Word Tibetan! 5.1

བོད་ཡིག

TIBETAN FOR WORD
FOR WINDOWS AND THE MACINTOSH

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Kathmandu
NEPAL
http://www.tibet.dk/tcc

Contents

A Message from the Author

The Tibetan Computer Company was started in 1986. It produced and sold the first Tibetan word-processing software for the PC. Since then, the products and fonts of the Tibetan Computer Company have been continually developed and improved. In the 1990's they became the defacto standard for Tibetan word-processing, especially in Asia.

It has been my wish since the early 1990's that some of our software—a basic Tibetan typeface and word-processing program—could be made available free for those needing it, Tibetans and non-Tibetans alike. Unfortunately, the high costs involved in developing the program have prevented us from being able to give it away.

Recently, the Trace Foundation of New York, USA, provided the assistance required for provision of free software. They have licenced a a complete, general purpose Tibetan typeface and two Tibetan word-processing programs from us and in turn have provided those to the public under a GNU General Public Licence. These programs and the accompanying typeface are more than sufficient for all ordinary word-processing needs. Many thanks are due to the Trace Foundation.

Thus it is with great pleasure that I declare the general purpose typeface called Tibetan Machine and the two Tibetan programs that we developed for Windows, Tibetan! 5 for Word and Tibetan! 5 for WordPerfect free for public use. The programs and typeface may be used and even developed further by others under the rubric of the GNU General Public Licence.

Following this, Trace Foundation provided further assistance so that the software could be improved. We were able to produce a version of the software that worked equally well and exactly the same in both Windows and the Macintosh. We were also able to produce a new version of the TibetanMachine typeface which worked on both Windows and Macintosh computers. The new typeface was named TibetanMachine Web. Like the original programs and typeface, the new programs and typeface are available free under GNU General Public Licence.

Yours sincerely,
Tony Duff
Author of the software and fonts.

About this software

This particular package adds Tibetan text capability to Microsoft Word for Windows and the Macintosh. Once Tibetan text has been typed into Word with it, the text can be exported to any Windows or Macintosh program that supports fonts correctly.

The program is not good for making pecha because Word does not provide the graphics capabilities needed for true pecha. If you want to make pecha, please use Tibetan! 5 for WordPerfect package or our TibetDoc software in conjunction with it.

One general-purpose, Tibetan typeface, called TibetanMachine, and its derivative TibetanMachine Web are provided free for use with programs that support them, e.g., the Word program described here. However, other, higher quality typefaces are available from Tibetan Computer Company for those who need something better. Samples and full documentation of these typefaces are given further on in this manual and in the file **TCC Tibetan Typefaces Samples.pdf** included in the distribution files. Note that these other typefaces are not free; they must be purchased from us or our authorized distributor.

Our Word-Processors in Brief

We have three different word-processing products for Windows, one for the Macintosh, and one for DOS each aimed at a different end-user.

1) Tibetan! 5 for WordPerfect for Windows has the advantage that it can be used for making authentic Tibetan pecha. Word for Windows and the Macintosh simply lacks the features needed to make authentic pecha. WordPerfect on the other hand does have the required features. WordPerfect is also well-known as being the best software for handling XML text.

2) Many end-users prefer to use Word. And it is true that for plain Tibetan text and simple purposes, Word is perceived as being easier to use than WordPerfect. Thus we provide this complete system for Word on both the Windows and Macintosh platforms called Tibetan! 5 for Word.

3) We have a standalone, custom-programmed word-processor

for Windows called TibetDoc. It is an excellent editor for Tibetan and includes features such as a Tibetan spelling checker not found in the other products. Tibetan text typed into TibetDoc can be saved in many different formats, including Word and WordPerfect. Our idea is that TibetDoc could be the main tool for Tibetan Word-processing and that other applications such as WordPerfect, Word, and so on could be used to provide formatting features that TibetDoc does not. A special feature of TibetDoc is that it has the means to make Tibetan text in a distributable format that you can use for distributing your work to others. So it is like an Adobe Acrobat for Tibetan.

Windows users might like to purchase one CD containing all of our word-processing products for Windows and the Macintosh, including TibetDoc. It is available from Snow Lion Publications at a reasonable price.

4) We continue to sell our word-processing product Tibetan! 4 for DOS. For those who want to make truly authentic Tibetan pecha, this is still for may reasons the best program to use. The truth of this is verified by the fact that in Asia, the Tibetan! 4 for DOS program is the standard Tibetan word-processor in use.

For a complete comparison of the four wordprocessors, look up the comparison table on our web-site at:
http://www.tibet.dk/tcc/download/wprotabl.pdf.
or see the text called "Wordprocessor table.pdf"on the distribution CD.

Our Other Products

We specialize in electronic products of the very highest quality for Tibetan loanguage studies. In particular, our dictionaries and electronic texts are very famous for their accuracy and ease of use:

- **The New Electronic Edition of Sarat Chandra Das's classic Tibetan-English Dictionary** in TibetD format. Comes with TibetD Reader-Only software.

- **The Illuminator Tibetan-English Dictionary** in TibetD format. Comes with TibetD Reader-Only software. A dictionary from Lotsawa Tony Duff.

- **Other Native Tibetan works** and translations in electronic format.

For information on **dictionaries and Buddhist texts** see the Padma Karpo Translation Committee web site at
http://www.tibet.dk/pktc

and the Drukpa Kagyu Heritage Project site at
http://www.tibet.dk/dkhp.

Also see the Snow Lion Publications web-site at
http://www.snowlionpub.com.

Better Quality Fonts

We have two typefaces better in quality than the free Tibetan Machine typeface. These fonts enhance any of our products, not only the word-processors:

- **TibetanCalligraphic** typeface to go with any TCC programs. A high quality typeface especially suitable for Tibetan publishing. If you are going to publish any Tibetan text you should at least purchase this font.

- **TibetanClassic** typeface to with any of the above programs. The highest quality typeface for those who want the very best in Tibetan publishing.

For samples and descriptions of the fonts, see the section in this documentation on page 15. Alternatively, view or print the pdf file that comes with the program called "TCC Tibetan Typefaces Samples.pdf".

Also see our web site at http://www.tibet.dk/tcc or the Snow Lion Publications web-site at http://www.snowlionpub.com.

Authorized Distributors

All of our software, fonts, dictionaries, and texts can be purchased through our authorized distributors.

1)World-wide distributor:
Snow Lion Publications
P.O. Box 6483
Ithaca NY 14851
USA
Tel.: +1 (800) 950-0313 (toll-free) or +1 (607) 273-8519
Go to their web-site at http://www.snowlionpub.com for more information, e-mail contact, and direct purchases using the internet.

2) In Kathmandu, Nepal
Tibetan Computer Company
P.O. Box 4957
Kathmandu
Nepal
Contact at:+977 (1) 273742 or send e-mail to
tdolma@wlink.com.np

Licence - General

The rights to the Tibetan! 5 for Word and TibetanMachine typeface are owned by Tony Duff © 2000-2001. The software mentioned was licenced to Trace Foundation, New York, by Tony Duff under a non-exclusive, world-wide licence in April, 2001. Trace Foundation has provided the software to the public under GNU General Public Licence version 2. The TibetanMachine Web typeface is derived from the licenced TibetanMachine typeface and is also available to the public under GNU General Public Licence version 2.

In general, you may use the software mentioned above for free and you may distribute it to others with the use and distribution being governed by the terms of the GNU General Public Licence provided with the software. If you intend to distribute or modify the software, it is important that you read and understand the licence. If you have any doubts about the files covered by the licence, please read the licence distributed with the software or contact us.

WARNING!!

Please note that Tibetan Computer Company has other products and typefaces. These are NOT free and are NOT distributed under General Public Licence. Those software packages and typefaces must be purchased by individual users for use on their machines from an authorized distributor of the software. Any illegal distribution of the other software or typefaces will be fully prosecuted under law.

Licence - Specific

The following software programs:

Tibetan! 5 for Word For Windows
Tibetan! 5 for Word For Macintosh
Tibetan! 5 for WordPerfect For Windows
Tibetan Machine typeface
Tibetan Machine Web typeface
are all authored by Tony Duff and are all
copyright © 2000-2001 Tony Duff.
Contact the author at tdolma@wlink.com.np

The above programs and typeface were licenced to the Trace Foundation, New York, USA in April, 2001 by the author. Trace Foundation is providing the program to the world via General Public Licence as follows.

The programs and typeface are free software; you can redistribute them and/or modify them under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of 'MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE'. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA.

UPDATES

There is one and only one authentic place to obtain updates. Many web sites now carry our free software but most of them have early versions obtained from the original, free distribution CD's. Our web site at:

http://www.tibet.dk/tcc

is the only place that you can obtained the latest versions of the software and fonts. We actively improve the software and fonts and add to the documentation. All of this latest material is only available at the site give. Please check the site from time to time.

Support From the Author

The only support provided is in the form of updates on the web site above.

Support in Kathmandu

Full support for the program can be obtained in Kathmandu from Ngawang Tenphel Dorje.

Tenphel as he is known has more experience than anyone except the author of the program with the products of Tibetan Computer Company. He has spent many years being the manager of major Tibetan text preservation project. He was the author's right hand man in the Drukpa Kagyu Heritage Project for many years and learned everything about the software there. He now has a company called TD Computer Parkhang in Kathmandu.

In Kathmandu, Nepal
TD Computer Parkhang
P.O. Box 2534
Kathmandu
Nepal
Contact at:+977 (1) 478332 or send e-mail to
tenphel@info.com.np

Step One: Installing and Setting up the software for PC's

First install Word for Windows. The Tibetan software was developed in Word '97 and Word 2000. It works in both and should work in any subsequent version of Word.

1. TIBETAN FONT INSTALLATION

We make several Tibetan typefaces. The program comes standard with the one called TibetanMachine and a version of that called TibetanMachine Web which is the same as TibetanMachine but has been altered so that it will work on both PC and Macintosh computers. Additional typefaces are available for optional purchase. See page 15ff for complete information on TibetanMachine and TibetanMachine Web. You will also find information and samples of our higher-quality Tibetan typefaces there, too.

The free Tibetan Machine and TibetanMachine Web typefaces that come with this package are not installed using a font installer. Rather, the five fonts of the TibetanMachine and/or ten fonts of the TibetanMachine typeface are included uncompressed on the distribution disk and should be installed using the standard Windows method. To do this, go to the Windows **Start menu**. Then go to **settings** on the menu, then open **Control panel**, then start the **fonts** applet from the control panel window. From the **file menu** of the **font installer** window that appears, press **install fonts** and a new window will appear. Use the appropriate controls on this Window to point to the CD or wherever you have the TibetanMachine and TibetanMachine Web fonts. When you have found the TibetanMachine fonts, five Tibetan Machine fonts as listed below will appear. Select all five and press the OK button to install them. Once they are installed, you will find them listed in the main Window of the font installer. Then, when you have found the TibetanMachine Web fonts, ten fonts as listed below will appear. Select all ten and press the OK button to install them. Once they are installed, you will find them listed in the main Window of the font installer.

Our other fonts, which are for sale only and are not free, come with a font installer and complete instructions on installation. To install these optional typefaces, follow the instructions provided with the typefaces. Then, because of the way that Windows is designed, it is a good idea to reboot your system after installing fonts, although not absolutely necessary.

You can test to see whether the fonts have installed by starting Word and looking at the font list. You should find five fonts for each of the PC style typefaces you installed as follows:

TibetanMachine
TibetanMachineSkt1
TibetanMachineSkt2
TibetanMachineSkt3
TibetanMachineSkt4

TibetanCalligraphic
TibetanCalligraphicSkt
TibetanCalligraphicSkt2
TibetanCalligraphicSkt3
TibetanCalligraphicSkt4

TibetanClassic
TibetanClassicSkt1
TibetanClassicSkt2
TibetanClassicSkt3
TibetanClassicSkt4

DzongkhaCalligraphic
DzongkhaCalligraphicSkt1
DzongkhaCalligraphicSkt2
DzongkhaCalligraphicSkt3
DzongkhaCalligraphicSkt4

You should find ten fonts for each of the Web style typefaces you installed as follows:

TibetanMachineWeb
TibetanMachineWeb1
TibetanMachineWeb2
TibetanMachineWeb3
TibetanMachineWeb4
TibetanMachineWeb5
TibetanMachineWeb6
TibetanMachineWeb7
TibetanMachineWeb8
TibetanMachineWeb9

To verify the names of the fonts in Word, do not look at the font list that drops down from the toolbar. Use the font list under **Format, fonts**.

(Note: in newer versions of Windows, a font is shown in the font-list using the characters in the fonts, which is good for Western fonts but means you cannot verify the above names. To change it so that the names are listed in an English font, please go to **Tools, Customize, Options Tab** and remove the tick in the box next to **List font names in their font**.)

In the end, if you can find a set of five fonts for the PC typeface you installed and ten for the Web style typeface then font installation is finished. If they simply don't appear, you have not installed them. If they only partially appear then you have yet to install the ones that are missing.

2. TIBETAN KEYBOARD INSTALLATION

First, if you have previously installed the sample Tibetan keyboard that used to be available from our web-site, delete it now by deleting the **TCCTibetan!Sample.dot** file from the startup directory where you previously installed it. Although it doesn't make any difference, you might also want to un-install the **TibetanMachineSample** font; use the delete menu item on **Control Panel, Fonts** to do that.

Second, the Tibetan keyboard and the toolbar for using it are contained in custom template files called

TCCTibetan! 97.DOT
TCCTibetan! 2000.DOT

in the **Custom Word Templates** folder on the distribution media. The number in the name refers to the version of Word that it is designed for use with. Choose the appropriate file and copy it into the startup folder of your Word or Office installation. The location of the startup folder can be found by looking under **Tools, options, file locations** in Word. By installing the new template in that folder, the contents of the template are available whenever you start Word.

When you have finished copying the appropriate file, start Word. The new template should be automatically loaded and activated. If it is, you will see the button shown in the picture below on the toolbar at the top of the window. In that case, your installation and set up is finished.

If you cannot see it, first check to see whether the template is loaded. Look at **Tools** off Word's menu then look at **Templates and add-ins**. You should see the **TCCTibetan!...**

template listed and the check box beside it should be ticked. If it is not there at all, you probably did not copy it into the startup directly properly and need to repeat the copying instructions given above. If it is there but not ticked, please tick it now by clicking on it. After you have done the above, the button might appear on the toolbar. If it does, you are finished.

If you successfully complete the above but still do not see it, you must activate the Tibetan Keyboard toolbar. Go to **Tools, Customize** and look at the **Toolbar** tab. At the very bottom of the list on that tab, you will see the name of a toolbar **TCC Tibetan!**. Activate it by clicking the box next to it so that a tick appears then close the window. As soon as you click it, a new toolbar will appear with a red letter ¶ to the left of the name **TCC Tibetan Keyboard** as in the image. You are now finished with the installation and setup.

3. EXTRA SETUP AND KEYBOARD SHORTCUT

The keyboard works using a set of macros and a toolbar in **TCCTibetan!.dot** template. If you would like to delete that toolbar and set up your own, or if you would like to do any other customization, the macro that runs all of the Tibetan keyboard and which needs to be put on a toolbar is called:

A_Tibetan_Keyboard

With that information you can do all sorts of customization using Word's built in procedures.

For example, we have already assigned a short-cut key to the Tibetan keyboard. The accelerator key is **CTRL-a**. However, by doing that, we have removed the normal **CTRL-a Select All** shortcut. If you want to get back the **CTRL-a** shortcut to **Select All** use the normal procedures of Word to reassign it as follows. Go to **Tools, Customize** and click on the **Keyboard** button at the bottom of the window. Go down the listto the left till you come to **Edit**. Click on that and then scroll down the right list till you come to **EditSelectAll**. Click on that and then put the cursor in the **Press new shortcut key box**. Press **Ctrl-A** and then **Assign** and the original assignment will be back.

If you want to assign a new key to the Tibetan keyboard, the process is similar. Go to **Tools, Customize** and click on the **Keyboard** button at the bottom of the window. Go down the list to the left till you come to **Macros**. Click on that and then scroll down the right list till you come to **A_Tibetan_Keyboard**. Click on that and then put the cursor in the **Press new shortcut key box**. Press the key assignment that you want then press **Assign** and you will have a new keyboard shortcut for the Tibetan keyboard.

Step One: Installing and Setting up the software for Macintosh

The Tibetan software for the Macintosh works only in Office 2001. First install that.

1. TIBETAN FONT INSTALLATION

We make several Tibetan typefaces. The only one that works on a Macintosh at the moment is a specially prepared version of the PC typeface called TibetanMachine. This specially prepared version works equally well on the PC and the Macintosh; it is called TibetanMachine Web. If there is demand for the better quality typefaces on the Macintosh we will produced them, so send us your requests! See page 15ff for complete information on and samples of all of our typefaces, including TibetanMachine Web.

The TibetanMachine Web typeface for installation on the Macintosh comes as a font suitcase with ten fonts in it. We provide it in uncompressed and stuffed formats for your convenience. There are ten TibetanMachine Web fonts in typeface. Their names are:

TibetanMachineWeb
TibetanMachineWeb1
TibetanMachineWeb2
TibetanMachineWeb3
TibetanMachineWeb4
TibetanMachineWeb5
TibetanMachineWeb6
TibetanMachineWeb7
TibetanMachineWeb8
TibetanMachineWeb9

Install the fonts using the standard procedures. To verify the names of the fonts in Word, do not look at the font list that drops down from the toolbar. Use the font list under **Format, fonts**.

(Note: in Word, the name of a font is shown in the font-list using the characters in the fonts, which is good for Western fonts but means you cannot verify the above names in a Tibetan font. To change it so that the names are listed in an English font, please go to **Tools, Customize, Options Tab** and remove the tick in the box next to **List font names in their font**.)

In the end, if you can find a set of ten fonts for the Web style typeface then font installation is finished. If they simply don't appear, you have not installed them. If they only partially appear then you have yet to install the ones that are missing.

2. TIBETAN KEYBOARD INSTALLATION

The Tibetan keyboard and the toolbar for using it are contained in a custom template file for Word called

TCCTibetan! Mac

on the distribution media.

This file will only work in Word that comes with Office 2001 for the Macintosh (due to bugs in the Office code in previous versions which Microsoft has declined to fix). Copy the file to the startup folder of your Word or Office installation. By installing the new template in that folder, the contents of the template are available whenever you start Word.

When you have finished copying the appropriate file, start Word. The new template should be automatically loaded and activated. If it is, you will see the button shown in the picture below on the toolbar at the top of the window. In that case, your installation and set up is finished.

If you cannot see it, first check to see whether the template is loaded. Look at **Tools** off Word's menu then look at **Templates and add-ins**. You should see the **TCCTibetan! Mac** template listed and the check box beside it should be ticked. If it is not there at all, you probably did not copy it into the start-up directly properly and need to repeat the copying instructions given above. If it is there but not ticked, please tick it now by clicking on it. After you have done the above, the button might appear on the toolbar. If it does, you are finished.

If you successfully complete the above but still do not see it, you must activate the Tibetan Keyboard toolbar. Go to **Tools, Customize** and look at the **Toolbar** tab. At the very bottom of the list on that tab, you will see the name of a toolbar **TCC Tibetan!**. Activate it by clicking the box next to it so that a tick appears then close the window. As soon as you click it, a new toolbar will appear with a red letter ཀ to the left of the name **TCC Tibetan Keyboard** as in the image. You are now finished with the installation and setup.

3. EXTRA SETUP AND KEYBOARD SHORTCUT

The keyboard works using a set of macros and a toolbar in the template. If you would like to delete that toolbar and set up

your own, or if you would like to do any other customization, the macro that runs all of the Tibetan keyboard and which needs to be put on a toolbar is called:

A_Tibetan_Keyboard

With that information you can do all sorts of customization using Word's built in procedures.

For example, we have already assigned a short-cut key to the Tibetan keyboard. The accelerator key is **CTRL-a**. However, by doing that, we have removed the normal **CTRL-a Select All** shortcut. If you want to get back the **CTRL-a** shortcut to **Select All** use the normal procedures of Word to reassign it as follows. Go to **Tools, Customize** and click on the **Keyboard** button at the bottom of the window. Go down the listto the left till you come to **Edit**. Click on that and then scroll down the right list till you come to **EditSelectAll**. Click on that and then put the cursor in the Press new shortcut key box. Press **Ctrl-A** and then **Assign** and the original assignment will be back.

If you want to assign a new key to the Tibetan keyboard, the process is similar. Go to **Tools, Customize** and click on the **Keyboard** button at the bottom of the window. Go down the list to the left till you come to **Macros**. Click on that and then scroll down the right list till you come to **A_Tibetan_Keyboard**. Click on that and then put the cursor in the **Press new shortcut key box**. Press the key assignment that you want then press **Assign** and you will have a new keyboard shortcut for the Tibetan keyboard.

Step Two: Recognizing The Tibetan Fonts

The fonts available from Tibetan Computer Company are regarded at this time as the best in the world. They are regarded as the most authentic and, on top of that, as very beautiful. This chapter gives an introduction to all of the fonts that have been made to go with our software. Note that not all of them are available for Windows.

- All of our Windows software comes standard with TibetanMachine typeface. Tibetan Calligraphic, Tibetan Classic, and Dzongkha Calligraphic are optionally available.
- Our DOS product comes standard with TibetanAmdris, TibetanMachine, and both Tibetan and Dzongkha Calligraphic typefaces. Tibetan Classic is available as an option.
- There is now a new version of TibetanMachine called TibetanMachine Web. This comes with our software for Word for Windows and Word for the Macintosh.

TibetanMachine is the most versatile of all of the typefaces, which is why we licenced it for free use and why we include it standard with every software package.

However, **TibetanCalligraphic** is much more suitable when it comes to making pecha and **TibetanClassic** is the best font available in the world for making pecha. Therefore, if you are going to make pecha, we strongly recommend that you purchase either TibetanCalligraphic or TibetanClassic for that purpose.

Tibetan Machine is very easy to look at on the screen, though for intensive viewing Tibetan Calligraphic is best. Tibetan Classic renders well on the screen only on higher resolution devices (1024 x 768 or greater).

1. TIBETAN MACHINE AND TIBETAN MACHINE WEB TYPEFACE

The first typeface that Mr. Duff created in the mid-1980's was the TibetanMachine typeface. It was modelled on a Tibetan typeface that was developed in India early in the 20th. century. The typeface was created by Presbyterian missionaries living in Calcutta who wanted to convert Tibetan Buddhists to Christianity. Thus, the typeface is usually referred to the "Calcutta" typeface but is sometimes known as the "Presbyterian" typeface. The typeface was cast in metal and became used throughout India for several decades as the standard font for reproducing Tibetan books in India.

The Calcutta typeface is easy to read and was popular amongst Tibetans for a long time which is why a computer typeface was designed after it. However, the original design was not very elegant, so the computer design was improved markedly over the original. Since its first introduction in 1987, TibetanMachine has been improved upon considerably. After several major revisions it has been made very elegant whilst still retaining the feel of the original design. Because the computer typeface was derived from a typeface intended for mechanical reproduction and because it was built especially for use with mechanical printers, the typeface was named "Machine".

TibetanMachine has quite short descenders and so is particularly useful for applications such as newspaper publishing, making tables, and making short pecha where a small line height is required. The typeface also has a rounded quality which makes it very legible, even at very small point sizes. For this reason it is especially suitable for printing the sheets of dharaṇi and mantras which need to be rolled up and put into statues, stūpas, and so on. The typeface has a very formal feel to it and so is useful for all sorts of true publication applications such as book publishing. and so on.

Many people have requested a "slanted" version of Tibetan typefaces, like the "Italics" of European typefaces. Such a design goes completely against the design principles of u.chan lettering so we do not provide it. However, it is possible, by italicizing Tibetan text with the word-processor to obtain that effect. A slanted form should *not* be used for pecha-making or other traditional purposes.

This typeface was used to produce the TibetanMachine Web typeface. TibetanMachine Web has exactly the same appearance as TibetanMachine because no changes were made to the characters in the typeface. However, the characters in the TibetanMachine typeface were moved into different positions and spread out amongst more fonts to make TibetanMachine Web with the result that TibetanMachine Web works on both PC and Macintosh platforms.

Moreover, the TibetanMachine Web typeface can be used successfully for web publishing and also for e-mail where the TibetanMachine typeface cannot. More details are found in the next chapter.

2. TIBETAN CALLIGRAPHIC FONT

Following the introduction of TibetanMachine typeface, work was started on a new typeface that would be very authentic and most suitable for publishing Tibetan texts. The new typeface was called TibetanCalligraphic and was designed with a noticeable difference between the thicks and thins of the strokes in the letters. The first designs were somewhat ugly and the inter-letter spacing was not good. However, the font went through several

revisions and a major renovation in early 1997 which made the typeface exceptionally attractive. The new design with all of its features has been repeatedly praised by Tibetans as very authentic and highly desirable for use in publishing native texts. It is without doubt the premier font in the package and certainly the most suitable font in this software for publishing pecha.

The font in general has a formal look and, with longer descenders than TibetanMachine typeface, is very suited to making pecha and other documents where a "native" look is required. The design is very readable and particularly suited to pecha-making. However, it does not reproduce well at very small sizes. For example, when very small letters are required for making dharaṇi for stuffing stūpas and statues (8-10 points) TibetanMachine is more legible.

The Tibetan newspaper called "Nyenchen Thanglha" published in Kathmandu, Nepal is made using this typeface.

3. DZONGKHA CALLIGRAPHIC FONT

In 1997, the Dzongkha Development Commission of the Royal Government of Bhutan licensed a special version of the Tibetan! program for use throughout the Kingdom of Bhutan. At that time, they requested that the a Dzongkha-style font be made to go with the new package. In order to fulfill their requirements, the TibetanCalligraphic font was modified to make a new font called DzongkhaCalligraphic. The DzongkhaCalligraphic font has the same qualities as mentioned above under the TibetanCalligraphic font but the numerals, letters ཀ, ཅ, their derivatives, the numerals, and the various ◌ྭ signs have all been changed to the Dzongkha look.

4. TIBETAN AMDRIS FONT

A fourth typeface, TibetanAmDris, was produced based on a design published by Dongthog Rinpoche for an "Elegant Tibetan dbu.can Script" some years ago. The strokes of the letters are quite thin compared with TibetanMachine and Calligraphic, a style more in keeping with the so-called Am.bris style of writing. The font was developed directly in postscript format but was left a little "rough" compared to TibetanMachine and TibetanCalligraphic so that it would have a hand-written look. The hand-written look that it has makes it very suitable to certain applications where an "informal" look is required, such as in reproduction of poetry in the midst of other text. This font has not been made available for Windows as yet.

5. TIBETAN CLASSIC FONT

Authentic Tibetan calligraphy gives U.chan letters a sculpted look which is not usually reproduced these days; in modern writing style, letters are written with the serifs in an oblique slab rather than having the earlier sculpted look. The fonts mentioned above all follow the more modern style so another font, called TibetanClassic, was made from the TibetanCalligraphic design but with the older style of serif. A great deal of effort was put into developing the font to be as close to original Tibetan script as possible and with very high quality. The font is a beautifully designed and correctly proportioned representation of the older calligraphic lettering style Tibet and is truly representative of the older style of calligraphy made with a bamboo pen. The typeface has delicately curved descenders and certain other design features which follow exactly the most elegant way of traditional writing. It is by far the best font available in the world for publishing pecha and other formal materials.

Note that this font used to be called "Tibetan ChosGyal Classic".

To purchase the optional fonts, contact one of the Tibetan Computer Company distributors (see page 3).

Tibetan Font Samples using Lord Gampopa's Oral Instructions on Mahamudra courtesy Drukpa Kagyu Heritage Project

Tibetan Machine Typeface 26 point

ཞི། །ན་མོ་གུ་རུ། རྗེ་འཚོ་བའི་མགོན་པོ་ཐུགས་རྗེ་ཅན། །ཆོས་ཕྱག་རྒྱ་ཆེ་ལ་མངའ་བརྙེས་པ། །འོད་གསལ་གྱི་ངང་ལ་རྒྱུན་ཆད་མེད། །རྗེ་སྐྱེ་སྦྱོམ་དེ་ལ་ཕྱག་འཚལ་ལོ། །ཁྲ་མ་ཆོས་སྐུ་རྟོ་རྗེའི་ཐུགས། །འོད་གསལ་གཉུག་མ་དེ་ལ་འདུད། །སྣང་ལྡན་ཕྱི་རབས་དོན་ཚད་དུ། །རང་སེམས་རྩ་བའི་མན་ངག་བྱི། །རང་སེམས་གཉུག་མ་ངོ་སྤྲོད་ཅིང་། །རིག་པ་ངོས་འཛིན་མན་ངག་འདི། །སྣལ་ལྡན་ཤེས་རབ་བྱང་ཆུབ་ལ། །རྒོགས་ལྡན་ཁྱམ་སྐྱི་སྤྲོམ་གསུངས། །དེ་ནས་བརྒྱུད་ནས་བདག་ངང་འཕྲད། །མན་ངག་ཁྱམ་འདི་གསུང་བཞིན་དུ། །སྤྲོབ་མའི་སེམས་ཀྱི་གནས་བཙལ་བ། །རིག་པ་གནད་དུ་གདབ་པར་བྱ། །མ་ཐེབས་བར་དུ་སྐྱོར་གྱིན་གདབ།། དུ་ལྟ་ངའི་ཁལ་ཆོས་ཉན་པའི་ཤེས་པ། མ་ཡེངས་པར་སེང་ངེ་བ་རིག་པ་གསལ་ལ་མ་འགགས་པ་འདི་ཆོས་སྐུ་ཡིན། འདི་ནས་ལངས་ནས་འབྱོ་བའི་དུས་དང་། དེ་ནས་མ་ཚད་དུ་ངལ་བསོ་བའི་དུས་དང་། དེ་ནས་ཕྱག་པར་མལ་དུ་འདུག་ཙ་ན་ཡང་དེ་རང་ཡིན་ནོ་གསུང་། ཁ་ཁྱོད་འཆི་ཡང་འདི་དང་མི་འབྲལ་ལ། ན་ཡང་འདི་

Tibetan Calligraphic Typeface 26 point

ཞི། །ན་མོ་གུ་རུ། རྗེ་འཚོ་བའི་མགོན་པོ་ཐུགས་རྗེ་ཅན། །ཆོས་ཕྱག་རྒྱ་ཆེ་ལ་མངའ་བརྙེས་པ། །འོད་གསལ་གྱི་ངང་ལ་རྒྱུན་ཆད་མེད། །རྗེ་སྐྱེ་སྦྱོམ་དེ་ལ་ཕྱག་འཚལ་ལོ། །ཁྲ་མ་ཆོས་སྐུ་རྟོ་རྗེའི་ཐུགས། །འོད་གསལ་གཉུག་མ་དེ་ལ་འདུད། །སྣང་ལྡན་ཕྱི་རབས་དོན་ཚད་དུ། །རང་སེམས་རྩ་བའི་མན་ངག་བྱི། །རང་སེམས་གཉུག་མ་ངོ་སྤྲོད་ཅིང་། །རིག་པ་ངོས་འཛིན་མན་ངག་འདི། །སྣལ་ལྡན་ཤེས་རབ་བྱང་ཆུབ་ལ། །རྒོགས་ལྡན་ཁྱམ་སྐྱི་སྤྲོམ་གསུངས། །དེ་ནས་བརྒྱུད་ནས་བདག་ངང་འཕྲད། །མན་ངག་ཁྱམ་འདི་གསུང་བཞིན་དུ། །སྤྲོབ་མའི་སེམས་ཀྱི་གནས་བཙལ་བ། །རིག་པ་གནད་དུ་གདབ་པར་བྱ། །མ་ཐེབས་བར་དུ་སྐྱོར་གྱིན་གདབ།། དུ་ལྟ་ངའི་ཁལ་ཆོས་ཉན་པའི་ཤེས་པ། མ་ཡེངས་པར་སེང་ངེ་བ་རིག་པ་གསལ་ལ་མ་འགགས་པ་འདི་ཆོས་སྐུ་ཡིན། འདི་ནས་ལངས་ནས་འབྱོ་བའི་དུས་དང་། དེ་ནས་མ་ཚད་དུ་ངལ་བསོ་བའི་དུས་དང་། དེ་ནས་ཕྱག་པར་མལ་དུ་འདུག་ཙ་ན་ཡང་དེ་རང་ཡིན་ནོ་གསུང་། ཁ་ཁྱོད་འཆི་ཡང་འདི་དང་མི་འབྲལ་ལ། ན་ཡང་འདི་

Tibetan Classic Typeface 26 point

ཞི། །ན་མོ་གུ་རུ། རྗེ་འཇོ་བའི་མགོན་པོ་ཐུགས་རྗེ་ཅན། །ཚོས་ཕྱག་རྒྱ་ཆེ་ལ་མངའ་བཀྲེས་པ། །འོད་གསལ་གྱི་ངང་ལ་རྒྱུན་ཆད་མེད། །རྗེ་སྐྱེ་སྦོམ་དེ་ལ་ཕྱག་འཚལ་ལོ། །བྱ་མ་ཚོས་སྐུ་རྡོ་རྗེའི་ཐུགས། །འོད་གསལ་གཉུག་མ་དེ་ལ་འདུད། །སྣང་ལྡན་ཕྱི་རབས་དོན་ཚད་དུ། །རང་སེམས་རྩ་བའི་མན་ངག་བྱེ། །རང་སེམས་གཉུག་མ་ངོ་སྤྲོད་ཅིང་། །རིག་པ་ངོས་འཛིན་མན་ངག་འདི། །སྣང་ལྡན་ཤེས་རབ་བྱང་ཆུབ་ལ། །རྒྱས་ལྡན་བླ་མ་སྐྱེ་སྐྱོམ་གསུངས། །དེ་ནས་བརྩུབ་ནས་བདག་དང་འཕྲད། །མན་ངག་བླ་མའི་གསུང་བཞིན་དུ། །སྐྱོབ་མའི་སེམས་ཀྱི་གནས་བཙལ་བ། །རིག་པ་གནད་དུ་གདབ་པར་བྱ། །མ་ཞེབས་བར་དུ་སྐྱོར་ཀྱིན་གདབ།། ད་ལྟ་ངའི་ཁལ་ཆོས་ཉན་པའི་ཤེས་པ། མ་ཡེངས་པར་སེང་ངེ་བ་རིག་པ་གསལ་ལ་མ་འགགས་པ་འདི་ཆོས་སྐུ་ཡིན། འདི་ནས་ལངས་ནས་འཁོར་བའི་དུས་དང་། དེ་ནས་མ་ཚོད་དུ་ངལ་བསོ་བའི་དུས་དང་། དེ་ནས་ཕྱག་པར་མལ་དུ་འདུག་ཙོ་ན་ཡང་དེ་རང་ཡིན་ནོ་གསུང་། ཁ་ཁྱོད་འཆི་ཡང་འདི་དང་མི་འབྲལ་ལ། ན་ཡང་འདི་

Dzongkha Calligraphic Typeface 26 point

ཞི། །ན་མོ་གུ་རུ། རྗེ་འཇོ་བའི་མགོན་པོ་ཐུགས་རྗེ་ཅན། །ཚོས་ཕྱག་རྒྱ་ཆེ་ལ་མངའ་བཀྲེས་པ། །འོད་གསལ་གྱི་ངང་ལ་རྒྱུན་ཆད་མེད། །རྗེ་སྐྱེ་སྦོམ་དེ་ལ་ཕྱག་འཚལ་ལོ། །བྱ་མ་ཚོས་སྐུ་རྡོ་རྗེའི་ཐུགས། །འོད་གསལ་གཉུག་མ་དེ་ལ་འདུད། །སྣང་ལྡན་ཕྱི་རབས་དོན་ཚད་དུ། །རང་སེམས་རྩ་བའི་མན་ངག་བྱེ། །རང་སེམས་གཉུག་མ་ངོ་སྤྲོད་ཅིང་། །རིག་པ་ངོས་འཛིན་མན་ངག་འདི། །སྣང་ལྡན་ཤེས་རབ་བྱང་ཆུབ་ལ། །རྒྱས་ལྡན་བླ་མ་སྐྱེ་སྐྱོམ་གསུངས། །དེ་ནས་བརྩུབ་ནས་བདག་དང་འཕྲད།། །མན་ངག་བླ་མའི་གསུང་བཞིན་དུ། །སྐྱོབ་མའི་སེམས་ཀྱི་གནས་བཙལ་བ། །རིག་པ་གནད་དུ་གདབ་པར་བྱ། །མ་ཞེབས་བར་དུ་སྐྱོར་ཀྱིན་གདབ།། ད་ལྟ་ངའི་ཁལ་ཆོས་ཉན་པའི་ཤེས་པ། མ་ཡེངས་པར་སེང་ངེ་བ་རིག་པ་གསལ་ལ་མ་འགགས་པ་འདི་ཆོས་སྐུ་ཡིན། འདི་ནས་ལངས་ནས་འཁོར་བའི་དུས་དང་། དེ་ནས་མ་ཚོད་དུ་ངལ་བསོ་བའི་དུས་དང་། དེ་ནས་ཕྱག་པར་མལ་དུ་འདུག་ཙོ་ན་ཡང་དེ་རང་ཡིན་ནོ་གསུང་། ཁ་ཁྱོད་འཆི་ཡང་འདི་དང་མི་འབྲལ་ལ། ན་ཡང་འདི་དང་མི་འབྲལ། ཁཁྱེད་ལོག་ཀྱང་འདི་དང་མི་

Step Three: Choosing a Font

As stated in the last chapter, the TibetanMachine typeface is a general-purpose typeface that has been put made publicly available. The TibetanMachine typeface was built for high-quality publishing in Windows. Because of the resulting arrangement of characters in the typeface, it could not work on the Macintosh, could not be used for making web-pages, and it also could not be used for sending e-mail.

The original TibetanMachine for Windows came as a series of five fonts. To make the typeface work on the Macintosh, the characters of the five fonts were re-arranged into a set of ten fonts. The re-arranged version still looks the same as the original but now works equally well on both Windows and Macintosh sides. Furthermore, it now works for making pages for the Web and it for sending e-mail.

The new version of the Tibetan Machine typeface is called Tibetan Machine Web. You should not confuse this with the Tibetan Machine typeface. There is no difference in the design of the individual characters in the fonts but there is a difference in how they are arranged amongst the fonts that the user will use.

1. WHO CAN USE WHAT

If you are a Macintosh user, you can only use the Web font; the TibetanMachine and other Windows style fonts will not work on your computer.

If you are Windows user you can use any of our fonts. You can use TibetanMachine or TibetanMachine Web for free and you can purchase our better typefaces and use those, too.

2. YOU WANT BEST QUALITY TIBETAN TEXT?

If you want the very best appearance of Tibetan text you should work in a PC and either use the TibetanMachine typeface (not the Web version) or one of our better typefaces.

There is a difference between TibetanMachine and TibetanMachine Web. When we made Tibetan Machine Web, we had to break Tibetan Machine up into twice as many fonts. Doing this means that many of the very fine features of the typeface were lost. For example, there is a lot of kerning in the Tibetan Machine font which really improves its appearance on the page. This kerning is all gone from the Tibetan Machine Web fonts. That doesn't mean to say that the Tibetan Machine Web fonts are ugly; to the contrary, they look very similar to the Tibetan Machine fonts. However, the new fonts do not have all of the fine details of the original fonts. These very fine details do not matter for standard letters, e-mails, or publishing on the Web.

However, for somebody who wants the very best appearance of Tibetan lettering, TibetanMachine Web is definitely inferior to TibetanMachine or any of our other fonts used under Windows; PC users should be using the Tibetan Machine typeface under Windows where possible

If you are working on a PC, you can use both the original TibetanMachine fonts for publishing purposes and switch to TibetanMachine Web for making text for web-publishing, e-mail, or sending to a Macintosh user. This is very easy to do; when you run the Tibetan keyboard for Word under Windows, you can choose whether to use Tibetan Machine or Tibetan Machine Web and you can change fonts on-the-fly.

To repeat, for somebody one a PC who does want compatibility with the Macintosh or is concerned about e-mail or web publishing it is correct to use TibetanMachine Web. At any other time, for better quality of Tibetan text, you should be using TibetanMachine or one of our better typefaces for Windows.

As was stated in the last chapter, the Tibetan Machine typeface is very suitable for many purposes and will serve the general needs of many people. However, some people will want an even higher quality typeface for publishing. We have two levels of better quality typeface: Tibetan Calligraphic and Tibetan Classic. These can be purchased from us directly or from our distributor, Snow Lion Publications. At the moment, these special typefaces are only available in Windows format. Thus, those two typefaces cannot be used on the Macintosh at the moment. If we have requests for these typefaces to be converted to the Web style typeface that will work on the Macintosh and we will consider doing that work and modifying the keyboards for the Macintosh so that they support those typefaces.

3. PUBLISHING TO THE WEB

TibetanMachine will not work for web publishing but TibetanMachine Web will. To publish to the web, type your text using the TibetanMachine Web typeface. Transfer the text to your HTML files. The text will render correctly on any browser on any computer. (That is true as long as the browser does not have faults displaying fonts. For instance, Internet Explorer 5.5 has a bug in it which incorrectly spaces Tibetan vowels. This is not a problem with the fonts, it is a problem with the browser. All other browsers, including other versions of IE that we have tested do work correctly).

For end-users to read the Tibetan text, they will need the fonts on their system. You can put a link to our web-site for them to download the fonts. You could put the fonts up on your own web-site but then the end-users will not obtain the latest versions

of the fonts; it is better to link to our site. Thank you.

You can also put smaller amounts of Tibetan text on your web-pages by making GIF's or JPG's of the text using our fonts. A tip for you is that the text will look even better if you have font-smoothing turned on before you capture the image of the text. It improves the appearance of the Tibetan markedly.

4. TIBETAN E-MAIL

Type your text in Word using TibetanMachineWeb. Then:

1) Use the Word to send the e-mail. You can either send it directly if you computer is properly set up or you can send it as a Word document attached to an e-mail. If you do this, the other person will need Word to read the file.
2) Use Outlook Express or Eudora or Netscape 6 to send your e-mail. This is very easy. Type your text in Word then simply copy and paste it into the e-mail and send. The other person will be able to read it directly in their e-mailer.

Remember that, In order to read your e-mail, the other person will have to have the TibetanMachine Web typeface on their computer. They will also need the TibetanMachine Web fonts on their system to read the e-mail. The fonts are free, so that makes it easy for everyone to get them. Again, please direct others to our web-site.

There is another way to send Tibetan documents which does not need the recipient to have Tibetan fonts on their computer. Type your Tibetan and/or other text using any typeface and make it into a PDF files using Adobe Acrobat. Send the PDF file as an attachment to an e-mail. The recipient can get the Adobe Acrobat reader free from Adobe's web-site. They will be able to read your document with Tibetan text, full formatting, and so on even if they don't have the Tibetan fonts.

