱈𐱉𐱊𐱋𐱌𐱍𐱎𐱏𐱐𐱑𐱒𐱓𐱔𐱕𐱖𐱗𐱘𐱙𐱚𐱛𐱜𐱝𐱞𐱟𐱠𐱡𐱢𐱣𐱤𐱥𐱦𐱧𐱨𐱩𐱪𐱫𐱬𐱭𐱮𐱯𐱰𐱱𐱲𐱳𐱴𐱵𐱶𐱷𐱸𐱹𐱺𐱻𐱼𐱽𐱾𐱿𐲀𐲁𐲂𐲃𐲄𐲅𐲆𐲇𐲈𐲉𐲊𐲋𐲌𐲍𐲎𐲏𐲐𐲑𐲒𐲓𐲔𐲕𐲖𐲗𐲘𐲙𐲚𐲛𐲜𐲝𐲞𐲟𐲠𐲡𐲢𐲣𐲤𐲥𐲦𐲧𐲨𐲩𐲪𐲫𐲬𐲭𐲮𐲯𐲰𐲱𐲲𐲳𐲴𐲵𐲶𐲷𐲸𐲹𐲺𐲻𐲼𐲽𐲾𐲿𐳀𐳁𐳂𐳃𐳄𐳅𐳆𐳇𐳈𐳉𐳊𐳋𐳌𐳍𐳎𐳏𐳐𐳑𐳒𐳓𐳔𐳕𐳖𐳗𐳘𐳙𐳚𐳛𐳜𐳝𐳞𐳟𐳠𐳡𐳢𐳣𐳤𐳥𐳦𐳧𐳨𐳩𐳪𐳫𐳬𐳭𐳮𐳯𐳰𐳱𐳲𐳳𐳴𐳵𐳶𐳷𐳸𐳹𐳺𐳻𐳼𐳽𐳾𐳿𐴀𐴁𐴂𐴃𐴄𐴅𐴆𐴇𐴈𐴉𐴊𐴋𐴌𐴍𐴎𐴏𐴐𐴑𐴒𐴓𐴔𐴕𐴖𐴗𐴘𐴙𐴚𐴛𐴜𐴝𐴞𐴟𐴠𐴡

POLLARD SYLLABIC SCRIPT

[illegible]

Lk 3. 1-4 1939

Luke 3:1-4 (UBS).

Resources

Language tag: lbc

Character set

Consonant onsets

Not listed

Vowels and finals

Not listed

Positioning tone marks

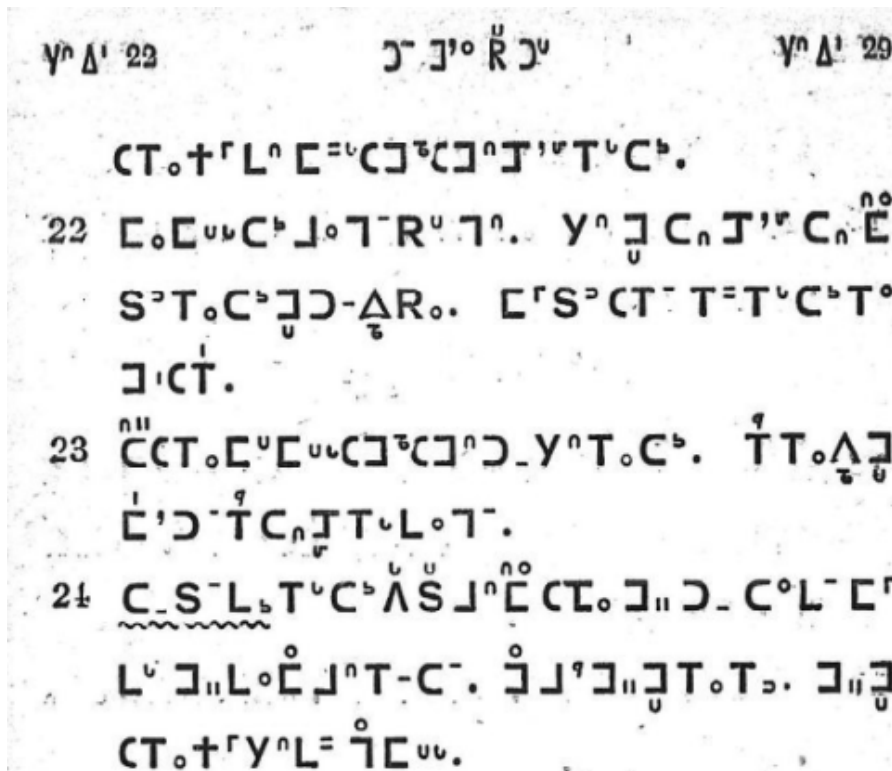
MIAO TONE RIGHT	MIAO TONE TOP RIGHT	MIAO TONE ABOVE	MIAO TONE BELOW
16F8F	16F90	16F91	16F92

Punctuation

See also [Punctuation and Digits](#).

