

अक्षरान्तरः Akṣarāntara Keyboard Layout

Rolf Noyer, University of Pennsylvania RNOYER at LING.UPENN.EDU

The Devanāgarī QWERTY keyboard layout shipped with Max OS X is designed to permit users who are familiar with the ordinary QWERTY keyboard layout to type in devanāgarī without having to learn the standard devanāgarī keyboard layout. But Devanāgarī QWERTY has a number of significant drawbacks, especially for typing Sanskrit, that make it both complicated for beginning students and also cumbersome even for relatively experienced typists. To remedy these problems the alternative Akṣarāntara (lit. ‘another syllable; transliteration’) keyboard layout was designed with three specific goals in mind:

- (1) The keystrokes used should as closely as possible have the same “look” as Romanized devanāgarī.
- (2) The *required* use of shift and option modifier keys should be reduced to minimum
- (3) Various options should be available so that users can choose a style which corresponds to their typing preferences. Some users may prefer to minimize number of keystrokes; others may prefer to minimize the use of shift and option keys.

Review of problems with Devanāgarī QWERTY

A number of issues make it difficult for beginners to adapt to Devanāgarī QWERTY, and make it cumbersome and slow even for experienced typists, especially for Sanskrit:

1. To obtain conjunct consonants (clusters of consonants), one has to type ⟨f⟩ for *halant/virāma* before any consonant which is *not* followed by a vowel.
2. A consonant keystroke, such as ⟨k⟩, produces the output क [ka], so the inherent vowel is automatic. This is unlike typing in Roman scripts where a vowel following a consonant will always require an additional keystroke.
3. For the independent vowel signs it is necessary to press ⟨opt⟩ along with the vowel.
4. For retroflex and aspirated consonants it is necessary to use option and shift keys along with other keystrokes. For example भ [bh] requires ⟨B⟩ = ⟨shift-B⟩, ट [ṭ] requires ⟨opt-t⟩, and ठ requires ⟨opt-T⟩ = ⟨shift-opt-T⟩. Similarly, ः (*visarga*) requires ⟨H⟩ and the *bindu* dot requires ⟨M⟩.

(1) entails that users must type ⟨f⟩ when *no vowel* follows a consonant. For users accustomed to typing in Roman-based alphabets this requires practice and is certainly not automatic. Moreover when [a] *does* follow the consonant (2), users must *not* type ⟨a⟩, since this will produce the long [ā] in Devanāgarī QWERTY. Making matters more complex, when a vowel is word-initial (or independent), users must *not* type the vowel, but instead remember to press ⟨opt⟩ and then type the vowel (3).

Finally, the nearly constant use of shift and option key as modifiers makes typing devanāgarī very cumbersome and slow. Beginners in particular may find it unnatural to type capital letters in the middle and ends of words.

Guide to Akṣarāntara Keyboard Layout

I. CV signs

Unlike in the Devanāgarī QWERTY keyboard layout (DQ), in the Akṣarāntara layout consonant symbols have *virāma/halant* by default and are generally *dead keys* which wait for the next keystroke before producing any output:

keystroke	output	comments
⟨k⟩		<i>dead key</i> : waiting for next stroke
⟨k a⟩	क	typing ⟨a⟩ produces the output character
⟨k A⟩	का	typing ⟨A⟩ produces the output character
or ⟨k ;⟩ or ⟨k a ;⟩		☞ note the <i>faster alternatives</i> ⟨;⟩ or ⟨a ;⟩ for /ā/
⟨k i⟩	कि	
⟨k I⟩	की	
⟨k u⟩	कु	
⟨k U⟩	कू	
⟨k e⟩	के	
⟨k E⟩	कै	
⟨k o⟩	को	
⟨k O⟩	कौ	
⟨k R⟩	कृ	
⟨k opt-R⟩	कृ	
⟨k q⟩	कॅ /kê/ [kɛ]	
⟨k w⟩	कॉ /kô/ [kɔ]	
⟨k `⟩	के /kě/	
⟨k \⟩	को /kõ/	

Explicit virāma/halant

To obtain an *explicit virāma/halant*, type space if at the end of a word (which would be typical), or type type ⟨opt-f⟩ after the relevant consonant keystroke:

⟨k space⟩ or ⟨k opt-f⟩ क्

Conjuncts

When typing conjunct consonants it is not necessary to type ⟨f⟩ to add a *virāma/halant*.

