ग्रन्थिलिपि

# e-Grantamil Package

© Elmar Kniprath 2005-2014

## Grantha Manual

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## Note

This Manual deals with the special requirements for installation and use of the font e-Grantamil 7.

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# Contents

# Introduction

Grantha is an old south Indian script which was (and sometimes still is) used to write Sanskrit in southern India. There are not only manuscripts but also a great number of printed books in this script, which threaten to fall into decay. So, a font to preserve these texts was needed.

Therefore a new font **e-Grantha OT** had been designed for the software package INDOLIPI. This was the first Grantha Open Type font in the world! Unfortunately there was not yet a Unicode encoding for Grantha, which normally would be a prerequisite for making an Open Type font. So the font had to be given a Bengali encoding to yield a working OT font. At that time Bengali was the only Indic script for which the features needed for an Open Type Grantha font were available in Windows XP and MS Word 2003. An attempt to use Malayalam encoding failed due to the absence of the Reph feature.

With **Windows 7** (maybe already with Vista) the Reph feature became available for Malayalam. This made a Malayalam encoding for Grantha possible resulting in the new font  **e-Grantamil 7**. It was designed as a mixed font for Grantha and Tamil and thus may be used to write Sanskrit, Tamil and Manipravala texts. Moreover a lot of old Tamil signs for fractions and abbreviations were added. This new font must be run under Windows 7 or later versions (maybe also Vista, but **not XP**). The keyboard layout to be used with e-Grantamil 7 is either e-Grantha MS DE/EN or an INSCRIPT Malayalam keyboard.

**Grantha and Unicode:** Meanwhile a proposal to encode the Grantha script in Unicode has been made. It has been accepted in 2014. The Unicode range is U+11300...U+1137F. This range is not yet supported by Microsoft's Uniscribe. Therefore the Malayalam encoding has still to be used for the OT font e-Grantamil 7.

# 1. Contents of the Package

This package contains the following folders and files:

- Grantha Manual.pdf, including keyboard tables (this file)

- e-Grantamil 7.ttf: OT font for Grantha and Tamil (classical spelling), to be used under **Windows 7** (and later versions). It has **Malayalam encoding** for Grantha.

- Folder "Keyboards with Malayalam Encoding" with sub folders "English Layout" and "German Layout", each one containing installation files and setup.exe files. These keyboard layouts can be run only under Windows 7 (and later versions).

- Folder "Tamil Keyboards" for typing Tamil texts with e-Grantamil 7.ttf or any other Unicode based Tamil font.

# 2. Installation of Grantha fonts and keyboards

> **Make sure that "complex scripts" are enabled in Windows**

Due to the Malayalam encoding of the font **e-Grantamil 7.ttf** you may use either an INSCRIPT Malayalam keyboard or you must install an **e-Grantha MS** keyboard as follows:

1. Copy the whole Grantha Package to your PC and unzip it.

2. Install the font "e-Grantamil 7.ttf" under Windows.

3. To install the keyboards doubleclick on "setup.exe" in the folder "English Layout" or "German Layout". The respective keyboard will be installed automatically.

4. You should now see a language indicator (letters "MY" or "മല" for Malayalam) in your System Tray (located at bottom right hand of the desktop by default). If you have additional keyboards installed under Malayalam there will be also a keyboard symbol allowing you to choose or change the keyboard layouts. If only the e-Grantha MS keyboard is installed there will be no keyboard symbol, and clicking on "MY" will automatically switch to the e-Grantha MS keyboard.

The installed keyboard(s) and font are now ready for use. For the keystrokes to be used with e-Grantha MS DE/EN please refer to the Keyboard Tables at the end of this manual!

**Important!** - If an **older version** of the keyboard layout is installed on your PC, you must remove it **before** installing the new one! This is done by the following steps:

1. Go to Control Panel.
2. Click on Date, Time, Language, and Regional Options.
3. Click on Regional and Language Options.
4. Click on the Languages tab.
5. Under "Text services and input languages," click on "Details...".
6. Under Installed Services you will see a listing of your input languages and keyboards. Select the keyboard to be removed and click on "Remove".
7. Click OK to exit. On the Text Services and Input Languages page, click OK again to close Regional Options.
8. In Control Panel go to the list of installed software. Find the keyboard to be removed (e.g. "e-Grantha EN", "e-Grantha DE" or "e-Grantha IN" etc.) and remove it. Now the old keyboard is totally uninstalled and the new version can be installed as described above.