1. TIBETAN FONTS and CHARACTERS IN WORD

Before learning how to how to type Tibetan, you need to know about the Tibetan fonts and how they work.

The first thing to know is which typefaces or typefaces you have installed on your computer. (The Tibetan Computer Company sells several Tibetan typefaces. Complete descriptions and samples of those typefaces are shown in the next chapter.) Briefly, the Tibetan typeface that comes standard with all Tibetan Computer Company products is called TibetanMachine and the typefaces available as options are TibetanCalligraphic, TibetanClassic, and Dzongkha Calligraphic.

The second thing to know is that each typeface is not one font but a series of fonts and that all fonts are needed for a Tibetan typeface to work properly. The names of the fonts in each typeface are listed in the Tibetan font installation instructions on page 11.

The third thing to know is that each of the fonts in a typeface contains a particular set of characters needed for Tibetan. The fonts and their characters are as follows:

- The first font for each typeface is a "normal" Tibetan font. containing all of the standard Tibetan letters and punctuation marks. All of the characters in the font can be typed directly with the Tibetan keyboard.
- The remaining fonts are support fonts. They are named Skt1, Skt2, Skt3, and Skt4 in the PC fonts and Web 1 to 9 in the Web fonts. The PC fonts received their name because originally the support fonts only contained Tibetan-Sanskrit characters.
- The first and second support fonts "Skt1" and "Skt2" contain only Tibetan-Sanskrit letters. All of these except two in the Skt1 fonts can be typed directly with the Tibetan keyboard. The user should never have to type them manually. The other two have to be manually inserted. The Web fonts 2 to 5 are like this, too.
- The third support font "Skt3" mainly contains Tibetan-Sanskrit letters. All of these can be typed directly with the Tibetan keyboard. The user should never have to type them manually. However, there are a few special symbols in this font which are not on the Tibetan keyboard and which have to be manually inserted. The Web fonts 6 and 7 are like this, too.
- The fourth support font "Skt4" contains only symbols and unusual letter-forms. None of these are on the Tibetan keyboard so all of them have to be manually inserted. The Web 8 and 9 fonts are like this, too.

Generally speaking, to manually insert a character which cannot be typed from the Tibetan keyboard, you first have to insert a font change to the appropriate font then insert the appropriate character using Word's **Insert, Symbol** method. This method cannot access all of the special Tibetan symbols, so we are working on an updated keyboard that will give easy access to all of the characters in all of the Tibetan fonts. Visit our web-site at http://www.tibet.dk/tcc to get updates, including this one.

The fourth thing to know is which Tibetan characters are available and where they are in the various fonts of a Tibetan typeface. All of the characters in each of the PC fonts are clearly shown in the maps of the appendix (page 54ff) and are described in the lists (page 59ff) following that. We strongly suggest that you look now at least at the character maps so that you know which characters you have available to you. The exact same characters are also in the Web fonts and a listing of all of them follows the lists of the characters in the PC fonts.

What about characters such as complex Sanskrit stacks which are not available in any of the five fonts of a typeface? They can be constructed from their parts using the **Field, advance** method of Word. You can use either full-size letters from any of the normal or support fonts or you can use the half-height letters at the end of the fourth support font that were made specifically for that purpose. E.g., the famous Kalachakra mantra  can be made using that method!

To sum up this section: you know now which typeface(s) you have, that there are several fonts in each typeface, that most of the characters in those fonts can be typed directly with the Tibetan keyboard, and that the remaining characters have to can be typed directly from the fonts. Any letters not in the fonts can be constructed from parts within the fonts using the features of Word.

The next thing to know then is how to use the Tibetan keyboard to type most of the characters within the fonts.

2. THE TIBETAN KEYBOARD

The Tibetan keyboard is a complex program provided in the form of a Word macro. The macro can be put on a toolbar or assigned to an accelerator key for ease of use. When you installed the template file containing the macro, a toolbar for starting the keyboard macro was automatically added to the other toolbars in Word and the accelerator key **Ctrl-a** was assigned to the macro. However, you can make your own toolbar for the macro or change the accelerator key at any time using the usual methods of Word.

The Tibetan keyboard is started by pressing **Ctrl-a** or the button on the Tibetan keyboard toolbar. The Tibetan keyboard appears as a window at the top left of the screen. The window can be moved about by dragging it with the mouse.

The window has five boxes on it. "The Tibetan Typeface" box to the left allows you to choose a Tibetan or Dzongkha typeface font for typing. Of course, if you don't have the typeface, you can't use it. If you need the better quality typefaces not shipped with the free software, please purchase it from one of our authorized distributors (listed earlier in this manual). Scroll up and down the list with cursor keys or with the mouse. Select a font that you have installed on your system. If you select a font that you do not have installed, the letters typed with be odd though there will not create a problem.

The "Size" box allows you to choose the point size of the typeface just selected. Normal Tibetan text ranges from about 18 points on the small side to about 30 points on the large side. Smaller sizes can be used for the dharani needed for filling stupas, statues, etcetera but the fonts become unreadable below about 8 points. Larger sizes can be used for display purposes such as headlines and banners and Word does support very large font sizes e.g., greater than 1000 points.

The "Adjust up" box allows you to adjust the Tibetan letters up from the baseline so that they register with English text. If you are typing plain Tibetan text, no adjustment is needed in which case the value should be set to "0". When the Tibetan text is to be mixed with English or other text, you can type a number into the box and the Tibetan text will be moved up that many points relative to the other text. For English text of about 11 points, try moving the Tibetan text up about 5 points.

The "Input" box is where you type using the Tibetan keyboard. When the cursor is in the right hand box, the keyboard becomes a Tibetan keyboard. The layout of the keyboard on a standard US English keyboard is shown in the keyboard map on page 140. (Some of the keys will move about on some other keyboards such as French, German, etc.) When a key is pressed, the appropriate Tibetan character will be inserted into the active Word document.

The Tibetan keyboard can type all of the standard Tibetan and Tibetan-Sanskrit letters that are in the Tibetan fonts. It can also type all of the standard symbols and punctuation marks. However, there are some characters, mainly the symbols in the later support fonts, that it cannot type. Most of those characters can be entered into a document using the **Insert, Symbol** method of Word. Unfortunately, it is difficult to see all of the characters in the **Insert, Symbol** dialogue box and on top of that some do not appear. However, as before, an update to the keyboard which will solve this will be available very shortly (probably by the time you read this. Again, go to our web-site at http://www.tibet.dk/tcc to find updates.

Complete information on all of the characters in our typefaces is contained in the appendices of this manual. We recommend that, before you start serious work, you acquaint yourself with those lists. Then, when you need a special character which is not on the keyboard you will be able to find and insert it.

Remember that you have to insert a manual font change to the appropriate one of the fonts before typing the character using the **Insert, Symbol** dialogue box. Remember also that, if there are some characters not on the keyboard that you need to use regularly, you can make a macro to insert those into your document. Again, the update to the keyboard will solve this problem.

Tibetan "stacks" (e.g., སྒྲ) are made by pressing the "stacking key" first then pressing the keys of the letters in the stack. The stacking key is the letter "h" on our keyboard layout. The stacking key signals the computer that the following keystrokes belong to a stack. Following that, the keyboard calculates and displays the stack as you press the component letters. E.g., to create སྒྲ, you would first press the "h" key then the ས, then the ག, then the ར keys. As you typed the keys you would see first ས then སྒ then སྒྲ. Every stacked letter in all of the fonts in a typeface can be made using that one, simple method.

The keyboard is smart enough to know when a stack should end so for the most part you just keep on typing rather than having to end a stack. One the few occasions where that does not work, you can end a stack by pressing the "stacking key" once more. Messages appear in the lower message box while you are typing so that you know whether you are in stacking mode or not. The stacking feature is one several very special features of our keyboard. It was developed through Mr. Duff's years of experience with native Tibetans typing native Tibetan texts so we have no doubt that it is the simplest, quickest, and easiest to use keyboard on the market.

When you are typing Tibetan text, most of Word's cursor movement keys work; you can move up and down, left and right, and can delete, backspace, and so on. Function keys and the TAB key do not work. For those, you have to turn off the keyboard temporarily, do what you need to do, then bring the Tibetan keyboard back. In practice, this is easy to do (see below).

There are two ways to turn off the Tibetan keyboard. One way is to hide it temporarily, the other way is to stop it completely. When you hide the keyboard and then start it again it comes back instantly and just as you left it. When you stop the keyboard completely and restart it, it has to reload all over again which sometimes takes a moment.

- To hide the keyboard, press the **ESCape** key at any time or click the mouse anywhere over the area of the Tibetan keyboard window.
- To stop the keyboard altogether, press the ALT-F4 key or click on the close program button a the top right of the Tibetan keyboard: 

The first time you start the Tibetan keyboard it comes up with the default settings shown in the image above i.e., with Tibetan Machine typeface and 27 points size selected. You can change those settings by moving to the typeface box and scrolling up and down or moving to the size box and typing the pointsize needed. All changes that you make to the settings are saved and your last settings appear when you restart the keyboard. These settings are saved in a file called **Tibkeybd.ini** which is placed in the Windows startup directory (look in Windows under **Options, File locations** for the location). You can delete this file at any time without harming the operation of the keyboard.

Keyboard Ease of Use Features

The keyboard has several other ease-of-use features. When the keyboard is started, it looks at the text where the cursor is currently positioned in the document to find which font is active.

- If the active font is a non-Tibetan font, the keyboard returns to that font whenever you hide or stop the keyboard. It also returns to the same point size and kerning and vertical font registrations. That way, if you are typing mixed text, you do not have to keep changing back to English fonts and sizes and positioning.
- If the active font is a Tibetan font, the keyboard does not start with the previous, saved Tibetan settings but automatically changes to the Tibetan typeface and size active in the document. This means that you can easily edit text without worrying about the point size, kerning, and positioning. Simply put your cursor in the middle of the text and start typing; the keyboard will make all of the necessary font, font size, kerning, and vertical position adjustments for you.

Thus, for example, if you want to switch in and out of Tibetan and English, start the keyboard with the cursor over English text with the English font and size that you want to return to whenever you hide or stop the Tibetan keyboard. Then, whenever you disable the Tibetan keyboard, it will automatically return to the English font and its size. Alternatively, for example, if you want to edit some pre-existing Tibetan text, just put the cursor on the text and start the keyboard; the keyboard will determine the font and size for you and you can just start typing.

When you edit pre-existing Tibetan text, the only thing to be careful of is to place the cursor over letters with a normal Tibetan font selected before starting to type Tibetan (i.e., over normal Tibetan letters). If you put the cursor in letters with one of the normal Tibetan fonts typing will always work correctly. However, if you put the cursor in letters with one of the support fonts the typing will not work correctly. For example, in Tibetan text that has both normal Tibetan and TibetanSanskrit letters, always put the cursor in the letters that show as a "normal" Tibetan PC font or the plain Web font; do not put it in letters that show as one of the support fonts (Skt1 to 4 on the PC typefaces or Web1 to 9 on the Web typefaces. However, even if you forget, the keyboard is watching and will warn you if you try to start in a non-normal font.

Once you understand the points mentioned above, typing either Tibetan only or Tibetan mixed with another language is exceptionally easy. More detailed instructions about typing Tibetan text with the keyboard are in the chapter devoted to that subject on page 25.

Step Five: Details of Typing Tibetan Text

The Tibetan Keyboard provided with this software is essentially the same as the Tibetan keyboard #1 found in all of our other software packages (Tibetan! for DOS, Tibetan! For WordPerfect for Windows, and TibetDoc) so if you have learned the keyboard in one of those packages, you already know how to type Tibetan with this keyboard. To start the Tibetan keyboard, follow the instructions in the chapter "Learning Some Basics".

1. TYPING NORMAL TIBETAN TEXT

Where are the Tibetan letters placed on the Tibetan keyboard? Look at the keyboard layout map on page 140 in the Appendices; it shows which key to press to obtain which Tibetan letter. This keyboard is called our TCC #1 Layout. The arrangement of this keyboard has the advantage that it is very easy to learn and remember. We have a second keyboard layout keyboard layout which is harder to memorize than the #1 keyboard layour but is optimized for speed typing. The second layout is not available in this version of the keyboard but will be available in a new version of the keyboard that will be on our web-site very soon (probably by the time you read this); see http://www.tibet.dk/tcc. If you would like to modify the layout to one that suits you, it is very easy to do; see page 45 for details.

Look at the map for keyboard #1 in the appendix and you will see that the Tibetan consonants are arranged in their normal ཀ་ཁ་ order from the top left of the keyboard to the bottom right of the keyboard and that the vowels are clustered in the centre of the keyboard. Furthermore, nearly all Tibetan characters can be typed without using the SHIFT key. Only ཏ་ and ཨ་ and a few unusual characters such as the ལོག་ཡིག་དྲུག་ (the six reversed letters for Tibetan-Sanskrit) need the SHIFT key. On the keyboard diagrams, un-SHIFT-ed letters are shown in the bottom right hand corner of a key box and SHIFT-ed letters are shown in the top right hand corner of a key box.

To learn to type Tibetan using the Tibetan keyboard, open a fresh document then start the Tibetan Keyboard. Now, type "**q w e r** " (with spaces as shown). The Tibetan keyboard converts that to ཀ་ཁ་ག་ང་. It appears on the screen and you can print it immediately, if you wish. Now use the map of keyboard 1 to type the rest of the consonants (གསལ་བྱེད) of the Tibetan lettering set. They are easy to type; just press the appropriate key as shown on the keyboard map.

What about the vowels (དབྱངས་) of the Tibetan lettering set? Each vowel sign comes in several versions so that every consonant receives a vowel sign which looks correct. Simply press the appropriate key on the Tibetan keyboard and the correct version of the vowel to suit the preceding letter will be typed automatically. When writing Tibetan letters, the vowel is always added *after* the letter is written. The Tibetan keyboard functions in the same way so, to add a vowel to a letter and to have it calculated correctly, position the cursor directly after the letter which is going to get the vowel and press the vowel key.

NOTE

Typing Rule 1: The order in which Tibetan characters should be typed is exactly the same as the order in which Tibetan letters should be written. The main letter comes first and the vowel follows it.

NOTE

Typing Rule 2: There are several versions of each vowel sign and each consonant has to get a specific one of those vowels, so when you delete a letter which has a vowel, you must delete the vowel as well and type the letter and the vowel again.

NOTE

Now you know how to type the consonants and the vowels— the གསལ་བྱེད་ and the དབྱངས་—but what about the letters which are really two or more consonants joined together in a vertical "stack"? These composite letters are the "stacked" letters containing superscribed ra, la, and sa consonants and/or subscribed wa, ya, ra, la, sa and a.chung consonants (the ར་ལ་ས་མགོ་ and ཝ་ཡ་ར་ལ་ས་འ་བཏགས་པ་ respectively). The Tibetan keyboard also takes care of these easily and very efficiently. To create a "stacked" letter, you first signal the keyboard that you are about to write a stacked letter and not a stand-alone consonant. You do this by pressing the "**h**" key, which we have called the "**stacking key**". Note that this is, conveniently, the key in the middle of the keyboard. Try pressing the "**h**" key now. After you press the "**h**" key, a message box appears on the lower part of the screen telling you that you are "**building a stack...**" and asking you to type the first letter of the stack.

Now that the keyboard knows that you are building a stack, the next step is to type the component letters of the stack. Type them in the order in which they would be written (i.e., top to bottom). For example, to make a རྐ, press the top-most letter of the combination, which in this case is a ར, then press the next letter of the combination which in this case is ཀ. Notice that the keyboard automatically calculates the new letter and shows it to you immediately. Notice also that, in this case, the message "**Building stack, type the next letter...**" remains at the bottom of the screen. This tells you that it is still possible to add another letter to the stack. In this particular case it is possible to add a ཡ་ letter to the bottom of རྐ; so press the letter ཡ and notice that the keyboard again immediately re-calculates the letter and shows you the new combination which is རྐྱ. Notice that the message at the bottom of the screen now changes to "**Type next letter, vowel, or a.chung...**"; the keyboard is telling you that the main

stack is finished and is telling you what can be typed next. In this case, if you type a new letter, the stack will finish and the new letter will appear on the screen. Or, if you type a vowel, that will be correctly calculated for you and will be shown on the screen, correctly positioned with respect to its main letter (the མིང་གཞི་).

Well, what if you wanted to stop at ཀ and not add another letter to the bottom of the stack? Easy, just keep typing! The keyboard knows what is a valid combination and what is not so if you type the next letter and it shouldn't go underneath, the keyboard will automatically end the stack and type your new letter after the stack. The keyboard knows that vowels and a.chungs end a stack so typing a vowel or a.chung automatically ends a stack as well. For example, if you typed a vowel or an a.chung to go with the ཀ by pressing the vowel or a.chung key, or typed the next letter that needs to follow the ཀ then the stack will be automatically ended and the character that you have typed will be put into the correct place. To see how this works, press the "stack" key to start a stack and type a ཀ again. To type the word ཀྐ་ you now type the ཁ; the keyboard knows that a ཁ cannot join onto a ཀ so it ends the "stack" and types the ཁ directly after the ཀ.

In this system, there are no special keys for superscribed and subscribed letters. Instead, you start a stack by pressing the "stack key" then press the standard vowels to type the parts of the stack. Thus, to type a superscribed ra, la, or sa letter or a sub-scribed wa, ya, ra, la, sa, or a.chung (ར་ལ་ས་མའོ་ or ཡ་ཡ་ར་ལ་ས་འ་བཏགས་པ་) you start a stack with the stacking key then press the consonant that you require: ར་ལ་ས་ཡ་ར་ལ་ས་ or འ་ respectively.

The Tibetan keyboard is designed to work as though you were hand-writing the Tibetan. The only real difference is that when you are writing you start writing a stack directly whereas with the Tibetan keyboard you have to tell it to start a stack. However, as in writing, you do not have to tell the Tibetan keyboard that you are ending a stack; the keyboard will always end a stack for you correctly if you just keep typing.

What if a stack doesn't end when you need it to? Or what if you really need to force a stack to end? Simply press the stacking key ("**h**") again and the stack will be closed. Also, when you press the back-space, delete, or enter keys the stacking function is turned off automatically. Finally, typing any character which does not belong to a stack, including vowels, punctuation marks, and consonants, also forces a stack to end.

What about punctuation? All of the common punctuation marks that you need for standard Tibetan are on the keyboard. Additionally, there are a few special signs and punctuation marks in the Skt3 font and many in the Skt4 font; these can be obtained using the **Insert, Symbol** method of inserting characters into a document. Note that a normal tsheg is obtained by pressing the space bar and a space is obtained by pressing the hyphen key. When you understand the basics of typingTibetan, you will need to read the next chapter on formatting where it says more about typing a tsheg.

That completes everything that you need to know about the keyboard for basic typing. You might like to practice typing a little before reading on.

The next item to discuss is the a.chung when sub-joined to a main letter (འ་རྒྱང་བཏགས་པ་). This is always made by typing it as part of a "stack". After pressing the stacking key, type the letter or stacked letter to have the a.chung subjoined and then the a.chung itself. What about a letter which has a vowel and an a.chung? When writing, an a.chung is always written before the vowel is written and likewise on the Tibetan keyboard the a.chung on a letter must always typed before the vowel.

HINT

Typing Rule 1 re-stated: when using the Tibetan keyboard the correct sequence for typing is: main letter, a.chung, then vowel.

There is one more thing to know. When the Tibetan consonants with long legs—ཀ་ག་ང་ཏ་ད་ན་ཕ་ཝ་ཧ་—have a vowel or an a.chung written below them, the consonant is written in a shorter form than normal. Accordingly, the Tibetan fonts and character sets have two forms of each of these consonants: a normal length one for when the consonant is written without something below it and a shorter length one for when the letter gets a zhabs.kyu or an a.chung joined below it. If you look at the "normal" character map of the Tibetan fonts in Appendix III, you will see that the normal Tibetan fonts contain two sets of these letters. Whenever you type one of these letters and then follow it with a zhabs.kyu or a.chung joined below, the Tibetan keyboard deletes the ordinary letter and substitutes the shorter version. Therefore, if you later delete the zhabs.kyu or a.chung below but want to keep the main letter, you also need to delete the short form of the letter and retype it so that the normal form with a long leg comes. In practice, if you make a habit of always deleting both the main letter and its vowel you will not have a problem.

What can you do to fix mistakes that have come from leaving a short form of one of these letters behind? There is no easy method for fixing that problem. Therefore, you are encouraged to learn the habit of fully deleting characters with a zhabs.kyu on them then re-typing the character freshly. (In the DOS version of the Tibetan! program a spelling check would catch the mistaken letter and you could replace the word with the correctly spelled word offered in the list of alternatives that appeared on the spell-checking screen. That method is not available in the Windows versions of Tibetan!)

2. TIBETAN-SANSKRIT (ལེགས་སྦྱར་)

Tibetan-Sanskrit text contains both stacked letters and vowel signs not present in normal Tibetan text. All of these can be typed directly using the Tibetan keyboard.

Tibetan-Sanskrit contains some unusual and sometimes very complicated letter-stacks. To make them, follow the same method that you have already learned for making a normal Tibetan stack but type the letter combination that you need. If it is not a valid combination, the keyboard will just delete your effort and wait for you to try again; if it is a valid combination it will be constructed for you. Try this now if you like. To make the letter combination ཀྐ press the stacking key followed by the letter ཀ twice. The stack will be constructed for you in the same way as a standard Tibetan stack.

If you try to type a Tibetan-Sanskrit stack and it doesn't appear, it is probably because that stack is not in the Tibetan-Sanskrit character sets. Look carefully at the Tibetan-Sanskrit character maps in Appendix III to determine whether it is there or not. If it is not there, you can construct the stack using the features of Word and the way to do that is discussed in the next section of this chapter.

The Tibetan-Sanskrit character རྵྵ can be typed directly from the keyboard but needs a special key-stroke. First type a རྵ་ by pressing the stack key, the ར་ key, and the ཥ་ key. At this point if you press the ཥ་ key yet again you will obtain the རྵྵ character and then you can type on as you normally would.

The special Sanskrit vowel signs all are right there on the keyboard. As before, the main letter should be typed first, followed by the a.chung joined below if there is one and then the special vowel should be typed after that.

In Tibetan-Sanskrit, an anushvara is represented by a medium-sized circle over the top of the letter that it is modifying; for example ཡཾ. To obtain one of these "bindus" type the main letter first and then press the "*" key; the correct sign will appear over the letter. Sometimes the main letter already has a vowel with it in which case the normal vowel has to be replaced by a smaller version of the normal vowel and a smaller version of the normal bindu. To make one of these "bindus joined with a vowel sign" type the main letter first, then type the normal vowel, and then immediately press the "*" key. When you do this, the keyboard will delete the normal vowel and replace it with the correct vowel+bindu character. For example to make ཨོཾ, press an ཨ, then press a na.ro, and then press the bindu key, "*".

There are two other special versions of the bindu which are used in mantras. They have a crescent moon underneath but one has a nada and one does not: ྃ ྂ. These are available on the Tibetan keyboard so to put them over a letter, type the letter and then type the required bindu. When you do this, the bindu will line up over the letter that you just typed.

Try now to type that famous mantra: ཨཱོྃ་ཨཱཿ་ཧཱུྃ་. It is easy: Start a stack, press ཨ, then press an a.chung, then na.ro, then bindu, and then tsheg. The ཨཱ is just a subset of that but with a visarga typed directly after it. The ཧཱུྃ་ is made by pressing the stack key, followed by an a.chung followed by a zhabs.kyu followed by a bindu. Note that each one is typed in the order in which it is written.

Another special Sanskrit character that you will need occasionally is the virama. The virama is on the Tibetan keyboard so it can be typed directly. The virama, like the bindus, should be typed after the letter it goes with so that it will print correctly. For instance to make པཏ྄, first type a པ then a ཏ then the virama: . There is the avagraha too, which can be typed directly from the keyboard: ྅.

3. SPECIAL CASES

Most of the letters and punctuation marks signs that you will need for Tibetan and Tibetan-Sanskrit are available directly from the Tibetan keyboard. However, there are many special characters and parts of characters which cannot be typed directly with the Tibetan keyboard. These special characters are mainly found in the support fonts and especially in support font Skt4. Any character which cannot be typed directly from the Tibetan keyboard can always be typed by looking up the maps and tables in the appendix, noting its decimal number, then typing that number with the **Insert, symbol** feature. The following characters are not directly obtainable from the keyboard:

- In normal fonts: [159] (stand-alone wa.zur only for use in making non-existent stacks).
- In Skt1 support font:[57] and [58] for Kalachakra texts.
- In Skt3 support font: [173] to [178] and [180] to [187]
- In Skt4 support font: all characters.

Although these characters are not available from the keyboard, they are very important and will be needed from time to time. Therefore we recommend strongly that you find out what these characters and acquaint yourself with their availability by looking them up in the maps and lists in the appendix.

After looking through the maps, you might be tempted to use the parts of letters available in the normal font (the wazur) and in the Skt3 font (ya.ta, rata, rago, etc.) to construct *normal* Tibetan "stacked" letters. However that would be a mistake. All of the stacked letters needed for normal Tibetan writing can and should be made using the keyboard stacking technique. The

part letters are there only for emergency cases where a letter that is not available in the font sets must be constructed, as for example in a very unusual Sanskrit stack. However, this is something that most people will never need to do. In regard to this, note that the stacked letter ཀླྱ which is is not really legal according to the rules of Tibetan grammar but which has been in use in Eastern Tibet (Kham) for a few hundred years can be made by the normal stacking procedure. (The Eastern Tibetans use this letter specifically when spelling the word for "shoe", which is normally spelled ལྷམ་ but is spelled ལྕམ་ by them.)

On the other hand, when you do meet a complex stack which is not otherwise available, the part letters in the various fonts, and particularly the half-height letters in support font four (Skt4) will enable you to build any stack at all. Use the part letters and the advance up/down/left/right features of Word to make these unusual combinations. The Advance feature is accessed by pressing "**SHIFT-F8, Other, Advance**". E.g., the famous Kalachakra mantra  can be made using that method!

(You might also have to change the size of some of the parts: do this with a font size change just for that part.)

Name markers, etc.: Tibetan has a way of marking text using a large circle underneath the text. This mark (རྟགས་) is usually used to mark someone's name in a long-life prayer or other text where a person's name is to be particularly marked out and also to mark a section of text in a commentary. There are honorific and non-honorific versions of these marks. The non-honorific version is a circle and the honorific version is a circle with a crescent moon underneath it. These marks are available in support font four. You can adjust their vertical position as required by using the advance feature of Word.

Mgo.yig: In terms of punctuation, it is usual in Tibetan tradition to have just one ཿ or two ཿཿ. However, some people insist on a third or more, in which case you can use the character ཿ at [200] to build up ཿཿཿ and so on. It is best to use the character ཿཿ [201] for making the double mgo.yig; it is pre-built and will look better than the same thing made by typing its parts from the Tibetan keyboard.

Other: There are too many other special marks and signs to describe all of them here. However, there are plenty of descriptions of all of these characters in the appendices. Again, please look at the lists and tables and acquaint yourself with what is available. If you need to type a character from the Tibetan support font 3 or 4 that is not on the keyboard, first insert the appropriate Tibetan font change then use the **Insert, symbol** method to type that character. (Re-read the section 2 on the Tibetan Keyboard in the chapter "Learning Some Basics" for more information.)

That's all about the Tibetan keyboard and how to type Tibetan and Tibetan-Sanskrit lettering. However, to repeat, the correct sequence for typing is the same sequence as in writing. Main letter first, followed by a sub-joined a.chung if there is one, followed by a vowel if there is one, followed by a bindu of some sort if there is one. If you follow this sequence, the letters that you build up will always work nicely.

Searching

This version of the software does not provide an easy method for searching for Tibetan. One trick that you can use is to type some Tibetan, copy it to the clipboard, then paste it into the search dialogue box.

Exporting and Importing Tibetan Text

WARNING!!

Unbeknownst to most end-users, many applications do not support fonts correctly. The problems are not usually seen because most end-users do not try to do unusual things. However, Tibetan text is unusual and often digs out the flaws in programs. E.g., WordPad will lose a character if you paste Tibetan text into it and vowels will not always appear correctly. If you are going export Tibetan text to other applications, test carefully to make certain that all characters are transferred correctly.

Generally the Tibetan Web style fonts should export and import to and from any program successfully. The Tibetan Windows style fonts, such as TibetanMachine are not guaranteed to export and import because they expose the faults in the Windows font handling systems.

We do not expect that you will have trouble exporting and importing TibetanMachine Web fonts. The following are notes regarding the TibetanMachine and other Windows style fonts.

1. TO and FROM THE CLIPBOARD

You can use the clipboard to copy and paste Tibetan text to and from Word and other applications using our fonts subject to the proviso mentioned above.

2. To and FROM TIBETDOC

The recommended method for obtaining text from TibetDoc is either to copy and paste using the clipboard or to save text to an RTF file then import it into Word. To export Tibetan text from Word to TibetDoc, use the clipboard.

3. To and FROM WORDPERFECT for DOS

Files made in WordPerfect for DOS with our Tibetan! program cannot be transferred to other applications without a special converter. There is a converter in our TibetDoc software which will correctly extract Tibetan text from WP for DOS. That text can then be exported to Word as mentioned above. Tibetan text in Word can be sent to TibetDoc and then saved in WordPerfect for DOS and Windows.

4. TO and FROM OTHER APPLICATIONS

Files containing Tibetan can be saved in most formats in Word and transferred successfully. Word's own format is good and generally speaking, RTF is an excellent means for saving files with Tibetan text and transferring the contents to another application.

Formatting Tibetan Text

Once you can type Tibetan, you need to know how to format it so that it looks the way that Tibetan text is supposed to look. Tibetan letters and their formatting are very different from the English letters and their formatting. Because of this there are a lot of little details and some difficult things to learn about Tibetan formatting. However, if you read the following carefully and try to put our advice into practice, you will be able to master the use of Tibetan within Word so that you can make very authentic Tibetan text.

There are two main subjects in this chapter. The first subject is the settings that you need to use for Tibetan text as opposed to English text; the first six sections concern that. The second subject is things that you will have to change in the Tibetan text itself in order to get the formatting to accord with the rules of Tibetan writing. The seventh and eighth sections concern that. All of the information in those first eight sections is summed up in practical way in the last section

1. LINE HEIGHT AND FONT SIZE

Tibetan text needs to have the height between the lines of text set correctly. Word lets you change the vertical distance between lines of text and calls it **Line Spacing**. You can either set the general amount of line spacing between lines of text or can set an exact amount of line spacing. The second method is better for Tibetan text. That is because the first method automatically calculates the line height and, since that is different for each of the five fonts in a Tibetan typeface (there are longer and shorter characters in different fonts), the lines come out with different spacing depending on the characters typed on any given line. The second method forces the line height to be a fixed height, regardless of the Tibetan characters and the fonts they are in. The second method is set by choosing **Line Spacing Exactly at (x) points**. Unfortunately, when an exact line height is chosen, the Tibetan letters tend to be clipped on the screen...

When you mix Tibetan and English text together on the same line, you will also need to fix the registration of the two types of text. English characters mostly sit above a line and Tibetan characters mostly sit below the line so, unless you change their registration, the Tibetan text will generally appear too far down on any given line. To rectify this you can place an advance up before the Tibetan text and an advance down after the Tibetan text which will have the effect of moving the Tibetan text upwards so that it registers nicely with the English text. When your English text is 10 to 11 points in size and your Tibetan text is about 18 points in size, advancing the Tibetan text up by .09 inches and then back down by the same amount when the Tibetan is finished will put the Tibetan text into a nice registration with the English.

HINT

An alternative method of doing this in Word is to use the **Format, Font, Character Spacing, Position** setting to move each of the Tibetan fonts up from the baseline. This could be put into a style or can be done directly from the Tibetan keyboard using the vertical adjust box.

NOTE

The style of older and also more elegant Tibetan pecha is to use a large distance between lines. However, in the last 150 years or so, the style of writing lines of Tibetan text very close together in a pecha became popular. This small line height can be reproduced with computerized publishing but there is the significant problem that line letters will "crash" into the letters of the line below. When a Tibetan calligrapher hand-writes a text or makes the written template used to carve a wood-block, he can use a smallish line height because he can adjust the position and height of any letters which might otherwise touch the letters of the next line as he goes. However, unless you are willing to do this by hand on your computer (a lot of work!) the very small line heights have to be replaced by a height that is slightly larger and which prevents lines of text from crashing into each other.

Now, font size will be discussed. The Tibetan fonts are scalable, so can you make your text as large or as small as you want. You can make letters as large as a page for special display purposes and you can also make them exceptionally small for putting dharaṇi into stupas and so on.

What is the correct size of Tibetan font to use? The first thing to note is that Tibetan characters are written larger than English characters. The normal size of text for reading in an English book is 9 to 12 points whereas it is 24 to 30 points in a Tibetan book.

In Tibet, pecha (དཔེ་ཆ་), were written by hand or printed from wood-blocks. Different sizes of text were used but most text averaged about 27 to 30 points in size. The first metal Tibetan typeface was made in Calcutta in the early 1900's and since then, many books have been printed in India using that typeface. Most of those books and pechas used 24 point type because that was all that was available. As a result, many Western Dharma centres have copied that size, thinking that it was correct. However, as mentioned, native Tibetan texts were usually printed in a slightly larger size. The larger size is certainly more readable, 24 points being a little on the small size.

There is, in the original Tibetan tradition, a tradition of a pecha with a very small-sized page. Such pecha are literally called

"small pecha" (དཔེ་ཆུང་). However, even though they have a smaller page size, it is not uncommon for them to be written with the same size of lettering as the larger size of pecha. You could use 24 point text for these if you had to; the main issue is readability (remember that older people have to read your work too!) For standard size pechas, text somewhere between 27 points and 30 points in size is desirable.

Furthermore, there is, especially in the area of Buddhist texts, the notion that it is better to print very special texts on a larger page-size than normal. This is done as a matter of respect for the meaning of the words being written in the text. For example, in the Tibetan tradition, the Buddhist Canon (bka'.'gyur and bstan.'gyur) is written on a particular, special, large-size page. The text for those pages is then written correspondingly larger. Some old manuscripts that we have seen of this type, for example Prajnaparamita texts, sometimes have very large lettering for the body text: perhaps 48 points or more in size. In general, good quality pechas will have a larger rather than smaller text size for readability and most of the Tibetans we have worked with favour a 27 to 30 point size for very high quality work on a pecha with a page width of about 15 to 17 inches.

Another application of Tibetan text has always required very small copy. When dharani (གཟུངས་) are made for stuffing statues, clay representations, and so on, hundreds of thousands of mantras are often required in as small a space as possible. In this case you can make very small text. For example, we used 10 point text recently to make the dharani for Karmapa's stupa in Crestone, Colorado.

So far we have discussed the size of body text in a standard Tibetan pecha. In a Western-style book, several different sizes of letters besides the body text are usually used to allow for the needs of titles, headings, footnotes, and so on. However, in a traditional Tibetan pecha there are usually only two sizes of text. These two different sizes are referred to, quite literally, as larger (ཡིག་ཆེན་) and smaller (ཡིག་ཆུང་). In the Tibetan system of book design, the "larger size" is equivalent to the "normal sized" text (body-text) of the Western typographical tradition. The Tibetan "smaller size" text performs a number of functions. Firstly, and in the reverse of the Western tradition, it is used to write the title of a text (though only in the case where the text itself is very short and does not have a title page; where there is a title page, the title is written in the "larger size" text). Secondly, "smaller sized" text is used as a way to differentiate annotations from principal text, much as we would use italic text or, sometimes, footnotes, to a text. When making Tibetan pecha, we find that "larger" text sized at 27 to 30 points is matched well by "smaller" text sized at 21 to 22 points. When making texts with "larger" text of less than 26 points in size, we look very carefully at what size to make the "smaller" text. As a rule of thumb, the smaller text should be visibly different from the large text but should also be readable. Thus we usually do not go below 20 points for the smaller-sized text.

A third size of text is occasionally used in pecha on the title page but this is unusual. If you don't really know the pecha-making tradition, you should bear in mind that pechas are very simple affairs from a type-setter's perspective and it is a great mistake to start using the complexity of Western type-setting traditions if you want to maintain the Tibetan tradition. For instance, there never has been a "bold" or "italic" version of Tibetan writing in the Tibetan tradition itself. The Chinese, after invading Tibet, did introduce a bold version of Tibetan writing in printed books. This does seem to have some merit to it when used in Western-style books printed in Tibetan but it seems to be out of place in pechas. Even more recently, some Westerners have published Tibetan text containing some text slanted in the manner of italic text. Unfortunately, they have slanted it in the direction used in Western italics rather than in the opposite direction (which would fit with the natural backhanded-ness that occurs in much Tibetan writing). It seems that slanted Tibetan text might also be of use in modern times but again, not in the context of reproductions of traditional pechas. Just as these new weights of text—bold and slanted—seem to have a place in Tibetan texts produced in Western-book style, likewise various point sizes might be used as required in Tibetan text produced in Western-book style but not on reproductions of traditional pecha.

That concludes the discussion of font size.

2. CHARACTER SPACING

The width of a space character in Tibetan text is much larger than the width of a space character in English text. A Tibetan space character is usually equivalent in width to two or three English-text space characters joined together. Thus the space character in the Tibetan font is defined fairly wide. If you need to change the width of the space character throughout your text, adjust the value in the **Format, Font, Character Spacing, Spacing** box. We think that the space width is correctly defined in the Tibetan fonts but if you need to change it, again, think of putting the new Character spacing value in a style so that it is turned on when the Tibetan text style is on and turned off when the Tibetan text style is off.

NOTE

It would be a mistake to produce Tibetan text with a small, English-like space characters. The space character in Tibetan text is usually a marker to indicate that a whole thought or portion of a thought is complete and, as such, should be quite noticeable on the page.

WARNING!!

It is important that the spaces

which occur in between the normal sections of Tibetan text should be typed as one space otherwise formatting becomes too difficult to deal with (for instance, you will not be able to control line wrapping properly).

In summary, it is important not to type multiple spaces to get the normal, wide width of a Tibetan space after a shad. Try instead, as with English text, to type just one space but use the Word Spacing adjustment to adjust the width of that space if necessary. If you don't follow this advice but put many spaces all over the place, you will run into significant formatting problems later on; in particular pecha making will become a nightmare.

There are a few circumstances in Tibetan text where you will need to type multiple spaces together. These are the very large spaces which occur between chapters or major divisions of text, for instance in the sign which shows the end of a major section of Tibetan text "   ༈   " as for example in: ་་་་་འགྱུར་རོ།   ༈   །ཀ་བ་རིད། དམར་པོ་རིད། དཀར་པོ་རིད།, or in a few other, unusual situations where a much larger spacing is required. In all of these situations we find that two or three or four spaces are usually enough to get the extra width. For example, we type two or three spaces on either side of a sbrul.shad (༈) to get the correct spacing for the end of chapter mark shown immediately above.

3. JUSTIFICATION

Tibetan text is written with an attempt to make it right justified. However because it is all done by eye and hand it usually ends up partially right justified and partially right ragged but with extra tsheg's thrown in to make it (sort of) right justified. Most of us who are doing computerized publishing of Tibetan works approach this by deciding that Tibetan text is right justified and formatting our text accordingly. However, if you want the very best appearance of text, in pecha, try turning of right justification and pad the ends of lines with tshegs; this is the way that real pecha are written by hand.

When you right justify text, Word has to change the spacing between characters in order to fit them onto the line. When doing this, Word first tries to change the size of any space characters on the line; if that doesn't work it then changes the spacing between characters. This can sometimes result in strange appearance of text...

4. KERNING

All of the Tibetan fonts have kerning information built into their printer definitions. There is sometimes a vast improvement in the printed appearance of Tibetan when kerning is turned on in a document. This is also true of most proportionately spaced English fonts, so we encourage you to turn kerning on as a default setting for all of your documents. To turn kerning as a default setting, set **Format, Character Spacing, Kerning** to "On" above about 18 points for Tibetan. Again, you could put the setting in a style for Tibetan for ease of use. In practice, you don't have to worry about this because the Tibetan keyboard automatically sets kerning on above 18 points for all Tibetan fonts.

5. USING STYLES TO MAKE FORMATTING EASY

Word gives you a very powerful way to deal with formatting that you have to put again and again into a document. The method is called "**styles**". We cannot emphasize strongly enough how important it is to learn to use styles to format your document. If you do not use styles in your work, especially if you are switching between multiple languages, you will be making things extremely difficult for your self. On the other hand, if you use styles it will simplify your work greatly!

When you are working with Tibetan and another language in the same document, you have to change font, font size, hyphenation zone, line height and/or line spacing, word and letter spacing, and justification limits every time you switch languages. The only practical way to do this is to have style sheet settings for each of your languages.

6. LINE WRAPPING

So far we have talked about the various settings that you need for Tibetan text to be formatted correctly. Now we need to talk about some things that you actually have to change in Tibetan text in order to get a document which fits with Tibetan text formatting rules. The settings that we have discussed are things that you should put into effect before you do your work. What we are going to discuss now are things that you need to do to your work after it is typed or as it is typed.

In English word-processing, you don't usually have to worry about line-wrapping because the word-processor automatically takes care of it for you. Tibetan text has different rules for line-wrapping than English text and, unfortunately, word-processing programs do not know the Tibetan rules. This means that line-wrapping of Tibetan text does not work automatically or the way that you would like it to. The following section describes all the problems of line-wrapping with Tibetan text and all of the ways to solve them. It might seem very picky sometimes but, once you have learned it, you will be able to deal with Tibetan text layout without a problem.

a. Line Wrapping and Tsheg's

Tibetan words are not separated by spaces like English words but by a special character called a tsheg (ཚེག་). Tibetan text has to wrap to a new line automatically at a tsheg but in a few, specific instances text must not wrap to a new line at a tsheg. To provide automatic line-wrapping at tsheg's and still provide a means to prevent line-wrapping in the specific instances when it should not occur, this Tibetan! program has two types of tsheg built into it: one which will allow automatic line-wrapping and one which will not. In WordPerfect parlance these are called soft and hard tshegs but more correctly they are called breaking and non-breaking tshegs.

When you use the Tibetan keyboard to type Tibetan text, pressing the normal tsheg key inserts a breaking tsheg into your document. A breaking tsheg is actually a hyphen character as far as Word is concerned so any text following it will automatically wrap onto the next line if need be.

Now there is a particular circumstance in which a line should not automatically wrap after a tsheg. The tsheg which follows a ང letter and precedes a shad as in ང་། should not line-wrap. If line-wrapping were to occur after this tsheg, the shad would become the first character of a new line of text and that is not permissible according to Tibetan formatting rules. To prevent line-wrapping in this situation, you should type a non-breaking tsheg instead of a breaking tsheg. A non-breaking tsheg can be typed directly from the Tibetan keyboard by pressing **SHIFT-Hyphen** or you can use the **Insert, Symbol** method at any time to insert character decimal 205 in a Tibetan normal font, which is a non-breaking tsheg.

