

# Revised code chart and names list for Zanabazar Square

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## 1 Introduction


The code chart and names list for Zanabazar Square (N4541 L2/14-024) have been revised as a result of a meeting with experts of Mongolian scripts in Tokyo, October 15–16, 2015. Changes are as follows:


1. Changed glyph for FINAL CONSONANT MARK from circle to diamond shape.
2. Included "Mongolian aang" as an annotation for LETTER -A.

















































































The following points were discussed informally between various participants, but they were not formally documented:

1. Add annotation for VOWEL LENGTH MARK regarding its additional usage for representing Tibetan 'a-chung.
2. Change the glyph for CLUSTER INITIAL RA from  $\text{ᠷ}$  to  $\text{ᠷ}$  in order to indicate its special rendering properties. This aligns with the use of a dashed box around glyphs for cluster-initial letters in the Soyombo block.
3. Allocate spaces for the future encoding of  $\text{ᠠ}$  \*ALTERNATE VOWEL SIGN AI and  $\text{ᠠ}$  \*ALTERNATE VOWEL SIGN AU. These two characters are required because contextual alternates for the diphthongs *ai* and *au* are based upon their glyph shapes.
4. Open new spaces at U+11A43 and U+11A45 for the future encoding of  $\text{ᠰ}$  \*INITIAL DOUBLE HEAD MARK and  $\text{ᠰ}$  \*CLOSING DOUBLE HEAD MARK. The proposal specifies that these are glyphic variants of INITIAL HEAD MARK and CLOSING HEAD MARK, respectively. They should be encoded as distinctive characters.
5. Consider renaming the *candrabindu* ornament signs to align with the revised names of these elements in the Soyombo head marks. However, it is more sensible to retain *candrabindu* in the Zanabazar Square names (as is also the case for Soyombo).

Current name	Revised name
SIGN CANDRABINDU WITH ORNAMENT	SIGN CANDRABINDU WITH FLAME
SIGN CANDRA WITH ORNAMENT	SIGN CANDRA WITH FLAME

6. Move SIGN ANUSVARA and SIGN VISARGA to after VOWEL LENGTH MARK, under a new subheading ‘Vowel modifiers’. This has the benefit of keeping all vowel-related signs together.
7. Move the LONG TSHEG to after TSHEG.
8. Change the control character used for producing conjunct stacks. Reintroduce the  \*SUBJOINER proposed in earlier versions (see N4471 L2/13-198). Rename SIGN VIRAMA to SIGN HALANTA and remove its conjunct-forming function. The SIGN HALANTA will only represent silencing of the inherent vowel.

Zanabazar Square does not have a native *halanta*. Apart from the FINAL CONSONANT MARK there is no means for indicating a bare consonant. The *halanta*, however, appears in a few sources and it was necessary to encode it. Earlier versions of the encoding model relied upon a  SUBJOINER for controlling conjunct formation. When the *halanta* was identified, it seemed practical to follow the Indic model and to unite its function with that of the SUBJOINER into the single character VIRAMA. As a result, the SUBJOINER was removed from the final proposal. It now seems more prudent to revert to the previous model so that it aligns with Soyombo.

	11A0	11A1	11A2	11A3	11A4
0	 11A00	 11A10	 11A20	 11A30	 11A40
1	 11A01	 11A11	 11A21	 11A31	 11A41
2	 11A02	 11A12	 11A22	 11A32	 11A42
3	 11A03	 11A13	 11A23	 11A33	 11A43
4	 11A04	 11A14	 11A24	 11A34	 11A44
5	 11A05	 11A15	 11A25	 11A35	
6	 11A06	 11A16	 11A26	 11A36	
7	 11A07	 11A17	 11A27	 11A37	
8	 11A08	 11A18	 11A28	 11A38	
9	 11A09	 11A19	 11A29	 11A39	
A	 11A0A	 11A1A	 11A2A	 11A3A	
B	 11A0B	 11A1B	 11A2B	 11A3B	
C	 11A0C	 11A1C	 11A2C	 11A3C	
D	 11A0D	 11A1D	 11A2D	 11A3D	
E	 11A0E	 11A1E	 11A2E	 11A3E	
F	 11A0F	 11A1F	 11A2F	 11A3F	

*Known in Mongolian as Xewtee Dörböljin Bicig or the Horizontal Square Script. Also called Zanabazarin Dörböljin Useg or Zanabazar Square Script.*

