

## MONGOLIAN BASE FORMS, POSITIONAL FORMS, & VARIANT FORMS

*(With great appreciation to Dr. Quejingzhabu for his many years of research and counsel and Microsoft staff Aaron Bell / Andrew Glass for our many man-years of collaboration)*

November 25, 2016 (Greg Eck - greyson@postone.net)

**TARGET AUDIENCE:** Font developers

**OBJECTIVE:** Full specification of Mongolian/Todo/Sibe/Manchu/Altai script base forms, positional forms, and variant forms. It should be noted that full specification of implementation logic is beyond the scope of this paper. It should be noted that the emphasis of this paper is stand-alone text rather than running text. However, all running text forms, aside from ligatures should be found here. This paper is not meant to be a replacement for the Chinese Standard nor the Ulaanbaatar Mongolian Standard. It is derived from these two standards. Suggestions such as in the yellow/violet highlighting is derived from external discussions such as the Unicode Forum.

## LEGEND

The first line of a given character section will always give the Unicode form. If the Unicode form matches the main isolate form, then there will be no line for the isolate and it will be understood that the first line of a section also gives the main isolate form. Given this situation along with there being another isolate, the second line will define the second isolate. Given the rare case where the Unicode presentation form is not the isolate (1824, 1826, 184A, 184B, 184F, 1859, 185D, 185E, 1861, 1862, 1863, 1873, 1874, 1875, 1876), the first line will define the Unicode form as already stated, the second line will define the main isolate (termed the first isolate), the second line and following will define additional potential isolates.

\* – Ligatures formed using this consonantal isolate appear in the initial-medial, initial-final, medial-medial, medial-final positions

§ – Ligatures formed at this code-point appear in the initial-medial, initial-final, medial-medial, medial-final positions. These code-points should actually include an isolate loop to signify the initial/medial feminine forms which are found in the ligatures but never show up independently

& – Variants used with the FVS only for reasons of stylistics, archaic anomalies as well as some few contemporary spelling anomalies, compound spellings, and foreign spellings

% – Unicode code-point forms are not specified as an isolate therefore the only way of viewing these glyphs is by positional simulation using ZWJ. FVS specification should be a future consideration for ease of usage in stand-alone environments.

There are 13 such cases.

(X<sub>1</sub>X<sub>2</sub>X<sub>3</sub>X<sub>4</sub>) – denotes script usage (X<sub>1</sub>=Mongolian, X<sub>2</sub>=Todo, X<sub>3</sub>=Sibe, X<sub>4</sub>=Manchu); positional glyphs which show no “X” at all are to be understood as undefined (such glyphs at this position are only the recommended form, not a required form).

Yellow highlighting denotes a difference from the Chinese Delegation (WG2#65)

Purple highlighting indicates the proposal for a new FVS assignment

Blue highlighting notes a need for refinement or just additional information

NOTE: There is an appendix to this paper which discusses the MVS model (DS00-MVS) as well as the NNBSP model (DS00-NNBSP). Assumptions inherent to these models will impact certain notations in this paper.

Punctuation		
1800	(xx__)	᠐ MONGOLIAN BIRGA
11660	(xx__)	᠎ MONGOLIAN BIRGA WITH ORNAMENT
11664	(xx__)	᠎᠎ MONGOLIAN BIRGA WITH DOUBLE ORNAMENT
11662	(xx__)	᠎᠎᠎ MONGOLIAN DOUBLE BIRGA WITH ORNAMENT
11663	(xx__)	᠎᠎᠎᠎ MONGOLIAN TRIPLE BIRGA WITH ORNAMENT
11661	(xx__)	᠋ MONGOLIAN ROTATED BIRGA
11665	(xx__)	᠋᠎ MONGOLIAN ROTATED BIRGA WITH ORNAMENT
11666	(xx__)	᠋᠎᠎ MONGOLIAN ROTATED BIRGA WITH DOUBLE ORNAMENT
11667	(xx__)	᠌ MONGOLIAN INVERTED BIRGA
11668	(xx__)	᠌᠎ MONGOLIAN INVERTED BIRGA WITH DOUBLE ORNAMENT
11669	(xx__)	᠏ MONGOLIAN SWIRL BIRGA
1166A	(xx__)	᠏᠎ MONGOLIAN SWIRL BIRGA WITH ORNAMENT
1166B	(xx__)	᠏᠎᠎ MONGOLIAN SWIRL BIRGA WITH DOUBLE ORNAMENT
1166C	(xx__)	᠏᠏᠎ MONGOLIAN TURNED SWIRL BIRGA WITH DOUBLE ORNAMENT
1801	(xxxx)	᠔ MONGOLIAN ELLIPSIS
1802	(xx__)	᠅ MONGOLIAN COMMA

1803	(xx__)	᠖ MONGOLIAN FULL STOP
1804	(xxxx)	᠈ MONGOLIAN COLON
1805	(xx__)	᠊ MONGOLIAN FOUR DOTS
1806	(_x__)	᠉ MONGOLIAN TODO SOFT HYPHEN
1808	(__x)	᠊ MONGOLIAN MANCHU COMMA
1809	(__x)	᠚ MONGOLIAN MANCHU FULL STOP

*NOTE: A Mongolian vertical font should also [the following punctuation ...](#)*


### Marks

1885	(xx_x)	ᠸ LETTER ALI GALI BALUDA (this is not a letter – it is a diacritic mark)
1886	(xx_x)	ᠸᠸ LETTER ALI GALI THREE BALUDA (this is not a letter – it is a diacritic mark)
18A9	(x__)	ᠰ LETTER ALI GALI DAGALGA (this is not a letter – it is a diacritic mark)



  

### Control Characters

180B	(xxxx)	FV ST MONGOLIAN FREE VARIATION SELECTOR ONE
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180C	(xxxx)		MONGOLIAN FREE VARIATION SELECTOR TWO
180D	(xxxx)		MONGOLIAN FREE VARIATION SELECTOR THREE

## Format Characters











180E	(xxxx)		MONGOLIAN VOWEL SEPARATOR (or ... Mongolian Tsatslag Connector)
180F	(xxxx)		MONGOLIAN SUFFIX CONNECTOR

Proposal #1 Graphic should read MSC for Mongolian Suffix Connector

NOTE: A Mongolian vertical font should also include the control characters NNBSP (U+202F), ZWJ (U+200D), ZNWJ (U+200C) and at least VS01 (U+FE00) through VS05 (U+FE04).

## Numbers

(rotated 90 degrees clockwise in vertical display)





1810	(xx__)		MONGOLIAN DIGIT ZERO
1811	(xx__)		MONGOLIAN DIGIT ONE
1812	(xx__)		MONGOLIAN DIGIT TWO
1813	(xx__)		MONGOLIAN DIGIT THREE
1814	(xx__)		MONGOLIAN DIGIT FOUR
1815	(xx__)		MONGOLIAN DIGIT FIVE
1816	(xx__)		MONGOLIAN DIGIT SIX
1817	(xx__)		MONGOLIAN DIGIT SEVEN
1818	(xx__)		MONGOLIAN DIGIT EIGHT
1819	(xx__)		MONGOLIAN DIGIT NINE

NOTE: These digits should also be rotate-able 270 degrees clockwise from current display (either by the font or by upper-level layout)



NOTE: A Mongolian vertical font should also have Latin digits which will rotate 270 degrees clockwise from current display also (either by the font or by upper-level layout)

181A	<reserved>
181B	<reserved>
181C	<reserved>
181D	<reserved>
181E	<reserved>
181F	<reserved>

## Mongolian Letters


1807	(__xx)		MONGOLIAN SIBE SYLLABLE BOUNDARY MARKER
1807+ZWJ	(__)		Initial Form
ZWJ+1807+ZWJ	(__xx)'		Medial Form
ZWJ+1807	(__)		Final Form







The question has been raised as to whether this character might be more broadly used than just in Sibe and Manchu. Included with the letters, although it is not a letter, as well it is not a diacritic mark, it is a marker, and it is implemented as a letter

180A	(xxxx)		MONGOLIAN NIRUGU
180A+ZWJ	(xxxx)	-	Initial Form
ZWJ+180A+ZWJ	(xxxx)	-	Medial Form
ZWJ+180A	(xxxx)	-	First Final Form
ZWJ+180A+FVS1	(xxxx)		Second Final Form

STATUS: Included in Chinese Proposal – WG2#65

Included with the letters, although it is not a letter, it is implemented as a letter.