Instead *simply type the sequence of consonants and then the vowel*:

⟨k t a⟩	क्त	⟨r k y u⟩	क्यु
⟨t r i⟩	त्रि	⟨d v O⟩	द्वौ

The text-rendering software of your word processor or application should produce the right outcomes. But note that it is necessary that the application *have this capability* and that the font be suitable. For example, Microsoft Word does not function correctly (even with DQ). Personally I find that Text Edit and Libre Office do work properly; in some cases I have also found that the font Devanāgarī Sangam (shipped with OS X) works better than other fonts.

Avagraha and Visarga

These remain the same as in DQ, but in addition one can also get visarga simply by typing ⟨h⟩ followed by ⟨.⟩ (period).

:	⟨h .⟩ or ⟨H⟩
s	⟨opt-'⟩

Bindu and Candrabindu

There are two options for adding *bindu* and *candrabindu*, and the one you use will depend on the sophistication of the text-rendering abilities of the application you are working with.

In the simplest situation it suffices to type ⟨m .⟩ for *bindu* and ⟨m ,⟩ for *candrabindu*.

कं	⟨k a m .⟩	कँ	⟨k a m ,⟩
कां	⟨k A m .⟩ or ⟨k ; m .⟩	कुँ	⟨k u m ,⟩
कें	⟨k e m .⟩		
कैं	⟨k E m .⟩		

However, because *not all applications* will render the *bindu* and *candrabindu* properly with these keystrokes, a second option has been included. For *bindu*, use the option key (or shift key with ⟨;⟩) along with the keystroke corresponding to the desired vowel. *Candrabindu* is available for [Ca, Cā, Cu] and [Cū] syllables (where there is no stroke above the line): ⟨opt-m⟩ produces *candrabindu* on [Ca], and ⟨opt-M⟩ on [Cā]. For [Cu Cū] type ⟨opt-y⟩ and ⟨opt-Y⟩ respectively:

Precompiled bindu and candrabindu:

<i>bindu</i>		<i>candrabindu</i>	
कं	⟨k opt-a⟩	कँ	⟨k opt-m⟩
कां	⟨k opt-A⟩ or ⟨k shift-;⟩	काँ	⟨k opt-M⟩
के	⟨k opt-e⟩	कुँ	⟨k opt-y⟩
कै	⟨k opt-E⟩ <i>etc.</i>	कूँ	⟨k opt-Y⟩

II. Independent vowel signs

Independent vowel signs are usually obtained by simply typing the relevant keystroke. Unlike in DQ, you do not have to also use the option key, at least for the common independent vowel signs:

<i>ordinary vowels</i>		<i>less common vowels</i>	
अ	⟨a⟩	ऋ	⟨r cap-0⟩ or ⟨opt-x opt-R⟩
आ	⟨A⟩	ऌ	⟨l 0⟩ or ⟨opt-x opt-l⟩
ए	⟨e⟩	ॠ	⟨opt-L⟩ or ⟨l cap-0⟩ or ⟨opt-x opt-L⟩
ऐ	⟨E⟩	ँ	⟨opt-q⟩
इ	⟨i⟩	ॡ	⟨opt-`⟩
ई	⟨I⟩	ऑ	⟨opt-w⟩
ओ	⟨o⟩	औ	⟨opt-\⟩
औ	⟨O⟩	ऐ	⟨Y⟩
उ	⟨u⟩	अँ	⟨opt-Y⟩
ऊ	⟨U⟩		
ऋ	⟨R⟩ or ⟨r 0⟩ or ⟨opt-x opt-r⟩		

Bindu and Candrabindu with independent vowel signs

There are several options for adding *bindu* or *candrabindu* to independent vowel signs. For applications which will permit it, the simplest option is the same as for the consonants:

☞ Type ⟨m .⟩ to add *bindu*

अं ⟨a m .⟩

इं ⟨i m .⟩

आं ⟨A m .⟩ *etc.*

☞ Type ⟨m ,⟩ to add *candrabindu*

अँ ⟨a m ,⟩

इँ ⟨i m ,⟩

For applications which will not properly combine *bindu* and *candrabindu* with a preceding vowel sign (and for which DQ will not work at all), there are some alternative input methods:

Alternative 1 (bindu only, and only for the common vowels):

☞ Press ⟨opt⟩ while making the keystroke for the corresponding vowel without *bindu*.