Rendering

Sample graphic



John (Illustration 5, China 2009).

Hmong Daw [mww]

Resources

Language tag: `mww-Plrd`

Opentype language system tag: `MWW`

No further information

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

Consonant onsets									
ㄱ	ㄷ	ㄹ	ㄴ	ㄲ	ㅂ	ㅌ	ㅍ	ㅈ	ㅊ
16F00	16F01	16F03	16F04	16F07	16F08	16F0A	16F0B	16F0E	16F0F
ㄷ	ㄸ	ㄴ	ㄷ	ㄹ	ㄹ	ㄷ	ㄸ	ㄴ	ㄷ
16F10	16F11	16F16	16F17	16F18	16F19	16F1E	16F1F	16F21	16F22
ㄱ	ㄴ	ㄹ	ㄷ	ㄷ	ㄷ	ㄷ	ㄷ	ㄷ	ㄷ
16F23	16F26	16F28	16F29	16F2E	16F2F	16F32	16F33	16F35	16F37
ㄷ	ㅅ	ㄹ	ㅅ	ㅅ	ㄷ	ㅅ	ㄷ		
16F38	16F3A	16F3D	16F42	16F43	16F45	16F46	16F47		

Modifiers	Nasalization	Aspiration
	ㄷ	ㅅ'
	16F50	16F51

Vowels and finals									
ㅏ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅜ	ㅠ	ㅡ	ㅣ
16F54	16F57	16F58	16F59	16F5C	16F5D	16F5E	16F5F	16F61	16F62
ㅖ	ㅙ	ㅚ	ㅜ	ㅠ	ㅜ	ㅜ	ㅜ	ㅜ	ㅜ
16F63	16F64	16F66	16F68	16F69	16F6A	16F6B	16F6C	16F6D	16F70
ㅟ	ㅠ	ㅢ	ㅣ	ㅤ	ㅥ	ㅦ	ㅧ	ㅨ	ㅩ
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

Punctuation

See also [Punctuation and Digits](#).

Sorting ([Cheuk](#), figure 11)

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

&ㄱ << ㄷ' << ㄷ << ㄷ << ㄷ' << ㄷ

&ㄲ

&ㄴ << ㄴ'

&ㄹ << ㄹ' << ㄹ << ㄹ

$$\&Y < R$$
$$\&\square \ll \square' \ll \exists \ll \sqsubset \ll \sqsubset' \ll \sqsubset$$
$$\mathbb{J} \ll \mathbb{J}' \ll \mathbb{C}\mathbb{J} \ll \mathbb{C}\mathbb{J}' \ll \mathbb{C}\mathbb{F}$$
$$\& \ll \ll' \ll \ll \ll \ll \ll' \ll \ll$$
$$\&L \ll \mathbb{L} \ll \mathfrak{L} \ll \mathfrak{L}$$

<<'>

&C << 'C << dC

 $\epsilon \ll \epsilon'$
$$\&\lrcorner \ll \lrcorner' \ll \lrcorner \ll \llcorner \ll \llcorner' \ll \llcorner$$

