Universal Multiple-Octet Coded Character Set International Organization for Standardization Organisation Internationale de Normalisation Международная организация по стандартизации

Doc Type: Working Group Document

Title: Proposal for encoding Sutton SignWriting in the UCS

Source: Michael Everson, Martin Hosken, Stephen Slevinski, and Valerie Sutton

Status: Individual Contribution

Action: For consideration by JTC1/SC2/WG2 and UTC

Date: 2012-10-14 Replaces: N4015

1. Introduction. SignWriting is a script developed in 1974 by Valerie Sutton, the inventor of Sutton Movement Writing, who two years earlier had developed DanceWriting. SignWriting is a featural script, its glyphs being visually iconic as well as in their spatial arrangement in text, which represents a sort of snapshot of any given sign. SignWriting is currently being used to write the following Sign Languages:

American Sign Language (in USA, English-speaking Canada) Japanese Sign Language Arabian Sign Languages Malawi Sign Language Australian Sign Language Malaysian Sign Language Bolivian Sign Language Maltese Sign Language Brazilian Sign Language Mexican Sign Language British Sign Language Nepalese Sign Language Catalan Sign Language New Zealand Sign Language Colombian Sign Language Nicaraguan Sign Language Czech Sign Language Norwegian Sign Language Danish Sign Language Peruvian Sign Language **Dutch Sign Language** Philippines Sign Language Ethiopian Sign Language Polish Sign Language Finnish Sign Language Portugese Sign Language Flemish Sign Language Québec Sign Language French-Belgian Sign Language South African Sign Language French Sign Language Spanish Sign Language German Sign Language Swedish Sign Language Greek Sign Language Swiss Sign Language Irish Sign Language Taiwanese Sign Language Italian Sign Language Tunisian Sign Language

A variety of literature exists in SignWriting. Much of it is lexical in nature (Sign Language dictionaries), but many longer texts, (such as the Gospels of Matthew, Mark, and John in American Sign Language) also exist (see www.signwriting.org/library/history/publications). It is estimated that there are thousands of publications in SignWriting, whether in ASL, or German Sign Language, Nicaraguan Sign Language, and so on.

2. Structure. The fundamental writing unit of SignWriting is called a "symbol", which in UCS terms is "character". The basic characters represent handshapes, facial expressions, and various indications of motion and contact. No single Sign Language uses all of the characters available in the SignWriting repertoire; some handshapes are distinctive in some Sign Languages while allophonic in others. Graphically, SignWriting characters are combined spatially on two-dimensional canvases to form individual "signs" (roughly equivalent to "words"). This spatial organization is *spelling* and is an essential part of the writing system.

Computer processing of SignWriting has been possible for many years, beginning with the SignWriter program which was in use from 1985 to 2004 (and continues to be used in some countries today). SignPuddle has been the world standard for SignWriting software from 2004 to present. In terms of UCS encoding, two main stages will be required. The first stage (represented in this proposal) is simpler: the encoding of the basic characters. These are simply graphic characters, proposed to be encoded in Plane 1. The second stage will deal with the spatial organization of SignWriting characters. The latter are anticipated to be encoded as control characters specific to SignWriting, probably in Plane 14. Currently, software developers for SignWriting use a variety of mechanisms to achieve spatial organization; research is ongoing to determine what the optimum mechanism is, in terms of accuracy and economy.

- **3. Character repertoire.** The largest group of graphic characters used in SignWriting represent 261 handshapes. There are also 250 motion and contact characters, 110 head and face characters, 26 body and location characters, 5 punctuation marks, and 20 characters which indicate "fill" and "rotation".
- **4. Fill and rotation characters.** These characters are somewhat analogous to the "shifter" characters proposed for Miao vowels in N3789 ("Final proposal for encoding the Miao script in the SMP of the UCS"). It is easiest to describe this in terms of the handshapes. A "fill" in SignWriting indicates the relative position of a handshape as the signer (or writer of SignWriting) views his or her hand. A black fill indicates that the back of the hand is viewed by the signer; a white fill indicates that the palm of the hand is viewed by the signer; and a half-fill indicates that the side of the hand is viewed by the signer. There are three fills which indicate when the hand is in a vertical plane (parallel to a wall) and three which indicate when the hand is in a horizontal plane (parallel to the floor).

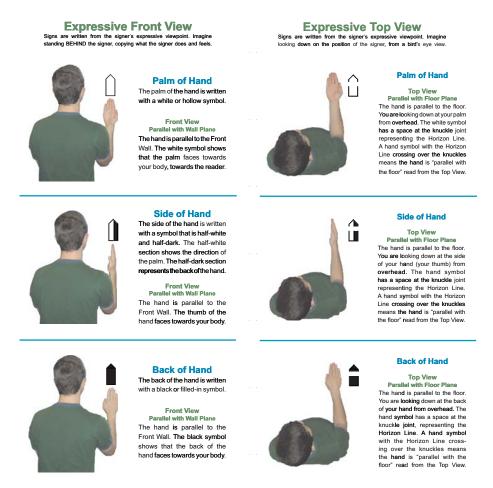


Figure 1. An example showing SIGNWRITING HAND-FLAT handshape with various fills.

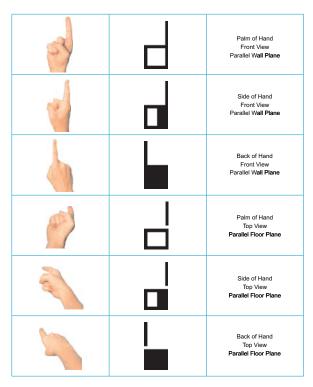


Figure 2. An example of SIGNWRITING HAND-FIST INDEX with various fills.

