


Typing guide to the Syriac phonetic keyboard

Gareth Hughes – ܓܪܝܬ ܗܝܘܝܘܣ *


7th January 2009

*Thanks go to [Beth Mardutho: the Syriac Institute](#) for developing the *Meltho* fonts and Syriac keyboards.

Contents

1	Introduction	1
2	Regular Syriac letters	1
3	Additional letters	2
4	Vowels	3
5	Diacritics	4
6	Punctuation and other marks	5
7	Writing Garšúni	6
8	Control characters	7
A	Unicode	8

List of Tables

1	Key bindings of the regular Syriac letters	2
2	Key bindings of additional Syriac letters	3
3	Key bindings of Syriac vowel points	4
4	Key bindings for various diacritics	5
5	Punctuation and other marks	6
6	Vowels and Hamazát for Garšúni	7
7	Syriac Unicode block – 1st nibble – 0700–070F	8
8	Syriac Unicode block – 2nd nibble – 0710–071F	9
9	Syriac Unicode block – 3rd nibble – 0720–072F	9
10	Syriac Unicode block – 4th nibble – 0730–073F	10
11	Syriac Unicode block – 5th nibble – 0740–074F	10

1 Introduction

Syriac has never been an easy language in which to print. Handwritten Syriac manuscripts are still produced today: half a nod to tradition, and half because it is often easier that way. The early editions of John F Healey’s *First Studies in Syriac*¹ have beautifully handwritten Syriac text. However, Syriacists have always been keen to tame the script to the latest printing technology, be it by the missionaries bearing printing presses or modern computer-font designers.

The *Meltho* fonts produced by **Beth Mardutho: the Syriac Institute** are designed to take advantage of two modern font technologies – *Unicode* and *OpenType* (see Appendix A on page 8) – making them fit comfortably in a flexible, multilingual environment. In this document, Estrāngelā text is displayed in the *Edessa* font (ܐܕܝܫܐ, ܐܕܝܫܐܐ), Sêrṭo text in *Jerusalem* (ܩܘܪܕܝܢܐ, ܩܘܪܕܝܢܐ) and East Syriac text in *Adiabene* (ܩܘܪܕܝܢܐ, ܩܘܪܕܝܢܐ).

With the *Meltho* fonts come two virtual keyboards for typing in Syriac. A virtual keyboard is a different way of mapping the keys of the keyboard to different characters. Most modern operating systems can handle multiple virtual keyboards and allow a user to switch between them with a mouse click or keyboard shortcut. The first virtual keyboard is the *Syriac 101 Standard Keyboard*, which maps the Syriac characters to the keys of a standard Arabic keyboard. This is only useful if you have a standard Arabic keyboard or have memorised the locations of the keys on one.

The other virtual keyboard is the *Syriac Phonetic Keyboard*. This keyboard attempts to match Syriac characters phonetically (more or less!) to the letters on a standard US keyboard: so the ‘d’ key produces a ܕ. Although this keyboard is modelled on the US keyboard layout, it is equally suited to my UK keyboard, which simply has some keys in different positions. This guide is based on my UK keyboard, but can be modified for other keyboard layouts.² The 22 basic Syriac letters are all quite easy to find, but the vowels and assorted points can be a little difficult to get the hang of. I originally wrote this guide as an aide mémoire to the key combinations required. I hope you, the reader, find it as useful as I.

2 Regular Syriac letters

The 22 regular letters of the Syriac alphabet are mapped as closely as possible to their phonetic equivalents on the keyboard (see Table 1). Of course, there are a few oddities that one has to get used to, like finding Ḥēṭ on the semicolon, Ṭēṭ on the ‘j’, ʿĒ on the ‘i’ (which makes some sense), Ṣādē on the ‘x’ and Šin on the ‘v’.

¹John F Healey (1980). *First Studies in Syriac*. Birmingham.