Alternative 2 (bindu or candrabindu):

☞ Add *bindu* by first pressing the dead key ⟨opt-m⟩ or ⟨opt-M⟩, then the keystroke for the vowel sign.

☞ Add ⟨opt⟩ to the keystroke to get *candrabindu* on vowels with no stroke above the line.

☞ For the less common independent vowel signs ऐँ ऐँँ औँ औँँ the ⟨opt-m⟩ or ⟨opt-M⟩ option must be used to obtain the bindu. For ऐँँ ऐँँँ औँँ औँँँ the keystrokes after ⟨opt-m⟩ or ⟨opt-M⟩ are the same as the ones used when the vowel occurs after a consonant.

Bindu

अं	⟨opt-a⟩ or ⟨opt-m a⟩ or ⟨opt-M a⟩
आं	⟨opt-A⟩ or ⟨opt-m A⟩ or ⟨opt-M A⟩
एं	⟨opt-e⟩ or ⟨opt-m e⟩ or ⟨opt-M e⟩
ऐं	⟨opt-E⟩ or ⟨opt-m E⟩ or ⟨opt-M E⟩
इं	⟨opt-i⟩ or ⟨opt-m i⟩ or ⟨opt-M i⟩
ईं	⟨opt-I⟩ or ⟨opt-m I⟩ or ⟨opt-M I⟩
उं	⟨opt-u⟩ or ⟨opt-m u⟩ or ⟨opt-M u⟩
ऊं	⟨opt-U⟩ or ⟨opt-m U⟩ or ⟨opt-M U⟩
ओं	⟨opt-o⟩ or ⟨opt-m o⟩ or ⟨opt-M o⟩
औं	⟨opt-O⟩ or ⟨opt-m O⟩ or ⟨opt-m O⟩
एँ	⟨opt-m q⟩ or ⟨opt-M q⟩
ऐँ	⟨opt-m `⟩ or ⟨opt-M `⟩
औँ	⟨opt-m w⟩ or ⟨opt-M w⟩
औँँ	⟨opt-m \⟩ or ⟨opt-M \⟩
ऐँँ	⟨opt-m '⟩ or ⟨opt-M '⟩
अँँ	⟨opt-m /⟩ or ⟨opt-M /⟩

Candrabindu

अँ	⟨opt-m opt-a⟩ or ⟨opt-M opt-a⟩
आँ	⟨opt-m opt-A⟩ or ⟨opt-M opt-A⟩
एँ	⟨opt-m opt-e⟩ or ⟨opt-M opt-e⟩
इँ	⟨opt-m opt-i⟩ or ⟨opt-M opt-i⟩
उँ	⟨opt-m opt-u⟩ or ⟨opt-M opt-u⟩
ऊँ	⟨opt-m opt-U⟩ or ⟨opt-M opt-U⟩

III. Consonant keystrokes

Many of the consonant keystrokes correspond to those of DQ, but there are a few differences; more importantly, however, in many cases there are additional options for producing the desired output.

Simple aspirated consonants [gh kh dh th bh ph]

1. Type the keystroke for the unaspirated consonant *and then* ⟨h⟩, OR
2. Press ⟨shift⟩ along with the keystroke of the unaspirated consonant (= Devanāgarī QWERTY),

ॠ ⟨b h a⟩ or ⟨B a⟩

Retroflex consonants [ṣ ṇ ṭ ḍ ḷ ṛ]

1. Type the keystroke of the non-retroflex consonant *and then* ⟨.⟩ (period), OR
2. Type ⟨N⟩ for [ṇ]; otherwise ⟨opt⟩ along with the keystrokes of the non-retroflex consonant, OR
3. Press ⟨opt-x⟩ and then the keystrokes of the non-retroflex consonant (= US Extended layout)

☞ For [ṣ ḍ] one can also type ⟨x⟩ and ⟨w⟩ respectively.