A "rotation" indicates one of sixteen positions a handshape can appear in. Rotation is also the means used to distinguish a left-hand character from a right-hand character.

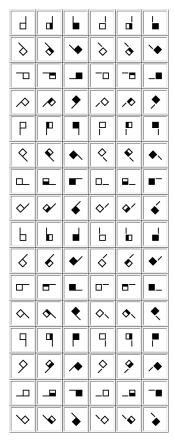


Figure 3. An example of SIGNWRITING HAND-FIST INDEX with all of the fills and rotations.

Thus it can be seen that a given handshape may have 96 different realizations. This is somewhat analogous to the letter e which serves as a base character but may be modified by various diacritical

marks, as in \acute{e} \grave{e} \acute{e} \acute{e} \acute{e} \acute{e} \acute{e} \acute{e} etc. In order to economize on code positions and to preserve the underlying index-hand character identity, fill and rotation is accomplished by following a base character with one of 5 fill characters and one of 15 rotation characters. Note that Fill-1 and Rotation-1 are inherent in the base character.

1 1	1	I I
d = d	$\Box + \begin{bmatrix} sw \\ F2 \end{bmatrix} = \Box$	- + [sw] - - -
$\Box + \begin{bmatrix} sw \\ R2 \end{bmatrix} = \diamond$	$\Box + \begin{bmatrix} sw \\ F2 \end{bmatrix} + \begin{bmatrix} sw \\ R2 \end{bmatrix} = \diamond$	$\Box + \begin{bmatrix} sw \\ F3 \end{bmatrix} + \begin{bmatrix} sw \\ R2 \end{bmatrix} = \checkmark$
d + [sw] = -	$\Box + \begin{bmatrix} sw \\ F2 \end{bmatrix} + \begin{bmatrix} sw \\ R3 \end{bmatrix} = - \Box$	$\Box + \begin{bmatrix} sw \\ F3 \end{bmatrix} + \begin{bmatrix} sw \\ R3 \end{bmatrix} = \bot \blacksquare$
d + [sw] = ⋄		$d + \begin{bmatrix} sw \\ F3 \end{bmatrix} + \begin{bmatrix} sw \\ R4 \end{bmatrix} = $
$d + \begin{bmatrix} sw \\ RS \end{bmatrix} = P$	$\Box + \begin{bmatrix} sw \\ F2 \end{bmatrix} + \begin{bmatrix} sw \\ R5 \end{bmatrix} = \blacksquare$	$\Box + \begin{bmatrix} sw \\ F3 \end{bmatrix} + \begin{bmatrix} sw \\ R5 \end{bmatrix} = \blacksquare$
d + [sw] = ♦		
d + [sw] = □_	☐ + [\$\frac{\text{SW}}{\text{F2}}] + [\text{SW}] = ■	☐ + [SW] + [SW] = ■
☐ + [\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	☐ + [\$\vec{\text{SW}}{\text{F2}} + [\vec{\text{SW}}{\text{R8}}] = �\rightarrow	
d + [RM] = b	$\Box + \begin{bmatrix} \frac{SW}{F2} + \frac{SW}{R9} \end{bmatrix} = \Box$	
d + (₹) = ♦	☐ + [\$\frac{\mathbf{SW}}{\mathbf{F}2}\right] + [\$\frac{\mathbf{SW}}{\mathbf{R}10}\right] = \$\phi\$	
d + [8] = -	☐ + [\$\vec{\text{RW}}{\text{F2}}] + [\vec{\text{RW}}{\text{RW}}] = □	d + [sw] + [sw] = ■
d + [sw] = ♦	☐ + [FW] + [FW] = ◆	
d + [sw] = 9	$d + \begin{bmatrix} \frac{1}{5} \\ \frac{1}{5} \end{bmatrix} + \begin{bmatrix} \frac{1}{5} \\ \frac{1}{813} \end{bmatrix} = \mathbf{q}$	
d + [sw] = ⋟	$d + \begin{bmatrix} \frac{1}{2} \\ \frac{1}{2} \end{bmatrix} + \begin{bmatrix} \frac{1}{2} \\ \frac{1}{2} \end{bmatrix} = 9$	d + [sw] + [sw] = ★
d + [sw] = _□	☐ + [FV] + [FV] = _□	d + [sw] + [sw] = ■
d + [sw] = ≫	☐ + [\$\frac{\sm}{\parallel} + [\sm] = \sigma	
		1111 - 1111
		「 <u>sw</u>]
☐ + [\$\text{\$W}] = ☐	☐ + [FW] = ☐	d + [sw] = ■
$d + \begin{bmatrix} sw \\ F4 \end{bmatrix} + \begin{bmatrix} sw \\ R2 \end{bmatrix} = \diamond$	$d + \begin{bmatrix} sw \\ F5 \end{bmatrix} + \begin{bmatrix} sw \\ R2 \end{bmatrix} = \diamond$	$\Box + \begin{bmatrix} sw \\ F6 \end{bmatrix} + \begin{bmatrix} sw \\ R2 \end{bmatrix} = \checkmark$
$ \begin{array}{c} $	$ \begin{array}{c} $	$\begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \\ \end{array} + \begin{array}{c} \begin{bmatrix} \\ \\ \\ \end{array} \end{bmatrix} = \begin{array}{c} \\ \\ \end{array} \end{array}$
$ \begin{array}{cccc} \Box + \begin{bmatrix} sw \\ F4 \end{bmatrix} + \begin{bmatrix} sw \\ R2 \end{bmatrix} = & & \\ \Box + \begin{bmatrix} sw \\ F4 \end{bmatrix} + \begin{bmatrix} sw \\ R3 \end{bmatrix} = & \\ \Box + \begin{bmatrix} sw \\ F4 \end{bmatrix} + \begin{bmatrix} sw \\ R4 \end{bmatrix} = & & \\ \end{array} $	$ \begin{array}{c} $	$ \begin{array}{c} $
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☐ + [\$\frac{\$\text{SW}}{\$\text{F4}}\$ + [\$\frac{\$\text{SW}}{\$\text{R2}}\$] = \$\limes\$ ☐ + [\$\frac{\$\text{SW}}{\$\text{F4}}\$ + [\$\frac{\$\text{SW}}{\$\text{R4}}\$] = \$\text{□}\$ ☐ + [\$\frac{\$\text{SW}}{\$\text{F4}}\$ + [\$\frac{\$\text{SW}}{\$\text{R5}}\$] = \$\text{□}\$ ☐ + [\$\frac{\$\text{SW}}{\$\text{F4}}\$ + [\$\frac{\$\text{SW}}{\$\text{R5}}\$] = \$\text{□}\$ ☐ + [\$\frac{\$\text{SW}}{\$\text{F4}}\$ + [\$\frac{\$\text{SW}}{\$\text{R9}}\$] = \$\text{□}\$	☐ + [SW] + [SW] = → ☐ + [SW] + [SW] = ¬□ ☐ + [SW] + [SW] = ¬□ ☐ + [SW] + [SW] = → ☐ + [SW] + [SW] = □ ☐ + [SW] + [SW] + [SW] = □ ☐ + [SW] + [SW] + [SW] = □ ☐ + [SW] + [SW] + [SW] = □ ☐ + [SW] +	□ + [SW] + [SW] = \ldots □ + [SW] + [SW] = \ldots □ + [FE] + [SW] = \ldots □ + [SW] + [SW] = \ldots
□ +	□ +	□ + SW F6 + SW =
□ + [SW] + [SW] = \$\lambda\$	□ +	□ + SW F8 F8 F8 F8 F8 F8 F8 F
□ +	□ +	□ + SW F6 + SW =

