

Universal Multiple-Octet Coded Character Set
International Organization for Standardization
Organisation Internationale de Normalisation
Международная организация по стандартизации

Doc Type: Working Group Document**Title: Update on encoding the Loma script in the SMP of the UCS****Source: UC Berkeley Script Encoding Initiative (Universal Scripts Project)****Author: Michael Everson****Status: Liaison Contribution****Action: For consideration by JTC1/SC2/WG2 and UTC****Date: 2016-07-22****Replaces: N3756, L2/10-005**

1. Update. Loma was introduced to back in 2010, but it has taken some time to make contact and work with the user community. There are people actively using Loma today—but it is as yet uncertain what the relation of their work is with the analyses made by David Dalby in 1967, which owed much to the descriptions made by Theodore Monod and Joseph Joffre, both in 1943.

Essentially there are two issues: one, the glyph shapes, which show variation in 1943–1967, but which differ in many particulars in images available today. The other issue is the repertoire, both in terms of identification of the vocalic and consonantal readings of the characters, and in terms of the completeness of the syllabic matrix.

Research continues, but there are serious needs to be met. We really need is an authoritative and complete modern description of the writing system and how it is applied to the syllables of Loma. Are there standard spellings? Books for children? We need to know whether Joffre and Monod’s texts are accurate, as Dalby’s are based on those. We need to understand the glyph structure (ductus and form) of the modern script, and map it, if not to Dalby or Joffre or Monod’s charts, to original early documents (dating to the 1930s and 1940s), if these can be transcribed into Loma Latin text and translated. We need to know the size of the corpus, at least better than we do now. We need to know if we need to support older forms of the syllabary, or if the modern form in use is sufficient.

2. Acknowledgements. This project was made possible in part by a grant from the U.S. National Endowment for the Humanities, which funded the Universal Scripts Project (part of the Script Encoding Initiative at UC Berkeley) in respect of the Loma encoding. Any views, findings, conclusions or recommendations expressed in this publication do not necessarily reflect those of the National Endowment of the Humanities.

3. Bibliography

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4. Figures.