☞ For [ṇ] one can also type ⟨n f⟩

ॡ	⟨n . a⟩	or ⟨N a⟩, ⟨n f⟩, ⟨opt-x n a⟩
ॢ	⟨s . a⟩	or ⟨x a⟩, ⟨opt-s a⟩, ⟨opt-x s a⟩
ॣ	⟨d . a⟩	or ⟨w a⟩, ⟨opt-d a⟩, ⟨opt-x d a⟩
।	⟨t . a⟩	or ⟨opt-t a⟩, ⟨opt-x t a⟩

Aspirated retroflex consonant [ṭh ḍh ṛh]

1. Type ⟨t . h⟩, ⟨d . h⟩, ⟨r . h⟩ OR
2. Type ⟨opt-t h⟩ and ⟨opt-d h⟩ (not possible for [ṛh]), OR
3. Press ⟨opt⟩ and ⟨shift⟩ plus ⟨t⟩, ⟨d⟩ or ⟨r⟩ (= Devanāgarī QWERTY for [ṭh ḍh]), OR
4. Type ⟨opt-x t h⟩, ⟨opt-x d h⟩, ⟨opt-x r h⟩, OR
5. Type ⟨T .⟩ and ⟨D .⟩ (not possible for [ṛh])

॥	⟨t . h a⟩	or ⟨opt-T a⟩, ⟨opt-t h a⟩, ⟨opt-x t h a⟩, ⟨T . a⟩
०	⟨r . h a⟩	or ⟨opt-r h⟩, ⟨d . h . a⟩, ⟨opt-d h .⟩ <i>etc.</i>

Consonant Keystroke List

As usual, in order to produce the letter without halant/virama it is necessary to type ⟨a⟩ (which for simplicity is not shown explicitly in the table below):

	<i>basic keystrokes</i>	<i>alternatives</i>
क /k/	⟨k⟩	
ख /kh/	⟨k h⟩	⟨K⟩
ग /g/	⟨g⟩	
घ /gh/	⟨g h⟩	⟨G⟩
ङ /ṅ/	⟨z⟩	
च /c/	⟨c⟩	
छ /ch/	⟨c h⟩	⟨C⟩
ज /j/	⟨j⟩	
झ /jh/	⟨j h⟩	⟨J⟩
ञ /ñ/	⟨n ,⟩	⟨opt-n⟩ or ⟨V⟩
ट /ṭ/	⟨t .⟩	⟨opt-t⟩ or ⟨opt-x t⟩
ठ /ṭh/	⟨t . h⟩	⟨opt-T⟩ or ⟨opt-t h⟩ or ⟨opt-x t h⟩
ड /ḍ/	⟨d .⟩	⟨w⟩ or ⟨opt-d⟩ or ⟨opt-x d⟩
ढ /ḍh/	⟨d . h⟩	⟨opt-D⟩ or ⟨opt-d h⟩ or ⟨opt-x d h⟩
ण /ṇ/	⟨n .⟩	⟨N⟩ or ⟨n f⟩
त /t/	⟨t⟩	
थ /th/	⟨t h⟩	⟨T⟩
द /d/	⟨d⟩	
ध /dh/	⟨d h⟩	⟨D⟩
न /n/	⟨n⟩	
प /p/	⟨p⟩	
फ /ph/	⟨p h⟩	⟨P⟩
ब /b/	⟨b⟩	
भ /bh/	⟨b h⟩	⟨B⟩
म /m/	⟨m⟩	
य /y/	⟨y⟩	
र /r/	⟨r⟩	

