

Tibw – Tibetan text printing, v. 1.1

Setup and operation.

The following files need to be saved into the same directory for the software to work:

tibw.exe
t1a.hpfb
t1b.hpfb
t2a.hpfb
t2b.hpfb

t1a20.hpfb
t1b20.hpfb
t2a20.hpfb
t2b20.hpfb

The program does not need installation; all that is needed is to create a shortcut on the desktop. The files ending in ".hpfb" are font files originally created for use with HP printers. No fonts are sent to the printer with this version and the software should work correctly with any printer with a Windows driver.

The last four files are optional. These are for larger fonts. The software uses these if it is started with the command line parameter "1":

```
tibw 1
```

These fonts are designed to be used with a printer resolution of 600×600 dpi. This is the most common default resolution used by modern printers, but it is worth checking when selecting the printer. The font will load without the correct resolution.

In general, when running the software, the first thing that needs to be done is to select the printer to be used (File menu). When in the printer dialogue box, make sure that the printer is set to the correct paper size and output size (A3, 11×17, A4, Legal or Letter) and that it is set to portrait mode. Even if printing is to be done in landscape mode for pecha-style printing, the printer driver still needs to be set to portrait mode; the orientation of the printing is all handled in the software and errors are likely to result if the printer is wrongly set.

Once the printer has been selected it is then possible to print one of the test pages; these were created to help with the development of the Windows interface and are still included in the software for testing purposes in case any problems occur during printing. Normally, the next step after selecting the printer is to choose a file to print. This must be a plain text file; if a program such as Microsoft Word is used to produce the text, all "Smart" corrections need to be turned off, as spurious characters may be introduced into the text. The most obvious is in place of apostrophies, although there may be others. Tibetan text needs to be encoded in Wylie and extra characters for Sanskrit encoded according to the description later in this document.

When a file has been selected, the "Print Preview..." and "Print file..." menu options are enabled. When either of these is selected, a dialogue box appears with the various parameters for determining the style of printing.

These work in exactly the same way, the only difference being that preview mode produces results on screen and "Print file..." prints to paper. The output is identical in each case, and the intention of preview mode is to enable checking of output before committing to paper.

Once in preview mode, Esc closes the preview window. PgUp and PgDn move between different pages of the text, Home and End move to the beginning and end of the file. Ctrl+ and Ctrl- zoom in and out, as do the normal plus and minus keys (at the right-hand end of the top row of numeric keys). The arrow keys move the preview page relative to the window, but only if it is larger than that window.

File: C:\tibw\4man_f.doc

A3 pecha: ☐ 11x17 pecha: ☐ A4 pecha: ☒ A4 portrait: ☐
 Legal pecha: ☐ Legal portrait: ☐ Letter pecha: ☐ Letter portrait: ☐

Frame printing: ☒ Justification on: ☒
 Tibetan number for first page: Western number for first page:
 Printing to start at Tibetan page: and finish at page:
 Print trim marks: ☐ Portrait mode (not A3 or 11x17): ☐
 Open printing, no final "byon": ☐
 Reverse printing, turning each page individually: ☐
 Turn off printing (for testing): ☐ Debug flag value:
 Number of copies:

Print

The dialogue box gives the name of the selected file, with below it the main options for printing: pecha-style on A3 or 11x17 paper, pecha-style on A4 paper and portrait-mode style on A4 paper; these are followed in the next row of options with pecha- and portrait-mode styles for Legal and Letter size paper. The software detects the paper size selected in the printer driver and selects the appropriate check box automatically. As Letter size paper is not really suitable for pecha-style printing, with Letter paper, portrait-style is the default. With other sizes of paper, pecha-style is checked by default. For printing portrait-style, simply check the appropriate box. In Preview mode, the default is set to the paper size chosen in the printer driver, but any size can be seen in preview. For printing, only the paper size previously set in the printer dialogue box can be used to create properly formatted output.