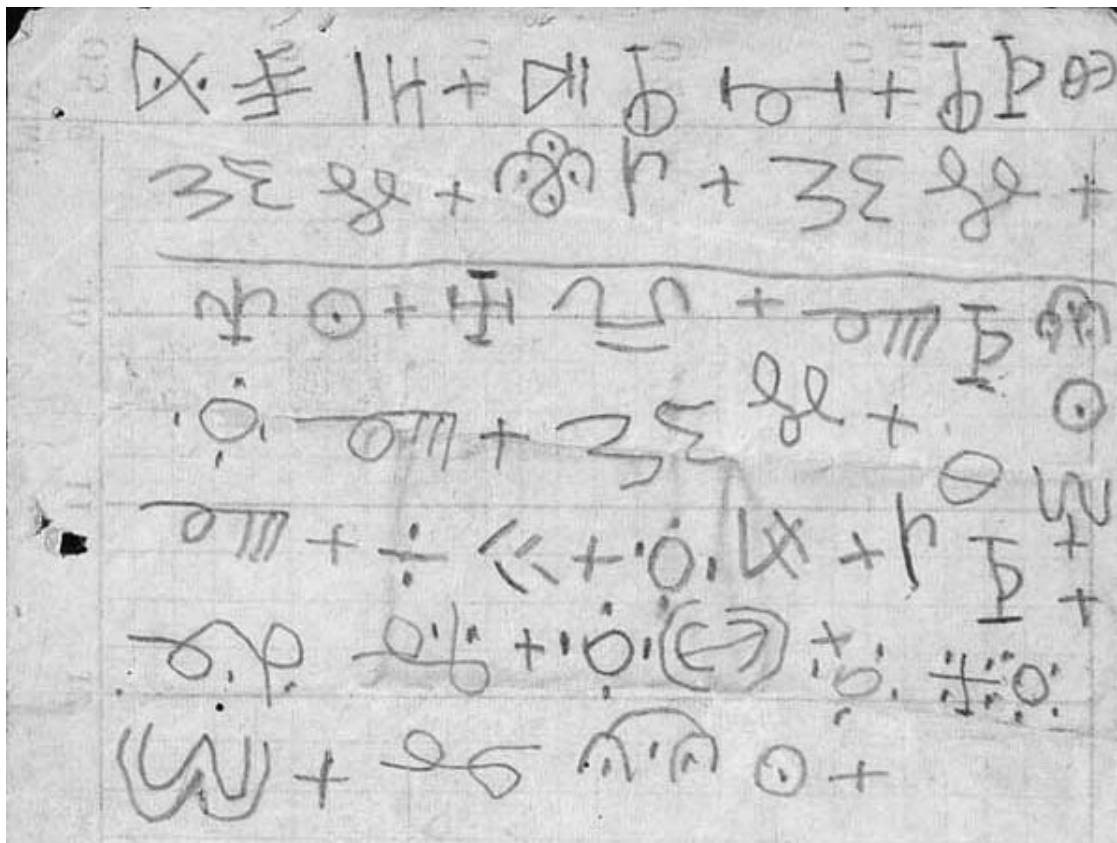


Figure 1. Sample of handwritten Loma text.

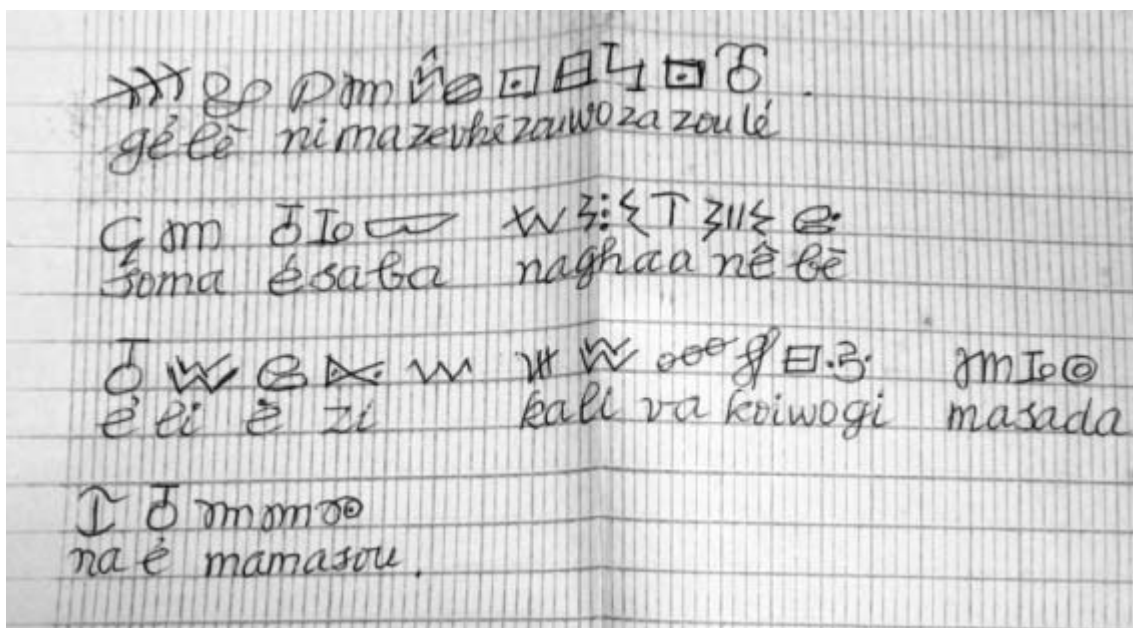


Figure 2. Sample of handwritten Loma text with a Latin transcription.