For users with **German** versions of Windows 7:

1. Start > Systemsteuerung > Region und Sprache
2. Tastaturen und Sprachen: Auf "Tastaturen ändern ..." klicken.
3. Im Fenster "Textdienste und Eingabesprachen" "Allgemein" wählen.
4. Unter "Installierte Dienste" wird eine Auflistung der installierten Sprachen und Tastaturen gezeigt. Markieren Sie die zu entfernende Tastatur und klicken Sie auf "Entfernen".
5. Mit "OK" bestätigen.
6. Auch "Region und Sprache" mit "OK" bestätigen.
7. Systemsteuerung > Programme und Funktionen
8. In der Liste der installierten Software die zu löschende Tastatur suchen (z.B. "e-Grantha DE") und anklicken.
9. Auf "Deinstallieren" klicken. Jetzt ist die alte Tastatur vollständig gelöscht und die neue kann wie oben beschrieben installiert werden.

# 3. Selection and Use of Keyboard Layouts

> ➢ **Please refer to the keyboard layout tables at the end of this manual!**

The font e-Grantamil 7 has Malayalam encoding of Grantha script and must be used with Windows 7 (and later versions). The keyboard layout to be used for Sanskrit is e-Grantha MS EN/DE.[1] The use of this layout is confined to Sanskrit.

To type **Tamil script** with the font e-Grantamil 7 a Tamil keyboard has to be applied, e.g. e-Tamil DE contained in this package.

# 4. Typing Grantha texts

## 4.1 Consonant clusters

In Grantha consonant clusters may be rendered in different ways:

- by formation of a ligature,
- by "stacking" of  the consonants: the normal form of the *first* consonant with subjoined (usually smaller) forms of the others,
- by individual vowelless consonants (= consonant + virama or virama ligatures) followed by the normal form of the *last* consonant.
- RA as first component of a cluster is converted to Repha � and shifted to the cluster end (between RA-vattu and YA-phalaa).
- RA as last or last but one component is converted to RA-vattu following the stacked consonants.
- YA as last component is converted to YA-phalaa ꜱ , following all other consonants (including Repha).

Usually the prefered rendering is a ligature. This is also the default in e-Grantamil 7 as far as ligatures are in common use today. Also default is the formation of Repha, RA-vattu and YA-phalaa.

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[1] "M" means "Malayalam Encoding"; "S" means "Sanskrit only". "EN" and "DE" refer to base keyboard "English" or "German".

As the number of consonant clusters in Sanskrit is much higher than the number of Grantha ligature glyphs, stacking is the most common rendering. Unlike modern Indian scripts a stack may comprise up to 3 component glyphs. Each layer may comprise either a single consonant or a ligature. That means that the number of consonants contained in a stack may be higher than 3.

Examples (INDOLIPI default rendering; with font e-Grantamil 7):

| ꯗ | ꯗ | ꯗ | ꯗ | ꯗ | ꯗ | ꯗ |
|---|---|---|---|---|---|---|
| kta | kṣa | ñcha | nta | nda | ṣṭa | hma |

| ꯗ | ꯗ | ꯗ | ꯗ | ꯗ | ꯗ | ꯗ |
|---|---|---|---|---|---|---|
| ksa | kma | ksna | ṅkṣa | ṅkṣva | ṣṭva | ndv |

| ꯗ | ꯗ | ꯗ | ꯗ | ꯗ | ꯗ | ꯗ |
|---|---|---|---|---|---|---|
| rkta | rksa | rksva | pra | ntsra | ntsya | rdrya |

## 4.2 Stack overflow (use of Zero Width Non Joiner)

Except RA-vattu, Repha and YA-phalaa no consonant glyph can stand on the right hand of a stack. If the number of stack compounds exceeds 3 the first consonant or ligature glyph must be moved to the left of the stack and be displayed as its virama or virama ligature form. This can not (yet) happen automatically but must be effected by the user by inserting a ZERO WIDTH NON JOINER (ZWNJ) after the virama:

ௐ + ் + ZWNJ + வ + ் + ஷ + ் + வ        => ṅkhṣva

ௐ + ் + ZWNJ + வ + ் + ஷ + ் + வ + ி        => ṅkhṣvi

ௐ + ் + ZWNJ + வ + ் + ஷ + ் + வ + ெ        => ṅkhṣve

If in addition the cluster contains a Repha this too has to be positioned on the left of the stack to yield the sequence:

(first) consonant in its full form + Repha + VIRAMA + ZWNJ

Examples:

ṅgdhva        <        NGA + VIRAMA + ZWNJ + GA ...

rkstrya        <        RA + VIRAMA + KA + VIRAMA + ZWNJ + SA ...

