

Orthography for the Massalit language

November 1994, revised May 1996, revised April 2011

English translation (in case of doubt see original French statement)

1. Introduction

We present a revised proposal for a Massalit orthography. This proposal has been submitted to Massalit leaders and discussed with them (with Chadian Massalit in 1994 in Adré, then in 2010/2011 in Hadjer Hadid with Sudanese Massalit, refugees from Darfur). It was finalised and accepted on 24 September 2011 in Hadjer Hadid by a group of Massalit involved in a literacy project.

We are still at the beginning of Massalit literacy. Practical application, i.e. the way in which new literates put the orthography into practice, will show whether the suggested conventions are viable or not and whether changes need to be made.

Even though we have used Latin/Roman characters to represent Massalit, we were also open to creating an orthography in Arabic script (though this would have created difficulties of its own, particularly in the representation of the 10 vowels). It was the speakers themselves, specifically Chadian Massalit community leaders, who declared themselves in favour of Roman characters (in 1994). The Sudanese Massalit refugees more recently actually rejected the idea of writing their language in Arabic script, although in Sudan, many people are literate in Arabic.

Phonological and morphological transcriptions were sometimes mixed.

2. The Alphabet

2.1. Consonants

Phoneme	Allophone	Grapheme	Initial	Medial	Final
/b/	[b]	b	baba 'father'	abbagu 'day before yesterday'	-
	[p]	b	-	-	ajab (A) rîŋ 'to be surprised'
	[w]	b	-	lebe 'you sharpen'	-

/t/	[t]	t	taŋi 'house'	muta 'south'	bût 'different'
/d/	[d]	d	dîri 'camel'	adiŋgi 'monkey'	-
	[t]	d	-	-	nod 'Finish it!'
/tʃ/	[tʃ]	c	cukaŋgi 'long'	caciŋ 'Untie it!'	ruc 'Cover it!'
/dʒ/	[dʒ]	j	ju 'mouse'	âji 'song'	ajbaj riddle (onom.)
/k/	[k]	k	kaŋgi 'man'	aka 'I went'	gak 'moment, time'
	[x]		kidime (A) 'work'	chokola (A) 'work, thing'	
/g/	[g]	g	gendeg 'yesterday'	gigi 'musical instrument'	-
	[k]	g	-	-	gendeg 'yesterday'
/f/	[f]	f	fi 'Lie down!'	gefela 'You have cut'	lif 'louffa' (plant)
	[p]	f	fukut (onom. for to open)	-	-
/s/	[s]	s	saa 'water'	asere 'I see'	as 'four'
/z/	[z], [j]	z	zârag (A) 'type of cloth'	azzam ken (A) 'invite'	-
/ʃ/	[ʃ]	ch	chokola(A) 'work'	tocha 'he stabbed'	kîch 'Bite!'

/h/	[h]	h	hâbi 'thing'	ahad (A) 'Sunday'	-

/m/	[m]	m	maama 'hare'	ama 'I'	kedem 'eggs'

/n/	[n]	n	naŋ 'Take!'	ana 'I did'	dîman 'tomorrow'

/ŋ/	[ŋ]	ŋ	ŋû 'Give!'	aŋa 'I gave'	kimiŋ 'children'

/ŋj/	[ŋj]	ŋj	ŋaŋa 'baby'	dâŋŋa 'thick'	berjeŋ 'sandals'

/mb/	[mb]	mb	mba 'boy'	gember 'millet stalks'	-

/nd/	[nd]	nd	ndû 'body'	andindil 'Tell me!'	-

/nj/	[ŋj], [nj]	nj	njindi 'bracelet'	konji 'bone'	-

/ŋg/	[ŋg]	ŋg	ŋga 'who'	kaŋgala 'third'	-
	[ŋ]	ŋ	-	-	kaŋ 'three'

/r/	[r]	r	rîŋ 'saying'	ara 'I came'	kar 'came'

/l/	[l]	l	landi 'vegetables'	selŋgi 'clean'	notoŋgol 'Roll up!'

/w/	[w]	w	wasi 'fire'	awa 'thigh'	kaw 'fog'

/y/	[y]	y	yây 'wolf'	aye 'moon'	lay 'Enter!'

2.2. Vowels

/i/	[i]	î	kîbin 'hold'	dîri 'camel'	sî 'goat'
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/ɪ/	[ɪ]	i	iṅa 'small child'	lira 'chameleon'	si 'Stay!'
-----	-----	---	----------------------	---------------------	---------------

/e/	[e]	ê	êneri 'They bring HAB'	âbiyer 'clouds'	lêle 'day'
-----	-----	---	------------------------------	--------------------	---------------

/ɛ/	[ɛ]	e	eleleṅ 'early'	gendeg 'yesterday'	le 'Leave it!'
-----	-----	---	-------------------	-----------------------	-------------------

/ʌ/	[ʌ]	â	âbi 'sand'	dâṅṅa 'thick'	ṅâ 'you gave'
-----	-----	---	---------------	------------------	------------------

/a/	[a]	a	akuy 'friend'	kaara 'bed'	ka 'Come!'
-----	-----	---	------------------	----------------	---------------

/u/	[u]	û	ûse 'bean'	ûrunji 'smoke'	kû 'back'
-----	-----	---	---------------	-------------------	--------------

/ʊ/	[ʊ]	u	uruṅgi 'termites'	tula 'he took'	ju 'mouse'
-----	-----	---	----------------------	-------------------	---------------

/o/	[o]	ô	ôyowi 'they broke'	sôgi 'millet flour'	dâburko 'old? leather'
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/ɔ/	[ɔ]	o	oda 'brick building'	doma 'basket'	ko 'Go!'
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2.3. Alphabetical order of phonemes

a â b c ch d e ê f g h i î j k l m mb n nd nj ṅ ṅg o ô r s t u û w y z

The “tense” vowels + ATR – see under 4. – (â, û, etc) will be placed after the non-tense vowels -ATR (a, u, etc)

The complex symbols will be placed after the simple symbols (mb after m).

In the dictionary, words with doubled letters will be placed after those with single letters.