	<i>basic keystrokes</i>	<i>alternatives</i>
ल /l/	⟨l⟩	
ळ /l̥/	⟨l .⟩	⟨L⟩ or ⟨opt-x l⟩
व /v/	⟨v⟩	
श /ś/	⟨s f⟩	⟨S⟩ or ⟨opt-c⟩
ष /ṣ/	⟨s .⟩	⟨x⟩ or ⟨opt-s⟩ or ⟨opt-x s⟩
स /m/	⟨m⟩	
ह /h/	⟨h⟩	
क्ष /kṣ/	⟨k s .⟩	⟨opt-k⟩ or ⟨X⟩
ज्ञ /jñ/	⟨j n ,⟩	⟨opt-j⟩ or ⟨Z⟩ or ⟨j V⟩ or ⟨j opt-n⟩
ष्ट /ṣṭ/	⟨s . t .⟩	⟨opt-S⟩ or ⟨x opt-t⟩ or ⟨opt-x s opt-t⟩ or ⟨s . opt-t⟩
श्र /śr/	⟨s f r⟩	⟨opt-C⟩ or ⟨S r⟩
ष्ठ /ṣṭh/	⟨s . t . h⟩	⟨opt-H⟩ or ⟨opt-S h⟩ or ⟨x opt-t h⟩ or ⟨s . opt-T⟩ <i>etc.</i>

IV. Nuqtā (dotted) consonants and Sindhi implosives

The dotted consonants can be obtained with the keystrokes for the corresponding non-dotted consonant followed by ⟨.⟩ (period) (and in some cases ⟨f⟩ is an alternative to ⟨.⟩). For ढ़ and ढ़़ the corresponding consonant keystrokes are ⟨r⟩ and ⟨R⟩ respectively. The implosives for Sindhi are obtained by typing the corresponding ordinary consonant's keystroke followed by ⟨-⟩, a hyphen.

	<i>basic keystroke</i>	<i>alternatives</i>
क़ /q/	⟨k .⟩	⟨q⟩ or ⟨k f⟩, ⟨opt-x k⟩
ख़ /x/	⟨k h .⟩	⟨K .⟩ or ⟨K f⟩, ⟨k h f⟩, ⟨opt-x K⟩
ग़ /ɣ, ʁ/	⟨g .⟩	⟨g f⟩ or ⟨opt-x g⟩
ज़ /z/	⟨j .⟩	⟨opt-z⟩ or ⟨j f⟩, ⟨opt-x j⟩
ढ़ /ɽ, ɾ/	⟨r .⟩	⟨opt-r⟩, ⟨d . .⟩, ⟨opt-d .⟩, ⟨opt-d f⟩, ⟨opt-x d .⟩, ⟨opt-x d f⟩
ढ़़ /ɽh, ɾh/	⟨r . h⟩	⟨opt-r h⟩ or ⟨opt-D .⟩, ⟨opt-D f⟩
फ़ /f/	⟨p h .⟩	⟨P .⟩ or ⟨opt-p⟩, ⟨P f⟩, ⟨p h f⟩
श़ /ʒ/	⟨S .⟩	
ग़ /ɣ/	⟨g -⟩	
ज़ /ʒ/	⟨j -⟩	
ड़ /ɖ/	⟨d -⟩	⟨opt-d -⟩
ब़ /b/	⟨b -⟩	

Examples

The following pages illustrate the use of the Akṣarāntara keyboard layout with various texts. Because of the many options available, users can choose a style which best matches their typing preferences. In the examples that follow, three different styles are compared:

- (1) **Simple style:** keystrokes most closely approximate the look of Romanized text. Best method for complete beginners. /ā/ after a consonant can be entered either with ⟨A⟩ or with ⟨a ;⟩.
- (2) **Fewer opt/shift:** Minimizes use of option and shift keys. Ultimately this is probably the fastest method.
- (3) **Minimal:** Minimizes number of keystrokes. Suitable for typists who do not find adding option and shift to be cumbersome.

The keystrokes for those applications which require precompiled bindu and candrabindu are given labelled below as 1b, 2b where applicable.

For comparison the same keystrokes using Devanāgarī QWERTY then given with the label DQ.

One can easily see that DQ usually but not invariably requires fewer total keystrokes; however the correspondence between the Romanized forms and the keystrokes required to input the devanāgarī is much more transparent in Akṣarāntara style 1, and the use of option and shift modifier keys is considerably reduced in Akṣarāntara style 2.