This insertion of the ZWNJ may also serve to limit the stack hight to 2 instead of 3 deliberately (e.g. to improve legibility):

| ꯗ | ꯗ | ꯗ | ꯗ |
|---|---|---|---|
| ṅkṣva | ṅkṣve | ṅkṣva | ṅkṣve |

➢ **It must be noted that at least some Microsoft applications can not handle writing syllables with more than 5 consonants in Indic scripts correctly. To cope with this problem the ZWNJ must be used in analogy to the dealing with stack overflow** (see example "rkstrya" above!).

## 4.3 Modifications of default rendering (use of Zero Width Joiner)

## 4.3.1 General

A user may wish to deviate from the default rendering of consonants. An important tool for changing the default behaviour of the font while writing is the ZERO WIDTH JOINER (ZWJ). This may concern the use of ligatures in certain positions of consonant clusters, but also the rendering of vowelless consonants with overt virama i.o. virama ligatures or virama ligatures i.o. overt virama and eventually the avoiding of Repha formation.

Examples:

|  | **default** | **with ZWJ** |
|---|---|---|
| ktva | கூ + ்‌ + த + ்‌ + வ > கக்கூ | கூ + ்‌ + த + ZWJ + ்‌ + வ > க்க்கூ |
|  |  | கூ + ZWJ + ்‌ + த + ZWJ + வ > க்க்கூ |
| ṣṭva | ஷ + ்‌ + ட + ்‌ + வ > ஷ்ட்வ | ஷ + ZWJ + ்‌ + ட + ்‌ + வ > ஷ்ட்வ |
| rka | ர + ்‌ + கூ > கூ | ர + ZWJ + ்‌ + கூ > ர்கூ |
| rya | ர + ்‌ + ய > யர | ர + ZWJ + ்‌ + ய > ர்ய |
| t | த + ்‌ > த் | த + ZWJ + ்‌ > தீ |
| ṣ | ஷ + ்‌ > ஷ் | ஷ + ZWJ + ்‌ > ஷ் |

Vowelless consonants: By default only ட், க், ந், ஞ are rendered as virama ligatures. To obtain their overt virama forms ZWJ has to be inserted before typing virama. For the other consonants the overt virama forms are default.

The following additional virama ligatures may be obtained by inserting ZWJ **before** virama:

க் ஹ் ஜ் ச் ஜ் ஞ் ட் உ் ண் ழ் ப் ன் ய் ர் வ் ச் ஷ் ஷ் ஹ்

Please bear in mind that normally the sequence "ZWJ + virama" when followed by a consonant yields a subjoined consonant. To ensure the formation of a virama ligature under such conditions virama must be followed by a ZWNJ!

Examples:

| **default** | **with ZWJ** | **with (additional) ZWNJ** |
|---|---|---|
| ஸ + ்‌ > ஸ் | ஸ + ZWJ + ்‌ > ஸ் |  |
| ஸ + ்‌ + த > ஸ்த | ஸ + ZWJ + ்‌ + த > ஸ்த | ஸ + ZWJ + ்‌ + ZWNJ + த > ஸ்த |
| உ + ்‌ > உ் | உ + ZWJ + ்‌ > உ் |  |
| உ + ்‌ + வ > உ் | உ + ZWJ + ்‌ + வ > உ் | உ + ZWJ + ்‌ + ZWNJ + வ > உ்வ |
|  |  | உ + ்‌ + ZWNJ + வ > உ்வ |

### 4.3.2 Nasalized sonorants

The rendering of clusters with nasalized YA, LA and VA occuring in Vedic requires a special procedure:

ய/ல/வ + ஃ + ZWJ + ய/ல/ய (+ ி/ீ)     => ய்ॏ / ல்ॏ / வ்ॏ / யॏி / லॏி / வॏி / யॏீ / லॏீ / வॏீ

ய + ஃ + ZWJ + ய + ஃ + வ (+ ி/ீ)     => ய்ॏॏ / யॏॏி / யॏॏீ

வ + ஃ + ZWJ + வ + ஃ + ல (+ ி/ீ)     => வ்ॏॏ / வॏॏி / வॏॏீ

(It would be desirable to effect this by typing "LA + anunasika (+ Virama) + LA etc." but until now rendering machines for Indic scripts are unable to form ligatures accross the boundaries of writing syllables.)