Table III The Loma Syllabary										
	i	a	u	e	ɛ	ɔ	o	NASAL VOWELS	LONG VOWELS	DIPHTHONGS
p	∇∇	f (F)	H(⊕)	†	∩	P'(P'ɔ)	∩(∩)		peɛ ∅	poi ɹ-∥
w		(mm mm)	[= u]	ʃ(ʃ)	ɣ(ɣ)	ʒ	ɣ(ɣ)	wé ☒ wū N(H)		woi ɔ
b	∞(∞)	∞	p (b) θ (β)			∞∞ (ww ww)		bē 9	bii ∞ baa T(TT) bce ∞ boo ∞	bue ʃ boi ∞ bái 0:0 [ʔ] bái ʃ(ʃ) bue 0-H
ɓ	×(x)	⊕	ϕ	∩		∩	⊕(⊕)			
kp				∞(ɣ)						
gb	∞	∞		∞	∞	∞	∞	gbū ∞		
'v	∞	∞								
f	∞	∞(∞)	∞(m) ∞	∞(∞)			∞(C)		faa (C)	
v	∞	∞(∞)		∞(∞)	∞(∞)	∞	∞(∞)		vaa (∞)	
t	∞	∞	∞(∞)	∞	w(w)	∞	∞(∞)			tie ∞ tui ∞
l	∞	∞	∞	∞	∞	∞(∞)	∞	lee ∞		lea ∞(∞) lui ∞(∞) luo ∞(∞) lue ∞(∞)
d	∞	∞	∞(∞)	∞	∞	∞	∞(∞)			dió ∞ diū ∞ duo ∞(∞)

s		∞	∞-∞	[ʔ] ∞(∞)		∞(∞)	∞(S)		saa ∞ see ∞ soo ∞	suo ∞
z	∞(X)	∞	∞	∞(∞)	∞	∞(∞)	∞(∞)	zē ∞ zō 1		zie I zuo ∞(∞)
y	[ʔ] ∞	∞	∞	∞	∞(∞)	∞	∞			yie ∞ yai ∞
k	∞(∞)	∞(∞)	H(∞)	∞(∞)	∞(∞)	∞(∞)	∞(∞)		kaa ∞	kai ∞(∞) kol ∞(∞) kue ∞(∞) kuē ∞(∞) kui ∞(∞)
ɣ	∞	∞		∞(∞)						
g	∞(∞)	∞	∞	∞	∞(∞)	∞		gē ∞	gee ∞	gic ∞
ŋg		∞					∞(∞)	ŋgē ∞		
-	∞	∞	∞(∞)	∞	∞	∞	∞(∞)			
NASAL SYLLABLES	ĩ	ã	ũ	ẽ	ɛ̃	õ	õ	SYLLABIC NASAL [ʔ]	LONG VOWELS	DIPHTHONGS
m	∞	∞(∞)	∞(∞)	∞	∞(∞)	∞(∞)	∞		mĩ I mũ ∞ mēe ∞	mõ ∞(∞)
n	∞(∞)	[ʔ] ∞	∞(∞)	∞	∞(∞)		∞		nēe ∞	
ŋ	∞(∞)	∞(∞)	∞			∞		∞	ŋēe ∞	ŋēe ∞(∞)

Figure 3. Table of Loma syllables from Dalby 1967.





























































a † + ba , , † + be , , ‹ + bē C =
 bō , , ,  + bō ÷, ÷, ÷, ÷ + bōi
 'bai †, † + 'be ,  + 'bè ,  + 'bi ,  +
 de †, † + dè ,  + dò ,  + do †, † + du IC
 dyuy † + e ,  + fa , ,  + fā () + fe || =,
 ge ÷ + gen ,  + gè †, †, †, † + gi ,
 gba † + gbè † + gbe † + gbi ,  + gbò †, †, †:
 †, † + kā ,  + kae °°, °° + ke , ,  + kè
 ku †, † + kwe ,  + kwey ÷ + kwi  + la  +
 lo † + lu † + lwè ||o + lwi † + lwo † + ma ,
 mò ,  + mo r + moi ,  + mū
 ni ,  + no ,  + nu ,  + nga ,  + ngen ,  + ngo
,  + ñie ,  + ñò ,  + 'o ,  +
 po , + pu , + ta † + te , + tè w, w +
 u , + uy , + sa , + sā , + sə , ,
 sò , + so , , + sō , + su , + swo ,
 vò †, † + vo , , + wa , , , E(?) +
 wò , , + woi , + 'wa , + ya ,
 yo , + yu , , + za , + ze , ,
 zie I + zò , + zo , + zoy , + zu , +

FIG. 1.—TOMA ALPHABET : CONTINUED IN FIG. 2 ON OPPOSITE PAGE.

