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Armenian Keyboard Layouts

This document defines keyboard layouts based on the Armenian Character Set from [1]. It describes two types of layouts: ergonomic and phonetic.

It is a recommendation for Armenian keyboard manufacturers and respective software developers.

In this document a pair of numbers identifies each keyboard key (button): row number and column number. Only main alphabetic, punctuation, and digit keys are assigned. The following is the description of that part of keyboard with Latin (QWERTY) layout (lower case):

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
4	<`>	<1>	<2>	<3>	<4>	<5>	<6>	<7>	<8>	<9>	<0>	<->	<=>	<Bcks>
3	<Tab>	<q>	<w>	<e>	<r>	<t>	<y>	<u>	<i>	<o>	<p>	<[>	<]>	<\>
2	<Cpsl>	<a>	<s>	<d>	<f>	<g>	<h>	<j>	<k>	<l>	<:>	<'>	<Entr>	
1	<Shft>	<z>	<x>	<c>	<v>		<n>	<m>	<,>	<.>	</>	<Shft>		

<Bcks>, <Tab>, <Cpsl>, <Entr>, and <Shft> buttons stand for "Backspace", "Tab[ulation]", "Cap[ital]s Lock", "Enter", and "Shift" buttons respectively. They are presented to simplify positioning of keys. The following pairs can identify these buttons (respectively): 4:14, 3:1, 2:1, 2:13, and 1:1 (for the "Right Shift and 1:12 for the "Left Shift"). The number before the colon is row, the number after it is column.

1. Ergonomic Layout

The ergonomic layout presented below in Table 1 is a modification of a layout suggested by ArmSCII [1] group some 10 years ago. It is based upon Armenian typewriter layout. The major difference is positioning the letters from bottom right of the typewriter to the first row of keyboard. The reason for this is to map Armenian punctuation marks with the ones on the Latin (QWERTY) keyboard. This document recommends to insert the "Sign 'Yev'" button at position 4:7 (it was missing in the original ArmSCII layout) and shift the letters in the row one position to the right. The "Ellipsis" sign from the rightmost button of the 1-st row is moved to position 1:11 (upper - the letters 'U' and 'L' next to the row number stand for 'Upper' and 'Lower' case). The "Eternity" sign is removed from that position. The "Section" sign from the rightmost button of the 1-st row is removed.

Table 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
4U	<Bats>	<Tch eh>	<Jeh>	<Zheh>	<Dze>	<Yi>	<TYev>	<Ra>	<Reh>	<Co>	<Eh>	<Ghat>	<Anja>	<Bcks>
4L	<Boot>	<Tch eh>	<Jeh>	<Zheh>	<Dze>	<Yi>	<Yev>	<Ra>	<Reh>	<Co>	<Eh>	<Ghat>	<Miut>	<Bcks>
3U	<Tab>	<Pyur>	<Ben>	<Seh>	<Men>	<Vo>	<Vyun>	<Ken>	<Et>	<To>	<Tsa>	<O>	<Feh>	<DPak>
3L	<Tab>	<Pyur>	<Ben>	<Seh>	<Men>	<Vo>	<Vyun>	<Ken>	<Et>	<To>	<Tsa>	<O>	<Feh>	<APak>
2U	<Cpsl>	<Vev>	<Gim>	<Yech>	<Ayb>	<Nu>	<Ini>	<Tyun>	<Ho>	<Peh>	<Yent>	<Apat>	<Entr>	
2L	<Cpsl>	<Vev>	<Gim>	<Yech>	<Ayb>	<Nu>	<Ini>	<Tyun>	<Ho>	<Peh>	<Verj>	<Shes>	<Entr>	
1U	<Shft>	<Da>	<Cheh>	<Za>	<Lyun>	<Qeh>	<Xeh>	<Sha>	<DCha>	<ACha>	<Kakh>	<Shft>		
1L	<Shft>	<Da>	<Cheh>	<Za>	<Lyun>	<Qeh>	<Xeh>	<Sha>	<Stor>	<Mija>	<Paru>	<Shft>		

The names of letters are taken from [1]. The following abbreviations are used for signs (the number of the sign from [1] is in square brackets):

- Bats - Exclamation Mark (Batsakanchakan) [92]
- Anja - Separating Line (Anjatman Gits) [89]
- Boot - Separation Mark (Boot) [88]
- Miut - Joining Line (Miutyan Gtsik) [86]
- DPak - Left Parenthesis (Dzakh Pakagits) [79]
- APak - Right Parenthesis (Aj Pakagits) [78]
- Yent - Hyphen (Yentamna) [95]
- Apat - Apostrophe (Apatarts) [96]
- Verj - Full Stop (Verjaket) [77]
- Shes - Emphasis (Shesht) [93]
- DCha - Left Quotation Mark (Dzakh Chakert) [85]
- ACha - Right Quotation Mark (Aj Chakert) [84]
- Kakh - Ellipsis (Kakhman Keter) [90]
- Stor - Comma (Storaket) [89]
- Mija - Middle Dot (Mijaket) [87]
- Paru - Question Mark (Paruyk) [94]

The name at position 4:7 (upper) ‘TYev’ stands for Title ‘Yev’. If the keyboard is used in Western Armenian Text (WAT) mode, then it is interpreted as Title Letter ‘YechVyun’ [2]. ‘TYev’ is interpreted as Title Letter ‘YechVev’, if the keyboard is used in Eastern Armenian Text (EAT) mode. In EAT mode Eastern Armenian Letter ‘U’ (digraph ‘U’) may be used at 3:7 position.