For a more technical understanding of the difference between a breaking and non-breaking tsheg, consider this. The Tibetan normal fonts have two tshegs. A non-breaking tsheg is available in the fonts with the native Tibetan characters. Inserting it into a document will not provide the automatic line wrapping which is usually needed in conjunction with a tsheg. Therefore, the same tsheg has also been put in the hyphen position (decimal 45) of the font and when you type a hyphen into a document which has a font change to Tibetan document, the hyphen appears and prints as a tsheg but line-wraps like a hyphen. The actual tsheg (at decimal 205 in Windows encoding) is what we are calling a non-breaking tsheg. The hyphen in a Tibetan font which looks and prints the same as a nonb-breaking tsheg but provides line-wrapping is what we are calling a breaking tsheg. A non-breaking tsheg can be obtained by pressing SHIFT-hyphen on the Tibetan keyboard or by inserting character decimal 205. A breaking tsheg is obtained by typing a hyphen character at any time. A non-breaking tsheg will always appear as a tsheg on the display and will always print as such. A breaking tsheg will appear and print exactly the same as a non-breaking tsheg if your current font is a Tibetan font otherwise a breaking tsheg will appear and print as a hyphen character. It is this hyphen character disguised as a tsheg that allows line-wrapping to occur automatically when required in Tibetan fonts.

Now that you understand that a breaking tsheg is in fact a standard hyphen character, you should also understand that, if you want to search for a breaking tsheg or do some other operation involving it, you must do your search or other operation using a hyphen character and not a decimal 205 character (which is a non-breaking tsheg). To make this clearer, we give you two examples of manipulating tsheg's:

(1) To do a manual search for a breaking tsheg, you would start a search then press the hyphen key to indicate that you are going to search for a breaking tsheg.

(2) To change all non-breaking tsheg's to breaking tsheg's, you would search for a decimal character 205 in a Tibetan normal font and replace it with a hyphen.

Normal typing of Tibetan text should be done using the breaking tsheg with non-breaking tsheg's only being typed when needed. In normal Tibetan text, the only circumstance that requires a non-breaking tsheg is the tsheg which is placed between a nga and a shad ང་།. However, there might be a special circumstance when you are doing an unusual page design and need to stop a line from wrapping at a tsheg and in that case you have the non-breaking tsheg at your disposal.

According to the rules of Tibetan writing, no character followed by a shad should have a tsheg between it and the shad unless the character is a nga. A tsheg must be placed between a nga and a shad in order to prevent the nga shad combination being mistaken as a letter pa. The tsheg must be placed between a nga and a shad whether the nga has a vowel sign or not. In other words the following are correct according to the rules of Tibetan grammar:

སང་།   ངེ་།   ཆུང་ངུ་།   ཧང་ངེ་།   བཟང་ངོ་།

Then on top of that in computerized Tibetan, the tsheg between a nga and a shad must be a non-breaking tsheg in order to prevent the shad from wrapping onto a new line.

In summary, you must use both breaking and non-breaking tshegs for Tibetan text to be properly formatted.

b. Line Wrapping and Other Characters

Line-wrapping in Tibetan occurs after tsheg's and sometimes occurs after other punctuation marks, too. In Tibetan text, a line is allowed to break after a shad (།), a visarga (ཿ), a repeat sign (༎ or ༔), and a gter.ma mark (༔). These characters do not necessarily have to allow line-wrapping after them, therefore they will not allow line-wrapping unless you do something special so that

line-wrapping can occur. To provide automatic line-wrapping after any of these additional punctuation signs, insert a space which is formatted to a minute point size after the punctuation sign and then, if needed, the line will wrap around at the right place. You probably should make a style for this "zero width breaking space" and, to minimize it's width, make it using an English rather than a Tibetan font.

Repeat signs and gter.ma marks are generally not a problem because they usually appear followed by a space. This treatment needs to be done for all visarga, though. Shad's are dealt with in the next section.

c. Line Wrapping and Spaces

This is most difficult to understand part of formatting Tibetan text with a computer. However, this topic is of vital importance because if you do not understand this properly, you will not be able to format Tibetan text properly and worse, you will probably end up introducing meanings into the text which were not there in the original.

There are two problems tangled together here. The problems come firstly from the fact that a space in Tibetan text has a very different function from a space in English text and secondly from the rule of Tibetan text formatting that a shad, space, or other punctuation mark cannot be the first character on any line of text.

In English, a space is simply a separator and never includes the meaning of a punctuation mark. Thus a space that arrives at the end of a line of text can be "swallowed" by a computer without changing the meaning of the text. Furthermore, any character following that space can be moved to the beginning of the next line without breaking any rules of written English. In Tibetan, a space is used as a separator of major sections of meaning and can include the function of the primary punctuation mark called a shad (།). Hence, a space at the end of a line in Tibetan cannot always be "swallowed" the way that it can in English. Moreover, it often happens that there is a shad character following a space in Tibetan text so, when line-wrapping occurs at the space, the shad is moved to the beginning of the next line and that immediately breaks the rule of Tibetan writing which says that a shad, space, or other punctuation mark is not allowed to be the first character of a line.

In short, the automatic line-wrapping that occurs at a space in English-based word-processing software, creates significant problems where Tibetan is concerned. And, unfortunately, there are no elegant ways around this. There is no choice but to type your Tibetan text and then correct the problems that result afterwards. This section, "Line Wrapping and Spaces" shows you how to do that.

Tibetan is written as a series of words separated by tsheg's. When enough words have been written to have a distinct meaning and the writer wants to separate them from the next group of words with a meaning, a particular mark is written at the end of the first group of words. This mark is the vertical stroke called a shad. The shad is then followed by a space. Then the next group of words with a meaning is written down and, when that group is finished, it too is marked off by writing a shad followed by a space. The result looks like this:

ངཚོ་དེ་ལ་འགྲོ་གྱི་ཡིན། ཁྱེད་རང་ཚོ་ཀ་བར་ཕེབས་ཀྱི་ཡིན། ཕ་ལགས་ཀ་བར་ཕེབས་ཀྱི་རེད། ཨ་མ་ལགས་ཁྱེད་རང་སྐུ་གཟུགས་བདེ་བོ་ཡིན་པས། དས་

However, the end-of-group-of-words marker is not always a shad followed by a space because of some rules of writing style which govern how the shad and space are to be written. Here are the rules:

1. The break between two sections of Tibetan text in prose consists of a shad to end the first section of text, followed by a space, followed directly by the text of the next section. For example: ཕེབས་ཀྱི་རེད། ཁོ་
2. The same break in prose but at a ཀ or ག ending must have the shad at the end of the first section of text dropped. For example: ཕེབས་ཀྱི་འདུག ཁོ་
3. The break between two sections of text when the subsequent section is verse consists of the standard prose break followed by an additional shad. For example: ཕེབས་ཀྱི་རེད། །ཁོ་
4. A break at a ཀ or ག ending followed by verse has a shad added prior to the verse but must have the first shad dropped. For example: ཕེབས་ཀྱི་འདུག །ཁོ་

In cases 2 and 4, the exact rule is that a shad is dropped after a ཀ or ག ending when the letter is bare or when it is modified with a gi.gu, 'greng.bu, or na.ro but is not dropped after it is modified by a zhabs.kyu. To illustrate this, the following all are correct when an end of section occurs, according to the rules of Tibetan text formatting:

ཀ ཀི ཀེ ཀོ ཀུ ག གི གེ གོ གུ

5. When the section of text being broken is a section of completed meaning (roughly the equivalent of a sentence in English), the section of text has to be completed with a particular grammar particle called a completing particle (རྫོགས་ཚིག) which is a duplication of the last consonant of the final word in the section and with a na.ro applied to it. The section of text following a completing particle must begin with a shad even in prose. For example:

ས་དང་པོར་སྨྱིན་པའི་གཏམ་མཛད་དོ། །སྨིང་རྗེ་དམན་ཞིང་ཕིན་

What happens when the space involved in those end-of-section markers occurs at the end of a line and disappears due to automatic line-wrapping?

The space in situation (1) can line-wrap and disappear at any time and no fault occurs. This is because (a) the shad at the end of the first section of text stays in place at the end of the line so it is apparent that a section of text has ended and (b) the next line of text then begins with a word and that is correct according to Tibetan text formatting rules. In normal Tibetan prose, most of the end-of-section markers are like this, making our job much easier.

The space in situation (2) is actually a space plus a shad so when this space is "swallowed" because of automatic line-wrapping, the meaning of the shad that was included in the space is lost, too. This loss of inherent shad, which is the principal punctuation mark in Tibetan, can change the meaning of Tibetan text considerably. In this example:

ང་ཆོ་དེ་ལ་འགྲོ་གི་ཡིན། ཁྱེད་རང་ཆོ་གა་པར་ཕེབས་ག ཕ་གა་འདུས་འདུག ཞལ་མ་ལགས་ག་འདུས་འདུག །

there is a space at the end of the line in the text but it has been swallowed due to line-wrapping. It is very problematic because you can no longer tell that there was a punctuated ending between the text at the end of the first line and the beginning of the second. In this particular case, the text is not hard to understand and an editor could correct it without guessing but in some cases it just would not be possible to tell that there was a break between the two sections of text. And in that case the meaning of the text would have changed with no way of the reader knowing that it had altered. Thus, the space in situation (2) then is extremely problematic and must be attended to.

The spaces in situations (3), (4), and (5) when "swallowed" at the end of a line do not introduce an error of mis-understanding into the text because a shad remains explicitly present. But there is the other problem that, after line-wrapping, the second shad becomes the first character of the new line and this is not allowed according to the rules of Tibetan text formatting. All three situations need to be corrected by having the space re-appear and by moving the shad so that it is not the first character of the line.

The problem in situation (2) can be solved simply by changing the space so that it cannot line-wrap. Fortunately, Word provides a method for that. If a normal space, called a breaking space, is replaced by a non-breaking space, the problem will disappear. A non-breaking space is obtained on the **Insert, Symbol, Special characters** screen. The example text just shown, when provided with a non-breaking space, now line-wraps like this:

ང་ཆོ་དེ་ལ་འགྲོ་གྱི་ཡིན། ཁྱེད་རང་ཆོ་གა་པར་ཕེབས་ག ཕ་འདུས་འདུག ཞལ་མ་ལགས་ག་འདུས་འདུག །

Note that the situation (2) space now appears clearly on the first line and there is no loss of implied shad because of losing the space.

The spaces in situations (3), (4), and (5) can be fixed by the same method of simply replacing them with a non-breaking space but a second treatment is also to fix the shad correctly. In these cases, the shad following the space should be able to stay with the space at the very end of the line if possible which means that line-wrapping has to be able to occur after the shad. This is arranged simply by inserting the zero-width space that we showed you how to make earlier after the shad following the space.

So far we have focussed on the marker used to show the end of simple groups of text. There are a few other circumstances in which automatic line-wrapping at spaces causes a problem, mostly at end-of-section markers used for larger sections of text, such as end-of-chapter. In these cases, the problem that occurs is simply that Tibetan text formatting rules get broken by the line wrapping that occurs.

Tibetan texts use several different markers to indicate the ends of major section sections of text and these markers are characterized by the use of a very wide space. This space has to be typed by typing several spaces together.

The end-of-an-internal-division marker looks like this: " ༄ ". This mark is typed by typing two or three or four spaces on either side of sbrul.shad (༄). If any of these spaces occur at the end of a line, line-wrapping will occur with the result that the mark as a whole will be broken up onto two lines and various errors, according to the rules of Tibetan text formatting, will result. For example, this which is correct:

བྱམས་པ་བྱང་ཆུབ་སེམས་དཔའ་ཡི། ༄ །སངས་རྒྱས་བཅོམ་ལྡན་འདས་དགྲ་བཅོམ་པ་

can turn into this which is incorrect:

དང་འཇམ་པའི་དབྱངས་དང་བྱམས་པ་བྱང་ཆུབ་སེམས་དཔའ་ཡིན། ༄ །སངས་རྒྱས་བཅོམ་ལྡན་འདས་དགྲ་བཅོམ་པ་

The end-of-a-chapter and end-of-a-great-section marker is two shad's at the end of one section of text and two shad's at the beginning of the next section of text separated by several spaces. The number of spaces that you will type will depend on the circumstance but could be as many as five or six. As in the previous example, this which is correct:

དང་འཇམ་པའི་དབྱངས་དང་བྱམས་པ་བྱང་ཆུབ་སེམས་དཔའ་ཡིན།། །།སངས་རྒྱས་བཅོམ་ལྡན་འདས་དགྲ་བཅོམ་པ་

can turn into this which is incorrect:

དང་འཇམ་པའི་དབྱངས་དང་བྱམས་པ་བྱང་ཆུབ་སེམས་དཔའ་ཡིན།། །།སངས་རྒྱས་བཅོམ་ལྡན་འདས་དགྲ་བཅོམ་པ་

All of these types of problems are solved directly by replacing all of the breaking spaces involved with non-breaking spaces.

In short, to fix these various problems, two things are required. Firstly, all spaces where line-wrapping is problematic have to be changed to non-breaking spaces and secondly, a zero-width space has to be placed after every shad that follows a space and precedes text. (A zero-width space should not be placed after a shad that follows a space and precedes another shad because if line-wrapping at the zero-width space would result in the second shad becoming the first character of a new line; double shad's following a space do occur in Tibetan text).

Changing all of the spaces in a document to non-breaking spaces as we just suggested would seem to be an easy way to deal with the need for replacing certain spaces with non-breaking spaces. Unfortunately, it brings another problem. Tibetan text is usually right justified. For a word-processor to right justify a line of text and space all of the letters on each line correctly, it is best if the word-processor can use spaces for squeezing and stretching the line rather than having to squeeze or stretch the spaces between the individual letters on the line. If the word-processor can use spaces in that way, the spacing between the letters on each line will be left alone and the appearance of the text on each line will be as good as possible. Unlike breaking spaces, non-breaking spaces cannot be squeezed and stretched during the justification process—non-breaking spaces have a fixed width—so text which contains only non-breaking spaces is justified by altering the spacing between letters. The result is that text which has all non-breaking spaces and which is right justified often has a less elegant spacing of characters on each line than the same text made with only breaking spaces.

In spite of that, for many purposes, replacing all of the breaking spaces in Tibetan text with non-breaking spaces remains an easy and effective way of dealing with the specific spaces in Tibetan text which must be changed to non-breaking spaces. However, it is a slightly "rough" solution and the real solution for the very best formatting of Tibetan text is to leave a document with breaking spaces throughout and then to change them to non-breaking spaces as required. In either case, as pointed out above, the appropriate shad's should also have zero-width spaces added after them.

If you choose to have the very best formatting of Tibetan text by changing only the breaking spaces that are problematic to non-breaking spaces, you have to go through the text from top to bottom, visually inspecting each line and manually deleting breaking spaces and typing non-breaking spaces as required. This is very tedious but there is no other way. (In Tibetan version 4 for DOS there is an extremely powerful macro called TPECHA that makes the task exceptionally easy and is one of the many reasons why the DOS program is still the ultimate way to make pecha.)

In the case where you want the very best appearance of text, the method of replacing breaking spaces with non-breaking spaces only as needed can be refined even further (and you can expend even more effort) to get a result as close to Tibetan formatting style as possible. The result of some of the breaking to non-breaking space replacements that you make will be that a line ends specifically with a shad/non-breaking space/shad (¦ ¦). In a Tibetan text, the space in this particular situation should be reduced in width to a ¼ or 1/3 of the width of a normal space. The space should not be eliminated altogether because then you would have a double shad and a double shad has a different meaning than two shad's separated by a space. The width of a non-breaking space can be reduced by putting it inside a font-size change to a font size that is appropriately smaller than the font size that your text is in at that point. If you can make it as small as ¼ to 1/3 of a normal space that will be best but sometimes the ¦ ¦ will then move and not be at the end of the line. If that happens, increase the size of the space until it returns to the end of the line. Sometimes there is no choice but to use a full-sized non-breaking space and that is all right. If you are doing a lot of work, it easiest to make a group of pre-defined styles with non-breaking spaces of varying widths. If you retrieve one of the pecha templates and look at the style sheet, you will see a group of three styles at the top of the sheet which provide non-breaking spaces of 1/3, ½, and 2/3 width; you could use these by copying them to your own style sheets. Whenever you have a non-breaking space with a shad on either side at the end of a line, delete the non-breaking space and replace it with one of the styles which has a narrower non-breaking space. Start with the smallest non-breaking space and go to the biggest until you find one that works. Sometimes you will have to use a full non-breaking space and that is all right. (The TPECHA macro in Tibetan! version 4 automates this process of adding smaller non-breaking spaces so that it is easy to do; another reason why that's still the ultimate way to make pecha..)

There is yet another difficulty here. We are suggesting that you can change back and forth between breaking and non-breaking spaces in a document as you need. But think for a moment: the space mentioned in situation (2) a few pages ago was mentioned as being seriously problematic if not fixed and we said that the fix was to replace it with a non-breaking space. However, if you decide that non-breaking spaces are not the best way to format your document, you might change them all back to breaking spaces in which case you would lose all of the important fixes for situation (2). In other words, we need to pay more attention to fixing situation (2).

The best way to fix situation (2) spaces is to put a non-breaking space into every situation (2) in such a way that it cannot be changed.

There is an alternative way to correct situation (2) spaces but it is not the best way to solve the problem. There is a tradition in

Tibet, though not very popular, of introducing a shad after a situation (2) space so that it becomes a situation (4) space. It is your choice whether you use this tradition or not. If you do choose this method it becomes the same situation as (4) and should be treated accordingly. Most Tibetans agree that it is better not to add the shad because doing so does not fit with original tradition.

In summary, to solve line-wrapping problems due to spaces, first add a zero-width space after every shad that particularly needs it. Then, if you want an easy method to prevent spaces from wrapping at the wrong place in Tibetan text, change to non-breaking spaces throughout the text. On the other hand, if you want the best possible appearance of text, leave breaking spaces throughout the text but change them to non-breaking spaces as required, remembering to find and deal with all situation (2) spaces. Change to non-breaking spaces manually. To refine this even further and give a more authentic appearance of text, try to replace the non-breaking spaces in the resulting shad/non-breaking space/shad combinations at the ends of lines with smaller non-breaking spaces. Use styles containing specially-defined, smaller, non-breaking spaces for easy application of the smaller non-breaking spaces.

7. RIN.CHEN SPUNG.SHAD'S AND OTHER FINAL POINTS OF FORMATTING

There is one other, major rule of Tibetan text formatting that we have not mentioned. It concerns the use of the shad, again. There is a rule which says that, whenever a text flows onto a new line, if there is one word on the line followed by a shad, then the shad must be replaced by a special kind of shad called a rin.chen spung.shad. A rin.chen spung.shad is an ornamental shad which serves to catch the eye so that the reader does not accidentally miss the fact that a section of text has ended following the first word on the new line.

A rin.chen spung.shad in dbu.can looks like this: ཿ. This is sometimes written very quickly by writing it with what looks like a tilde over the top or two dots over the top instead of three dots: ཾ ཿ. This is a sloppy way of writing what should be three distinct dots, therefore we do not include characters like these in the normal Tibetan fonts (though they are available in the fourth support font. If you see such a character and want to reproduce it use the correctly written ཿ.

Here is an example of the correct use a rin.chen spung.shad. The following line of text:

ས་དང་པོར་སྦྱིན་པའི་གཏམ་མཛད་དོ། །སྒྲིང་རྩེ་དམན་ཞིང་.....སེམས་ཅན། གཉིས་པ་རྒྱལ་བའི་

should have the first shad on line two replaced so that it looks like this:

ས་དང་པོར་སྦྱིན་པའི་གཏམ་མཛད་དོ། །སྒྲིང་རྩེ་དམན་ཞིང་.....སེམས་ཅན།ཿ གཉིས་པ་རྒྱལ་བའི་

There is an exception to this rule when making pecha which is that the rule does not operate on the first line of the front side of a pecha folio, i.e., the rule is ignored on the same line as the yig.mgo.

You will, in some books, see two rin.chen spung.shad placed like this:

ས་དང་པོར་སྦྱིན་པའི་གཏམ་མཛད་དོ། །སྒྲིང་རྩེ་དམན་ཞིང་.....སེམས་ཅན།ཿཿ གཉིས་པ་རྒྱལ་བའི་

This is incorrect! If two shads are required near the beginning of a line, as in verse, the correct way to write the required rin.chen spung.shad is as before:

ས་དང་པོར་སྦྱིན་པའི་གཏམ་མཛད་དོ། །སྒྲིང་རྩེ་དམན་ཞིང་.....སེམས་ཅན།ཿ །གཉིས་པ་རྒྱལ་བའི་

Because the placement of a rin.chen spung.shad depends on a location of a shad in relation to the page rather than in relation to text, it is not appropriate to type a rin.chen spung.shad when you are typing text. Even when you are copying some other work, say from a pecha that you are re-producing, any rin.chen spung.shad's that you see should be dropped and replaced by ordinary shad's as you type. This is not a fault!! Rin.chen spung.shad's can only be correctly placed at the very end of Tibetan text production, *after* you have finished every other formatting task. If you place them before you format the text, or before you are finished formatting, they will almost certainly shiæt to the wrong place!

We do our work by placing rin.chen spung.shad at the same time that we fix space/shad line-wrapping problems. Note that you can always re-do the rin.chen spung.shad if you change a text which has had them added. First change the ones that are there back to ordinary shad's then redo them.

Here are some other formatting notes:

1. Please note that it is absolutely incorrect to have a shad or punctuation mark of any kind at the very beginning of a line of text in a pecha. It also incorrect to have spaces start a new line of text.

2. Items in Tibetan texts are often numbered by putting a number above or below the line of text. These numbers can be put into place by using the special superscript and subscript versions of the numerals that are made available specially for the purpose in support font 4. The positioning of the numbers can be further adjusted with advances placed in the text:

སྒྲིན་པ་ཁ་རོལ་ཏུ་ཕྱིན་པ། ཚུལ་ཁྲིམས་ཁ་རོལ་ཏུ་ཕྱིན་པ། བཟོད་པ་ཁ་རོལ་ཏུ་ཕྱིན་པ།

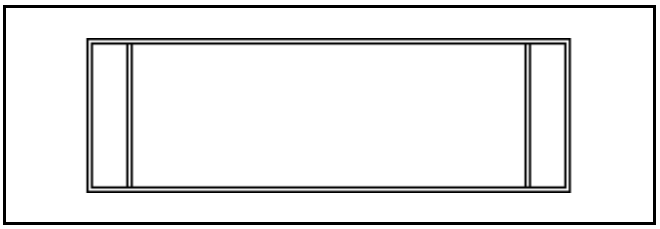
Making Authentic Tibetan Pecha

We do not know of a reasonable way to make authentic Tibetan pecha in Word. Unlike WordPerfect which has complete facilities for drawing the complex boxes necessary to house a pecha and deal with the lanscape orientated boxes on either side of the page, Word has very few facilities for making the necessary boxes. For this reason, we sell a product for use in WordPerfect that comes with a complete set of specialized, utterly authentic pecha templates.

It might be that the required templates could be created in Pagemaker or another page layout program. If so, the text can easily be typed in Word using the Tibetan keyboard described herein and then saved and exported to that application. (Remember that RTF files are an excellent, almost universally supported file format.)

The documentation for the WordPerfect for Windows Tibetan product has a very long chapter at this point fully describing the way to make a pecha using that program and our supplied templates. Since Word cannot use these templates and does not have the necessary facilities most of the chapter is meaningless here. However, for the sake of those interested, portions of the chapter are reproduced here.

It is possible to make a Tibetan pecha in a moderately simple way using the templates that we provide. However, making pecha properly is no different from making a book in the sense that it is a complex task with many different details to be taken care of. For some reason, most end-users think that it should be press-button easy to make pecha using a computer. However,



nobody in the electronic publishing business would agree that it is push-button simple to make a Western book using a computer! We would like to say quite clearly that making a Tibetan book and publishing it using a personal computer involves the same level of complexity as the production of a Western book and requires a similar level of expertise in the use of the advanced features of the software and hardware being used for the job. Furthermore, Western book production requires a good understanding of typography and traditions of text layout and likewise, *authentic* pecha production requires a good knowledge not only of the advanced features of the software in use but also of the traditions of Tibetan pecha layout and of Tibetan grammar!!

1. THE SIZE AND SHAPE OF A PECHA

The first difficulty, and it is a significant one, involved in making a pecha with a personal computer is that the sizes of paper which the software and hardware work with are quite different from that used in pecha. A Tibetan pecha is a wide and not very tall rectangle. The width can vary all the way from about six inches up to three feet! The corresponding heights are from about two inches up to about seven inches. The usual size is 12 to 18 inches wide and about 3 inches high.

The text written on the pecha is enclosed by a border which runs close to the edge of the page. The border will differ in shape depending on which type of writing is being used on the pecha (there are several styles of Tibetan writing). The dbu.can style, which is the style of all of the fonts in this program, has a complete border running around the page, as shown in the above diagram. This border is placed as a sign of respect for the written word enclosed by it. A border of double lines was always considered more elegant in Tibet than one of single lines but was time consuming to produce so was often placed only on the first page or two of a text and sometimes was left out altogether in favour of the easier-to-make single line border. Since making a double line with a computer is no more difficult than a single line and is regarded as more elegant, you will find that all of our pecha templates have a double line as the outer border. Should you make pecha according to your own design, we suggest that you use double borders for the reason just mentioned.

Because of the shape of a pecha, there is not much choice when making a pecha with a computer except to use a standard paper size as supported by computers and printers but to use it in Landscape direction. When that is done, it is usually possible to fit two Tibetan page sides on one side of the printed sheet of paper but then you have the problem of how to get the reverse sides of those two sides-of-pages printed. Our templates are made so that you print two sides of a single Tibetan page on one side of a standard sheet of paper. You then take the printed sheet, turn it over AND around and reprint the same sides-of-page on the same sheet once again. The registration of the templates is such that you end up with the front and back of a single Tibetan page printed twice on the one sheet of paper. The two Tibetan pages then have to be cut from the one sheet of paper.

It is possible to alter the templates so that they only print one side of a Tibetan page on one side of a sheet of paper. The other side of the pecha is then printed by printing the other side of the

Tibetan page on the back of the sheet. Once again, you have to cut the Tibetan page from the sheet. To do this you will have to modify our templates so that they print only one Tibetan side on a side of paper. It also possible to alter the templates to use other paper sizes, to change the vertical size of the borders, etc., on the page. These modifications are difficult and we will not describe how to do them here.

Is there a way to print a pecha directly on the correct size (i.e., Tibetan size) of paper? No! It is not possible to make a Tibetan sized-piece of paper go directly through a printer. There are many reasons for this in both hardware and software but it really comes down to the fact that the shape and size of a native Tibetan pecha is totally different from anything used in the rest of the world. There is no support for this Tibetan size and shape in hardware or software and the issue cannot be forced. (We have tried many times, always to no avail!)

Do Tibetan texts have to be printed on both sides? Yes! There is no such thing as one-sided Tibetan pages. Tibetan texts are always printed on both sides.

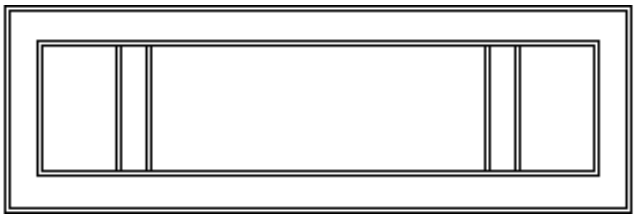
How does a calligrapher come up with the dimensions of a Tibetan pecha? Pecha design is based on a primary unit of measurement which is the distance between two lines of text. The calligrapher starts with a special ruler that he makes for the purpose (ཐིག་ཞིང་). This ruler is wide enough to cover the width of the page he will work with and is square in cross-section. Each side of the ruler, each side of the square, has a dimension equal to the distance between two lines of text. The calligrapher starts by cutting his sheets to size and then drawing in the lines for the text to be written along. Six lines, each one ruler's height apart, are drawn per side of a normal page. (Pecha with more lines to a normal page do exist but are regarded as in-elegant; pecha with less lines to the page are almost never seen, except in the case of very small pechas where six lines per page sometimes cannot be accommodated and five are written).

The borders are then drawn around the page. A normal page has two sets of borders: an outer border surrounding everything and within that, to the left and right of the page, a side-box on each side of the page. The side-boxes are drawn the width of the ruler, i.e., one line height unit. This type of border is illustrated below.

The title page and first few pages of long pechas have a fancier style than the normal text pages following them. The fancy pages have two sets of borders around the outside and a setof boxes internal to that as shown in the diagram below:

The two outer borders are separated by a gap which is the width of the ruler; the distance into the inner boxes is three or four ruler

widths; and the width of the inner boxes is one ruler width, so line-height is the primary measurement again. A title page accommodates one or two lines of text in the central area and the fancy pages following it accommodate four lines of text, so the total height of the border still depends on the basic measurement of line height.
The side-boxes on all of these different page designs is used for



writing the page number, an abbreviated title, and possibly the name of the collection that the text belongs to. The text in these boxes is always written at right angles to the text of the book, i.e., vertically on the page. This is sufficiently different from the standard way of producing an English book that, combined with the unusual size and shape of a Tibetan page, it starts to make the production of authentic Tibetan pages quite difficult.

Worse still, the numbering of Tibetan pages is always done in words. Thus the usual page numbering features of software are of no value at all in creating authentic Tibetan pecha. You might think it not true that there is no numerical page numbering on Tibetan pecha. However, it is only in very recent times that English numbering appeared on Tibetan pecha and it appeared for a good, though slightly bizarre reason: when Tibetan refugees started having pecha reproduced, they reproduced them in India. The Indians who were doing the photographing of the pages for offset printing would sometimes drop the bundle of pages and, not being able to read Tibetan numbers which were written in Tibetan words, would mess up the whole job. The Tibetans in charge soon learned to paste English numbers on the pages so that the Indians would be able to print their pecha correctly. However, if you ask older Tibetans who knew the ways before the Chinese invaded Tibet, they usually say that they prefer not to have the English numbering on their pages. This is worth thinking about, isn't it?

1. RE-DEFINING THE KEYBOARD

The layout of the Tibetan keyboard can be changed to suit your needs. You can change the arrangement of the keys and you can also use letters not currently being used.

The layout of the keyboard is controlled by a file that is written into the root directory of the hard disk on a Windows computer and in the same folder as the keyboard template file on a Macintosh computer.

when you start the keyboard for the first time. The file is called **TibKeybdLayout.ini**. If you want to change the layout from the default that we provide, double click on that file in explorer and it will open in Notepad (do not use Word to do it!). There are clear instructions in the file itself on how to make the necessary changes. It is as simple as changing the names of the keys (a single letter / n umeral / etcetera) from what they are now to what you want them to be.

At the moment, only the keys on a US standard keyboard are supported, however we can easily add support for the non-English keys on other keyboards. All you need to do is e-mail is with the letters of those keys and we will do it for you and send you the adjusted keyboard.

NOTE

If you edit the file but mess it up, simply delete it. The next time you start the Tibetan keyboard it will write a new one for you and you can edit that. There is no harm at all to deleting the file.

Appendix I. Tibetan Numerals Correctly Written from One to One Thousand

The traditional written form of Tibetan numerals is, like English (e.g., four and forty), not entirely regular. Here are the numerals from one to one thousand in their correct written form.

These numbers are provided in the file called Numerals.rtf on the distribution media so that you can retrieve it and cut and paste as needed.

The numerals are formatted according to how they should be used when numbering the pages in a pecha. Though when making pecha, two variations on the format are permissible as follows. In some pecha there is a tsheg at the end of the number. This follows the general rule of Tibetan lettering that a letter or word should always be followed by a tsheg. Then in some pecha there is not a tsheg at the end of the number. Some writers prefer this aesthetic. Either one is acceptable. We prefer the first for the reason given.

2. The ཐམ་ས can be left off the end of numbers in multiples of ten. It is correct always to put it after the even hundred numbers, though some writers will leave it off. The following text has the particle included after all tens and hundreds. We use this method when making pecha, since it is the most elegant.

Note the presence of a space after the numbers indicating one, two (and so on) hundred. This too is correct.

གཅིག	༡
གཉིས	༢
གསུམ	༣
བཞི	༤
ལྔ	༥
དྲུག	༦
བདུན	༧
བརྒྱད	༨
དགུ	༩
བཅུ	༡༠
བཅུ་གཅིག	༡༡
བཅུ་གཉིས	༡༢
བཅུ་གསུམ	༡༣
བཅུ་བཞི	༡༤
བཅོ་ལྔ	༡༥
བཅུ་དྲུག	༡༦
བཅུ་བདུན	༡༧
བཅོ་བརྒྱད	༡༨
བཅུ་དགུ	༡༩
ཉི་ཤུ་ཐམ་ས	༢༠
ཉེར་གཅིག	
ཉེར་གཉིས	
ཉེར་གསུམ	
ཉེར་བཞི	
ཉེར་ལྔ	
ཉེར་དྲུག	
ཉེར་བདུན	
ཉེར་བརྒྱད	
ཉེར་དགུ	
སུམ་བཅུ་ཐམ་ས	༣༠
སོ་གཅིག	
སོ་གཉིས	
སོ་གསུམ	
སོ་བཞི	
སོ་ལྔ	
སོ་དྲུག	
སོ་བདུན	
སོ་བརྒྱད	
སོ་དགུ	
བཞི་བཅུ་ཐམ་ས	༤༠
ལྔ་བཅུ་ཐམ་ས	༥༠
དྲུག་བཅུ་ཐམ་ས	༦༠
བདུན་བཅུ་ཐམ་ས	༧༠
བརྒྱད་བཅུ་ཐམ་ས	༨༠
དགུ་བཅུ་ཐམ་ས	༩༠
བརྒྱ་ཐམ་ས	༡༠༠
ཉིས་བརྒྱ་ཐམ་ས	༢༠༠
ཉིས་གཅིག	
ཉིས་གཉིས	
ཉིས་གསུམ	
ཉིས་བཞི	
ཉིས་ལྔ	
ཉིས་དྲུག	
ཉིས་བདུན	
ཉིས་བརྒྱད	
ཉིས་དགུ	
སུམ་བརྒྱ་ཐམ་ས	༣༠༠
བཞི་བརྒྱ་ཐམ་ས	༤༠༠
ལྔ་བརྒྱ་ཐམ་ས	༥༠༠
དྲུག་བརྒྱ་ཐམ་ས	༦༠༠
བདུན་བརྒྱ་ཐམ་ས	༧༠༠
བརྒྱད་བརྒྱ་ཐམ་ས	༨༠༠
དགུ་བརྒྱ་ཐམ་ས	༩༠༠
སྟོང་ཐམ་ས	༡༠༠༠

ཀིས་	བཅོ་བརྒྱད	ཀིས་	དོན་གཅིག	སུམ་	ཉེར་བཞི	སུམ་	དོན་བདུན	བཞི་	སུམ་ཅུ་ཐམ་པ	བཞི་	བཀྲ་གསུམ				
ཀིས་	བཅུ་དགུ	ཀིས་	དོན་གཉིས	སུམ་	ཉེར་ལྔ	སུམ་	དོན་བརྒྱད	སུམ་	སོ་གཅིག	བཞི་	བཀྲ་བཞི				
ཀིས་	ཉི་ཁྲ་ཐམ་པ	ཀིས་	དོན་གསུམ	སུམ་	ཉེར་དྲུག	སུམ་	དོན་དགུ	སུམ་	སོ་གཉིས	བཞི་	བཀྲ་ལྔ				
ཀིས་	ཉེར་གཅིག	ཀིས་	དོན་བཞི	སུམ་	ཉེར་བདུན	སུམ་	བརྒྱད་ཅུ་ཐམ་པ	སུམ་	སོ་གསུམ	བཞི་	བཀྲ་དྲུག				
ཀིས་	ཉེར་གཉིས	ཀིས་	དོན་ལྔ	སུམ་	ཉེར་བརྒྱད	སུམ་	བཀྲ་གཅིག	སུམ་	སོ་བཞི	བཞི་	བཀྲ་བདུན				
ཀིས་	ཉེར་གསུམ	ཀིས་	དོན་དྲུག	སུམ་	ཉེར་དགུ	སུམ་	བཀྲ་གཉིས	སུམ་	སོ་ལྔ	བཞི་	བཀྲ་བརྒྱད				
ཀིས་	ཉེར་བཞི	ཀིས་	དོན་བདུན	སུམ་	སུམ་ཅུ་ཐམ་པ	སུམ་	བཀྲ་གསུམ	སུམ་	སོ་དྲུག	བཞི་	བཀྲ་དགུ				
ཀིས་	ཉེར་ལྔ	ཀིས་	དོན་བརྒྱད	སུམ་	སོ་གཅིག	སུམ་	བཀྲ་བཞི	སུམ་	སོ་བདུན	བཞི་	དབུག་བཅུ་ཐམ་པ				
ཀིས་	ཉེར་དྲུག	ཀིས་	དོན་དགུ	སུམ་	སོ་གཉིས	སུམ་	བཀྲ་ལྔ	སུམ་	སོ་བརྒྱད	བཞི་	གོ་གཅིག				
ཀིས་	ཉེར་བདུན	ཀིས་	བརྒྱད་ཅུ་ཐམ་པ	སུམ་	སོ་གསུམ	སུམ་	བཀྲ་དྲུག	སུམ་	སོ་དགུ	བཞི་	གོ་གཉིས				
ཀིས་	ཉེར་བརྒྱད	ཀིས་	བཀྲ་གཅིག	སུམ་	སོ་བཞི	སུམ་	བཀྲ་བདུན	བཞི་	བཅུ་ཐམ་པ	བཞི་	གོ་གསུམ				
ཀིས་	ཉེར་དགུ	ཀིས་	བཀྲ་གཉིས	སུམ་	སོ་ལྔ	སུམ་	བཀྲ་བརྒྱད	བཞི་	བཅུ་གཅིག	བཞི་	གོ་བཞི				
ཀིས་	སུམ་ཅུ་ཐམ་པ	ཀིས་	བཀྲ་གསུམ	སུམ་	སོ་དྲུག	སུམ་	བཀྲ་དགུ	བཞི་	བཅུ་གཉིས	བཞི་	གོ་ལྔ				
ཀིས་	སོ་གཅིག	ཀིས་	བཀྲ་བཞི	སུམ་	སོ་བདུན	སུམ་	དབུག་བཅུ་ཐམ་པ	བཞི་	བཅུ་གསུམ	བཞི་	གོ་དྲུག				
ཀིས་	སོ་གཉིས	ཀིས་	བཀྲ་ལྔ	སུམ་	སོ་བརྒྱད	སུམ་	གོ་གཅིག	བཞི་	བཅུ་བཞི	བཞི་	གོ་བདུན				
ཀིས་	སོ་གསུམ	ཀིས་	བཀྲ་དྲུག	སུམ་	སོ་དགུ	སུམ་	གོ་གཉིས	བཞི་	བཅུ་ལྔ	བཞི་	གོ་བརྒྱད				
ཀིས་	སོ་བཞི	ཀིས་	བཀྲ་བདུན	སུམ་	བཞི་བཅུ་ཐམ་པ	སུམ་	གོ་གསུམ	བཞི་	བཅུ་དྲུག	བཞི་	གོ་དགུ				
ཀིས་	སོ་ལྔ	ཀིས་	བཀྲ་བརྒྱད	སུམ་	ཉེ་གཅིག	སུམ་	གོ་བཞི	བཞི་	བཅུ་བདུན	ལྔ་བརྒྱ་ཐམ་པ	༡༠༠				
ཀིས་	སོ་དྲུག	ཀིས་	བཀྲ་དགུ	སུམ་	ཉེ་གཉིས	སུམ་	གོ་ལྔ	བཞི་	བཅུ་བརྒྱད	ཀླུ་གཅིག					
ཀིས་	སོ་བདུན	ཀིས་	དབུག་བཅུ་ཐམ་པ	སུམ་	ཉེ་གསུམ	སུམ་	གོ་དྲུག	བཞི་	བཅུ་དགུ	ཀླུ་གཉིས					
ཀིས་	སོ་བརྒྱད	ཀིས་	གོ་གཅིག	སུམ་	ཉེ་བཞི	སུམ་	གོ་བདུན	བཞི་	གཅིག་བརྒྱ་ཐམ་པ	ཀླུ་གསུམ					
ཀིས་	སོ་དགུ	ཀིས་	གོ་གཉིས	སུམ་	ཉེ་ལྔ	སུམ་	གོ་བརྒྱད	ཀླུ་	ཅིག	ཀླུ་བཞི					
ཀིས་	བཞི་བཅུ་ཐམ་པ	ཀིས་	གོ་གསུམ	སུམ་	ཉེ་དྲུག	སུམ་	གོ་དགུ	ཀླུ་	གཉིས	ཀླུ་ལྔ					
ཀིས་	ཞེ་གཅིག	ཀིས་	གོ་བཞི	སུམ་	ཉེ་བདུན	བཞི་བརྒྱ་ཐམ་པ	༩༠༠	ཀླུ་	གསུམ	ཀླུ་དྲུག					
ཀིས་	ཞེ་གཉིས	ཀིས་	གོ་ལྔ	སུམ་	ཉེ་བརྒྱད	ཀླུ་	བཞི	ཀླུ་	བཞི	ཀླུ་བདུན					
ཀིས་	ཞེ་གསུམ	ཀིས་	གོ་དྲུག	སུམ་	ཉེ་དགུ	ཀླུ་	ལྔ	ཀླུ་	དྲུག	ཀླུ་བརྒྱད					
ཀིས་	ཞེ་བཞི	ཀིས་	གོ་བདུན	སུམ་	ཉོ་ཁྲ་ཐམ་པ	ཀླུ་	དྲུག	ཀླུ་	བདུན	ཀླུ་དགུ					
ཀིས་	ཞེ་ལྔ	ཀིས་	གོ་བརྒྱད	སུམ་	ཉི་ཤུ་ཐམ་པ	ཀླུ་	བདུན	ཀླུ་	བརྒྱད	ཀླུ་ཁྲ་ཐམ་པ					
ཀིས་	ཞེ་དྲུག	ཀིས་	གོ་དགུ	སུམ་	ཉེར་གཅིག	ཀླུ་	བརྒྱད	ཀླུ་	དགུ	ཉི་ཤུ་ཐམ་པ					
ཀིས་	ཞེ་བདུན	སུམ་	བཞི་བཅུ་ཐམ་པ	ཉེར་	གཉིས	ཀླུ་	དགུ	ཉི་	ཤུ་ཐམ་པ	ཉི་ཤུ་རྩ་གཅིག					
ཀིས་	ཞེ་བརྒྱད	སུམ་	གཅིག	ཉེར་	གསུམ	ཉི་	ཤུ་ཐམ་པ	ཉི་ཤུ་རྩ་གཉིས							
ཀིས་	ཞེ་དགུ	སུམ་	གཉིས	ཉེར་	བཞི	ཉི་ཤུ་རྩ་གཅིག		ཉི་ཤུ་རྩ་གསུམ							
ཀིས་	ལྔ་བཅུ་ཐམ་པ	སུམ་	གསུམ	ཉེར་	ལྔ	ཉི་ཤུ་རྩ་གཉིས		ཉི་ཤུ་རྩ་བཞི							
ཀིས་	ངོ་གཅིག	སུམ་	བཞི	ཉེར་	དྲུག	ཉི་ཤུ་རྩ་གསུམ		ཉི་ཤུ་རྩ་ལྔ							
ཀིས་	ངོ་གཉིས	སུམ་	ལྔ	ཉེར་	བདུན	ཉི་ཤུ་རྩ་བཞི		ཉི་ཤུ་རྩ་དྲུག							
ཀིས་	ངོ་གསུམ	སུམ་	དྲུག	ཉེར་	བརྒྱད	ཉི་ཤུ་རྩ་ལྔ		ཉི་ཤུ་རྩ་བདུན							
ཀིས་	ངོ་བཞི	སུམ་	བདུན	ཉེར་	དགུ	ཉི་ཤུ་རྩ་དྲུག		ཉི་ཤུ་རྩ་བརྒྱད							
ཀིས་	ངོ་ལྔ	སུམ་	བརྒྱད	ཉི་ཤུ་	ཐམ་པ	ཉི་ཤུ་རྩ་བདུན		ཉི་ཤུ་རྩ་དགུ							
ཀིས་	ངོ་དྲུག	སུམ་	དགུ	ཉི་ཤུ་རྩ་	གཅིག	ཉི་ཤུ་རྩ་བརྒྱད		སུམ་ཅུ་ཐམ་པ							
ཀིས་	ངོ་བདུན	ཀླུ་	ཅིག	ཉི་ཤུ་རྩ་	གཉིས	ཉི་ཤུ་རྩ་དགུ		སོ་གཅིག							
ཀིས་	ངོ་བརྒྱད	ཀླུ་	གཉིས	སུམ་ཅུ་	ཐམ་པ	སུམ་ཅུ་རྩ་གཅིག		སོ་གཉིས							
ཀིས་	ངོ་དགུ	ཀླུ་	གསུམ	སུམ་ཅུ་རྩ་	གཅིག	སུམ་ཅུ་རྩ་གཉིས		སོ་གསུམ							
ཀིས་	བཀྲ་ཐམ་པ	ཀླུ་	བཞི	སུམ་ཅུ་རྩ་	གཉིས	སུམ་ཅུ་རྩ་གསུམ		སོ་བཞི							
ཀིས་	བཀྲ་གཅིག	ཀླུ་	ལྔ	སུམ་ཅུ་རྩ་	གསུམ	སུམ་ཅུ་རྩ་བཞི		སོ་ལྔ							