²The standard US keyboard does not have an ‘AltGr’ key, but sometimes the right ‘Alt’ key can be figured to act like ‘AltGr’, or the combination ‘Alt’ + ‘Ctrl’ (pressed in that order) can do the same. Otherwise, just some keys have moved around. As this guide uses the UK keyboard, you can translate back to a US keyboard by reading ~ as ~, ” as @, £ as # and @ as ”. Mac keyboards are slightly different again, but the differences should be easy to spot.

Various fonts have special ligatures for letter combinations, like the Sérto ligatures 𐌪 and 𐌫, and the East Syriac 𐌲 and 𐌳. These should be formed automatically as one types.³

In addition to these regular letters, the Syriac keyboard provides a Mṭilánā (or, in Arabic, a Taṭwíl) to increase the ligature length between two joining letters. The Mṭilánā is typed as shift + ‘j’. For example, the Syriac word ʾAláhā is typed in the sequence ‘a’, ‘l’, ‘h’, ‘a’, producing ܐܠܗܐ. We can lengthen the word by placing Mṭilánā between Lámāḍ and Hē, typing ‘a’, ‘l’, shift + ‘j’, ‘h’, ‘a’, producing ܐܠܗܐܝܗܐ.⁴

Table 1: Key bindings of the regular Syriac letters

Letter name	Letter	Key	Letter name	Letter	Key
ʾÁlap	ܐ	‘a’	Lámāḍ	ܠ	‘l’
Bēt	ܒ	‘b’	Mim	ܡ	‘m’
Gámal	ܓ	‘g’	Nun	ܢ	‘n’
Dálat	ܕ	‘d’	Sémkaṭ	ܣ	‘s’
Hē	ܗ	‘h’	Ē	ܝ	‘i’
Wau	ܘ	‘w’	Pē	ܦ	‘p’
Zai	ܙ	‘z’	Šádē	ܫ	‘x’
Ḥēt	ܚ	‘;’	Qoṗ	ܩ	‘q’
Tēt	ܛ	‘j’	Rēš	ܪ	‘r’
Yoḍ	ܝ	‘y’	Šin	ܫ	‘v’
Kāp	ܟ	‘k’	Tau	ܬ	‘t’

3 Additional letters

The keyboard can also produce some additional letters for special purposes (see Table 2). Most of these key bindings do not possess the ‘phonetic’ link of the regular letters.

The keyboard provides a dot-less Dálat/Rēš, ܕ, which occurs in some old inscriptions and supports a legacy character which used to be used for Rēš with Syámē, ܕ; nowadays, a dot-less Rēš is not necessary and Syámē can be added to a normal, dotted Rēš. The dot-less character is mapped to the ‘e’ key on the keyboard – making a corner between ‘d’ and ‘r’.

The keyboard also provides a few additional letters for typing Garšúni (Arabic written in Syriac script). The letters Ĝámal and Zēt (ܨ and ܐ) represent the Arabic letters Ĝim and Zā (ج and ظ). Ĝámal is mapped to the ‘f’ key, to the left of ‘g’, while

³See Chapter 8 on page 7 on control characters for instructions how to break these automatic ligatures.

⁴The X_YTeX typesetting system, used to set this document, can automatically add Mṭilánā to Syriac text to justify it on the page, without it having to be typed into the original text.

Zēt̄ is mapped to the ‘u’ key, above ‘j’. The other additional Garšúni letter is Dádē (ܕܝܥܝ), representing the Arabic letter Dād (ض), which is produced by typing Šádē followed by the raised diacritical point.⁵ The keyboard also offers a number of key-bindings for Hámza^h and other Garšúni/Arabic signs.⁶

Three other signs are also provided on the keyboard. Typing an apostrophe produces the East-Syriac *Yahweh* symbol, ܘܫܬܐ, typing a ‘c’ produces the tailed variant of Sémkaṭ, ܘܫܬܐ, and typing ‘o’ produces the reversed Pē, ܘܫܬܐ, used in Christian Palestinian Aramaic.

