1. Transliteration and Unicode Coding

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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	בֶֽבְבָבְבֶ
breve	Ă	Ĕ	Ĭ	Ŏ	Ŭ	Y̆	ă	ĕ	ĭ	ŏ	ŭ	y̆	בְבֶֽ
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	בֵֽבְבָבֹ
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	בָה בֵי בִי
unicode	00C2	00CA	00CE	00D4	00DB	0176	00E2	00EA	00EE	00F4	00FB	0177	בוֹ בוּ
grave		È						è					בֵי
unicode		00C8						00E8					
shewa		ᵉ											בְ
		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

	שׁ	שׂ	צ	ע	ט	ח	א
	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

	ע	א
	ˁ	ˀ
unicode	02C1	02C0

2. The Alphabet

	Hebr square	Hand-written	Hebrew name	Trans-literation of name	Popular name	Scholarly translit-eration	AV translit-eration	Remarks
1	א	א	אָלֶף	ʾālep	aleph	ʾ	-	a glottal plosive
2a	ב	ב	בֵּית	bêt	beth	B b (+bb)	b	*b*
2b	ב	ב				B b	b	originally bilabial (?) modern pronunciation is *v*
3a	ג	ג	גִּימֶל	gîmel	gimel	G g (+gg)	g	*g*
3b	ג	ג				G g	g	originally a velar fricative modern pronunciation is *g*
4a	דּ	דּ	דָּלֶת	dālet	daleth	D d (+dd)	d	*d*
4b	ד	ד				D d	d	originally voiced *th* modern pronunciation is *d*
5	ה	ה	הֵא	hēʾ	hé	H h	*h*	*h*
6	ו	ו	וָו	wāw	waw	W w	v	originally *w* (?) modern pronunciation is *v*
7	ז	ז	זַיִן	zayin	zayin	Z z	*z*	*z*
8	ח	ח	חֵית	ḥêt	heth	Ḥ ḥ	h	a pharyngeal unvoiced fricative
9	ט	ט	טֵית	ṭêt	teth	Ṭ ṭ	t	pharyngealized *t*
10	י	י	יוֹד	yôd	yod	Y y	j/i	*y*
11a	כ ךּ	כ ךּ	כָּף	kāp	kaph	K k (+kk)	c	*k*
11b	כ ך	כ ך				K k	ch	a velar fricative
12	ל	ל	לָמֶד	lāmed	lamed	L l	l	*l*
13	מ ם	מ ם	מֵם	mēm	mem	M m	m	*m*
14	נ ן	נ ן	נוּן	nûn	nun	N n	n	*n*
15	ס	ס	סָמֶךְ	sāmek	samekh	S s	s	*s*
16	ע	ע	עַיִן	ʿayin	ayin	ʿ	-	a pharyngeal voiced fricative
17a	פ ףּ	פ ףּ	פֵּה	pēh	pé	P p (+pp)	p	*p*
17b	פ ף	פ ף				P p	ph	modern pronunciation is *f*
18	צ ץ	צ ץ	צָדֵי	ṣādê	tsadé	Ṣ ṣ	z	originally pharyngealized s modern pronunciation is *ts*.
19	ק	ק	קוֹף	qôp	qoph	Q q	k	a uvular voiceless plosive
20	ר	ר	רֵישׁ	rêš	resh	R r	r	rolled or uvular
21a	שׂ	שׂ	שִׂין	śîn	sin	Ś ś	s	*s,* not distinguished from samekh
21b	שׁ	שׁ	שִׁין	šîn	shin	Š š	sh	*sh*
22a	תּ	תּ	תָּו	taw	taw	T t (+tt)	t	*t*
22b	ת	ת				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 (בגדכפת) have a hard and soft form. In pointed script, the hard form takes a dot or *dagesh* (בּגּדּכּפּתּ) whereas the soft form does not (בגדכפת). These two forms are not regarded as separate letters, and do not have separate dictionary ordering. One must also distinguish

  o Dagesh lene. A dagesh lene will always be present when no vowel precedes the consonant.

  o 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*.

- שׂ and שׁ are counted as one letter and do not (traditionally) have separate dictionary ordering.

- Five letters (כמנפצ) have separate final forms (ךםןףץ). These are used at the end of a word.