&J << J

&S

$$\&T \ll T' \ll \overline{v} \ll CT \ll CT' \ll C\overline{v}$$
$$\&\mathbb{T} \ll \mathbb{T}' \ll \mathbb{T} \ll \mathbb{CT} \ll \mathbb{CT}' \ll \mathbb{CT}$$
$$\&t \ll t' \ll \dagger \ll \mathcal{C}t \ll \mathcal{C}t' \ll \mathcal{C}\dagger$$
$$U < V < \Lambda$$
$$\&\Gamma \ll \Gamma' \ll \mathfrak{f} \ll \mathbb{C}\Gamma \ll \mathbb{C}\Gamma' \ll \mathbb{C}\mathfrak{f}$$
$$\&\circ_- < \circ_I < \circ_{II}$$
 $\&\circ_{C=}$
$$\alpha_{\downarrow} < \alpha_{\uparrow}$$
$$\&\circ_n << \circ_{n_0}(\circ_{n\bar{0}}) << \circ_{n_t}(\circ_{n\tau}) << \circ_{nI} << \circ_{nII} << \circ_{nC} << \circ_{n5} << \circ_{n_6}(\circ_{no}) << \circ_{nV} << \circ_{n\nu} << \circ_{n6} << \circ_{n\varepsilon} << \circ_{n\varepsilon_0}$$
$$\&\circ_r < \circ_\Gamma < \circ_\neg$$
$$\&\odot_o \ll \odot_{ou}$$
$$\&\circ_U \ll \circ_{UE} \ll \circ_{UE_0} \ll \circ_{U6} \ll \circ_{\omega}$$
$$\alpha_v \ll \alpha_{v6}$$
$$\&\circ_{\gamma} < \circ_{\gamma c} < \circ_{\gamma \downarrow} < \circ_{\gamma 6} < \circ_{\gamma \varepsilon}$$
$$\&\circ_L < \circ_L < \circ_N < \circ_\tau < \circ_{\bar{\theta}} < \circ_\varepsilon < \circ_{\varepsilon_0}$$
$$\alpha_{\mu} \ll \alpha_{\tau} \ll \alpha_{\theta}$$

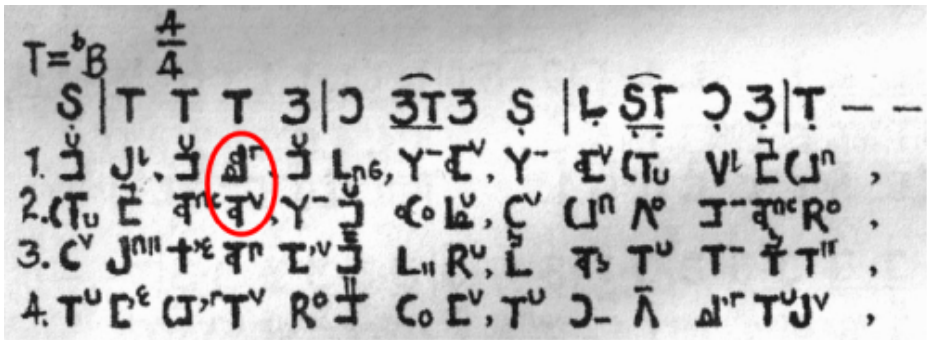
Rendering

See also [Tone mark positioning](#) for unusual positioning in this language.

See also [Kerning](#) for special behavior.

See also [Ligatures](#) for special behavior.

Sample graphic



John (Figure 14, Cheuk).

Gan Yi / Aluo [yna]

Resources

Language tag: yna

Opentype language system tag: YNA

SLDR: none

Keyman keyboard: yna

Font: Shimenkan Zonghe

Character set

The keyboard includes U+16F13 \cup (instead of U+16F42 \cup), and U+16F2F \mathbb{C} although they are not in Figure 10 L2/17-345.

Consonant onsets									
\cup	\perp	\mathcal{O}	Γ	\vee	\top	\mathcal{I}	\mathbb{T}	\mathcal{C}	\mathcal{L}
16F00	16F02	16F04	16F07	16F08	16F0A	16F0D	16F0E	16F10	16F16
\mathbb{L}	\mathcal{J}	\mathcal{I}	\mathcal{G}	\mathcal{T}	\mathcal{I}	\mathbb{C}	\mathcal{J}	\mathcal{R}	\mathcal{T}
16F18	16F1E	16F20	16F23	16F26	16F28	16F2E	16F33	16F35	16F37
\mathcal{T}	\mathcal{S}	\mathcal{Z}	\mathcal{A}	\mathcal{U}	\mathcal{Y}				
16F39	16F3A	16F3B	16F3D	16F42	16F43				

Modifiers	Consonant modifier bar	Nasalization	Aspiration
	\circ_1	\mathcal{C}	\circ'
	16F4F	16F50	16F51

U+16F7A ☹, and *U+16F7C* ☹ although they are not in Figure 10 [L2/17-345](#).

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

See also [Punctuation and Digits](#).