Table 2: Key bindings of additional Syriac letters

Letter name	Letter	Keyboard input
Ĝámal (Garšúni Ĝim ܓ)	ܓ	‘f’
Dot-less Dálat/Rēš	ܕ	‘e’
Zēt̄ (Garšúni Zā’ ܙ)	ܙ	‘u’
<i>Yahweh</i> symbol	ܘܫܬܐ	’ (apostrophe)
Tailed Sémkaṭ	ܘܫܬܐ	‘c’
CPA Pē	ܘܫܬܐ	‘o’
Garšúni Hámza ^h	ܐ	AltGr + ‘f’

4 Vowels

The Syriac keyboard is flexible enough to allow for the typing of both West and East Syriac vowel marks or a combination of the two (as is sometimes done by West Syriac writers). For each West Syriac vowel sign, two keys are assigned: one for placement above a letter, one for below. All the vowels are produced with the ‘shift’ key held down. The raised West Syriac vowels are produced by the top line of letters of the keyboard: ‘q’, ‘w’, ‘e’, ‘r’ and ‘t’. The lowered counterparts are on the keys directly below: ‘a’, ‘s’, ‘d’, ‘f’ and ‘g’. The East Syriac vowels are on the bottom row of keys, and correspond somewhat with the positions of the West Syriac vowels (with an exception and an addition): ‘z’, ‘x’, ‘c’, ‘v’, ‘b’ and ‘n’ (for a full list of vowels see Table 3).

⁵That is ‘x’ followed by shift + ‘p’.

⁶The Hámza^h on the line is shown in Table 2, while the others are shown in Table 6 on page 7.

⁷The vowels are displayed with the letter Bēt, ܘܫܬܐ, and *matres lectionis* where appropriate.

Five sets of two or three points are provided to represent the various minor diacritics found in manuscripts. Some of these (specifically the three dots) are also used in Ṭuróyo to mark borrowed phonemes like those in the previous paragraph. The East-Syriac raised ʾÁlaḫ̄ the Syriac-Orthodox music sign and the liturgical Barreḫ are also provided with key-bindings.

Table 4: Key bindings for various diacritics

Diacritic name	Diacritic	Keyboard input
Quššáyā (plosive)	ܩ/ܩ̣	shift + ‘u’/shift + ‘2’ (’)
Rukkákā (fricative)	ܕ/ܕ̣	shift + ‘m’/shift + ‘3’ (‘£’)
Syámē (plural)	ܩ̣	shift + ‘i’
Diacritical point	ܩ̣/ܩ̣̣	shift + ‘p’/shift + ‘;’ (’:’)
Feminine verb marker	ܝ̣/ܝ̣̣	shift + ‘y’ (shape font dependent)
Various lines	ܩ̣̣/ܩ̣̣̣	shift + ‘o’/shift + ‘l’
W. Syriac abbrev. ⁸	ܩ̣̣̣/ܩ̣̣̣̣	AltGr + ‘u’/AltGr + ‘j’
E. Syriac abbrev.	ܩ̣̣̣̣/ܩ̣̣̣̣̣	˘ (back-tick)
Modern Syriac diacritics	ܩ̣̣̣̣/ܩ̣̣̣̣̣	shift + ‘7’ (‘&’)
Ms. diacritics	ܩ̣̣̣̣̣/ܩ̣̣̣̣̣̣	shift + ‘[’ (‘{’)/shift + ‘ ’ (‘@’)
Liturgical symbols	ܩ̣̣̣̣̣̣/ܩ̣̣̣̣̣̣̣	shift + ` (‘-’)/AltGr + ‘p’
	ܩ̣̣̣̣̣̣̣/ܩ̣̣̣̣̣̣̣̣	shift + ‘k’/AltGr + ‘i’
	ܩ̣̣̣̣̣̣̣̣/ܩ̣̣̣̣̣̣̣̣̣	AltGr + ‘o’/AltGr + ‘k’/AltGr + ‘l’
Raised ʾÁlaḫ̄	ܩ̣̣̣̣̣̣̣̣̣	shift + ‘]’ (‘}’)/shift + ‘4’ (‘\$’)
	ܩ̣̣̣̣̣̣̣̣̣̣	shift + ‘h’

6 Punctuation and other marks

The Syriac keyboard maps most usual punctuation marks onto the keyboard’s punctuation keys (see Table 5). Some similar looking punctuation marks map to the similar English keys: for example, the full-stop, question mark and exclamation mark (these latter only used in modern writing). The comma, forward-slash, hash and tilde map to other common punctuation marks, and the less-than and greater-than signs map to the modern Syriac comma and semicolon. More unusual punctuation (including the Harklean *Obelus*, *Metobelus* and *Asteriscus*) is found by typing ‘AltGr’ and the numeral keys.

