Introduction

`Hclassic` is a modernized Classical Hebrew font (in the same way that Knuth's `cmr` family is a modernized Roman font — but his fonts are much nicer). It contains all of the Hebrew consonants, the (rarely used) ligature *aleph-lamed* (as seen in "ישראל") and two versions of the letter *ayin*: "ע" and "ע." The latter is for use with vowels. `Hclassic` also contains all of the vowels found in Hebrew, a symbol for *meteg*, and dots for use as a *dagesh* and for differentiating "שׁ" and "שׂ."

Also included is a set of macros, in the files `hletter1.tex`, `vowels.tex` and `dots.tex` for using the `hclassic` font. Here is an example of what `hclassic` looks like:

בְּרֵאשִׁית בָּרָא אֱלֹהִים אֵת הַשָּׁמַיִם וְאֵת הָֽאָרֶץ׃

The only punctuation included is as follows: period, comma, exlamation mark, dash; all except the comma look rather Biblical.

Using the Font

The file `hletter1`* defines macros for all of the Hebrew letters: `\aleph, \bet, \gimel,` ... `\taf`; the final letters: `\fchaf, \fmem,` etc.; the ligature *aleph-lamed*: `\alephlamed`; and the variant form of the letter *ayin* for use with vowels: `\vowelayin`. It also contains definitions for letters with a *dagesh*: `\Aleph, \Bet,` etc. I realize there is no reason to put a *dagesh* in an *aleph*, but you can. Use `\Heh` for a *mappiq*. You must include the file `dots.tex` (q.v. below) to use a *dagesh*.

The files `dots.tex` and `vowels.tex` define macros for all of the diacritic marks included with `hclassic`. The following macros are available for vowels: `\patach{`*letter*`}`, `\kamatz{`*letter*`}`, `\segol{`*letter*`}`, `\kibutz{`*letter*`}`, `\chiriq{`*letter*`}`, `\kamatzkatan{`*letter*`} and \shva{`*letter*`}`, where "letter" is any Hebrew letter. For example, `\segol{\aleph}` will produce "אֶ." Unlike most Hebrew fonts, a *kamatz katan* is slightly larger than an ordinary *kamatz*. So: כָּל הילָדים. The command `\meteg{`*letter*`}` places a *meteg* under the letter "letter." For each vowel command is a corresponding *chataf* vowel command (`\chatafkamatz{`*letter*`}`, `\chatafsegol{`*letter*`}`, etc.) and a command for adding a *meteg* (`\Kamatz{`*letter*`}`, `\Segol{`*letter*`}`, etc.).

The above macros automatically adjust the location of some vowels, substitute `\vowelayin` for `\ayin`, and adjust the location of the *dagesh*. So `\shva{\resh}` will produce "רְ," with the *shva* not centered but under the stem, where it belongs. Likewise, `\kamatz{\fchaf}` and `\kamatz{\Fkaf}` produce "ךָ" and "ךָּ" respectively. Also, `\ayin` produces "ע" but `\patach{\ayin}` produces "עַ."

The commands `\shinwithdot` and `\sinwithdot` produce "שׁ" and "שׂ" respectively; they both have a corresponding version with a *dagesh*. The command `\vavwithdot` yields "וֹ." Use `\odot` for a *cholem chaseir*.

I Have to Type All of THAT?!

I realize that typing `\taf\yud\chiriq{\shinwithdot}\aleph\tzere{\resh}\shva{\Bet}` is a difficult way to produce "בְּרֵאשִׁית." You will doubtless notice that I have not included any better mechanism for entering Hebrew with ease.

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* I have named the file `hletter1` because you may want to have other mappings for other fonts (several public domain fonts in the U.S. use 'b' for *bet*, 'g' for *gimel*, etc. `Hclassic` uses the character mapping I've seen in use in Israel. I have not yet had a chance to look at TEX 3.0, but I suspect 3.0 introduces a more elegant way of using two character sets.