Figure 4a. Table of Loma syllables from Monod 1943.

+bè 𐄂 +bèḡ 𐄃 +bi 𐄄, 𐄅 +bī 𐄆, 𐄇 +
𐄈, 𐄉 +bu 𐄊, 𐄋; 𐄌, 𐄍 +bwe 𐄎 +'ba 𐄏 + 'bae 𐄐: 𐄑 +
'bo 𐄒 +'bo 𐄓, 𐄔 +'bu 𐄕 +'bwe 𐄖 +da 𐄗 +
, 𐄘 +dgi 𐄙 +dwe 𐄚, 𐄛 +dy 𐄜 +dyon 𐄝 +
𐄞, 𐄟 +fi 𐄠 +fò 𐄡 +fo 𐄢 +fu 𐄣, 𐄤 +ga 𐄥, 𐄦 +
𐄧, 𐄨 +go 𐄩 +gu 𐄪 +'ga 𐄫: 𐄬 +'ge 𐄭 +'gü 𐄮 +
, 𐄯 +gbo 𐄰 +gbun 𐄱 +gpe 𐄲, 𐄳 +i 𐄴 +Ka 𐄵,
𐄶; 𐄷, 𐄸 +ki 𐄹 +kò 𐄺, 𐄻 +ko 𐄼, 𐄽 +koi 𐄾, 𐄿 +
le 𐅀 +lea 𐅁, 𐅂 +lei 𐅃 +lè 𐅄 +li 𐅆, 𐅇 +lò 𐅈, 𐅉 +
𐅊 +me 𐅋 +mei 𐅌 +mè 𐅍, 𐅎, 𐅏, 𐅐, 𐅑 +mi 𐅒 +mī 𐅓 +
𐅔 +n' 𐅕 +na 𐅖 +ne 𐅗 +nē 𐅘 +na 𐅙 +nè 𐅚, 𐅛 +
𐅜, 𐅝 +ñā 𐅞, 𐅟 +ñei 𐅠 𐅡 +ñi 𐅢, 𐅣 +ñī 𐅤, 𐅥,
pa 𐅦, 𐅧 +pe 𐅨 +pē 𐅩 +pè 𐅪, 𐅫(?) +pi 𐅬 +pò 𐅭, 𐅮 +
tò 𐅯 +to 𐅰, 𐅱 +tu 𐅲, 𐅳, 𐅴 +twi 𐅵 +ty 𐅶 +tye 𐅷 +
𐅸 +sei 𐅹, 𐅺 +sè 𐅻, 𐅼 +si 𐅽, 𐅾, 𐅿 +
+va 𐆀 +vā (𐆁) +ve 𐆂), 𐆃 +vè 𐆄, 𐆅(?wè) +vi 𐆆 +
we 𐆇, 𐆈 +wè 𐆉, 𐆊 +wen 𐆋 +wi 𐆌, 𐆍 +wi 𐆎, 𐆏 +
𐆐 +yae 𐆑 +yā 𐆒, 𐆓, 𐆔 +ye 𐆕 +yè 𐆖, 𐆗 +
𐆘, 𐆙 +zen 𐆚 +zè 𐆛, 𐆜 +zi 𐆝, 𐆞 +
zwo 𐆟; 𐆠 + ? (gwei?) 𐆡 + ? 𐆢 + ? 𐆣 + ? 𐆤 (cf. va) + ? 𐆥.

FIG. 2.—THE TOMA ALPHABET: CONTINUED FROM FIG. 1 ON OPPOSITE PAGE.