## 5. Typing Tamil texts

With the font e-Grantamil 7 Tamil script with classical spelling can be typed using any Tamil keyboard, e.g. e-Tamil DE/EN (contained in this package).

## 6. Manipravala

Manipravala is a mixed language. It could be described as Tamil mixed up with smaller or larger portions of Sanskrit. In order to make typing of such texts easier, the font e-Grantamil 7 has been designed to be used both for pure Grantha and Tamil (classical spelling) as well as for Manipravala texts. You don't have to change the font, but just the keyboard layout from Grantha (i.e. "Malayalam") to Tamil and back, if you need even in the middle of a word, as the following text sample shows:

கொ൪ல பரிகரித்தற்காகப் புலால் குற்றமென்று தவிர்க்கை, நின்குகமத்து

கூ௵உ൩ஸம௪ஜிக்கவென்று சொன்னமயில் ஆ௲ம விரோதமா யகுசல

மா൫மே யெனினுங் குசலமே யென்று நின்குற் கைக்கொள்ளப்படும; என்௨ன?

## 7. Vedic svaras

e-Grantamil 7 allows for the use of svara markers for Vedic Sanskrit. For Rig or Yajur Vedic on the one hand and Sama Vedic on the other different methods are to be used.

### 7.1 Rig and Yajur Vedic

The svara markers are typed directly. They appear below or on top of the syllable end. A better positioning is not yet possible.

### 7.2 Sama Vedic

For the addition of Sama Vedic svaras "ruby annotation" must be used. This method is a feature usually used with far eastern scripts (e.g. Japanese). It ensures perfect positioning of the markers.

To use this method far eastern scripts must be enabled on your computer and in MS Word support for Japanese must be activated. Please refer to the help function of MS Word for details of use!

Roughly the procedure is as follows:

1. Type a syllable, e.g. மெதா

2. Select it

3. **In Word 2003**: Open the FORMAT menu and its submenu ASIAN LAYOUT.
   **In Word 2007**: Click on the "Phonetic Guide" (German: "Phonetische Leitzeichen") button in the "Home" (German: "Start") menue.

4. The phonetic guide opens and you can enter the marks in the ruby text line, e.g. the digit உ.
   Don't be shocked to see the a Malayalam digit ൧ instead of Grantha. This results from the Malayalam encoding of e-Grantamil 7. But in the preview field you will see the exact Grantha rendering. You may change the size and position of the superscripts.

5. Click on OK to return to your text and see the syllable with the mark on top:

<div align="center">

உ
மெதா

</div>

e-Grantamil 7 contains all Sama Vedic swara marks in normal size, i.e. besides the Grantha digits and letters it has normal size mark signs in their due Unicode encoding:

<div align="center">

∧ (U+ 028C), ⊔ (U+0BAA = Tamil PA), * (U+204E), ─ (U+2012)

</div>

Text sample:

உ       ப       ங கூஉ௦    கஉஙக      உ௦ங க உ ஙகஉ
௧ஃ ॥ ஹஇஹஜஹஂ ஶஂ - ததூவிதூவடுநெண்ஂஹமெதாஜெவஹஸூயஈஉஹி

       ங க உ        ங கஉ
- யியொயொஹஃஹுர்வொஉயாஃ॥

# 8. Old Tamil Fractions and Abbreviations

e-Grantamil 7 comprises a great number of old Tamil fraction and abbreviation signs (together with some variants). Out of these only the following ones are already contained in Tamil Unicode:

<div align="center">

ட மீ ளுஂ யு ஈ டை ரூ நீ

</div>

They can be typed with an e-Tamil EN/DE keyboard (see 11.1 and 11.2 below). The rest must be inserted as "Symbols".

# 9. Transliteration Grantha < > Malayalam

Sanskrit text may be easily transliterated from Grantamil 7 to Malayalam and back by selecting the text and changing the font.

