# Quick Reference for Writing with Sonova UC version 1.1

This document will show how to construct some of the symbols used in Aural Sonology. The new Keyboard Layouts distributed with Sonova UC version 1.1 must be installed and activated before the keys mentioned actually will produce the right symbols.

Key strokes corresponds to those printed on a U.S. Keyboard with the characters printed as follows:
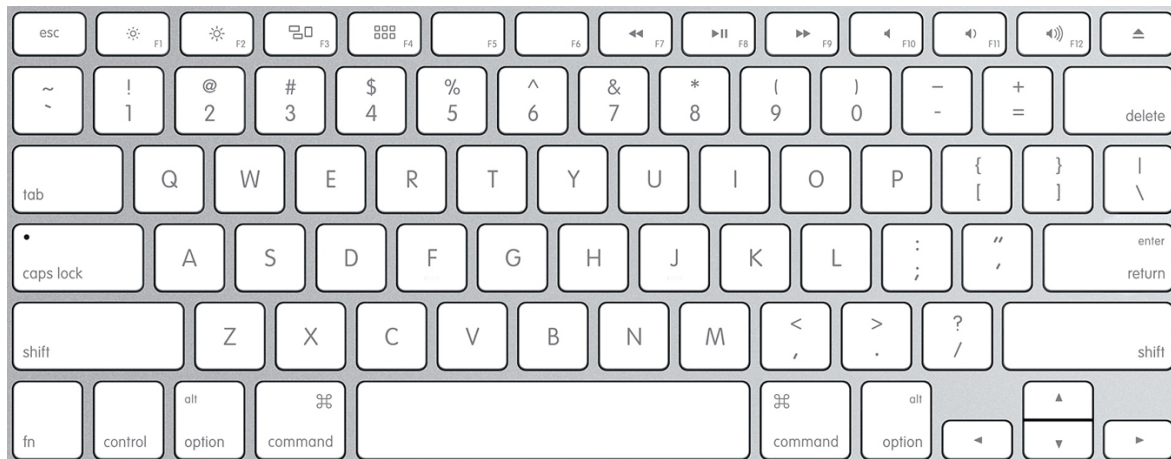
Special signs used in the tables

⇧ = shift key
⌥ = alt/option key
↵ = return key
␣ = space key

For extra clarity the shift key symbol will be shown also alongside uppercase letters.

Found a mistake in this document? Please report to: info@spectromusic.com

Using Keyboard Layout 'Sonova Spectromorph'
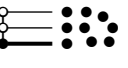
Basic symbols

Sign	Keys	Unicode
● ◆ ■	q ↵ a ↵ z	E010,↵,E011,↵,E012
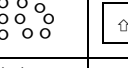
Prolongations

Sign	Keys	Unicode
●———	q - - -	E010,E070,E070,E070
●- - -	q = = =	E010,E071,E071,E071
[⦂	[␣ ␣ ␣] ; -	E084,E000,E000,E000,E085,E088,E070
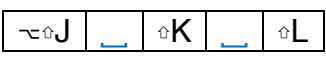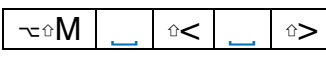
Pitched/Dystonic/Complex symbols are placed on different rows on the keyboard

Sign	Keys	Unicode
●	q ␣ w e r ⇧W ⇧E ⇧R ␣ ␣ ␣ t y u	E010,E000,E016,E02F, E030,E036,E037,E038, E000,E000,E000,E042, E043,E044
◆	a ␣ s d f ⇧S ⇧D ⇧F ␣ ␣ ␣ g h j	E011,E000,E019,E031, E032,E03C,E03D,E03E, E000,E000,E000E045, E046,E047
■	z ␣ x c v ⇧X ⇧C ⇧V ␣ ␣ ␣ b n m	E012,E000,E01C,E033, E034,E03F,E040,E041, E000,E000,E000,E048, E049,E04A
	w ␣ i ␣ o	E016,E017,E018
	s ␣ k ␣ l	E019,E01A,E01B
	x ␣ , ␣ .	E01C,E01D,E01E
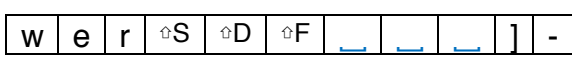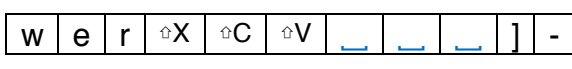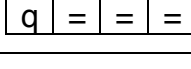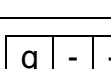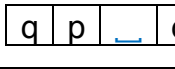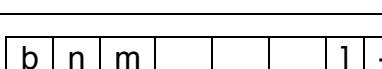
Pressing the shift key will give an open symbol in these cases:

