

Character Set

Character Table

一	𠄎 𠄏 𠄐	𠄑 𠄒 𠄓	𠄔 𠄕 𠄖	𠄗 𠄘 𠄙	𠄚 𠄛 𠄜 𠄝 𠄞 𠄟	𠄠 𠄡	𠄢 𠄣
二	𠄤 𠄥 𠄦	𠄧 𠄨 𠄩	𠄪 𠄫 𠄬	𠄭 𠄮 𠄯	𠄰 𠄱 𠄲 𠄳	𠄴 𠄵	𠄶 𠄷
三	𠄸 𠄹 𠄺	𠄻 𠄼 𠄽	𠄾 𠄿 𠅀	𠅁 𠅂 𠅃	𠅄 𠅅 𠅆 𠅇	𠅈 𠅉	𠅊 𠅋
𠅌			𠅍		𠅎 𠅏 𠅐 𠅑	𠅒 𠅓	
𠅔	𠅕 𠅖 𠅗	𠅘 𠅙 𠅚	𠅛 𠅜 𠅝	𠅞 𠅟 𠅠	𠅡 𠅢 𠅣 𠅤	𠅥	
𠅦	𠅧 𠅨 𠅩	𠅪 𠅫 𠅬	𠅭 𠅮 𠅯	𠅰 𠅱 𠅲 𠅳	𠅴 𠅵 𠅶 𠅷		
𠅹	𠅺 𠅻 𠅼	𠅽 𠅾 𠅿	𠆀 𠆁 𠆂	𠆃 𠆄 𠆅			
𠆇							

1. Numbers [8 characters]
2. Vowels [$4 \times 9 + 1 = 37$ characters]
3. Regular consonants [$6 \times 4 + 2 = 26$ characters]
4. Adaptive consonants [$4 \times 2 + 1 = 9$ characters]
5. Irregular consonants [$3 \times 2 = 6$ characters]

A space denotes an **extra short** \emptyset if and only if it stands between two words of the same sentence, and it is phonetically surrounded by non-identical consonants from both sides. Otherwise, a space is a **null phoneme**.

Group 1 – Numbers

Voorhaal
uses **octal**
numeral
system.

voorhaal	—	Ⅱ	Ⅲ	Ⅳ	Ⅴ	Ⅵ	Ⅶ	Ⅷ	Ⅸ
value	0	1	2	3	4	5	6	7	
unicode	0	1	2	3	4	5	6	7	

Group 2 – Vowels

Basic Vowels

voorhaal	ⱱ	Ⱳ	ⱳ	ⱴ	Ⱶ	ⱶ	ⱷ	ⱸ	ⱹ
phoneme	i	e	ɛ	a	ɑ	o	u	y	ø
unicode	i	ë	e	ä	a	o	u	ü	ö

Long Vowels

In voorhaal script, the inner dot diacritic is replaced by a thinner, vertical line to mark long vowels. The transcription is doubling or capitalizing the character corresponding to the basic vowel (this transcription rule applies to any kind of phoneme). I.e. ⱱ marks the 'i:' phoneme, represented by the 'ii' or the 'I' unicode characters.

Voiced Vowels

A horizontal bar diacritic marks the voiced nature. The corresponding phoneme itself does not change; they shift regular (by default voiceless) consonants to voiced until the next vowel or the end of the word, whichever comes first. Transcriptions replace diaereses with acute diacritics, and add grave in the rest of the cases. A syllable starts with a vowel, and ends before another vowel, or the end of the word. Voiced vowels can only stand in syllables containing regular consonants.

voorhaal	ⱱ̄	Ⱳ̄
phoneme	i	e
unicode	ì	é

Long Voiced Vowels

The combination of being long and voiced also exists for every vowel.

ⱱ̄̄	i:	ii/Ì
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Voicing Mark / Separator

The voicing mark is a vowel that carries the same contextual effect as voiced vowels, however, its corresponding phoneme is the null phoneme. It can only stand at the beginning of words.

Separators (full stops) are written in the same form as voicing marks, but they are always surrounded by spaces. The last sentence in a paragraph does not need a separator on its end.

Group 3 – Regular Consonants

Discrete Regular Consonants (Plosives & Affricates):

voorhaal	𐌲	𐌳	𐌴	𐌵	𐌶	𐌷
phoneme	p / b	t̥ / d̥	ts̥ / dz̥	tʃ̥ / dʒ̥	c̥ / ɟ̥	k̥ / g̥
unicode	p	t	c	q	y	k

Delayed Regular Consonants (Long Plosives & Long Affricates):

A doubled vertical line diacritic on the top right of the character denotes a delay effect, lengthening the original phoneme. I.e. 𐌲̥̥ - p̥̥.

Continuous Regular Consonants (Fricatives Excluding Glottal):

voorhaal	𐌸	𐌹	𐌺	𐌻	𐌽	𐌾
phoneme	ɸ / β	θ̥ / ð̥	s̥ / z̥	ʃ̥ / ʒ̥	ç̥ / ʝ̥	x̥ / ɣ̥
unicode	f	d	s	x	j	g

Sustained Regular Consonants (Long Fricatives):

A circle diacritic marks long fricatives, i.e. 𐌲̥̥̥ - f̥̥̥.