1820	(xxxx)		MONGOLIAN LETTER A
1820+FVS1			Second Isolate Form

1820+ZWJ		(xxxx)	First Initial Form
ZWJ+1820+ZWJ		(xxxx)	First Medial Form
ZWJ+1820+FVS1+ZWJ		(xx__)	Second Medial Form <sup>ε</sup>
ZWJ+1820+FVS2+ZWJ		(xx__)	Third Medial Form
			(only implemented with NNBSP actually - processed as initial in ACA suffix)
ZWJ+1820		(xxxx)	First Final Form
ZWJ+1820+FVS1		(xx__)	Second Final Form







(actually two glyphs)

first one is the oragshilig without space (must use FVS1);

second is the tsatslag with space and implemented with MVS/NNBSP (does not use FVS)



1821	(x__)		MONGOLIAN LETTER E
1821+ZWJ		(x__)	First Initial Form
1821+FVS1+ZWJ		(x__)	Second Initial Form <sup>ε</sup>
ZWJ+1821+ZWJ		(x__)	First Medial Form
ZWJ+1821+FVS1+ZWJ		(x__)	Second Medial Form
			(only implemented with NNBSP actually - processed as initial in ECA suffix)
ZWJ+1821		(x__)	First Final Form
ZWJ+1821+FVS1		(x__)	Second Final Form

(identical with comment on U+1820 Second Final)

1822	(x__)		MONGOLIAN LETTER I
1822+ZWJ		(x__)	Initial Form
ZWJ+1822+ZWJ		(x__)	First Medial Form
			(also implemented with NNBSP - actually processed as initial with instrumental suffix)
ZWJ+1822+FVS1+ZWJ		(x__)	Second Medial Form <sup>ε</sup>
ZWJ+1822+FVS2+ZWJ		(x__)	Third Medial Form
			(context-driven)
ZWJ+1822+FVS3+ZWJ		(x__)	Fourth Medial Form







STATUS: Discussion needed








(needed to over-ride default context  
(NAI+FVS2+MA))

ZWJ+1822		(x__)	First Final Form
			(also implemented with NNBSP - actually processed as isolate in accusative suffix)
ZWJ+1822+FVS1		(x__)	Second Final Form

STATUS: Included in Chinese Proposal – WG2#65

(dotted - only implemented with NNBSP)

1823	(x__xx)		MONGOLIAN LETTER O
1823+ZWJ		(x__xx)	Initial Form
ZWJ+1823+ZWJ		(x__xx)	First Medial Form
ZWJ+1823+FVS1+ZWJ		(x__xx)	Second Medial Form <sup>ε</sup>
ZWJ+1823		(x__xx)	First Final Form
ZWJ+1823+FVS1		(x__xx)	Second Final Form <sup>ε</sup>

1824	(x__)		MONGOLIAN LETTER U
1824		(x__)	First Isolate Form
1824+FVS1		(x__)	Second Isolate Form
			(NOTE: this is the Unicode presentation form)
1824+ZWJ		(x__)	Initial Form <sup>%</sup>
ZWJ+1824+ZWJ		(x__)	First Medial Form
			(also implemented with NNBSP - actually processed as initial in genitive suffix)
ZWJ+1824+FVS1+ZWJ		(x__)	Second Medial Form <sup>ε</sup>
ZWJ+1824		(x__)	First Final Form

		(also implemented with NNBSF actually processed as isolate in genitive suffix)
ZWJ+1824+FVS1	ᠨ (x_)	<i>Second Final Form<sup>ⓔ</sup></i>
STATUS: Included in Chinese Proposal – WG2#65		
ZWJ+1824+FVS2	ᠨ (x_)	<i>Third Final Form</i>
STATUS: Included in Chinese Proposal – WG2#65		
		(dotted - only implemented with NNBSF - actually processed as isolate in genitive suffix)
1825 (x_)	ᠨ	MONGOLIAN LETTER OE
1825+ZWJ	ᠨ (x_)	<i>Initial Form</i>
ZWJ+1825+ZWJ	ᠨ (x_)	<i>First Medial Form</i>
ZWJ+1825+FVS1+ZWJ	ᠨ (x_)	<i>Second Medial Form</i>
		(context-driven)
ZWJ+1825+FVS2+ZWJ	ᠨ (x_)	<i>Third Medial Form<sup>ⓔ</sup></i>
ZWJ+1825	ᠨ (x_)	<i>First Final Form</i>
ZWJ+1825+FVS1	ᠨ (x_)	<i>Second Final Form<sup>ⓔ</sup></i>
1826 (x_)	ᠨ	MONGOLIAN LETTER UE
1826	ᠨ (x_)	<i>First Isolate Form</i>
1826+FVS1	ᠨ (x_)	<i>Second Isolate Form</i>
1826+FVS2	ᠨ (x_)	<i>Third Isolate Form</i>
STATUS: Included in Chinese Proposal – WG2#65		
		(NOTE: this is the Unicode presentation form)
1826+ZWJ	ᠨ (x_)	<i>Initial Form<sup>Ⓜ</sup></i>
ZWJ+1826+ZWJ	ᠨ (x_)	<i>First Medial Form</i>
		(also implemented with NNBSF - actually processed as isolate in genitive suffix)
ZWJ+1826+FVS1+ZWJ	ᠨ (x_)	<i>Second Medial Form</i>
		(context-driven)
ZWJ+1826+FVS2+ZWJ	ᠨ (x_)	<i>Third Medial Form<sup>ⓔ</sup></i>
ZWJ+1826+FVS3+ZWJ	ᠨ (x_)	<i>Fourth Medial Form</i>
STATUS: Discussion needed		
		(needed to handle DUEGER without NNBSF)
ZWJ+1826	ᠨ (x_)	<i>First Final Form</i>
		(also implemented with NNBSF - actually processed as isolate in genitive suffix)
ZWJ+1826+FVS1	ᠨ (x_)	<i>Second Final Form<sup>ⓔ</sup></i>
ZWJ+1826+FVS2	ᠨ (x_)	<i>Third Final Form</i>
STATUS: Included in Chinese Proposal – WG2#65		
		(dotted - only implemented with NNBSF - actually processed as isolate in genitive suffix)
1827 (x_)	ᠨ	MONGOLIAN LETTER EE
1827+ZWJ	ᠨ (x_)	<i>Initial Form</i>
ZWJ+1827+ZWJ	ᠨ (x_)	<i>Medial Form</i>
ZWJ+1827	ᠨ (x_)	<i>Final Form</i>
1828 (xxxx)	ᠨ	MONGOLIAN LETTER NA
1828+ZWJ	ᠨ (xxxx)	<i>First Initial Form</i>
		(also context-driven in Todo)
1828+FVS1+ZWJ	ᠨ (x_)	<i>Second Initial Form<sup>ⓔ</sup></i>
ZWJ+1828+ZWJ	ᠨ (xxxx)	<i>First Medial Form</i>
		(context-driven) (may be implemented as a toggle)
ZWJ+1828+FVS1+ZWJ	ᠨ (xxxx)	<i>Second Medial Form</i>
		(context-driven as a toggle, so in actuality could be dotted or undotted)
ZWJ+1828+FVS2+ZWJ	ᠨ (x_)	<i>Third Medial Form</i>
		(only implemented with MVS - actually - processed as final when pre-MVS)
ZWJ+1828+FVS3+ZWJ	ᠨ (x_)	<i>Fourth Medial Form</i>