A font implementation which does not have support for fill and rotation should simply display or display or display or display display display or display display or display display display display or display display display display display display display display or display display

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These arrows do not have the "handedness" of the handshapes, so they take only 8 rotations, and require only 4 fills.

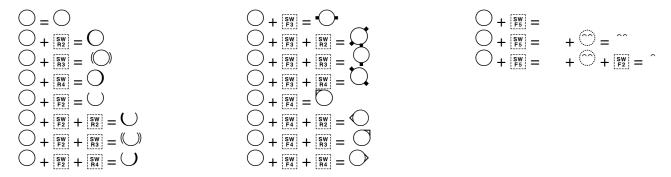
$\uparrow = \uparrow$			\uparrow + $\begin{bmatrix} sw \\ F4 \end{bmatrix} = \parallel$
↑ + [sw] = \			
↑ + [SW] = ←		$ \uparrow + \begin{bmatrix} sw \\ F3 \end{bmatrix} + \begin{bmatrix} sw \\ R3 \end{bmatrix} = $	$ \uparrow + \begin{bmatrix} sw \\ F4 \end{bmatrix} + \begin{bmatrix} sw \\ R3 \end{bmatrix} = = = $
	$ \uparrow + \begin{bmatrix} sw \\ F2 \end{bmatrix} + \begin{bmatrix} sw \\ R4 \end{bmatrix} = \checkmark $	$ \uparrow + \begin{bmatrix} sw \\ F3 \end{bmatrix} + \begin{bmatrix} sw \\ R4 \end{bmatrix} = \cancel{U} $	$ \uparrow + \begin{bmatrix} sw \\ F4 \end{bmatrix} + \begin{bmatrix} sw \\ R4 \end{bmatrix} = // $
$ \uparrow + \begin{bmatrix} sw \\ R5 \end{bmatrix} = \downarrow $	$ \uparrow + \begin{bmatrix} sw \\ F2 \end{bmatrix} + \begin{bmatrix} sw \\ R5 \end{bmatrix} = \psi $	$ \uparrow + \begin{bmatrix} sw \\ F3 \end{bmatrix} + \begin{bmatrix} sw \\ R5 \end{bmatrix} = \downarrow $	$ \uparrow + \begin{bmatrix} sw \\ F4 \end{bmatrix} + \begin{bmatrix} sw \\ R5 \end{bmatrix} = \ $
	$ \uparrow + \begin{bmatrix} sw \\ F2 \end{bmatrix} + \begin{bmatrix} sw \\ R6 \end{bmatrix} = \searrow $	$ \uparrow + \begin{bmatrix} sw \\ F3 \end{bmatrix} + \begin{bmatrix} sw \\ R6 \end{bmatrix} = \searrow $	$ \uparrow + \begin{bmatrix} sw \\ F4 \end{bmatrix} + \begin{bmatrix} sw \\ R6 \end{bmatrix} = \mathbf{N} $
			$ \uparrow + \begin{bmatrix} sw \\ F4 \end{bmatrix} + \begin{bmatrix} sw \\ R8 \end{bmatrix} = \# $

The fast tempo signs in the left column below have neither "rotations" nor "fills" but Fill characters are used to select their shapes. The slow tempo signs in the centre column have no fills, but do have rotations. Headshapes like the one shown in the right column, cannot take (for example) Rotation 5 because it is physiologically impossible.