Using the ‘shift’ key produces some other characters. With ‘5’ (‘%’) and ‘6’ (‘^’) one gets two differently styled crosses. On ‘8’ (‘*’) and ‘-’ (‘_’) are a pair of guillemets. As with the keyboard markings, parentheses, square brackets and the plus sign are typed in the same way.

⁸The West-Syriac abbreviation mark does not display correctly in this document.

Table 5: Punctuation and other marks

Name	Mark	Keyboard input
End paragraph	✦ ܘܘܘܘ	‘,’
End clause (Pāsóqā)	. ܘܘܘܘ	‘.’
Right-skewed colon (‘Eláyā)	. ܘܘܘܘ	‘/’
Left-skewed colon (Taḥtáyā)	. ܘܘܘܘ	‘#’
Colon (Šwáyyā/Záugā)	: ܘܘܘܘ	~
Raised stop (‘Ešyánā)	. ܘܘܘܘ	AltGr + ‘1’
Lowered stop (Sámkā)	. ܘܘܘܘ	AltGr + ‘2’
Raised colon (Táksā/Záugā ‘eláyā)	: ܘܘܘܘ	AltGr + ‘3’
Lowered colon	: ܘܘܘܘ	AltGr + ‘4’ (‘€’)
Horizontal colon (Ráḥtā)	.. ܘܘܘܘ	AltGr + ‘5’
Raised left-skewed colon (Táksā)	. ܘܘܘܘ	AltGr + ‘6’
Lowered right-skewed colon (Mšaḥlānā)	. ܘܘܘܘ	AltGr + ‘7’
Comma	, ܘܘܘܘ	shift + ‘,’ (‘<’)
Semicolon	; ܘܘܘܘ	shift + ‘.’ (‘>’)
Question mark	? ܘܘܘܘ	shift + ‘/’ (‘?’)
Exclamation mark	! ܘܘܘܘ	shift + ‘1’ (‘!’)
Guillemets	« ܘܘܘܘ »	shift + ‘8’ (‘*’) & + ‘-’ (‘_’)
Critical brackets ⁹	⌈ ܘܘܘܘ ⌋	AltGr + ‘=’ & + ‘-’
W Syriac cross	✠	shift + ‘5’ (‘%’)
E Syriac cross	✡	shift + ‘6’ (‘^’)
Harklean apparatus	- / \ / ✖	AltGr + ‘8’ / + ‘9’ / + ‘0’

7 Writing Garšúni

Some aspects of using the Syriac phonetic keyboard to type Garšúni have been discussed above (see page 2), including the additional letters Ġámal and Zēṭ (ܘܘܘܘ , ܘܘܘܘ), and Dáḏē and Hámza^h on the line (ܘܘܘܘ , ܘܘܘܘ). In addition to these, the keyboard provides bindings for the Garšúni/Arabic vowels and other marks (see Table 6).¹⁰

The Garšúni/Arabic vowels are typed using ‘AltGr’ and the letters ‘q’, ‘a’ and ‘e’ for Fátḥa^h, Kásra^h and Dámma^h respectively. The key to the right of each of these produces the respective Tanwín ending. The long vowel mark Mádda^h is bound to the ‘t’, raised and lower Hamazát are on ‘y’ and ‘g’ and the raised ʾÁlif is on ‘h’.¹¹ The signs Sukún and Šádda^h are bound to the keys ‘z’¹² and the back-tick.

⁹The critical brackets are not supported by any of the *Meltho* fonts.

