

L2/09-283

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**Title:** Proposal to include Chinook Pipa script in UCS  
**Source:** Van Anderson  
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**Action:** For review by community. Comments to [Van Anderson](#)  
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**Discussion list:** [Chinook in the UCS](#)

## Overview

The Chinook Pipa script, an adaptation by father Jean Marie Raphael LeJeune of the Duployéan shorthand, is an historic script used for writing the Chinook Jargon and other languages of interior British Columbia. Its original use and greatest surviving attestation is from the run of the *Kamloops Wawa*, a (mostly) Chinook Jargon newsletter of the Catholic diocese of Kamloops, British Columbia, published 1891-1923. At the time, the Chinook Jargon trade language was spoken in an area encompassing SE Alaska, most of British Columbia, Washington State, western Montana, Oregon, Idaho, far northern California, and communities further afield. Although the Chinook Jargon was the lingua franca in many of these communities, it was generally a spoken, rather than written language. Most attempts at documentation used the Latin script to approximate Jargon phonology, and indeed, dictionaries of the Chinook Jargon are still readily available in many of these Latinate orthographies. In contrast, the archives of the *Kamloops Wawa*, written in Chinook Pipa, includes a considerable dictionary, but also constitutes a 3+ decade corpus of Chinook Jargon usage, during the height of its spread and utility. There currently exists no formal encoding, in any context, for the representation of the Chinook Pipa, and the only informal representation is transliteration by means of the Latin orthographies used in writing the Chinook Jargon. Indeed, the submission of the Chinook Pipa script to UCS has necessitated the creation, from scratch, of the first Chinook typeface, such an effort currently underway with glyph images available for review.

## Structure

Chinook Pipa contains several classes of letters, differentiated by visual form - hence script function - and phonetic value. Letter classes include the line and arc consonants, circle vowels (A and the O/W vowels), nasal vowels, arc vowels, and non-conjoiners. Since Chinook Pipa is an adaptation of a shorthand system, strings of letters are intended, generally, to join together cursively to form nominally syllabic units. Many Pipa letters have variant forms, including compound letters and overlapping concatenated behaviors for initialisms and abbreviations. Excepting for reverse stroke direction of a few letters, Chinook Pipa is written LTR, quasi-syllable by syllable, in horizontal lines proceeding down the page, as with most European scripts.

## Ordering

Ordering of the characters in the Chinook Pipa is undefined - the only lexicon using the script cites nominally in Latin alphabetical order - so allocation order in the Chinook Pipa Character Block is revisable up to inclusion in the standard. Essentially, a Unicode Standard that includes a Chinook Pipa Character Block will be the only official ordering of the script. The currently proposed allocation ordering and its basis is as follows: According to Father LeJeune's [Chinook Rudiments](#), the characters encoded x00-x09 (P,T,F,K,L,M,N,Sh,S,O) double as the numbers 1-9&0. x09 - x0C (O,A,Oo,Ow) constitute the next basic vowels given in his introduction, with W+ forms 16 code points later. x0D (I) is another simple vowel with a W+ form 16 code points later and a variant form 32 code points later. x0E rounds out the basic vowels given in LeJeune's repertoire, while x0F (H) is a non-conjoining simple consonant with a Salish variant 16 code points later. The second column of the allocation begins (x10-x14; B,D,V,G,R) with the voiced counterparts (elongated form) of the first five consonants (x00-x04). x15 is reserved for a form of x05, and x16-x18 (Ng,Ch,Ts) are the dot modified forms of x06-x08. x19-x1D (Wo,Wa,Woo,Wow,We) are the W+ forms of the vowel sequence in column 1: x09-x0D. x1E is reserved, ostensibly, for another W+ vowel variant. Rounding out the second column is the Salish complement to 'H', ie x1F (X). The third column is generally given to compound consonants and vowel variants,

with two code points (x20&x21) reserved for theroetical 'P' and 'B' compounds. x22-x24 (Th,Dh,Kh) are 'T','D',&'K' variants. x25 is for a putative 'G' compound, while x26 & x27 (Lh,Rhh) are 'L' and 'R' compounds. x28-x2A are reserved for consonant compounds, and x2B (K') and x2C (hL) are the K/G and L/R compounds. x2D (E) is a variant of x0D sharing a shape and properties, but having a different orientation in many conjoining environments. x2E (Uh) is the dot modified variant of x0E and x0F is a reserved codepoint. In the last column come the Nasal Vowels, x30-x33 (An,In,On,Un) that only intermittently appear in the Wawa texts, but are neither composed characters nor variants. Next is the logograph /likalisti/ meaning *eucharist*

at x24 with the code points x25-x2D again reserved, this time for any other logographs encountered in Pipa texts and any compound vowels or vowel variants unearthed through scholarship into private Pipa texts. Ending the allocation are the Chinook Pipa Full Stop (x3E) and the Virama-like Chinook Pipa Concatenator (x3F) which encodes for abbreviations and similar constructions in the script.