Figure 4b. Table of Loma syllables from Monod 1943.

a	† †	du	lc , c
ba	∞, ∞	dji	∇
bā	∇, ∇, ∇	duo	⊞, ⊞
be	∞, ∞, ∞	dy	∞
bē	∞=	dyon	∞
bè	∞, ∞, ∞	dyun	∞, ∞, ∞
beη	∞	e	∞, ∞
bi	∞, ∞	è	∞
bī	∞, ∞	fa	∞, ∞, ∞
bo	∞, ∞, ∞, ∞, ∞	fā	(∞)
bō	∞, ∞, ∞	fe	∞=, ∞=, ∞
bō	∞	fi	∞
bōi	∞, ∞	fō	∞
bu	∞, ∞, ∞, ∞	fo	∞
bue	∞	fu	∞, ∞, ∞
'ba	∞	ga	∞
'bae	∞:∞	gē	∞
'bai	∞, ∞	ge	∞
'be	∞, ∞	gei	∞
'bē	∞, ∞	geη	∞
'bi	∞, ∞	gē	∞, ∞, ∞, ∞
'bo	∞, ∞	gi	∞, ∞, ∞
'bō	∞	gu	∞
'bu	∞	'ga	∞
'bue	∞	'ge	∞, ∞
da	∞	'gi	∞
de	∞, ∞	gba	∞
dē	∞	gbe	∞
dō	∞	gbē	∞
do	∞, ∞, ∞	gbi	∞

FIG. 1. — Syllabaire toma.

Figure 5a. Table of Loma syllables from Joffre 1943.

gbo	ɔ̃	ma	ɔ̃, ɔ̃
gbò	ɔ̃, ɔ̃, ɔ̃, ɔ̃, ɔ̃	me	ɔ̃
gbuɔ̃	ɔ̃	mei	ɔ̃
gpe	ɔ̃, ɔ̃	mè	ɔ̃, ɔ̃, ɔ̃, ɔ̃
i	ɔ̃	mi	ɔ̃
ka	ɔ̃, ɔ̃, ɔ̃	mī	ɔ̃
kā	ɔ̃	mō	ɔ̃, ɔ̃
kae	ɔ̃, ɔ̃	mo	ɔ̃
ke	ɔ̃, ɔ̃, ɔ̃	moi	ɔ̃, ɔ̃
kē	ɔ̃, ɔ̃, ɔ̃	mu	ɔ̃, ɔ̃
ki	ɔ̃, ɔ̃	mū	ɔ̃
kò	ɔ̃, ɔ̃	nè	ɔ̃
ko	ɔ̃, ɔ̃, ɔ̃	naɔ̃	ɔ̃
koi	ɔ̃, ɔ̃	ne	ɔ̃
ku	ɔ̃, ɔ̃	nē	ɔ̃
kwe	ɔ̃, ɔ̃	na	ɔ̃
kweɔ̃	ɔ̃	nè	ɔ̃, ɔ̃, ɔ̃
kwi	ɔ̃	ni	ɔ̃
la	ɔ̃	no	ɔ̃, ɔ̃
le	ɔ̃	nu	ɔ̃, ɔ̃
lea	ɔ̃	ɔ̃ga	ɔ̃
lei	ɔ̃, ɔ̃	ɔ̃geɔ̃	ɔ̃
lè	ɔ̃	ɔ̃go	ɔ̃, ɔ̃
li	ɔ̃, ɔ̃	ñā	ɔ̃, ɔ̃
lò	ɔ̃, ɔ̃	ñei	ɔ̃
lo	ɔ̃	ñū	ɔ̃, ɔ̃, ɔ̃
lu	ɔ̃	ñē	ɔ̃, ɔ̃
lwe	ɔ̃	ñò	ɔ̃
lwi	ɔ̃	ñū	ɔ̃
lwo	ɔ̃	'o	ɔ̃, ɔ̃

FIG. 2. — Syllabaire toma (suite)

Figure 5b. Table of Loma syllables from Joffre 1943.