		(context-driven, Todo only)
ZWJ+1828+VS01+ZWJ	ᠨ (x_)	<i>Fifth Medial Form</i>
STATUS: Discussion needed		
		(AN+FVS4+AR must remove the dot)
ZWJ+1828	ᠨ (xxxx)	<i>Final Form</i>
1829 (x_x)	ᠨ	MONGOLIAN LETTER ANG
1829+ZWJ	ᠨ (x_)	<i>Initial Form</i>
ZWJ+1829+ZWJ	ᠨ (x_xx)	<i>Medial Form</i>
ZWJ+1829	ᠨ (x_x)	<i>Final Form</i>
182A (x_xx)	ᠨ	MONGOLIAN LETTER BA <sup>ᠰ</sup>
182A+ZWJ	ᠨ (x_xx)	<i>Initial Form</i>
ZWJ+182A+ZWJ	ᠨ (x_xx)	<i>Medial Form</i>
ZWJ+182A	ᠨ (x_xx)	<i>First Final Form</i>
ZWJ+182A+FVS1	ᠨ (x_)	<i>Second Final Form<sup>ⓔ</sup></i>
182B (x_)	ᠨ	MONGOLIAN LETTER PA <sup>ᠰ</sup>
182B+ZWJ	ᠨ (x_)	<i>Initial Form</i>
ZWJ+182B+ZWJ	ᠨ (x_)	<i>Medial Form</i>
ZWJ+182B	ᠨ (x_)	<i>Final Form</i>
182C (x_)	ᠨ	MONGOLIAN LETTER QA
182C+FVS1	ᠨ (x_)	<i>Second Isolate Form<sup>ᠰ</sup></i>
STATUS: Included in Chinese Proposal – WG2#65		
182C+FVS2	ᠨ (x_)	<i>Third Isolate Form<sup>ᠰ</sup></i>
STATUS: Included in Chinese Proposal – WG2#65		
182C+ZWJ	ᠨ (x_)	<i>First Initial Form</i>
182C+FVS1+ZWJ	ᠨ (x_)	<i>Second Initial Form<sup>ⓔ</sup></i>
182C+FVS2+ZWJ	ᠨ (x_)	<i>Third Initial Form</i>
ZWJ+182C+ZWJ	ᠨ (x_)	<i>First Medial Form</i>
ZWJ+182C+FVS1+ZWJ	ᠨ (x_)	<i>Second Medial Form<sup>ⓔ</sup></i>
ZWJ+182C+FVS2+ZWJ	ᠨ (x_)	<i>Third Medial Form</i>
STATUS: Included in Chinese Proposal – WG2#65		
		(actually - processed as final when pre-MVS)
ZWJ+182C+FVS3+ZWJ	ᠨ (x_)	<i>Fourth Medial Form<sup>ⓔ</sup></i>
STATUS: Included in Chinese Proposal – WG2#65		
		(actually - processed as final when pre-MVS)
ZWJ+182C	ᠨ (x_)	<i>Final Form</i>
182D (x_)	ᠨ	MONGOLIAN LETTER GA
182D+FVS1	ᠨ (x_)	<i>Second Isolate Form<sup>ᠰ</sup></i>
STATUS: Included in Chinese Proposal – WG2#65		
182D+FVS2	ᠨ (x_)	<i>Third Isolate Form<sup>ᠰ</sup></i>
STATUS: Included in Chinese Proposal – WG2#65		
182D+ZWJ	ᠨ (x_)	<i>First Initial Form</i>
182D+FVS1+ZWJ	ᠨ (x_)	<i>Second Initial Form<sup>ⓔ</sup></i>
182D+FVS2+ZWJ	ᠨ (x_)	<i>Third Initial Form</i>
STATUS: Included in Chinese Proposal – WG2#65		
		(context-driven)
ZWJ+182D+ZWJ	ᠨ (x_)	<i>First Medial Form</i>
ZWJ+182D+FVS1+ZWJ	ᠨ (x_)	<i>Second Medial Form</i>
		(context-driven)
ZWJ+182D+FVS2+ZWJ	ᠨ (x_)	<i>Third Medial Form</i>
		(only implemented with MVS) (actually - processed as final when pre-MVS)
ZWJ+182D+FVS3+ZWJ	ᠨ (x_)	<i>Fourth Medial Form</i>
		(context-driven)

ZWJ+182D+VS01+ZWJ	ᠮ (x_) <i>Fifth Medial Form</i>
<small>STATUS: Discussion needed</small>	
	<small>(needed to over-ride default context) (COG+FVS4+A+FVS1+GULA)</small>
ZWJ+182D	ᠨ (x_) <i>First Final Form</i>
ZWJ+182D+FVS1	ᠨ (x_) <i>Second Final Form</i>
	<small>(needed to over-ride default context) (SIG+FVS1)</small>
ZWJ+182D+FVS2	ᠯ (x_) <i>Third Final Form</i>
	<small>(context-driven) (ABSIG+FVS2)</small>
182E (x_xx)	MONGOLIAN LETTER MA
182E+ZWJ	ᠮ (x_xx) <i>Initial Form</i>
ZWJ+182E+ZWJ	ᠮ (x_xx) <i>Medial Form</i>
ZWJ+182E	ᠮ (x_xx) <i>Final Form</i>
	<small>(also implemented with MVS)</small>
182F (xxxx)	MONGOLIAN LETTER LA
182F+ZWJ	ᠯ (xxxx) <i>Initial Form</i>
ZWJ+182F+ZWJ	ᠯ (xxxx) <i>Medial Form</i>
ZWJ+182F	ᠯ (xxxx) <i>Final Form</i>
	<small>(also implemented with MVS)</small>
1830 (xxxx)	MONGOLIAN LETTER SA
1830+ZWJ	ᠰ (xxxx) <i>Initial Form</i>
ZWJ+1830+ZWJ	ᠰ (xxxx) <i>Medial Form</i>
ZWJ+1830	ᠰ (xxxx) <i>First Final Form</i>
ZWJ+1830+FVS1	ᠰ (x_) <i>Second Final Form<sup>᠑</sup></i>
ZWJ+1830+FVS2	ᠰ (x_) <i>Third Final Form<sup>᠑</sup></i>
1831 (xx_)	MONGOLIAN LETTER SHA
1831+ZWJ	ᠱ (xx_) <i>Initial Form</i>
ZWJ+1831+ZWJ	ᠱ (xx_) <i>Medial Form</i>
ZWJ+1831	ᠱ (xx_) <i>Final Form</i>
1832 (x_)	MONGOLIAN LETTER TA
1832+ZWJ	ᠲ (x_) <i>Initial Form</i>
ZWJ+1832+ZWJ	ᠲ (x_) <i>First Medial Form</i>
ZWJ+1832+FVS1+ZWJ	ᠲ (x_) <i>Second Medial Form<sup>᠑</sup></i>
ZWJ+1832	ᠲ (x_) <i>Final Form</i>
1833 (x_)	MONGOLIAN LETTER DA
1833+ZWJ	ᠳ (x_) <i>First Initial Form</i>
1833+FVS1+ZWJ	ᠳ (x_) <i>Second Initial Form</i>
	<small>(also implemented with NNBSPP)</small>
ZWJ+1833+ZWJ	ᠳ (x_) <i>First Medial Form</i>
ZWJ+1833+FVS1+ZWJ	ᠳ (x_) <i>Second Medial Form</i>
	<small>(context-driven)</small>
ZWJ+1833	ᠳ (x_) <i>First Final Form</i>
ZWJ+1833+FVS1	ᠳ (x_) <i>Second Final Form<sup>᠑</sup></i>
1834 (xxxx)	MONGOLIAN LETTER CHA
1834+ZWJ	ᠴ (xxxx) <i>Initial Form</i>
ZWJ+1834+ZWJ	ᠴ (xxxx) <i>Medial Form</i>