- Identical sounds in modern Hebrew

  o ע א

  o ו ב

  o ק כּ

  o ח כ

  o ג גּ

  o דּ ד

  o שׂ ס

  o ט תּ ת

  o טשׂ תּשׂ תשׂ טס תּס תס צ

  but these are distinguished

  o ב בּ

  o כ כּ

  o פ פּ

Some other fonts

Hebrew Square	Siloam / Palaeo	Samaritan	Qumran	Rabbinic (Rashi)	Hand-written Square	Modern cursive
א	≭	אִ	א	ƀ	א	lc
ב	ϑ	⊅	נ	ב	ב	פ
ג	ך	✓	⅄	ג	ג	ﻉ
ד	◺	ꟼ	प	ך	ד	२
ה	≋	⅀	ㅈ	מ	ה	מ
ו	⅄	⅊	ㄱ	ㄱ	ㄱ	/
ז	═	⅄	ㅣ	ㅣ	ㄷ	ও
ח	ⅎ	Ⴁ	ㅆ	ㅁ	ㄷ	ㅺ
ט	⊗	▽	ㅂ	ㅂ	ㄷ	Ϭ
י	⋜	㎜	ㆍ	ㆍ	ㆍ	ㆍ
כ ך	y	𝈋	ⲅ⌐	כך	כ ㄱ	כ ך
ל	⟋	Ⴜ	ㅣ	ㅣ	ל	㇗
מ ם	𝒴	𝈐	𝕄	ㄲ	מ ם	ㄱ ℵ
נ ן	𝒴	⅃	ㄴ	ㄱ	נ ן	/ ㆍ
ס	𝔽	ꟿ	ㄲ	ㅁ	ㆍ	O
ע	ø	▽	ㅅ	ㅄ	ㄴ	㇓
פ ף	𝒥	ꟲ	ꟼꟼ	ꟼꟼ	פ ך	⅗ ㆍ
צ ץ	⅏	𝈏	ㅈㅈ	ㄱ5	צ ㄱ	⅌ 3
ק	𝒫	ꟼ	ꟼ	ꟼ	ꟼ	ꟼ
ר	⅃	⅃	ㄱ	ㄱ	ㄱ	ㆍ
שׁ	∿	ᴟ	ㅄ	ꟲ	שׁ	ꟾ
שׂ					שׂ	ꟾ
ת	⤫	Ⴟ	ㄲ	ㅁ	ㄴ	ㄴ

Meanings of the letters and gematria

Hebrew Square	Hebrew Name	Meaning	Gematria
א	אָלֶף	Ox	1
ב	בֵּית	House	2
ג	גִּימֶל	Camel	3
ד	דָּלֶת	Door	4
ה	הֵא	Window	5
ו	וָו	Hook	6
ז	זַיִן	Weapon	7
ח	חֵית	Fence	8
ט	טֵית	Snake	9
י	יוֹד	Hand	10
כ	כָּף	Palm of hand	20
ל	לָמֶד	Goad	30
מ	מֵם	Water	40
נ	נוּן	Fish	50
ס	סָמֶךְ	Prop	60
ע	עַיִן	Eye	70
פ	פֵּה	Mouth	80
צ	צָדֵי	Fish-hook?	90
ק	קוֹף	Eye of needle?	100
ר	רֵישׁ	Head	200
שׁ	שִׁין	Tooth	300
שׂ	שִׁין	*(same)*	*(same)*
ת	תָּו	Cross	400
ך			500
ם			600
ן			700
ף			800
ץ			900

2.1   Vowels

Summary of the vowels

	A	E	I	O	U
long with *mater lectionis*	בָה bâ	בֵי bê	בִי bî	בוֹ bô	בוּ bû
long without *mater lectionis*	בָ bā	בֵ bē	בִ bī	בֹ bō	בֻ bū
short	בַ ba	בֶ be	בִ bi	בָ bo	בֻ bu
hurried	בֲ bă	בֱ bĕ		בֳ bŏ	

shewa	בְ b^e
long e grave	בֶי bè

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

	A	E	I	O	U
long with *mater lectionis*	בָה bâ	צֵרֵי גָדוֹל בֵי ṣērê gādôl bê *tseré gadol*	חִירֶק גָדֹל בִי ḥîreq gādôl bî *chireq gadol*	חוֹלֶם גָדוֹל בוֹ ḥôlem gādôl bô *cholem gadol*	שׁוּרֶק בוּ šûreq bû *shureq*
long without *mater lectionis*	קָמֶץ בָ qāmeṣ bā *qamets*	צֵרֵי בֵ ṣērê bē *tseré*	חִירֶק בִ ḥîreq bī *chireq*	חוֹלֶם בֹ ḥôlem bō cholem	קִבּוּץ בֻ qibbûṣ bū *qibbuts*
short	פַּתַח בַ pataḥ ba *patach*	סְגוֹל בֶ sᵉgôl be *segol*	חִירֶק בִ ḥîreq bi *chireq*	קָמֶץ חָטוּף בָ qāmeṣ ḥātûp bo *qamets chatuph*	קִבּוּץ בֻ qibbûṣ bu *qibbuts*
hurried	חָטֶף פַּתַח בֲ ḥātēp pataḥ bă *chateph patah*	חָטֶף סְגוֹל בֱ ḥātēp sᵉgôl bĕ *chateph segol*		חָטֶף קָמֶץ חָטוּף בֳ ḥātēp qāmeṣ ḥātûp bŏ *chateph qamets chatuph*	
shewa		שְׁוָא בְ šᵉwaʾ bᵉ *shewa*			
long e grave		סְגוֹל גָדוֹל בֶי sᵉgôl gādôl bè *segol gadol*			

Notes

1. Generally, בָה (bâ) will only occur at the end of a word; elsewhere בָ (bā) is used.

2. There are some (rather complex) ways to distinguish between בָ= bā and בָ=bo, e.g.

    - Word pattern (short closed unstressed syllable) + (stressed syllable [open/closed long/short]): חָכְמָה (ḥokmâ) *(wisdom)*, הָקְטַל (hoqṭal) *(he was caused to be killed)*
    - A meteg, as in כָּתְבוּ (kāṯᵉvû) *(they wrote)* indicates an ā.
    - Standard grammatical forms reveal the vowel, e.g. hofal הָכְתַּב from כָּתַב and חָדְשֵׁיכֶם from חֹדֶשׁ.

3. Transliterate בֵה by bēh, בֶה and בֶה both by beh, בָא by bāʾ, and בָה by bāh.

4. As in precise orthography, the GGTAmos font can distinguish, by the position of the dot, a consonantal waw+ ḥôlem (וֹ) from a vocalic ḥôlem on o mater lectionis (וֹ).

5. As in precise orthography, the GGTAmos font can distinguish, by the position of the dot, a consonantal waw with dagesh (וּ) from a šûreq (וּ).

6. The GGTAmos font can distinguish, by a convention, בָ=bā from בָ=bo.