o	o	
pa	p	,
pe	+	
pē	⌒	
pō	⊖	
pi	v	, p
pō	⊖	, p
poi	k	
pu	H	, H
ta	#	
te	*	
tē	W	, B
tō	+	
to	⌒	, ⌒
tu	⌒	, ⌒
tu	⊖	
ty	⌒	
tye	⌒	
u	⌒	, ⌒
uy	N	
sa	⊖	
sā	⊖	, ⊖
sē	⊖	, ⊖
sē	⊖	, ⊖
sū	⊖	, ⊖
sū	⊖	, ⊖
sō	⊖	, ⊖
sō	⊖	, ⊖
sō	⊖	, ⊖
su	⊖	

swo	⌒
va	⊖ , ⊖
vā	⌒
ve	⌒ , ⌒ , ⌒
vē	⊖ , ⊖ , ⊖
vi	(i)
vō	*
vo	⊖ , ⊖ , ⊖
wa	⌒ , ⌒ , ⌒
we	⌒ , ⌒
wē	⌒ , ⌒
wuy	⌒
wi	⊖ , ⊖ , ⊖
wi	⌒ , ⌒ , ⌒
wō	⌒ , ⌒ , ⌒
wo	⌒ , ⌒ , ⊖ , ⊖
woi	⌒
'wa	⌒
'wi	⌒
ya	⊖ , ⊖
yae	⊖
yē	⊖ , ⊖ , ⊖
ye	⊖
yē	⌒ , ⌒
yō	⌒
yu	⌒ , ⌒
za	⌒
ze	⌒ , ⌒ , ⌒ , ⌒
zē	⌒
zē	⌒ , ⌒ , ⌒

FIG. 3. — Syllabaire toma (suite).

Figure 5c. Table of Loma syllables from Joffre 1943.

zi ✕ , ✕
 zie I
 zò ㄩ , ㄩ
 zo ㄩ , ㄩ , ㄩ
 zoy ㄩ
 zu ㄩ
 zwo ㄩ , ㄩ

signe de ponctuation : +

Analogie entre quelques signes
 Mendé et Toma

Mendé	Toma
vi ○	la ○
fa ⊙	da ⊙
kpu ○, ⊙	go ⊙
gbo ⊕	ye ⊕
si	fe
sa ≡	ku ≡
'ei ✕	lei ✕

Analogie entre quelques signes
 Mendé et Vai

Mendé	Vai
mo ㄩ	mò ㄩ
gue ㄩ	ba ㄩ
vi ○	Kü ○

Analogie entre quelques signes
 Vai et Toma

Vai	Toma
Kü ○	la ○
ma ✕	wò ㄩ
bu ○○	Kae ○○
gbi ≠	de ≠
e ㄩ	dy ㄩ
ju +	pe +
gbu ㄩ	Kwi ㄩ
ra =	fe ^m
iü H	pu H
pe ㄩ	wi ㄩ
ta +	a +

FIG. 4. — Syllabaire toma (fin) et comparaisons.

Figure 5c. Table of Loma syllables from Joffre 1943.

a			
a	aï	T	K
avou		Fo	
e			
e	é	f°	o
ê		E	
o			
o	oun	oo	oo
ö		G	
B			
bi	bo	ff	ji
bä	bu'	W	B
bö	be	xc	n
bé	bè	pc	n
bê		n	G

Suite			
bou	bon	↔	↔
baum	bâ	⊕	⊕
bhi	bhä	⊖	⊖
bhö	bhâ	⊙	⊙
bhé	bhoë	⊗	⊗
bhoï	bhou	⊕	⊕
bèin		⊖	⊖
D			
di	do	o	o
dä	dâ	⊙	⊙
de	dé	⊗	⊗
dè	dê	⊖	⊖
dö	dô	⊕	⊕
dou	dou	DE	P
din	din	⊕	⊕
djon	dji	⊕	⊕
	dha	H	⊕

Figure 6a. Modern table of Loma text, from an undated document called "Alphabet Toma Macenta".