ལྔ་	སོ་དྲུག
ལྔ་	སོ་བདུན
ལྔ་	སོ་བརྒྱད
ལྔ་	སོ་དགུ
ལྔ་	བཞི་བཅུ་ཐམ་པ
ལྔ་	ཞེ་གཅིག
ལྔ་	ཞེ་གཉིས
ལྔ་	ཞེ་གསུམ
ལྔ་	ཞེ་བཞི
ལྔ་	ཞེ་ལྔ
ལྔ་	ཞེ་དྲུག
ལྔ་	ཞེ་བདུན
ལྔ་	ཞེ་བརྒྱད
ལྔ་	ཞེ་དགུ
ལྔ་	ལྔ་བཅུ་ཐམ་པ
ལྔ་	ང་གཅིག
ལྔ་	ང་གཉིས
ལྔ་	ང་གསུམ
ལྔ་	ང་བཞི
ལྔ་	ང་ལྔ
ལྔ་	ང་དྲུག
ལྔ་	ང་བདུན
ལྔ་	ང་བརྒྱད
ལྔ་	ང་དགུ
ལྔ་	དྲུག་ཅུ་ཐམ་པ
ལྔ་	རེ་གཅིག
ལྔ་	རེ་གཉིས
ལྔ་	རེ་གསུམ
ལྔ་	རེ་བཞི
ལྔ་	རེ་ལྔ
ལྔ་	རེ་དྲུག
ལྔ་	རེ་བདུན
ལྔ་	རེ་བརྒྱད
ལྔ་	རེ་དགུ
ལྔ་	བདུན་ཅུ་ཐམ་པ
ལྔ་	དོན་གཅིག
ལྔ་	དོན་གཉིས
ལྔ་	དོན་གསུམ
ལྔ་	དོན་བཞི
ལྔ་	དོན་ལྔ
ལྔ་	དོན་དྲུག
ལྔ་	དོན་བདུན
ལྔ་	དོན་བརྒྱད
ལྔ་	དོན་དགུ
ལྔ་	བརྒྱད་ཅུ་ཐམ་པ
ལྔ་	གྱ་གཅིག
ལྔ་	གྱ་གཉིས
ལྔ་	གྱ་གསུམ
ལྔ་	གྱ་བཞི
ལྔ་	གྱ་ལྔ
ལྔ་	གྱ་དྲུག
ལྔ་	གྱ་བདུན
ལྔ་	གྱ་བརྒྱད
ལྔ་	གྱ་དགུ
ལྔ་	དགུ་བཅུ་ཐམ་པ
ལྔ་	གོ་གཅིག
ལྔ་	གོ་གཉིས
ལྔ་	གོ་གསུམ
ལྔ་	གོ་བཞི
ལྔ་	གོ་ལྔ
ལྔ་	གོ་དྲུག
ལྔ་	གོ་བདུན
ལྔ་	གོ་བརྒྱད
ལྔ་	གོ་དགུ
དྲུག་བརྒྱ་ཐམ་པ	༦༠༠
དྲུག་	གཅིག
དྲུག་	གཉིས
དྲུག་	གསུམ
དྲུག་	བཞི
དྲུག་	ལྔ
དྲུག་	དྲུག
དྲུག་	བདུན
དྲུག་	བརྒྱད
དྲུག་	དགུ
དྲུག་	བཅུ་ཐམ་པ
དྲུག་	བཅུ་གཅིག
དྲུག་	བཅུ་གཉིས
དྲུག་	བཅུ་གསུམ
དྲུག་	བཅུ་བཞི
དྲུག་	བཅོ་ལྔ
དྲུག་	བཅུ་དྲུག
དྲུག་	བཅུ་བདུན
དྲུག་	བཅོ་བརྒྱད
དྲུག་	བཅུ་དགུ
དྲུག་	ཉི་ཤུ་ཐམ་པ
དྲུག་	ཉེར་གཅིག
དྲུག་	ཉེར་གཉིས
དྲུག་	ཉེར་གསུམ
དྲུག་	ཉེར་བཞི
དྲུག་	ཉེར་ལྔ
དྲུག་	ཉེར་དྲུག
དྲུག་	ཉེར་བདུན
དྲུག་	ཉེར་བརྒྱད
དྲུག་	ཉེར་དགུ
དྲུག་	སུམ་ཅུ་ཐམ་པ
དྲུག་	སོ་གཅིག
དྲུག་	སོ་གཉིས
དྲུག་	སོ་གསུམ
དྲུག་	སོ་བཞི
དྲུག་	སོ་ལྔ
དྲུག་	སོ་དྲུག
དྲུག་	སོ་བདུན
དྲུག་	སོ་བརྒྱད
དྲུག་	སོ་དགུ
དྲུག་	བཞི་བཅུ་ཐམ་པ
དྲུག་	ཞེ་གཅིག
དྲུག་	ཞེ་གཉིས
དྲུག་	ཞེ་གསུམ
དྲུག་	ཞེ་བཞི
དྲུག་	ཞེ་ལྔ
དྲུག་	ཞེ་དྲུག
དྲུག་	ཞེ་བདུན
དྲུག་	ཞེ་བརྒྱད
དྲུག་	ཞེ་དགུ
དྲུག་	ལྔ་བཅུ་ཐམ་པ
དྲུག་	ང་གཅིག
དྲུག་	ང་གཉིས
དྲུག་	ང་གསུམ
དྲུག་	ང་བཞི
དྲུག་	ང་ལྔ
དྲུག་	ང་དྲུག
དྲུག་	ང་བདུན
དྲུག་	ང་བརྒྱད
དྲུག་	ང་དགུ
དྲུག་	དྲུག་ཅུ་ཐམ་པ
དྲུག་	རེ་གཅིག
དྲུག་	རེ་གཉིས
དྲུག་	རེ་གསུམ
དྲུག་	རེ་བཞི
དྲུག་	རེ་ལྔ
དྲུག་	རེ་དྲུག
དྲུག་	རེ་བདུན
དྲུག་	རེ་བརྒྱད
དྲུག་	རེ་དགུ
དྲུག་	བདུན་ཅུ་ཐམ་པ
དྲུག་	དོན་གཅིག
དྲུག་	དོན་གཉིས
དྲུག་	དོན་གསུམ
དྲུག་	དོན་བཞི
དྲུག་	དོན་ལྔ
དྲུག་	དོན་དྲུག
དྲུག་	དོན་བདུན
དྲུག་	དོན་བརྒྱད
དྲུག་	དོན་དགུ
དྲུག་	བརྒྱད་ཅུ་ཐམ་པ
དྲུག་	གྱ་གཅིག
དྲུག་	གྱ་གཉིས
དྲུག་	གྱ་གསུམ
དྲུག་	གྱ་བཞི
དྲུག་	གྱ་ལྔ
དྲུག་	གྱ་དྲུག
དྲུག་	གྱ་བདུན
དྲུག་	གྱ་བརྒྱད
དྲུག་	གྱ་དགུ
དྲུག་	དགུ་བཅུ་ཐམ་པ
དྲུག་	གོ་གཅིག
དྲུག་	གོ་གཉིས
དྲུག་	གོ་གསུམ
དྲུག་	གོ་བཞི
དྲུག་	གོ་ལྔ
དྲུག་	གོ་དྲུག
དྲུག་	གོ་བདུན
དྲུག་	གོ་བརྒྱད
དྲུག་	གོ་དགུ
བདུན་བརྒྱ་ཐམ་པ	༧༠༠
བདུན་	གཅིག
བདུན་	གཉིས
བདུན་	གསུམ
བདུན་	བཞི
བདུན་	ལྔ
བདུན་	དྲུག
བདུན་	བདུན
བདུན་	བརྒྱད
བདུན་	དགུ
བདུན་	བཅུ་ཐམ་པ
བདུན་	བཅུ་གཅིག
བདུན་	བཅུ་གཉིས
བདུན་	བཅུ་གསུམ
བདུན་	བཅུ་བཞི
བདུན་	བཅོ་ལྔ
བདུན་	བཅུ་དྲུག
བདུན་	བཅུ་བདུན
བདུན་	བཅོ་བརྒྱད
བདུན་	བཅུ་དགུ
བདུན་	ཉི་ཤུ་ཐམ་པ
བདུན་	ཉེར་གཅིག
བདུན་	ཉེར་གཉིས
བདུན་	ཉེར་གསུམ
བདུན་	ཉེར་བཞི
བདུན་	ཉེར་ལྔ
བདུན་	ཉེར་དྲུག
བདུན་	ཉེར་བདུན
བདུན་	ཉེར་བརྒྱད
བདུན་	ཉེར་དགུ
བདུན་	སུམ་ཅུ་ཐམ་པ
བདུན་	སོ་གཅིག
བདུན་	སོ་གཉིས
བདུན་	སོ་གསུམ
བདུན་	སོ་བཞི
བདུན་	སོ་ལྔ
བདུན་	སོ་དྲུག
བདུན་	སོ་བདུན
བདུན་	སོ་བརྒྱད
བདུན་	སོ་དགུ
བདུན་	བཞི་བཅུ་ཐམ་པ
བདུན་	ཞེ་གཅིག
བདུན་	ཞེ་གཉིས
བདུན་	ཞེ་གསུམ
བདུན་	ཞེ་བཞི
བདུན་	ཞེ་ལྔ
བདུན་	ཞེ་དྲུག
བདུན་	ཞེ་བདུན
བདུན་	ཞེ་བརྒྱད
བདུན་	ཞེ་དགུ
བདུན་	ལྔ་བཅུ་ཐམ་པ
བདུན་	ང་གཅིག
བདུན་	ང་གཉིས
བདུན་	ང་གསུམ
བདུན་	ང་བཞི
བདུན་	ང་ལྔ
བདུན་	ང་དྲུག
བདུན་	ང་བདུན
བདུན་	ང་བརྒྱད
བདུན་	ང་དགུ
བདུན་	དྲུག་ཅུ་ཐམ་པ
བདུན་	རེ་གཅིག
བདུན་	རེ་གཉིས
བདུན་	རེ་གསུམ
བདུན་	རེ་བཞི
བདུན་	རེ་ལྔ
བདུན་	རེ་དྲུག
བདུན་	རེ་བདུན
བདུན་	རེ་བརྒྱད
བདུན་	རེ་དགུ
བདུན་	བདུན་ཅུ་ཐམ་པ
བདུན་	དོན་གཅིག
བདུན་	དོན་གཉིས
བདུན་	དོན་གསུམ
བདུན་	དོན་བཞི
བདུན་	དོན་ལྔ
བདུན་	དོན་དྲུག
བདུན་	དོན་བདུན
བདུན་	དོན་བརྒྱད
བདུན་	དོན་དགུ
བདུན་	བརྒྱད་ཅུ་ཐམ་པ
བདུན་	གྱ་གཅིག
བདུན་	གྱ་གཉིས
བདུན་	གྱ་གསུམ
བདུན་	གྱ་བཞི
བདུན་	གྱ་ལྔ
བདུན་	གྱ་དྲུག
བདུན་	གྱ་བདུན
བདུན་	གྱ་བརྒྱད
བདུན་	གྱ་དགུ
བདུན་	དགུ་བཅུ་ཐམ་པ
བདུན་	གོ་གཅིག
བདུན་	གོ་གཉིས
བདུན་	གོ་གསུམ
བདུན་	གོ་བཞི
བདུན་	གོ་ལྔ
བདུན་	གོ་དྲུག
བདུན་	གོ་བདུན
བདུན་	གོ་བརྒྱད
བདུན་	གོ་དགུ
བརྒྱད་བརྒྱ་ཐམ་པ	༨༠༠
བརྒྱད་	གཅིག
བརྒྱད་	གཉིས
བརྒྱད་	གསུམ
བརྒྱད་	བཞི
བརྒྱད་	ལྔ
བརྒྱད་	དྲུག
བརྒྱད་	བདུན
བརྒྱད་	བརྒྱད
བརྒྱད་	དགུ
བརྒྱད་	བཅུ་ཐམ་པ
བརྒྱད་	བཅུ་གཅིག
བརྒྱད་	བཅུ་གཉིས
བརྒྱད་	བཅུ་གསུམ
བརྒྱད་	བཅུ་བཞི
བརྒྱད་	བཅོ་ལྔ
བརྒྱད་	བཅུ་དྲུག
བརྒྱད་	བཅུ་བདུན
བརྒྱད་	བཅོ་བརྒྱད
བརྒྱད་	བཅུ་དགུ
བརྒྱད་	ཉི་ཤུ་ཐམ་པ
བརྒྱད་	ཉེར་གཅིག
བརྒྱད་	ཉེར་གཉིས
བརྒྱད་	ཉེར་གསུམ
བརྒྱད་	ཉེར་བཞི
བརྒྱད་	ཉེར་ལྔ
བརྒྱད་	ཉེར་དྲུག
བརྒྱད་	ཉེར་བདུན
བརྒྱད་	ཉེར་བརྒྱད
བརྒྱད་	ཉེར་དགུ
བརྒྱད་	སུམ་ཅུ་ཐམ་པ
བརྒྱད་	སོ་གཅིག
བརྒྱད་	སོ་གཉིས
བརྒྱད་	སོ་གསུམ
བརྒྱད་	སོ་བཞི
བརྒྱད་	སོ་ལྔ
བརྒྱད་	སོ་དྲུག
བརྒྱད་	སོ་བདུན
བརྒྱད་	སོ་བརྒྱད
བརྒྱད་	སོ་དགུ
བརྒྱད་	བཞི་བཅུ་ཐམ་པ
བརྒྱད་	ཞེ་གཅིག
བརྒྱད་	ཞེ་གཉིས
བརྒྱད་	ཞེ་གསུམ
བརྒྱད་	ཞེ་བཞི
བརྒྱད་	ཞེ་ལྔ
བརྒྱད་	ཞེ་དྲུག
བརྒྱད་	ཞེ་བདུན
བརྒྱད་	ཞེ་བརྒྱད
བརྒྱད་	ཞེ་དགུ
བརྒྱད་	ལྔ་བཅུ་ཐམ་པ
བརྒྱད་	ང་གཅིག
བརྒྱད་	ང་གཉིས
བརྒྱད་	ང་གསུམ

Appendix II. The Wylie Transliteration System: Tibetan into English

Different methods for representing Tibetan letters using the English alphabet have been employed since the early 1800's. Due to the proliferation of various transliteration schemes, Turrell Wylie tried to establish a standard system of Tibetan transcription into English. Unfortunately, he was only partially successful, and a variety of transliteration systems are still in use.

For some years it was not possible to represent Tibetan adequately with the computers that were available. Because of this, and in sheer frustration, most of us resorted to the use of transliteration systems such as Wylie's as a means of storing and representing the Tibetan language on personal computers.

Fortunately, and as evidenced by this software package, it seems that the days of having to represent Tibetan with English transliteration are now past. We would like to see all groups involved in the preservation and dissemination of Tibetan documents and religious materials give up the use of Wylie and other transliteration schemes as the principal means for storing and manipulating Tibetan data.

We include some details about the Wylie transliteration system in this documentation not because we think that it is the right way to do things but just because it has been in use for so long as the standard method for transliterating Tibetan. The following chart illustrates the Wylie transliteration system for the base letters (མིང་གཞི་):

ཀ་ ka	ཁ་ kha	ག་ ga	ང་ nga
ཅ་ ca	ཆ་ cha	ཇ་ ja	ཉ་ nya
ཏ་ ta	ཐ་ tha	ད་ da	ན་ na
པ་ pa	ཕ་ pha	བ་ ba	མ་ ma
ཙ་ tsa	ཚ་ tsha	ཛ་ dza	ཝ་ wa
ཞ་ zha	ཟ་ za	འ་ 'a	ཡ་ ya
ར་ ra	ལ་ la	ཤ་ sha	ས་ sa
ཧ་ ha	ཨ་ a		

The transliteration changes when using the five vowels. The following examples illustrate this:

ཨ་ a	ཨི་ i	ཨུ་ u	ཨེ e	ཨོ་ o
ཀ་ ka	ཀི་ ki	ཀུ་ ku	ཀེ་ ke	ཀོ་ ko

Next we present an alphabetized list of Tibetan words taken from Melvyn Goldstein's *Tibetan English Dictionary of Modern Tibetan*. This list contains phrases which will illustrate some of the finer points of Wylie transliteration. Note that spaces are put between the transliterated syllables as opposed to hyphens or periods; this makes the typing of such syllables quite a bit easier. Pay particular attention to the transliteration of the འ་རྒྱང་.

Note that, in recent times, foreign words have been added to the Tibetan vocabulary whose spelling does not follow the rules of traditional Tibetan grammar. Wylie transliteration proves inadequate for such words, prompting the definition of a more general transliteration scheme. In the meantime, such words can be entered into a document by hand using the appropriate character from the font table or by using the Tibetan Keyboard program.

ཀ་བ་	ka ba
བཀའ་	bka'
ཁང་པ་	khang pa

མགོ་	mgo
འགགས་	’gags
འགའ་ཤས་	’ga’ shas
རྔ་	rnga
ལྕགས་	lcags
འཆར་	’char
ལྗོངས་	ljongs
བརྗོད་ཚིག	brjod tshig
ཉམས་མྱོང་	nyams myong
གཏི་མུག	gti mug
ཐའི་དབན་	tha’i dban
དུས་ཚོད་	dus tshod
ནའང་	na’ang (note that this is not translit-erated as na’ng)
བསྣམས་	bsnams
དཔའ་བོ་	dpa’ bo
སྤྱིའི་འཕྲུལ་ཆས་བཟོ་གྲྭ་	spyi’i ’phrul chas bzo grwa
འཕྲོད་པའི་རང་བཞིན་	’phrod pa’i rang bzhin
བྱིའུ་	byi’u
བླ་གྲྭ་	bla grwa
འབྲས་བགྲུའི་འཕྲུལ་འཁོར་	’bras bgru’i ’phrul ’khor
མ་རྩའི་རིང་ལུགས་	ma rtsa’i ring lugs
རྩྭ་ཁ་	rtswa kha
འཚོལ་འདྲི་	’tshol ’dri
རྫུའི་ཆི་འུ་	dzu’i chi’u
རྫོང་ཨུ་	rdzong u
ཝ་ནག་	wa nag
ཨུའུ་ལྕགས་	wu’u lcags
ཞྭ་མོ་	zhwa mo
ཞི་བའི་རིམ་འགྱུར་	zhi ba’i rim ’gyur
ཟྭ་ཚོད་	zwa tshod
གཟའ་ཟླ་བ་	gza’ zla ba
འ་ཞུར་	’a ’ur
འང་	’ang
འོ་ན་	’o na
འོས་པོ་	’os po
ཡང་བ་	yang ba
གཡར་	g.yar (the full-stop is necessary to differentiate this from gyar ཇྱར་)
རླངས་ཆུ་	rlangs chu
ལུའི་ལྕགས་	lu’i lcags
ཤྭ་བ་	shwa ba
ས་བ་ཚྭ་ཅན་	sa ba tshwa can
བསློགས་	bslogs
ཧུའོ་ཁྲེ་	hu’o khre
ཧྲུའུ་ཅི་	hru’u ci
ལྷོད་ལྷོད་	lhod lhod
ཨང་གི་	ang gi
ཨོ་མོ་སུ་	o mo su
ཨོག་ཚོམ་	og tshom

Appendix III: The Tibetan Character Sets (Windows Encoding)

All of our Window's encoded typefaces come as a set of five fonts. The first font is the "main" or "normal" font that contains all of the basic Tibetan characters. The remaining four fonts are "support" fonts that contain an extensive number of Tibetan-Sanskrit pre-made "stacked" letters and a wide array of marks and signs needed for Tibetan publishing. Additionally, the fonts contain every glyph in the current Unicode definition for Tibetan (3.0)

WARNING!!

Our Tibetan fonts are made available in Truetype format for our Windows programs and in Postscript format for our Tibetan! version 4 for DOS program. There are slight differences in the character encodings of the two. The information in the maps and lists which follows is correct for the Truetype fonts for Windows. Information for the DOS encoding can be obtained from the documentation for the DOS version of the Tibetan! program (version 4) which is available on our web site.

The Windows encoding character set of the normal Tibetan fonts is shown in the map on page 54 and the Windows encoding character set maps for the supporting fonts follow that. Lists of all of the characters in the fonts follow the maps. The lists contain considerable amounts of information about the various characters. The lists also have all information on the relationships between characters needed to utilize the fonts.

Please note that all of our fonts are copyrighted. There are now several Tibetan font sets around the world which have been created from our fonts and sold for profit illegally. This is disturbing to note in this relatively small world of Tibetan computing where most of the people involved proclaim the Buddhist way.

Overview of the Contents of the Fonts

In the normal Tibetan fonts, the Tibetan consonants and all of their possible combinations are placed from positions 33 to 160, 170 to 175, and 180 to 189. The Tibetan numerals appear at positions 190–199. The punctuation marks appear between positions 200 and 211. The vowel signs appear between 161 to 169, 176 to 179, and 211 to 252.

Four specialized Tibetan characters are available at positions 154 to 157. The first two are the modern day Tibetan letters for transcription of the English fa and va sounds. There is a short ha at 156 which is useful both for Tibetan and Sanskrit (use this to make Sanskrit stacks such as hum). Then at 157 is a half ah.chen.

The vowel signs, including the a.chung and a.chung with zhabs.kyu to go below letters, have little or no width as far as the printer is concerned. They have been carefully produced so that, when printed, they will automatically line up over the preceding letter. For instance, to obtain the word སྒྲི, if the printer is told to print character number 127, སྒ followed by character number 232, ◌ྲི will be the direct result.

The lists detail which vowel signs to use with which letter. The gi.gu, dreng.bu and na.ro at positions 220, 232, and 235 respectively are the "normal" vowel signs which go with most letters and stacks. The gi.gu, dreng.bu, and na.ro at 221, 233, and 236 respectively, are for use with the letters ཅཙཛ and their stacks. The reversed gi.gu at position 222 is for use in the creation of the Sanskrit vowels, ཷ and ཹ and their combinations.

The zhabs.kyu's are placed at varying levels to suit the varying heights and styles of letters and their stacks, for instance, zhabs.kyu's 230 and 231 are for use with ya.btags. The lists detail which zhabs.kyu goes with which letter. The vowel signs for the long Sanskrit ཻ and ཽ are at positions 234 and 237 respectively. An anushvara is at position 238, and a visarga is at position 239. From 240 to 242 are a series of bindus. At 241 is a bindu with crescent moon and no nada; at 242 is a bindu with crescent moon together with nada. At 252 is a virama. The virama should be typed after the letter it goes with so that it will print correctly. For instance to make ཌྡ, first type a ཌ then a ྡ then the virama: ◌྄.

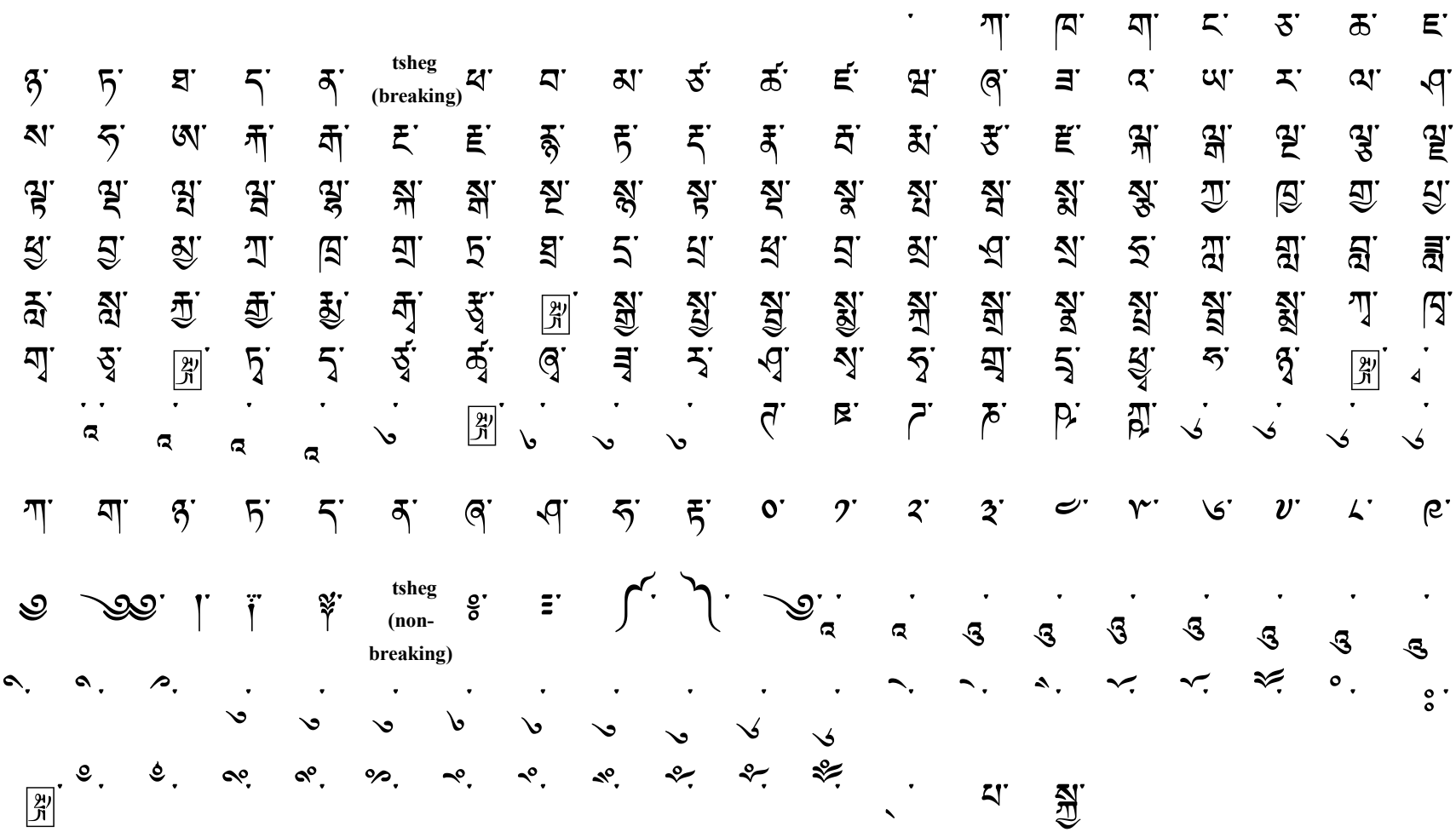
Note the characters positioned from 180 to 189. These are all shortened versions of standard characters which appear earlier in the set. They are used when the letter requires a zhabs.kyu, an a.chung, or an a.chung plus zhabs.kyu below it. This is required because, in proper Tibetan calligraphy, these letters are always significantly shortened when they receive one of these vowel signs. Their correct vowels are also listed in the lists.

The Tibetan-Sanskrit characters are placed in Sanskrit alphabetical order starting at position 33 in font Skt1 and proceeding through the fonts Skt2 and Skt3. When you look at the relevant maps which follow, you will see that the first three support fonts have letters defined up to 199, followed by sets of a.chung, a.chung with zhabs.kyu, and zhabs.kyu. The other vowel signs are obtained from the "normal" font.

There are a few characters in the normal Tibetan set and many characters in the support Skt 1, 2, 3 fonts sets which are intended for use but which are not on the Tibetan keyboard. These characters can be obtained with **Insert, Symbol** feature as mentioned earlier in the instructions. If you need them they will be invaluable, so you are strongly advised to look at the maps and lists that follow to acquaint yourself with what is available.

THE TIBETAN NORMAL FONT CHARACTER SET WINDOWS ENCODING

The numbers refer to decimal values of the characters in a font. Square boxes with the Tibetan "doesn't exist" are undefined characters.

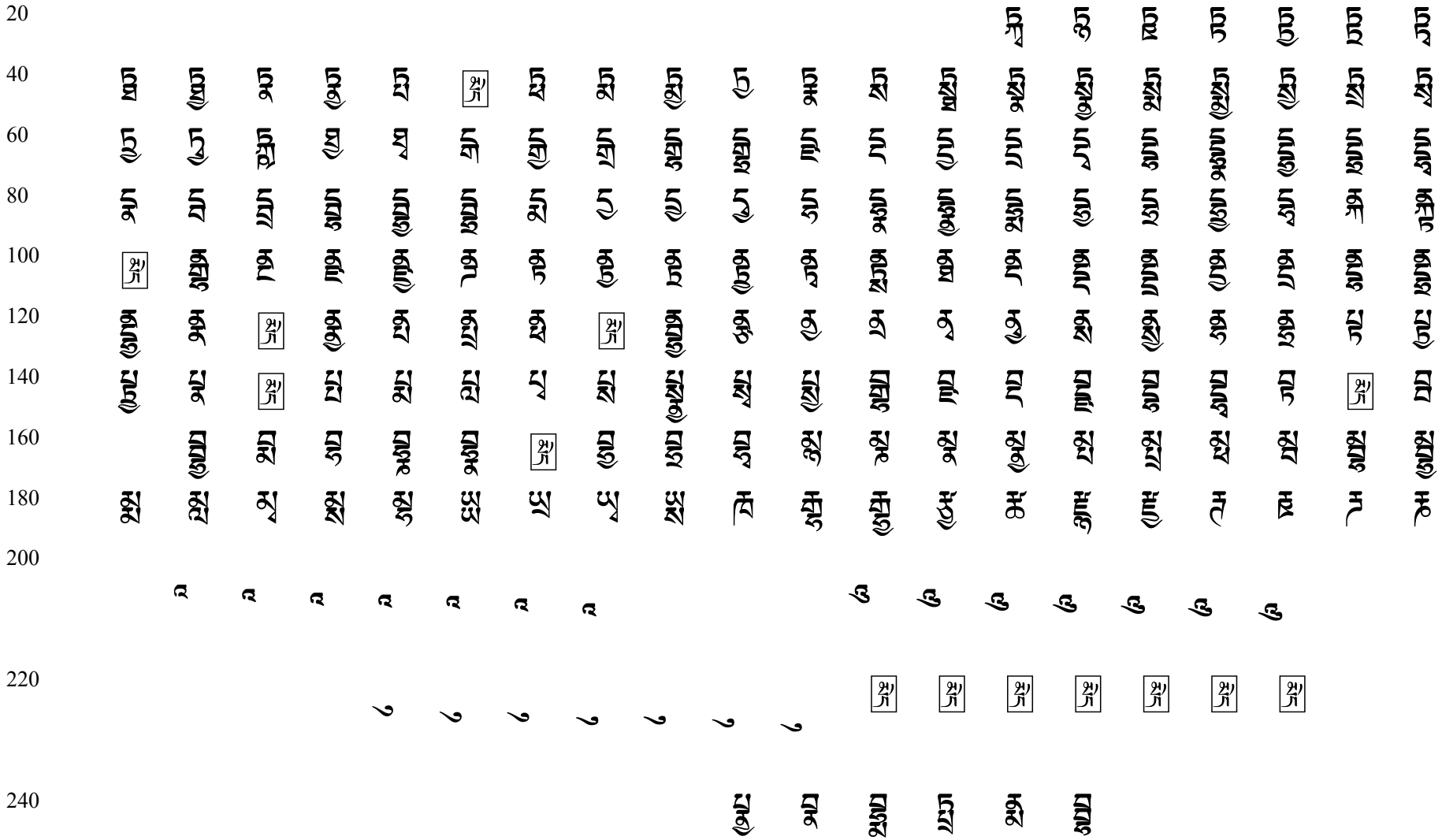


TIBETAN SANSKRIT FONT #1 CHARACTER SET WINDOWS ENCODING

The numbers refer to decimal values of the characters in a font. Square boxes with the Tibetan "doesn't exist" are undefined characters.

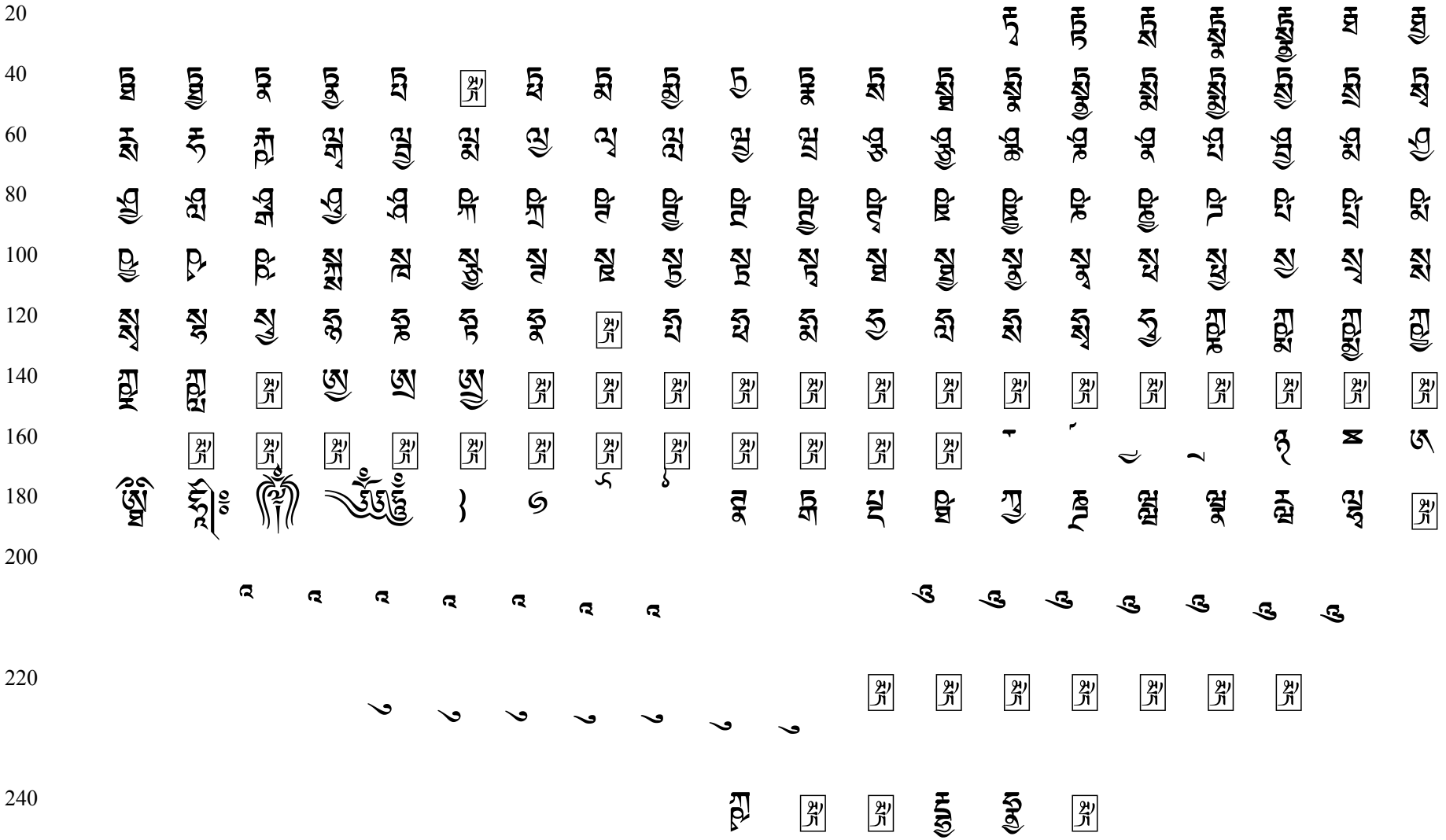
TIBETAN SANSKRIT FONT #2 CHARACTER SET WINDOWS ENCODING

The numbers refer to decimal values of the characters in a font. Square boxes with the Tibetan "doesn't exist" are undefined characters.



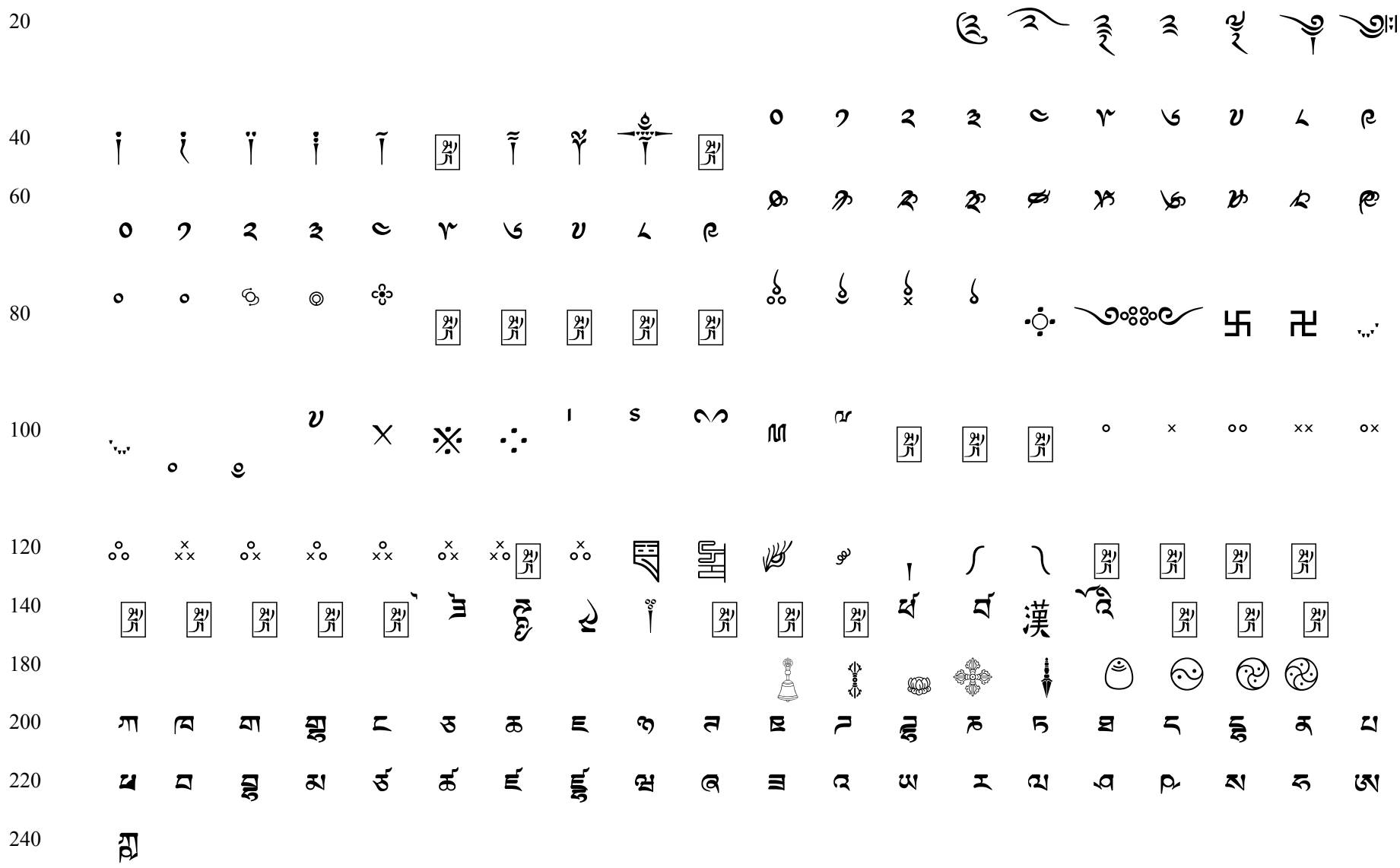
TIBETAN SANSKRIT FONT #3 CHARACTER SET WINDOWS ENCODING

The numbers refer to decimal values of the characters in a font. Square boxes with the Tibetan "doesn't exist" are undefined characters.



TIBETAN SANSKRIT FONT #4 CHARACTER SET WINDOWS ENCODING

The numbers refer to decimal values of the characters in a font. Square boxes with the Tibetan "doesn't exist" are undefined characters.