## Naming

The Chinook Pipa script has gone by many names. The most common of these are "Chinook Pipa" and "Wawa Writing". The former, meaning *Chinook writing* in Chinook Jargon was used both as a Chinook Jargon and English name for the script. The latter was generally used only in an English context. It has been suggested that the name of the script could simply be "Chinook", and there is some merit, considering the redundancy of the phrase "Chinook Pipa script".

Some discussion has also centered around the glyph names having "old" phonetic values. Specifically, the phonemes represented by the characters "Oo" (x1A) and "U" (x1E) are found in modern orthography as "U" and "Yu" respectively. Given that the transliterations found in the source materials for the script, as well as in most historic lexica, and even used in modern place names, all converge on the historic (Oo/U) transliteration, it is felt that the given character names are the most transparent.

The character CHINOOK PIPA LETTER KK is used to represent the "crossed K", thought to indicate a glottalized K' sound. Likewise CHINOOK PIPA LETTER DH indicates the voiced *Th* sound.

## Alphabetization

No information is available on alphabetization, as the dictionary portions of the [Chinook Rudiments text](#) are given in roughly Latin alphabetical order. [Other sources](#) group words by novel alphabetization, no more or less canonical than any other. The most logical ordering, given the structure of the script, would be along the lines of P, B, T (Th), D (Dh), F, V, K (Kh, K'), G, L (Lh, hL), R (Rhh), M, N (Ng), Sh (Ch), S (Ts), O (Wo), A (Wa), I, E (We), Oo (Woo), Ow (Wow), U (Uh), H (X) then An, In, On, and Un. Given that alphabetization is not a defined property of the Unicode Standard, it would seem that the above or simple binary order would more than suffice for any implementation needing an order of alphabetization.

ı | - \_ — — \ / \ / / \ / / / / ( ) ) ~ ~ ~ ~ ~ O O o O c ~ O O O O O ~ ~ ~ ~ ~

## Chinook Pipa Codechart v.4.2

[Previous Version](#)

Glyphs					Character List	
	U+x00	U+x10	U+x20	U+x30	<b>Arc Consonants</b>	<b>Non-conjoining Consonant</b>
0	ı			˘	05 ( CHINOOK PIPA LETTER M · number 6	1F ⚡ CHINOOK PIPA LETTER X · Voiceless velar/uvular fricative
					<b>Compound Consonants</b>	

1	—	—		↘
2	↘	↘	·	↘
3	/	/	—	↘
4	/	/	↗	⊕
5	(			
6	)	·	↗	
7	⌒	⌒	↗	
8	⌒	⌒		
9	○	⊖		
A	○	⊖		
B	○	⊖	↗	
C	○	⊖	↗	
D	⌒	⊖	⌒	
E	↘		↘	≡
F	·	⚡		⊖

**Short Line Consonants**

- 00 <sup>1</sup> CHINOOK PIPA LETTER P  
· number 1
- 01 — CHINOOK PIPA LETTER T  
· number 2
- 02 \ CHINOOK PIPA LETTER F  
· number 3
- 03 / CHINOOK PIPA LETTER K  
· number 4  
· written down and to the left
- 04 ↗ CHINOOK PIPA LETTER L  
· number 5  
· written up and to the right

- 06 ) CHINOOK PIPA LETTER N  
· number 7
- 07 ˘ CHINOOK PIPA LETTER SH  
· number 8
- 08 ˘ CHINOOK PIPA LETTER S  
· number 9

**Simple Vowels**

- 09 ○ CHINOOK PIPA LETTER O  
· number 0  
· Circle vowel
- 0A ◯ CHINOOK PIPA LETTER A  
· Circle vowel
- 0B ○ CHINOOK PIPA LETTER OO  
· Circle vowel
- 0C ⊖ CHINOOK PIPA LETTER OW  
· Circle vowel
- 0D ˘ CHINOOK PIPA LETTER I  
→ ˘ x2D chinook pipa letter E
- 0E ˘ CHINOOK PIPA LETTER U