For example:

koy 'also'

kooy 'all'

3. Explanation of certain symbols

3.1. Prenasalised consonants /mb/, /nd/, /nj/, /ŋg/

These sounds, though realized as one sound, are written as two letters.

phonem.	orthogr.	gloss	pronunciation
/mba/	⟨mba⟩	'boy'	[mba]
/ndu/	⟨ndû⟩	'body'	[ndu]
/andindil/	⟨andindil⟩	'tell me'	[andindil], [andɪdɪl]
/njindi/	⟨njindi⟩	'bracelet'	[njindi]
/ŋga/	⟨ŋga⟩	'who'	[ŋga]

3.2. Consonants borrowed from Arabic

There are words originally from Arabic which contain phonemes that do not exist in the Massalit phonemic system, notably /z/ and /x/. /ʃ/ is a little different. /ʃ/ is part of the alphabet; there are actually a few rare examples that are truly Massalit (two verbs – see 2.1). In loan words /ʃ/ is often pronounced [s]. /Z/ is also part of the alphabet, even though a good number of Massalit pronounce it [j]. /Kh/ was rejected by the Massalit (both those in Hadjer Hadid and in Khartoum). In loan words, it is often pronounced [k] or [h].

/ʃ/ ⟨ch⟩	⟨Ahta, Asta⟩	[asta], [aʃta]	fem. name
/z/ ⟨z⟩	⟨zeribe⟩	[zeribe], [jeribe]	'yard'
/kh/ ⟨k⟩	⟨Kartoum⟩	[kartum], [khartum], [hartum]	name of city

4. Vowel harmony

There is vowel harmony that divides the 10 vowels into two groups of five:

- ATR /a, ɛ, ɪ, ɔ, ʊ/ and + ATR /ʌ, e, i, o, u/

– ATR is the major group.

For the same lexical root, there are only vowels from one group or the other. The affixes influence the root or are influenced by it in the following manner:

Prefix		Root		Suffix
-		-		-
+	←	+		-
+	←	+/-	←	+

Usually the +ATR value of the root propagates to the left.

The affixes are for the most part -ATR, but the prefixes, to the left, take the +ATR value of the root.

There are some +ATR suffixes which propagate their value to the left, even with -ATR roots.

In the orthography, we use the 'simple' vowels (a, e, i, o, u) for the -ATR vowels and mark the words with +ATR vowels by a circumflex accent on the first vowel of the word, even if it occurs in a prefix. The orthography does not therefore take into account + or -ATR in the suffixes (since +ATR is only marked on the first syllable). Native speakers automatically pronounce these correctly.

- -ATR examples

/kɪma/	[kɪma]	⟨kɪma⟩	'child'
/gɛndɛgʊ/	[gɛndɛgʊ]	⟨gɛndɛgʊ⟩	'yesterday'
/mʊnʊnara/	[mʊnʊnara]	⟨mʊnʊnara⟩	'we rested'
/kɪrɪma/	[kɪrɪma]	⟨kɪrɪma⟩	'sweet'

- +ATR examples

/kɪrɪma/	[kɪrɪmΛ]	⟨kîrɪma⟩	'cold'
/use/	[use]	⟨ûse⟩	'bean'
/muco/	[muco]	⟨mûco⟩	'woman'

- Propagation to the left: from the root to the prefix and to the xxx“épenhétiques” vowels

/and-Λŋkarɪn-a/	[ΛndΛŋkarɪna]	⟨ândaŋkarina⟩	'he asked me'
/and + a-nd-Λmin-a/	[ΛndΛndΛmina]	⟨ândandamina⟩	'he made me jump'
/and + iibin/	[Λndiibin] ou [andiibin]	⟨ândibin⟩	'Catch me!'

- Propagation to the left: There are several plural + ATR suffixes: from the suffix to the root

/kʊm-a/	[kʊma]	⟨kuma⟩	'stone'
/kʊm-Vci/	[kʊmoci]	⟨kûmoci⟩	'stones'

/jɔk-a/	[jɔka]	⟨joka⟩	'knife'
/jɔk-Vsi/	[jɔ'kosi]	⟨jôkosi⟩	'knives'

/bell-ε/	[bellɛ]	⟨belle⟩	'boomerang'
/bell-Vsi/	[bellesi]	⟨bêllesi⟩	'boomerangs'

- Compound words with regressive assimilation (propagation of + ATR to the left)

/jɔ/	[jɔ]	⟨jɔ⟩	'foot, times'
/mbir(i)/	[mbir(i)]	⟨mbîri⟩	'two, twice'
/jɔ-mbir/	[jɔmbir]	⟨jômbir⟩	'twice'

/ka:/	[ka:]	⟨kaa⟩	'people'
/ni/	[ni]	⟨nî⟩	possessive connector
/ka:-ni/	[kʌ:ni]	⟨kâani⟩	'theirs'

/ŋga/	[ŋga]	⟨ŋga⟩	'who?'
/ni/	[ni]	⟨nî⟩	possessive connector
/ŋga-ni-m/	[ŋgʌnim]	⟨ŋgânim⟩	'whose place? whose?'

However, the two final examples are exceptions: the connector ⟨nî⟩ does not usually cause assimilation of the + ATR trait. For example:

⟨gani kana masaraka nî⟩ 'place of the Massalit language'

There are dialectal differences, i.e. there are speakers in whom the difference between +/-ATR is less clear. These speakers, however, seem to be aware of the difference even if they do not pronounce it. For the moment, we write the + ATR vowels and this should not be problematic.

5. Suprasegmental transcription

Tone, stress and vowel length all play a role in the Massalit language. The system is complex and our studies to this point have not yielded satisfactory results. There are almost no minimal pairs with only one differing trait - there is usually a difference in a combination of suprasegmentals.

For example:

[ˈkárà] <kaara> 'bed' vs [kà'rá] <kara> 'girl'

For the moment, we do not write tone or stress or vowel length. The Massalit do not seem to have problems with this. The (quasi-)minimal pairs appear in different parts of a sentence or where the meaning can be deduced from the context.

The words where we use doubled vowels are those where the plurals do not vary from the singulars except in suprasegmentals (see 5.1.1. below) or where they are used to give a different look to the word in cases where there may be confusion between words:

[ˈkárà] <kaara> 'bed' vs [kà'rá] <kara> 'girl'
[ˈmáamà] <mama> 'maternal uncle' vs [ˈmàamà] <maama> 'hare'
[kòy] <koy> 'also' vs [kóy] <kooy> 'all'

5.1.1. Grammatical differences

There are grammatical differences to mark.