LIST 1. TIBETAN CHARACTERS IN THE PC STYLE FONTS
A. NATIVE CHARACTERS IN THE "NORMAL" FONT

The left column contains a brief **description** of the character; column two shows the **Tibetan** character; column three shows the **Decimal** value of the Tibetan character in the Tibetan font. The next columns show thedecimal values for the correct vowels to use with the character. All characters indicated in all columns belong to the normal font of a typeface. n/a means that this character does not receive these characters because a short version of the character later in the table is specifically for use with these characters. **Unicode 3** gives the Unicode for that character according to the Tibetan version 3.0 Unicode definition. Further information about the character is contained in the **Notes** column following that.

Notes on Unicode glyphs: The Unicodes shown in the following tables are for version 3.0 of the Tibetan Extension to the Universal Multiple Octet Coded Character Set (UCS). All glyphs contained in the Tibetan Unicode 3.0 definition can be correctly produced using the characters contained in the following sets. Most of them are produced using one character from the following sets. However, a few of them can only be represented by using a combination of characters from the following sets. The Unicode glyphs needing to be made from multiple characters can be divided into three categories. They are as follows:

1) Compound glyphs
0F00 is made with [62]+[249] from the normal font
0F02 is made with [55]+[223]+[242]+[239] from the normal font
0F03 is made with [55]+[223]+[242]+[206] from the normal font
0F0E is made with [202]+[202] from the normal font

2) Glyphs with multiple possibilities
0F71, 0F72, 0F74, 0F75, 0F7A, and 0F7C are represented with multiple glyphs in the following set. The appropriate glyph from the following set must be chosen in dependence on the glyph(s) preceding it using some logic. All information necessary to make the correct choices are included in the following table.

2) Compound glyphs with multiple possibilities
0F73, 0F76, 0F77, 0F78, 0F79, and 0F81 are compound glyphs and in addition, some of their parts are represented with multiple glyphs in the following set. The appropriate glyphs from the following set must be chosen in dependence on the glyph to be produced using some logic. All information necessary to make the correct choices are included in the following table.

Description	Tibetan	Dec.	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
space	space	[0,32]								
ka	ཀ	[33]	[220]	n/a	[232]	[235]	n/a	n/a	[0F40]	
kha	ཁ	[34]	[220]	[223]	[232]	[235]	[161]	[216]	[0F41]	
ga	ག	[35]	[220]	n/a	[232]	[235]	n/a	n/a	[0F42]	
nga	ང	[36]	[220]	[223]	[232]	[235]	[161]	[216]	[0F44]	
ca	ཅ	[37]	[220]	[176]	[232]	[235]	[161]	[216]	[0F45]	
cha	ཆ	[38]	[220]	[177]	[232]	[235]	[161]	[216]	[0F46]	
ja	ཇ	[39]	[220]	[223]	[232]	[235]	[161]	[216]	[0F47]	

Description	Tibetan	Dec.	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
nya	ཉ	[40]	[220]	n/a	[232]	[235]	n/a	n/a	[0F48]	
ta	ཏ	[41]	[220]	n/a	[232]	[235]	n/a	n/a	[0F4F]	
tha	ཐ	[42]	[220]	[223]	[232]	[235]	[161]	[216]	[0F50]	
da	ད	[43]	[220]	n/a	[232]	[235]	n/a	n/a	[0F51]	
na	ན	[44]	[220]	n/a	[232]	[235]	n/a	n/a	[0F53]	
tsheg (breaking)	་	[45]							[0F0B]	for non-breaking tsheg use [205]
pa	པ	[252]	[220]	[223]	[232]	[235]	[161]	[216]	[0F54]	
pha	ཕ	[46]	[220]	[223]	[232]	[235]	[161]	[216]	[0F55]	
ba	བ	[47]	[220]	[223]	[232]	[235]	[161]	[216]	[0F56]	
ma	མ	[48]	[220]	[223]	[232]	[235]	[161]	[216]	[0F58]	
tsa	ཙ	[49]	[221]	[176]	[233]	[236]	[161]	[216]	[0F59]	
tsha	ཚ	[50]	[221]	[177]	[233]	[236]	[161]	[216]	[0F5A]	
dza	ཛ	[51]	[221]	[223]	[233]	[236]	[161]	[216]	[0F5B]	
wa	ཝ	[52]	[220]	[223]	[232]	[235]	[161]	[216]	[0F5D]	For all typefaces except TibetanMachine and TibetanMachineWeb use given values. For TibetanMachine and TibetanMachineWeb use zhabs.kyu [224]; use a.chung [211]; use a.chung+zhabs.kyu [213]
zha	ཞ	[53]	[220]	n/a	[232]	[235]	n/a	n/a	[0F5E]	
za	ཟ	[54]	[220]	[223]	[232]	[235]	[161]	[216]	[0F5F]	
a chung	འ	[55]	[220]	[223]	[232]	[235]	[161]	[216]	[0F60]	
ya	ཡ	[56]	[220]	[223]	[232]	[235]	[161]	[216]	[0F61]	
ra	ར	[57]	[220]	[223]	[232]	[235]	[161]	[216]	[0F62]	
la	ལ	[58]	[220]	[223]	[232]	[235]	[161]	[216]	[0F63]	
sha	ཤ	[59]	[220]	n/a	[232]	[235]	n/a	n/a	[0F64]	
sa	ས	[60]	[220]	[223]	[232]	[235]	[161]	[216]	[0F66]	
ha	ཧ	[61]	[220]	n/a	[232]	[235]	n/a	n/a	[0F67]	
ahchen	ཨ	[62]	[220]	[223]	[232]	[235]	[161]	[216]	[0F6A]	
ra mgo ka	ཀྲ	[63]	[220]	[227]	[232]	[235]	[162]	[217]		
ra mgo ga	གྲ	[64]	[220]	[227]	[232]	[235]	[162]	[217]		
ra mgo nga	ཁྲ	[65]	[220]	[224]	[232]	[235]	[162]	[217]		
ra mgo ja	ཇྲ	[66]	[220]	[224]	[232]	[235]	[162]	[217]		
ra mgo nya	ཉྲ	[67]	[220]	[167]	[232]	[235]	[163]	[218]		
ra mgo ta	ཏྲ	[68]	[220]	n/a	[232]	[235]	n/a	n/a		
ra mgo da	དྲ	[69]	[220]	[227]	[232]	[235]	[162]	[217]		
ra mgo na	ནྲ	[70]	[220]	[227]	[232]	[235]	[162]	[217]		
ra mgo ba	བྲ	[71]	[220]	[224]	[232]	[235]	[162]	[217]		
ra mgo ma	མྲ	[72]	[220]	[224]	[232]	[235]	[162]	[217]		

Description	Tibetan	Dec.	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
ra mgo tsa	རཙ	[73]	[220]	[224]	[232]	[235]	[162]	[217]		
ra mgo dza	རཛ	[74]	[220]	[224]	[232]	[235]	[162]	[217]		
la mgo ka	ལཀ	[75]	[220]	[168]	[232]	[235]	[163]	[218]		
la mgo ga	ལག	[76]	[220]	[168]	[232]	[235]	[163]	[218]		
la mgo nga	ལང	[77]	[220]	[228]	[232]	[235]	[163]	[218]		
la mgo ca	ལཅ	[78]	[220]	[228]	[232]	[235]	[163]	[218]		
la mgo ja	ལཇ	[79]	[220]	[228]	[232]	[235]	[163]	[218]		
la mgo ta	ལཏ	[80]	[220]	[169]	[232]	[235]	[163]	[218]		
la mgo da	ལད	[81]	[220]	[168]	[232]	[235]	[163]	[218]		
la mgo pa	ལཔ	[82]	[220]	[228]	[232]	[235]	[163]	[218]		
la mgo ba	ལབ	[83]	[220]	[228]	[232]	[235]	[163]	[218]		
la mgo ha	ལཧ	[84]	[220]	[169]	[232]	[235]	[163]	[218]		
sa mgo ka	སཀ	[85]	[220]	[168]	[232]	[235]	[163]	[218]		
sa mgo ga	སག	[86]	[220]	[168]	[232]	[235]	[163]	[218]		
sa mgo nga	སང	[87]	[220]	[228]	[232]	[235]	[163]	[218]		
sa mgo nya	སཉ	[88]	[220]	[169]	[232]	[235]	[163]	[218]		
sa mgo ta	སཏ	[89]	[220]	[169]	[232]	[235]	[163]	[218]		
sa mgo da	སད	[90]	[220]	[168]	[232]	[235]	[163]	[218]		
sa mgo na	སན	[91]	[220]	[168]	[232]	[235]	[163]	[218]		
sa mgo pa	སཔ	[92]	[220]	[228]	[232]	[235]	[163]	[218]		
sa mgo ba	སབ	[93]	[220]	[228]	[232]	[235]	[163]	[218]		
sa mgo ma	སམ	[94]	[220]	[228]	[232]	[235]	[163]	[218]		
sa mgo tsa	སཙ	[95]	[220]	[228]	[232]	[235]	[163]	[218]		
ka ya tag	ཀྱཏ	[96]	[220]	[178]	[232]	[235]	[162]	[217]		
kha ya tag	ཁྱཏ	[97]	[220]	[178]	[232]	[235]	[162]	[217]		
ga ya tag	གྱཏ	[98]	[220]	[178]	[232]	[235]	[162]	[217]		
pa ya tag	པྱཏ	[99]	[220]	[179]	[232]	[235]	[163]	[218]		
pha ya tag	ཕྱཏ	[100]	[220]	[179]	[232]	[235]	[163]	[218]		
ba ya tag	བྱཏ	[101]	[220]	[179]	[232]	[235]	[163]	[218]		
ma ya tag	མྱཏ	[102]	[220]	[179]	[232]	[235]	[163]	[218]		
ka ra tag	ཀྲཏ	[103]	[220]	[225]	[232]	[235]	[162]	[217]		
kha ra tag	ཁྲཏ	[104]	[220]	[225]	[232]	[235]	[162]	[217]		
ga ra tag	གྲཏ	[105]	[220]	[225]	[232]	[235]	[162]	[217]		
ta ra tag	ཏྲཏ	[106]	[220]	[225]	[232]	[235]	[162]	[217]		
tha ra tag	ཐྲཏ	[107]	[220]	[225]	[232]	[235]	[162]	[217]		
da ra tag	དྲཏ	[108]	[220]	[225]	[232]	[235]	[162]	[217]		
pa ra tag	པྲཏ	[109]	[220]	[225]	[232]	[235]	[162]	[217]		

Description	Tibetan	Dec.	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
pha ra tag		[110]	[220]	[225]	[232]	[235]	[162]	[217]		
ba ra tag		[111]	[220]	[225]	[232]	[235]	[162]	[217]		
ma ra tag		[112]	[220]	[225]	[232]	[235]	[162]	[217]		
sha ra tag		[113]	[220]	[225]	[232]	[235]	[162]	[217]		
sa ra tag		[114]	[220]	[225]	[232]	[235]	[162]	[217]		
ha ra tag		[115]	[220]	[225]	[232]	[235]	[162]	[217]		
ka la tag		[116]	[220]	[228]	[232]	[235]	[163]	[218]		
ga la tag		[117]	[220]	[228]	[232]	[235]	[163]	[218]		
ba la tag		[118]	[220]	[228]	[232]	[235]	[163]	[218]		
za la tag		[119]	[220]	[228]	[232]	[235]	[163]	[218]		
ra la tag		[120]	[220]	[228]	[232]	[235]	[163]	[218]		
sa la tag		[121]	[220]	[228]	[232]	[235]	[163]	[218]		
ra mgo ka ya tag		[122]	[220]	[230]	[232]	[235]	[163]	[218]		
ra mgo ga ya tag		[123]	[220]	[230]	[232]	[235]	[163]	[218]		
ra mgo ma ya tag		[124]	[220]	[230]	[232]	[235]	[163]	[218]		
ra mgo ga wa zur		[125]	[220]	[229]	[232]	[235]	[164]	[219]		
ra mgo tsa wa zur		[126]	[220]	[229]	[232]	[235]	[164]	[219]		
sa mgo ka ya tag		[254]	[220]	[231]	[232]	[235]	[164]	[219]		
sa mgo ga ya tag		[128]	[220]	[231]	[232]	[235]	[164]	[219]		
sa mgo pa ya tag		[129]	[220]	[231]	[232]	[235]	[164]	[219]		
sa mgo ba ya tag		[130]	[220]	[231]	[232]	[235]	[164]	[219]		
sa mgo ma ya tag		[131]	[220]	[231]	[232]	[235]	[164]	[219]		
sa mgo ka ra tag		[132]	[220]	[229]	[232]	[235]	[164]	[219]		
sa mgo ga ra tag		[133]	[220]	[229]	[232]	[235]	[164]	[219]		
sa mgo na ra tag		[134]	[220]	[229]	[232]	[235]	[164]	[219]		
sa mgo pa ra tag		[135]	[220]	[229]	[232]	[235]	[164]	[219]		
sa mgo ba ra tag		[136]	[220]	[229]	[232]	[235]	[164]	[219]		
sa mgo ma ra tag		[137]	[220]	[229]	[232]	[235]	[164]	[219]		
ka wa zur		[138]	[220]	[228]	[232]	[235]	[163]	[218]		
kha wa zur		[139]	[220]	[228]	[232]	[235]	[163]	[218]		
ga wa zur		[140]	[220]	[228]	[232]	[235]	[163]	[218]		
ca wa zur		[141]	[220]	[228]	[232]	[235]	[163]	[218]		
ta wa zur		[143]	[220]	[228]	[232]	[235]	[163]	[218]		

Description	Tibetan	Dec.	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
da wa zur	ཌྭ	[144]	[220]	[228]	[232]	[235]	[163]	[218]		
tsa wa zur	ཙྭ	[145]	[221]	[228]	[233]	[236]	[163]	[218]		
tsha wa zur	ཚྭ	[146]	[221]	[228]	[233]	[236]	[163]	[218]		
zha wa zur	ཞྭ	[147]	[220]	[228]	[232]	[235]	[163]	[218]		
za wa zur	ཟྭ	[148]	[220]	[228]	[232]	[235]	[163]	[218]		
ra wa zur	རྭ	[149]	[220]	[228]	[232]	[235]	[162]	[218]		
sha wa zur	ཤྭ	[150]	[220]	[228]	[232]	[235]	[163]	[218]		
sa wa zur	སྭ	[151]	[220]	[228]	[232]	[235]	[162]	[218]		
ha wa zur	ཧྭ	[152]	[220]	[228]	[232]	[235]	[163]	[218]		
ga ra tag wa zur	གྲྭ	[153]	[220]	[228]	[232]	[235]	[163]	[218]		
da ra tag wa zur	ཌྲྭ	[154]	[220]		[232]	[235]				
pha ya tag wa zur	ཕྱྭ	[155]	[220]		[232]	[235]				
extra short ha	ཧ	[156]	[220]		[232]	[235]	[161]	[215]		This extra short ha is only meant to be used for making ha+a.chung+ zhabs.kyu. All other combinations with ha are made using [188]
nya wa zur	ཉྭ	[157]	[220]	[228]	[232]	[235]	[163]	[218]		
small, low wa zur	ྭ	[159]							[0FAD]	
small a chung, level 1	ཱ	[161]								for this achung with a zhabs.kyu use [216]
small a chung, level 2	ཱ	[162]								for this achung with a zhabs.kyu use [217]
small a chung, level 3	ཱ	[163]								for this achung with a zhabs.kyu use [218]
small a chung, level 4	ཱ	[164]								for this achung with a zhabs.kyu use [219]
level 1 zhabs.kyu.....	ྱ	[165]								
level 1 zhabs.kyu.....	ྲ	[226]								
level 1 zhabs.kyu.....	ྱ	[167]								
level 1 zhabs.kyu.....	ྲ	[168]								
level 1 zhabs.kyu.....	ྱ	[169]								
ta log yig	ཏ	[170]	[220]	[225]	[232]	[235]	[162]	[217]	[0F4A]	
tha log yig	ཐ	[171]	[220]	[223]	[232]	[235]	[161]	[216]	[0F4B]	
da log yig	ད	[172]	[220]	[225]	[232]	[235]	[162]	[217]	[0F4C]	
na log yig	ན	[173]	[220]	[225]	[232]	[235]	[162]	[217]	[0F4E]	
sha log yig	ཤ	[174]	[220]	[225]	[232]	[235]	[162]	[217]	[0F65]	
k.sha log yig	ཀྵ	[175]	[220]	[228]	[232]	[235]	[163]	[218]	[0F69]	
zhabs.kyu w. arm.	ྱ	[176]								use with ཅ and ཆ
zhabs.kyu w. arm.	ྱ	[177]								use with ཀ and ཁ
zhabs.kyu w. arm.	ྱ	[178]								use with yatas (see table)

Description	Tibetan	Dec.	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
zhabs.kyu w. arm.	྿	[179]								use with yatas (see table)
shortened ka	ྈ	[180]	[220]	[165]	[232]	[235]	[211]	[213]		
shortened ga	ྉ	[181]	[220]	[165]	[232]	[235]	[211]	[213]		
shortened nya	ྊ	[182]	[220]	[226]	[232]	[235]	[212]	[214]		
shortened ta	ྋ	[183]	[220]	[226]	[232]	[235]	[212]	[214]		
shortened da	ྌ	[184]	[220]	[165]	[232]	[235]	[211]	[213]		
shortened na	ྍ	[185]	[220]	[165]	[232]	[235]	[211]	[213]		
shortened zha	ྎ	[186]	[220]	[165]	[232]	[235]	[211]	[213]		
shortened sha	ྏ	[187]	[220]	[165]	[232]	[235]	[211]	[213]		
shortened ha	ྐ	[188]	[220]	[226]	[232]	[235]	[212]			ha+achung+zhabs.kyu is made with extra short ha [156].
shortened rta	ྑ	[189]	[220]	[167]	[232]	[235]	[163]	[217]		
numeral 0	๐	[190]							[0F20]	
numeral 1	๑	[191]							[0F21]	
numeral 2	๒	[192]							[0F22]	
numeral 3	๓	[193]							[0F23]	
numeral 4	๔	[194]							[0F24]	
numeral 5	๕	[195]							[0F25]	
numeral 6	๖	[196]							[0F26]	
numeral 7	๗	[197]							[0F27]	
numeral 8	๘	[198]							[0F28]	
numeral 9	๙	[199]							[0F29]	
half zla tse gcig	ཿ	[200]							[0F05]	use after [201] or [210] to make multiple zla tshes
zla tse gnyis	ཾ	[201]								use in preference to [210]+[200]

Note the meanings of the use of these signs: ཾ། used as a beginning mark means either the three kayas of a Buddha or the three Jewels of Refuge in Buddhism; ཿཿ། used as a beginning mark means the dharmakaya and rupakaya of a Buddha or, alternatively, the union of upaya and prajña; ཿ། used as a beginning mark means the svabhavika-kaya of a buddha. These were originally thought of in this way because of wanting the writing that followed them to have a connection with these dharmic principles. Other than that, these have no particular meaning except that they are used as a way of starting whatever writing is being done.

Description	Tibetan	Dec.	Gi.gu	Zhabs.kyu	’Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
shad	།	[202]							[0F0D]	
rinchen shad	༑	[203]							[0F11]	
sbrul shad	༈	[204]							[0F08]	
tsheg (non-breaking)	༌	[205]							[0F0C]	for breaking tsheg use hyphen [45]
gter tsheg	༔	[206]							[0F14]	
sogs.rtags	༴	[207]							[0F34]	Literally an “etcetera sign”. It means “ditto” i.e., repeat again what was written out in full earlier in the text.
dbu.khang.g-yon	༼	[208]							[0F3C]	
dbu.khang.g-yas	༽	[209]							[0F3D]	
zla tse gcig	༄	[210]							[0F04]	use alone or with 200 but use [N,201] in preference to [N,210]+[N,200] for multiple zha tshes
small a chung, level 1		[211]								for this achung with a zhabs.kyu use [213]
small a chung, level 1		[212]								for this achung with a zhabs.kyu use [214]
small achung+zhabs.kyu 1		[213]								same height as achung [211]
small achung+zhabs.kyu 1		[214]								same height as achung [212]
small achung+zhabs.kyu 1		[215]								only for use with [156] to make
small achung+zhabs.kyu 1		[216]								same height as achung [161]
small achung+zhabs.kyu 2		[217]								same height as achung [162]
small achung+zhabs.kyu 3		[218]								same height as achung [163]
small achung+zhabs.kyu 4		[219]								same height as achung [164]
full gi.gu		[220]								
shortened gi.gu		[221]								use with ཙཚཛ
log yig gi.gu	ྀ	[222]							[0F80]	
level 1 zhabs.kyu............		[223]								
level 2 zhabs.kyu............		[224]								
level 3 zhabs.kyu............		[225]								
level 4 zhabs.kyu #1.......		[226]								belongs to the zhabskyu series from [N,165] to [N,169]
level 4 zhabs.kyu #2.......		[227]								
level 5 zhabs.kyu............		[228]								
level 6 zhabs.kyu............		[229]								
level 5 zhabs.kyu w. arm.		[230]								use with yatas, level 1
level 6 zhabs.kyu w. arm.		[231]								use with yatas, level 2

Description	Tibetan	Dec.	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
normal 'greng.bu	ེ	[232]								
shortened 'greng.bu	ེ	[233]								use with ཙེ་ཚེ་ཛེ་
double 'greng.bu	ཻ	[234]							[0F7B]	
normal naro	ོ	[235]								
raised naro	ོ	[236]								use with ཙེ་ཚེ་ཛེ་
double naro	ཽ	[237]							[0F7D]	
large anushvara	ཾ	[238]							[0F7E]	
rnam.bcad	ཿ	[239]							[0F7F]	Tibetan mark used to represent the Sanskrit visarga
bindu + datse	ྃ	[241]							[0F83]	
bindu + datse + thigle	ྂ	[242]							[0F82]	
bindu + gi.gu	ིཾ	[243]								
bindu + short gi.gu	ིཾ	[244]								use with ཙེ་ཚེ་ཛེ་
bindu + log yig gi.gu	ཱྀཾ	[245]								
bindu + normal 'greng.bu	ེཾ	[246]								
bindu + short 'greng.bu	ེཾ	[247]								use with ཙེ་ཚེ་ཛེ་
bindu + double 'greng.bu	ཻཾ	[248]								
bindu + normal naro	ོཾ	[249]								
bindu + raised naro	ོཾ	[250]								use with ཙེ་ཚེ་ཛེ་
bindu + double naro	ཽཾ	[251]								
srog.med	྄	[252]							[0F84]	Tibetan mark used to represent the Sanskrit virama. Use for ཏ྄་ཀ྄ and so on

B. NON-NATIVE CHARACTERS IN SUPPORT FONTS ONE, TWO, AND THREE (SKT1, SKT2, and SKT3)

Description lists the character in roman transliteration; **Tibetan** shows the character; **Decimal** shows the decimal value of the character in the font; **Font** shows the font for the character (N=normal; Skt1, Skt2, Skt3, Skt4=support font names); **Gigu**, **Zhabs.kyu**, and **'Greng.bu** show the decimal value of the correct versions of those characters to be used with the character and note that these are all in the normal font, not the support font; the **Achung** and **Achung+Zhabs.kyu** columns give the decimal character value for the correct versions of these vowels to use with the character and note that these are from the support font itself. All of the characters from [201] to [231] are the same in each of the three Sanskrit fonts so are only listed once with the Sanskrit 1 font. **Unicode v3.0** gives the Unicode according to the Tibetan version 3.0 Unicode definition.

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode3	Notes
kka	ཀྐ	[33]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
kkha	ཁྑ	[34]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
knga	ཀྨ	[35]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ktsa	ཀྩ	[36]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
kta	ཀྟ	[37]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ktya	ཀྱྟ	[38]	Skt1	[220]	[225]	[232]	[235]	[202]	[212]		
ktra	ཀྲྟ	[39]	Skt1	[220]	[225]	[232]	[235]	[202]	[212]		
ktrya	ཀྱྲྟ	[40]	Skt1	[220]	[227]	[232]	[235]	[204]	[214]		
ktva	ཀྭྟ	[41]	Skt1	[220]	[225]	[232]	[235]	[202]	[212]		
ktha	ཀྠ	[42]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
kthya	ཀྱྠ	[43]	Skt1	[220]	[226]	[232]	[235]	[203]	[213]		
kṇa	ཀྞ	[44]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
kna	ཀྣ	[252]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
knya	ཀྙ	[46]	Skt1	[220]	[226]	[232]	[235]	[203]	[213]		
kpha	ཀྥ	[47]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
kma	ཀྨ	[48]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
kmya	ཀྱྨ	[49]	Skt1	[220]	[226]	[232]	[235]	[203]	[213]		
krya	ཀྱྲ	[50]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ksha	ཀྵ	[51]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ksa	ཀྶ	[52]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ksna	ཀྺ	[53]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
ksma	ཀྴ	[54]	Skt1	[220]	[227]	[232]	[235]	[204]	[214]		
ksya	ཀྵྱ	[55]	Skt1	[220]	[226]	[232]	[235]	[203]	[213]		
ksva	ཀྵྭ	[56]	Skt1	[220]	[226]	[232]	[235]	[203]	[213]		
utsama ka	ཪཀ	[57]	Skt1	[220]	[224]	[235]	[232]	[201]	[211]		
utsama kha	ཪཁ	[58]	Skt1	[220]	[224]	[235]	[232]	[201]	[211]		
khkha	ཁཁ	[59]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
khna	ཁན	[60]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
khla	ཁལ	[61]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
gga	གག	[62]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ggha	གགྷ	[63]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		
gña	གཉ	[64]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
gda	གད	[65]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
gdha	གདྷ	[66]	Skt1	[220]	[227]	[232]	[235]	[204]	[214]		
gdhya	གདྷྱ	[67]	Skt1	[220]	[229]	[232]	[235]	[206]	[216]		
gdhva	གདྷྭ	[68]	Skt1	[220]	[229]	[232]	[235]	[206]	[216]		
gna	གན	[69]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
gnya	གཉ	[70]	Skt1	[220]	[226]	[232]	[235]	[203]	[213]		
gpa	གཔ	[71]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
gbha	གབྷ	[72]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		
gbhya	གབྷྱ	[73]	Skt1	[220]	[229]	[232]	[235]	[206]	[216]		
gma	གམ	[74]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
gmya	གྨ	[75]	Skt1	[220]	[226]	[232]	[235]	[203]	[213]		
grya	གྲྱ	[76]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
gha	ཀྷ	[77]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]	[0F43]	
ghgha	ཀྷགྷ	[78]	Skt1	[220]	[230]	[232]	[235]	[207]	[217]		
ghña	ཀྷཉ	[79]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		
ghna	ཀྷན	[80]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		
ghnya	ཀྷཉ	[81]	Skt1	[220]	[229]	[232]	[235]	[206]	[216]		
ghma	ཀྷམ	[82]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
ghla		[83]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		
ghya		[84]	Skt1	[220]	[225]	[232]	[235]	[202]	[212]		
ghra		[85]	Skt1	[220]	[225]	[232]	[235]	[202]	[212]		
ghva		[86]	Skt1	[220]	[225]	[232]	[235]	[202]	[212]		
ṅka		[87]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṅkta		[88]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		
ṅktya		[89]	Skt1	[220]	[229]	[232]	[235]	[206]	[216]		
ṅkya		[90]	Skt1	[220]	[226]	[232]	[235]	[203]	[213]		
ṅkha		[91]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṅkhya		[92]	Skt1	[220]	[226]	[232]	[235]	[203]	[213]		
ṅga		[93]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṅgra		[94]	Skt1	[220]	[225]	[232]	[235]	[202]	[212]		
ṅgya		[95]	Skt1	[220]	[226]	[232]	[235]	[203]	[213]		
ṅgha		[96]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		
ṅghya		[97]	Skt1	[220]	[229]	[232]	[235]	[206]	[216]		
ṅghra		[98]	Skt1	[220]	[229]	[232]	[235]	[206]	[216]		
ṅṅa		[99]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṅta		[100]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṅna		[101]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṅma		[102]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṅya		[103]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṅla		[104]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṅśa		[105]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṅha		[106]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṅkṣha		[107]	Skt1	[220]	[227]	[232]	[235]	[204]	[214]		
ṅkṣhva		[108]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		
ṅkṣhya		[109]	Skt1	[220]	[229]	[232]	[235]	[206]	[216]		
tstsa		[110]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
tstsha		[111]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
tstshva		[112]	Skt1	[221]	[226]	[233]	[236]	[203]	[213]		
tstshra		[113]	Skt1	[221]	[226]	[233]	[236]	[203]	[213]		
tsña		[114]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
tsnya		[115]	Skt1	[221]	[226]	[233]	[236]	[203]	[213]		
tsma		[116]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
tsya		[117]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
tsra		[118]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
tsla		[119]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
ts-hya		[120]	Skt1	[221]	[226]	[233]	[236]	[203]	[213]		
tshtha		[121]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
tsh-tsha		[122]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
tshya		[123]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
tshra		[124]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
tshla		[125]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
dzdza		[126]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
dzdzña		[253]	Skt1	[221]	[228]	[233]	[236]	[205]	[215]		
dzdzva		[128]	Skt1	[221]	[227]	[233]	[236]	[204]	[214]		
dzdzha		[129]	Skt1	[221]	[228]	[233]	[236]	[205]	[215]		
dzhdzha		[130]	Skt1	[221]	[230]	[233]	[236]	[207]	[217]		
dzña		[131]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
dzñya		[132]	Skt1	[221]	[226]	[233]	[236]	[203]	[213]		
dzna		[133]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
dznva		[134]	Skt1	[221]	[226]	[233]	[236]	[203]	[213]		
dzma		[135]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
dzya		[136]	Skt1	[221]	[224]	[233]	[236]	[201]	[211]		
dzra		[137]	Skt1	[221]	[224]	[232]	[236]	[201]	[211]		
dzva		[138]	Skt1	[221]	[224]	[232]	[236]	[201]	[211]		
dzha		[139]	Skt1	[221]	[224]	[232]	[236]	[201]	[211]	[0F5C]	
dzhya		[140]	Skt1	[221]	[225]	[232]	[236]	[202]	[212]		

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
dzhra		[141]	Skt1	[221]	[225]	[232]	[236]	[202]	[212]		
dzhla		[249]	Skt1	[221]	[228]	[232]	[236]	[205]	[215]		
dzhva		[143]	Skt1	[221]	[226]	[232]	[236]	[203]	[213]		
ñtsa		[144]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ñtsma		[145]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		
ñtsya		[146]	Skt1	[220]	[226]	[232]	[235]	[203]	[213]		
ñtsha		[147]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ñdza		[148]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ñdzya		[149]	Skt1	[220]	[227]	[232]	[235]	[204]	[214]		
ñdzha		[150]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		
ññ a		[151]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ñpa		[152]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ñpha		[153]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ñya		[154]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ñra		[155]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ñla		[156]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ñśa		[157]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṭka		[250]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṭṭa		[159]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṭṭ-ha		[254]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		
ṭpa		[161]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṭma		[162]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṭya		[163]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṭva		[164]	Skt1	[220]	[225]	[232]	[235]	[202]	[212]		
ṭsa		[165]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṭhya		[251]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṭhra		[167]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ḍga		[168]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ḍgya		[169]	Skt1	[220]	[226]	[232]	[235]	[203]	[213]		

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
ḍgha	ཌྒྷ	[170]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		
ḍghra	ཌྒྷྲ	[171]	Skt1	[220]	[229]	[232]	[235]	[206]	[216]		
ḍḍa	ཌྡ	[172]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ḍḍha	ཌྡྷ	[173]	Skt1	[220]	[227]	[232]	[235]	[204]	[214]		
ḍḍhya	ཌྡྷྱ	[174]	Skt1	[220]	[229]	[232]	[235]	[206]	[216]		
ḍna	ཎ	[175]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ḍma	ཎྨ	[176]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ḍya	ཎྱ	[177]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ḍra	ཎྲ	[178]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ḍva	ཎྭ	[179]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ḍha	ཏ	[180]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]	[0F4D]	
ḍhḍha	ཐྡྷ	[181]	Skt1	[220]	[230]	[232]	[235]	[207]	[217]		
ḍhma	ཐྨ	[182]	Skt1	[220]	[228]	[232]	[235]	[205]	[215]		
ḍhya	ཐྱ	[183]	Skt1	[220]	[225]	[232]	[235]	[202]	[212]		
ḍhra	ཐྲ	[184]	Skt1	[220]	[225]	[232]	[235]	[202]	[212]		
ḍhva	ཐྭ	[185]	Skt1	[220]	[225]	[232]	[235]	[202]	[212]		
ṇṭa	ཊ	[186]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṇṭha	ཋ	[187]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṇḍa	ཌ	[188]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṇḍya	ཌྱ	[189]	Skt1	[220]	[227]	[232]	[235]	[204]	[214]		
ṇḍrya	ཌྱྲ	[190]	Skt1	[220]	[229]	[232]	[235]	[206]	[216]		
ṇḍha	ཌྷ	[191]	Skt1	[220]	[227]	[232]	[235]	[204]	[214]		
ṇṇa	ཎ	[192]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṇdra	ཎྲ	[193]	Skt1	[220]	[226]	[232]	[235]	[203]	[213]		
ṇma	ཎྨ	[194]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṇya	ཎྱ	[195]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
ṇva	ཎྭ	[196]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
tka	ཏྐ	[197]	Skt1	[220]	[224]	[232]	[235]	[201]	[211]		
tkra	ཏྐྲ	[198]	Skt1	[220]	[225]	[232]	[235]	[202]	[212]		

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
tksa	ཀྵ	[199]	Skt1	[220]	[227]	[232]	[235]	[204]	[214]		
small achung, 1	ཀ	[201]	Skt1								
small achung, 2	ཁ	[202]	Skt1								
small achung, 3	ག	[203]	Skt1								
small achung, 4	ང	[204]	Skt1								
small achung, 5	ཅ	[205]	Skt1								
small achung, 6	ཆ	[206]	Skt1								
small achung, 7	ཇ	[207]	Skt1								
small achung+zhabs.kyu, 1	ཀྱ	[211]	Skt1								
small achung+zhabs.kyu, 2	ཁྱ	[212]	Skt1								
small achung+zhabs.kyu, 3	གྱ	[213]	Skt1								
small achung+zhabs.kyu, 4	ཀྱ	[214]	Skt1								
small achung+zhabs.kyu, 5	ཀྱ	[215]	Skt1								
small achung+zhabs.kyu, 6	ཀྱ	[216]	Skt1								
small achung+zhabs.kyu, 7	ཀྱ	[217]	Skt1								
level 1 zhabs.kyu.....	ཀ	[223]	Skt1								
level 2 zhabs.kyu.....	ཀ	[224]	Skt1								
level 3 zhabs.kyu.....	ཀ	[225]	Skt1								
level 4 zhabs.kyu	ཀ	[226]	Skt1								
level 5 zhabs.kyu	ཀ	[227]	Skt1								
level 6 zhabs.kyu.....	ཀ	[228]	Skt1								
level 7 zhabs.kyu.....	ཀ	[229]	Skt1								
level 8 zhabs.kyu	ཀ	[230]	Skt1								

All remaining vowels (gigu, 'greng.bu, naro and so on) are provided by using the vowels from the "normal" font character set.

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
tkva	ཀྭ	[33]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
tña	ཉ	[34]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
ṭha	ཋ	[35]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
tta	ཏ	[36]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
ttya	ཏྱ	[37]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
ttra	ཏྲ	[38]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
ttva	ཏྭ	[39]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
ttha	ཐ	[40]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
tthya	ཐྱ	[41]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
tna	ན	[42]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
tnya	ཉྱ	[43]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
tpa	པ	[44]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
tpra	པྲ	[252]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
tpha	ཕ	[46]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
tma	མ	[47]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
tmya	ཉྨ	[48]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
tya	ཡ	[49]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
trna	ཎ	[50]	Skt2	[221]	[225]	[233]	[235]	[202]	[212]		
tsa	ཙ	[51]	Skt2	[221]	[224]	[233]	[235]	[201]	[211]		
tstha	ཚ	[52]	Skt2	[221]	[228]	[233]	[235]	[205]	[215]		
tsna	ཚྣ	[53]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
tsnya	ཚྙ	[54]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
tsma	ཚྨ	[55]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
tsmya	ཚྨྱ	[56]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
tsya	ཚྱ	[57]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
tsra	ཚྲ	[58]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
tsva	ཚྭ	[59]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
trya	ཏྱ	[60]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
tvya	ཏྭ	[61]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
tkṣa	ཏྐྵ	[62]	Skt2	[220]	[227]	[232]	[235]	[204]	[214]		
thya	ཐྱ	[63]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
thva	ཐྭ	[64]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
dga	དྒ	[65]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
dgya	དྒྱ	[66]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
dgra	དྒྲ	[67]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
dgha	དྷ	[68]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
dghra	དྷྲ	[69]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
ddza	ཌྫ	[70]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
dda	ཌ	[71]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
ddya	ཌྱ	[72]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
ddra	ཌྲ	[73]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
ddva	ཌྭ	[74]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
ddha	ཌྷ	[75]	Skt2	[220]	[227]	[232]	[235]	[204]	[214]		
ddhna	ཌྷྣ	[76]	Skt2	[220]	[230]	[232]	[235]	[207]	[217]		
ddhya	ཌྷྱ	[77]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
ddhra	ཌྷྲ	[78]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
ddhrva	ཌྷྲྭ	[79]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
dna	དྣ	[80]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
dba	དྦ	[81]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
dbra	དྦྲ	[82]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
dbha	དྦྷ	[83]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
dbhya	དྦྷྱ	[84]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
dbhra	དྦྷྲ	[85]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
dma	དྨ	[86]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
dya	ཌྱ	[87]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
drya	ཌྲ	[88]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
dvya	ཌྭ	[89]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
dha	ཎ	[90]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]	[0F4D]	

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
dhna		[91]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
dhnya		[92]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
dhma		[93]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
dhya		[94]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
dhra		[95]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
dhrya		[96]	Skt2	[220]	[227]	[232]	[235]	[204]	[214]		
dhva		[97]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
nka		[98]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
nkta		[99]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
ngha		[101]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
nṅa		[102]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
ndza		[103]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
ndzya		[104]	Skt2	[220]	[227]	[232]	[235]	[204]	[214]		
nḍa		[105]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
nta		[106]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
ntya		[107]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
ntra		[108]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
ntrya		[109]	Skt2	[220]	[227]	[232]	[235]	[204]	[214]		
ntva		[110]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
ntsa		[111]	Skt2	[220]	[227]	[232]	[235]	[204]	[214]		
ntha		[112]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
nda		[113]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
ndda		[114]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
nddra		[115]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
ndya		[116]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
ndra		[117]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
ndha		[118]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
ndhra		[119]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
ndhya		[120]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
nna		[121]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
nnya		[123]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
npa		[124]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
npra		[125]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
npha		[126]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
nma		[253]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
nbhya		[128]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
ntsa		[129]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
nya		[130]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
nra		[131]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
nva		[132]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
nvya		[133]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
nsa		[134]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
nsya		[135]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
nha		[136]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
nhra		[137]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
pta		[138]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
ptya		[139]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
ptrya		[140]	Skt2	[220]	[227]	[232]	[235]	[204]	[214]		
pna		[141]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
pnya		[249]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
ppa		[143]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
pma		[144]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
pla		[145]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
pva		[146]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
psa		[147]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
psnya		[148]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
psva	པྭ	[149]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
psya	པྱ	[150]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
bgha	བྒྷ	[151]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
bdza	བྫ	[152]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
bda	བྡ	[153]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
bddza	བྦྫ	[154]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
bdha	བྡྷ	[155]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
bdhva	བྡྷྭ	[156]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
bta	བྟ	[157]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
bna	བྣ	[250]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
bba	བྦ	[159]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
bbha	བྦྷ	[254]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
bbhya	བྦྷྱ	[161]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
bma	བྨ	[162]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
bha	བྷ	[163]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]	[0F57]	
bhṇa	བྷྞ	[164]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
bhna	བྷྣ	[165]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
bhma	བྷྨ	[251]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
bhya	བྷྱ	[167]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
bhra	བྷྲ	[168]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
bhva	བྷྭ	[169]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
mña	མྙ	[170]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
mṇa	མྞ	[171]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
mna	མྣ	[172]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
mnya	མྤྱ	[173]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
mpa	མྤ	[174]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
mpra	མྤྲ	[175]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
mpha	མྥ	[176]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
mba	མྦ	[177]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
mbha		[178]	Skt2	[220]	[228]	[232]	[235]	[205]	[215]		
mbhya		[179]	Skt2	[220]	[229]	[232]	[235]	[206]	[216]		
mma		[180]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
mla		[181]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
mva		[182]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
msa		[183]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
mha		[184]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
yya		[185]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
yra		[186]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
yva		[187]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
ysa		[188]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
rkha		[189]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
rgha		[190]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
rghya		[191]	Skt2	[220]	[227]	[232]	[235]	[204]	[214]		
rtsya		[192]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
rtsha		[193]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
rdzña		[194]	Skt2	[220]	[226]	[232]	[235]	[203]	[213]		
rdzya		[195]	Skt2	[220]	[225]	[232]	[235]	[202]	[212]		
rṭa		[196]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
rṭha		[197]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
rḍa		[198]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		
rṇa		[199]	Skt2	[220]	[224]	[232]	[235]	[201]	[211]		

All of the characters from [201] to [230] are exact repeats of the same characters shown in the Skt1 section above. All remaining vowels (gigu, 'greng.bu, naro and so on) are provided by using the vowels from the "normal" font character set.

