**KEYBOARD INPUT**

The text encoded as specified in this standard may serve as an input to a computer system in many ways, e.g. text recognition, 10-key keypad, etc. However, most of the text is input using standard computer keyboards (e.g. 101-key). This section provides guidelines on how the Tamil text may be entered using such a keyboard.

Each Tamil character, (such as represented by a sequence of code points) is input by a sequence of keys on the keyboard. Thus, there is a many-to-many relation between keys and code points.

The set of symbols which appear on the keyboard and the key sequences to generate each character are independent of the mapping of symbols to keys. The same key sequences may be used by several keyboard layouts.

This section specifies the standard key sequences for generating Tamil characters on a standard computer keyboard. A standard keyboard layout, based on the *Renganathan* keyboard, is specified in Clause 7.

Key sequences are defined on the principle "type as you write". Each symbol is typed in the order it is written in, which may be different from the encoding sequence or the display order.

**NOTE:** *This standard does not specify the symbols that are displayed during the intermediate stages in the construction and deletion of letters.*

## 6.1 Keyboard Symbols

A Tamil standard keyboard must have the following symbols. Each physical key may have several symbols assigned to it, one for each shift-state. Only the symbols of the unshifted and the normal shift states will be depicted on the physical keyboard.

Keys must be assigned to the following:

### 6.1.1 *Consonants (With inherent vowel அ)*

| க | ங | ச | ஞ | ட | ண | த | ந | ப |
|---|---|---|---|---|---|---|---|---|
| ம | ய | ர | ல | வ | ழ | ள | ற | ன |

### 6.1.2 *Grantham Consonants (With inherent vowel அ)*

| ஜ | ஸ | ஷ | ஸ | ஹ | க்ஷ |
|---|---|---|---|---|---|

### 6.1.3 *Vowels*

| அ | ஆ | இ | ஈ | உ | ஊ | எ | ஏ | ஐ | ஒ | ஓ | ஔ |
|---|---|---|---|---|---|---|---|---|---|---|---|

### 6.1.4  *āytam*
ஃ

### 6.1.5  *Grantham Conjunct Syllable*
ஶ்ரீ

### 6.1.6  *Puḷḷi*
◌்

### 6.1.7  *Vowel Signs*

| | |
|---|---|
| Vowel signs comprise the leading signs: | ெ◌, ே◌, ை◌ |
| Vowel signs comprise the trailing signs: | ◌ா |
| Vowel signs comprise the attached signs: | ◌ு, ◌ூ |

Since the உ vowel modifier takes four different forms and ஊ vowel modifier takes five different forms, there are no distinct symbols to represent them on the physical keyboard. Similar symbols have been recommended as shown in Appendix B.

**NOTES:**

**1.** *ொ◌, ோ◌, ௌ◌ symbols are not expected to be printed on the physical keyboard and can be produced by a key sequence.*

**2.** *AU length mark ( ◌ள) should not be printed on the physical keyboard.*

### 6.1.8  *Symbols*
The keys for non-Tamil symbols such as European numerals, punctuation marks and standard symbols must be printed on the keyboard.

**NOTE:** *Anusvara (◌்) should not be printed on the physical keyboard.*

### 6.1.9  *Tamil Numeral and Tamil Symbols*
Due to lack of distinction discussed in the section 4.7, the Tamil numerals should not be printed on the keyboard.

Since Tamil symbols are not used very much at present, they should not be printed on the keyboard.

## 6.2  Key Sequences

Each character is entered by one or more key sequences as specified in 6.2.1 to 6.2.7.

### 6.2.1   *Vowels*

The twelve Tamil vowels are entered either with one key or one key with shift state.

ஒள vowel can also be generated by two keys which are ஒ vowel assigned key followed by ள consonant assigned key.

### 6.2.2   **Consonants**

A consonant is entered with a single key.
A Grantha consonant is entered with a single key with shift state.
The Grantha க்ஷ can be generated by one key with shift state.