Below the check boxes for these are various other selections; these change when one of the three main selections is checked, but then further adjustments can be made. For example, when printing pecha style other than on A3 or 11x17 paper, trim marks are not normally needed – with A4, Legal and Letter pecha printing the text boxes are positioned such that the page simply has to be cut straight down the middle. The "Print trim marks" selection is by default unchecked, but if trim marks are needed, these can be selected. (In Preview mode, trim marks are assumed and the display page size adjusted accordingly.)

Regarding the other selections, the most important are those that control page numbers. The first two, "Tibetan number for first page:" and "Western number for first page:" determine the numbers for the first pages to be printed. The Tibetan numbers are printed in Tibetan language in the left-hand sidebars of the upper side of each page; this only applies to pecha-style printing. The Western numbers are printed in a Roman font to the right of the right-hand side bar in pecha-style printing and at the top right of the page in portrait-style printing. If the western page number is set to zero, western page numbers are not printed.

The next two options: "Printing to start at Tibetan page:", and "and finish at page:", are useful when printing large texts, particularly when there are pagebreaks within such texts. The program runs through the file, formatting as it goes, but only starts printing when it reaches the correct page count.

"Frame printing" controls the printing of the frames around text in pecha-style printing, and "Justification on:" turns on or off right justification of text, normally used with pecha-style.

"Open printing, no final "byon"" controls the use of the word "byon" together with the page number on the last page of a text. Turning this off is useful when printing large texts that stretch over more than one file.

"Reverse printing..." is a flag that is needed when feeding pages one at a time for printing double sided. The user is prompted to insert the paper before each page is printed. In future, there may be added here an option to control duplex printing for those printers that support it. However, this does not currently seem necessary; all that is needed is to select duplex printing in the printer driver or on the printer's control menu.

"Turn off printing (for testing):" is a flag to turn off printing. When this is checked, the program runs through the file, formatting and analysing the text as it goes – the only thing it does not do is print. This is useful when preparing large files for printing – the debug file can then be checked for any major errors (some minor errors are reported, which are not important).

The "Number of copies:" selection speaks for itself.

Whenever the program is run, a file of debugging information, debug.dat, is saved to disk. When it is run again, the last file is deleted and a new one created. This contains information that might be useful if something goes wrong with the operation of the program. The type of information that is saved to disk is controlled by "Debug flag value:" in the print dialogue box. The default value of this flag is 1. The information stored is as follows:

- 1 – Lists all major operations only. It also stores any error messages, such as words or characters not recognised.
- 2 – Includes a list of words as they are encountered.

- 3 – Sanskrit word and syllable construction and printing.
- 4 – Details of line construction.
- 5 – Parsing and printing of Tibetan words.
- 6 – Creation of the frames around pecha-style text.

The debug file often indicates errors in many Sanskrit words, even though the words print properly. These false positives will be fixed at some point.

File format and formatting commands.

Anything placed within {curly brackets} will not print and is ignored by the software – this is useful for such things as original page numebrs, variant spellings, notes and so forth.

Certain commands can be placed in the text to control formatting. Each of these starts with a "\$" sign, and they are usually used in pairs. For example, "\$TP" is used to indicate the text for the main title page, such as:

\$TP rdo rje phur pa'i sgrub thabs bzhugs so // \$TP

Similarly, with

\$TS dus 'khor lha dgu \$TS

this indicates that the words between the two "\$TS" are to form the short running title for the text. This will be printed in the left hand border of the reverse side of each page.

"\$S" acts as a toggle and turns on and off the use of the small font for notations (yig chung) in the text.

"\$N" causes a new line – equivalent to a carriage return and line feed in normal ASCII text formatting.

"\$P" causes a new page. This, and \$N, are mainly needed for formatting portrait-mode A4 printing.

Care must be taken when entering Tibetan transcriptions of Sanskrit to ensure that the desired printed result is obtained. The method used treats letters between spaces as a word, consisting of one or more syllables. Each pair of adjacent syllables is separated by a vowel.

For example "svabhāwa" will be treated as one word with three syllables, and the equivalent "sva bhā wa" as three words of one syllable each. A "tsheg" (stop) is not printed between syllables of one word.

Any collection of consecutive consonants within one syllable will be printed one above the other, as a stacked set, in the order they are given. So, to print the "rnam bcu dbang ldan" stack of Kālacakra, you would type in the text: "hkṣmlwryaṃ". See the example file test3.txt.