**Non-Conjoining Consonant**

- 0F · CHINOOK PIPA LETTER H  
→ 00B7 middle dot

**Long Line Consonants**

- 10 | CHINOOK PIPA LETTER B
- 11 — CHINOOK PIPA LETTER D
- 12 \ CHINOOK PIPA LETTER V
- 13 / CHINOOK PIPA LETTER G  
· written down and to the left
- 14 ↗ CHINOOK PIPA LETTER R  
· written up and to the right

- 20 <reserved>
- 21 <reserved>
- 22 ˘ CHINOOK PIPA LETTER TH
- 23 ˘ CHINOOK PIPA LETTER DH
- 24 ˘ CHINOOK PIPA LETTER KH
- 25 <reserved>
- 26 ˘ CHINOOK PIPA LETTER LH
- 27 ˘ CHINOOK PIPA LETTER RHH
- 28 <reserved>
- 29 <reserved>
- 2A <reserved>
- 2B ˘ CHINOOK PIPA LETTER KK
- 2C ˘ CHINOOK PIPA LETTER HL
- 2D ˘ CHINOOK PIPA LETTER E  
→ ˘ x0D chinook pipa letter I
- 2E ˘ CHINOOK PIPA LETTER UH
- 2F <reserved>

**Nasal Vowels**

- 30 ˘ CHINOOK PIPA LETTER AN
- 31 ˘ CHINOOK PIPA LETTER IN
- 32 ˘ CHINOOK PIPA LETTER ON
- 33 ˘ CHINOOK PIPA LETTER UN

**Logographs**

- 34 ⊕ CHINOOK PIPA LIKALISTI SIGN
- 35 <reserved>
- 36 <reserved>
- 37 <reserved>
- 38 <reserved>
- 39 <reserved>
- 3A <reserved>
- 3B <reserved>
- 3C <reserved>
- 3D <reserved>

**Punctuation**

- 3E ≡ CHINOOK PIPA PUNCTUATION FULL STOP

**Concatenating Control Character**

- 3F ⊖ CHINOOK PIPA CONCATENATOR  
· signifies abbreviations and initialisms

<b>Modified Arc Consonants</b>		· shape shown is arbitrary and is not visibly rendered → 10A3F Kharoshthi Virama
15	<reserved>	
16	𑖑 CHINOOK PIPA LETTER NG	
17	𑖒 CHINOOK PIPA LETTER CH	
18	𑖓 CHINOOK PIPA LETTER TS	
<b>W- Vowels</b>		
19	𑖔 CHINOOK PIPA LETTER WO	
1A	𑖕 CHINOOK PIPA LETTER WA	
1B	𑖖 CHINOOK PIPA LETTER WOO	
1C	𑖗 CHINOOK PIPA LETTER WOW	
1D	𑖘 CHINOOK PIPA LETTER WE	
1E	<reserved>	



The Chinook Pipa script has a standard cursive conjoining behaviour effected by the use of the Zero Width Non-Joiner. The Zero Width Non-Joiner (ZWNJ) encodes a syllabic break, overriding the standard conjoining of all characters except H and X. The ZWNJ and Zero Width Joiner have no effect when adjacent an H or X. This contrasts slightly with its usage in other scripts, where it generally encodes for conjoining *forms* rather than conjoining *behaviour* in Chinook Pipa. Also, because of conjoining behaviour being the default, there is no general use for the Zero Width Joiner, except the abnormal instance of joining Chinook Pipa characters in running text to characters from other scripts with joining properties, the default behaviour in this instance being unjoined. For lists consisting of Chinook Pipa characters and, for example, a medial form of an Arabic character (eg. Sh + medial Alef + M) a sequence like Sh + ZWNJ + ZWJ + Alef + ZWJ + ZWNJ + M should be used.



The most common form of character interaction is that of the cursive connection. The termination of the stroke of an initial character leads directly into the beginning of the next character. Circle vowels are connected on their perimeter at a tangent to adjacent consonants and I/E. The vowels "I", "E", and "U" rotate to connect without angle to a preceding character and with minimal angle into following characters. The letter "Oo" connects with preceding characters as normal, but in flowing handwritten text most often cursively connects with a following character at the nub, which orients to a position dictated by the adjacent consonants. Words are often split into nominally syllabic units with ZWNJ, H, or X, with breaks occurring between syllables containing circle and W- vowels and in other environments, such rules being generally algorithmic, but best handled manually or with spell-checking and other word-processing features, given variations in syllable breaking among the dozen or so Chinook Pipa orthographies for different languages.







Chinook:.... A History and Dictionary, by Edward Harper Thomas, 1935, Metropolitan Press, Portland, OR)

Documentation can be found [here](#).