**NOTE:** *In the context where க்ஷ is needed instead of க்ஷ, it should be keyed-in with the following sequence:*
  க்ஷ = க + ் + ஷ *(internal code points sequence must be 0B95 0BCD 200C 0BB7).*

### 6.2.3   **Pure-Consonants**

A pure consonant is entered with two keys: *consonant + Puḷḷi*
e.g.   க + ் = க்
    ஹ + ் = ஹ்

### 6.2.4   ***āytam***

The special letter āytam ஃ is entered with one key

### 6.2.5  *Grantha Syllable* ஶ்ரீ

ஶ்ரீ is entered with one key with shift state
It can also be generated by key sequence
    ஶ + ் + ர + ீ     = ஶ்ரீ

### 6.2.6   *Vowel-Consonant Syllables Using Vowel Signs*

a)     ா
The ா is entered with one key: *consonant +  ா*
E.g. க + ா   = கா

b)     ி
The ி is entered with one key: *consonant +  ி*
    E.g. க + ி  = கி

Even though Vowel sign ◌ொ takes different forms, they are all entered using the same key.

c)     ◌ீ

The ◌ீ is entered with one key: *consonant +* ◌ீ

e.g. க **+** ◌ீ     = கீ

Even though Vowel sign ◌ீ takes different forms, they are all entered using the same key.

**NOTES:**

**1.**    *Although the ர consonant takes different shape when it is modified by* ◌ொ *and* ◌ீ*, the vowel signs are used with the same ர consonant. (ரி, ரீ)*

**2.**    *There are no special keys for ழ and ள*

### d)    உ vowel sign

The உ vowel modifier is entered with one key: *consonant +* ॏ

e.g. க **+** ॏ    = கு
e.g. ட **+** ॏ    = டு
e.g. கழ **+** ॏ    = கழௌ

### e)    ஊ vowel sign

The ஊ vowel modifier is entered with one key with shift state: *consonant +* ॏ

e.g. க **+** ॏ    = கூ
e.g. ட **+** ॏ    = டூ
e.g. கழ **+** ॏ    = கழூ

**NOTE:** *Although the உ and ஊ vowel signs produce many different forms they are generated by using the same keys.*

### f)    ெ◌

The ெ◌ is entered with one key: *ெ◌ + consonant*
e.g. ெ◌ **+** க    = கெ

### g)    ே◌

The ே◌ is entered with one key: *ே◌ + consonant*
e.g. ே◌ **+** க    = கே

### h)    ை◌

The ை◌ is entered with one key: *ை◌ + consonant*
e.g. ை◌ **+** க    = கை

i)    கொ

The கொ is entered with 2 keys: கெ + *consonant* + ா

       e.g. கெ + க + ா       = கொ

j)    கோ

The கோ is entered with 2 keys: கே + *consonant* + ா

       e.g. கே + க + ா       = கோ


k)    கௌ

The கௌ is entered with 2 keys: கெ + *consonant* + ௗ *consonant*

       e.g. கெ + க + ள       = கௌ


### *6.2.7.  Tamil Numerals and Tamil Symbols*

For Tamil digits the right-alt-state key combination must be used. The key combination is integrated with the European digits 0 to 9 keys to go along with Tamil digits 0 to 9.

e.g.    Tamil ௦        = right-alt + 0
        Tamil ௬        = right-alt + 6


The Tamil numerics are also generated using right-alt-state key combinations.

e.g.    ௰        = right-alt + q
        ௱        = right-alt + w
        ௲        = right-alt + e


The Tamil Symbols are also generated using right-alt-state key combinations.

e.g.    ௳        = right-alt + -
        ௴        = right-alt + =
        ௵        = right-alt + r
        ௶        = right-alt + t
        ௷        = right-alt + y
        ௸        = right-alt + u
        ௹        = right-alt + i