**The Hebrew Alphabet**

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# Transliteration and Unicode Coding

***Transliterated vowels with length markings (applicable to Hebrew, Greek, Latin...)***

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  | e.g. for |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| basic | A | E | I | O | U | Y | a | e | i | o | u | y | bubfbibeba |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| breve | Ă | Ĕ | Ĭ | Ŏ | Ŭ | Y̆ | ă | ĕ | ĭ | ŏ | ŭ | y̆ | b/bvbj |
| *unicode* | 0102 | 0114 | 012C | 014E | 016C | +0306 | 0103 | 0115 | 012D | 014F | 016D | +0306 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| macron | Ā | Ē | Ī | Ō | Ū | Ȳ | ā | ē | ī | ō | ū | ȳ | |buob|bib'bf |
| *unicode* | 0100 | 0112 | 012A | 014C | 016A | +0304 | 0101 | 0113 | 012B | 014D | 016B | +0304 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| circumflex | Â | Ê | Î | Ô | Û | Ŷ | â | ê | î | ô | û | ŷ | ybi yb' hbf |
| *unicode* | 00C2 | 00CA | 00CE | 00D4 | 00DB | 0176 | 00E2 | 00EA | 00EE | 00F4 | 00FB | 0177 | w3b Gwb |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| grave |  | È |  |  |  |  |  | è |  |  |  |  | ybe |
| *unicode* |  | 00C8 |  |  |  |  |  | 00E8 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| shewa |  | e |  |  |  |  |  |  |  |  |  |  | b; |
|  |  | *super* |  |  |  |  |  |  |  |  |  |  |  |

***Notes***

* The unicode codes marked with a leading plus, e.g. +0306, are independent nonspacing diacritics.
* Do not mistake a *caron* for a *breve*: Ǎ Ě Ǐ Ǒ Ǔ Y̌ ǎ ě ǐ ǒ ǔ y̌ (01CD 011A 01CF 01D1 01D3 +030C etc.)
* Acute accents : É=00C9, é=00E9 (others easy to find on the character map; nonspacing: +0301)
* In Word, ALT/X will toggle a selected character between its hex value and its representation.

***Hebrew consonants***

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | #$ |  | o# |  | c | ( |  | + |  | x | ) |
|  | š | Š | ś | Ś | ṣ | Ṣ | ʿ | ṭ | Ṭ | ḥ | Ḥ | ʾ |
| unicode | 0161 | 0160 | 015B | 015A | 1E63 | 1E62 | 02BF | 1E6D | 1E6C | 1E25 | 1E24 | 02BE |

***Notes***

* The IPA (International Phonetic Alphabet) symbols for *aleph* and *ayin* are

|  |  |  |
| --- | --- | --- |
|  | ( | ) |
|  | ˁ | ˀ |
| unicode | 02C1 | 02C0 |

# The Alphabet

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Hebr  square | Hand-written | Hebrew name | Trans-  literation  of name | Popular  name | Scholarly  translit-eration | AV  translit-  eration | Remarks |
| 1 | ) | ) | Ple)f | ʾālep | aleph | ʾ | - | a glottal plosive |
| 2a | b% | b% | tyb%' | bêt | beth | B b (+bb) | b | *b* |
| 2b | b | b |  |  |  | B b | b | originally bilabial (?)  modern pronunciation is *v* |
| 3a | g@ | g@ | lmeyg@I | gîmel | gimel | G g (+gg) | *g* | *g* |
| 3b | g | g |  |  |  | G g | g | originally a velar fricative  modern pronunciation is *g* |
| 4a | d% | d% | tledf% | dālet | daleth | D d (+dd) | d | *d* |
| 4b | d | d |  |  |  | D d | d | originally voiced *th*  modern pronunciation is *d* |
| 5 | h | h | )h' | hēʾ | hé | H h | *h* | *h* |
| 6 | w | w | wwF | wāw | waw | W w | v | originally *w* (?)  modern pronunciation is *v* |
| 7 | z | z | NyIzA | zayin | zayin | Z z | *z* | *z* |
| 8 | x | x | tyx' | ḥêt | heth | Ḥ ḥ | h | a pharyngeal unvoiced fricative |
| 9 | + | + | ty+' | ṭêt | teth | Ṭ ṭ | t | pharyngealized *t* |
| 10 | y | y | dowy | yôd | yod | Y y | j/i | *y* |
| 11a | K@ k% | K@ k% | Pk%f | kāp | kaph | K k (+kk) | c | *k* |
| 11b | K k | K k |  |  |  | K k | ch | a velar fricative |
| 12 | l | l | dmelf | lāmed | lamed | L l | l | *l* |
| 13 | M m | M m | Mm' | mēm | mem | M m | m | *m* |
| 14 | N n | N n | Nw3n | nûn | nun | N n | n | *n* |
| 15 | s | s | Kmesf | sāmek | samekh | S s | s | *s* |
| 16 | ( | ( | NyI(a | ʿayin | ayin | ʿ | - | a pharyngeal voiced fricative |
| 17a | P3 pZ | P3 pZ | hpZ' | pēh | pé | P p (+pp) | p | *p* |
| 17b | P p | P p |  |  |  | P p | ph | modern pronunciation is *f* |
| 18 | C c | C c | yd'cf | ṣādê | tsadé | Ṣ ṣ | z | originally pharyngealized s  modern pronunciation is *ts*. |
| 19 | q | q | Powq | qôp | qoph | Q q | k | a uvular voiceless plosive |
| 20 | r | r | #$yr' | rêš | resh | R r | r | rolled or uvular |
| 21a | o# | o# | Ny#i$ | śîn | sin | Ś ś | s | *s,* not distinguished from samekh |
| 21b | #$ | #$ | Nyo#i | šîn | shin | Š š | sh | *sh* |
| 22a | tZ | tZ | wtaZ | taw | taw | T t (+tt) | t | *t* |
| 22b | t | t |  |  |  | T t | th | originally voiceless *th* |

