

CJHebrew*

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1 Overview

CJHebrew is package which enables the easy typesetting of Hebrew text with L^AT_EX. Hebrew text can be vocalised, also a few accents are available. The main purpose of this package is to allow the insertion of Hebrew words or sentences into non-Hebrew text; so CJHebrew is quite appropriate e.g. for theological papers.

To use CJHebrew you will need a T_EX distribution that supports type1 fonts and contains ϵ -T_EX.

CJHebrew contains two fonts (`cjhebltx.pfb` und `cjheblsm.pfb`) plus their metric files (`*.afm`, `*.tfm`, `*.vf`), an encoding file (`cjhebltx.enc`), a map file for use with `dvips` and `pdfTEX`(`cjhebrew.map`), and finally a L^AT_EX style file (`cjhebrew.sty`).

2 Installation

In order to install CJHebrew, you should first copy all the files to the appropriate directories. Table 1 shows the directories that might be used with a TDS-compatible T_EX distribution.¹

After copying the files, the fonts have to be made known to the system. How this is done depends on the T_EX distribution and should be explained in the documentation.

Using MiK_TE_X for example, you have to add the line:

```
Map cjhebrew.map
```

to the file `\texmf\web2c\updmap.cfg` and to run `mkfntmap.exe`.

If you use another distribution you often will have to add this line:

```
p +cjhebrew.map
```

to the file `[texmf]/dvips/config/config.ps` and the following line:

```
map +cjhebrew.map
```

to the file `[texmf]/pdftex/config/pdftex.cfg`

*Version 0.0b. CJHebrew is subject to the *L^AT_EX Project Public License* (see also `lizenz.txt`). The most recent version of this license can be found at www.latex-project.org/lppl.txt.

¹`[texmf]` symbolises the root directory of the T_EX system; e.g. in a Windows distribution it might be `c:\texmf`.

| File | Directory |
|---------------|---|
| cjhebltx.pfb | [texmf]/fonts/type1/cjhebrew |
| cjhebltx.afm | [texmf]/fonts/afm/cjhebrew |
| cjhebltx.tfm | [texmf]/fonts/tfm/cjhebrew |
| rcjhebltx.tfm | [texmf]/fonts/tfm/cjhebrew |
| cjhebltx.vf | [texmf]/fonts/vf/cjhebrew |
| cjhebltx.enc | [texmf]/dvips/cjhebrew |
| cjhebrew.map | [texmf]/dvips/config [texmf]/pdftex/config |
| cjhebrew.sty | [texmf]/tex/latex/cjhebrew |

Tabelle 1: Example of a CJHebrew installation

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|----|----|----|---|----|----|----|---|---|
| א | ב | ג | ד | ה | ו | ז | ח | ט | י | כ | ך | ל | מ | ם |
| , | b | g | d | h | w | z | .h | .t | y | k | K | l | m | M |
| נ | ן | ס | ע | פ | ף | צ | ץ | ק | ר | ש | ש | ש | ת | |
| n | N | s | ' | p | P | .s | .S | q | r | /s | ,s | +s | t | |

Tabelle 2: Coding of the consonants

If necessary you must refresh the *file name database* and the *ps resource database*, before you can use CJHebrew.

3 Usage

To use CJHebrew simply put `\usepackage{cjhebrew}` in the preamble of your document. CJHebrew requires ϵ -L^AT_EX; otherwise compiling your document will cause an error message.

CJHebrew provides the text font command `\textcjheb` which switches to the hebrew font, but does not change the direction of typesetting. The input `\textcjheb{’bgd}` results in דגבא, which is in most cases not what you want. Instead you will normally use the command `\cjRL`, that also switches to the right direction of typesetting. The input `\cjRL{’bgd}` will have as result the output אבגד. There is also an even shorter form: `\<>`; thus, you can type `\<’bgd>` instead of `\cjRL{’bgd}`.

If you want to typeset a complete passage of Hebrew text, you ought to use the `cjhebrew` environment.

Finally, CJHebrew provides also the `\cjLR` command, which switches (inside a Hebrew piece of text) back to the “normal” direction of typesetting. Be careful: this command does not switch to a non-Hebrew font!

3.1 The consonants

How the Hebrew consonants are coded in your input file, is shown in table 2. Normally the final letters are used automatically; `\<mlk>` will become מלך. Sometimes it is necessary to use final letters in places where they will not be set automatically, e. g. in the middle of a word. To do this you either use the coding according to table 2 or you put an exclamation mark (!) after the consonant; alternatively you can use the `\endofword` command. For example, a *final mem*

| | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|--------|--------|----|----|
| ◌ִ | ◌ֵ | ◌ֶ | ◌ֹ | ◌ֻ | ◌ֹ | ◌ֻ | ◌ֹ | ◌ֻ | ◌ֹ | ◌ֻ | ◌ֹ | ◌ֻ | ◌ֹ | ◌ֻ | ◌ֹ | ◌ֻ |
| i | e | E | E: | a | /a | a: | A | A: | o | u | * | : | O / wo | U / w* | | |

Tabelle 3: Coding of the vowels

| | | |
|---|----|---------------|
| : | - | ◌ֹ |
| ; | -- | \dottedcircle |

Tabelle 4: Accents and symbols

could be achieved by typing `\<M>`, `\<m!>` or `\<m\endofword>`.

On the other hand, sometimes you will not want the automatic replacement with final letters. In these cases you can add | to the consonant or use the `\zeronojoin` command. Both `\<m|>` and `\<m\zeronojoin>` will give you a normal *mem*. |
\zeronojoin

3.2 The vowels

How to code the vowels in your input file is shown in table 3. The vowels have to be typed *after* the consonant they belong to (for example אֱלֹהִים is coded as `\<'E:lohiym>`). The only exception is the *patah furtivum* as in רִוּחַ (`\<rU/a.h>`). Always use * for *dageš*; CJHebrew does not distinguish between *dageš lene* and *dageš forte*. The *dageš* has to follow its consonant *immediately* (`\<b*:>` becomes בָּ), otherwise you will get a wrong result (`\<b*:>` becomes בִּ).

3.3 More accents and symbols

There are some more accents and symbols available, as shown in table 4. I hope to add some more in the future.

4 An example

Here is the beginning of the Bible:

בְּרֵאשִׁית בָּרָא אֱלֹהִים אֶת הַשָּׁמַיִם וְאֶת הָאָרֶץ: וְהָאָרֶץ הָיְתָה תֹהוּ וָבֹהוּ וְחָשֶׁךְ עַל־פְּנֵי תְהוֹם וְרוּחַ
אֱלֹהִים מְרַחֵף עַל־פְּנֵי הַמָּיִם:

```
\begin{cjhebrew}
b*:re'+siyt b*ArA' 'E:lohiym 'et ha+s*Amayim w:'et hA'ArE.s;
w:hA'ArE.s hAy:tAh tohU wAbohU w:.ho+sEk: 'al--p*:ney t:hOm
w:rU/a.h 'E:lohiym m:ra.hEpEt 'al--p*:ney ham*Ayim;
\end{cjhebrew}
```

5 Finally

The version number of CJHebrew is 0.0b, it is far from being finished. Especially the fonts still need a lot of work; many letters look rather imperfect. If you have any ideas how to improve CJHebrew, please do send me an email.