- **Plurals:** We mark the plural with a doubling of the final vowel (which is actually longer, and always high)

Sg.		Pl.		
<de>	[dɛ]	<dee>	[dɛ:]	'cow'
<wasi>	[wāsí]	<wasii>	[wāsí:]	'fire'
<ûse>	[úsè]	<ûsee>	[ūsé:]	'bean'
<kalla>	[kállà]	<kallaa>	[kállá:]	'good'

etc.

- **Non-final verbs and the imperative:** The grammatical difference (indicated by a difference in stress) between a non-final verb (used in serial verbs) and the imperative is not marked in spelling, but only by an exclamation mark after the imperative.

<Kurnaŋ taka.> [kor'naŋ] 'Getting up, they left'
<"Kurnaŋ!" tirnen taka.> [ˈkurnaŋ] 'Saying "Get up!", they left'

5.1.2. Consonant length

Geminate consonants will be written with a doubling of the consonant even though there are no true minimal pairs (the examples that we have found always have a difference in vowel length as well as consonant length – see below):

⟨kalla⟩ [kalla] 'good' vs ⟨kala⟩ [ka:la] 'aunt'
 ⟨lirra⟩ [lɪr:a] 'heavy' vs ⟨lira⟩ [lɪ:ra] 'chameleon'

6. Other conventions

6.1. Transcription of plosives in word/syllable final position

There is a devoicing of plosives in final position that becomes clear in other forms of the same word. We therefore write the voiced plosives:

/gendɛg/	[gɛndɛk]	⟨gendeg⟩	'yesterday'
/gendɛgʊ/	[gɛndɛgʊ]	⟨gendegu⟩	'yesterday'
/nɔɔd/	[nɔt]	⟨nod⟩	'Finish it!'
/nɔɔda/	[nɔɔda]	⟨noda⟩	'You finished'
/tɔnɔɔdɪ/	[tɔnɔɔtti]	⟨tonodti⟩	'He will finish'

Words originally from Arabic that end with a plosive follow the same rule as Massalit words:

/xalad/	[halat], [kalat]	⟨kalad⟩	'mistake' (A)
/zunuub/	[junup]	⟨zunub⟩	'sin' (A)
/maktub/	[maktup]	⟨mâktub⟩	'letter' (A)

There are also Massalit words that end with devoiced plosives:

/but/	[but]	⟨bût⟩	'different'
/but-butɑ/	[butbutɑ]	⟨bût-bûta⟩	'different one from the other'

6.2. Transcription of compound words/phrases

In general, we opt to write the clitics **related to nouns** separately as much as possible, in order to avoid having very long words whose nuclei are difficult to discern. A general exception is for those clitics which consist of only a single consonant. These may cause morpho-phonological changes and are added to the end of the final syllable.

In terms of verbs, we have to this point the impression that the different affixes are too amalgamated to separate.

ex.

⟨Ambundununarndiye.⟩ ‘They will not let us rest.’

/amb-nd-nonar-ndiye/

they.us – CAUS – rest.PF – NEG.FUT

The conjunctions of a subordinate clause are generally written with a hyphen, except those which consist of a single consonant and which are therefore joined to the verb.

There are compound verbs which are written separately (see further below).

	Root + nominal clitics	Root + verbal affixes/clitics
joined	Single consonant clitics	- affixes which belong to the verb - Single consonant clitics
separated	Clitics of at least one syllable	
hyphenated		Conjunctions of at least one syllable

6.2.1. Written together/joined

In the noun phrase

- Clitics which consist of a single consonant:
 - Short forms of the determinant/close demonstrative: ⟨g, w⟩

⟨Mûco tula...mûcog tabasiņa.⟩ ‘He took a wife... He divorced the wife.’

- the locative ⟨m⟩

⟨Madaldim taka.⟩ ‘He went to the wadi.’

Amalgamated form:

⟨Âsurum taka.⟩ ‘She went to the fields.’

(instead of the ⟨âsur mo⟩ which we would expect)

- Nominal suffixes (singular, plural and accusative) are joined to the root. There is a special case for parental nouns: there may be a possessive pronoun between the noun and the plural suffix. In these cases, the plural suffix is attached to the possessive pronoun:

⟨data⟩ mothers/parents

⟨da mbeta⟩ my mothers/parents, my mother and her people
 cf. ⟨Fatimeta⟩ ‘Fatime and her people’

In the verb phrase

- Everything belonging to the verb: prefixes which indicate subject and object, TAM markers, negation, interrogatives:

⟨asere⟩	/a-sɛr-ɛ/ /1PS-base1.see-PR/	‘I see’
⟨tíkala⟩	/t-ikɔl-a/ /3PS-base2.see-PS/	‘He saw’
⟨âsurti⟩	/a-sûr-ti/ /1PS-base2.come down-FUT/	‘I came down (from)’
⟨andonosiŋti⟩	/and-n-osiŋ-ti/ /1PS.PR.OBJ-CAUS-base2.know-FUT/	‘He taught me’
⟨awosinjeti⟩	/a-os-?-s-ti/ ou /a-osiŋ-s-ti/ /1PS-base1 (ou2?).know-REP-FUT/	‘I will learn (habitually)’
⟨Gosendoŋ?⟩	/g-os-e-nd-oŋ/ /2PS-base1.know-NEG-QU/	‘Do you not know?’

See 6.6. for details on negation.

- Conjunctions which consist of a single consonant:

○ ⟨n⟩	‘if, and, but’
⟨tara⟩	‘he came’
⟨Taran salam keni.⟩	‘Greet him when he comes.’
⟨Tarin-kodo mani.⟩	‘We will go after he comes.’
○ ⟨g⟩	‘when, because, after’
⟨Turnariŋ gani ɲerem tûka.⟩	‘When he got up, it had become evening.’

6.2.2. Written as separate words

In noun phrases

- Clitics of more than one consonant:

⟨gim⟩	'here' (but hyphenated ⟨-gim⟩ 'when' as a verbal conjunction)
⟨ilim⟩	'there'
⟨ây, âlu⟩	'over there (out of view)'
⟨mbo⟩	'with, and'
⟨de⟩	'only'
⟨na⟩	'between them, of (a place; a number); partitive'
⟨lo⟩	emphasis on a subject
⟨wo⟩, ⟨wi wo⟩	emphasis on an object
⟨du⟩	in the subject: 'on the contrary, on the other hand' (contrastive)
mo	'at' LOC
⟨molok, lo(k)⟩	› 'from the direction of, after', 'of...to (temporal)'
molok dummo⟩	'behind'
etc.	