II. Phonetic Layout

Phonetic layout is useful then there are no Armenian letters on the keyboard buttons. The most popular keyboard for personal computers is Latin (QWERTY) keyboard. In this section two - Eastern and Western - Armenian phonetic layouts for that keyboard are described (for naming convention see Section I):

Table 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
4U	<Bats>	<Dza>	<Ghat>	<Sha>	<Eh>	<Ra>	<To>	<Anja>	<TYev>	<Et>	<O>	<Pyur>	<Tch eh>	<Bcks>

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4L <Boot><Dza><Ghat><Sha> <Eh> <Ra> <To><Miut><TYev><Et><O> <Pyr><Tcheh><Bcks>
3U <Tab> <Qeh> <Zheh><Yech><Reh><Tyun><Yi><U> <Ini> <Vo><Peh><Cha><Tsa> <DPak>
3L <Tab> <Qeh> <Zheh><Yech><Reh><Tyun><Yi><U> <Ini> <Vo><Peh><Cha><Tsa> <APak>
2U <Cps1><Ayb> <Seh> <Da> <Feh><Gim><Ho><Jeh><Ken><Lyun><Yent><Apat><Entr>
2L <Cps1><Ayb> <Seh> <Da> <Feh><Gim><Ho><Jeh><Ken><Lyun><Verj><Shes><Entr>
1U <Shft><Za> <Xeh> <Co> <Vev><Ben><Nu><Men><DCha><ACha><Kakh><Shft>
1L <Shft><Za> <Xeh> <Co> <Vev><Ben><Nu><Men><Stor><Mi ja><Paru><Shft>

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Table 2 represents a layout, which is a modification of Eastern Armenian phonetic keyboard layout suggested by J. Avetisian and implemented for “Quick Writer (Armenian)” text editor (8 years ago). This layout based upon phonetic closeness of Eastern Armenian pronunciation to Latin letters. It has an additional key to remember positions of Armenian letters. For letter ‘Yech’, ‘Reh’, ‘Tyun’, ‘Vo’, ‘Peh’, and ‘Cha’ there are phonetically close letters ‘Eh’, ‘Ra’, ‘To’, ‘O’, ‘Pyr’, and ‘Tcheh’ next to respective buttons (up and right position). The Letter ‘O’ is associated with the digit ‘0’, the Letter ‘Dza’ is associated with the digit ‘2’.

If the software doesn’t support virtual letter ‘U’ [2], then letter ‘Vyun’ is assumed at the position 3:8.

Table 3 represents Western Armenian phonetic layout, which is a modification of Eastern Armenian phonetic layout of Table 2.

Table 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
4U	<Bats>	<Tsa>	<Ghat>	<Sha>	<Eh>	<Ra>	<To>	<Anja>	<TYev>	<Et>	<O>	<Pyr>	<Cheh>	<Bcks>
4L	<Boot>	<Tsa>	<Ghat>	<Sha>	<Eh>	<Ra>	<To>	<Miut>	<TYev>	<Et>	<O>	<Pyr>	<Cheh>	<Bcks>
3U	<Tab>	<Keh>	<Zheh>	<Yech>	<Reh>	<Ta>	<Yi>	<Hyun>	<Ini>	<Vo>	<Pen>	<Cha>	<Dza>	<DPak>
3L	<Tab>	<Keh>	<Zheh>	<Yech>	<Reh>	<Ta>	<Yi>	<Hyun>	<Ini>	<Vo>	<Pen>	<Cha>	<Dza>	<APak>
2U	<Cps1>	<Ayb>	<Seh>	<Dyun>	<Feh>	<Gen>	<Ho>	<Cheh>	<Kim>	<Lyun>	<Yent>	<Apat>	<Entr>	
2L	<Cps1>	<Ayb>	<Seh>	<Dyun>	<Feh>	<Gen>	<Ho>	<Cheh>	<Kim>	<Lyun>	<Verj>	<Shes>	<Entr>	
1U	<Shft>	<Za>	<Xeh>	<Co>	<Vev>	<Beh>	<Nu>	<Men>	<DCha>	<ACha>	<Kakh>	<Shft>		
1L	<Shft>	<Za>	<Xeh>	<Co>	<Vev>	<Beh>	<Nu>	<Men>	<Stor>	<Mi ja>	<Paru>	<Shft>		

Western Armenian names for letters are used in Table 3. If the software doesn’t support virtual letters, then SOLIDUS (SLASH) may be used at ‘TYev’ position (all layouts).

VI References

1. RFC EN-001. Armenian Character Names, Descriptions, Classification, Collating, and Searching.
2. RFC EN-003. Armenian Text Input, Display, and Externalization Support.