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
rtva	རྟྭ	[33]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
rtta	རྟྟ	[34]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
rtsa	རྩ	[35]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
rtsna	རྩྣ	[36]	Skt3	[220]	[229]	[232]	[235]	[206]	[216]		
rtsnya	རྩྙ	[37]	Skt3	[220]	[230]	[232]	[235]	[207]	[217]		
rtha	རྠ	[38]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
rthya	རྠྱ	[39]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
rddha	རྡྡྷ	[40]	Skt3	[220]	[229]	[232]	[235]	[206]	[216]		
rddhya	རྡྡྷྱ	[41]	Skt3	[220]	[230]	[232]	[235]	[207]	[217]		
rdya	ཪྡྱ	[42]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
rdha	རྡྷ	[43]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
rdhma	རྡྷྨ	[44]	Skt3	[220]	[229]	[232]	[235]	[206]	[216]		
rdhya	རྡྷྱ	[252]	Skt3	[220]	[227]	[232]	[235]	[204]	[214]		
rdhra	རྡྷྲ	[46]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
rpa	ཫ	[47]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
rbpa	རྦྤ	[48]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
rbba	རྦྦ	[49]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
rbha	རྦྷ	[50]	Skt3	[221]	[228]	[233]	[235]	[205]	[215]		
rmma	རྨྨ	[51]	Skt3	[221]	[225]	[233]	[235]	[202]	[212]		
rya	ཬ	[52]	Skt3	[221]	[224]	[233]	[235]	[201]	[211]		
rśa	ཤ	[53]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
rśya	ཤྱ	[54]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
rṣa	ཥ	[55]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
rṣṇa	རྵྞ	[56]	Skt3	[220]	[227]	[232]	[235]	[204]	[214]		
rṣṇya	རྵྙ	[57]	Skt3	[220]	[230]	[232]	[235]	[207]	[217]		
rṣma	རྵྨ	[58]	Skt3	[220]	[228]	[232]	[235]	[205]	[215]		
rṣya	ཥྱ	[59]	Skt3	[220]	[227]	[232]	[235]	[204]	[214]		
rsa	སྲ	[60]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
rha	ཧྲ	[61]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
rkṣa	རྐྵ	[62]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
lgva	ལྒྭ	[63]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
lbya	ལྦྱ	[64]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
lma	ལྨ	[65]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
lya	ལྱ	[66]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
lva	ལྭ	[67]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
lla	ལྷ	[68]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
vya	ཝྱ	[69]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
vra	ཝྲ	[70]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
śtsa	ཤྩ	[71]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
śtsya	ཤྩྱ	[72]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
śtsha	ཤྩྷ	[73]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
śṇa	ཤྞ	[74]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
śna	ཤྣ	[75]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
śpa	ཤྤ	[76]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
śbya	ཤྦྱ	[77]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
śma	ཤྨ	[78]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
śya	ཤྱ	[79]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
śrya	ཤྱྲ	[80]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
śla	ཤྵ	[81]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
śvga	ཤྭྒ	[82]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
śvya	ཤྭྱ	[83]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
śśa	ཤྶ	[84]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
ṣka	ཥྐ	[85]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
ṣkra	ཥྐྲ	[86]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
ṣṭa	ཥྚ	[87]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
ṣṭya	ཥྚྱ	[88]	Skt3	[220]	[227]	[232]	[235]	[204]	[214]		
ṣṭra	ཥྚྲ	[89]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
ṣṭrya	ཥྚྱྲ	[90]	Skt3	[220]	[227]	[232]	[235]	[204]	[214]		

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
ṣṭva	ཥྚྭ	[91]	Skt3	[220]	[227]	[232]	[235]	[204]	[214]		
ṣṭha	ཥྚྷ	[92]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
ṣṭhya	ཥྚྷྱ	[93]	Skt3	[220]	[227]	[232]	[235]	[204]	[214]		
ṣṇa	ཥྞ	[94]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
ṣṇya	ཥྞྱ	[95]	Skt3	[220]	[227]	[232]	[235]	[204]	[214]		
ṣḍa	ཥྡ	[96]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
ṣpa	ཥྤ	[97]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
ṣpra	ཥྤྲ	[98]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
ṣma	ཥྨ	[99]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
ṣya	ཥྱ	[100]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
ṣva	ཥྭ	[101]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
ṣṣa	ཥྵ	[102]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
sksa	སྐྵ	[103]	Skt3	[220]	[228]	[232]	[235]	[205]	[215]		
skha	སྐྷ	[104]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
stsya	སྩྱ	[105]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
sṭa	སྚ	[106]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
sṭha	སྛ	[107]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
stya	སྟྱ	[108]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
stra	སྟྲ	[109]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
stva	སྟྭ	[110]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
stha	སྠ	[111]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
sthya	སྠྱ	[112]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
snya	སྙྱ	[113]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
snva	སྙྭ	[114]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
spha	སྥ	[115]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
sphya	སྥྱ	[116]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
sya	ཤྱ	[117]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
srva	སྲྭ	[118]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
ssa	སྶ	[119]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
ssva	ཷ	[120]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
sha	ཹ	[121]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
svya	ཻ	[122]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
hña	ཽ	[123]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
hṇa	ཾ	[124]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
hta	ཿ	[125]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
hna	ྀ	[126]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
hnya	ཱྀ	[253]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
hpa	ྂ	[128]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
hpha	ྃ	[129]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
hma	྄	[130]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
hya	྅	[131]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
hla	྆	[132]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
hsa	྇	[133]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
hsva	ྈ	[134]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
hvya	ྉ	[135]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
kṣṇa	ྊ	[136]	Skt3	[220]	[228]	[232]	[235]	[205]	[215]		
kṣma	ྋ	[137]	Skt3	[220]	[228]	[232]	[235]	[205]	[215]		
kṣmya	ྌ	[138]	Skt3	[220]	[230]	[232]	[235]	[207]	[217]		
kṣya	ྍ	[139]	Skt3	[220]	[227]	[232]	[235]	[204]	[214]		
kṣra	ྎ	[140]	Skt3	[220]	[227]	[232]	[235]	[204]	[214]		
kṣla	ྏ	[141]	Skt3	[220]	[228]	[232]	[235]	[205]	[215]		
kṣva	ྐ	[249]	Skt3	[220]	[226]	[232]	[235]	[203]	[213]		
aya	ྑ	[143]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
ara	ྒ	[144]	Skt3	[220]	[224]	[232]	[235]	[201]	[211]		
arya	ྒྱ	[145]	Skt3	[220]	[225]	[232]	[235]	[202]	[212]		
ra.mgo	ྭ	[173]	Skt3								Part character for use in building unavailable stacked letters

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
tza.'phru	ཿ	[174]	Skt3							[0F39]	Part character for use in building unavailable stacked letters
ya.btags	ྻ	[175]	Skt3							[0FB1]	Part character for use in building unavailable stacked letters
ra.btags	ྼ	[176]	Skt3							[0FB2]	Part character for use in building unavailable stacked letters
plu.ta'o	ཽ	[177]	Skt3							[0F85]	Sanskrit grammar sign used to show the loss of visarga
damaru.rtags	྆	[178]	Skt3							[0F88]	Used in Kalachakra texts over Sanskrit lettering. Also called utsama and gru.can.gyings.
half a.chen	ཇ	[179]	Skt3							[0F01]	Terma mark used in a variety of terma, e.g., Chog.gyur.-gling.pa's terms.
ITHI secret sign	ཱྀ	[180]	Skt3								This sign shows that a text is secret and is not to be transmitted to more than one student for a set number of generations of transmission.
Terton's mark	ཀླུ་	[181]	Skt3								The terton's mark of Dilgo Khyentse Rinpoche
Terton's mark	ཀཱ	[182]	Skt3								The terton's mark of Ratna Lingpa
Terton's mark	ཨོཾཨཱཿཧཱུྃ	[183]	Skt3								The terton's mark of Mingyur Rinpoche
Terma mark	ཻ	[184]	Skt3								A special terma mark used (in triplicate) to represent ཨོཾ་ཨཱཿ་ཧཱུྃ་
Terma mark	ཷ	[185]	Skt3								A special terma mark sometimes also used as an ornament
Terma mark	ཹ	[186]	Skt3								Bliss-swirl for placement above other letters. Used for instance to make Chokling Rinpoche's terma mark ཆོ
Mark	ྂ	[187]	Skt3								A special mark used to mark consonants and other characters in tantric literature e.g., ཉྃ
ṭna	ཊྣ	[188]	Skt3	[220]	[224]	[232]	[201]	[211]			
tga	ཏྒ	[189]	Skt3	[220]	[224]	[232]	[201]	[211]			
pda	པྡ	[190]	Skt3	[220]	[224]	[232]	[201]	[211]			

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
śṭha	ཥྚ	[191]	Skt3	[220]	[224]	[232]	[201]	[211]			
kvya	ཀྺ	[192]	Skt3	[220]	[225]	[232]	[202]	[212]			
ṇḍra	ཎྜྲ	[193]	Skt3	[220]	[225]	[232]	[202]	[212]			
wwa	ཝྭ	[194]	Skt3	[220]	[224]	[232]	[201]	[211]			
wna	ཝྣ	[195]	Skt3	[220]	[224]	[232]	[201]	[211]			
rwa	ཪྭ	[196]	Skt3	[220]	[224]	[232]	[201]	[211]			
lhwa	ླྷྭ	[197]	Skt3	[220]	n/a	[232]	[201]	[211]			

All of the characters from [201] to [230] are exact repeats of the same characters shown in the Skt1 section above. All remaining vowels (gigu, 'greng.bu, naro and so on) are provided by using the vowels from the "normal" font character set.

C. SYMBOLS IN SUPPORT FONT FOUR, SKT4

The characters in Skt 4 support font are symbols, punctuation marks, ornamental characters, astrological signs, and specialized letters. There are no normal consonants, vowels, or stacked letters.

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
A) Bhutanese (Dzongkha) script requirements										
(All information on Bhutanese usage obtained and translated from the "Complete Handbook of Dzongkha Letter- Writing "published by the Dzongkha Development Commission of the Royal Government of Bhutan, Thimpu, 1995)										
1) "Initial Ornaments "(mgo. rgyan) for use in opening a letter:										
zhu.yig.mgo.rgyan		[33]	Skt4	[0F0A]						The "starting flourish for a letter to someone higher "is for writing letters to someone else who is a superior. These days it is usedfor writing letters to the king.
bka'.shog.mgo.rgyan		[34]	Skt4							The "starting flourish for giving a command (i. e. , for talking to someone lower than oneself) is for writing letters to someone who is lower than oneself. A guru, king, high personage would use this when writing this to someone lower than himself.
mnyam.yig.mgo.rgyan		[35]	Skt4							The "starting flourish for a letter to an equal ". The mark indicates that the letter is being written to someone who is equal but who is being seen as special andwith great love and appreciation.
mnyam.yig.mgo.rgyan		[36]	Skt4	[0F09]						A second "starting flourish for a letter to an equal "which is only used when the writer is making his own notes for his personal use. Hence it is also called a tho.yig.mgo.-rgyan and a 'ba'.gan.mgo.yig i.e., a "starting flourish for personal notes "and a "starting flourish for personal use only ".

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
			[37]	Skt4							A name less sign which shows either the seven successive Buddhas (a succession of seven Buddhas ending with Shakyamuni Buddha who gave the teaching on Dependent Related Origination) or the seven successive trustees of the Buddha 's teaching (the seven arhats who were entrusted with the lineage of the Buddha 's teaching following his parinirvana).

B) Tibetan (and Bhutanese) script requirements.

1) "Initial Ornaments" (mgo.rgyan) for use in opening a letter:

yig.mgo.phur.shad		[38]	Skt4							[0F06]	The meaning of the sign is that it is a sign of the unchanging essence of the (Buddha's) Dharmakaya. It is usually used to indicate the beginning of a new book within another book; it is not usually usedto indicate the beginning of chapters, etc., within a book.
Yig.mgo.tsheg.shad		[39]	Skt4							[0F07]	

2) Punctuation marks and ornaments.

These should be used with care. Mostly they are variants on the rin.chen.spungs.shad and sbrul.shad and are nearly always used mistakenly when a rin.chen.spungs.shad or sbrul.shad should have been used. For instance, it is common practice, especially amongst Bhutanese scholars, to use a shad with two tshegs above it instead of a rin.chen.spungs.shad when writing Tibetan text; this is a mistake and should be avoided.

shad + single tsheg		[40]	Skt4							[0F0F]	
shad (hooked) + single tsheg		[41]	Skt4								Used frequently in Drukpa Kagyu literature where a shad is needed grammatically but where there is direct continuation to the next text. E.g., in sādhanas followed by text for recitation requires the shad grammatically but breaks the continuity of recitation, therefore this device:

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
											ཱ is used to reduce the strength of the break introduced by the shad.
shad + double tsheg	ཿ	[42]	Skt4								This is the common orientiation (cf., 43). Usually used mistakenly in place of a true rin.chen.spungs.shad
shad + single ornament	ཾ	[43]	Skt4							[0F10]	Unusual form of [42]
sbrul.shad + single ornament	ཽ	[44]	Skt4								
sbrul.shad + double ornament	ཿ	[46]	Skt4								
sbrul.shad variant form	ྀ	[47]	Skt4								This form of sbrul.shad is missing the usual flourish between the top ornament and the underlying shad. It is a "quick way" of writing a sbrul.shad.
rgya.gram.shad	ཱྀ	[48]	Skt4							[0F12]	A "crossed" ornamental type of shad.

3) Specialized numerals.

Tibetan texts sometimes use superscripted numbers and less frequently subscripted numbers to enumerate a group of items. Subscripted numbers are seen but very rarely. Use these numerals here for superscripts and those following for subscripts—the numbers have been designed specifically for the purpose and should be used for such. Using them for this purpose rather than ordinary numbers will help improve data integrity, amongst other things.

a) Use the numerals here for superscripted numerals.

Superscript numeral 0	ྰ	[50]	Skt4
Superscript numeral 1	ྱ	[51]	Skt4
Superscript numeral 2	ྲ	[52]	Skt4
Superscript numeral 3	ླ	[53]	Skt4
Superscript numeral 4	ྴ	[54]	Skt4
Superscript numeral 5	ྵ	[55]	Skt4
Superscript numeral 6	ྶ	[56]	Skt4
Superscript numeral 7	ྷ	[57]	Skt4
Superscript numeral 8	ྸ	[58]	Skt4

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
Superscript numeral 9	ᠹ	[59]	Skt4								
b) Use the numerals here for subscripts.											
Subscript numeral 0	ᠥ	[60]	Skt4								
Subscript numeral 1	ᠧ	[61]	Skt4								
Subscript numeral 2	ᠨ	[62]	Skt4								
Subscript numeral 3	ᠩ	[63]	Skt4								
Subscript numeral 4	ᠪ	[64]	Skt4								
Subscript numeral 5	ᠫ	[65]	Skt4								
Subscript numeral 6	ᠬ	[66]	Skt4								
Subscript numeral 7	ᠭ	[67]	Skt4								
Subscript numeral 8	ᠮ	[68]	Skt4								
Subscript numeral 9	ᠯ	[69]	Skt4								
c) Half-numerals.											
Tibetan has a system of signs for writing half ordinals.											
1/2	ཨ	[70]	Skt4							[0F33]	
1 1/2	ཧ	[71]	Skt4							[0F2A]	
2 1/2	ཀྵ	[72]	Skt4							[0F2B]	
3 1/2	ཪ	[73]	Skt4							[0F2C]	
4 1/2	ཫ	[74]	Skt4							[0F2D]	
5 1/2	ཬ	[75]	Skt4							[0F2E]	
6 1/2	཭	[76]	Skt4							[0F2F]	
7 1/2	ཀ	[77]	Skt4							[0F30]	
8 1/2	ཁ	[78]	Skt4							[0F31]	
9 1/2	ཅ	[79]	Skt4							[0F32]	
4) Musical Notation Marks											
cantillation sign,heavy beat	ཿ	[80]	Skt4							[0FC0]	Sign to strike the drum with a heavy beat

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
cantillation sign,light beat	ཿ	[81]	Skt4							[0FC1]	Sign to strike the drum with a light beat
cantillation sign,cang.te-u	ྀ	[82]	Skt4							[0FC2]	Sign to play the cang te-u or damaru
cantillation sign sbub.chal	ཾ	[83]	Skt4							[0FC3]	Sign to strike domed cymbals
zhi.rol.btags	ྂ	[84]	Skt4								"Peaceful Music Mark" indicates that cymbal roll-down of a certain type is to be played here.

5) Miscellaneous Marks

These four marks are mainly used much like a caret in English, as placeholders for text that has been omitted and is being re-instated, though editors use them freely in a variety of ways.

a) Editor's marks (zhu.dag.mkhan.rtags)

sher.bu	ྃ	[90]	Skt4								
nyi.zla	྄	[91]	Skt4								
kuruka	྅	[92]	Skt4								
no name	྆	[93]	Skt4								

b) Various

dzud.rtags.me.long.can	ྈ	[94]	Skt4							[0F13]	
gug.rtags.gyon	ྉ	[95]	Skt4							[0F3A]	Left hand hooked brace
gug.rtags.gyas	ྊ	[96]	Skt4							[0F3B]	Right hand hooked brace
yungs.drung (reversed)	ྋ	[97]	Skt4								The reverse swastika
yungs.drung (standard)	ྌ	[98]	Skt4								The normal swastika.

c) Annotation Markers (mchan.rtags).

One type of Tibetan commentary uses annotations in the body of the text itself as a way of commenting on the body of the text, just as we use footnotes or parenthetical notes are used in English. The annotations (called mchan) usually follow the text that they are commenting upon and amplify or clarify it. The annotations are usually preceded by a series of tshegs and occasionally succeeded by them. The mark made by the group of tshegs joins the annotation to the text that it is commenting on.

mchan rtags trailing ྍ [99] Skt4

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
mchan rtags leading	་	[100]	Skt4								

d) Name Markers (mtshan.rtags) non-honorific and honorific:

mtshan.rtags	ཿ	[101]	Skt4							[0F37]	"Non-honorific Name marker". This is applied below the central letter of each word-part in a person's name.
mtshan.rtags zhes.sa		[102]	Skt4							[0F37]	"Honorific Name marker". Honorific version of [101].
che.mgo	ཬ	[103]	Skt4							[0F35]	This mark is placed immediately before a person's name to indicate that the person is a very great person.
kuruka	×	[104]	Skt4							[0FBE]	An alternative form of the sogs.rtags in the normal font at [207]. Although × appears frequently in texts, educated Tibetans say that it is a little vulgar and that the ཻ sign should be used in preference to it.
Kuruka.mig.ldan	※	[105]	Skt4							[0FBF]	"Kuruka with eyes". An ornamental device often used to separate sections of text.
ornament	·:·	[106]	Skt4							[0F36]	Eyes only of the Kuruka with eyes at [105]
yang.rtags	ཾ	[107]	Skt4							[0F87]	This and [108] are borrowed from Sanskrit grammar. In Sanskrit, each syllable is accented either strongly (guru) or weakly (laghu). These signs are the signs used in Sanskrit to show the stress that is given to a particular syllable. The signs are placed so that they are centred above the syllable being marked. Yang.rtags is the guru sign and lci.rtags is the laghu sign. These are only used when illustrating Sanskrit works in Tibetan since this concept does not exist in Tibetan grammar and hence is not applicable.
lci.rtags	ཽ	[108]	Skt4							[0F86]	see [107]
mchu.can	ྀ	[109]	Skt4							[0F89]	
gru.can.rgyings	ྃ	[110]	Skt4							[0F8A]	

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
gru.med.gyings	ཻ	[111]	Skt4							[0F8B]	

6) Astrological Signs

a) The "pebble" astrological signs (white and black pebbles; rdel dkar and rdel nag).

single white pebble	°	[115]	Skt4							[0F1A]	rdel dkar gcig used to indicate a degree of good fortune
single black pebble	ˣ	[116]	Skt4							[0F1D]	rdel nag gcig used to indicate a degree of bad fortune
double white pebble	°°	[117]	Skt4							[0F1B]	rdel dkar gnyis used to indicate a degree of good fortune
double black pebble	ˣˣ	[118]	Skt4							[0F1E]	rdel nag gnyis used to indicate a degree of good fortune
white and black pebble	°ˣ	[119]	Skt4							[0F1F]	rdel dkar gcig nag gcig used to indicate a degree of good fortune
triple white pebble	⁰₀	[120]	Skt4							[0F1C]	rdel dkar gsum used to indicate greatest degree of good fortune
triple black pebble	ˣ ˣˣ	[121]	Skt4							[0FCF]	rdel nag gsum used to indicate greatest degree of bad fortune

b) White and black pebbles in astrological top/bottom door configurations.

	⁰₍ₓ₎	[122]	Skt4								
	ₓ⁰₀	[123]	Skt4								
	ₓ⁰ₓ	[124]	Skt4								
	₀ˣ	[125]	Skt4								
	ₓˣ₀	[126]	Skt4								
	₀ˣ₀	[128]	Skt4								

c) Other Astrological Signs

logo sign chad.rtags		[129]	Skt4							[0F15]	
logo sign lhag.rtags		[130]	Skt4							[0F16]	
sgra.gcan.char.rtags		[131]	Skt4							[0F17]	
khyud.pa		[132]	Skt4							[0F18]	

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
sdong.tshugs	ཿ	[133]	Skt4							[0F19]	Small shad for inserting underneath other letters, numerals, and signs. In astrology it is placed underneath numerals.
yar.tshes.rtags	྾	[134]	Skt4							[0F3E]	Sign indicating the waxing lunar period which is appended to the left of numerals
mar.tshes.rtags	྿	[135]	Skt4							[0F3F]	Sign indicating the waning lunar period which is appended to the right of numerals
d) Terma related marks and signs:											
reversed tza.'phru	྅	[145]	Skt4								
reversed dza letter	ཛ	[146]	Skt4								
reversed hu	ཧ	[147]	Skt4								Usually seen as reversed ཧཱུ.
Inverted ha	ཧ	[148]	Skt4								Seen in tantric texts as inverted HAM letter.
	ཱ	[149]	Skt4								The mark used by terton ??
e) Other											
fa	ཕ	[153]	Skt4	[221]	[223]	[233]	[236]	[161]	[216]		For transliteration of the Chinese (or other) sounds fa
va	ཝ	[154]	Skt4	[221]	[223]	[233]	[236]	[161]	[216]		For transliteration of the Chinese (or other) sounds va
Chinese letter	漢	[155]	Skt4								The Chinese letter HAN, which literally means "Chinese".
Special combination	ཀྵ	[156]	Skt4								For ultimate appearance in publishing texts, replace all normal naro, achung, gigu combinations with this letter.
8) Tibetan Symbols											
dril.bu		[190]	Skt4							[0FC4]	bell
rdo.rje		[191]	Skt4							[0FC5]	vajra
padma.gdan		[192]	Skt4							[0FC6]	lotus seat/base
rdo.rje.rgya.gram		[193]	Skt4							[0FC7]	crossed vajras
phur.ba		[194]	Skt4							[0FC8]	kilaya

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
nor.bu		[195]	Skt4							[0FC9]	jewel
nor.bu.gnyis.khyil		[196]	Skt4							[0FCA]	yin yang sign with two parts
nor.bu.gsum.khyil		[197]	Skt4							[0FCB]	yin yang sign with three parts
nor.bu.bzhi.khyil		[198]	Skt4							[0FCC]	yin yang sign with four parts

9) Half-height letters

The characters from [200] to [240] are a complete set of half-height Sanskrit-Tibetan characters for use in making stacked letters which might not otherwise be available. See the tables of characters given earlier for the glyphs.

ka		[200]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F90]
kha		[201]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F91]
ga		[202]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F92]
gha		[203]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F93]
nga		[204]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F94]
ca		[205]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F95]
cha		[206]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F96]
ja		[207]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F97]
nya		[208]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F99]
ta log yig		[209]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F9A]
tha log yig		[210]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F9B]
da log yig		[211]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F9C]
dha log yig		[212]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F9D]
na log yig		[213]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F9E]
ta		[214]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0F9F]
tha		[215]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FA0]
da		[216]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FA1]
dha		[217]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FA2]
na		[218]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FA3]
pa		[219]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FA4]
pha		[220]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FA5]

Description	Tibetan	Dec.	Font	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode 3	Notes
ba	ཐ	[221]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FA6]	
bha	ཙ	[222]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FA7]	
ma	ཚ	[223]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FA8]	
tsa	ཛ	[224]	Skt4	[221]	n/a	[233]	[236]	n/a	n/a	[0FA9]	
tsha	ཝ	[225]	Skt4	[221]	n/a	[233]	[236]	n/a	n/a	[0FAA]	
dza	ཞ	[226]	Skt4	[221]	n/a	[233]	[236]	n/a	n/a	[0FAB]	
dzha	ཟ	[227]	Skt4	[221]	n/a	[233]	[236]	n/a	n/a	[0FAC]	
wa	ཡ	[228]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FBA]	
zha	ར	[229]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FAE]	
za	ལ	[230]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FAF]	
a.chung	ཤ	[231]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FB0]	
ya	ཥ	[232]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FBB]	
ra	ས	[233]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FBC]	
la	ཧ	[234]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FB3]	
sha	ཨ	[235]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FB4]	
sha log yig	ཀྵ	[236]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FB5]	
sa	ཁ	[237]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FB6]	
ha	ག	[238]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FB6]	
ahchen	ང	[239]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FB8]	
ksha (ka log yig sha)	ཉ	[240]	Skt4	[220]	n/a	[232]	[235]	n/a	n/a	[0FB9]	

LIST 2. TIBETAN MACHINE WEB TYPEFACE

DOCUMENTATION OF A NEW ENCODING OF TIBETAN MACHINE

FOR CROSS PLATFORM, WEB-VIABLE PURPOSES

The TibetanMachine typeface is a general purpose Tibetan typeface that was originally produced for the PC platform. The typeface has been produced in two encodings. The first encoding was for the DOS platform and the fonts were delivered only in Postscript Type 1 format. The second encoding was for the Windows platform. It was very similar to the DOS encoding; minor changes were made only to accommodate the needs of the Windows environment. The Windows encoding was only delivered in Truetype format.

The encodings of the TibetanMachine typeface are not suitable for the Macintosh platform. Furthermore, some HTML browsers have problems displaying some of the high-order (> decimal 127) characters in the encoding schemes. The only way to make a high-quality cross-platform, web-viable version of the TibetanMachine typeface is to make a true Unicode version of it. However, this will take some time, therefore, for interim purposes ONLY, a new encoding of Tibetan Machine typeface has been produced which is cross-platform compatible (PC, Macintosh, Unix) and which will work in HTML browsers that behave reasonably.

The new encoding is called TibetanMachineWeb. The Web encoding achieves its goals by re-organizing the glyphs of the original five fonts into ten fonts. The fonts are named sequentially TibetanMachineWeb then TibetanMachineWeb1 to 9. The characters in the ten Web fonts are placed only between decimal positions 32-126 so as to conform to 7-bit ASCII. This allows cross-platform compatibility and web-viability. Certain specific features of the compilation of the fonts then ensures the compatibility and viability.

It was not possible simply split each of the original five fonts into two. The fonts had to be split and various glyphs re-allocated as well. Nonetheless, the first TibetanMachine font (called Normal) closely corresponds to the TibetanMachine-Web fonts TibetanMachineWeb and TibetanMachineWeb1; the TibetanMachineSkt1 font roughly corresponds to TibetanMachineWeb fonts 2 and 3; and so on, each of the remaining TibetanMachine fonts roughly corresponding in order to two of the TibetanMachineWeb fonts.

The final encoding is documented in the rest of this document. It was specifically designed firstly to minimize font changes, secondly to retain a semblance of the original encoding (for ease of conversion), and thirdly to minimize the number of fonts in the typeface. Hence, the arrangement might not seem logical at times but there are good reasons for the placement of each glyph.

There are several points of note:

1) The space character is always at decimal 32 in every font.

2) The breaking tsheg is defined at decimal 45 in TibetanMachineWeb). Decimal 45 is the position of a hyphen. By placing the tsheg at this position, all software that supports line-wrapping at a hyphen, which is most (though not all) applications, will wrap correctly at a tsheg as required by Tibetan formatting rules.

The decimal 45 position must be reserved in every font in order to prevent spurious breakages of words due to hyphenation at a character located at the decimal 45 position. However, the tsheg from font one has been placed in each of the remaining 9 fonts at the decimal 45 position. This allows imput mechanisms to simply write a decimal 45 in order to obtain a tsheg without having to check and possibly adjust the font.

3) The shad and hard tsheg are formally defined at decimal 108 and 109 respectively in the first Web font.

4) The zhabs.kyu's, a.chungs, and a.chung+zhabs.kyu's from the Tibetan Sanskrit fonts have been positioned in the same location in the even Web encoded fonts corresponding to Skt1, Skt2, and Skt3 of the Window's original encoding. In other words, the zhabs.kyu's, a.chungs, and a.chung+zhabs.kyu's required for TibetanMachineWeb 2 and 3 are found in TibetanMachineWeb3; the ones for TibetanMachineWeb 4 and 5 are found in TibetanMachineWeb5; and the ones for TibetanMachineWeb 6 and 7 are found in TibetanMachineWeb7.

The remainder of this documentation tabulates all of the characters in the fonts, their relationship to each other, and their relationship to the original encoding of Tibetan Machine.

Legend to Tables:

The left column contains a brief **description** of the character.

Column two shows the **Tibetan** character.

Column three **Ori. Dec** shows the decimal value of the glyph in the original TibetanMachine font.

Column four **Ori Font** is the name of the original TibetanMachine font containing the glyph. Norm means the Normal TibetanMachine font and Skt1, 2, 3, and 4 refer to TibetanMachineSkt1, 2, 3, and 4.

Column five gives the number of the Web font (0-9) followed by the decimal number of the glyph in the font.

Columns six to eleven give the font followed by the decimal values of the glyph in the font for the correct vowels to use with the character. n/a means that this character does not receive a vowel of that type either because that combination is not possible or because a short version of the character elsewhere in the table is specifically for use with that vowel.

Column twelve marked **Unicode 3** gives the Unicode for that character according to the Tibetan version 3.0 Unicode definition.

The rightmost **Notes** column contains further information about the character.

Notes on Unicode glyphs:

The Unicodes shown in the following tables are for version 3.0 of the Tibetan Extension to the Universal Multiple Octet Coded Character Set (UCS). All glyphs contained in the Tibetan Unicode 3.0 definition can be correctly produced using the characters contained in the following sets. Most of them are produced using one character from the following sets. However, a few of them can only be represented by using a combination of characters from the following sets. The Unicode glyphs needing to be made from multiple characters can be divided into three categories. They are as follows (given in the encoding of the original TibetanMachine font):

1) Compound glyphs

0F00 is made with [62]+[249] from the normal font
0F02 is made with [55]+[223]+[242]+[239] from the normal font
0F03 is made with [55]+[223]+[242]+[206] from the normal font
0F0E is made with [202]+[202] from the normal font

2) Glyphs with multiple possibilities

0F71, 0F71, 0F73, 0F74, 0F7A, and 0F7C are represented with multiple glyphs in the following set. The appropriate glyph from the following set must be chosen in dependence on the glyph(s) preceding it using some logic. All information necessary to make the correct choices are included in the following table.

3) Compound glyphs with multiple possibilities

0F72, 0F75, 0F76, 0F77, 0F78, and 0F81 are compound glyphs and in addition, some of their parts are represented with multiple glyphs in the following set. The appropriate glyphs from the following set must be chosen in dependence on the glyph to be produced using some logic. All information necessary to make the correct choices are included in the following table.

FONT: Tibetan Machine WEB

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
space	space										
ka	ཀ	[33] Norm	[0,33]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F40]	
kha	ཁ	[34] Norm	[0,34]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F41]	
ga	ག	[35] Norm	[0,35]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F42]	
nga	ང	[36] Norm	[0,36]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F44]	
ca	ཅ	[37] Norm	[0,37]	[0,109]	[0,116]	[0,123]	[0,125]	[9,114]	[9,123]	[0F45]	
cha	ཆ	[38] Norm	[0,38]	[0,109]	[0,117]	[0,123]	[0,125]	[9,114]	[9,123]	[0F46]	
ja	ཇ	[39] Norm	[0,39]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F47]	
nya	ཉ	[40] Norm	[0,40]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F48]	
ta	ཏ	[41] Norm	[0,41]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F4F]	
tha	ཐ	[42] Norm	[0,42]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F50]	
da	ད	[43] Norm	[0,43]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F51]	
na	ན	[44] Norm	[0,44]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F53]	
tsheg (breaking)	་	[45] Norm	[0,45]							[0F0B]	for non-breaking tsheg use [0,108]
pa	པ	[253] Norm	[0,46]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F54]	
pha	ཕ	[46] Norm	[0,47]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F55]	
ba	བ	[47] Norm	[0,48]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F56]	
ma	མ	[48] Norm	[0,49]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F58]	
tsa	ཙ	[49] Norm	[0,50]	[0,110]	[0,116]	[0,124]	[0,126]	[9,114]	[9,123]	[0F59]	
tsha	ཚ	[50] Norm	[0,51]	[0,110]	[0,117]	[0,124]	[0,126]	[9,114]	[9,123]	[0F5A]	
dza	ཛ	[51] Norm	[0,52]	[0,110]	[0,118]	[0,124]	[0,126]	[9,114]	[9,123]	[0F5B]	
wa	ཝ	[52] Norm	[0,53]	[0,109]	[0,118/9]	[0,123]	[0,125]	[9,115/8]	[9,124/0]	[0F5D]	number for Tibetan Machine font only; main number for all other TCC fonts
zha	ཞ	[53] Norm	[0,54]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F5E]	
za	ཟ	[54] Norm	[0,55]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F5F]	
achung	འ	[55] Norm	[0,56]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F60]	
ya	ཡ	[56] Norm	[0,57]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F61]	
ra	ར	[57] Norm	[0,58]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F62]	
la	ལ	[58] Norm	[0,59]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F63]	
sha	ཤ	[59] Norm	[0,60]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F64]	
sa	ས	[60] Norm	[0,61]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F66]	
ha	ཧ	[61] Norm	[0,62]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F67]	
ahchen	ཨ	[62] Norm	[0,63]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F6A]	
ta log yig	ཏ	[170] Norm	[0,64]	[0,109]	[0,120]	[0,123]	[0,125]	[9,115]	[9,124]	[0F4A]	
tha log yig	ཐ	[171] Norm	[0,65]	[0,109]	[0,118]	[0,123]	[0,125]	[9,114]	[9,123]	[0F4B]	

FONT: Tibetan Machine WEB

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
da log yig	ཌ	[172] Norm	[0,66]	[0,109]	[0,120]	[0,123]	[0,125]	[9,115]	[9,124]	[0F4C]	
na log yig	ཎ	[173] Norm	[0,67]	[0,109]	[0,118]	[0,123]	[0,125]	[9,115]	[9,124]	[0F4E]	
sha log yig	ཤ	[174] Norm	[0,68]	[0,109]	[0,118]	[0,123]	[0,125]	[9,115]	[9,124]	[0F65]	
kṣha log yig	ཥ	[175] Norm	[0,69]	[0,109]	[0,122]	[0,123]	[0,125]	[9,116]	[9,125]	[0F69]	
ra mgo ka	ཀྲ	[63] Norm	[0,70]	[0,109]	[0,121]	[0,123]	[0,125]	[9,115]	[9,124]		
ra mgo ga	གྲ	[64] Norm	[0,71]	[0,109]	[0,121]	[0,123]	[0,125]	[9,115]	[9,124]		
ra mgo nga	ང྄	[65] Norm	[0,72]	[0,109]	[0,119]	[0,123]	[0,125]	[9,115]	[9,124]		
ra mgo ja	ཇྲ	[66] Norm	[0,73]	[0,109]	[0,119]	[0,123]	[0,125]	[9,115]	[9,124]		
ra mgo nya	ཉྲ	[67] Norm	[0,74]	[0,109]	[0,113]	[0,123]	[0,125]	[9,116]	[9,125]		
ra mgo ta	ཏྲ	[68] Norm	[0,75]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a		
ra mgo da	དྲ	[69] Norm	[0,76]	[0,109]	[0,121]	[0,123]	[0,125]	[9,115]	[9,124]		
ra mgo na	ནྲ	[70] Norm	[0,77]	[0,109]	[0,121]	[0,123]	[0,125]	[9,115]	[9,124]		
ra mgo ba	བྲ	[71] Norm	[0,78]	[0,109]	[0,119]	[0,123]	[0,125]	[9,115]	[9,124]		
ra mgo ma	མྲ	[72] Norm	[0,79]	[0,109]	[0,119]	[0,123]	[0,125]	[9,115]	[9,124]		
ra mgo tsa	ཙྲ	[73] Norm	[0,80]	[0,109]	[0,119]	[0,123]	[0,125]	[9,115]	[9,124]		
ra mgo dza	ཛྲ	[74] Norm	[0,81]	[0,109]	[0,119]	[0,123]	[0,125]	[9,115]	[9,124]		
la mgo ka	ཀླ	[75] Norm	[0,82]	[0,109]	[0,114]	[0,123]	[0,125]	[9,116]	[9,125]		
la mgo ga	གླ	[76] Norm	[0,83]	[0,109]	[0,114]	[0,123]	[0,125]	[9,116]	[9,125]		
la mgo nga	ང྅	[77] Norm	[0,84]	[0,109]	[0,122]	[0,123]	[0,125]	[9,116]	[9,125]		
la mgo ca	ཅླ	[78] Norm	[0,85]	[0,109]	[0,122]	[0,123]	[0,125]	[9,116]	[9,125]		
la mgo ja	ཇླ	[79] Norm	[0,86]	[0,109]	[0,122]	[0,123]	[0,125]	[9,116]	[9,125]		
la mgo ta	ཏླ	[80] Norm	[0,87]	[0,109]	[0,115]	[0,123]	[0,125]	[9,116]	[9,125]		
la mgo da	དླ	[81] Norm	[0,88]	[0,109]	[0,114]	[0,123]	[0,125]	[9,116]	[9,125]		
la mgo pa	པླ	[82] Norm	[0,89]	[0,109]	[0,122]	[0,123]	[0,125]	[9,116]	[9,125]		
la mgo ba	བླ	[83] Norm	[0,90]	[0,109]	[0,122]	[0,123]	[0,125]	[9,116]	[9,125]		
la mgo ha	ཧླ	[84] Norm	[0,91]	[0,109]	[0,115]	[0,123]	[0,125]	[9,116]	[9,125]		
shortened ka	ཀ	[180] Norm	[0,92]	[0,109]	[0,111]	[0,123]	[0,125]	[9,118]	[9,120]		
shortened ga	ག	[181] Norm	[0,93]	[0,109]	[0,111]	[0,123]	[0,125]	[9,118]	[9,120]		
shortened nya	ཉ	[182] Norm	[0,94]	[0,109]	[0,112]	[0,123]	[0,125]	[9,115]	[9,121]		
shortened ta	ཏ	[183] Norm	[0,95]	[0,109]	[0,112]	[0,123]	[0,125]	[9,115]	[9,121]		
shortened da	ད	[184] Norm	[0,96]	[0,109]	[0,111]	[0,123]	[0,125]	[9,118]	[9,120]		
shortened na	ན	[185] Norm	[0,97]	[0,109]	[0,111]	[0,123]	[0,125]	[9,118]	[9,120]		
shortened zha	ཞ	[186] Norm	[0,98]	[0,109]	[0,111]	[0,123]	[0,125]	[9,118]	[9,120]		
shortened sha	ཤ	[187] Norm	[0,99]	[0,109]	[0,111]	[0,123]	[0,125]	[9,118]	[9,120]		

FONT: Tibetan Machine WEB

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
shortened ha	ཧ	[188] Norm	[0,100]	[0,109]	[0,112]	[0,123]	[0,125]	[9,119]	n/a		ha+achung+zhabs.kyu is made with extra short ha TibetanMachineWeb [102]
shortened rta	ཥ	[189] Norm	[0,101]	[0,109]	[0,113]	[0,123]	[0,125]	[9,116]	[9,124]		
extra short ha	ཧ	[156] Norm	[0,102]	[0,109]	n/a	[0,123]	[0,125]	[9,114]	[9,122]		This extra short ha is only meant to be used for making ha+a.chung+zhabs.kyu. All other combinations with ha are made using TibetanMachineWeb [100]
rinchen shad	ཿ	[203] Norm	[0,103]							[0F11]	
sbrul shad	྅	[204] Norm	[0,104]							[0F08]	
gter tsheg	྾	[206] Norm	[0,105]							[0F14]	
sogs.rtags	ྵ	[207] Norm	[0,106]							[0F34]	Literally an "etcetera sign". It means "ditto" i.e., repeat again what was written out in full earlier in the text
shad	།	[202] Norm	[0,107]							[0F0D]	
hard tsheg	་	[205] Norm	[0,108]							[0F0C]	Non-breaking tsheg. For breaking tsheg use TibetanMachine Web [45]
full gi.gu	◌ྭ	[220] Norm	[0,109]								
shortened gi.gu	◌ྭ	[221] Norm	[0,110]								use with ཙཧཿ
level 1 zhabs.kyu.....	◌ྱ	[165] Norm	[0,111]								
level 1 zhabs.kyu.....	◌ྲ	[226] Norm	[0,112]								
level 1 zhabs.kyu.....	◌ྱ	[167] Norm	[0,113]								
level 1 zhabs.kyu.....	◌ྲ	[168] Norm	[0,114]								
level 1 zhabs.kyu.....	◌ྱ	[169] Norm	[0,115]								
zhabs.kyu w. arm.	◌ྱ	[176] Norm	[0,116]								use with ཅ and ཆ
zhabs.kyu w. arm.	◌ྲ	[177] Norm	[0,117]								use with ཀ and ཁ
level 1 zhabs.kyu.....	◌ྱ	[223] Norm	[0,118]								
level 2 zhabs.kyu.....	◌ྱ	[224] Norm	[0,119]								
level 3 zhabs.kyu.....	◌ྱ	[225] Norm	[0,120]								
level 4 zhabs.kyu #2.....	◌ྱ	[227] Norm	[0,121]								
level 5 zhabs.kyu.....	◌ྱ	[228] Norm	[0,122]								
normal 'greng.bu	◌ྃ	[232] Norm	[0,123]								
shortened 'greng.bu	◌ྃ	[233] Norm	[0,124]								use with ཙཧཿ
normal naro	◌ྂ	[235] Norm	[0,125]								
raised naro	◌ྂ	[236] Norm	[0,126]								use with ཙཧཿ

All remaining Sanskrit vowels are in TibetanMachineWeb7 font. All achungs and achung+zhabs.kyu are in TibetanMachineWeb9 font.