Example 1: RV 2.12.1

यो जात एवे प्रथमो मनस्वान्

yo jāta eva prathamō manasvān

⟨y o j A t a e v a p r a t h a m o m a n a s v A n ⟩	1
⟨y o j a ; t a e v a p r a t h a m o m a n a s v a ; n ⟩	1: ⟨a ;⟩ for ā
⟨y o j ; t a e v a p r a t h a m o m a n a s v ; n ⟩	2: ⟨;⟩ for ā
⟨y o j ; t a e v a p r a T a m o m a n a s v ; n ⟩	3
⟨y o j a t o - e v p f r T m o m n s f v a n f ⟩	DQ

देवो देवान्क्रतुना पर्यभूषत्।

devo devānkratunā paryabhūṣat ;

⟨d e v o d e v A n k r a t u n A p a r y a b h U s . a t . ⟩	1
⟨d e v o d e v a ; n k r a t u n a ; p a r y a b h U s . a t . ⟩	1: ⟨a ;⟩ for ā
⟨d e v o d e v ; n k r a t u n ; p a r y a b h U x a t . ⟩	2
⟨d e v o d e v ; n k r a t u n ; p a r y a B U x a t . ⟩	3
⟨d e v o d e v a n f k f r t u n a p r f y B U x t f . ⟩	DQ

यस्य शुष्माद्रोदसी अभ्यसेतां

yasya śuṣmādrodasī abhyasetāṃ

⟨y a s y a S u s . m A d r o d a s I a b h y a s e t A m . ⟩	1
⟨y a s y a S u s . m a ; d r o d a s I a b h y a s e t a ; m . ⟩	1: ⟨a ;⟩ for ā
⟨y a s y a S u s . m A d r o d a s I a b h y a s e t o - A ⟩	1b
⟨y a s y a s f u x m ; d r o d a s I a b h y a s e t : ⟩	2
⟨y a s y a S u x m A d r o d a s I a B y a s e t : ⟩	3
⟨y s f y S u x f m a d f r o d s I o - a B f y s e t a M ⟩	DQ

नृम्णस्य मन्त्रा स जनास इन्द्रः ॥

nṛmṇasya mahnā : sa, janāsa, Indraḥ.

⟨n R m n . a s y a m a h n A s a j a n A s a i n d r a h . o s - . ⟩	1
⟨n R m n . a s y a m a h n a ; s a j a n A s a i n d r a h . o s - . ⟩	1: ⟨a ;⟩ for ā
⟨n R m n . a s y a m a h n ; s a j a n ; s a i n d r a h . o s - . ⟩	2
⟨n R m N a s y a m a h n ; s a j a n ; s a i n d r a H o s - . ⟩	3
⟨n R m N s f y m h f n a s j n a s o - i n f d f r H o s - . ⟩	DQ

Example 2: RV 1.1.12

☞ In some cases styles 1 and 2 may converge.

अग्निः पूर्वेभिर्ऋषिभिर्

agnih pūrvebhirṛṣibhir

RV 1.1.2

⟨a g n i h . p U r v e b h i r R s . i b h i r ⟩

1/2

⟨a g n i H p U r v e b h i r R s . i b h i r ⟩

1b/2b

⟨a g n i H p U r v e B i r R x i B i r ⟩

3

⟨w g f n i H p U r f v e B i r R x i B i r f ⟩

DQ

ईड्यो नूतनैरुत ।

īdyo nūtanair uta,

⟨I d . y o n U t a n E r u t a . ⟩

1/2

⟨I o - d y o n U t a n E r u t a . ⟩

3

⟨o - I o - d f y o n U t n E r u t . ⟩

DQ

स देवाँ एह वक्षति ॥

sa devāṁ eha vakṣati.