⟨Adam mbo Nura mbo âsurum waka.⟩ 'Adam and Nura went to the fields.'
 ⟨ka ây na ila⟩ 'those people over there'

⟨Madaldi molok ara.⟩ 'I came from the wadi.'
 ⟨Sa 10 molok 12⟩ 'from 10 o'clock to 12 o'clock'

Determinants/Demonstratives:

- gi/igi, ili, wi/yi/iwi, ila; the ones in the singular also in object form: gu/igu, ilu (but see 6.2.1 for single consonant forms (determinants/demonstratives) which are written attached to the noun).

⟨Mûco tula... mûco gu tabasiŋa.⟩
 //wife /3SG-takeII-PF/ wife/DET-SG-O/3SG-divorceII-PF//
 'He took a wife... He divorced the wife.'

⟨Kimiŋ iwi sule molok wara.⟩
 //child-PL/ DETDEM-PL-close/ outside(the bush) /LOC/3PL-comeII-PF//
 'These children came from the bush.'

⟨Gâr nindige gi tara.⟩
 //read/REL-CAUS-doI-IMP/ DET/3Sg-comeII-PF//
 'The one who teaches came – The teacher came.'

- Compound interrogative pronouns:

⟨ŋgo ken⟩ 'how?'
 ⟨ŋgo ru⟩ 'why?'

- Compounds with 'in' (which are actually very frequent in discourse). We have opted for this solution even though assimilation takes place.

⟨in ken⟩ [iŋken], [in ken] 'in this way, thus'

⟨in ru⟩ [irru], [in ru], 'therefore'

- Connectors of possession/genitives (of, 's): ta, taŋ(a), nî, nîŋ(a).

These include the singular forms which undergo a change in object form:

⟨ta⟩ → ⟨to⟩

⟨nî⟩ → ⟨nû⟩.

⟨kimiŋ nî baba⟩ 'father of the children'

⟨baba taŋ kimiŋ⟩ 'children of the father'

⟨Kimiŋ nû torona.⟩ 'He bought it for the children.'

- Pronominals

- Possessives:

mbe, na, ta, mîni, kîni, îni (my, your, his/her, our, your, their – where the noun is in the singular)

mbeŋa, naŋa, taŋa, mîniŋa,.. (my, your, his/her, etc. – where the noun is in the plural)

⟨Igi kima mbe ye.⟩ 'This is my child'

⟨Iwi kimiŋ mbeŋa ye.⟩ 'These are my children'

- pronouns as independent objects:

direct object (these are not compulsory): amboro, mboro, tiro, minta, kinta, inta

indirect object: mba, nda, amba, kanda

(But note that compulsory direct object pronominals are attached to the verb – see above!)

⟨(Kinta) kîmbiya.⟩ 'They gave (it to) you(pl.).'

⟨Juwabko mba tenjebena.⟩ 'He sent me a letter.'

In the verb phrase

- The copula ⟨ye/le/re/ge/me/ke/te⟩ and past tense ⟨yere⟩ etc.

⟨Ama ye.⟩ 'It is I.'

«Kima igi dortola ye». 'This child is small/short.'

«Ma le.» [ma le] [maŋ ge], [magge], [ma ye] 'It's you.'

- Co-verbs with «geya» or «liririya»

for example

«salam geya» 'greeting'

«bik geya» 'covering'

«lar liririya» 'moving'

- Other constructions with compound verbs:

«mus(ni) mige» 'we are spending the day'

«tus(ni) tige» 'he is spending the day'

etc.

6.2.3. Hyphenated

In verb phrases

Subordinate conjunctions.

These are hyphenated partly to facilitate reading in view of changes in stress and length.

«tíya» [tíyà] 'She died'

«tíya-kunuŋ» [tíyáá kùhùŋ], [tíyáá kùhùŋ] 'Since she died...'

«tara» [táárà] 'We came'

«tara-kodo» [tāārāá kòdò] 'After he came' (in the past)

«tarin-kodo» [táárīn kòdò] 'After he comes'

«tīre» [tīrē] 'he says' '

«tīra-ken» [tī'ráa kèn] 'if he says (that)'

«Tarar-ken amboro mbo kâddu mûrantiyere».

'If he had come, we would have conversed/discussed a lot.'

-kede 'before' (note: written separately when it means 'without')

-gim 'when' (note: written separately when it means 'here')

-gu 'when, because, after' (note: written separately when it means 'this-OBJ')

«In tīrnaŋa-gu kima tu ŋgo tīre...» 'When she said that, the other child said...'

6.2.4. List of clitics and conjunctions

	Root + nominal clitics	Root + verbal affixes/clitics
joined	<m> LOC 'at' <g> DET sg. <w> DET pl.	Everything that is part of a verb, including negations (ndV) and interrogatives (oŋ) <n> 'if, and, but' 1. <g> 'when, because, after'
separated	<gim> 'here' <ilim> 'there' <ây, âlu> 'over there' <mbo> 'with, and' <de> 'only' <na> partitive <lo> subject emphasis <wo>, <wi wo> object emphasis <du> subject contrast <mo> LOC 'at' <molok, lo(k)> LOC 'of/from' <gi/gu/igu/igu> DET/DEM sg. <wi/yi/iwi> DET/DEM pl.	<ye/le/re/ge/me/ke/te> <yere> etc. • COP •
hyphenated		-kunuŋ 'after, since' 2. -kodo(l) 'after' -ken 'if, when' -kede 'before' -gim 'when, because, after' 3. -gu 'when, because, after'

6.3. Transcription of compound words

- If a compound word does not undergo phonetic or phonological changes when it is created, we write it as two words. In the plural form it becomes clear that they are in fact two words.

‹koro› 'finger' ‹dala› 'chief' → ‹koro dala› 'thumb'
 plur. ‹koro dalar›
 ‹kima› 'child' ‹kara› 'girl' → ‹kima kara› 'girl'
 plur. ‹kimiṅ kâli›
 ‹leri›, pl. ‹leker› 'donkey' → ‹leri garaṅgi› 'giraffe'
 plur. ‹leker garaṅi›

(The word ‹garaṅgi› on its own has no meaning that we know of)

- If the compound word undergoes phonological changes (such as assimilation to vowel harmony), we write it as one word, and, as usual, words with +ATR vowels are written with the circumflex accent on the first vowel – see section 4.