F			G suite		
Fí	Fo	⌒	Gou	Ghin	⌒
Fâ	Fé	o/	Gbê	Gbi	3
Fê	Fë)	Gbo	Gbö	⊗
Fâ	Fî	⊗	Gba	Gbe	⌒
Fô	Fö	(())	Gbé	Gbè	⌒
Fouí	Fou	⌒	Gbê	Ghi	⌒
Foin	Foin	⌒	Gno	Gna	⊗
Foin	Foin	⌒	Gnè	Ghi	⊗
Foin	Foin	⌒	Gha	Ghe	⊗
			Ghé	Ghè	⊗
			Ghê		⊗
G			K		
Gi	Gu	3	Ki	Ko	⊗
Go	Gâ	⌒	kô	kâ	o:
Gâ	Gé	⌒	kâ	ke	⌒
Gê	Gê	⌒	ké	kè	⌒
Gö	Goi	⌒	kê		⌒
Goin		⌒			

Figure 6b. Modern table of Loma text, from an undated document called “Alphabet Toma Macenta” by Foromo Guilavogui of Guinea.

Suite K			
Koi		sp	#
Koui	Kou	HC	x
KPO	KPI	⊕	⊖
KPae	KPö	oo	⊖
KPe	KPa		H
KPè	KPé	⊕	⊖
KPè	KPê	⊕	⊖
KPOU			⊕
L			
Li		⊕	
Le	La	⊕	⊖
Lè	Lé	⊕	⊖
Lo	Lê	NI	NI
Lou	Lö	⊕	IN
Lâ	Lô	⊕	⊖
LöIN	Lei	⊕	⊖
Löi	Loi	⊕	⊖

M			
Mi		v	r
Ma	Mo	⊕	⊖
Mé	Me	⊕	⊖
Mê	Më	⊕	⊖
Mê	Mö	⊕	⊖
Mai	Mou	⊕	⊖
Moi	Moi	⊕	⊖
Moi	Mö	⊕	⊖
Mei		⊕	⊖
N			
Na		⊕	
Nâ	Ne	⊕	⊖
Nö	Né	⊕	⊖
Ni	Nê	⊕	⊖
Nou	No	⊕	⊖
Noui		⊕	⊖
Nhen	Nha	⊕	⊖
	Nya	⊕	⊖

Figure 6c. Modern table of Loma text, from an undated document called "Alphabet Toma Macenta" by Foromo Guilavogui of Guinea.

V			
Pi	Po	∇	∞
Pa	Pâ	∇	∞
Poi	Poi	∇	∞
Pou	Pou	∇	∞
Pein	Pou	∇	∞
Pé	Pè	∇	∞
Pè	Pè	∇	∞
S			
sa	se	Io	∞
sé	sè	∞	∞
sei	si	∞	∞
so	so	∞	∞
sou	sein	∞	∞
T			
Ti	To	∞	∞
Tô	Ta	∞	∞
Tâ	Té	∞	∞
Tè	Té	∞	∞
W			
wi	wo	∞	∞
wô	wou	∞	∞
wa	wâ	∞	∞
we	wé	∞	∞
Se			
Tei	Tou	∞	∞
Tou	Tou	∞	∞
V			
vi	va	∞	∞
vo	vô	∞	∞
vô	vâ	∞	∞
ve	vé	∞	∞
vè	vè	∞	∞
vè	vè	∞	∞
voïn	vain	∞	∞
vhi	vha	∞	∞
vhé	vhe	∞	∞
W			
wi	wo	∞	∞
wô	wou	∞	∞
wa	wâ	∞	∞
we	wé	∞	∞

Figure 6d. Modern table of Loma text, from an undated document called "Alphabet Toma Macenta" by Foromo Guilavogui of Guinea.

Suite W	
Wè	ୱି
Wê	ୱି
Woi	ୱି
Woin	ୱି
Woën	ୱି
Wou	ୱି
Wouï	ୱି

Y	
ya	ୱା
yi	ୱି
ye	ୱି
yè	ୱି
yo	ୱି
Z	
zi	ୱି
zö	ୱି
zâ	ୱି
zé	ୱି
zè	ୱି
zè	ୱି
zoi	ୱି
zoïn	ୱି
zoën	ୱି

Figure 6e. Modern table of Loma text, from an undated document called “Alphabet Toma Macenta” by Foromo Guilavogui of Guinea.