With the extra Sanskrit vowels, 'ṛ' and 'ṝ', it is not necessary to include a following 'i'. It is usually considered correct not to use the 'i', but Tibw allows its inclusion. So, 'ṛ' is equivalent to 'ṛi'. If the vowel is a long one, then if either the vowel letter or the 'i' are long, so the vowel is considered long. Similarly, 'ṝ' is equivalent to both 'ṝi' and 'ṝ'.

The 'shad' is represented by the slash character: '/'. Spaces are also important either side of a "shad", and so where "...gyur cig/" would produce an error; "...gyur cig /" will not. For a double 'shad' use a double slash character: '//'. This will have the spacing adjusted automatically. The one exception to this is when the last character before the double 'shad' is either a 'g' or 'h' (anusvara). In both of these cases the first 'shad' will not be printed, but it's spacing will be used. In the case of a single '/' following a 'h', the 'shad' will not be printed, but a space will be made. This is used for the purpose only of creating a space after the anusvāra, as in most instances in original Tibetan texts.

When the last character before a 'shad' is a 'ng', it is normal for a 'tsheg' to be printed. This is done automatically, except when the last word is Sanskrit. Both a per cent sign and a colon can be used instead of '/' to indicate a Terma-style 'shad'. A reversed slash, '\' is used to generate a "bsdus rtags" – three dashes that are effectively a Tibetan ellipsis, indicating missing words to avoid repetition.

'\$X' or '\$x' produce a "sbrul shad". (See the sample file 21homage.doc.)

The software currently supports five different methods for representing the extra characters required for Tibetan transcriptions of Sanskrit. Two use the fonts prel1.ttf and prel2.ttf. These are both based on Prestige Elite; the first was originally created in 1984 for use with DOS. Subsequent changes in Windows resulted in some characters no longer being usable, and so a few characters were moved. Also supported is CSX (Classical Sanskrit eXtended) encoding. This has not been tested very thoroughly.

For prel2.ttf encoding, see sample file test1.doc

It is also useful to have a method which uses only ASCII characters and so the fourth method uses capital letters to represent characters not covered by Wylie; this is very similar to the Harvard-Kyoto and ITRANS encodings, particularly the former. The one difference is that Harvard-Kyoto has "za" for "śa" and "Sa" for "ṣa". The first of these is not compatible with Wylie and so here "Za" is used.

For ASCII-style encoding, see sample file test2.doc.

The most recent addition to the software is support for Unicode UTF-8. UTF-8 is the most popular of all the encodings for Unicode, particularly as it is backwards compatible with ASCII text. Some UTF-8 text files include a three-byte header at the beginning, known as the byte order mark (BOM). Tibw is agnostic and it does not matter whether a BOM is present.

As an example of UTF-8 encoding, see the sample file test3.txt. It does have the BOM at the beginning.

All these supported encodings are given on the next page.

Transliteration	-	CSX	-	Prel1	-	Prel2	-	ASCII	-	Unicode
ā		224		129		163		A		257
ī		227		131		131		I		299
ū		229		133		133		U		363
ṛ		231		135		135		R		7771
ṛī, ī		—		137		137		RI		7773
ḷ		235		139		139		L		7735
ḷī, ī		—		141		166		LI		7737
ṇ		239		143		168		G		7749
ṭ		241		145		145		T		7789
ḍ		243		147		147		D		7963
ṇ		245		149		149		N		7751
ṁ		252		151		151		M		7747
ś		247		153		153		Z		347
ṣ		249		157		170		S		7779
ḥ		254		160		160		H		7717
ñ		164		164		164		J		241

The hard spirants "ḥp" and "ḥk" are currently best represented by "f" and "q", respectively, due to an as yet unresolved problem with stacked characters.

By default, CSX does not get decoded. This is because of a conflict between the CSX code for "ṭ" and the normal code for the letter "ñ", which is needed for Sanskrit. If a file including CSX encoding needs to be used, the software should be started with the command line:

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tibw csx
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Ends. E Henning, 1 October 2012.