ZWJ+1834	ᠷ (x_) <i>Final Form</i>
1835 (x_x)	MONGOLIAN LETTER JA
1835+ZWJ	ᠵ (x_x) <i>Initial Form</i>
ZWJ+1835+ZWJ	ᠵ (x_x) <i>First Medial Form</i>
ZWJ+1835+FVS1+ZWJ	ᠵ (x_x) <i>Second Medial Form</i>
	<small>(implemented with MVS &amp; NNBSPP only - actually - processed as final when pre-MVS/NNBSPP)</small>
ZWJ+1835	ᠵ (x_x) <i>Final Form</i>
1836 (x_xx)	MONGOLIAN LETTER YA
1836+ZWJ	ᠶ (x_xx) <i>First Initial Form</i>
1836+FVS1+ZWJ	ᠶ (x_x) <i>Second Initial Form</i>
	<small>(context-driven)</small>
ZWJ+1836+ZWJ	ᠶ (x_xx) <i>First Medial Form</i>
ZWJ+1836+FVS1+ZWJ	ᠶ (x_x) <i>Second Medial Form</i>
	<small>(context-driven AND also needed to over-ride default context)</small>
ZWJ+1836+FVS2+ZWJ	ᠶ (x_x) <i>Third Medial Form</i>
	<small>(implemented with MVS &amp; NNBSPP only - actually - processed as final when pre-MVS/NNBSPP)</small>
ZWJ+1836	ᠶ (x_x) <i>Final Form</i>
1837 (xxx_)	MONGOLIAN LETTER RA
1837+ZWJ	ᠷ (xxx_) <i>Initial Form</i>
ZWJ+1837+ZWJ	ᠷ (xxx_) <i>Medial Form</i>
ZWJ+1837	ᠷ (xxx_) <i>Final Form</i>
	<small>(also implemented with MVS)</small>
1838 (xxxx)	MONGOLIAN LETTER WA
1838+ZWJ	ᠰ (xxxx) <i>Initial Form</i>
ZWJ+1838+ZWJ	ᠰ (xxxx) <i>First Medial Form</i>
ZWJ+1838+FVS1+ZWJ	ᠰ (x_x) <i>Second Medial Form</i>
	<small>Out of sync with standardizedvariants.txt here (context-driven)</small>
ZWJ+1838	ᠰ (x_x) <i>First Final Form</i>
ZWJ+1838+FVS1	ᠰ (x_x) <i>Second Final Form<sup>᠑</sup></i>
	<small>(only implemented with MVS)</small>
1839 (x_)	MONGOLIAN LETTER FA <sup>᠑</sup>
1839+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+1839+ZWJ	ᠰ (x_) <i>Medial Form</i>
ZWJ+1839	ᠰ (x_) <i>Final Form</i>
183A (xxxx)	MONGOLIAN LETTER KA <sup>᠑</sup>
183A+ZWJ	ᠰ (xxxx) <i>Initial Form</i>
ZWJ+183A+ZWJ	ᠰ (xxxx) <i>Medial Form</i>
ZWJ+183A	ᠰ (x_x) <i>Final Form</i>
183B (xx_)	MONGOLIAN LETTER KHA <sup>᠑</sup>
183B+ZWJ	ᠰ (xx_) <i>Initial Form</i>
ZWJ+183B+ZWJ	ᠰ (xx_) <i>Medial Form</i>
ZWJ+183B	ᠰ (xx_) <i>Final Form</i>
183C (x_)	MONGOLIAN LETTER TSA

183C+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+183C+ZWJ	ᠰ (x_) <i>Medial Form</i>
ZWJ+183C	ᠰ (x_) <i>Final Form</i>

183D (x_) ᠰ	MONGOLIAN LETTER ZA
183D+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+183D+ZWJ	ᠰ (x_) <i>Medial Form</i>
ZWJ+183D	ᠰ (x_) <i>Final Form</i>

183E (x_) ᠰ	MONGOLIAN LETTER HAA
183E+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+183E+ZWJ	ᠰ (x_) <i>Medial Form</i>
ZWJ+183E	ᠰ (x_) <i>Final Form</i>

183F (x_) ᠰ	MONGOLIAN LETTER ZRA
183F+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+183F+ZWJ	ᠰ (x_) <i>Medial Form</i>
ZWJ+183F	ᠰ (x_) <i>Final Form</i>

1840 (xx_) ᠰ	MONGOLIAN LETTER LHA
1840+ZWJ	ᠰ (xx_) <i>Initial Form</i>
ZWJ+1840+ZWJ	ᠰ (xx_) <i>Medial Form</i>
ZWJ+1840	ᠰ (x_) <i>Final Form</i>

1841 (x_) ᠰ	MONGOLIAN LETTER ZHI
1841+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+1841+ZWJ	ᠰ (x_) <i>Medial Form</i>
ZWJ+1841	ᠰ (x_) <i>Final Form</i>

1842 (x_) ᠰ	MONGOLIAN LETTER CHI
1842+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+1842+ZWJ	ᠰ (x_) <i>Medial Form</i>
ZWJ+1842	ᠰ (x_) <i>Final Form</i>

## Todo Letters

1843 (x_) ᠰ	MONGOLIAN LETTER TODO LONG VOWEL SIGN
1843+ZWJ	ᠰ (x_) <i>Initial Form</i> (context-driven)
ZWJ+1843+ZWJ	ᠰ (x_) <i>Medial Form</i> (context-driven)
ZWJ+1843	ᠰ (x_) <i>First Final Form</i> (context-driven)
ZWJ+1843+FVS1	ᠰ (x_) <i>Second Final Form</i> (context-driven)

1844 (x_) ᠰ	MONGOLIAN LETTER TODO E
1844+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+1844+ZWJ	ᠰ (x_) <i>First Medial Form</i>
ZWJ+1844+FVS1+ZWJ	ᠰ (x_) <i>Second Medial Form</i> <sup>Ⓔ</sup>

ZWJ+1844	ᠰ (x_) <i>Final Form</i>
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1845 (x_) ᠰ	MONGOLIAN LETTER TODO I
1845+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+1845+ZWJ	ᠰ (x_) <i>First Medial Form</i>
ZWJ+1845+FVS1+ZWJ	ᠰ (x_) <i>Second Medial Form</i> (context-driven)
ZWJ+1845	ᠰ (x_) <i>Final Form</i>

1846 (x_) ᠰ	MONGOLIAN LETTER TODO O
1846+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+1846+ZWJ	ᠰ (x_) <i>First Medial Form</i>
ZWJ+1846+FVS1+ZWJ	ᠰ (x_) <i>Second Medial Form</i> <sup>Ⓔ</sup>
ZWJ+1846	ᠰ (x_) <i>Final Form</i>

1847 (x_) ᠰ	MONGOLIAN LETTER TODO U
1847+FVS1	ᠰ (x_) <i>Second Isolate Form</i>
1847+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+1847+ZWJ	ᠰ (x_) <i>First Medial Form</i>
ZWJ+1847+FVS1+ZWJ	ᠰ (x_) <i>Second Medial Form</i> <sup>Ⓔ</sup>
ZWJ+1847+FVS2+ZWJ	ᠰ (x_) <i>Third Medial Form</i> (context-driven)
ZWJ+1847	ᠰ (x_) <i>First Final Form</i>
ZWJ+1847+FVS1	ᠰ (x_) <i>Second Final Form</i> (context-driven)

1848 (x_) ᠰ	MONGOLIAN LETTER TODO OE
1848+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+1848+ZWJ	ᠰ (x_) <i>First Medial Form</i>
ZWJ+1848+FVS1+ZWJ	ᠰ (x_) <i>Second Medial Form</i> <sup>Ⓔ</sup>
ZWJ+1848	ᠰ (x_) <i>Final Form</i>

1849 (x_) ᠰ	MONGOLIAN LETTER TODO UE
1849+FVS1	ᠰ (x_) <i>Second Isolate Form</i>
1849+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+1849+ZWJ	ᠰ (x_) <i>First Medial Form</i>
ZWJ+1849+FVS1+ZWJ	ᠰ (x_) <i>Second Medial Form</i> <sup>Ⓔ</sup>
ZWJ+1849	ᠰ (x_) <i>Final Form</i>

184A (x_) ᠰ	MONGOLIAN LETTER TODO ANG
184A	ᠰ (x_) <i>Isolate Form</i>
184A+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+184A+ZWJ	ᠰ (x_) <i>Medial Form</i>
ZWJ+184A	ᠰ (x_) <i>Final Form</i> <sup>Ⓜ</sup>

184B (x_) ᠰ	MONGOLIAN LETTER TODO BA
184B	ᠰ (x_) <i>Isolate Form</i>
184B+ZWJ	ᠰ (x_) <i>Initial Form</i>
ZWJ+184B+ZWJ	ᠰ (x_) <i>Medial Form</i>
ZWJ+184B	ᠰ (x_) <i>Final Form</i> <sup>Ⓜ</sup>