A complete list of valid and invalid sequences of base character, fill character, and rotation character, is given in a file at http://www.evertype.com/standards/iso10646/pdf/signwritingsequences.txt

- **5. Fills and Rotations in current implementations.** SignWriting has employed "triplets" of Base + Fill + Rotation since the "SignWriter" computer program (written by Richard Gleaves for the Apple IIe in 1985–1986 and later ported to DOS); are still used in the SignPuddle software presently maintained by Stephen E. Slevinski Jr. Although various methods of representing the triplets in data were used depending on platform, the data structure has been consistent and it has been possible to map this data from implementation to implementation. The UCS encoding differs from the previous encodings in "hard-coding" Fill-1 and Rotation-1 as "inherent" to the base character, but the structure remains the same and previous data can be reliably mapped to the structure of the encoding proposed here.
- **6. Faces and heads.** The characters U+1DA00..1DA36 and U+1DA3B..1DA6C are combining characters that combine with a preceding base character, U+1D9FF SIGNWRITING HEAD. Diacritics are subcategorized by modifying then with fill characters. For example U+1DA16 SIGNWRITING EYES CLOSED indicates both eyes closed, while U+1DA16 SIGNWRITING EYES CLOSED followed by SW U+1DA9B SIGNWRITING FILL MODIFIER-2 is just the right eye closed. Diacritics may be combined following the HEAD, for example with eye and mouth diacritics both occurring.

Face diacritics modify a head. If one wants to render a diacritic sequence (eyes, eyebrows, mouthshapes) on its own, the base character is first modified to make it invisible, by using U+1D9FF SIGNWRITING HEAD followed by U+1D9AE SIGNWRITING FILL MODIFIER-5. The need to render face modifiers without a face is very rare and never used in actual sign languages.



The head followed by fill-2, open at the top, is used for example when eyebrows and eyes might take up too much space when rendered within a fully-circular head.



Figure 4. Three heads with complex facial expressions, making use of the "open-top head".

- **7.** Collating order. For the purposes of the UCA and ISO/IEC 14651, the binary collation order in the code chart should be sufficient for the default tailorable template. Sorting SignWriting signs is far too complex for the default template.
- **8. Linebreaking.** Line breaks do not occur in the middle of a sign. Line breaks do not occur before punctuation. It would appear that SignWriting graphic characters should have the same linebreaking properties as Egyptian hieroglyphs.
- **9. SignWriting Markup Language.** There are several flavours of SWML. Some versions are more complicated and included more semantic structure than does the SignPuddle implementation which is predominant today.

For the type of SWML which Steve Slevinski used in the past, see an example from SignPuddle 1.5; see http://www.signbank.org/signpuddle1.5/data/sgn/28/6810.swml

This older SWML overloads the "sign" entity for punctuation. There are only 2 elements: signs and symbols. For the current implementation, Steve Slevinski separated out punctuation. Here is an example in SignPuddle 1.6; The online example is at:

http://signbank.org/signpuddle1.6/dataformat.php?ui=1&sgn=4&ksw=M18x29S14c20n19xn29S271063xn11%20M18x33S1870an11x15S18701n18xn10S205008xn4S2e7340xn32%20S38800n36xn4

This shows the phrase "Hello World." in American Sign Language. This has 2 signs ("hello" and "world") and one punctuation mark (SIGNWRITING FULL STOP).



Data Options

Markup	Lite 💠
Symbol Identification	[mage ‡]
Data Content	Minimal 💠
Display Parameters	
	View
M¥n19xn29 ₹3xn11	M ←n11x15 →n18xn10 *8xn4 9 0xn32 ———
Markup	Lite 💠
Symbol Identification	Preliminary Unicode 💠
Data Content	Minimal 💠
Display Parameters	
	View
M□□□n19xn29□□□3:	xn11 MDDDn11x15DDDn18xn10DDD8xn4DDD0xn32 DDD

Figure 5. Here, the underlying data structure of "Hello World" is shown. In the upper box the glyphs (hand, three-back-and-forth-arrows, hand, hand, circling-arrow, punctuation) are shown surrounded by SWML markup for two-dimensional display. In the lower box, the triplet of (in this case) PUA characters are shown (displayed as square boxes) for each of those entities, flanked by the same SWML markup.

The main two elements in the markup are "signbox" and "punctuation". The punctuation element always contains a single punctuation symbol. The "signbox" element can have 2 types of elements: "sym" as spatial symbols and "seq" as sequential symbols. The spatial symbol includes 2-dimensional positioning and are considered unordered. The sequential symbols are ordered, but do not include 2-dimensional positioning.

Earlier implementations used a set of standardized symbol IDs to identify each symbol: example "01-01-001-01-01" is \Box . The first 4 number parts are used for conversion to the modern symbol identification. A datafile with 652 rows is required for conversion. For conversion to Unicode, the value of the second column is revised starting from the hex value "1D700". A list of signs in this numeric format is given at http://signpuddle.net/iswa/data/iswa_sym_base.txt .

For symbol identification, existing software has 3 primary options: code, key, and Unicode.