/jɔ/	[jɔ]	‹jɔ›	‘foot, times’
/mbir(i)/	[mbir(i)]	‹mbîri›	‘two’
/jɔ-mbir/	[jombir]	‹jômbir›	‘two times/twice’
/ka/	[ka:]	‹kaa›	‘people’
/ni/	[ni]	‹nî›	possessive connector
/ka:-nim/	[kɔ:nim]	‹kâanim›	‘their place; theirs’
/ŋga/	[ŋga]	‹ŋga›	‘who?’
/ni/	[ni]	‹nî›	possessive connector
/ŋga-nim/	[ŋganim]	‹ŋgânim›	‘whose place? whose?’

- Certain words have become phonological unities:

‹malembo› 'slowly'
 ‹nîyembo› 'extremely'
 ‹hâgudu› 'now'
 ‹hâbuto› 'something'
 ‹hâkkoy› 'again'
 ‹jekkoy› 'very'

- If a word consists of repeated parts, we write it with a hyphen in between:

‹jerey-jerey› 'swallow'
 ‹înjâl-înjâl› 'wild dog'
 ‹kîrima› 'cold'
 ‹kîrim-kîrima› 'very cold'
 etc.

6.4. Diphthongs

(Where relevant below, the syllables will be indicated by a period/full-stop.)

In Massalit there are several heterorganic vowel sequences. If they form part of the same syllable, the second is always a high vowel (/i/ or /ɪ/, /u/ or /ʊ/). If there are two or three vowels over two syllables, these may be non-high.

E.g. [aɑɛ] /aayɛ/ 'I go' <aye>

- When two different vowels where neither is a high vowel are juxtaposed, they will be written V.CV. For certain verbs, it is clearly audible, particularly when a speaker talks slowly and distinctly, the semi-vowel and two syllables. For others, it seems to be rather one syllable with a diphthong.

/a-ɔɔs-ɛ/ 'I know' [awɔsɛ], [aɔsɛ] <awose>

/t-ɔɔs-ɛ/ 'He knows' [tɔɔsɛ] <tose>

/a-ʊʊl-a/ 'I took' [aʊla] <awula>

/g-ʊʊl-a/ 'You took' [gʊla] <gula>

/t-ʊʊl-a/ 'He took' [tʊʊla] <tula>

/l-i.ʌr-ce/ '(your) brothers' [liyʌrce], [li:rce] <ɫiyarce>

- Nevertheless, there are verbs which the speakers insist that there is not an extra syllable.

/a-iib-i/ 'I catch' [ʌibi] <âybi>

/t-iib-i/ 'He catches' [tiibi] <ṭibi>

/a-yfel-a/ 'I cut' (past) [ayfɛla] <ayfela>

/g-efel-a/ 'You cut' (past) [gefɛla] <gefela>

- A combination of vowels where the second vowel is + high will be written VC:

[kʌu] /kʌw/ 'harmattan' <kâw>

[ndawran] /ndawran/ 'to be effective' <ndawran>

[kɔɪ] /kɔy/ 'also' <koy>

[ʌɪŋge] /ʌyŋge/ 'sun' <âyŋge>

- This interpretation takes into account the consonantal character of the glide during a syllabic restructuring, when the consonant in the coda position becomes the attack of the next syllable:

/lay/ 'Enter!'
 /layti/ 'you will enter' [lay.tɪ] ‹layti›
 mais
 /lay-i/ 'Enter (all of you)!' [la.yɪ] ‹layi›
 /lay-a/ 'you entered' [la.ya] ‹laya›

(There are examples of consonants in these positions:)

‹ruc› /ruc/ 'to cover' (abbreviated form in a verb series)
 ‹turuca› /tu-ru.c-a/ 'he covered'

- When a word contains a sequence of -high and +high vowels followed by a consonant, the two vowels will be written as a glide vowel (consonantal interpretation), even though a CC sequence in the final position of a syllable is very rare. In the event of a syllabic restructuring, as in the preceding case, the consonant in the coda position becomes the attack of the next syllable:

[lɔɪn] /lɔɪn/ ‹loyn› 'pour'
 [lɔɪn.tɪ] /lɔɪn-tɪ/ ‹loynti› 'you will pour'
 but:
 [lɔɪ.na] /lɔɪn-a/ ‹loyna› 'you poured'

Nevertheless, there are verbs which are clearly bisyllabic. It is audible and the speakers are also convinced of this: ‹loyn› [lɔɪn], but ‹rayin› [rayɪn]. We present here the paradigms of these two verbs:

[awɔɪna] /a.-ɔɪ.n-a/ ‹awoyna› 'I poured'
 [lɔɪna] /l-ɔɪ.n-a/ ‹loyna› 'You poured'
 [tɔɪna] /t-ɔɪ.n-a/ ‹toyna› 'He poured'
 [ɔɪna] /ɔɪ.n-a/ ‹oyna› 'They poured'

[arayɪna] /a.ra.yɪ.na/ ‹arayina› 'I sent, chased away'
 [rayɪna] /ra.yɪ.na/ ‹rayina› 'You sent, chased away'
 [turayɪna] /tura.yɪ.na/ ‹turayina› 'He sent, chased away'
 [ɔrayɪna] /ɔra.yɪ.na/ ‹urayina› 'They sent, chased away'

- A glide will be inserted in the conjugation of verbs where the radical is V, when the ending is a vowel, to avoid VV sequences in the orthography.

/t-iy-ε/	'he walks'	[tɪyɛ]	⟨tiye⟩
/a-iy-ε/	'I walk'	[ayɛ]	⟨aye⟩ homograph with [aayɛ] ⟨aye⟩ 'I go' (only in first person singular)
/t-iy-i/	'He massages'	[tiyi]	⟨tʲyi⟩
/ʌ-iy-i/	'I massage'	[ʌyi]	⟨âyi⟩

The palatal glide is inserted in anterior vowel-posterior vowel sequences.

/ɛ/	'Leave it!'	
/ɛ-y-u/	'left...'	⟨leyu⟩
/ʌnd-i-a/	'He gave me'	⟨ândiya⟩

6.5. Propagation of roundness

Non-round high vowels are readily influenced by a preceding high round vowel or the glide w, and we hear both. Speakers usually know which is the underlying form.