Sign	Keys	Unicode
○	⇧Q ␣ ⇧T ⇧Y ⇧U	E013,E000,E04B,E04C,E04D
◇	⇧A ␣ ⇧G ⇧H ⇧J	E014,E000,E04E,E04F,E050
□	⇧Z ␣ ⇧B ⇧N ⇧M	E015,E000,E051,E052,E053

Shift + w will give a vacillating line, but there is an option close to the open symbols:

Sign	Keys	Unicode
○○ ○ ○	⌐⇧U ␣ ⇧I ␣ ⇧O	E01F,E000,E020,E000,E021
◇◇ ◇ ◇	⌐⇧J ␣ ⇧K ␣ ⇧L	E022,E000,E023,E000,E024
□□ □ □	⌐⇧M ␣ ⇧< ␣ ⇧>	E025,E000,E026,E000,E027

Typology sound-objects

Sign	Keys	Unicode
	w e r ⇧2 ⇧3 ⇧4 ␣ ␣ ␣] -	E016,E02F,E030, E039,E03A,E03B, E000,E000,E000, E085,E070
	w e r ⇧W ⇧E ⇧R ␣ ␣ ␣] -	E016,E02F,E030, E039,E03A,E03B, E000,E000,E000, E085,E070
	w e r ⇧S ⇧D ⇧F ␣ ␣ ␣] -	E016,E02F,E030, E039,E03A,E03B, E000,E000,E000, E085,E070
	w e r ⇧X ⇧C ⇧V ␣ ␣ ␣] -	E016,E02F,E030, E03F,E040,E041, E000,E000,E000, E085,E070
	w ` r W R ␣ ␣ ␣] -	E016,E035,E030, E039,E03B, E000,E000,E000, E085,E070
●---	q = = =	E010, E071, E071, E071
●	q ⇧8	E010,E080
●—	q - - -	E010, E070,E070,E070
●⌣	q p ␣ o ␣] -	E010,E094, E000,E018, E000,E085,E070
	t y u ␣ ␣ ␣] -	E042,E043,E044, E000,E000,E000, E085,E0709
	g h j ␣ ␣ ␣] -	E045,E046,E047, E000,E000,E000, E085,E0709
	b n m ␣ ␣ ␣] -	E048,E049,E04A, E000,E000,E000, E085,E0709

Gliding sound-objects

Sign	Keys	Unicode
✹	`q` `⌐/`	E010, E054
✹	`q` `⌐\`	E010, E055
●´	`q` `⇧/`	E010, E07A
●ˎ	`q` `⇧\`	E010, E07B
◇⟩Y	`⇧A` `p` `␣` `⇧L` `␣` `]` `/`	E014,E094,E000, E024,E000,E085,E074
□⟩λ	`⇧Z` `p` `␣` `⇧>` `␣` `]` `\`	E015,E094,E000, E027,E000,E085,E075
⋮⋮⊦	`t` `y` `u` `⇧5` `⇧6` `⇧7` `␣` `␣` `␣` `]` `-`	E042,E043,E044, E05C,E05D,E05E, E000,E000,E000, E085,E070
⋰⋰⊦	`⇧G` `⇧H` `⇧J` `⇧5` `⇧6` `⇧7` `␣` `␣` `␣` `]` `;` `-`	E04E,E04F,E050, E05C,E05D,E05E, E000,E000,E000, E085,E088,E070

Spaces

Half space width	`⌐``	E002
1/10th space width	`⌐␣`	E001

By using fractional spaces we can make custom objects.

Example: The composite object is designed to fill 3 spaces before the bracket. The first sign (●) takes up 1 space and we'll use a full space between the last symbol and the bracket. The halfsize circle signs has width = 0, so doesn't advance the insertion point. This leaves 1 space that can be broken down into fractions for finer positioning. Various combinations are possible:

Sign	Keys	Unicode
●⟩⊦	`q` `p` `⌐`` `o` `⌐`` `i` `␣` `]` `-`	E010,E094,E002, E018,E002,E017, E000,E085,E070
●⟩⊦	`q` `0` + 3× `⌐␣` + `i` + 7× `⌐␣` + `w` `␣` `]` `-`	E010,E095, (3×E001),E017, (7×E001),E016, E000,E085,E070
●⟩⊦	`q` `p` + 1× `⌐␣` + `w` + 4× `⌐␣` + `o` `⌐`` `i` `␣` `]` `-`	E010,E094,E001, E016,(4×E001), E018,E002,E017, E000,E085,E070

Onsets

Sign	Keys	Unicode
⬤	⇧] q ↵	E0A0,E010
⬤	⇧; q ↵	E0A1,E010
⬤	⇧' q ↵	E0A2,E010
⬤	⇧= q ↵	E0A3,E010
⬤	⇧P q ↵	E0A4,E010
⬤	⇧[q ↵	E0A5,E010