- The code is a 16-bit number from 1 to 65,000. These codes are useful as primary keys in a database.
- The key is a string of 6 ASCII characters. This is used for the ASCII representation of SignWriting data
- The Unicode is a string of 3 characters (minus inherent Fill-1 and Rotation-1).

There are simple mathematical formulae for conversion between the symbol code, key, and Unicode. These identifications are isomorphic. For the structures above the symbols, there are 2 types of markup: lite and full. They both represent the same data. The "lite" markup uses strings for signs and punctuation marks. The full markup uses XML. In both markups, the symbols can be identified by code, key, Unicode, or even symbol ID.

9.1 Encoding models for SignWriting graphic characters. A brief discussion as to possible encoding models is relevant to the UTC and WG2 decision about how to encode the characters. In principle, the following three methods could be used:

- a) encode 37,811 characters
- b) encode 522 handshapes (for left and right hands) and only 8 rotations
- c) encode 261 handshapes and 16 rotations

Choice (a) is equivalent to the 16-bit symbol code. This was in fact the first encoding considered, but it was dropped because of search limitation in the design. *Searching* was the main reason for choice (c). We can easily search for a general symbol base, or a symbol base with a specific fill, a symbol base with a specific rotation, or an exact symbol. Choice (b) has not been preferred because it is the handshape which is the basic phoneme, not the hand per se. Moreover, complex signs involving hands touching and crossing the body would make it more difficult for end users than choice (c) does. And choice (c) is isomporphic to previous implementations.

Since the triplets Base + Fill +Rotation are part of the "entity set" in SWML, our proposal optimizes mapping between existing data and the new UCS data which will be created after the proposed characters are encoded. The concept of symbol identity is used in SWML. We have 3 equivalent symbol identifications: code, key, and Unicode. The optimized mapping of existing data is explicitly stated in the mathematical conversions between these symbol identifications.