⟨t̥osɪnjirinde⟩	[tosɪnjirinde], [tosɪnjurinde], [tosɪnjirinde]
/t-+ATR-ɔs-injir-e-nd-ε/	
or? /t-+ATR-ɔsɪŋ-sir-e-nd-ε/	'one never knows' (it is not clear) (one is not let to know)

⟨âwiye⟩	[ʌwiye], [ʌwuye]	'hyena'
---------	------------------	---------

6.6. Negation

There is neutralisation in the negation: a form for the past and the present ⟨nde⟩, and another for the future ⟨ndiye⟩.

Base 1 :

The negation is attached after the TAM marker.

gose	/g-ɔs-ε/	'you know'
gosende	/g-ɔs-ε-nde/	'you don't know'

nûnji	/n-ûnj-i/	'you give'
nûnjinde	/n-ûnj-i-nde /	'you don't give'

Base 2 :

Past tense: The negation is attached directly to the base in place of the past suffix

gosɪŋa	/g-ɔsɪŋ-a/	'you knew'
gosɪŋnde	/g-ɔsɪŋ-nde /	'you didn't know'

Future: <ndiye> is the suffix attached to the base

<musnde> /m-us-ndɛ/ [mʊsndɛ]

'we didn't spend the day together'

<musndiye> /m-us-ndiɛ/ [mʊsndiɛ], [mʊsundɪɛ]

'we will not spend the day together'

In rare cases, an extra vowel is inserted between the root and the NEG marker, but this will not be written.

Note: In cases where base 1 and 2 are identical, the only difference between “past” and “present” is the TAM marker of the present tense to which the NEG marker is suffixed.

<garnde> /g-ar-ndɛ/ [garndɛ] 'you didn't come'

<garende> /g-ar-e-ndɛ/ [garɛndɛ] 'you don't come'

For verbs where base 2 ends in ŋ, there is, for some speakers, assimilation at the point of articulation which is nevertheless not written (a dialectical question?)

<gosiŋti> /g-ɔsiŋ-tɪ/ 'you will know'

<gosiŋndiye> /g-ɔsiŋ-ndiye/ [gɔsiŋndiye], [gɔsiŋŋɪye] 'you will not know'

<ginaŋnde> /g-inaŋ-nde/ [ginaŋnde], [ginaŋŋe] 'you did not hear'

(cf. assimilation of the future affix – see 6.10)

Note the juxtaposition of two 'n's if the base ends in an -n (but see 6.7)

<mûrana> /m-ûran-a/ 'we spoke'

<mûrannde> /m-ûran-nd-a/ [mûrannde] 'we did not speak'

6.7. Prenasalized plosives perceived as long

Some Massalit speakers hear prenasalized plosives as lengthened and therefore want to write them. This is a predictable phenomenon of prenasalized plosives between vowels and will therefore not be written.

*tîrimbil <tîrimbil> 'car'

*koŋŋji	⟨koŋji⟩	'bone'
*jaŋŋgab	⟨jaŋgab⟩	'second weeding'

Nevertheless, verbs where base 2 ends in -n will have, in the negative form, -nnd. See 6.6.

6.8. (Morpho)phonologic changes to the verb base of the irregular verb 'to give'

The irregular verb 'to give' undergoes numerous changes at the morphophonological level.

/t-uŋ-a/	⟨tûŋa⟩	'he gave'	[tuŋa]
/a-uŋ-a/	⟨âŋa⟩	'I gave'	[ʌŋa]
/∅-uŋ-a/	⟨ŋâ⟩	'you gave'	[ŋʌ]

/a-uŋj-i/	⟨âŋji⟩	'I give'
/n-uŋj-i/	⟨nûŋji⟩	'You give'

Following is a list of the conjugations for this verb:

«Past tense»	«Present tense»
âŋa 'I gave'	âŋji 'I give'
ŋâ 'You gave'	nûŋji 'You give'
tûŋa, mûŋa, kûŋa, ûŋa	tûŋji, mûŋji...

Participle and imperatives of the perfective:

ŋû	'given, Give (to him)!'
ŋi! ŋûyi!	'Give (to them)! (sg. and pl.)'

Negative imperatives:

ŋân!	'Don't give (to him)!'
kûŋan!	'Don't give (to them)!'

Participle and imperatives of the imperfective:

nûŋju	'give (regularly)-SG!'
nûŋje!	'give (regularly)-PL!'
nûŋjan!	'never give-SG!'
kûŋjan!	'never give-PL!'

Certain forms will be written according to the surface form. For forms with the pronominal object the only trace of the root is the +ATR nature:

Forms with pronominal objects:

ândiya	'you gave me, he gave me'
ndîya	'he gave you (SG)'
âmbiya	'you(pl.) gave me/they gave you...'
mbîya	'I gave you/they gave me...'
kîndiya	'I gave you(pl.)'....

Imperatives with object pronouns:

ândi!	'give me!'
âmbi!	'(you pl.) give me!, give us!, (you pl.) give us!'

6.9. Shortening in speech or elimination of vowels

In speaking quickly, the vowels of the radical between r + n are often eliminated. In these cases, they will be continue to be written:

[rona]		'you bought'	⟨rona⟩
[tɔrna] or [tɔrɔna]		'he bought'	⟨torona⟩
[ʌndʌŋkarina] or [ʌndʌŋkarɔna]		'he asked me'	⟨ândaŋkarina⟩

However, there are also cases where the vowel between r + C is actually eliminated:

[ʌrɸila]	'I beat'	⟨ârɸila⟩
[rɸila]	'you beat'	⟨rîɸila⟩
[irɸila]	'they beat'	⟨îrɸila⟩
[arka]	'I found'	⟨arka⟩
[raka]	'you found'	⟨raka⟩
[tarka]	'he found'	⟨tarka⟩

6.10. Keeping the “look” of the word – phonological processes

We want to keep the “look” of the word even though phonological processes may cause the pronunciation to be different:

- The verb 'to see' has as its base 2 -îkal, which is pronounced in almost all forms. In the imperative and the “participle”, k often becomes g, but we write k nevertheless.