### Vowel letter

11A00 𐠄 ZANABAZAR SQUARE LETTER A

### Vowel signs

11A01 𐠅 ZANABAZAR SQUARE VOWEL SIGN I  
 11A02 𐠆 ZANABAZAR SQUARE VOWEL SIGN UE  
 11A03 𐠇 ZANABAZAR SQUARE VOWEL SIGN U  
 11A04 𐠈 ZANABAZAR SQUARE VOWEL SIGN E  
 11A05 𐠉 ZANABAZAR SQUARE VOWEL SIGN OE  
 11A06 𐠊 ZANABAZAR SQUARE VOWEL SIGN O  
 11A07 𐠋 ZANABAZAR SQUARE VOWEL SIGN AI  
 • also represents secondary vowel i  
 11A08 𐠌 ZANABAZAR SQUARE VOWEL SIGN AU  
 • also represents secondary vowel u

### Reversed vowel sign

11A09 𐠍 ZANABAZAR SQUARE REVERSED VOWEL SIGN I  
 • used for Sanskrit vocalic sounds

### Vowel length mark

11A0A 𐠎 ZANABAZAR SQUARE VOWEL LENGTH MARK

### Consonants

11A0B 𐠏 ZANABAZAR SQUARE LETTER KA  
 • Mongolian ga, gamma  
 11A0C 𐠐 ZANABAZAR SQUARE LETTER KHA  
 • Mongolian ka, qa, xa  
 11A0D 𐠑 ZANABAZAR SQUARE LETTER GA  
 11A0E 𐠒 ZANABAZAR SQUARE LETTER GHA  
 11A0F 𐠓 ZANABAZAR SQUARE LETTER NGA  
 11A10 𐠔 ZANABAZAR SQUARE LETTER CA  
 11A11 𐠕 ZANABAZAR SQUARE LETTER CHA  
 11A12 𐠖 ZANABAZAR SQUARE LETTER JA  
 11A13 𐠗 ZANABAZAR SQUARE LETTER NYA  
 11A14 𐠘 ZANABAZAR SQUARE LETTER TTA  
 11A15 𐠙 ZANABAZAR SQUARE LETTER TTHA  
 11A16 𐠚 ZANABAZAR SQUARE LETTER DDA  
 11A17 𐠛 ZANABAZAR SQUARE LETTER DDHA  
 11A18 𐠜 ZANABAZAR SQUARE LETTER NNA  
 11A19 𐠝 ZANABAZAR SQUARE LETTER TA  
 • Mongolian da  
 11A1A 𐠞 ZANABAZAR SQUARE LETTER THA  
 • Mongolian ta  
 11A1B 𐠟 ZANABAZAR SQUARE LETTER DA  
 11A1C 𐠠 ZANABAZAR SQUARE LETTER DHA  
 11A1D 𐠡 ZANABAZAR SQUARE LETTER NA  
 11A1E 𐠢 ZANABAZAR SQUARE LETTER PA  
 • Mongolian ba  
 11A1F 𐠣 ZANABAZAR SQUARE LETTER PHA  
 • Mongolian pa  
 11A20 𐠤 ZANABAZAR SQUARE LETTER BA  
 • Mongolian va  
 • also used instead of non-initial 11A2D 𐠦 in conjuncts  
 11A21 𐠥 ZANABAZAR SQUARE LETTER BHA  
 11A22 𐠦 ZANABAZAR SQUARE LETTER MA  
 11A23 𐠧 ZANABAZAR SQUARE LETTER TSA  
 • Mongolian ja, Sanskrit ca  
 11A24 𐠨 ZANABAZAR SQUARE LETTER TSHA  
 • Mongolian ca, Sanskrit cha

11A25 𐠩 ZANABAZAR SQUARE LETTER DZA  
 • Sanskrit ja  
 11A26 𐠪 ZANABAZAR SQUARE LETTER DZHA  
 • Sanskrit jha  
 11A27 𐠫 ZANABAZAR SQUARE LETTER ZHA  
 11A28 𐠬 ZANABAZAR SQUARE LETTER ZA  
 11A29 𐠭 ZANABAZAR SQUARE LETTER -A  
 • Mongolian aang  
 • Tibetan a-chung  
 → 0F60 𐠮 tibetan letter -a