¹⁰Although the *Meltho* fonts provide so-called ‘Indic’ numerals, the Syriac keyboard does not provide key-bindings for them. One has to use an Arabic keyboard or paste them from a character palette. The X_YT_EX package *Polyglossia* can be used with the option `numerals=eastern` to use Indic numerals and

Table 6: Vowels and Hamazát for Garšúni

Name	Vowel or Hamazát	Keyboard input
Fáṯḥa ^h (a)	ܐ	AltGr + ‘q’
Fáṯḥa ^h tanwín (an)	ܐܢ	AltGr + ‘w’
Ḍámma ^h (u)	ܘ	AltGr + ‘e’
Ḍámma ^h tanwín (un)	ܘܢ	AltGr + ‘r’
Mádda ^h (ā)	ܐܐ	AltGr + ‘t’
Raised Hámza ^h	ܐ̇	AltGr + ‘y’
Kásra ^h (i)	ܐܝ	AltGr + ‘a’
Kásra ^h tanwín (in)	ܐܝܢ	AltGr + ‘s’
Lowered Hámza ^h	ܐ̣	AltGr + ‘g’
Raised ʾÁlif ¹³	ܐ̣ܐ	AltGr + ‘h’
Sukún	ܐ̣ܘ	AltGr + ‘z’
Šádda ^h	ܐ̣ܐ̣	AltGr + ‘`’

8 Control characters

The Syriac phonetic keyboard is capable of producing four control characters. Control characters do not print but produce additional effects. The first control character to discuss is the *zero-width joiner*, an invisible mark that cheats a Syriac letter into thinking that there is a preceding or following letter to which it should join. This control character has zero width, so it does not create extra white space after the printed character. The zero-width joiner is produced by typing AltGr + ‘c’.¹⁴ For example, the Syriac letter Nun, when printed alone, displays as ܢ. However, if we type the zero-width joiner after the Nun, we get ܢ⸗, and, if we type one before, we get ⸗ܢ. Note that, as the zero-width joiner pretends to be the next letter, any vowel or diacritic should be entered before the control character. So, the key sequence ‘n’, shift + ‘q’, AltGr + ‘c’ gives the correct ܢܐ, whereas the ‘n’, AltGr + ‘c’, shift + ‘q’ gives the wrong form, ܢܐ̣.

To complement the zero-width joiner, the Syriac keyboard also has a *zero-width non-joiner*, which can be typed using AltGr + ‘v’.¹⁵ This works in exactly the same way as its sibling, but it cheats the previous letter into thinking it is final. That is, it breaks the join between letters. This is useful for reproducing some older texts

provides the macro `abjadsyriac` for entering numbers as Syriac letters: 2008 ܡܘܨܘܚܐ.

¹¹There should also be a key-binding for the Hámza^h I-Waṣl, but I cannot find it on my UK keyboard!

¹²As the UK keyboard has an additional key to the left of ‘z’ as compared to the US keyboard. Therefore, the ‘AltGr’ combinations on the US keyboard are one key to the right of their UK equivalents. This puts the US key-binding for Sukún on ‘x’ instead of ‘z’.

¹³The raised ʾÁlif does not display correctly in this document.

¹⁴On the US keyboard, it is Alt + Ctrl + ‘v’, as the UK keyboard has an extra key, the backslash, to the left of the ‘z’.

¹⁵Again, US keyboards have this at Alt + Ctrl + ‘b’.

in which some letters unexpectedly do not join to the left. For example, the word *nsab* is usually written ܢܫܒ, but old inscriptions have ܢܫܒ instead. In this case, a zero-width non-joiner has been typed between the letters Sémkaṭ and Bēt. Again, vowels and diacritics must be typed before either zero-width control character. The zero-width non-joiner is also useful for breaking special ligatures defined in the font. Thus, in Sérṭo, the ʾĀlaṗ-Lāmaḏ ligature, ܐܠܦܠܡܐܘܕ, is automatic, and can only be broken using a zero-width non-joiner, producing ܐܠܦܠܡܐܘܕ.