These keys are difficult to find on non U.S. keyboards, they are clustered at the top right side of the keyboard:
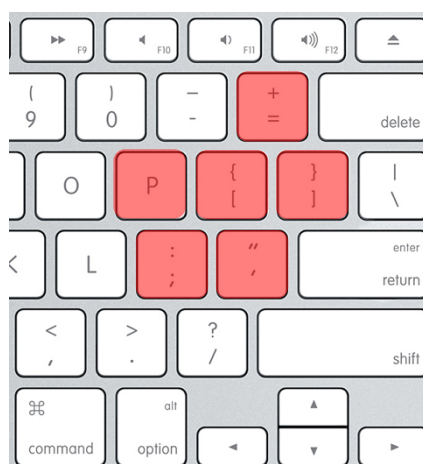
Use the alt/option key instead of the shift key to produce the onset-symbols for the larger symbols.

For spectral brightness of the prolongation, always use the small version

Sign	Keys	Unicode
⬤─┬──	⇧" 1 + q - - + ⇧" 5 - -	E0A2,E0B1, E010,E070,E070, E0A2,E0B5, E070,E070
⦂⦂⦂⦂├┬──	⌥" ⌥1 + t y u ␣ ␣ ␣] ; - - + ⇧" 5 - -	E0A8,E0B0, E042,E043,E044, E000,E000,E000, E085,E088, E070,E070, E0A2,E0B5, E070,E070

5

Symbols using multiple lines

The use of the terms *doublesize* and *halfsize* in the *Sonova UC Unicode Glyph List* needs some clarification.

• Halfsize just means that the size of the sign appears as reduced to 50% compared to a standard sign. No extra action is needed when using these.

• Doublesize means that the size of the sign is 200% compared to a standard sign. However, they have a special usage; they are actually meant to be *displayed* at the same size as standard size. *Because the sign is double-sized this enables the font-size to be halved.* These signs are typically used for writing on multiple lines and their purpose is to reduce the vertical space between lines.

Examples:

First some standard size symbols at **16pt** font size on one line, for comparison.

Standard size symbols are possible to connect across multiple lines, but they will tend to look a bit "stretched out" as can be seen below using standard size symbols at **16pt** font size, on three lines.

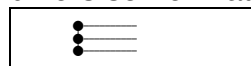| Sign	Keys								Unicode
	⌐⇧k	q		+	5×	-	+	↵	E091,E010,(5×E070),↵, E092,E091,E010,(5×E070),↵, E092,E010,(5×E070)
	⌐⇧o	⌐⇧k	q	+	5×	-	+	↵	
	⌐⇧o	q		+	5×	-			

Symbols used: E010: pitched, E091: connection beam under, E092: connection beam over, E070: prolongation sustained.

The following example instead uses doublesize symbols at **8pt** font size, on three lines (as they are not included in any keylayout, the middle column does not represent keys, but rather actual symbols).

Sign	Individual Signs							Unicode
	'	●	+	10×	-	+	↵	E093,E028,(10×E073),↵, E093,E028,(10×E073),↵, E028,(10×E073)
	'	●	+	10×	-	+	↵	
		●	+	10×	-			

Symbols used: E093: connection beam under, doublesize, E028: pitched, doublesize, E073: prolongation, double thickness

This is what the above example looks like using at **4pt** font size, on three lines. It differs somewhat from a vacillating sound-object and are not meant to replace those.

Using Keyboard Layout 'Sonova Fields'

Time-fields

Sign	Keys	Unicode
⌊ _ _ _ ⌋	9 0 0 0 0 9	E300,E301,E301, E301,E301,E300
⌊_____⌋	9 - - - - 9	E300,E302,E302, E302,E302,E300
⊢___⊣	9 = - - = 9	E300,E303,E302, E302,E303,E300
⊨__⊨	9] - -] 9	E300,E304,E302, E302,E304,E300

Hinged Positioning

Sign	Keys	Unicode
⌊_⊔_⊔⊢	9 - - ⇧9 ⇧- - 9 ⇧- ⎵ ⇧- ⎵ 9 ⇧- - ⇧9 -	E300,E302,E302, E310,E312, E302,E300, E312,E000, E312,E000 E300,E312,E302, E312,E302

Dynamic forms

In the Acousmographe the triangle and square shapes of dynamic form are made with shapes. Sonova is not used because when expanding characters of a font (e.g. triangles) their linewidths tend to look distorted. However, in cases where scaling to absolute time isn't required, the Sonova font can be very useful.

To give as much flexibility as possible in combining shapes, many of the dynamic form symbols have zero width and need spaces to advance the cursor to the next insertion point.