11A2A 𐠯 ZANABAZAR SQUARE LETTER YA  
 11A2B 𐠰 ZANABAZAR SQUARE LETTER RA  
 11A2C 𐠱 ZANABAZAR SQUARE LETTER LA  
 11A2D 𐠲 ZANABAZAR SQUARE LETTER VA  
 11A2E 𐠳 ZANABAZAR SQUARE LETTER SHA  
 11A2F 𐠴 ZANABAZAR SQUARE LETTER SSA  
 • created by reversal of 11A2E 𐠳  
 11A30 𐠵 ZANABAZAR SQUARE LETTER SA  
 11A31 𐠶 ZANABAZAR SQUARE LETTER HA  
 11A32 𐠷 ZANABAZAR SQUARE LETTER KSSA

### Final consonant mark

11A33 𐠸 ZANABAZAR SQUARE FINAL CONSONANT MARK  
 • used for marking a syllable-final consonant in Mongolian  
 • indicates a syllabic boundary in Mongolian

### Virama

11A34 𐠹 ZANABAZAR SQUARE SIGN VIRAMA  
 → 0F84 𐠺 tibetan mark halanta  
 • indicates a bare consonant in Sanskrit and Tibetan  
 • used for producing subjoining conjuncts

### Candra ornaments

11A35 𐠻 ZANABAZAR SQUARE SIGN CANDRABINDU  
 • indicates nasalization  
 → 0F83 𐠼 tibetan sign sna ldan  
 → 1880 𐠽 mongolian letter ali gali anusvara one  
 11A36 𐠽 ZANABAZAR SQUARE SIGN CANDRABINDU WITH ORNAMENT  
 • used primarily with 11A3F 𐠿  
 11A37 𐠾 ZANABAZAR SQUARE SIGN CANDRA WITH ORNAMENT  
 • used primarily with 11A3F 𐠿  
 → 0F82 𐠿 tibetan sign nyi zla naa da

### Vowel modifiers

11A38 𐠿 ZANABAZAR SQUARE SIGN ANUSVARA  
 • indicates nasalization  
 → 0F7E 𐡀 tibetan sign rjes su nga ro  
 11A39 𐡁 ZANABAZAR SQUARE SIGN VISARGA  
 • indicates post-vocalic aspiration  
 → 0F7F 𐡂 tibetan sign rnam bead

**Cluster-initial consonant**

- 11A3A 𑀓 ZANABAZAR SQUARE LETTER CLUSTER  
INITIAL RA
- initial form of 11A2B 𑀓 in Tibetan conjuncts

**Cluster-final consonants**

- 11A3B 𑀔 ZANABAZAR SQUARE LETTER CLUSTER  
FINAL YA
- final form of 11A2A 𑀔 in Tibetan conjuncts
- 11A3C 𑀕 ZANABAZAR SQUARE LETTER CLUSTER  
FINAL RA
- final form of 11A2B 𑀓 in Tibetan conjuncts
- 11A3D 𑀖 ZANABAZAR SQUARE LETTER CLUSTER  
FINAL LA
- final form of 11A2C 𑀖 in Tibetan conjuncts
- 11A3E 𑀗 ZANABAZAR SQUARE LETTER CLUSTER  
FINAL VA
- final form of 11A20 𑀗 in Tibetan conjuncts

**Head marks**

- 11A3F 𑀘 ZANABAZAR SQUARE INITIAL HEAD MARK
- 0FD3 𑀘 tibetan mark initial brda rmying yig mgo mdun ma
  - 0F04 𑀘 tibetan mark initial yig mgo mdun ma
  - 1800 𑀘 mongolian birga
- 11A40 𑀙 ZANABAZAR SQUARE CLOSING HEAD MARK
- 0FD4 𑀙 tibetan mark closing brda rmying yig mgo sgab ma
  - 0F05 𑀙 tibetan mark closing yig mgo sgab ma

**Punctuation**

- 11A41 𑀚 ZANABAZAR SQUARE TSHEG
- 0F0B 𑀚 tibetan mark intersyllabic tsheg
- 11A42 𑀛 ZANABAZAR SQUARE SHAD
- 0F0D 𑀛 tibetan mark shad
- 11A43 𑀜 ZANABAZAR SQUARE DOUBLE SHAD
- 0F0E 𑀜 tibetan mark nyis shad
- 11A44 𑀝 ZANABAZAR SQUARE LONG TSHEG
- 0F14 𑀝 tibetan mark gter tsheg