184C	(x_)		MONGOLIAN LETTER TODO PA <sup>s</sup>
184C+ZWJ		(x_)	Initial Form
ZWJ+184C+ZWJ		(x_)	Medial Form
ZWJ+184C		(x_)	Final Form
184D	(x_)		MONGOLIAN LETTER TODO QA
184D+FVS1		(x_)	Second Isolate Form <sup>*</sup>
Out of sync with standardizedvariants.txt here			
184D+ZWJ		(x_)	Initial Form
Out of sync with standardizedvariants.txt here			
ZWJ+184D+ZWJ		(x_)	Medial Form
Out of sync with standardizedvariants.txt here			
ZWJ+184D		(x_)	Final Form
184E	(x_)		MONGOLIAN LETTER TODO GA
184E+FVS1		(x_)	Second Isolate Form <sup>*</sup>
STATUS: Included in Chinese Proposal – WG2/65			
184E+ZWJ		(x_)	Initial Form
ZWJ+184E+ZWJ		(x_)	First Medial Form
ZWJ+184E+FVS1+ZWJ		(x_)	Second Medial Form
(context-driven)			
ZWJ+184E		(x_)	Final Form
184F	(x_)		MONGOLIAN LETTER TODO MA
184F		(x_)	Isolate Form
184F+ZWJ		(x_)	Initial Form
ZWJ+184F+ZWJ		(x_)	Medial Form
ZWJ+184F		(x_)	Final Form <sup>%</sup>
1850	(x_)		MONGOLIAN LETTER TODO TA
1850+ZWJ		(x_)	Initial Form
ZWJ+1850+ZWJ		(x_)	Medial Form
ZWJ+1850		(x_)	Final Form
1851	(x_)		MONGOLIAN LETTER TODO DA
1851+ZWJ		(x_)	Initial Form
ZWJ+1851+ZWJ		(x_)	Medial Form
ZWJ+1851		(x_)	Final Form
1852	(x_)		MONGOLIAN LETTER TODO CHA
1852+ZWJ		(x_)	Initial Form
ZWJ+1852+ZWJ		(x_)	Medial Form
ZWJ+1852		(x_)	Final Form
1853	(xx_)		MONGOLIAN LETTER TODO JA
1853+ZWJ		(xx_)	Initial Form
ZWJ+1853+ZWJ		(xx_)	Medial Form
ZWJ+1853		(x_)	Final Form
1854	(x_)		MONGOLIAN LETTER TODO TSA

1854+ZWJ		(x_)	Initial Form
ZWJ+1854+ZWJ		(x_)	Medial Form
ZWJ+1854		(x_)	Final Form
1855	(x_)		MONGOLIAN LETTER TODO YA
1855+ZWJ		(x_)	Initial Form
ZWJ+1855+ZWJ		(x_)	Medial Form
ZWJ+1855		(x_)	Final Form
1856	(x_)		MONGOLIAN LETTER TODO WA
1856+ZWJ		(x_)	Initial Form
ZWJ+1856+ZWJ		(x_)	Medial Form
ZWJ+1856		(x_)	Final Form
1857	(x_)		MONGOLIAN LETTER TODO KA <sup>s</sup>
1857+ZWJ		(x_)	Initial Form
ZWJ+1857+ZWJ		(x_)	Medial Form
ZWJ+1857		(x_)	Final Form
1858	(xx_)		MONGOLIAN LETTER TODO GAA <sup>s</sup>
1858+ZWJ		(xx_)	Initial Form
ZWJ+1858+ZWJ		(xx_)	Medial Form
ZWJ+1858		(x_)	Final Form
1859	(x_)		MONGOLIAN LETTER TODO HAA
1859		(x_)	Isolate Form
1859+ZWJ		(x_)	Initial Form
ZWJ+1859+ZWJ		(x_)	Medial Form
ZWJ+1859		(x_)	Final Form <sup>%</sup>
185A	(x_)		MONGOLIAN LETTER TODO JIA
185A+ZWJ		(x_)	Initial Form
ZWJ+185A+ZWJ		(x_)	Medial Form
ZWJ+185A		(x_)	Final Form
185B	(xx_)		MONGOLIAN LETTER TODO NIA
185B+ZWJ		(xx_)	Initial Form <sup>2</sup>
ZWJ+185B+ZWJ		(xx_)	Medial Form
ZWJ+185B		(x_)	Final Form
185C	(xx_)		MONGOLIAN LETTER TODO DZA
185C+ZWJ		(xx_)	Initial Form
ZWJ+185C+ZWJ		(xx_)	Medial Form
ZWJ+185C		(x_)	Final Form
Sibe Letters			
185D	(xx_)		MONGOLIAN LETTER SIBE E
185D		(xx_)	Isolate Form

185D+ZWJ	ᠳ (xx)	Initial Form
ZWJ+185D+ZWJ	ᠳ (xx)	First Medial Form
ZWJ+185D+FVS1+ZWJ	ᠳ (xx)	Second Medial Form
	(context-driven)	
ZWJ+185D	ᠳ (xx)	First Final Form%
ZWJ+185D+FVS1	ᠳ (xx)	Second Final Form
	(context-driven)	

185E	( <u>x</u> )	ᠰ	MONGOLIAN LETTER SIBE I
185E		ᠰ ( <u>x</u> )	<i>Isolate Form</i>
185E+ZWJ		ᠰ ( <u>x</u> )	<i>Initial Form</i>
ZWJ+185E+ZWJ		ᠰ ( <u>x</u> )	<i>First Medial Form</i>
ZWJ+185E+FVS1+ZWJ		ᠰ ( <u>x</u> )	<i>Second Medial Form</i> <sup>%</sup>
		(context-driven)	
ZWJ+185E+FVS2+ZWJ		ᠰ ( <u>x</u> )	<i>Third Medial Form</i>
		(context-driven)	
ZWJ+185E		ᠰ ( <u>x</u> )	<i>First Final Form</i>
		(also implemented with NNBSF - actually processed as isolate in accusative suffix)	
ZWJ+185E+FVS1		ᠰ ( <u>x</u> )	<i>Second Final Form</i>
		(context-driven)	
ZWJ+185E+FVS2		ᠰ ( x )	<i>Third Final Form</i>

185F	(__xx)	ᠳ	MONGOLIAN LETTER SIBE IY
185F+ZWJ		ᠳ (__)	<i>Initial Form</i>
ZWJ+185F+ZWJ		ᠳ (__xx)	<i>Medial Form</i>
ZWJ+185F		ᠳ ( xx)	<i>Final Form</i>

1860	(__xx)	ᠳ	MONGOLIAN LETTER SIBE UE
1860+ZWJ		ᠳ (xx)	Initial Form
ZWJ+1860+ZWJ		ᠳ (xx)	First Medial Form
ZWJ+1860+FVS1+ZWJ		ᠳ (xx)	Second Medial Form
		(context-driven)	
ZWJ+1860		ᠳ (xx)	First Final Form
ZWJ+1860+FVS1		ᠳ (xx)	Second Final Form
		(context-driven)	
ZWJ+1860+FVS2		ᠳ (xx)	Third Final Form
		(context-driven)	
STATUS: Included in Chinese Proposal – WG2#65			

1861	(xx)	ᠳ	MONGOLIAN LETTER SIBE U
1861		ᠳ	(x) <i>Isolate Form</i>
1861+ZWJ		ᠳᠤ	(x) <i>Initial Form</i>
ZWJ+1861+ZWJ		ᠳᠤ	(xx) <i>Medial Form</i> <sup>%</sup>
ZWJ+1861		ᠳ	(xx) <i>Final Form</i>

1862	(x)	ᠳ	MONGOLIAN LETTER SIBE ANG
1862		ᠳ (x)	<i>Isolate Form</i>
1862+ZWJ		ᠳ ( )	<i>Initial Form</i>
ZWJ+1862+ZWJ		ᠳ (x)	<i>Medial Form</i>
ZWJ+1862		ᠳ ( x )	<i>Final Form</i> <sup>%</sup>

1863	(x)	ᠳ	MONGOLIAN LETTER SIBE KA
1863	ᠳ (x)		<i>First Isolate Form</i>

Out of sync with standardizedvariants.txt here

1863+FVS1	ᠳ (x)	Second Isolate Form*
Out of sync with standardizedvariants.txt here		
1863+ZWJ	ᠳ (x)	Initial Form
ZWJ+1863+ZWJ	ᠳ (x)	First Medial Form
ZWJ+1863+FVS1+ZWJ	ᠳ (x)	Second Medial Form
	(context-driven)	
ZWJ+1863	ᠳ (x)	Final Form%