10. Unicode Character Properties.

```
1D800; SIGNWRITING HAND-FIST INDEX; Lo; 0; L;;;;; N;;;;;
1D801; SIGNWRITING HAND-CIRCLE INDEX; Lo; 0; L;;;;; N;;;;
1D802;SIGNWRITING HAND-CUP INDEX;Lo;0;L;;;;;N;;;;
1D803; SIGNWRITING HAND-OVAL INDEX; Lo; 0; L;;;;; N;;;;
1D804; SIGNWRITING HAND-HINGE INDEX; Lo; 0; L;;;;; N;;;;
1D805; SIGNWRITING HAND-ANGLE INDEX; Lo; 0; L;;;;; N;;;;
1D806; SIGNWRITING HAND-FIST INDEX BENT; Lo; 0; L;;;;; N;;;;
1D807; SIGNWRITING HAND-CIRCLE INDEX BENT; Lo; 0; L;;;;; N;;;;
1D808; SIGNWRITING HAND-FIST THUMB UNDER INDEX BENT; Lo; 0; L;;;;; N;;;;
1D809; SIGNWRITING HAND-FIST INDEX RAISED KNUCKLE; Lo; 0; L;;;; N;;;;
1D80A; SIGNWRITING HAND-FIST INDEX CUPPED; Lo; 0; L;;;;; N;;;;
1D80B; SIGNWRITING HAND-FIST INDEX HINGED; Lo; 0; L;;;;; N;;;;
1D80C; SIGNWRITING HAND-FIST INDEX HINGED LOW; Lo; 0; L;;;;; N;;;;
1D80D; SIGNWRITING HAND-CIRCLE INDEX HINGE; Lo; 0; L;;;;; N;;;;
1D80E; SIGNWRITING HAND-FIST INDEX MIDDLE; Lo; 0; L;;;;; N;;;;
1D80F; SIGNWRITING HAND-CIRCLE INDEX MIDDLE; Lo; 0; L;;;;; N;;;;
1D810; SIGNWRITING HAND-FIST INDEX MIDDLE BENT; Lo; 0; L;;;;; N;;;;;
1D811;SIGNWRITING HAND-FIST INDEX MIDDLE RAISED KNUCKLES;Lo;0;L;;;;;N;;;;
1D812; SIGNWRITING HAND-FIST INDEX MIDDLE HINGED; Lo; 0; L;;;;; N;;;;
1D813; SIGNWRITING HAND-FIST INDEX UP MIDDLE HINGED; Lo; 0; L; ;; ;; n; ;; ;;
1D814; SIGNWRITING HAND-FIST INDEX HINGED MIDDLE UP; Lo; 0; L;;;;; N;;;;
1D815; SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED; Lo; 0; L; ;; ;; N; ;; ;
1D816; SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED INDEX BENT; Lo; 0; L;;;;; N;;;;;
1D817;SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED MIDDLE BENT;Lo;0;L;;;;N;;;;
1D818; SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED CUPPED; Lo; 0; L;;;;; N;;;;
1D819;SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED HINGED;Lo;0;L;;;;;N;;;;;
1D81A; SIGNWRITING HAND-FIST INDEX MIDDLE CROSSED; Lo; 0; L;;;;; N;;;;;
1D81B; SIGNWRITING HAND-CIRCLE INDEX MIDDLE CROSSED; Lo; 0; L; ;; ;; N; ;; ;;
1D81C; SIGNWRITING HAND-FIST MIDDLE BENT OVER INDEX; Lo; 0; L;;;;; N;;;;
1D81D; SIGNWRITING HAND-FIST INDEX BENT OVER MIDDLE; Lo; 0; L;;;;; N;;;;;
1D81E; SIGNWRITING HAND-FIST INDEX MIDDLE THUMB; Lo; 0; L;;;;; N;;;;
1D81F; SIGNWRITING HAND-CIRCLE INDEX MIDDLE THUMB; Lo; 0; L;;;;; N;;;;
1D820; SIGNWRITING HAND-FIST INDEX MIDDLE STRAIGHT THUMB BENT; Lo; 0; L;;;;; N;;;;
1D821;SIGNWRITING HAND-FIST INDEX MIDDLE BENT THUMB STRAIGHT;Lo;0;L;;;;;N;;;;;
1D822;SIGNWRITING HAND-FIST INDEX MIDDLE THUMB BENT;Lo;0;L;;;;;N;;;;;
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1D823; SIGNWRITING HAND-FIST INDEX MIDDLE HINGED SPREAD THUMB SIDE; Lo; 0; L;;;;; N;;;;
1D824; SIGNWRITING HAND-FIST INDEX UP MIDDLE HINGED THUMB SIDE; Lo; 0; L;;;;; N;;;;
1D825;SIGNWRITING HAND-FIST INDEX UP MIDDLE HINGED THUMB CONJOINED;Lo;0;L;;;;N;;;; 1D826;SIGNWRITING HAND-FIST INDEX HINGED MIDDLE UP THUMB SIDE;Lo;0;L;;;;N;;;;
1D827;SIGNWRITING HAND-FIST INDEX MIDDLE UP SPREAD THUMB FORWARD;Lo;0;L;;;;;N;;;;
1D828; SIGNWRITING HAND-FIST INDEX MIDDLE THUMB CUPPED; Lo; 0; L;;;;; N;;;;
1D829; SIGNWRITING HAND-FIST INDEX MIDDLE THUMB CIRCLED; Lo; 0; L;;;;; N;;;;
1D82A; SIGNWRITING HAND-FIST INDEX MIDDLE THUMB HOOKED; Lo; 0; L;;;;; N;;;;
1D82B;SIGNWRITING HAND-FIST INDEX MIDDLE THUMB HINGED;Lo;0;L;;;;;N;;;;;
1D82C;SIGNWRITING HAND-FIST THUMB BETWEEN INDEX MIDDLE STRAIGHT;Lo;0;L;;;;N;;;;
1D82D;SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED THUMB SIDE;Lo;0;L;;;;N;;;;
1D82E;SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED THUMB SIDE CONJOINED;Lo;0;L;;;;N;;;;;
1D82F;SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED THUMB SIDE BENT;Lo;0;L;;;;;N;;;;;