# 10. Keyboard Tables for Malayalam encoding

## 10.1 e-Grantha MS EN
**Keyboard layout for Sanskrit with font e-Grantamil 7 (Malayalam encoding)**
**Layout for English keyboards (USA, International)**

| Key | ` | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | - | = |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | ஔ | க | உ | ங | ச | ரு | சூ | எ | அ | கூ | O | - | = |
| Shift | ஏ | ! | @ | # | § | % | ^ | & | * | ( | ) | _ | + |
| AltGr | ஏி | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | உ | |
| ShAltGr | ஔ | ² | ³ | ⁴ | ய | ஈ | சூ | { | [ | ] | } | | |
| ShCtrl | | ZWJ | ZWNJ | ZWSP | | | | | | | | | |

| Key | q | w | e | r | t | y | u | i | o | p | [ | ] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | ட | உ | ொ | ஈ | த | ய | ௐ | ி | ொ | ப | ௗ | " |
| Shift | O | உ | ஹ | | ௩ | ௪ | உ | ஐ | ஒ | | ஜ | \ |
| AltGr | | | | | | | ௐ | ீ | | | ஜ | ° |
| ShAltGr | | | | | | | உள | ஈ | | | ஜ | ~ |

| Key | a | s | d | f | g | h | j | k | l | ; | ' | \| |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | (a)[1] | ஸ | உ | | ம | ஹ | ஜ | கூ | ஐ | ளை | ொ | ீ |
| Shift | சூ | ஷ | ய | | வ | ஃ | ஙு | வ | எ | ளை | ன | ' |
| AltGr | ா | ா | | | | ௐ | | | | | | ௌ |
| ShAltGr | ௗ | § | | | | | | | | | | ௌ[2] |

| Key | < | z | x[3] | c | v | b | n | m | , | . | / |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | < | உ | ∧ | அ | வ | ப | ந | உ | , | ॥ | / |
| Shift | > | உ | ௐ | ௐ | ஐ | ஐ | ண | ௐ | ; | : | ? |
| AltGr | \| | | * | | | | | ̆ | | . | |
| ShAltGr | | | — | | | | | | | ॥ | |

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1 Inherent vowel (if desired)
2 Pluti
3 Additional Sama Vedic svaras for ruby annotation

# 10.2 e-Grantha MS DE
**Keyboard layout for Sanskrit with font e-Grantamil 7 (Malayalam encoding)**
**Layout for German keyboards**

| Key | ^ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | ß | ´ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | Λ | க | உ | ங | ச | ரு | சூ | எ | அ | கூ | ௦ | ௗ | எள |
| Shift | ° | ! | " | § | $ | % | & | / | ( | ) | = | ? | எள |
| AltGr | \ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | உ | எஜி |
| ShAltGr | # | | ² | ³ | ⁴ | ய | ௗ | { | [ | ] | } | கூ | எரு |
| ShCtrl | | ZWJ | ZWNJ | ZWSP | | | | | | | | | |

| Key | q | w | e | r | t | z | u | i | o | p | ü | + |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | ட | உ | ொெ | ௐ | த | ௮ | ொௗ | ி | ொ | ப | ொு | + |
| Shift | ௦ | ஜ | ொன | யௗ | ௫ | உ | ஐ | ஒ | | ப | ஜ | * |
| AltGr | @ | | | | | ொஇ | ீ | | | | ஜ | ~ |
| ShAltGr | | | | | | உள | ஈ | | | | ஜ3 | |

| Key | a | s | d | f | g | h | j | k | l | ö | ä | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | (a)[1] | ஸ | உ | ் | ம | ஹ | ஜ | கூ | ஐ | ொள | ொெ | ீ |
| Shift | சூ | ஷ | ய | ˘ | வ | ொஃ | ௫ய | வ | இ | ொள | ொன | ' |
| AltGr | ொௗ | | | | | ✗ | | | | | | ஜ |
| ShAltGr | சூ | | | | | | | | | | | ஜ[2] |

| Key | < | y | x[3] | c | v | b | n | m | , | . | - | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | < | ய | Λ | அ | வ | ப | ங | உ | , | ௐ | - | |
| Shift | > | ஞ | ப | அறு | ஐ | ஐ | ண | ொ | ; | : | _ | |
| AltGr | \| | | * | | | | | ˘ | | . | | |
| ShAltGr | | | — | | | | | | | ‖ | | |