There are two problems. First, you have to enter Hebrew left-to-right (in what is called "screen order"); second, typing all the vowel-commands is difficult. There are several solutions to the first problem, reviewed elsewhere; the `IVRITEX` group managed at `TAUNIVM` is a good place to start.

For my own use, I have found that escape sequences are fine for including occasional Hebrew words in English documents. For more extensive Hebrew, I use my `ibelbe`** program to enter Hebrew text in screen order, and then my `addvowel` program to add the necessary escape sequences. `Addvowel` is an interactive program that facilitates the pointing of Hebrew. Both programs require an EGA Hebrew font, and `addvowel` requires that that EGA font have vowels. I will release my EGA Hebrew font, `addvowel` and `ibelbe` Real Soon Now; I still want to fix a few letters on the font, and `ibelbe` isn't quite stable yet.

The MetaFont Files

`Hclassic` is programmed in MetaFont. I have divided the font into two files, `hclassic.mf` and `base.mf`, the latter containing routines for all of the characters, and the former dealing with the parameters of the font: serif-size; character height, depth and width; line size; etc. Variations can be created simply by modifying the parameter file (`hclassic.mf`). The file `hcaption` is such a variation; it is a fancier font, slanted, and looks good in captions:

ארץ ישראל

Bugs

This is my first MetaFont attempt, and I have "cheated" in making many of the letters. That is, I have allowed minute errors to remain in several letters. At 300 dpi, I have found that both `hclassic` and `hcaption` look good up to `\magstep4`, and I suspect perhaps higher. By `\magstep15` (which I have used for posters), many problems are readily apparent. Some lines don't join the way they should, for example. Also, the serif routine isn't quite right, and this becomes noticeable.

The letter *mem* looks awful; it will be changed when I get a chance.

There is also a bug in the TEX routine in `vowels.tex` that adjusts vowel placement. It fails to recognize that `\Daled` is really just a *daled* with a *dagesh*, and so vowels under it should be shifted to the right. (The same problem would appear with *resh*, but `\Resh` is never used.) This should not be hard to fix.

Please report any additional bugs, or, especially, suggestions for improvement, to me at:
`hoffman@nyuacf.BITNET` ← *This will change soon.*

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** Itty-bitty Emacs-Like Bidirectional Editor — it looks a lot like Emacs and has provisions for bidirectional editing.

Command Summary

Here is a complete list of the commands defined in the TeX files that you're likely to use:

\aleph	\bet	\gimel	\dalet	\daled
\he	\heh	\vav	\zion	\chet
\tet	\yud	\fkaf	\fchaf	\kaf
\chaf	\lamed	\fmem	\mem	\fnun
\nun	\samech	\ayin	\fpe	\fpeh
\ffe	\ffeh	\pe	\peh	\fe
\feh	\ftzadi	\ftzadik	\kuf	\koof
\resh	\shin	\sin	\tav	\taf
\Aleph	\Bet	\Gimel	\Dalet	\Daled
\He	\Heh	\Vav	\Zion	\Chet
\Tet	\Yud	\Fkaf	\Fchaf	\Kaf
\Chaf	\Lamed	\Fmem	\Mem	\Fnun
\Nun	\Samech	\Ayin	\Fpe	\Fpeh
\Ffe	\Ffeh	\Pe	\Peh	\Fe
\Feh	\Ftzadi	\Ftzadik	\Kuf	\Koof
\Resh	\Shin	\Sin	\Tav	\Taf
\alephlamed	\vowelayin	\dagesh	\odot	\shinwithdot
\sinwithdot	\Shinwithdot	\Sinwithdot	\vavwithdot	\Vavwithdot
\patach	\kamatz	\segol	\kibutz	\chiriq
\kamatzkatan	\shva	\meteg	\tzere	\chatafpatach
\chatafkamatz	\chatafsegol	\chatafkibutz	\chatafchiriq	\chatafkamatzkatan
\chataftzere	\Patach	\Kamatz	\Segol	\Kibutz
\Chiriq	\Kamatzkatan	\Tzere		

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