***Notes on the alphabet***

* The Hebrew alphabet consists of 22 basic consonants. The other consonants are variations of the 22 fundamental consonants.
* The handwritten forms are in imitation of printed letters, which is as Biblical Hebrew is normally taught, and are not the way Modern Hebrew is normally written (which is rather different).
* Six letters (tpkdgb) have a hard and soft form. In pointed script, the hard form takes a dot or *dagesh* (tpZk%d%g@b%) whereas the soft form does not (tpkdgb). These two forms are not regarded as separate letters, and do not have separate dictionary ordering. One must also distinguish
  + Dagesh lene. A dagesh lene will always be present when no vowel precedes the consonant.
  + Dagesh forte. If there is a dagesh when a vowel precedes the consonant, it is a dagesh forte, in which case the transliteration will be a ***double letter***.

Although the soft forms are transcribed in the same way as the hard forms with dagesh lene, the forms (including when reading a transcription) can be read with a soft (fricative) pronunciation, so e.g. *p* will be read as *f*.

* o# and #$ are counted as one letter and do not (traditionally) have separate dictionary ordering.
* Five letters (cpnmk) have separate final forms (CPNMK). These are used at the end of a word.
* Identical sounds in modern Hebrew
* ) (
* b w
* k% q
* k x
* g g@
* d d%
* s o#
* t t@ +
* c st stZ s+ o#t o#tZ o#+

but these are distinguished

* b% b
* k% k
* pZ p

***Some other fonts***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Hebrew  Square |  | Siloam /  Palaeo | Samaritan | Qumran | Rabbinic  (Rashi) | Hand-written  Square | Modern cursive |
| ) |  | ) | ) | ) | ) | ) | ) |
| b |  | b | b | b | b | b | b |
| g |  | g | g | g | g | g | g |
| d |  | d | d | d | d | d | d |
| h |  | h | h | h | h | h | h |
| w |  | w | w | w | w | w | w |
| z |  | z | z | z | z | z | z |
| x |  | x | x | x | x | x | x |
| + |  | + | + | + | + | + | + |
| y |  | y | y | y | y | y | y |
| K k |  | k | k | Kk | Kk | K k | K k |
| l |  | l | l | l | l | l | l |
| M m |  | m | m | Mm | m | M m | M m |
| N n |  | n | n | Nn | n | N n | N n |
| s |  | s | s | s | s | s | s |
| ( |  | ( | ( | ( | ( | ( | ( |
| P p |  | p | p | Pp | Pp | P p | P p3 |
| C c |  | c | c | Cc | Cc | C c | C c |
| q |  | q | q | q | q | q | q |
| r |  | r | r | r | r | r | r |
| o# |  | # | # | # | # | o# | o# |
| #$ |  |  |  |  |  | #$ | #$ |
| t |  | t | t | t | t | t | t |

***Meanings of the letters and gematria***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Hebrew  Square |  | Hebrew Name | Meaning | Gematria |
| ) |  | Ple)f | Ox | 1 |
| b |  | tyb%' | House | 2 |
| g |  | lmeyg@I | Camel | 3 |
| d |  | tledf% | Door | 4 |
| h |  | )h' | Window | 5 |
| w |  | wwF | Hook | 6 |
| z |  | NyIzA | Weapon | 7 |
| x |  | tyx' | Fence | 8 |
| + |  | ty+' | Snake | 9 |
| y |  | dowy | Hand | 10 |
| k |  | Pk%f | Palm of hand | 20 |
| l |  | dmelf | Goad | 30 |
| m |  | Mm' | Water | 40 |
| n |  | Nw3n | Fish | 50 |
| s |  | K7mesf | Prop | 60 |
| ( |  | NyI(a | Eye | 70 |
| p |  | hpZ' | Mouth | 80 |
| c |  | yd'cf | Fish-hook? | 90 |
| q |  | Powq | Eye of needle? | 100 |
| r |  | #$yr' | Head | 200 |
| o# |  | Ny#i$ | Tooth | 300 |
| #$ |  | Nyo#i | *(same)* | *(same)* |
| t |  | wtaZ | Cross | 400 |
| K |  |  |  | 500 |
| M |  |  |  | 600 |
| N |  |  |  | 700 |
| P |  |  |  | 800 |
| C |  |  |  | 900 |