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[1] Inherent vowel (if desired)
[2] Pluti
[3] Additional Sama Vedic svaras for ruby annotation

# 11. Keyboard Tables for Tamil

## 11.1 e-Tamil EN
**Layout for English keyboards (USA, International)**

| Key | ` | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | - | = |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | * | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | - | = |
| Shift | | ! | @ | # | $ | % | ^ | & | * | ( | ) | _ | + |
| AltGr | | க | உ | ங | சு | ரு | சூ | எ | அ | கூ | ௦ | ஓ | |
| ShAGr | | ² | ³ | ⁴ | ய | ாா | கூ | { | [ | ] | } | ₹ | |
| ShCtrl | | ZWJ | ZWNJ | | | | | | | | | | |

| Key | q | w | e | r | t | y | u | i | o | | p | [ | ] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | ட | ட³ | ெர | தா | ய | ௗ | ிி | ொ | | ப | நீ | " |
| Shift | ட² | ட⁴ | எ | ற | த² | ரு | உ | இ | ஒ | | ப² | யூ | \ |
| AltGr | | ே | | | | ஏி ீ | ோ | | ஙூ | ° | |
| ShAltGr | | ஏ | | | | உள ஈ | ஓ | | | ~ | |

| Key | a | s | d | f | | g | h | j | k | l | ; | | ' | \ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | (a) | ஸ | த³ | டெ | | க³ | ஹ | ஜ | க | ல | ெள | ை | ்(Pulli) | |
| Shift | அ | ஷ | த⁴ | ணீ | | க⁴ | ஃ | ச⁴ | க² | ள | ஔ | | ஐ | ' |
| AltGr | ொ | ௹ | | | | | | | | | | | | |
| ShAltGr | ஆ | § | | | | | | | | | | | | |

| Key | \ | z | x | c | v | b | n | m | , | . | / |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | < | ன | டெ | ச | வ | ப³ | ந | ம | , | . | / |
| Shift | > | ழ | மீ | ச² | ங | ப⁴ | ண | | ; | : | ? |
| AltGr | | | | ஹூ | | | | | | | |
| ShAltGr | | | | | | | | | | | |

## 11.2 e-Tamil DE
**Layout for German keyboards**

| Key | ^ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | ß | ´ |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | ^ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | � | நீ |
| Shift | ° | ! | " | § | $ | % | & | / | ( | ) | = | ? | யு |
| AltGr | \ | க | உ | ங | சு | ரு | சூ | எ | அ | கூ | ௦ | ஓ | ஏவ |
| ShAGr | # |  | ² | ³ | ⁴ | ய | ாா | { | [ | ] | } | சூ | ₹ |
| ShCtrl |  | ZWJ | ZWNJ |  |  |  |  |  |  |  |  |  |  |

| Key | q | w | e | r | t | z | u | i | o | p | ü | + |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | ட | ட³ | ெ | ர | த | ன | ௗ | ி | ொ | ப | * | + |
| Shift | ட² | ட⁴ | எ | ற | த² | ழ | உ | இ | ஒ | ப² |  | * |
| AltGr | @ |  | ே |  |  | ௙ீ | ே |  | ோ |  | ~ |  |
| ShAltGr |  | ஏ |  |  |  | ஊா ஈ |  | ஓ |  |  |  |  |

| Key | a | s | d | f | g | h | j | k | l | ö | ä | # |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|
| Sign | (a) | ஸ | த³ | ஷி | க³ | ஹ | ஜ | க | ல | ொள | ை | ் (Pulli) |
| Shift | அ | ஷ | த⁴ | நீ | க⁴ | ஃ | ச⁴ | க² | ள | ஔள | ஜ | ' |
| AltGr | ா |  |  |  |  |  |  |  |  |  |  |  |
| ShAltGr | ஆ |  |  |  |  |  |  |  |  |  |  |  |

| Key | < | y | x | c | v | b | n | m | , | . | - |
|-----|---|---|---|---|---|---|---|---|---|---|---|
| Sign | < | ய | உ | ச | வ | ப³ | ந | ம | , | . | - |
| Shift | > | ரு | மீ | ச² | ங | ப⁴ | ண | ் | ; | : | _ |
| AltGr | \| | ஹூ |  |  |  |  |  |  |  |  |  |
| ShAltGr |  |  |  |  |  |  |  |  |  |  |  |