FONT: Tibetan Machine WEB1

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
space	space	[32] Norm	[*,32]								
sa mgo ka	ཀ	[85] Norm	[1,33]	[1,109]	[1,113]	[1,123]	[1,125]	[9,116]	[9,125]		
sa mgo ga	ག	[86] Norm	[1,34]	[1,109]	[1,113]	[1,123]	[1,125]	[9,116]	[9,125]		
sa mgo nga	ང	[87] Norm	[1,35]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
sa mgo nya	ཉ	[88] Norm	[1,36]	[1,109]	[1,114]	[1,123]	[1,125]	[9,116]	[9,125]		
sa mgo ta	ཏ	[89] Norm	[1,37]	[1,109]	[1,114]	[1,123]	[1,125]	[9,116]	[9,125]		
sa mgo da	ད	[90] Norm	[1,38]	[1,109]	[1,113]	[1,123]	[1,125]	[9,116]	[9,125]		
sa mgo na	ན	[91] Norm	[1,39]	[1,109]	[1,113]	[1,123]	[1,125]	[9,116]	[9,125]		
sa mgo pa	པ	[92] Norm	[1,40]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
sa mgo ba	བ	[93] Norm	[1,41]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
sa mgo ma	མ	[94] Norm	[1,42]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
sa mgo tsa	ཙ	[95] Norm	[1,43]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
ka wa zur	ཪ	[138] Norm	[1,44]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
tsheg (breaking)	་	[45] Norm	[*,45]							[0F0B]	for non-breaking tsheg use TibetanMachineWeb [108]
kha wa zur	ྭ	[139] Norm	[1,46]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
ga wa zur	ྱ	[140] Norm	[1,47]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
ca wa zur	ྲ	[141] Norm	[1,48]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
nya wa zur	ྵ	[157] Norm	[1,49]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
ta wa zur	ྟ	[143] Norm	[1,50]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
da wa zur	ྠ	[144] Norm	[1,51]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
tsa wa zur	ྡ	[145] Norm	[1,52]	[1,110]	[1,116]	[1,124]	[1,126]	[9,116]	[9,125]		
tsha wa zur	ྡྷ	[146] Norm	[1,53]	[1,110]	[1,116]	[1,124]	[1,126]	[9,116]	[9,125]		
zha wa zur	ྣ	[147] Norm	[1,54]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
za wa zur	ྤ	[148] Norm	[1,55]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
ra wa zur	ྥ	[149] Norm	[1,56]	[1,109]	[1,116]	[1,123]	[1,125]	[9,115]	[9,125]		
sha wa zur	ྦ	[150] Norm	[1,57]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
sa wa zur	ྨ	[151] Norm	[1,58]	[1,109]	[1,116]	[1,123]	[1,125]	[9,115]	[9,125]		
ha wa zur	ྩ	[152] Norm	[1,59]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
ka ya tag	ྐ	[96] Norm	[1,60]	[1,109]	[1,111]	[1,123]	[1,125]	[9,115]	[9,124]		
kha ya tag	ྑ	[97] Norm	[1,61]	[1,109]	[1,111]	[1,123]	[1,125]	[9,115]	[9,124]		
ga ya tag	ྒ	[98] Norm	[1,62]	[1,109]	[1,111]	[1,123]	[1,125]	[9,115]	[9,124]		
pa ya tag	ྤ	[99] Norm	[1,63]	[1,109]	[1,112]	[1,123]	[1,125]	[9,116]	[9,125]		
pha ya tag	ྥ	[100] Norm	[1,64]	[1,109]	[1,112]	[1,123]	[1,125]	[9,116]	[9,125]		
ba ya tag	ྦ	[101] Norm	[1,65]	[1,109]	[1,112]	[1,123]	[1,125]	[9,116]	[9,125]		

FONT: Tibetan Machine WEB1

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
ma ya tag	ཨྱ	[102] Norm	[1,66]	[1,109]	[1,112]	[1,123]	[1,125]	[9,116]	[9,125]		
ka ra tag	ཀྲ	[103] Norm	[1,67]	[1,109]	[1,115]	[1,123]	[1,125]	[9,115]	[9,124]		
kha ra tag	ཁྲ	[104] Norm	[1,68]	[1,109]	[1,115]	[1,123]	[1,125]	[9,115]	[9,124]		
ga ra tag	གྲ	[105] Norm	[1,69]	[1,109]	[1,115]	[1,123]	[1,125]	[9,115]	[9,124]		
ta ra tag	ཏྲ	[106] Norm	[1,70]	[1,109]	[1,115]	[1,123]	[1,125]	[9,115]	[9,124]		
tha ra tag	ཐྲ	[107] Norm	[1,71]	[1,109]	[1,115]	[1,123]	[1,125]	[9,115]	[9,124]		
da ra tag	དྲ	[108] Norm	[1,72]	[1,109]	[1,115]	[1,123]	[1,125]	[9,115]	[9,124]		
pa ra tag	པྲ	[109] Norm	[1,73]	[1,109]	[1,115]	[1,123]	[1,125]	[9,115]	[9,124]		
pha ra tag	ཕྲ	[110] Norm	[1,74]	[1,109]	[1,115]	[1,123]	[1,125]	[9,115]	[9,124]		
ba ra tag	བྲ	[111] Norm	[1,75]	[1,109]	[1,115]	[1,123]	[1,125]	[9,115]	[9,124]		
ma ra tag	མྲ	[112] Norm	[1,76]	[1,109]	[1,115]	[1,123]	[1,125]	[9,115]	[9,124]		
sha ra tag	ཤྲ	[113] Norm	[1,77]	[1,109]	[1,115]	[1,123]	[1,125]	[9,115]	[9,124]		
sa ra tag	སྲ	[114] Norm	[1,78]	[1,109]	[1,115]	[1,123]	[1,125]	[9,115]	[9,124]		
ha ra tag	ཧྲ	[115] Norm	[1,79]	[1,109]	[1,115]	[1,123]	[1,125]	[9,115]	[9,124]		
ka la tag	ཀླ	[116] Norm	[1,80]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
ga la tag	གླ	[117] Norm	[1,81]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
ba la tag	བླ	[118] Norm	[1,82]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
za la tag	ཟླ	[119] Norm	[1,83]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
ra la tag	རླ	[120] Norm	[1,84]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
sa la tag	སླ	[121] Norm	[1,85]	[1,109]	[1,116]	[1,123]	[1,125]	[9,116]	[9,125]		
ra mgo ka ya tag	རྐྱ	[122] Norm	[1,86]	[1,109]	[1,118]	[1,123]	[1,125]	[9,116]	[9,125]		
ra mgo ga ya tag	རྒྱ	[123] Norm	[1,87]	[1,109]	[1,118]	[1,123]	[1,125]	[9,116]	[9,125]		
ra mgo ma ya tag	རྨྱ	[124] Norm	[1,88]	[1,109]	[1,118]	[1,123]	[1,125]	[9,116]	[9,125]		
ra mgo ga wa zur	རྒྭ	[125] Norm	[1,89]	[1,109]	[1,117]	[1,123]	[1,125]	[9,117]	[9,126]		
ra mgo tsa wa zur	རྩྭ	[126] Norm	[1,90]	[1,109]	[1,117]	[1,123]	[1,125]	[9,117]	[9,126]		
sa mgo ka ya tag	ས྄ཀྱ	[254] Norm	[1,91]	[1,109]	[1,119]	[1,123]	[1,125]	[9,117]	[9,126]		
sa mgo ga ya tag	སྒྱ	[128] Norm	[1,92]	[1,109]	[1,119]	[1,123]	[1,125]	[9,117]	[9,126]		
sa mgo pa ya tag	སྤྱ	[129] Norm	[1,93]	[1,109]	[1,119]	[1,123]	[1,125]	[9,117]	[9,126]		
sa mgo ba ya tag	སྦྱ	[130] Norm	[1,94]	[1,109]	[1,119]	[1,123]	[1,125]	[9,117]	[9,126]		
sa mgo ma ya tag	སྨྱ	[131] Norm	[1,95]	[1,109]	[1,117]	[1,123]	[1,125]	[9,117]	[9,126]		
sa mgo ka ra tag	སྐྲ	[132] Norm	[1,96]	[1,109]	[1,117]	[1,123]	[1,125]	[9,117]	[9,126]		
sa mgo ga ra tag	སྒྲ	[133] Norm	[1,97]	[1,109]	[1,117]	[1,123]	[1,125]	[9,117]	[9,126]		
sa mgo na ra tag	སྣྲ	[134] Norm	[1,98]	[1,109]	[1,117]	[1,123]	[1,125]	[9,117]	[9,126]		
sa mgo pa ra tag	སྤྲ	[135] Norm	[1,99]	[1,109]	[1,117]	[1,123]	[1,125]	[9,117]	[9,126]		

FONT: Tibetan Machine WEB1

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
sa mgo ba ra tag		[136] Norm	[1,100]	[1,109]	[1,117]	[1,123]	[1,125]	[9,117]	[9,126]		
sa mgo ma ra tag		[137] Norm	[1,101]	[1,109]	[1,117]	[1,123]	[1,125]	[9,117]	[9,126]		
ga ra tag wa zur		[153] Norm	[1,102]	[1,109]	[1,116]	[1,123]	[1,125]	[9,115]	[9,124]		
da ra tag wa zur		[154] Norm	[1,103]	[1,109]	n/a	[1,123]	[1,125]	n/a	n/a		
pha ya tag wa zur		[155] Norm	[1,104]	[1,109]	n/a	[1,123]	[1,125]	n/a	n/a		
zhabs.kyu w. arm.		[178] Norm	[1,111]								use with yatas (see table)
zhabs.kyu w. arm.		[179] Norm	[1,112]								use with yatas (see table)
level 1 zhabs.kyu.....		[168] Norm	[1,113]								
level 1 zhabs.kyu.....		[169] Norm	[1,114]								
level 3 zhabs.kyu.....		[225] Norm	[1,115]								
level 5 zhabs.kyu.....		[228] Norm	[1,116]								
level 6 zhabs.kyu.....		[229] Norm	[1,117]								
level 5 zhabs.kyu w. arm.		[230] Norm	[1,118]								use with yatas, level 1
level 6 zhabs.kyu w. arm.		[231] Norm	[1,119]								use with yatas, level 2

All remaining Sanskrit vowels are in TibetanMachineWeb7 font. All achungs and achung+zhabs.kyu are in TibetanMachineWeb9 font.

FONT: Tibetan Machine WEB2

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
kka	ཀཾ	[33] Skt1	[2,33]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
kkha	ཁཾ	[34] Skt1	[2,34]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
knga	གཾ	[35] Skt1	[2,35]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ktsa	ཀྀ	[36] Skt1	[2,36]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
kta	ཀྂ	[37] Skt1	[2,37]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ktya	ཀྱཾ	[38] Skt1	[2,38]	[0,109]	[3,121]	[0,123]	[0,125]	[3,107]	[3,114]		
ktra	ཀྲཾ	[39] Skt1	[2,39]	[0,109]	[3,121]	[0,123]	[0,125]	[3,107]	[3,114]		
ktrya	ཀྲྱཾ	[40] Skt1	[2,40]	[0,109]	[3,123]	[0,123]	[0,125]	[3,109]	[3,116]		
ktva	ཀྭཾ	[41] Skt1	[2,41]	[0,109]	[3,121]	[0,123]	[0,125]	[3,107]	[3,114]		
ktha	ཁྂ	[42] Skt1	[2,42]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
kthya	ཁྱཾ	[43] Skt1	[2,43]	[0,109]	[3,122]	[0,123]	[0,125]	[3,108]	[3,115]		
kṇa	ཎྂ	[44] Skt1	[2,44]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
tsheg (breaking)	་	[45] Skt1	[*,45]							[0F0B]	for non-breaking tsheg use TibetanMachineWeb [108]
kna	ཎྀ	[252] Skt1	[2,46]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
knya	ཉྂ	[46] Skt1	[2,47]	[0,109]	[3,122]	[0,123]	[0,125]	[3,108]	[3,115]		
kpha	ཕྂ	[47] Skt1	[2,48]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
kma	མྂ	[48] Skt1	[2,49]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
kmya	ཧྱཾ	[49] Skt1	[2,50]	[0,109]	[3,122]	[0,123]	[0,125]	[3,108]	[3,115]		
krya	ཀྱཾ	[50] Skt1	[2,51]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
kvya	ཀྭྱཾ	[192] Skt3	[2,52]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
ksha	ཀྵཾ	[51] Skt1	[2,53]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ksa	ཀྶཾ	[52] Skt1	[2,54]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ksna	ཀྞཾ	[53] Skt1	[2,55]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
ksma	ཀྨཾ	[54] Skt1	[2,56]	[0,109]	[3,123]	[0,123]	[0,125]	[3,109]	[3,116]		
ksya	ཀྱཾ	[55] Skt1	[2,57]	[0,109]	[3,122]	[0,123]	[0,125]	[3,108]	[3,115]		
ksva	ཀྭཾ	[56] Skt1	[2,58]	[0,109]	[3,122]	[0,123]	[0,125]	[3,108]	[3,115]		
utsama ka	ཀ	[57] Skt1	[2,59]	[0,109]	[3,120]	[0,125]	[0,123]	[3,106]	[3,113]		
utsama kha	ཁ	[58] Skt1	[2,60]	[0,109]	[3,120]	[0,125]	[0,123]	[3,106]	[3,113]		

FONT: Tibetan Machine WEB2

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
khkha	ཁྐ	[59] Skt1	[2,61]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
khna	ཁྣ	[60] Skt1	[2,62]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
khla	ཁླ	[61] Skt1	[2,63]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
gga	གྒ	[62] Skt1	[2,64]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ggha	གྒྷ	[63] Skt1	[2,65]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
gña	གྙ	[64] Skt1	[2,66]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
gda	གྡ	[65] Skt1	[2,67]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
gdha	གྡྷ	[66] Skt1	[2,68]	[0,109]	[3,123]	[0,123]	[0,125]	[3,109]	[3,116]		
gdhya	གྡྷྱ	[67] Skt1	[2,69]	[0,109]	[3,125]	[0,123]	[0,125]	[3,111]	[3,118]		
gdhva	གྡྷྭ	[68] Skt1	[2,70]	[0,109]	[3,125]	[0,123]	[0,125]	[3,111]	[3,118]		
gna	གྣ	[69] Skt1	[2,71]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
gnya	གྤ	[70] Skt1	[2,72]	[0,109]	[3,122]	[0,123]	[0,125]	[3,108]	[3,115]		
gpa	གྥ	[71] Skt1	[2,73]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
gbha	གྦྷ	[72] Skt1	[2,74]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
gbhya	གྦྷྱ	[73] Skt1	[2,75]	[0,109]	[3,125]	[0,123]	[0,125]	[3,111]	[3,118]		
gma	གྨ	[74] Skt1	[2,76]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
gmya	གྨྱ	[75] Skt1	[2,77]	[0,109]	[3,122]	[0,123]	[0,125]	[3,108]	[3,115]		
grya	གྲྱ	[76] Skt1	[2,78]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
gha	ཪ	[77] Skt1	[2,79]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]	[0F43]	
ghgha	ཪྒྷ	[78] Skt1	[2,80]	[0,109]	[3,126]	[0,123]	[0,125]	[3,112]	[3,119]		
ghña	ཪྙ	[79] Skt1	[2,81]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
ghna	ཪྣ	[80] Skt1	[2,82]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
ghnya	ཪྤ	[81] Skt1	[2,83]	[0,109]	[3,125]	[0,123]	[0,125]	[3,111]	[3,118]		
ghma	ཪྨ	[82] Skt1	[2,84]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
ghla	ཪླ	[83] Skt1	[2,85]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
ghya	ཪྱ	[84] Skt1	[2,86]	[0,109]	[3,121]	[0,123]	[0,125]	[3,107]	[3,114]		
ghra	ཪྲ	[85] Skt1	[2,87]	[0,109]	[3,121]	[0,123]	[0,125]	[3,107]	[3,114]		
ghva	ཪྭ	[86] Skt1	[2,88]	[0,109]	[3,121]	[0,123]	[0,125]	[3,107]	[3,114]		
ṅka	ཀ	[87] Skt1	[2,89]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		

FONT: Tibetan Machine WEB2

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
ṅkta	ཀྟ	[88] Skt1	[2,90]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
ṅktya	ཀྟྱ	[89] Skt1	[2,91]	[0,109]	[3,125]	[0,123]	[0,125]	[3,111]	[3,118]		
ṅkya	ཀྱ	[90] Skt1	[2,92]	[0,109]	[3,122]	[0,123]	[0,125]	[3,108]	[3,115]		
ṅkha	ཁ	[91] Skt1	[2,93]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṅkhya	ཁྱ	[92] Skt1	[2,94]	[0,109]	[3,122]	[0,123]	[0,125]	[3,108]	[3,115]		
ṅga	ག	[93] Skt1	[2,95]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṅgra	གྲ	[94] Skt1	[2,96]	[0,109]	[3,121]	[0,123]	[0,125]	[3,107]	[3,114]		
ṅgya	གྱ	[95] Skt1	[2,97]	[0,109]	[3,122]	[0,123]	[0,125]	[3,108]	[3,115]		
ṅgha	གྷ	[96] Skt1	[2,98]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
ṅghya	གྷྱ	[97] Skt1	[2,99]	[0,109]	[3,125]	[0,123]	[0,125]	[3,111]	[3,118]		
ṅghra	གྷྲ	[98] Skt1	[2,100]	[0,109]	[3,125]	[0,123]	[0,125]	[3,111]	[3,118]		
ṅṅa	ངྭ	[99] Skt1	[2,101]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṅta	ཏ	[100] Skt1	[2,102]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṅna	ན	[101] Skt1	[2,103]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṅma	མ	[102] Skt1	[2,104]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṅya	ཡ	[103] Skt1	[2,105]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṅla	ལ	[104] Skt1	[2,106]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṅśa	ཤ	[105] Skt1	[2,107]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṅha	ཧ	[106] Skt1	[2,108]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṅkṣha	ཀྵ	[107] Skt1	[2,109]	[0,109]	[3,123]	[0,123]	[0,125]	[3,109]	[3,116]		
ṅkṣhva	ཀྵྭ	[108] Skt1	[2,110]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
ṅkṣhya	ཀྵྱ	[109] Skt1	[2,111]	[0,109]	[3,125]	[0,123]	[0,125]	[3,111]	[3,118]		
tstsa	ཙཙ	[110] Skt1	[2,112]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
tstsha	ཙཚ	[111] Skt1	[2,113]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
tstshva	ཙཚྭ	[112] Skt1	[2,114]	[0,110]	[3,122]	[0,125]	[0,126]	[3,108]	[3,115]		
tstshra	ཙཚྲ	[113] Skt1	[2,115]	[0,110]	[3,122]	[0,125]	[0,126]	[3,108]	[3,115]		
tsña	ཙཉ	[114] Skt1	[2,116]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
tsnya	ཙཉྱ	[115] Skt1	[2,117]	[0,110]	[3,122]	[0,125]	[0,126]	[3,108]	[3,115]		
tsma	ཙམ	[116] Skt1	[2,118]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		

FONT: Tibetan Machine WEB2

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
tsya	ཙྱ	[117] Skt1	[2,119]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
tsra	ཙྲ	[118] Skt1	[2,120]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
tsla	ཙླ	[119] Skt1	[2,121]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
ts-hya	ཙྷྱ	[120] Skt1	[2,122]	[0,110]	[3,122]	[0,125]	[0,126]	[3,108]	[3,115]		
tshtha	ཚྛ	[121] Skt1	[2,123]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
tsh-tsha	ཚྩ	[122] Skt1	[2,124]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
tshya	ཚྱ	[123] Skt1	[2,125]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
tshra	ཚྲ	[124] Skt1	[2,126]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		

All remaining standard vowels are provided by using the vowels from TibetanMachineWeb font and all remaining Sanskrit vowels by using the vowels from TibetanMachineWeb7 font.

FONT: Tibetan Machine WEB3

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
tshla		[125] Skt1	[3,33]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
dzdza		[126] Skt1	[3,34]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
dzdzña		[253] Skt1	[3,35]	[0,110]	[3,124]	[0,125]	[0,126]	[3,110]	[3,117]		
dzdzva		[128] Skt1	[3,36]	[0,110]	[3,123]	[0,125]	[0,126]	[3,109]	[3,116]		
dzdzha		[129] Skt1	[3,37]	[0,110]	[3,124]	[0,125]	[0,126]	[3,110]	[3,117]		
dzhdzha		[130] Skt1	[3,38]	[0,110]	[3,126]	[0,125]	[0,126]	[3,112]	[3,119]		
dzña		[131] Skt1	[3,39]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
dzñya		[132] Skt1	[3,40]	[0,110]	[3,122]	[0,125]	[0,126]	[3,108]	[3,115]		
dzna		[133] Skt1	[3,41]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
dznva		[134] Skt1	[3,42]	[0,110]	[3,122]	[0,125]	[0,126]	[3,108]	[3,115]		
dzma		[135] Skt1	[3,43]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
dzya		[136] Skt1	[3,44]	[0,110]	[3,120]	[0,125]	[0,126]	[3,106]	[3,113]		
tsheg (breaking)		[45] Skt1	[*,45]							[0F0B]	for non-breaking tsheg use TibetanMachineWeb [108]
dzra		[137] Skt1	[3,46]	[0,110]	[3,120]	[0,123]	[0,126]	[3,106]	[3,113]		
dzva		[138] Skt1	[3,47]	[0,110]	[3,120]	[0,123]	[0,126]	[3,106]	[3,113]		
dzha		[139] Skt1	[3,48]	[0,110]	[3,120]	[0,123]	[0,126]	[3,106]	[3,113]	[0F5C]	
dzhya		[140] Skt1	[3,49]	[0,110]	[3,121]	[0,123]	[0,126]	[3,107]	[3,114]		
dzhra		[141] Skt1	[3,50]	[0,110]	[3,121]	[0,123]	[0,126]	[3,107]	[3,114]		
dzhla		[249] Skt1	[3,51]	[0,110]	[3,124]	[0,123]	[0,126]	[3,110]	[3,117]		
dzhva		[143] Skt1	[3,52]	[0,110]	[3,122]	[0,123]	[0,126]	[3,108]	[3,115]		
ñtsa		[144] Skt1	[3,53]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ñtsma		[145] Skt1	[3,54]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
ñtsya		[146] Skt1	[3,55]	[0,109]	[3,122]	[0,123]	[0,125]	[3,108]	[3,115]		
ñtsha		[147] Skt1	[3,56]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ñdza		[148] Skt1	[3,57]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ñdzya		[149] Skt1	[3,58]	[0,109]	[3,123]	[0,123]	[0,125]	[3,109]	[3,116]		
ñdzha		[150] Skt1	[3,59]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
ññ a		[151] Skt1	[3,60]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		

FONT: Tibetan Machine WEB3

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
ñpa	ཉྤ	[152] Skt1	[3,61]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ñpha	ཉྥ	[153] Skt1	[3,62]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ñya	ཉྱ	[154] Skt1	[3,63]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ñra	ཉྲ	[155] Skt1	[3,64]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ñla	ཉླ	[156] Skt1	[3,65]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ñśa	ཉྵ	[157] Skt1	[3,66]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṭka	ཊྐ	[250] Skt1	[3,67]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṭṭa	ཊྚ	[159] Skt1	[3,68]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṭṭ-ha	ཊྚཧ	[254] Skt1	[3,69]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
ṭna	ཊྣ	[188] Skt3	[3,70]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
ṭpa	ཊྤ	[161] Skt1	[3,71]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṭma	ཊྨ	[162] Skt1	[3,72]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṭya	ཊྱ	[163] Skt1	[3,73]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṭva	ཊྭ	[164] Skt1	[3,74]	[0,109]	[3,121]	[0,123]	[0,125]	[3,107]	[3,114]		
ṭsa	ཊྶ	[165] Skt1	[3,75]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṭhya	ཋྱ	[251] Skt1	[3,76]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṭhra	ཋྲ	[167] Skt1	[3,77]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ḍga	ཌྒ	[168] Skt1	[3,78]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ḍgya	ཌྒྱ	[169] Skt1	[3,79]	[0,109]	[3,122]	[0,123]	[0,125]	[3,108]	[3,115]		
ḍgha	ཌྒྷ	[170] Skt1	[3,80]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
ḍghra	ཌྒྷྲ	[171] Skt1	[3,81]	[0,109]	[3,125]	[0,123]	[0,125]	[3,111]	[3,118]		
ḍḍa	ཌྜ	[172] Skt1	[3,82]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ḍḍha	ཌྜྷ	[173] Skt1	[3,83]	[0,109]	[3,123]	[0,123]	[0,125]	[3,109]	[3,116]		
ḍḍhya	ཌྜྷྱ	[174] Skt1	[3,84]	[0,109]	[3,125]	[0,123]	[0,125]	[3,111]	[3,118]		
ḍna	ཌྞ	[175] Skt1	[3,85]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ḍma	ཌྨ	[176] Skt1	[3,86]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ḍya	ཌྱ	[177] Skt1	[3,87]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ḍra	ཌྲ	[178] Skt1	[3,88]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ḍva	ཌྭ	[179] Skt1	[3,89]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		

FONT: Tibetan Machine WEB3

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
ḍha	ཌ	[180] Skt1	[3,90]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]	[0F4D]	
ḍhḍha	ཌྷཌ	[181] Skt1	[3,91]	[0,109]	[3,126]	[0,123]	[0,125]	[3,112]	[3,119]		
ḍhma	ཌྷམ	[182] Skt1	[3,92]	[0,109]	[3,124]	[0,123]	[0,125]	[3,110]	[3,117]		
ḍhya	ཌྷཡ	[183] Skt1	[3,93]	[0,109]	[3,121]	[0,123]	[0,125]	[3,107]	[3,114]		
ḍhra	ཌྷར	[184] Skt1	[3,94]	[0,109]	[3,121]	[0,123]	[0,125]	[3,107]	[3,114]		
ḍhva	ཌྷྭ	[185] Skt1	[3,95]	[0,109]	[3,121]	[0,123]	[0,125]	[3,107]	[3,114]		
ṇṭa	ཎཊ	[186] Skt1	[3,96]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṇṭha	ཎཋ	[187] Skt1	[3,97]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṇḍa	ཎཌ	[188] Skt1	[3,98]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṇḍya	ཎཌྱ	[189] Skt1	[3,99]	[0,109]	[3,123]	[0,123]	[0,125]	[3,109]	[3,116]		
ṇḍra	ཎཌྲ	[193] Skt3	[3,100]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
ṇḍrya	ཎཌྲྱ	[190] Skt1	[3,101]	[0,109]	[3,125]	[0,123]	[0,125]	[3,111]	[3,118]		
ṇḍha	ཎཌྷ	[191] Skt1	[3,102]	[0,109]	[3,123]	[0,123]	[0,125]	[3,109]	[3,116]		
ṇṇa	ཎཎ	[192] Skt1	[3,103]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṇdra	ཎྡྲ	[193] Skt1	[3,104]	[0,109]	[3,122]	[0,123]	[0,125]	[3,108]	[3,115]		
ṇma	ཎྨ	[194] Skt1	[3,105]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
small achung, 1	ྀ	[201] Skt1	[3,106]								
small achung, 2	ཱྀ	[202] Skt1	[3,107]								
small achung, 3	ྂ	[203] Skt1	[3,108]								
small achung, 4	ྃ	[204] Skt1	[3,109]								
small achung, 5	྄	[205] Skt1	[3,110]								
small achung, 6	྅	[206] Skt1	[3,111]								
small achung, 7	྆	[207] Skt1	[3,112]								
small achung+zhabs.kyu, 1	ྀ	[211] Skt1	[3,113]								
small achung+zhabs.kyu, 2	ཱྀ	[212] Skt1	[3,114]								
small achung+zhabs.kyu, 3	ྂ	[213] Skt1	[3,115]								
small achung+zhabs.kyu, 4	ྃ	[214] Skt1	[3,116]								
small achung+zhabs.kyu, 5	྄	[215] Skt1	[3,117]								

FONT: Tibetan Machine WEB3

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
small achung+zhabs.kyu, 6		[216] Skt1	[3,118]								
small achung+zhabs.kyu, 7	ཱ	[217] Skt1	[3,119]								
level 2 zhabs.kyu.....	ཱ ྀ	[224] Skt1	[3,120]								
level 3 zhabs.kyu.....	ྀ	[225] Skt1	[3,121]								
level 4 zhabs.kyu	ྀ ཱ	[226] Skt1	[3,122]								
level 5 zhabs.kyu	ཱ	[227] Skt1	[3,123]								
level 6 zhabs.kyu.....	ཱ ླ	[228] Skt1	[3,124]								
level 7 zhabs.kyu.....	ླ	[229] Skt1	[3,125]								
level 8 zhabs.kyu	ླ ཱ	[230] Skt1	[3,126]								
	ཱ										

All remaining standard vowels are provided by using the vowels from TibetanMachineWeb font and all remaining Sanskrit vowels by using the vowels from TibetanMachineWeb7 font.

FONT: Tibetan Machine WEB4

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
ṇya	ཎྱ	[195] Skt1	[4,33]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
ṇva	ཎྭ	[196] Skt1	[4,34]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
tka	ཏྐ	[197] Skt1	[4,35]	[0,109]	[3,120]	[0,123]	[0,125]	[3,106]	[3,113]		
tkra	ཏྐྲ	[198] Skt1	[4,36]	[0,109]	[3,121]	[0,123]	[0,125]	[3,107]	[3,114]		
tkva	ཏྐྭ	[33] Skt2	[4,37]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
tksa	ཏྐྵ	[199] Skt1	[4,38]	[0,109]	[3,123]	[0,123]	[0,125]	[3,109]	[3,116]		
tga	ཏྒ	[189] Skt3	[4,39]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
tña	ཏྙ	[34] Skt2	[4,40]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
ṭṭha	ཊྛ	[35] Skt2	[4,41]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
tta	ཏྟ	[36] Skt2	[4,42]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
ttya	ཏྱ	[37] Skt2	[4,43]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
ttra	ཏྲ	[38] Skt2	[4,44]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
tsheg (breaking)	་	[45] Skt2	[*,45]							[0F0B]	for non-breaking tsheg use TibetanMachineWeb [108]
ttva	ཏྭ	[39] Skt2	[4,46]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
ttha	ཐྟ	[40] Skt2	[4,47]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
tthya	ཐྱ	[41] Skt2	[4,48]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
tna	ཏྣ	[42] Skt2	[4,49]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
tnya	ཏྙ	[43] Skt2	[4,50]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
tpa	ཏྤ	[44] Skt2	[4,51]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
tpra	ཏྤྲ	[252] Skt2	[4,52]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
tpha	ཐྤ	[46] Skt2	[4,53]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
tma	ཏྨ	[47] Skt2	[4,54]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
tmya	ཏྨྱ	[48] Skt2	[4,55]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
tya	ཏྱ	[49] Skt2	[4,56]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
trna	ཏྲྣ	[50] Skt2	[4,57]	[0,110]	[5,121]	[0,125]	[0,125]	[5,107]	[5,114]		
tsa	ཙྪ	[51] Skt2	[4,58]	[0,110]	[5,120]	[0,125]	[0,125]	[5,106]	[5,113]		
tstha	ཙྠ	[52] Skt2	[4,59]	[0,110]	[5,124]	[0,125]	[0,125]	[5,110]	[5,117]		
tsna	ཙྞ	[53] Skt2	[4,60]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		

FONT: Tibetan Machine WEB4

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
tsnya		[54] Skt2	[4,61]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
tsma		[55] Skt2	[4,62]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
tsmya		[56] Skt2	[4,63]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
tsya		[57] Skt2	[4,64]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
tsra		[58] Skt2	[4,65]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
tsva		[59] Skt2	[4,66]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
trya		[60] Skt2	[4,67]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
tvya		[61] Skt2	[4,68]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
tkṣa		[62] Skt2	[4,69]	[0,109]	[5,123]	[0,123]	[0,125]	[5,109]	[5,116]		
thya		[63] Skt2	[4,70]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
thva		[64] Skt2	[4,71]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
dga		[65] Skt2	[4,72]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
dgya		[66] Skt2	[4,73]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
dgra		[67] Skt2	[4,74]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
dgha		[68] Skt2	[4,75]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
dghra		[69] Skt2	[4,76]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
ddza		[70] Skt2	[4,77]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
dda		[71] Skt2	[4,78]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
ddya		[72] Skt2	[4,79]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
ddra		[73] Skt2	[4,80]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
ddva		[74] Skt2	[4,81]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
ddha		[75] Skt2	[4,82]	[0,109]	[5,123]	[0,123]	[0,125]	[5,109]	[5,116]		
ddhna		[76] Skt2	[4,83]	[0,109]	[5,126]	[0,123]	[0,125]	[5,112]	[5,119]		
ddhya		[77] Skt2	[4,84]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
ddhra		[78] Skt2	[4,85]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
ddhrva		[79] Skt2	[4,86]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
dna		[80] Skt2	[4,87]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
dba		[81] Skt2	[4,88]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
dbra		[82] Skt2	[4,89]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		

FONT: Tibetan Machine WEB4

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
dbha		[83] Skt2	[4,90]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
dbhya		[84] Skt2	[4,91]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
dbhra		[85] Skt2	[4,92]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
dma		[86] Skt2	[4,93]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
dya		[87] Skt2	[4,94]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
drya		[88] Skt2	[4,95]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
dvya		[89] Skt2	[4,96]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
dha		[90] Skt2	[4,97]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]	[0F4D]	
dhna		[91] Skt2	[4,98]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
dhnya		[92] Skt2	[4,99]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
dhma		[93] Skt2	[4,100]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
dhya		[94] Skt2	[4,101]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
dhra		[95] Skt2	[4,102]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
dhrya		[96] Skt2	[4,103]	[0,109]	[5,123]	[0,123]	[0,125]	[5,109]	[5,116]		
dhva		[97] Skt2	[4,104]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
nka		[98] Skt2	[4,105]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
nkta		[99] Skt2	[4,106]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
ngha		[101] Skt2	[4,107]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
nṅa		[102] Skt2	[4,108]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
ndza		[103] Skt2	[4,109]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
ndzya		[104] Skt2	[4,110]	[0,109]	[5,123]	[0,123]	[0,125]	[5,109]	[5,116]		
nḍa		[105] Skt2	[4,111]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
nta		[106] Skt2	[4,112]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
ntya		[107] Skt2	[4,113]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
ntra		[108] Skt2	[4,114]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
ntrya		[109] Skt2	[4,115]	[0,109]	[5,123]	[0,123]	[0,125]	[5,109]	[5,116]		
ntva		[110] Skt2	[4,116]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
ntsa		[111] Skt2	[4,117]	[0,109]	[5,123]	[0,123]	[0,125]	[5,109]	[5,116]		
ntha		[112] Skt2	[4,118]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		

FONT: Tibetan Machine WEB4

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
nda	ནཌ	[113] Skt2	[4,119]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
ndda	ནཌ་ཌ	[114] Skt2	[4,120]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
nddra	ནཌ་ཌ་ར	[115] Skt2	[4,121]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
ndya	ནཌ་ཡ	[116] Skt2	[4,122]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
ndra	ནཌ་ར	[117] Skt2	[4,123]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
ndha	ནཌ་ཧ	[118] Skt2	[4,124]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
ndhra	ནཌ་ཧ་ར	[119] Skt2	[4,125]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
ndhya	ནཌ་ཧ་ཡ	[120] Skt2	[4,126]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		

All remaining standard vowels are provided by using the vowels from TibetanMachineWeb font and all remaining Sanskrit vowels by using the vowels from TibetanMachineWeb7 font.

FONT: Tibetan Machine WEB5

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
nna	ཎ	[121] Skt2	[5,33]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
nnya	ཉ	[123] Skt2	[5,34]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
npa	པ	[124] Skt2	[5,35]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
npra	ཕ	[125] Skt2	[5,36]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
npha	ཕ	[126] Skt2	[5,37]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
nma	ཙ	[253] Skt2	[5,38]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
nbhya	ཛ	[128] Skt2	[5,39]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
ntsa	ཚ	[129] Skt2	[5,40]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
nya	ཉ	[130] Skt2	[5,41]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
nra	ཏ	[131] Skt2	[5,42]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
nva	ཐ	[132] Skt2	[5,43]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
nvya	ཐ	[133] Skt2	[5,44]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
tsheg (breaking)	་	[45] Norm	[*,45]							[0F0B]	for non-breaking tsheg use TibetanMachineWeb [108]
nsa	ཤ	[134] Skt2	[5,46]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
nsya	ཥ	[135] Skt2	[5,47]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
nha	ཧ	[136] Skt2	[5,48]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
nhra	ཨ	[137] Skt2	[5,49]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
pta	ཀ	[138] Skt2	[5,50]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
ptya	ཁ	[139] Skt2	[5,51]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
ptrya	ཁ	[140] Skt2	[5,52]	[0,109]	[5,123]	[0,123]	[0,125]	[5,109]	[5,116]		
pda	ག	[190] Skt3	[5,53]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
pna	ང	[141] Skt2	[5,54]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
pnya	ཅ	[249] Skt2	[5,55]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
ppa	ད	[143] Skt2	[5,56]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
pma	ཉ	[144] Skt2	[5,57]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
pla	ཏ	[145] Skt2	[5,58]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
pva	ཐ	[146] Skt2	[5,59]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
psa	ན	[147] Skt2	[5,60]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		

FONT: Tibetan Machine WEB5

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
psnya		[148] Skt2	[5,61]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
psva		[149] Skt2	[5,62]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
psya		[150] Skt2	[5,63]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
bgha		[151] Skt2	[5,64]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
bdza		[152] Skt2	[5,65]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
bda		[153] Skt2	[5,66]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
bddza		[154] Skt2	[5,67]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
bdha		[155] Skt2	[5,68]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
bdhva		[156] Skt2	[5,69]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
bta		[157] Skt2	[5,70]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
bna		[250] Skt2	[5,71]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
bba		[159] Skt2	[5,72]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
bbha		[254] Skt2	[5,73]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
bbhya		[161] Skt2	[5,74]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
bma		[162] Skt2	[5,75]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
bha		[163] Skt2	[5,76]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]	[0F57]	
bhṇa		[164] Skt2	[5,77]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
bhna		[165] Skt2	[5,78]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
bhma		[251] Skt2	[5,79]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
bhya		[167] Skt2	[5,80]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
bhra		[168] Skt2	[5,81]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
bhva		[169] Skt2	[5,82]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
mña		[170] Skt2	[5,83]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
mṇa		[171] Skt2	[5,84]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
mna		[172] Skt2	[5,85]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
mnya		[173] Skt2	[5,86]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
mpa		[174] Skt2	[5,87]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
mpra		[175] Skt2	[5,88]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
mpha		[176] Skt2	[5,89]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		

FONT: Tibetan Machine WEB5

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
mba	བྦ	[177] Skt2	[5,90]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
mbha	བྦྷ	[178] Skt2	[5,91]	[0,109]	[5,124]	[0,123]	[0,125]	[5,110]	[5,117]		
mbhya	བྦྷྱ	[179] Skt2	[5,92]	[0,109]	[5,125]	[0,123]	[0,125]	[5,111]	[5,118]		
mma	མྨ	[180] Skt2	[5,93]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
mla	མླ	[181] Skt2	[5,94]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
mva	མྭ	[182] Skt2	[5,95]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
msa	མྶ	[183] Skt2	[5,96]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
mha	ཧྨ	[184] Skt2	[5,97]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
yya	ཡྱ	[185] Skt2	[5,98]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
yra	ཡྲ	[186] Skt2	[5,99]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
yva	ཡྭ	[187] Skt2	[5,100]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
ysa	ཡྶ	[188] Skt2	[5,101]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
rkha	རྐྷ	[189] Skt2	[5,102]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
rgha	རྒྷ	[190] Skt2	[5,103]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
rghya	རྒྷྱ	[191] Skt2	[5,104]	[0,109]	[5,123]	[0,123]	[0,125]	[5,109]	[5,116]		
rtsya	རྩྱ	[192] Skt2	[5,105]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
small achung, 1	ྃ	[201] Skt2	[5,106]								
small achung, 2	྄	[202] Skt2	[5,107]								
small achung, 3	྅	[203] Skt2	[5,108]								
small achung, 4	྆	[204] Skt2	[5,109]								
small achung, 5	྇	[205] Skt2	[5,110]								
small achung, 6	ྈ	[206] Skt2	[5,111]								
small achung, 7	ྉ	[207] Skt2	[5,112]								
small achung+zhabs.kyu, 1	ྃྱ	[211] Skt2	[5,113]								
small achung+zhabs.kyu, 2	྄ྱ	[212] Skt2	[5,114]								
small achung+zhabs.kyu, 3	྅ྱ	[213] Skt2	[5,115]								
small achung+zhabs.kyu, 4	྆ྱ	[214] Skt2	[5,116]								

FONT: Tibetan Machine WEB5

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
small achung+zhabs.kyu, 5		[215] Skt2	[5,117]								
small achung+zhabs.kyu, 6	ཱ	[216] Skt2	[5,118]								
small achung+zhabs.kyu, 7	ཱ	[217] Skt2	[5,119]								
	ཱ										
level 2 zhabs.kyu.....		[224] Skt2	[5,120]								
level 3 zhabs.kyu.....	ེ	[225] Skt2	[5,121]								
level 4 zhabs.kyu	ེ	[226] Skt2	[5,122]								
level 5 zhabs.kyu	ེ	[227] Skt2	[5,123]								
level 6 zhabs.kyu.....	ེ	[228] Skt2	[5,124]								
level 7 zhabs.kyu.....	ེ	[229] Skt2	[5,125]								
level 8 zhabs.kyu	ེ	[230] Skt2	[5,126]								
	ེ										

All remaining standard vowels are provided by using the vowels from TibetanMachineWeb font and all remaining Sanskrit vowels by using the vowels from TibetanMachineWeb7 font.