⟨s a d e v A m , e h a v a k s . a t i o s - . ⟩

1

⟨s a d e v a ; m , e h a v a k s . a t i o s - . ⟩

1: ⟨a ;⟩ for \bar{a}

⟨s a d e v ; m , e h a v a k s . a t i o s - . ⟩

2

⟨s a d e v o - M e h a v a k s . a t i o s - . ⟩

1b/2b

⟨s a d e v o - M e h a v a X a t i o s - . ⟩

3

⟨s d e v a o - m o - e h v X t i o s - . ⟩

DQ

Example 3: RV 1.154.2

pra tadviṣṇuḥ stavate vīryeṇa

RV 1.154.2

प्र तद्विष्णुः स्तवते वीर्येण

⟨p r a t a d v i s . n . u h . s t a v a t e v I r y e n . a⟩	1
⟨p r a t a d v i x n . u h . s t a v a t e v I r y e n . a⟩	2
⟨p r a t a d v i x N u H s t a v a t e v I r y e N a⟩	3
⟨p f r t d f v i x f N u H s f t v t e v I r f y e N⟩	DQ

mr̥go na bhīmaḥ kucaro giriṣṭhāḥ,

मृगो न भीमः कुचरो गिरिष्ठाः ।

⟨m R g o n a b h I m a h . k u c a r o g i r i s . t . h A h . .⟩	1
⟨m R g o n a b h I m a h . k u c a r o g i r i x t . h ; h . .⟩	2
⟨m R g o n a B I m a H k u c a r o g i r i o - H A H . .⟩	3
⟨m R g o n B I m H k u c r o g i r i x f o - T a H . .⟩	DQ

yasyoruṣu triṣu vikramaṇeṣu

यस्योरुषु त्रिषु विक्रमणेषु

⟨y a s y o r u s . u t r i s . u v i k r a m a n . e s . u⟩	1
⟨y a s y o r u x u t r i x u v i k r a m a n . e x u⟩	2
⟨y a s y o r u x u t r i x u v i k r a m a N e x u⟩	3
⟨y s f y o r u x u t f r i s u v i k f r m N e x u⟩	DQ

adhikṣiyanti bhuvanāni viśvā.

अधिक्षियन्ति भुवनानि विश्वा ॥

⟨a d h i k s . i y a n t i b h u v a n A n i v i S v A o s - .⟩	1
⟨a d h i k x i y a n t i b h u v a n ; n i v i s f v ; o s - .⟩	2
⟨a D i X i y a n t i B u v a n A n i v i S v A o s - .⟩	3
⟨o - a D i X i y n f t i B u v n a n i v i S v a o s - .⟩	DQ

Example 4: Ram. 2.111.9

lakṣmī candrādaṣṭya dvā himavān vā himaṃ tyacet

लक्ष्मी चन्द्रादपेयाद्वा हिमवान् वा हिमं त्यजेत्

<l a k s . m I c a n d r A d a p e y a d v A h i m a v A n v A h i m a m . t y a c e t >	1
<l a k s . m I c a n d r a ; d a p e y a d v a ; h i m a v a ; n v a ; h i m a m . t y a c e t >	1 (alt.)
<l a k s . m I c a n d r A d a p e y a d v A h i m a v A n v A h i m o - a t y a c e t >	1b
<l a k x m I c a n d r ; d a p e y a d v ; h i m a v ; n v ; h i m a m . t y a c e t >	2
<l a k x m I c a n d r ; d a p e y a d v ; h i m a v ; n v ; h i m o - a t y a c e t >	2b
<l a X m I c a n d r ; d a p e y a d v ; h i m a v ; n v ; h i m o - a t y a c e t >	3
<l X m I c n f d f r a d p e y d f v a h i m v a n f v a h i m M t f y a c e t f >	DQ

atīyādsagarī velam na pratijñāmaham pituḥ

अतीयाद्सगरो वेलं न प्रतिज्ञामहं पितुः

<a t I y A d s a g a r I v e l a m . n a p r a t i j n , A m a h a m . p i t u h .>	1
<a t I y a ; d s a g a r I v e l a m . n a p r a t i j n , a ; m a h a m . p i t u h .>	1 (alt.)
<a t I y A d s a g a r I v e l a o - a n a p r a t i j n , A m a h a o - a p i t u h .>	1b
<a t I y ; d s a g a r I v e l a m . n a p r a t i j n , ; m a h a m . p i t u h .>	2
<a t I y ; d s a g a r I v e l a o - a n a p r a t i j n , A m a h a o - a p i t u h .>	2b
<a t I y ; d s a g a r I v e l a o - a n a p r a t i o - j ; m a h a o - a p i t u H>	3
<o - a t I y a d f s g r I v e l M n p f r t i o - j a m h M p i t u H>	DQ