1864	( <u>xx</u> )	ᠳ	MONGOLIAN LETTER SIBE GA
1864+FVS1	ᠳ ( <u>xx</u> )		<i>Second Isolate Form*</i>
<i>Out of sync with standardizedvariants.txt here</i>			
1864+ZWJ	ᠳ ( <u>xx</u> )		<i>Initial Form</i>
ZWJ+1864+ZWJ	ᠳ ( <u>xx</u> )		<i>Medial Form</i>
ZWJ+1864	ᠳ ( )		<i>Final Form</i>

1865	( <u>xx</u> )	ᠳ	MONGOLIAN LETTER SIBE HA
1865+FVS1	ᠳ ( <u>xx</u> )		<i>Second Isolate Form*</i>
<i>Out of sync with standardizedvariants.txt here</i>			
1865+ZWJ	ᠳ ( <u>xx</u> )		<i>Initial Form</i>
ZWJ+1865+ZWJ	ᠳ ( <u>xx</u> )		<i>Medial Form</i>
ZWJ+1865	ᠳ ( )		<i>Final Form</i>

1866	( <u>xx</u> )	ᠳ	MONGOLIAN LETTER SIBE PA <sup>s</sup>
1866+ZWJ		ᠳ ( <u>xx</u> )	<i>Initial Form</i>
ZWJ+1866+ZWJ		ᠳ ( <u>xx</u> )	<i>Medial Form</i>
ZWJ+1866		ᠳ ( )	<i>Final Form</i>

1867	(__xx)	ᠰ	MONGOLIAN LETTER SIBE SHA
1867+ZWJ		ᠰ (xx)	<i>Initial Form</i>
ZWJ+1867+ZWJ		ᠰ (xx)	<i>Medial Form</i>
ZWJ+1867		ᠰ (x)	<i>Final Form</i>

1868	(__xx)	ᠳ	MONGOLIAN LETTER SIBE TA
1868+ZWJ	ᠳ (xx)	First Initial Form	
1868+FVS1+ZWJ	ᠳ (xx)	Second Initial Form	
	(context-driven)		
ZWJ+1868+ZWJ	ᠳ (xx)	First Medial Form	
ZWJ+1868+FVS1+ZWJ	ᠳ (xx)	Second Medial Form	
	(context-driven)		
ZWJ+1868+FVS2+ZWJ	ᠳ (xx)	Third Medial Form	
	(no context currently – more research needed here)		
ZWJ+1868	ᠳ (xx)	Final Form	


1869	(__xx)	ᠳ	MONGOLIAN LETTER SIBE DA
1869+ZWJ	ᠳ (xx)	First Initial Form	
1869+FVS1+ZWJ	ᠳ (xx)	Second Initial Form	
	(context-driven and also NNBSF)		
ZWJ+1869+ZWJ	ᠳ (xx)	First Medial Form	
ZWJ+1869+FVS1+ZWJ	ᠳ (xx)	Second Medial Form	
	(context-driven)		
ZWJ+1869	ᠳ ( )	Final Form	

186A ( _x )	ᠰ	MONGOLIAN LETTER SIBE JA
186A+ZWJ	ᠰ ( _x )	<i>Initial Form</i>
ZWJ+186A+ZWJ	ᠰ ( _x )	<i>Medial Form</i>
ZWJ+186A	ᠰ ( _ )	<i>Final Form</i>
186B ( _x )	ᠰᠢ	MONGOLIAN LETTER SIBE FA
186B+ZWJ	ᠰᠢ ( _x )	<i>Initial Form</i>
ZWJ+186B+ZWJ	ᠰᠢ ( _x )	<i>Medial Form</i>
ZWJ+186B	ᠰᠢ ( _ )	<i>Final Form</i>
186C ( _xx )	ᠰᠡ	MONGOLIAN LETTER SIBE GAA <sup>s</sup>
186C+ZWJ	ᠰᠡ ( _xx )	<i>Initial Form</i>
ZWJ+186C+ZWJ	ᠰᠡ ( _xx )	<i>Medial Form</i>
ZWJ+186C	ᠰᠡ ( _ )	<i>Final Form</i>
186D ( _xx )	ᠰᠢᠨ	MONGOLIAN LETTER SIBE HAA <sup>s</sup>
186D+ZWJ	ᠰᠢᠨ ( _xx )	<i>Initial Form</i>
ZWJ+186D+ZWJ	ᠰᠢᠨ ( _xx )	<i>Medial Form</i>
ZWJ+186D	ᠰᠢᠨ ( _ )	<i>Final Form</i>
186E ( _xx )	ᠰᠢᠨᠠ	MONGOLIAN LETTER SIBE TSA
186E+ZWJ	ᠰᠢᠨᠠ ( _xx )	<i>Initial Form</i>
ZWJ+186E+ZWJ	ᠰᠢᠨᠠ ( _xx )	<i>Medial Form</i>
ZWJ+186E	ᠰᠢᠨᠠ ( _xx )	<i>Final Form</i>
186F ( _xx )	ᠰᠢᠨᠠᠨ	MONGOLIAN LETTER SIBE ZA
186F+ZWJ	ᠰᠢᠨᠠᠨ ( _xx )	<i>First Initial Form</i>
186F+FVS1+ZWJ	ᠰᠢᠨᠠᠨ ( _xx )	<i>Second Initial Form</i> (context-driven)
ZWJ+186F+ZWJ	ᠰᠢᠨᠠᠨ ( _xx )	<i>First Medial Form</i>
ZWJ+186F+FVS1+ZWJ	ᠰᠢᠨᠠᠨ ( _xx )	<i>Second Medial Form</i> (context-driven)
ZWJ+186F	ᠰᠢᠨᠠᠨ ( _xx )	<i>Final Form</i>
1870 ( _xx )	ᠰᠢᠨᠠᠨᠠ	MONGOLIAN LETTER SIBE RAA
1870+ZWJ	ᠰᠢᠨᠠᠨᠠ ( _xx )	<i>Initial Form</i>
ZWJ+1870+ZWJ	ᠰᠢᠨᠠᠨᠠ ( _xx )	<i>Medial Form</i>
ZWJ+1870	ᠰᠢᠨᠠᠨᠠ ( _xx )	<i>Final Form</i>
1871 ( _xx )	ᠰᠢᠨᠠᠨᠠᠨ	MONGOLIAN LETTER SIBE CHA
1871+ZWJ	ᠰᠢᠨᠠᠨᠠᠨ ( _xx )	<i>Initial Form</i>
ZWJ+1871+ZWJ	ᠰᠢᠨᠠᠨᠠᠨ ( _xx )	<i>Medial Form</i>
ZWJ+1871	ᠰᠢᠨᠠᠨᠠᠨ ( _ )	<i>Final Form</i>
1872 ( _x )	ᠰᠢᠨᠠᠨᠠᠨᠠ	MONGOLIAN LETTER SIBE ZHA
1872+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠ ( _x )	<i>Initial Form</i>
ZWJ+1872+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠ ( _x )	<i>Medial Form</i>
ZWJ+1872	ᠰᠢᠨᠠᠨᠠᠨᠠ ( _ )	<i>Final Form</i>