In some contexts, it might be important to make explicit that the text should run from right to left, so the Syriac keyboard has a right-to-left marker on AltGr + ‘n’.¹⁶ To complement this, there is a left-to-right marker on AltGr + ‘b’.¹⁷

A Unicode

Table 7: Syriac Unicode block – 1st nibble – 0700–070F

Unicode encoding	Character	Official description
U+0700	⸌	Syriac end of paragraph
U+0701	⸍	Syriac supralinear full stop
U+0702	⸎	Syriac sublinear full stop
U+0703	⸏	Syriac supralinear colon
U+0704	⸐	Syriac sublinear colon
U+0705	⸑	Syriac horizontal colon
U+0706	⸒	Syriac colon skewed left
U+0707	⸓	Syriac colon skewed right
U+0708	⸔	Syriac supralinear colon skewed left
U+0709	⸕	Syriac sublinear colon skewed right
U+070A	⸖	Syriac contraction
U+070B	⸗	Syriac Harklean obelus
U+070C	⸘	Syriac Harklean metobelus
U+070D	⸙	Syriac Harklean asteriscus
U+070E		<i>unassigned</i>
U+070F		Syriac abbreviation mark

¹⁶US keyboards have this on Alt + Ctrl + ‘m’.

¹⁷US keyboards have this on Alt + Ctrl + ‘n’.

Table 8: Syriac Unicode block – 2nd nibble – 0710–071F

Unicode encoding	Character	Official description
U+0710	ܐ	Syriac letter Alaph
U+0711	ܐ̇	Syriac letter superscript Alaph
U+0712	ܒ	Syriac letter Beth
U+0713	ܓ	Syriac letter Gamal
U+0714	ܓ̈	Syriac letter Gamal Garshuni
U+0715	ܘܢܐ	Syriac letter Dalath
U+0716	ܘܢܐ̇	Syriac letter dotless Dalath Rish
U+0717	ܗ	Syriac letter He
U+0718	ܘܘܐ	Syriac letter Waw
U+0719	ܘܘܐ̇	Syriac letter Zain
U+071A	ܗ̈	Syriac letter Heth
U+071B	ܚ	Syriac letter Teth
U+071C	ܚ̈	Syriac letter Teth Garshuni
U+071D	ܘܘܘܐ̇	Syriac letter Yudh
U+071E	ܘܘܘܐ̇ܐ̇	Syriac letter Yudh He
U+071F	ܘܘܘܐ̇ܐ̇ܐ̇ܐ̇	Syriac letter Kaph

Table 9: Syriac Unicode block – 3rd nibble – 0720–072F

Unicode encoding	Character	Official description
U+0720	ܠ	Syriac letter Lamadh
U+0721	ܡ	Syriac letter Mim
U+0722	ܢ	Syriac letter Nun
U+0723	ܢ̈	Syriac letter Semkath
U+0724	ܢ̈ܐ	Syriac letter final Semkath
U+0725	ܐ̈	Syriac letter E
U+0726	ܐ̈ܐ̈	Syriac letter Pe
U+0727	ܐ̈ܐ̈ܐ̈	Syriac letter reversed Pe
U+0728	ܘܘܘܐ̈	Syriac letter Sadhe
U+0729	ܘܘܘܐ̈ܐ̈	Syriac letter Qaph
U+072A	ܘܘܘܐ̈ܐ̈ܐ̈	Syriac letter Rish
U+072B	ܘܘܘܐ̈ܐ̈ܐ̈ܐ̈	Syriac letter Shin
U+072C	ܘܘܘܐ̈ܐ̈ܐ̈ܐ̈ܐ̈	Syriac letter Taw
U+072D	ܘܘܘܐ̈ܐ̈ܐ̈ܐ̈ܐ̈ܐ̈	Syriac letter Persian Bbeth
U+072E	ܘܘܘܐ̈ܐ̈ܐ̈ܐ̈ܐ̈ܐ̈ܐ̈	Syriac letter Persian Ghamal
U+072F	ܘܘܘܐ̈ܐ̈ܐ̈ܐ̈ܐ̈ܐ̈ܐ̈ܐ̈	Syriac letter Persian Dhalath