Example 6: Ram. 3.50.18

yatkṛtvā na bhaveddharmo na kīrtiḥ na yaśo dhruvaṃ,

यत्कृत्वा न भवेद्धर्मो न कीर्तिः न यशो ध्रुवं।

⟨y a t k R t v A n a b h a v e d d h a r m o n a k I r t i h . n a y a S o d h r u v a m . .⟩	1
⟨y a t k R t v a ; n a b h a v e d d h a r m o n a k I r t i h . n a y a S o d h r u v a m . .⟩	1 alt
⟨y a t k R t v A n a b h a v e d d h a r m o n a k I r t i h . n a y a S o d h r u v o - a .⟩	1b
⟨y a t k R t v ; n a b h a v e d d h a r m o n a k I r t i h . n a y a s f o d h r u v a m . .⟩	2
⟨y a t k R t v ; n a b h a v e d d h a r m o n a k I r t i h . n a y a s f o d h r u v o - a .⟩	2b
⟨y a t k R t v ; n a B a v e d D a r m o n a k I r t i H n a y a S o D r u v o - a .⟩	3
⟨y t f k R t f v a n B v e d f D r f m o n k I r f t i H n y S o D f r u v a M .⟩	DQ

śarīrasya bhavetkheadaḥ kastatkarma samācaret.

शरीरस्य भवेत्खेदः कस्तत्कर्म समाचरेत् ॥

⟨S a r I r a s y a b h a v e t k h e d a h . k a s t a t k a r m a s a m A c a r e t o s - .⟩	1
⟨s f a r I r a s y a b h a v e t k h e d a h . k a s t a t k a r m a s a m ; c a r e t o s - .⟩	2
⟨S a r I r a s y a B a v e t K e d a H k a s t a t k a r m a s a m ; c a r e t o s - .⟩	3
⟨S r I r s f y B v e t f K e d H k s f t t f k r f m s m a c r t f o s - .⟩	DQ

Akṣarāntara Keyboard Layout Quick Reference

Independent Vowels

अ	a
आ	A
इ	i
ई	I
उ	u
ऊ	U
ऋ	R or r 0
ॠ	r shift-0
ए	e
ऐ	E
ओ	o
औ	O

Bindu

अं	am. (not all applications)
----	----------------------------

Candrabindu

अँ	am, (not all applications)
----	----------------------------

Visarga and Avagraha

:	h.
S	opt-'

Explicit Virāma/Halant

क्	k space or k opt-f
----	--------------------

Consonant plus Vowel

क	ka
का	k; or kA or ka;
कि	ki
की	kl
कु	ku
कू	kU
कृ	kR
कृ	k opt-R
के	ke
कै	kE
को	ko
कौ	kO

Consonants

क	k
ख	kh or K
ग	g
घ	gh or G
ङ	z
च	c
छ	ch or C
ज	j
झ	jh or J
ञ	n, or V
ट	t.
ठ	t.h
ड	d. or w
ढ	d.h
ण	n. or N
त	t
थ	th or T
द	d
ध	dh or D
प	p
फ	ph or P
ब	b
भ	bh or B
म	m
ल	l
ळ	l. or L or opt-l
व	v
श	sf or S
ष	s. or x
स	m
ह	h
क्ष	ks. or opt-k
ज्ञ	jn, or opt-j
श्र	sfr or opt-C or Sr

Implosives

ग	g- (hyphen)
ज	j-
ड	d-
ब	b-

Consonants with Nuqtā

क़	k. or q
ख़	kh.
ग़	g.
ज़	j.
ड़	r. or d..
ढ़	r.h or d.h.
फ़	ph.

Symbols

	. (period)
	shift-opt-.
०	0
१	1
२	2
३	3
४	4
५	5
६	6
७	7
८	8
९	9
०	10
~	opt-shift-/

Less common vowels

लृ	l 0 or opt-x opt-l
लृ	opt-L or opt-x opt-L
एँ	opt-q
ऐँ	opt-`
औँ	opt-w
ओँ	opt-\
अे	Y
अँ	opt-Y
कँ	kq
केँ	k`
कॉ	kw
को	k\