## Vowels

***Summary of the vowels***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **A** | **E** | **I** | **O** | **U** |  |  |  |
| long with *mater lectionis* | hbf% | yb'% | yb%i | Gwb% | w3b% |  |  |  |
|  | bâ | bê | bî | bô | bû |  |  |  |
| long without *mater lectionis* | b%f | b%' | |b%i | ob% | |b%u |  |  |  |
|  | bā | bē | bī | bō | bū |  |  |  |
| short | b%a | b%e | b%i | b%f | b%u |  | shewa | b@%; |
|  | ba | be | bi | bo | bu |  |  | be |
| hurried | b%j | b%v |  | b%/ |  |  | long e grave | ybe% |
|  | bă | bĕ |  | bŏ |  |  |  | bè |

Detailed Table of vowels with Hebrew names, transliterated names and informal names.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **A** |  | **E** |  | **I** |  | **O** |  | **U** |  |
|  |  |  |  |  |  |  |  |  |  |  |
| long with  *mater* | hbf% |  | yb'% | lowdgF yr'c'  ṣērê gādôl | yb%i | lowdgF qreyxi  ḥîreq gādôl | Gwb% | lowdgF Mleowx  ḥôlem gādôl | w3b% | qrew3#$  šûreq |
| *lectionis* | bâ |  | bê | *tseré gadol* | bî | *chireq gadol* | bô | *cholem gadol* | bû | *shureq* |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| long without  *mater* | b%f | Cmeqf  qāmeṣ | b%' | yr'c'  ṣērê | |b%i | qreyxi  ḥîreq | ob% | Mleowx  ḥôlem | |b%u | Cw3b%qi  qibbûṣ |
| *lectionis* | bā | *qamets* | bē | *tseré* | bī | *chireq* | bō | cholem | bū | *qibbuts* |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| short | b%a | xtapaZ  pataḥ | b%e | lowgs;  segôl | b%i | qreyxi  ḥîreq | b%f | Pw3+xf Cmeqf  qāmeṣ ḥātûp | b%u | Cw3b%qi  qibbûṣ |
|  | ba | *patach* | be | *segol* | bi | *chireq* | bo | *qamets chatuph* | bu | *qibbuts* |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| hurried | b%j | xtapaZ P+'xf  ḥātēp pataḥ | b%v | lowgs; P+'xf  ḥātēp segôl |  |  | b%/ | Pw3+xf Cmeqf P+'xf  ḥātēp qāmeṣ ḥātûp |  |  |
|  | bă | *chateph pataḥ* | bĕ | *chateph segol* |  |  | bŏ | *chateph qamets chatuph* |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| shewa |  |  | b@%; | )wF#;$  šewaʾ |  |  |  |  |  |  |
|  |  |  | be | *shewa* |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| long e grave |  |  | ybe% | lowdgF lowgs;  segôl gādôl |  |  |  |  |  |  |
|  |  |  | bè | *segol gadol* |  |  |  |  |  |  |

***Notes***

1. Generally, hbf% (bâ) will only occur at the end of a word; elsewhere bf% (bā) is used.
2. There are some (rather complex) ways to distinguish between bf%= bā and bf%=bo, e.g.

* Word pattern (short closed unstressed syllable) + (stressed syllable [open/closed long/short]): hmfk;xf (ḥokmâ) *(wisdom)*, l+aq;hf (hoqṭal) *(he was caused to be killed)*
* A meteg, as in w3bt;|k%f (kātevû) *(they wrote)* indicates an ā.
* Standard grammatical forms reveal the vowel, e.g. hofal btZak;hfû from btak%f and Mkey#$'d;xûf from #$deox.

1. Transliterate hb'% by bēh, hbe% and h@be% both by beh, )b%f by bāʾ, and h@b%f by bāh.
2. As in precise orthography, the GGTAmos font can distinguish, by the position of the dot, a consonantal waw+ ḥôlem (ow) from a vocalic ḥôlem on o mater lectionis (Gw).
3. As in precise orthography, the GGTAmos font can distinguish, by the position of the dot, a consonantal waw with dagesh (w[) from a šûreq (w3).
4. The GGTAmos font can distinguish, by a convention, bf%=bā from bf%û=bo.