Additional punctuation: ::_ '?!*

、 (U+3001 IDEOGRAPHIC COMMA) 。 (U+3002 IDEOGRAPHIC FULL STOP)

Sorting (Cheuk, figure 10)

$$\&\lrcorner \ll \perp \ll \lrcorner'$$
$$\tau \ll I \ll T'$$
$$\&\mathbb{J} \ll \mathbb{J} \ll \mathbb{J}'$$
$$\&[\ll \mathbb{I} \ll [',$$
$$\&t \ll t \ll t'$$

&V

&Γ

 $\gamma \ll \gamma'$

&D

$$\&C \ll C' \ll _1 C$$

&L<Lb<G<U<R<J<3<S<Λ<Y<I

$$\gamma_I \ll C_I \ll I'$$
$$\&\odot_- < \odot_{||} < \odot_b < \odot_c < \odot_d < \odot_P < \odot_N$$
$$\delta_{\gamma} < \delta_{\gamma m} < \delta_{\gamma L} < \delta_{\gamma =}$$
$$\&\circ_n \ll \circ_{nm} \ll \circ_{nII} \ll \circ_{nL} \ll \circ_{nP} \ll \circ_{nd} \ll \circ_{nc} \ll \circ_{nw} \ll \circ_{no} \ll \circ_{n6} \ll \circ_{nb} \ll \circ_{n=} \ll \circ_{ne}$$
$$\&\odot_U \ll \odot_{UI} \ll \odot_{UL} \ll \odot_{U=}$$

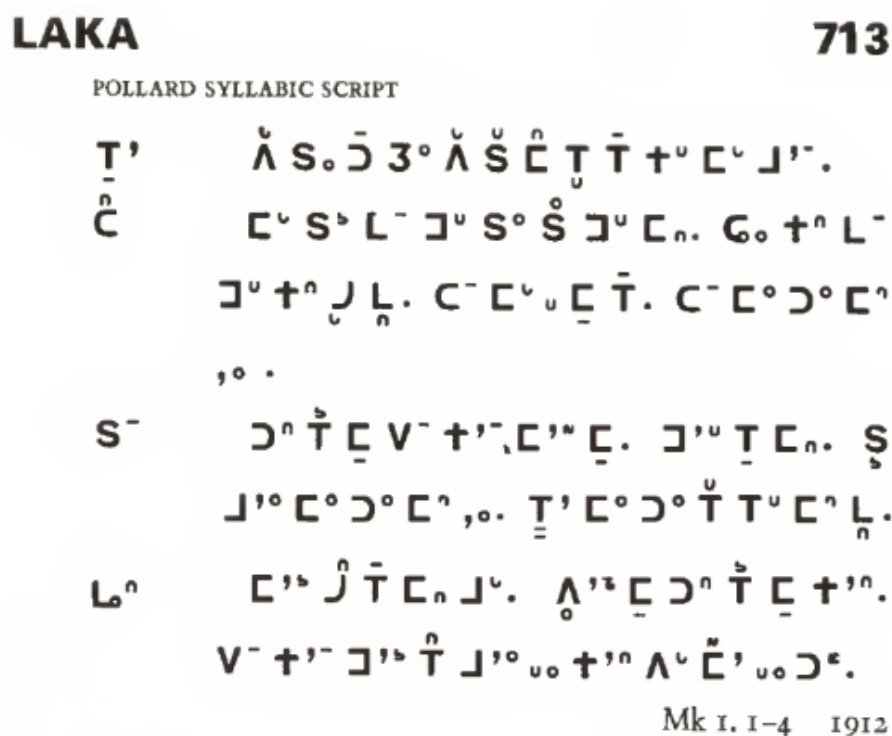
$$\&\circ_{\mathfrak{N}} < \circ_{\mathfrak{U}} < \circ_{\mathfrak{S}} < \circ_{\mathfrak{A}} < \circ_6 < \circ_e < \circ_{\omega} < \circ_m < \circ_{\varepsilon} < \circ_l < \circ_{=}$$

See also [Kerning](#) for special behavior.

Sample text taken from Figure 8 of Cheuk.

Setting	Sample	USV
yna	$\text{,}^{\text{''}}\text{C}^{\text{'}}\text{E}^{\text{'}}\text{E}_{\text{no}}$	U+16F10 U+16F4F U+16F7B U+16F91 U+0020 U+16F2E U+16F51 U+16F5C U+16F90 U+0020 U+16F2E U+16F61 U+16F59

Sample graphic



Mark 1:1-4 (UBS).

References

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