⟨âkala⟩	[ʌkʌla]	'I saw'.
⟨sîkal⟩	[sigel], [sigʌl], [sikʌl]	'Look!' and “participle”

- Two exceptions: Where a -k in base 2 disappears in the future tense. This could be due to an altering of the radical. We write the surface form.

⟨taka⟩	/t-ak-a/	[taka]	'he went'
⟨tati⟩	/t-ak-ti/	[taati]	'he will go'
⟨tūka⟩	/t-uk-a/	[tuka]	'he became'
⟨tūti⟩	/t-uk-ti/	[tuuti]	'he will become'

- Verbs where base 2 ends in η in the future tense:

There are two different pronunciations (dialectal?)—in some words the suffix -ti undergoes assimilation at the point of articulation; there we keep the “look” of the suffix:

⟨tosiηti⟩ /t-osi η-ti/ [tɔsiηti], [tɔsiηki] 'he will know, learn'

Cf. also the parallel phenomenon in the negation of verbs at the -η (6.6)

6.11. Nasalization

Nasalization of vowels is rare. In most cases, it occurs under the influence of a neighbouring nasal consonant. Cases where nasalization is not predictable are very rare. We found no contrast between a nasalized and non-nasalized vowel. For this reason, nasalization will not be transcribed.

⟨miŋa⟩	[miŋãã], [miŋãã]	'our food'
⟨me⟩	[mẽẽ]	'epileptic', very light nasalization

The following expressions are the exceptions to the rule above. However, speakers produce the nasalization naturally, and these will not be transcribed either:

⟨tarfu si⟩	[tarfũ si], [tarfũŋ si]	'stay away!'
⟨hu ru⟩	[hũ ru]	'say hu' (fixed phrase to attract someone's attention)

6.12. Word list

Following is a non-exhaustive list of words which are pronounced in different ways and for which we have decided on an orthography arbitrarily:

- gê [gi], [ge], [giyɛ] 'together'
- hâgudu [hɔgudu], [hogudu] 'then'

- madrasa [madarsa], [madrasa] 'school'
- rînaŋ [rinΛŋ], [riniŋ], [rineŋ] 'say' ("participle" form)
We write all other base 2 forms with these vowels, e.g. <tîrnaŋ> 'he said'.
- tîran [tirΛn], [tiren] 'meet'
We write all other base 2 forms with these vowels, e.g. <mîdirana> 'we met'.
- tîkala [tikΛla], [tikela] 'he saw'
We write all other base 2 forms with these vowels.
- tûrana [turon] [turΛn] 'he said'
We write all other base 2 forms with these vowels.

6.13. Punctuation

The following symbols will be used:

6.13.1. End of a sentence (which has a conjugated verb): <.>

<Ama aka. Dîmen arti.>

'I'm going now. I will come back tomorrow.'

6.13.2. Question, at the end of a sentence: <?>

<Garndoj?>

'You didn't come?'

6.13.3. Exclamation mark: <!>

This is used to mark the end of an exclamation or an order or after an ideophonic exclamation, even in the middle of a sentence.

<ka!> 'Come!'

<cêr-cêr!> 'I refuse!, I don't want to!' (onomatopoeia)

<Furut! gîrichta kooy tuduna.> '(sound of money) he spent all his money'

6.13.4. Quotation marks: <"> at the beginning and end of direct speech

<"Ka!" tîrnaŋa.> "'Come!'", he said'

6.13.5. Single quotation marks: ⟨'⟩ at the beginning and end of speech within speech

“Jîre mîni ‘tusmayo ane’ tîrnaŋa, maka miŋan!” irnen ...

“Our neighbour said: 'I'm having a naming party'; let's go and eat!" they said...

6.13.6. Hyphen ⟨-⟩ and dash: ⟨ – ⟩

Attached to a noun or verb, a hyphen is used to separate certain verbal clitics from their radicals (see above).

⟨gaka-ken⟩ 'if you go'

A dash between spaces will be used to indicate a pause or a different idea in a sentence, as well as a certain break.

karkaja molok – tiro ganim kedel(u)-kodo –
/frame/since/it/place-LOC/2P-construct-first/
'After the frame - made on the ground first - '

6.13.7. Comma ⟨,⟩

This will be used to separate complex subordinate clauses which consist of “expanded” serial verbs (e.g. with objects) – see below under 7. Example Text – and at clauses where one normally stops for breath. It may also be used to separate principal clauses where they recapitulate the preceding clause (see line 6 in the example text below).

See 6.14 for use of the comma in direct speech.

6.13.8. Colon ⟨:⟩

Use of the colon is similar to that of other languages, except that it does not precede direct speech (see 6.14 below).

6.14. *Direct speech*

When direct speech is introduced by ⟨ŋgo tire⟩, a comma will be placed after this expression. There will be no comma after direct speech if it is followed by ⟨in tirne⟩ or ⟨tirne⟩ (or other conjugated forms).

Direct speech, after the first quotation mark, will begin with an upper-case letter.

... âwiye gi ŋgo tire,

hyena/ DET/ what/ 3S-direI-PR//

“De mbe gi lo tuṅana” in tirne.

//cow/ my/ DET/ EMPH/ 3S-give-birthII-PS/ this/ 3S-direI-PR//

... the hyena said: “My cow has given birth”, this is what he said.

Direct speech may take the place of the object without introduction. In these cases, only the quotation marks will be used to mark it:

Halas maama gi du “Ambe gi lo tuṅana” tirne.

“Finished”/ hare/ DET/ CONTR/ mine/ DET/ EMPH/ 3S-give-birthII-PS/ 3S-direI-PR.

But the hare said: “It's my cow that has given birth!”

6.15. Upper-case letters

Proper nouns will be written starting with an upper-case letter. The category of “proper nouns” includes, not only the names of people, but also the names of cities, rivers, mountains, countries, etc.

Abese 'Abéché'

Gerṅe 'Guergné'

Iṅa (woman's name)

Temere (woman's name)

Adukora (man's name)

After a period/full-stop, the next sentence will begin with an upper-case letter. This is also the case at the beginning of a text.

Ama aka. Dîmen arti.

/I/1S-go-II-PS/tomorrow/1S-come-II-FUT/

'I am going now, and I will come back tomorrow.'

In the case of direct speech in the middle of a sentence, the direct speech will start with an upper-case letter after the opening quotation mark.

Ti du “Murkuti yande” tirnen, ...