β:

𐌲 (or 𐌲̥̥̥ for its longer variant) also corresponds to the phoneme 'β'. With this exception, all the regular consonants are voiceless by default. 𐌲 is strictly voiced.

If a syllable only contains 'β' from the regular consonants, the correct form of writing is using the voiceless form of the vowel, and 𐌲̥̥̥.

In a syllable containing a 𐌲̥̥̥, the vowel must be voiceless, and no other regular consonants can stand after 𐌲̥̥̥.

Group 4 – Adaptive Consonants (Nasals)

voorhaal (short / long)	𐌵 / 𐌶	𐌷 / 𐌸	𐌹 / 𐌺	𐌻 / 𐌼	𐌽
phoneme	m / m:	n / n:	ɲ / ɲ:	ŋ / ŋ:	m, n, ɲ, ŋ
unicode	m	n	ñ	w	'

Of all the nasals, only 𐌽 can, and must stand before a regular consonant, adapting to its place of articulation. It does not have a long variant.

character after 𐌽	𐌾	𐌿	𐍀	𐍁	𐍂	𐍃
phoneme marked by 𐌽	m	n	ɲ	ŋ	ɲ	ŋ

This table applies for the continuous variations of the regular consonants as well.

Group 5 – Irregular Consonants

voorhaal (short / long)	𐍄 / 𐍅	𐍆 / 𐍇	𐍈 / 𐍉
phoneme	r / r:	l / l:	h / h:
unicode	r	l	h

Installing and Testing (Win10)

1. Download the "voorhaal.zip" archive, and extract.
 2. Inside the extracted folder (keyboard_layout), execute "setup.exe" and install the keyboard layout. (Do the same with keyboard_layout_us, if the bottom row of your physical keyboard only has 10 buttons.)
 3. Open the font file outside the folder ("font.otf") and press "install".
 4. Press Win+Space, and the OS should respond with highlighting the newly added alternative keyboard on a menu appearing on the right. (Press Win+Space again to switch between the standard keyboard layout and voorhaal any time.)
 5. Open Word, and under the fonts, "voorhaal" should appear in its native spelling. ("スゴシハル") [NOTE: for consistency, some autocorrect features need to be turned off.]
 6. Start typing, and enjoy!
- +1.** For a nicer outlook when switching keyboard layouts, the description can be changed. After pressing Win+R, then typing "regedit" and pressing OK, go to Computer\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Keyboard Layouts, then search for the added keyboard layout (probably the last one), that should have "voorlang.dll" for its "Layout File" field. When found, select "Layout Display Name" and delete. For its effects, a pc restart is needed.

++1. The files should work on **Win11, Linux and Mac** as well, however, it is not tested yet.

Keyboard Layout

ズコヰΠ㐀 (Short variations: default)

ー	Ⅱ	ㄣ	ㄥ	ㄦ	ㄨ	ㄩ	ㄨ	ㄩ	ㄨ	ㄩ	ㄨ	ㄩ
	ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅆ	ㅈ	ㅊ	ㅋ	ㆁ
	ㄷ	ㄸ	ㄷ	ㄹ	ㅁ	ㅂ	ㅅ	ㅆ	ㅈ	ㅊ	ㅋ	ㆁ
ㄴ	ㄷ	ㄸ	ㄹ	ㅁ	ㅂ	ㅂ	ㅅ	ㅆ	ㅈ	ㅊ	ㅊ	ㅊ

ズコヰΠ㐀 (Long variations: shift or doubling)

(ㄴ)	(ㄴ)								ㄴ	ㄴ	ㄴ	ㄴ
	ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ	ㅂ	ㅅ	ㅆ	ㅈ	ㅊ	ㆁ
	ㄷ	ㄸ	ㄷ	ㄹ	ㅁ	ㅂ	ㅂ	ㅅ	ㅆ	ㅈ	ㅊ	ㆁ
ㄴ	ㄷ	ㄸ	ㄹ	ㅁ	ㅂ	ㅂ		ㅅ	ㅆ	ㅈ	ㅊ	ㆁ

Unicode (Short variations: default)

0	1	2	3	4	5	6	7	'	m	n	ñ	w
	e	ä	a	è	á	à	p	t	c	q	y	k
	ë	ö	o	é	ó	ò	f	d	s	x	j	g
i	ü	u	ì	ú	ù	_	v	r	l	h		

Unicode (Long variations: shift or doubling)

(i)	(l)								M	N	Ñ	W
	E	Ä	A	È	Á	À	P	T	C	Q	Y	K
	Ë	Ö	O	É	Ó	Ò	F	D	S	X	J	G
I	Ü	U	Ì	Ú	Ù		V	R	L	H		

US keyboard layout explanation: The 'i' and 'l' characters denoted in parentheses are only needed for US keyboards, and are not present in the standard layout, as the bottom left buttons are missing on US keyboards. For convenience, they only work with shift, not by doubling.