1D830; SIGNWRITING HAND-FIST MIDDLE THUMB HOOKED INDEX UP; Lo; 0; L;;;;; N;;;;
1D831; SIGNWRITING HAND-FIST INDEX THUMB HOOKED MIDDLE UP; Lo; 0; L;;;;; N;;;;
1D832; SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED HINGED THUMB SIDE; Lo; 0; L;;;;; N;;;;;
1D833; SIGNWRITING HAND-FIST INDEX MIDDLE CROSSED THUMB SIDE; Lo; 0; L;;;;; N;;;;; 1D834; SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED THUMB FORWARD; Lo; 0; L;;;;; N;;;;
1D835;SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED CUPPED THUMB FORWARD;Lo;0;L;;;;;N;;;;
1D836; SIGNWRITING HAND-FIST MIDDLE THUMB CUPPED INDEX UP; Lo; 0; L;;;;; N;;;;
1D837;SIGNWRITING HAND-FIST INDEX THUMB CUPPED MIDDLE UP;Lo;0;L;;;;;N;;;;
1D838; SIGNWRITING HAND-FIST MIDDLE THUMB CIRCLED INDEX UP; Lo; 0; L;;;;; N;;;;;
1D839; SIGNWRITING HAND-FIST MIDDLE THUMB CIRCLED INDEX HINGED; Lo; 0; L;;;;; N;;;;;
1D83A; SIGNWRITING HAND-FIST INDEX THUMB ANGLED OUT MIDDLE UP;Lo;0;L;;;;N;;;;
1D83B; SIGNWRITING HAND-FIST INDEX THUMB ANGLED IN MIDDLE UP;Lo;0;L;;;;N;;;;
1D83C; SIGNWRITING HAND-FIST INDEX THUMB CIRCLED MIDDLE UP; Lo; 0; L;;;;; N;;;;
1D83D; SIGNWRITING HAND-FIST INDEX MIDDLE THUMB CONJOINED HINGED; Lo; 0; L; ;; ;; N; ;; ;;
1D83E;SIGNWRITING HAND-FIST INDEX MIDDLE THUMB ANGLED OUT;Lo;0;L;;;;;N;;;;;
1D83F;SIGNWRITING HAND-FIST INDEX MIDDLE THUMB ANGLED;Lo;0;L;;;;;N;;;;;
1D840; SIGNWRITING HAND-FIST MIDDLE THUMB ANGLED OUT INDEX UP; Lo; 0; L;;;;; N;;;;
1D841; SIGNWRITING HAND-FIST MIDDLE THUMB ANGLED OUT INDEX CROSSED; Lo; 0; L;;;;; N;;;;;
1D842;SIGNWRITING HAND-FIST MIDDLE THUMB ANGLED INDEX UP;Lo;0;L;;;;N;;;;;
1D843;SIGNWRITING HAND-FIST INDEX THUMB HOOKED MIDDLE HINGED;Lo;O;L;;;;;N;;;;
1D844; SIGNWRITING HAND-FLAT FOUR FINGERS; Lo; 0; L;;;;; N;;;;
1D845; SIGNWRITING HAND-FLAT FOUR FINGERS BENT; Lo; 0; L;;;;; N;;;;;
1D846; SIGNWRITING HAND-FLAT FOUR FINGERS HINGED; Lo; 0; L;;;;; N;;;;
1D847; SIGNWRITING HAND-FLAT FOUR FINGERS CONJOINED; Lo; 0; L;;;; N;;;;
1D848; SIGNWRITING HAND-FLAT FOUR FINGERS CONJOINED SPLIT; Lo; 0; L;;;;; N;;;;
1D849; SIGNWRITING HAND-CLAW FOUR FINGERS CONJOINED; Lo; 0; L;;;; N;;;;
1D84A; SIGNWRITING HAND-FIST FOUR FINGERS CONJOINED BENT; Lo; 0; L;;;;; N;;;;
1D84B; SIGNWRITING HAND-HINGE FOUR FINGERS CONJOINED; Lo; 0; L;;;;; N;;;;
1D84C;SIGNWRITING HAND-FLAT FIVE FINGERS SPREAD;Lo;0;L;;;;;N;;;;
1D84D; SIGNWRITING HAND-FLAT HEEL FIVE FINGERS SPREAD; Lo; 0; L;;;;; N;;;;
1D84E;SIGNWRITING HAND-FLAT FIVE FINGERS SPREAD FOUR BENT;Lo;0;L;;;;;N;;;;
1D84F;SIGNWRITING HAND-FLAT HEEL FIVE FINGERS SPREAD FOUR BENT;Lo;0;L;;;;;N;;;;;
1D850; SIGNWRITING HAND-FLAT FIVE FINGERS SPREAD BENT; Lo; 0; L;;;;; N;;;;
1D851;SIGNWRITING HAND-FLAT HEEL FIVE FINGERS SPREAD BENT;Lo;0;L;;;;N;;;;
1D852;SIGNWRITING HAND-FLAT FIVE FINGERS SPREAD THUMB FORWARD;Lo;0;L;;;;;N;;;;
1D853;SIGNWRITING HAND-CUP FIVE FINGERS SPREAD;Lo;0;L;;;;;N;;;;
1D854; SIGNWRITING HAND-CUP FIVE FINGERS SPREAD OPEN; Lo; 0; L;;;;; N;;;;
1D855; SIGNWRITING HAND-HINGE FIVE FINGERS SPREAD OPEN; Lo; 0; L;;;;; N;;;;
1D856; SIGNWRITING HAND-OVAL FIVE FINGERS SPREAD; Lo; 0; L;;;;; N;;;;;
1D857; SIGNWRITING HAND-FLAT FIVE FINGERS SPREAD HINGED; Lo; 0; L;;;;; N;;;;
10858; SIGNWRITING HAND-FLAT FIVE FINGERS SPREAD HINGED THUMB SIDE; Lo; 0; L; ;; ;; n; ;; ;; 10859; SIGNWRITING HAND-FLAT FIVE FINGERS SPREAD HINGED NO THUMB; Lo; 0; L; ;; ;; n; ;; ;;
1D85A; SIGNWRITING HAND-FLAT; Lo; 0; L;;;;; N;;;;;
1D85B; SIGNWRITING HAND-FLAT BETWEEN PALM FACINGS; Lo; 0; L;;;;; N;;;;
1D85C; SIGNWRITING HAND-FLAT HEEL; Lo; 0; L;;;;; N;;;;
1D85D; SIGNWRITING HAND-FLAT THUMB SIDE; Lo; 0; L;;;;; N;;;;