## Manchu Letters



1873 ( _x )	ᠰᠢᠨᠠᠨᠠᠨᠠᠨ	MONGOLIAN LETTER MANCHU I
1873	ᠰᠢᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Isolate Form</i>
1873+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Initial Form</i>
ZWJ+1873+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>First Medial Form</i>
ZWJ+1873+FVS1+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Second Medial Form</i> (context-driven)
ZWJ+1873+FVS2+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Third Medial Form</i> <sup>%</sup>
ZWJ+1873+FVS3+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Fourth Medial Form</i>
ZWJ+1873	ᠰᠢᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>First Final Form</i> (also implemented with NNBS - actually processed as isolate in accusative suffix)
ZWJ+1873+FVS1	ᠰᠢᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Second Final Form</i>
ZWJ+1873+FVS2	ᠰᠢᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Third Final Form</i>
ZWJ+1873+FVS3	ᠰᠢᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Fourth Final Form</i> <i>Out of sync with standardizedvariants.txt here – glyph needs to be modified</i> (context-driven) (not in current USVL)
1874 ( _x )	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠ	MONGOLIAN LETTER MANCHU KA
1874	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠ ( _x )	<i>First Isolate Form</i> <i>Out of sync with standardizedvariants.txt here</i>
1874+FVS1	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠ ( _x )	<i>Second Isolate Form</i> <i>Out of sync with standardizedvariants.txt here</i>
1874+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠ ( _x )	<i>Initial Form</i>
ZWJ+1874+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠ ( _x )	<i>First Medial Form</i>
ZWJ+1874+FVS1+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠ ( _x )	<i>Second Medial Form</i> (context-driven)
ZWJ+1874+FVS2+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠ ( _x )	<i>Third Medial Form</i> (context-driven)
ZWJ+1874+FVS3+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠ ( _x )	<i>Fourth Medial Form</i>
ZWJ+1874	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠ ( _x )	<i>First Final Form</i> <sup>%</sup>
ZWJ+1874+FVS1	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠ ( _x )	<i>Second Final Form</i> (context-driven)
ZWJ+1874+FVS2	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠ ( _x )	<i>Third Final Form</i>
1875 ( _x )	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠᠨ	MONGOLIAN LETTER MANCHU RA
1875	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Isolate Form</i>
1875+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Initial Form</i>
ZWJ+1875+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Medial Form</i>
ZWJ+1875	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Final Form</i> <sup>%</sup>
1876 ( _x )	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠᠨᠠ	MONGOLIAN LETTER MANCHU FA
1876	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Isolate Form</i>
1876+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>First Initial Form</i>
1876+FVS1+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Second Initial Form</i> (context-driven)
ZWJ+1876+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>First Medial Form</i> <sup>%</sup>
ZWJ+1876+FVS1+ZWJ	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠᠨᠠᠨ ( _x )	<i>Second Medial Form</i> (context-driven)
ZWJ+1876	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠᠨᠠᠨ ( _ )	<i>Final Form</i>
1877 ( _x )	ᠰᠢᠨᠠᠨᠠᠨᠠᠨᠠᠨᠠᠨᠠ	MONGOLIAN LETTER MANCHU ZHA



1877+ZWJ       (xx\_x)      *Initial Form*  
 ZWJ+1877+ZWJ       (xx\_x)      *Medial Form*  
 ZWJ+1877       (xx\_x)      *Final Form*

1878 <reserved>  
 1879 <reserved>  
 187A <reserved>  
 187B <reserved>  
 187C <reserved>  
 187D <reserved>  
 187E <reserved>  
 187F <reserved>


## Ali Gali Letters









1880 (xx\_x)       MONGOLIAN LETTER ALI GALI ANUSVARA  
 1880+FVS1       (xx\_x)      *Second Form*

1881 (xx\_x)       MONGOLIAN LETTER ALI GALI VISARGA  
 1881+FVS1       (xx\_x)      *Second Form*







1882 (xx\_x)       MONGOLIAN LETTER ALI GALI DAMARU





1883 (xx\_x)       MONGOLIAN LETTER ALI GALI UBADAMA

1884 (xx\_x)       MONGOLIAN LETTER ALI GALI INVERTED UBADAMA






1887 (xx\_x)       MONGOLIAN LETTER ALI GALI A  
 1887+ZWJ       (xx\_x)      *Initial Form*  
 ZWJ+1887+ZWJ       (xx\_x)      *Medial Form*  
 ZWJ+1887       (xx\_x)      *First Final Form*  
 ZWJ+1887+FVS1       (xx\_x)      *Second Final Form*  
 ZWJ+1887+FVS2       (xx\_x)      *Third Final Form*  
 ZWJ+1887+FVS3       (xx\_x)      *Fourth Final Form*  
 ZWJ+1887+VS01       (xx\_x)      *Fifth Final Form*





STATUS: Agreed upon by the UTC at WG2#65 – glyph is currently the wrong shape





1888 (xx\_x)       MONGOLIAN LETTER ALI GALI I  
 1888+ZWJ       (xx\_x)      *Initial Form*  
 ZWJ+1888+ZWJ       (xx\_x)      *First Medial Form*  
 ZWJ+1888+ZWJ+FVS1       (xx\_x)      *Second Medial Form*  
 STATUS: Discussion needed  
 ZWJ+1888       (xx\_x)      *First Final Form*  
 ZWJ+1888+FVS1       (xx\_x)      *Second Final Form*


1889 (xx\_x)       MONGOLIAN LETTER ALI GALI KA<sup>s</sup>  
 1889+ZWJ       (xx\_x)      *Initial Form*  
 ZWJ+1889+ZWJ       (xx\_x)      *Medial Form*<sup>3</sup>  
 ZWJ+1889       (xx\_x)      *Final Form*





188A (xx\_x)       MONGOLIAN LETTER ALI GALI NG A





188A+ZWJ       (xx\_x)      *First Initial Form*  
 188A+FVS1+ZWJ       (xx\_x)      *Second Initial Form*  
 ZWJ+188A+ZWJ       (xx\_x)      *First Medial Form*  
 ZWJ+188A+FVS1+ZWJ       (xx\_x)      *Second Medial Form*  
 ZWJ+188A       (xx\_x)      *Final Form*





188B (xx\_x)       MONGOLIAN LETTER ALI GALI CA  
 188B+ZWJ       (xx\_x)      *Initial Form*  
 ZWJ+188B+ZWJ       (xx\_x)      *Medial Form*  
 ZWJ+188B       (xx\_x)      *Final Form*





188C (x\_x)       MONGOLIAN LETTER ALI GALI TTA  
 188C+ZWJ       (x\_x)      *Initial Form*  
 ZWJ+188C+ZWJ       (x\_x)      *Medial Form*  
 ZWJ+188C       (x\_x)      *Final Form*





188D (x\_x)       MONGOLIAN LETTER ALI GALI TTHA  
 188D+ZWJ       (x\_x)      *Initial Form*  
 ZWJ+188D+ZWJ       (x\_x)      *Medial Form*  
 ZWJ+188D       (x\_x)      *Final Form*

188E (x\_x)       MONGOLIAN LETTER ALI GALI DDA  
 188E+ZWJ       (x\_x)      *Initial Form*  
 ZWJ+188E+ZWJ       (x\_x)      *Medial Form*  
 ZWJ+188E       (x\_x)      *Final Form*

188F (x\_xx)       MONGOLIAN LETTER ALI GALI NNA  
 188F+ZWJ       (xx\_x)      *Initial Form*  
 ZWJ+188F+ZWJ       (xx\_x)      *Medial Form*  
 ZWJ+188F       (xx\_x)      *Final Form*

1890 (x\_x)       MONGOLIAN LETTER ALI GALI TA  
 1890+ZWJ       (x\_x)      *Initial Form*  
 ZWJ+1890+ZWJ       (x\_x)      *Medial Form*  
 ZWJ+1890       (x\_x)      *Final Form*

1891 (x\_x)       MONGOLIAN LETTER ALI GALI DA  
 1891+ZWJ       (x\_x)      *Initial Form*  
 ZWJ+1891+ZWJ       (x\_x)      *Medial Form*  
 ZWJ+1891       (x\_x)      *Final Form*

1892 (x\_x)       MONGOLIAN LETTER ALI GALI PA<sup>s</sup>  
 1892+ZWJ       (x\_x)      *Initial Form*  
 ZWJ+1892+ZWJ       (x\_x)      *Medial Form*  
 ZWJ+1892       (x\_x)      *Final Form*

1893 (x\_x)       MONGOLIAN LETTER ALI GALI PHA<sup>s</sup>  
 1893+ZWJ       (x\_x)      *Initial Form*