'He said: “Aren't you mad”...

7. Example text

1. Âwiye mbo maama mbo dee mbara ne tîran
hyena and rabbit and cow-PL two having met
suro waka.
pasture 3PL-goII-PS//

The hyena and the hare had two cows; they met and went (took the cows) to pasture.

2. Wâkit suro waka-gim,
//When(A)/ pasture/ 3PL-goII-PS.when/
When they went to the pasture,

3. de âwiye tag margi yen,
cow/ hyena/ his-DET/ male/ COP-SUB/
the hyena's cow was a male,

4. de maama gi ta gi du se ye.
cow/ hare/ DET/ his/ DET/ CONTR/ female/ COP//
the hare's cow was a female.

5. In ken halas se gi kimo tuṅana.
//So/ done/ "finished"/ female/ DET/ child-O/ 3S-give-birthII-PS//
Thus the female gave birth.

6. Kimo tuṅana,
//child-O/3S-give-birthII-PS/
She gave birth,

7. âwiye gi kima gu kul nar
hyena/ DET/child/ DET-O/take/bring
and the hyena took the calf and brought it

8. de ta gim jambi tam nduṅu,
/cow/ his/ DET-LOC//at-side/ his-LOC/ put/
to his cow and put it by his side.

9. hâgudu ko
then/ go/
Then he left,

10. fariṅ de nuṅana gi taṅa kul nar,
blood/ cow/ REL-give-birthII-PS/ DET/ his/ take/ bring/
took the blood of the cow that had given birth, took and brought it

11. de ta gim kayiṅ,
cow/ his/DET-LOC/ spread/
and spread it on his cow.

12. in ken ken âwiye gi ṅgo tire,
So/ done/ did/ hyena/ DET/ what/ 3S-sayI-PR//
Thus, having done this, the hyena said:

13. “De mbe gi lo tuṅana” in tirne.
//cow/ my/ DET/ EMPH/ 3S-give-birthII-PS/ this/ 3S-saidI-PR//
“My cow has given birth,” this is what he said.

14. Halas maama gi du “Ambe gi lo tuṅana” tirne.
“Finished”/ hare/ DET/ CONTR/ mine/ DET/ EMPH/ 3S-give-birthII-PS/ 3S-sayI-PR.
Then the hare said: “It's my cow that has given birth!”

15. Gulto ena.
//quarrel/ 3PL-doII-PS//
They quarrelled.

16. In ken maama gi ṅgo tire,
So/ done/ hare/ DET/ what/ 3S-sayI-PR//
Thus the hare said this:

17. “Gaka jamata naṅa guruṅin,
//Go!/ people/ your/ 2S-callIII-FUT-SUB//
“Go and call your people,

18. ama koy aka jamata mbeṅa awuruṅin,
I / also/ 1S-goII-PS/ people/ my/ 1S-callIII-FUT-SUB/
and I also will go and call my people,

19. wara gâdiyo mba en” tirnen,
3PL-comeII-PS/ judgement-O/ for-us/ 3PL-doII/ 3S-sayI-PR-SUB//
and having come, they will judge for us” he said.

20. “Kalla ye” ru âwiyeg taka,
//Good/ COP/saying/ hyena-DET/ 3S-goII-PS/
“Good” said the hyena and left.

21. maama gi koy taka.

hare/ DET/also/3S-goII-PS//

The hare also left.

22. Halas âwiye gi ko

//”Finished”/hyena/ DET/go/

So the hyena went

23. ka kooy gudra nene de turuḡa.

people/all/power/REL-haveI-PR/only/3S-callIII-PS//

and called only powerful people.

24. Amara mbo kuruḡ tanara,

//Lion/ with/ call/ 3S-bringII-PS/

He called and brought them with the lion,

25. ginda ta ânjurom ḡuḡ inde.

soap tree/ his/shadow-LOC/ sit/3PL-be-there-I-PR//

and they sat down in the shadow of a soap tree.

26. Ken maama gi du ko

//Did/ hare/ DET/ CONTR/ go/

The hare, he went

27. ḡâwro kul tara.

jackal-O/ take/ 3S-comeII-PS//

and brought the jackal.

28. Kul tanare-gim,

//take/ 3S-bringI-PR.when/

When he came bringing the jackal,

29. ḡâwre gi kar halas tâwali karaḡ tayen,

jackal/ DET/ come/”finished”/immediately (A)/pass/3S-goI-PR-CONJ

the jackal came and immediately passed by,

30. jamata yi ḡgo ire,

people/ DET/ what/ 3PL-sayI-PR://

and the people said,

31. “Mi kar mboro mbursen,

We/ come/ you/ waitI-PR-SUB/

“We came and waited for you,

32. ɲgo ru kar tâwali gayoŋ?” irne.

what/ say/ come/ immediately/ 2S-goI-PR-QU/ 3PL-sayI-PR?//
why did you come and go immediately?” they said.

33. ɲâwre gi du “Ama baba mbe tuɲana aye” tirnen,

//jackal/DET/CONTR/ I/ father/ my/ 3S-give-birthII-PS / I-go/ 3S-sayI-PR-SUB//
The jackal said: “I am going to my father who has given birth”

34. halas ka jamata yi du ɲgo ire,

//”Finished”/ people/ people/ DET/CONTR/ what/ 3PL-sayI-PR//
So the people said:

35. “Tâŋgit kamba tuɲanoŋ?”

//Never/ man/3S-give-birthII-PS-QU//
“Has a man ever given birth?”

36. in irnen,

so/ 3PL-sayI-PR-SUB//
saying this,

37. “Lala, ɲgo ru ki margi tuɲana kire?

//no/what/say/ you(pl.)/ male/ 3S-give-birthII-PS / you(pl).-say//
“No. Why do you say that a male has given birth?”

38. Tâŋgit margi tuɲana?

Never/ male/ 3S-give-birthII-PS -QU?//
Has a male ever given birth?

39. In ko yan, kula de gu se gu ɲûyi!” rîŋ

//so/ COP-SUB/ take-IMP-PL/ cow/ DET-O/ give-IMP-PL/ say/
If that is the case, take the calf and give it to the female!” they said,

40. halas kanaa îniɲa tonoda.

“finished”/ problems/ their/ 3S-finishII-PS/
and so he finished their problem.

41. Hâddi ye.

//Finished/ COP.”
The end.

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