FONT: Tibetan Machine WEB6

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
rtsha	རྩྷ	[193] Skt2	[6,33]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
rdzña	རྫྙ	[194] Skt2	[6,34]	[0,109]	[5,122]	[0,123]	[0,125]	[5,108]	[5,115]		
rdzya	རྫྱ	[195] Skt2	[6,35]	[0,109]	[5,121]	[0,123]	[0,125]	[5,107]	[5,114]		
rṭa	རྚ	[196] Skt2	[6,36]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
rṭha	རྛ	[197] Skt2	[6,37]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
rḍa	རྜ	[198] Skt2	[6,38]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
rṇa	རྞ	[199] Skt2	[6,39]	[0,109]	[5,120]	[0,123]	[0,125]	[5,106]	[5,113]		
rtva	རྟྭ	[33] Skt3	[6,40]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
rtta	རྟྟ	[34] Skt3	[6,41]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
rtsa	རྩ	[35] Skt3	[6,42]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
rtsna	རྩྣ	[36] Skt3	[6,43]	[0,109]	[7,125]	[0,123]	[0,125]	[7,111]	[7,118]		
rtsnya	རྩྙ	[37] Skt3	[6,44]	[0,109]	[7,126]	[0,123]	[0,125]	[7,112]	[7,119]		
tsheg (breaking)	་	[45] Skt3	[*,45]							[0F0B]	for non-breaking tsheg use TibetanMachineWeb [108]
rtha	རྟྷ	[38] Skt3	[6,46]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
rthya	རྟྷྱ	[39] Skt3	[6,47]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
rddha	རྡྡྷ	[40] Skt3	[6,48]	[0,109]	[7,125]	[0,123]	[0,125]	[7,111]	[7,118]		
rddhya	རྡྡྷྱ	[41] Skt3	[6,49]	[0,109]	[7,126]	[0,123]	[0,125]	[7,112]	[7,119]		
rdya	རྡྱ	[42] Skt3	[6,50]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
rdha	རྡྷ	[43] Skt3	[6,51]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
rdhma	རྡྷྨ	[44] Skt3	[6,52]	[0,109]	[7,125]	[0,123]	[0,125]	[7,111]	[7,118]		
rdhya	རྡྷྱ	[252] Skt3	[6,53]	[0,109]	[7,123]	[0,123]	[0,125]	[7,109]	[7,116]		
rdhra	རྡྷྲ	[46] Skt3	[6,54]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
rpa	རྤ	[47] Skt3	[6,55]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
rbpa	རྦྤ	[48] Skt3	[6,56]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
rbba	རྦྦ	[49] Skt3	[6,57]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
rbha	རྦྷ	[50] Skt3	[6,58]	[0,110]	[7,124]	[0,125]	[0,125]	[7,110]	[7,117]		
rmma	རྨྨ	[51] Skt3	[6,59]	[0,110]	[7,121]	[0,125]	[0,125]	[7,107]	[7,114]		
rya	ཪ	[52] Skt3	[6,60]	[0,110]	[7,120]	[0,125]	[0,125]	[7,106]	[7,113]		

FONT: Tibetan Machine WEB6

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
rwa	རྭ	[196] Skt3	[6,61]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
rśa	རྶ	[53] Skt3	[6,62]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
rśya	རྶྱ	[54] Skt3	[6,63]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
rṣa	རྵ	[55] Skt3	[6,64]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
rṣṇa	རྵྣ	[56] Skt3	[6,65]	[0,109]	[7,123]	[0,123]	[0,125]	[7,109]	[7,116]		
rṣṇya	རྵྣྱ	[57] Skt3	[6,66]	[0,109]	[7,126]	[0,123]	[0,125]	[7,112]	[7,119]		
rṣma	རྵྨ	[58] Skt3	[6,67]	[0,109]	[7,124]	[0,123]	[0,125]	[7,110]	[7,117]		
rṣya	རྵྱ	[59] Skt3	[6,68]	[0,109]	[7,123]	[0,123]	[0,125]	[7,109]	[7,116]		
rsa	རྸ	[60] Skt3	[6,69]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
rha	ཪ	[61] Skt3	[6,70]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
rkṣa	རྐྵ	[62] Skt3	[6,71]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
lgva	ལྒྷ	[63] Skt3	[6,72]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
lbya	ལྦྱ	[64] Skt3	[6,73]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
lma	ལྨ	[65] Skt3	[6,74]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
lya	ལྱ	[66] Skt3	[6,75]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
lva	ལྭ	[67] Skt3	[6,76]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
lla	ལྷ	[68] Skt3	[6,77]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
lhwa	ལྷྭ	[197] Skt3	[6,78]	[0,109]	n/a	[0,123]	[0,125]	[7,106]	[7,113]		
vya	ཝྱ	[69] Skt3	[6,79]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
vra	ཝྲ	[70] Skt3	[6,80]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
wna	ྃ	[195] Skt3	[6,81]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
wwa	ྂ	[194] Skt3	[6,82]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
śtsa	ཤྩ	[71] Skt3	[6,83]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
śtsya	ཤྩྱ	[72] Skt3	[6,84]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
śtsha	ཤྪ	[73] Skt3	[6,85]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
śṇa	ཤྞ	[74] Skt3	[6,86]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
śna	ཤྣ	[75] Skt3	[6,87]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
śpa	ཤྤ	[76] Skt3	[6,88]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
śbya	ཤྦྱ	[77] Skt3	[6,89]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		

FONT: Tibetan Machine WEB6

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
śma		[78] Skt3	[6,90]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
śya		[79] Skt3	[6,91]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
śrya		[80] Skt3	[6,92]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
śla		[81] Skt3	[6,93]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
śvga		[82] Skt3	[6,94]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
śvya		[83] Skt3	[6,95]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
śśa		[84] Skt3	[6,96]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
ṣka		[85] Skt3	[6,97]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
ṣkra		[86] Skt3	[6,98]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
ṣṭa		[87] Skt3	[6,99]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
ṣṭya		[88] Skt3	[6,100]	[0,109]	[7,123]	[0,123]	[0,125]	[7,109]	[7,116]		
ṣṭra		[89] Skt3	[6,101]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
ṣṭrya		[90] Skt3	[6,102]	[0,109]	[7,123]	[0,123]	[0,125]	[7,109]	[7,116]		
ṣṭva		[91] Skt3	[6,103]	[0,109]	[7,123]	[0,123]	[0,125]	[7,109]	[7,116]		
ṣṭha		[92] Skt3	[6,104]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
ṣṭhya		[93] Skt3	[6,105]	[0,109]	[7,123]	[0,123]	[0,125]	[7,109]	[7,116]		
ṣṇa		[94] Skt3	[6,106]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
ṣṇya		[95] Skt3	[6,107]	[0,109]	[7,123]	[0,123]	[0,125]	[7,109]	[7,116]		
ṣḍa		[96] Skt3	[6,108]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
ṣṭha		[191] Skt3	[6,109]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
ṣpa		[97] Skt3	[6,110]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
ṣpra		[98] Skt3	[6,111]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
ṣma		[99] Skt3	[6,112]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
ṣya		[100] Skt3	[6,113]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
ṣva		[101] Skt3	[6,114]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
ssa		[102] Skt3	[6,115]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
sksa		[103] Skt3	[6,116]	[0,109]	[7,124]	[0,123]	[0,125]	[7,110]	[7,117]		
skha		[104] Skt3	[6,117]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
stsya		[105] Skt3	[6,118]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		

FONT: Tibetan Machine WEB6

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
sṭa	སྟ	[106] Skt3	[6,119]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
sṭha	སྠ	[107] Skt3	[6,120]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
stya	སྱ	[108] Skt3	[6,121]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
stra	སྲ	[109] Skt3	[6,122]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
stva	སྭ	[110] Skt3	[6,123]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
stha	སྷ	[111] Skt3	[6,124]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
sthya	ཀྵ	[112] Skt3	[6,125]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
snya	ཧྱ	[113] Skt3	[6,126]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		

All remaining standard vowels are provided by using the vowels from TibetanMachineWeb font and all remaining Sanskrit vowels by using the vowels from TibetanMachineWeb7 font.

FONT: Tibetan Machine WEB7

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
snva	སྣྭ	[114] Skt3	[7,33]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
spha	སྤྷ	[115] Skt3	[7,34]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
sphya	སྤྷྱ	[116] Skt3	[7,35]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
sya	སྱ	[117] Skt3	[7,36]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
srva	སྲྭ	[118] Skt3	[7,37]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
ssa	སྶ	[119] Skt3	[7,38]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
ssva	སྶྭ	[120] Skt3	[7,39]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
sha	ཤྭ	[121] Skt3	[7,40]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
svya	ཥྱ	[122] Skt3	[7,41]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
hña	ཧྙ	[123] Skt3	[7,42]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
hṇa	ཧྞ	[124] Skt3	[7,43]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
hta	ཧྟ	[125] Skt3	[7,44]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
tsheg (breaking)	་	[45] Norm	[*,45]							[0F0B]	for non-breaking tsheg use TibetanMachineWeb [108]
hna	ཧྣ	[126] Skt3	[7,46]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
hnya	ཧྣྱ	[253] Skt3	[7,47]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
hpa	ཧྤ	[128] Skt3	[7,48]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
hpha	ཧྥ	[129] Skt3	[7,49]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
hma	ཧྨ	[130] Skt3	[7,50]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
hya	ཧྱ	[131] Skt3	[7,51]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
hla	ཧླ	[132] Skt3	[7,52]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
hsa	ཧྶ	[133] Skt3	[7,53]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
hsva	ཧྶྭ	[134] Skt3	[7,54]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
hvya	ཧྺ	[135] Skt3	[7,55]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
kṣṇa	ཀྵྞ	[136] Skt3	[7,56]	[0,109]	[7,124]	[0,123]	[0,125]	[7,110]	[7,117]		
kṣma	ཀྵྨ	[137] Skt3	[7,57]	[0,109]	[7,124]	[0,123]	[0,125]	[7,110]	[7,117]		
kṣmya	ཀྵྨྱ	[138] Skt3	[7,58]	[0,109]	[7,126]	[0,123]	[0,125]	[7,112]	[7,119]		
kṣya	ཀྵྱ	[139] Skt3	[7,59]	[0,109]	[7,123]	[0,123]	[0,125]	[7,109]	[7,116]		
kṣra	ཀྵྲ	[140] Skt3	[7,60]	[0,109]	[7,123]	[0,123]	[0,125]	[7,109]	[7,116]		

FONT: Tibetan Machine WEB7

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
kṣla	ཀླ	[141] Skt3	[7,61]	[0,109]	[7,124]	[0,123]	[0,125]	[7,110]	[7,117]		
kṣva	ཀྭ	[249] Skt3	[7,62]	[0,109]	[7,122]	[0,123]	[0,125]	[7,108]	[7,115]		
aya	ཡ	[143] Skt3	[7,63]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
ara	ར	[144] Skt3	[7,64]	[0,109]	[7,120]	[0,123]	[0,125]	[7,106]	[7,113]		
arya	ཤ	[145] Skt3	[7,65]	[0,109]	[7,121]	[0,123]	[0,125]	[7,107]	[7,114]		
ra.mgo	ཱ	[173] Skt3	[7,66]								Part character for use in building unavailable stacked letters
tza.'phru	ཻ	[174] Skt3	[7,67]							[0F39]	Part character for use in building unavailable stacked letters
reversed tza.'phru	ཽ	[145] Skt4	[7,68]								
wa.btags	ཷ	[159] Norm	[7,69]							[0FAD]	
ya.btags	ཹ	[175] Skt3	[7,70]							[0FB1]	Part character for use in building unavailable stacked letters
ra.btags	ེ	[176] Skt3	[7,71]							[0FB2]	Part character for use in building unavailable stacked letters
damaru.rtags	ཿ	[178] Skt3	[7,72]							[0F88]	Used in Kalachakra texts over Sanskrit lettering. Also called utsama and gru.can.gyings.
half a.chen	ཀ	[179] Skt3	[7,73]							[0F01]	Terma mark used in a variety of terma, e.g., Chog.gyur.gling.pa's terms.
ITHI secret sign	ཱི	[180] Skt3	[7,74]								This sign shows that a text is secret and is not to be transmitted to more than one student for a set number of generations of transmission.
Terton's mark	ཱུ	[181] Skt3	[7,75]								The terton's mark of Dilgo Khyentse Rinpoche
Terton's mark	ྲྀ	[182] Skt3	[7,76]								The terton's mark of Ratna Lingpa
Terton's mark	ཷ	[183] Skt3	[7,77]								The terton's mark of Mingyur Rinpoche
Terton's mark	ཹ	[149] Skt4	[7,78]								The mark used by terton ??

FONT: Tibetan Machine WEB7

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
Terma mark		[184] Skt3	[7,79]								A special terma mark used (in triplicate) to represent ཨོཾ་ཨཱཿཧཱུྃ་
Terma mark		[185] Skt3	[7,80]								A special terma mark sometimes also used as an ornament
Terma mark		[186] Skt3	[7,81]								Bliss-swirl for placement above other letters. Used for instance to make Chokling Rinpoche's terma mark
Mark		[187] Skt3	[7,82]								A special mark used to mark consonants and other characters in tantric literature e.g.,
log yig gigu	ྀ	[222] Norm	[7,87]							[0F80]	
double 'greng.bu	ཻ	[234] Norm	[7,88]							[0F7B]	
double naro	ཽ	[237] Norm	[7,89]							[0F7D]	
large anushvara	ཾ	[238] Norm	[7,90]							[0F7E]	
small bindu		Norm	[7,91]								held from DOS encoded fonts position [240] in normal font. Not in Windows TibetanMachine encoding.
rnam.bcad	ཿ	[239] Norm	[7,92]							[0F7F]	Tibetan mark used to represent the Sanskrit visarga
plu.ta'o	྅	[177] Skt3	[7,93]							[0F85]	Sanskrit grammar sign called avagraha used to show the loss of visarga
bindu + datse	ྃ	[241] Norm	[7,94]							[0F83]	
bindu + datse + thigle	ྂ	[242] Norm	[7,95]							[0F82]	
bindu + gi.gu		[243] Norm	[7,96]								
bindu + short gi.gu		[244] Norm	[7,97]								use with ཙཚཛ་, etc
bindu + log.yig gi.gu		[245] Norm	[7,98]								
bindu + normal 'greng.bu		[246] Norm	[7,99]								
bindu + short 'greng.bu		[247] Norm	[7,100]								use with ཙཚཛ་, etc
bindu + double 'greng.bu		[248] Norm	[7,101]								
bindu + normal naro		[249] Norm	[7,102]								
bindu + raised naro		[250] Norm	[7,103]								use with ཙཚཛ་, etc

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Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
bindu + double naro	ཽཾ	[251] Norm	[7,104]								
srog.med	྄	[252] Norm	[7,105]							[0F84]	Tibetan mark used to represent the Sanskrit virama. Use for ཏ྄་ག྄ and so on
small achung, 1	ཱ	[201] Skt3	[7,106]								
small achung, 2	ཱ	[202] Skt3	[7,107]								
small achung, 3	ཱ	[203] Skt3	[7,108]								
small achung, 4	ཱ	[204] Skt3	[7,109]								
small achung, 5	ཱ	[205] Skt3	[7,110]								
small achung, 6	ཱ	[206] Skt3	[7,111]								
small achung, 7	ཱ	[207] Skt3	[7,112]								
small achung+zhabs.kyu, 1	ཱུ	[211] Skt3	[7,113]								
small achung+zhabs.kyu, 2	ཱུ	[212] Skt3	[7,114]								
small achung+zhabs.kyu, 3	ཱུ	[213] Skt3	[7,115]								
small achung+zhabs.kyu, 4	ཱུ	[214] Skt3	[7,116]								
small achung+zhabs.kyu, 5	ཱུ	[215] Skt3	[7,117]								
small achung+zhabs.kyu, 6	ཱུ	[216] Skt3	[7,118]								
small achung+zhabs.kyu, 7	ཱུ	[217] Skt3	[7,119]								
level 2 zhabs.kyu..................	ུ	[224] Skt3	[7,120]								
level 3 zhabs.kyu..................	ུ	[225] Skt3	[7,121]								
level 4 zhabs.kyu	ུ	[226] Skt3	[7,122]								
level 5 zhabs.kyu	ུ	[227] Skt3	[7,123]								
level 6 zhabs.kyu..................	ུ	[228] Skt3	[7,124]								
level 7 zhabs.kyu..................	ུ	[229] Skt3	[7,125]								
level 8 zhabs.kyu	ུ	[230] Skt3	[7,126]								

All remaining standard vowels are provided by using the vowels from TibetanMachineWeb font.

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Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes

A) Bhutanese (Dzongkha) script requirements

(All information on Bhutanese usage obtained and translated from the "Complete Handbook of Dzongkha Letter- Writing "published by the Dzongkha Development Commission of the Royal Government of Bhutan, Thimpu, 1995)

1) "Initial Ornaments "(mgo. rgyan) for use in opening a letter:

zhu.yig.mgo.rgyan		[33]	Skt4	[8,33]						[0F0A]	The "starting flourish for a letter to someone higher" is for writing letters to someone else who is a superior. These days it is used for writing letters to the king.
bka'.shog.mgo.rgyan		[34]	Skt4	[8,34]							The "starting flourish for giving a command (i. e., for talking to someone lower than oneself) is for writing letters to someone who is lower than oneself. A guru, king, high personage would use this when writing this to someone lower than himself.
mnyam.yig.mgo.rgyan		[35]	Skt4	[8,35]							The "starting flourish for a letter to an equal". The mark indicates that the letter is being written to someone who is equal but who is being seen as special and with great love and appreciation.
mnyam.yig.mgo.rgyan		[36]	Skt4	[8,36]						[0F09]	A second "starting flourish for a letter to an equal" which is only used when the writer is making his own notes for his personal use. Hence it is also called a tho.yig.mgo. rgyan and a 'ba'.gan.mgo.yig i.e., a "starting flourish for personal notes" and a "starting flourish for personal use only".
		[37]	Skt4	[8,37]							A name less sign which shows either the seven successive Buddhas (a succession of seven Buddhas ending with Shakyamuni Buddha who gave the teaching on Dependent Related Origination) or the seven successive trustees of the Buddha 's teaching (the seven arhats who

FONT: Tibetan Machine WEB8

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
											were entrusted with the lineage of the Buddha 's teaching following his parinirvana).
B) Tibetan (and Bhutanese) script requirements.											
1) "Initial Ornaments" (mgo.rgyan) for use in opening a letter:											
zla tse gcig	ཀ	[210]	Norm	[8,38]						[0F04]	use alone or with [8,38] but use [8,40] in preference to [8,38]+[8,39] for multiple zha tshes
half zla tse gcig	ཪ	[200]	Norm	[8,39]						[0F05]	use after [8,38] or [8,40] to make multiple zla tshes
zla tse gnyis	ཫ	[201]	Norm	[8,40]							use in preference to [8,38]+[8,39] Note the meanings of the use of these signs: ཫ། used as a beginning mark means either the three kayas of a Buddha or the three Jewels of Refuge in Buddhism; ཬ། used as a beginning mark means the dharma-kaya and rupakaya of a Buddha or, alternatively, the union of upaya and prajña; ཀ། used as a beginning mark means the svabhavikakaya of a buddha. These were originally thought of in this way because of wanting the writing that followed them to have a connection with these dharmic principles. Other than that, these have no particular meaning except that they are used as a way of starting whatever writing is being done.
yig.mgo.phur.shad	ཿ	[38]	Skt4	[8,41]						[0F06]	The meaning of the sign is that it is a sign of the un-changing essence of the (Buddha's) Dharmakaya. It is usually used to indicate the beginning of a new book within another book; it is not usually usedto indicate the beginning of chapters, etc., within a book.
Yig.mgo.tsheg.shad	ཀཿ	[39]	Skt4	[8,42]						[0F07]	

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Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes

2) Punctuation marks and ornaments.

These should be used with care. Mostly they are variants on the rin.chen.spungs.shad and sbrul.shad and are nearly always used mistakenly when a rin.chen.spungs.shad or sbrul.shad should have been used. For instance, it is common practice, especially amongst Bhutanese scholars, to use a shad with two tshegs above it instead of a rin.chen.spungs.shad when writing Tibetan text; this is a mistake and should be avoided.

shad + single tsheg	།	[40]	Skt4	[8,43]						[0F0F]	
shad (hooked) + single tsheg	།	[41]	Skt4	[8,44]							Used frequently in Drukpa Kagyu literature where a shad is needed grammatically but where there is direct continuation to the next text. E.g., in sādhanas ཨོཾ། followed by text for recitation requires the shad grammatically but breaks the continuity of recitation, therefore this device: ཨོཾ། is used to reduce the strength of the break introduced by the shad.
shad + double tsheg	།	[42]	Skt4	[8,46]							This is the common orientiation (cf., 43). Usually used mistakenly in place of a true rin.chen.spungs.shad
shad + single ornament	།	[43]	Skt4	[8,47]						[0F10]	Unusual form of [42]
sbrul.shad + single ornament	།	[44]	Skt4	[8,48]							
tsheg (breaking)	་	[45]	Skt3	[*,45]						[0F0B]	for non-breaking tsheg use TibetanMachineWeb [108]
sbrul.shad + double ornament	།	[46]	Skt4	[8,49]							
sbrul.shad variant form	།	[47]	Skt4	[8,50]							This form of sbrul.shad is missing the usual flourish between the top ornament and the underlying shad. It is a "quick way" of writing a sbrul.shad.
rgya.gram.shad	།	[48]	Skt4	[8,51]						[0F12]	A "crossed" ornamental type of shad.

3) Specialized numerals.

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Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes

Tibetan texts sometimes use superscripted numbers and less frequently subscripted numbers to enumerate a group of items. Subscripted numbers are seen but very rarely. Use these numerals here for superscripts and those following for subscripts—the numbers have been designed specifically for the purpose and should be used for such. Using them for this purpose rather than ordinary numbers will help improve data integrity, amongst other things.

a) Use the numerals here for superscripted numerals.

Superscript numeral 0	⁰	[50]	Skt4	[8,52]
Superscript numeral 1	¹	[51]	Skt4	[8,53]
Superscript numeral 2	²	[52]	Skt4	[8,54]
Superscript numeral 3	³	[53]	Skt4	[8,55]
Superscript numeral 4	⁴	[54]	Skt4	[8,56]
Superscript numeral 5	⁵	[55]	Skt4	[8,57]
Superscript numeral 6	⁶	[56]	Skt4	[8,58]
Superscript numeral 7	⁷	[57]	Skt4	[8,59]
Superscript numeral 8	⁸	[58]	Skt4	[8,60]
Superscript numeral 9	⁹	[59]	Skt4	[8,61]

b) Use the numerals here for subscripts.

Subscript numeral 0	₀	[60]	Skt4	[8,62]
Subscript numeral 1	₁	[61]	Skt4	[8,63]
Subscript numeral 2	₂	[62]	Skt4	[8,64]
Subscript numeral 3	₃	[63]	Skt4	[8,65]
Subscript numeral 4	₄	[64]	Skt4	[8,66]
Subscript numeral 5	₅	[65]	Skt4	[8,67]
Subscript numeral 6	₆	[66]	Skt4	[8,68]
Subscript numeral 7	₇	[67]	Skt4	[8,69]
Subscript numeral 8	₈	[68]	Skt4	[8,70]
Subscript numeral 9	₉	[69]	Skt4	[8,71]

c) Half-numerals.

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Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
Tibetan has a system of signs for writing half ordinals.											
1/2	ཨ	[70]	Skt4	[8,72]						[0F33]	
1 1/2	ཨི	[71]	Skt4	[8,73]						[0F2A]	
2 1/2	ཨུ	[72]	Skt4	[8,74]						[0F2B]	
3 1/2	ཨེ	[73]	Skt4	[8,75]						[0F2C]	
4 1/2	ཨོ	[74]	Skt4	[8,76]						[0F2D]	
5 1/2	ཨྃ	[75]	Skt4	[8,77]						[0F2E]	
6 1/2	ཨཿ	[76]	Skt4	[8,78]						[0F2F]	
7 1/2	ཨྂ	[77]	Skt4	[8,79]						[0F30]	
8 1/2	ཨ྄	[78]	Skt4	[8,80]						[0F31]	
9 1/2	ཨ྅	[79]	Skt4	[8,81]						[0F32]	
4) Musical Notation Marks											
cantillation sign,heavy beat	ཪ	[80]	Skt4	[8,82]						[0FC0]	Sign to strike the drum with a heavy beat
cantillation sign,light beat	ཫ	[81]	Skt4	[8,83]						[0FC1]	Sign to strike the drum with a light beat
cantillation sign,cang.te-u	ཬ	[82]	Skt4	[8,84]						[0FC2]	Sign to play the cang te-u or damaru
cantillation sign sbub.chal	ཀ	[83]	Skt4	[8,85]						[0FC3]	Sign to strike domed cymbals
zhi.rol.btags	ཱ	[84]	Skt4	[8,86]							"Peaceful Music Mark" indicates that cymbal roll-down of a certain type is to be played here.
5) Miscellaneous Marks											
These four marks are mainly used much like a caret in English, as placeholders for text that has been omitted and is being re-instated, though editors use them freely in a variety of ways.											
a) Editor's marks (zhu.dag.mkhan.rtags)											
sher.bu	ཱ	[90]	Skt4	[8,88]							
nyi.zla	ཱ	[91]	Skt4	[8,89]							
kuruka	ཱ	[92]	Skt4	[8,90]							
no name	ཱ	[93]	Skt4	[8,91]							

FONT: Tibetan Machine WEB8

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
b) Various											
dzud.rtags.me.long.can	ཿ	[94]	Skt4	[8,92]						[0F13]	
dbu.khang.g-yon	ཱ	[208]	Norm	[8,93]						[0F3C]	
dbu.khang.g-yas	ི	[209]	Norm	[8,94]						[0F3D]	
gug.rtags.gyon	ུ	[95]	Skt4	[8,95]						[0F3A]	Left hand hooked brace
gug.rtags.gyas	ཹ	[96]	Skt4	[8,96]						[0F3B]	Right hand hooked brace
yungs.drung (reversed)	卐	[97]	Skt4	[8,97]							The reverse swastika
yungs.drung (standard)	卍	[98]	Skt4	[8,98]							The normal swastika.

c) Annotation Markers (mchan.rtags).

One type of Tibetan commentary uses annotations in the body of the text itself as a way of commenting on the body of the text, just as we use footnotes or parenthetical notes are used in English. The annotations (called mchan) usually follow the text that they are commenting upon and amplify or clarify it. The annotations are usually preceded by a series of tshegs and occasionally succeeded by them. The mark made by the group of tshegs joins the annotation to the text that it is commenting on.

mchan rtags trailing	྅	[99]	Skt4	[8,99]
mchan rtags leading	྄	[100]	Skt4	[8,100]

d) Name Markers (mtshan.rtags) non-honorific and honorific:

mtshan.rtags	ཾ	[101]	Skt4	[8,101]	[0F37]	"Non-honorific Name marker". This is applied below the central letter of each word-part in a person's name.
mtshan.rtags zhes.sa	ཿ	[102]	Skt4	[8,102]	[0F37]	"Honorific Name marker". Honorific version of [101].
che.mgo	ཽ	[103]	Skt4	[8,103]	[0F35]	This mark is placed immediately before a person's name to indicate that the person is a very great person.
kuruka	×	[104]	Skt4	[8,104]	[0FBE]	An alternative form of the sogs.rtags in the normal font at [1,14]. Although × appears frequently in texts, educated Tibetans say that it is a little vulgar and that the ꣸ sign should be used in preference to it.
Kuruka.mig.ldan	※	[105]	Skt4	[8,105]	[0FBF]	"Kuruka with eyes". An ornamental device often used to separate sections of text.
ornament	ཿ	[106]	Skt4	[8,106]	[0F36]	Eyes only of the Kuruka with eyes at [105]

FONT: Tibetan Machine WEB8

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
yang.rtags	ཿ	[107] Skt4	[8,107]							[0F87]	This and [108] are borrowed from Sanskrit grammar. In Sanskrit, each syllable is accented either strongly (guru) or weakly (laghu). These signs are the signs used in Sanskrit to show the stress that is given to a particular syllable. The signs are placed so that they are centred above the syllable being marked. Yang.rtags is the guru sign and lci.rtags is the laghu sign. These are only used when illustrating Sanskrit works in Tibetan since this concept does not exist in Tibetan grammar and hence is not applicable.
lci.rtags	ཾ	[108] Skt4	[8,108]							[0F86]	see [107]
mchu.can	ྀ	[109] Skt4	[8,109]							[0F89]	
gru.can.rgyings	ཱ	[110] Skt4	[8,110]							[0F8A]	
gru.med.gyings	ཱི	[111] Skt4	[8,111]							[0F8B]	

6) Astrological Signs

a) The "pebble" astrological signs (white and black pebbles; rdel dkar and rdel nag).

single white pebble	°	[115] Skt4	[8,115]							[0F1A]	rdel dkar gcig used to indicate a degree of good fortune
single black pebble	ˣ	[116] Skt4	[8,116]							[0F1D]	rdel nag gcig used to indicate a degree of bad fortune
double white pebble	°°	[117] Skt4	[8,117]							[0F1B]	rdel dkar gnyis used to indicate a degree of good fortune
double black pebble	ˣˣ	[118] Skt4	[8,118]							[0F1E]	rdel dkar gnyis used to indicate a degree of good fortune
white and black pebble	°ˣ	[119] Skt4	[8,119]							[0F1F]	rdel dkar gcig nag gcig used to indicate a degree of good fortune
triple white pebble	⁰⁰	[120] Skt4	[8,120]							[0F1C]	rdel dkar gsum used to indicate greatest degree of good fortune
triple black pebble	ˣˣ	[121] Skt4	[8,121]							[0FCF]	rdel nag gsum used to indicate greatest degree of bad fortune

b) White and black pebbles in astrological top/bottom door configurations.

	⁰ˣ	[122] Skt4	[8,122]								

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Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
	ཿ	[123] Skt4	[8,123]								
	ཿ	[124] Skt4	[8,124]								
	ཿ	[125] Skt4	[8,125]								
	ཿ	[126] Skt4	[8,126]								
	ཿ	[128] Skt4	[9, 33]								
c) Other Astrological Signs											
logo sign chad.rtags		[129] Skt4	[9,34]							[0F15]	
logo sign lhag.rtags		[130] Skt4	[9,35]							[0F16]	
sgra.gcan.char.rtags		[131] Skt4	[9,36]							[0F17]	
khyud.pa		[132] Skt4	[9,37]							[0F18]	
sdong.tshugs	།	[133] Skt4	[9,38]							[0F19]	Small shad for inserting underneath other letters, numerals, and signs. In astrology it is placed underneath numerals.
yar.tshes.rtags	ཾ	[134] Skt4	[9,39]							[0F3E]	Sign indicating the waxing lunar period which is appended to the left of numerals
mar.tshes.rtags	ཿ	[135] Skt4	[9,40]							[0F3F]	Sign indicating the waning lunar period which is appended to the right of numerals
d) Terma related marks and signs:											
reversed dza letter	ཛ	[146] Skt4	[9,42]								
reversed hu	ཧ	[147] Skt4	[9,43]								Usually seen as reversed ཧཱུྃ.
Inverted ha	ཧ	[148] Skt4	[9,44]								Seen in tantric texts as inverted HAM letter.
tsheg (breaking)	་	[45] Skt3	[*,45]							[0F0B]	for non-breaking tsheg use TibetanMachineWeb [108]
numeral 0	๐	[190] Norm	[9,48]							[0F20]	
numeral 1	๑	[191] Norm	[9,49]							[0F21]	
numeral 2	๒	[192] Norm	[9,50]							[0F22]	
numeral 3	๓	[193] Norm	[9,51]							[0F23]	
numeral 4	๔	[194] Norm	[9,52]							[0F24]	

FONT: Tibetan Machine WEB9

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
numeral 5	༥	[195] Norm	[9,53]							[0F25]	
numeral 6	༦	[196] Norm	[9,54]							[0F26]	
numeral 7	༧	[197] Norm	[9,55]							[0F27]	
numeral 8	༨	[198] Norm	[9,56]							[0F28]	
numeral 9	༩	[199] Norm	[9,57]							[0F29]	

e) Other

fa	ཕ	[153] Skt4	[9,58]	[0,110]	[0,223]	[0,125]	[0,126]	[9,114]	[9,123]		For transliteration of the Chinese (or other) sounds fa
va	ཝ	[154] Skt4	[9,59]	[0,110]	[0,223]	[0,125]	[0,126]	[9,114]	[9,123]		For transliteration of the Chinese (or other) sounds va
Chinese letter	漢	[155] Skt4	[9,60]								The Chinese letter HAN, which literally means "Chinese".
Special combination	ཀྵ	[156] Skt4	[9,61]								For ultimate appearance in publishing texts, replace all normal naro, achung, gigu combinations with this letter.

8) Tibetan Symbols

dril.bu		[190] Skt4	[9,62]							[0FC4]	bell
rdo.rje		[191] Skt4	[9,63]							[0FC5]	vajra
padma.gdan		[192] Skt4	[9,64]							[0FC6]	lotus seat/base
rdo.rje.rgya.gram		[193] Skt4	[9,65]							[0FC7]	crossed vajras
phur.ba		[194] Skt4	[9,66]							[0FC8]	kilaya
nor.bu		[195] Skt4	[9,67]							[0FC9]	jewel
nor.bu.gnyis.khyil		[196] Skt4	[9,68]							[0FCA]	yin yang sign
nor.bu.gsum.khyil		[197] Skt4	[9,69]							[0FCB]	
nor.bu.bzhi.khyil		[198] Skt4	[9,70]							[0FCC]	

9) Half-height letters

The characters from [200] to [240] are a complete set of half-height Sanskrit-Tibetan characters for use in making stacked letters which might not otherwise be available. See the tables of characters given earlier for the glyphs.

ka	ཀ	[200] Skt4	[9,71]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F90]	

FONT: Tibetan Machine WEB9

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
kha	ཁ	[201] Skt4	[9,72]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F91]	
ga	ག	[202] Skt4	[9,73]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F92]	
gha	གྷ	[203] Skt4	[9,74]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F93]	
nga	ང	[204] Skt4	[9,75]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F94]	
ca	ཅ	[205] Skt4	[9,76]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F95]	
cha	ཆ	[206] Skt4	[9,77]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F96]	
ja	ཇ	[207] Skt4	[9,78]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F97]	
nya	ཉ	[208] Skt4	[9,79]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F99]	
ta log yig	ཊ	[209] Skt4	[9,80]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F9A]	
tha log yig	ཋ	[210] Skt4	[9,81]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F9B]	
da log yig	ཌ	[211] Skt4	[9,82]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F9C]	
dha log yig	ཌྷ	[212] Skt4	[9,83]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F9D]	
na log yig	ཎ	[213] Skt4	[9,84]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F9E]	
ta	ཏ	[214] Skt4	[9,85]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0F9F]	
tha	ཐ	[215] Skt4	[9,86]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FA0]	
da	ད	[216] Skt4	[9,87]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FA1]	
dha	དྷ	[217] Skt4	[9,88]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FA2]	
na	ན	[218] Skt4	[9,89]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FA3]	
pa	པ	[219] Skt4	[9,90]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FA4]	
pha	ཕ	[220] Skt4	[9,91]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FA5]	
ba	བ	[221] Skt4	[9,92]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FA6]	
bha	བྷ	[222] Skt4	[9,93]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FA7]	
ma	མ	[223] Skt4	[9,94]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FA8]	
tsa	ཙ	[224] Skt4	[9,95]	[0,110]	n/a	[0,125]	[0,126]	n/a	n/a	[0FA9]	
tsha	ཚ	[225] Skt4	[9,96]	[0,110]	n/a	[0,125]	[0,126]	n/a	n/a	[0FAA]	
dza	ཛ	[226] Skt4	[9,97]	[0,110]	n/a	[0,125]	[0,126]	n/a	n/a	[0FAB]	
dzha	ཛྷ	[227] Skt4	[9,98]	[0,110]	n/a	[0,125]	[0,126]	n/a	n/a	[0FAC]	
wa	ཝ	[228] Skt4	[9,99]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FBA]	
zha	ཞ	[229] Skt4	[9,100]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FAE]	

FONT: Tibetan Machine WEB9

Description	Tibetan	Ori Dec. / Font	Web	Gi.gu	Zhabs.kyu	'Greng.bu	Na.ro	A.chung	A.chung+ Zhabs.kyu	Unicode	Notes
za		[230] Skt4	[9,101]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FAF]	
a.chung		[231] Skt4	[9,102]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FB0]	
ya		[232] Skt4	[9,103]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FBB]	
ra		[233] Skt4	[9,104]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FBC]	
la		[234] Skt4	[9,105]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FB3]	
sha		[235] Skt4	[9,106]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FB4]	
sha log yig		[236] Skt4	[9,107]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FB5]	
sa		[237] Skt4	[9,108]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FB6]	
ha		[238] Skt4	[9,109]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FB6]	
ahchen		[239] Skt4	[9,110]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FB8]	
ksha (ka log yig sha)		[240] Skt4	[9,111]	[0,109]	n/a	[0,123]	[0,125]	n/a	n/a	[0FB9]	
small a chung, level 1		[161] Norm	[9,114]								for this achung with a zhabs.kyu use [9,123]
small a chung, level 2		[162] Norm	[9,115]								for this achung with a zhabs.kyu use [9,124]
small a chung, level 3		[163] Norm	[9,116]								for this achung with a zhabs.kyu use [9,125]
small a chung, level 4		[164] Norm	[9,117]								for this achung with a zhabs.kyu use [9,126]
small a chung, level 1		[211] Norm	[9,118]								for this achung with a zhabs.kyu use [9,120]
small a chung, level 1		[212] Norm	[9,119]								for this achung with a zhabs.kyu use [9,121]
small achung+zhabs.kyu 1		[213] Norm	[9,120]								same height as achung [9,118]
small achung+zhabs.kyu 1		[214] Norm	[9,121]								same height as achung [9,119]
small achung+zhabs.kyu 1		[215] Norm	[9,122]								only for use with [1,94] to make
small achung+zhabs.kyu 1		[216] Norm	[9,123]								same height as achung [9,114]
small achung+zhabs.kyu 2		[217] Norm	[9,124]								same height as achung [9,115]
small achung+zhabs.kyu 3		[218] Norm	[9,125]								same height as achung [9,116]
small achung+zhabs.kyu 4		[219] Norm	[9,126]								same height as achung [9,117]

All remaining vowels are provided by using the vowels from TibetanMachineWeb or TibetanMachineWeb7 fonts.

Appendix IV. Contents of the Distribution Diskettes

WINDOWS:

IN \CUSTOM TEMPLATE\Word 2000:

TCC Tibetan! 2000.dot	Custom template file with Tibetan Toolbar and Keyboards for Word for Windows 2000 in TCC keyboard layout 1.

IN \CUSTOM TEMPLATE\Word 97:

TCC Tibetan! 97.dot	Custom template file with Tibetan Toolbar and Keyboards for Word for Windows '97 in TCC keyboard layout 1

IN \DOCUMENTATION:

Gyalwang Je Pecha on A4 Size Paper.pdf	Sample pecha file in Adobe Acrobat PDF format.
Numbers.pdf	File with full listing of all written Tibetan numbers—self-documenting—in Adobe Acrobat PDF format
Numbers.wpd	File with full listing of all written Tibetan numbers—self-documenting—in WordPerfect format
Ratna Linga Pecha on Letter Size Paper.pdf	Sample pecha file in Adobe Acrobat PDF format.

IN \MANUAL

Tibetan! 5.1 for Word Manual.pdf	The complete manual for both Windows and Macintosh in Adobe Acrobat PDF format.
TCC Tibetan Typefaces Samples.pdf	Complete information with samples of Tibetan Computer Company typefaces in PDF format.
Wordprocessor table.pdf	Tabulated comparison of all Tibetan Computer Company wordprocessing products in PDF format.

MACINTOSH:

IN \CUSTOM TEMPLATE\Word 2001:

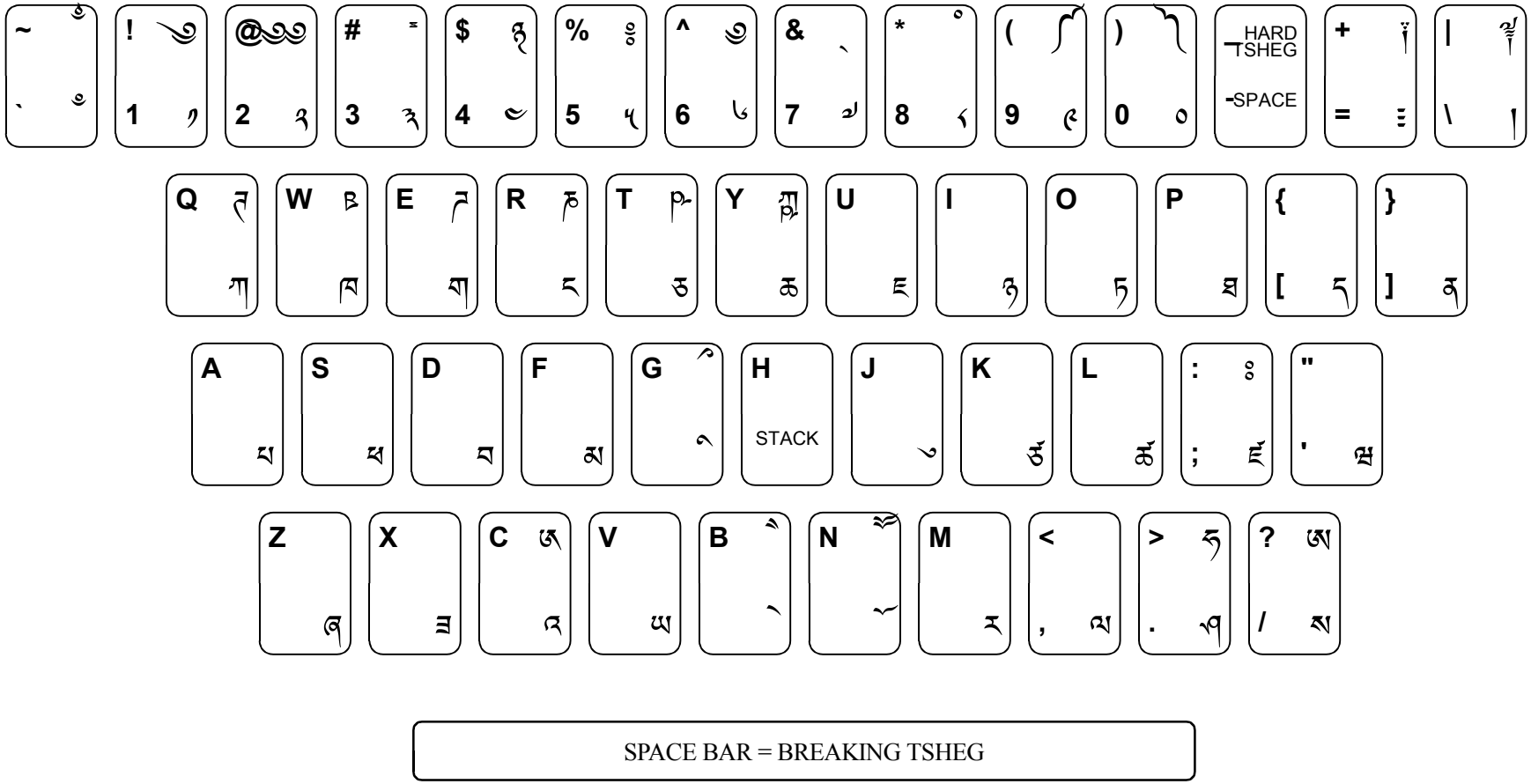
TCC! Tibetan Mac	Custom template file with Tibetan Toolbar and Keyboards for Word for Macintosh 2001 in TCC keyboard layout 1

IN \DOCUMENTATION:

Gyalwang Je Pecha on A4 Size Paper.pdf	Sample pecha file in Adobe Acrobat PDF format.
Numbers.pdf	File with full listing of all written Tibetan numbers—self-documenting—in Adobe Acrobat PDF format
Numbers.wpd	File with full listing of all written Tibetan numbers—self-documenting—in WordPerfect format
Ratna Linga Pecha on Letter Size Paper.pdf	Sample pecha file in Adobe Acrobat PDF format.

IN SUBDIRECTORY \MANUAL

Tibetan! 5.1 for Word Manual.pdf	The complete manual for both Windows and Macintosh in Adobe Acrobat PDF format.
TCC Tibetan Typefaces Samples.pdf	Complete information with samples of Tibetan Computer Company typefaces in PDF format.
Wordprocessor table.pdf	Tabulated comparison of all Tibetan Computer Company wordprocessing products in PDF format.



THE TIBETAN #1 KEYBOARD

This is the Tibetan #1 keyboard layout on a United States keyboard. If a Tibetan letter is shown at the bottom of a box it is obtained by pressing the key alone; if shown at the top of a box it is obtained by pressing SHIFT and the key together. For instance, ཀ is obtained by pressing q; ཤ is obtained by pressing Q. On keys where no Tibetan letter is shown, none is assigned. Characters not on the keyboard can be found in the maps and lists of Appendix II and entered using the **Insert, Symbol** feature of Word.