ZWJ+1893+ZWJ	᠑ᠢ (x_)ᶜ	Medial Form	189D+ZWJ	ᠠᠨ (x_)	Initial Form
ZWJ+1893	᠑ ( )	Final Form	ZWJ+189D+ZWJ	ᠠᠨ (x_)	Medial Form
1894 (xx_) ᠠᠨ	MONGOLIAN LETTER ALI GALI SSA		ZWJ+189D	ᠠᠨ ( )	Final Form
1894+ZWJ	ᠠᠨ (xx_)	Initial Form	189E (x_) ᠠᠨ	MONGOLIAN LETTER MANCHU ALI GALI TTA	
ZWJ+1894+ZWJ	ᠠᠨ (xx_)	Medial Form	189E+ZWJ	ᠠᠨ (x_)	Initial Form
ZWJ+1894	ᠠᠨ ( )	Final Form	ZWJ+189E+ZWJ	ᠠᠨ (x_)	Medial Form
1895 (x_) ᠠᠨ	MONGOLIAN LETTER ALI GALI ZHA		ZWJ+189E	ᠠᠨ ( )	Final Form
1895+ZWJ	ᠠᠨ (x_)	Initial Form	189F (x_) ᠠᠨ	MONGOLIAN LETTER MANCHU ALI GALI DDHA	
ZWJ+1895+ZWJ	ᠠᠨ (x_)ᶜ	Medial Form	189F+ZWJ	ᠠᠨ (x_)	Initial Form
ZWJ+1895	ᠠᠨ ( )	Final Form	ZWJ+189F+ZWJ	ᠠᠨ (x_)	Medial Form
1896 (xx_) ᠠᠨ	MONGOLIAN LETTER ALI GALI ZA		ZWJ+189F	ᠠᠨ ( )	Final Form
1896+ZWJ	ᠠᠨ (xx_)	Initial Form	18A0 (x_) ᠠᠨ	MONGOLIAN LETTER MANCHU ALI GALI TA	
ZWJ+1896+ZWJ	ᠠᠨ (xx_)	Medial Form	18A0+ZWJ	ᠠᠨ (x_)	First Initial Form
ZWJ+1896	ᠠᠨ ( )	Final Form	18A0+FVS1+ZWJ	ᠠᠨ (x_)	Second Initial Form
1897 (x_) ᠠᠨ	MONGOLIAN LETTER ALI GALI AH		Out of sync with standardized variants.txt here		
1897+ZWJ	ᠠᠨ (x_)	Initial Form	(context-driven) (not in current USVL)		
ZWJ+1897+ZWJ	ᠠᠨ (x_)ᶜ	Medial Form <sup>5</sup>	ZWJ+18A0+ZWJ	ᠠᠨ (x_)	First Medial Form
ZWJ+1897	ᠠᠨ ( )	Final Form	ZWJ+18A0+FVS1+ZWJ	ᠠᠨ (x_)	Second Medial Form
1898 (x_) ᠠᠨ	MONGOLIAN LETTER TODO ALI GALI TA		Out of sync with standardized variants.txt here		
1898+ZWJ	ᠠᠨ (x_)	Initial Form	(context-driven) (not in current USVL)		
ZWJ+1898+ZWJ	ᠠᠨ ( )	Medial Form	ZWJ+18A0	ᠠᠨ ( )	Final Form
ZWJ+1898	ᠠᠨ ( )	Final Form	18A1 (x_) ᠠᠨ	MONGOLIAN LETTER MANCHU ALI GALI DHA	
1899 (x_) ᠠᠨ	MONGOLIAN LETTER TODO ALI GALI ZHA		18A1+ZWJ	ᠠᠨ (x_)	First Initial Form
1899+ZWJ	ᠠᠨ (x_)	Initial Form	18A1+FVS1+ZWJ	ᠠᠨ ( )	Second Initial Form <sup>6</sup>
ZWJ+1899+ZWJ	ᠠᠨ ( )	Medial Form	Out of sync with standardized variants.txt here		
ZWJ+1899	ᠠᠨ ( )	Final Form	(context-driven) (not in current USVL)		
189A (x_) ᠠᠨ	MONGOLIAN LETTER MANCHU ALI GALI GH		ZWJ+18A1+ZWJ	ᠠᠨ (x_)	First Medial Form
189A+ZWJ	ᠠᠨ (x_)	Initial Form	ZWJ+18A1+FVS1+ZWJ	ᠠᠨ ( )	Second Medial Form <sup>7</sup>
ZWJ+189A+ZWJ	ᠠᠨ (x_)	Medial Form	Out of sync with standardized variants.txt here		
ZWJ+189A	ᠠᠨ ( )	Final Form	(context-driven) (not in current USVL)		
189B (x_) ᠠᠨ	MONGOLIAN LETTER MANCHU ALI GALI NGA		ZWJ+18A1	ᠠᠨ ( )	Final Form
189B+ZWJ	ᠠᠨ (x_)	Initial Form	18A2 (x_) ᠠᠨ	MONGOLIAN LETTER MANCHU ALI GALI SSA	
ZWJ+189B+ZWJ	ᠠᠨ (x_)	Medial Form	18A2+ZWJ	ᠠᠨ (x_)	Initial Form
ZWJ+189B	ᠠᠨ ( )	Final Form	ZWJ+18A2+ZWJ	ᠠᠨ (x_)	Medial Form
189C (x_) ᠠᠨ	MONGOLIAN LETTER MANCHU ALI GALI CA		ZWJ+18A2	ᠠᠨ ( )	Final Form
189C+ZWJ	ᠠᠨ (x_)	Initial Form	18A3 (x_) ᠠᠨ	MONGOLIAN LETTER MANCHU ALI GALI CYA	
ZWJ+189C+ZWJ	ᠠᠨ (x_)	Medial Form	18A3+ZWJ	ᠠᠨ (x_)	Initial Form
ZWJ+189C	ᠠᠨ ( )	Final Form	ZWJ+18A3+ZWJ	ᠠᠨ (x_)	Medial Form
189D (x_) ᠠᠨ	MONGOLIAN LETTER MANCHU ALI GALI JHA		ZWJ+18A3	ᠠᠨ ( )	Final Form
			18A4 (x_) ᠠᠨ	MONGOLIAN LETTER MANCHU ALI GALI ZHA	
			18A4+ZWJ	ᠠᠨ (x_)	Initial Form
			ZWJ+18A4+ZWJ	ᠠᠨ (x_)	Medial Form
			ZWJ+18A4	ᠠᠨ ( )	Final Form

18A5	(__x)		MONGOLIAN LETTER MANCHU ALI GALI ZA
18A5+ZWJ			<i>Initial Form</i>
ZWJ+18A5+ZWJ			<i>Medial Form</i>
ZWJ+18A5			<i>Final Form</i>
18A6	(xx__)		MONGOLIAN LETTER ALI GALI HALF U
18A6+ZWJ			<i>Initial Form</i>
ZWJ+18A6+ZWJ			<i>Medial Form</i>
ZWJ+18A6			<i>Final Form</i>
18A7	(xx__)		MONGOLIAN LETTER ALI GALI HALF YA
18A7+ZWJ			<i>Initial Form</i>

<sup>1</sup> Weizhe Zheng: “U+1807 (Sibe syllable boundary marker) is also used in Manchu. For example, the name Ming’ilha (G. R. Li, Manchu - A textbook for reading documents, p. 51, l. 5, first word), is written with an additional tooth separating the two syllables.”

<sup>2</sup> Weizhe Zheng: “Also used in Ali Gali (U+185B as well as U+1853, U+1858, U+185C).”

<sup>3</sup> Weizhe Zheng: “Attested to in TWYT and DZQZ.”

ZWJ+18A7+ZWJ			<i>Medial Form</i>
ZWJ+18A7			<i>Final Form</i>
18A8	(__x)		MONGOLIAN LETTER MANCHU ALI GALI BHA <sup>5</sup>
18A8+ZWJ			<i>Initial Form</i>
ZWJ+18A8+ZWJ			<i>Medial Form</i>
ZWJ+18A8			<i>Final Form</i>
18AA	(__x)		MONGOLIAN LETTER MANCHU ALI GALI LHA
18AA+ZWJ			<i>Initial Form</i>
ZWJ+18AA+ZWJ			<i>Medial Form</i>
ZWJ+18AA			<i>Final Form</i>

<sup>4</sup> Weizhe Zheng: “The Mongolian Ali Gali letters U+188C through U+1893 and U+1895 also appear in medial position. See TWYT\_110, TWYT\_214.”

<sup>5</sup> Weizhe Zheng: “Attested to in DZQZ.”

<sup>6</sup> Weizhe Zheng: “Attested to in TWYT and DZQZ.”

<sup>7</sup> Weizhe Zheng: “Attested to in DZQZ.”

<sup>8</sup> U+18A8: “(Ali Gali Manchu BHA) also appears in medial position. See TWYT\_110.”