Sign	Keys	Unicode
(triangle/trapezoid shape)	q + 4× ⎵ + w w e + 4× ⎵	E35A,(4×E000), E353,E353,E35B, (4×E000)
(crossed box shape)	` d + 4× w + e ⌐a	E350,E359, (4× E353), E35B,E35E

Secondary direction is added before the symbol

Sign	Keys	Unicode
(box with diagonal)	t + r w w w w r	E36A,E350,E353, E353,E353,E353, E350
(box with diagonal)	t + ⌐w	E36A,E356
(box with diagonal)	5 + 4 2 2 2 2 4	E366,E350,E354, E354,E354,E354, E350
(box with diagonal)	t + ⌐2	E36A,E357

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
Using Keyboard Layout 'Sonova Layers'

The signs used inside layers are half-width to enable detailed notation of intensity of profile. To advance the cursor after compositing layers use the half-space key: ⌐`

Layer width and profile intensity

Sign	Keys	Unicode
⊢	2 - - - -	E220,E260, E260,E260,E260
⊨	2 g h ⌐` ⇧G ⇧H ⌐` g h ⌐` 2 -	E220,E223,E224, E002,E227,E228, E002,E223,E224, E002,E220,E260
⊟	3 a s d ⌐` ⇧A ⇧S ⇧D ⌐` a s d ⌐` 3 -	E200,E201,E202, E203,E002,E204, E205,E206, E002, E201,E202,E203, E002,E200,E260
⊟	4 f g h j ⌐` ⇧F ⇧G ⇧H ⇧J ⌐` f g h j ⌐` 4 -	E221,E222,E223, E224,E225,E002, E226,E227,E228, E229,E002,E222, E223,E224,E225, E002,E221, E260

Layer Functions

Sign	Keys	Unicode
Ⓕ⊢	⌐f ⌐o ⌐` 2 - -	E280,E284,E002 E220,E260,E260
Ⓜφ⊢	⌐m ⌐o ⌐` ⌐q ⌐` 2 - -	E281,E284,E002 E28B,E002, E220,E260,E260
Ⓑ∫⊢	⌐b ⌐o ⌐␣ ⌐␣ ⌐⇧] 2 - -	E282,E284,E002, E001,E001,E28A, E220,E260,E260

Entry- and ending-mode

Sign	Keys	Unicode
⊢	2 ⌐⇧z - - -	E220,E23C, E260,E260,E260
⊢	3 ⌐⇧x - - -	E200,E215, E260,E260,E260
⊢	4 ⌐⇧c - - -	E221,E240, E260,E260,E260

Using Keyboard Layout 'Sonova Form'

Formal functions

The symbols for formal function all have zero width, the insertion point cursor will advance when using the upper prolongation line. A prolongation line under the symbols needs a space to advance. At least 2 prolongation lines need to be used between the 'complete' forms for them not to overlap. Adding signs between them should use an extra line *after* the added sign.

Sign	Keys													Unicode
◇=◇	e	-	u	-	-	e								E406,E431,E470, E431,E431,E406
◇=◇	e	⇧-	⎵	u	⇧-	⎵	⇧-	⎵	e					E406,E441,E000, E470,E441,E000, E441,E000,E406

Prolongation

For ease of use some symbols can be entered with more than one key. e.g. the key '-' and '2' will give the same prolongation line sign. Additional prolongation types are located at the number keys, e.g. the fragment. Pressing shift gives the corresponding type under the symbol (at zero width, so these need an extra space key after each symbol).

Sign	Keys													Unicode
⏀|˙|˙|þ	q	2	1	4	1	5	1	⎵	z	6				E400,E431, E430,E433, E430,E434, E430,E000, E402,E435
⏀|.|.|þ	q	⇧2	⎵	⇧1	⇧4	⎵	⇧1	⇧5	⎵	⇧1	⎵	z	⇧6	E400,E441,E000, E430,E443,E000, E430,E444,E000, E430,E000, E402,E445

Use of abbreviations

To conserve space, especially in the Acousmographe we have at times made use of abbreviations. The vertical line when used without a formal function under it is intended to mean repetition of the previous sign.

Alternating between high and low voice:	þ|þ|þ (alternating high/low)	Repetition of element:	þ|||

9

Hierarchies

To create connected groups we can use fonts at half the point size, as the reduced line height tend to look better for this purpose. Four prolongation lines at regular point-size needs to be balanced by twice that at half-point-size. Reducing the font size will also reduce the thickness of the lines, so instead of using the normal prolongation we can use the *doublesize* symbols that already compensate for this reduction.

Sign	Keys						Unicode
	8pt size	\ +	8×] +	\ +		↵	E450,(8×E451),E450,↵ E406,(2×E431), E406,(2×E431), E406
	16pt size	e +	2× - +	e +	2× - +	e	

Transformation

Sign	Keys	Unicode
	m / / / ; ' / / / .	E491, E492,E492,E492, E499,E493, E492,E492,E492, E495