1D85E; SIGNWRITING HAND-FLAT HEEL THUMB SIDE; Lo; 0; L;;;;; N;;;;
1D85F;SIGNWRITING HAND-FLAT THUMB BENT;Lo;0;L;;;;N;;;;
1D860;SIGNWRITING HAND-FLAT THUMB FORWARD;Lo;0;L;;;;N;;;;
1D861; SIGNWRITING HAND-FLAT SPLIT INDEX THUMB SIDE; Lo; 0; L;;;;; N;;;;
1D862; SIGNWRITING HAND-FLAT SPLIT CENTER; Lo; 0; L;;;;; N;;;;;
1D863; SIGNWRITING HAND-FLAT SPLIT CENTER THUMB SIDE; Lo; 0; L;;;;; N;;;;;
1D864; SIGNWRITING HAND-FLAT SPLIT CENTER THUMB SIDE BENT; Lo; 0; L;;;;; N;;;;;
1D865; SIGNWRITING HAND-FLAT SPLIT LITTLE; Lo; 0; L;;;;; N;;;;;
1D866;SIGNWRITING HAND-CLAW;Lo;0;L;;;;;N;;;;
1D867; SIGNWRITING HAND-CLAW THUMB SIDE; Lo; 0; L;;;;; N;;;;
1D868;SIGNWRITING HAND-CLAW NO THUMB;Lo;0;L;;;;;N;;;;
1D869;SIGNWRITING HAND-CLAW THUMB FORWARD;Lo;0;L;;;;;N;;;;
1D86A; SIGNWRITING HAND-HOOK CURLICUE; Lo; 0; L;;;;; N;;;;
1D86B; SIGNWRITING HAND-HOOK; Lo; 0; L;;;;; N;;;;
1D86C; SIGNWRITING HAND-CUP OPEN; Lo; 0; L;;;;; N;;;;
1D86D;SIGNWRITING HAND-CUP;Lo;0;L;;;;N;;;;
1D86E;SIGNWRITING HAND-CUP OPEN THUMB SIDE;Lo;0;L;;;;N;;;;
1D86F; SIGNWRITING HAND-CUP THUMB SIDE; Lo; 0; L;;;;; N;;;;
1D870; SIGNWRITING HAND-CUP OPEN NO THUMB; Lo; 0; L;;;;; N;;;;
1D871;SIGNWRITING HAND-CUP NO THUMB;Lo;0;L;;;;;N;;;;;
1D872; SIGNWRITING HAND-CUP OPEN THUMB FORWARD; Lo; 0; L;;;;; N;;;;
1D873; SIGNWRITING HAND-CUP THUMB FORWARD; Lo; 0; L;;;;; N;;;;
1D874; SIGNWRITING HAND-CURLICUE OPEN; Lo; 0; L;;;;; N;;;;;
1D875; SIGNWRITING HAND-CURLICUE; Lo; 0; L;;;;; N;;;;
1D876; SIGNWRITING HAND-CIRCLE; Lo; 0; L;;;;; N;;;;;
1D877;SIGNWRITING HAND-OVAL;Lo;0;L;;;;;N;;;;
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1D878; SIGNWRITING HAND-OVAL THUMB SIDE; Lo; 0; L;;;;; N;;;;
1D879; SIGNWRITING HAND-OVAL NO THUMB; Lo; 0; L;;;;; N;;;;
1D87A;SIGNWRITING HAND-OVAL THUMB FORWARD;Lo;0;L;;;;;N;;;;
1D87B; SIGNWRITING HAND-HINGE OPEN; Lo; 0; L;;;;; N;;;;;
1D87C; SIGNWRITING HAND-HINGE OPEN THUMB FORWARD; Lo; 0; L;;;;; N;;;;
1D87D; SIGNWRITING HAND-HINGE; Lo; 0; L;;;;; N;;;;;
1D87E; SIGNWRITING HAND-HINGE SMALL; Lo; 0; L;;;;; N;;;;
1D880; SIGNWRITING HAND-HINGE THUMB SIDE; Lo; 0; L;;;;; N;;;;;
1D881;SIGNWRITING HAND-HINGE OPEN NO THUMB;Lo;0;L;;;;;N;;;;
1D882;SIGNWRITING HAND-HINGE NO THUMB;Lo;0;L;;;;;N;;;;
1D883; SIGNWRITING HAND-HINGE THUMB SIDE TOUCHING INDEX; Lo; 0; L;;;;; N;;;;
1D884; SIGNWRITING HAND-HINGE THUMB BETWEEN MIDDLE RING; Lo; 0; L; ;; ;; N; ;; ;;
1D885; SIGNWRITING HAND-ANGLE; Lo; 0; L;;;;; N;;;;;
1D886; SIGNWRITING HAND-FIST INDEX MIDDLE RING; Lo; 0; L;;;;; N;;;;;
1D887; SIGNWRITING HAND-CIRCLE INDEX MIDDLE RING; Lo; 0; L;;;;; N;;;;
1D888;SIGNWRITING HAND-HINGE INDEX MIDDLE RING;Lo;0;L;;;;;N;;;;
1D889; SIGNWRITING HAND-ANGLE INDEX MIDDLE RING; Lo; 0; L;;;;; N;;;;
1D88A; SIGNWRITING HAND-HINGE LITTLE; Lo; 0; L; ;; ; N; ;; ;; 1D88B; SIGNWRITING HAND-FIST INDEX MIDDLE RING BENT; Lo; 0; L; ;; ;; N; ;; ;;
1D88C; SIGNWRITING HAND-FIST INDEX MIDDLE RING CONJOINED; Lo; 0; L;;;;; N;;;;;
1D88D; SIGNWRITING HAND-HINGE INDEX MIDDLE RING CONJOINED; Lo; 0; L;;;;; N;;;;
1D88E; SIGNWRITING HAND-FIST LITTLE DOWN; Lo; 0; L;;;;; N;;;;;
1D88F; SIGNWRITING HAND-FIST LITTLE DOWN RIPPLE STRAIGHT; Lo; 0; L;;;;; N;;;;
1D890;SIGNWRITING HAND-FIST LITTLE DOWN RIPPLE CURVED;Lo;0;L;;;;;N;;;;
1D891;SIGNWRITING HAND-FIST LITTLE DOWN OTHERS CIRCLED;Lo;0;L;;;;;N;;;;;
1D892; SIGNWRITING HAND-FIST LITTLE UP; Lo; 0; L;;;;; N;;;;;
1D893; SIGNWRITING HAND-FIST THUMB UNDER LITTLE UP; Lo; 0; L;;;;; N;;;;
1D894; SIGNWRITING HAND-CIRCLE LITTLE UP; Lo; 0; L;;;;; N;;;;;
1D895; SIGNWRITING HAND-OVAL LITTLE UP; Lo; 0; L;;;;; N;;;;;
1D896; SIGNWRITING HAND-ANGLE LITTLE UP; Lo; 0; L;;;;; N;;;;
1D897; SIGNWRITING HAND-FIST LITTLE RAISED KNUCKLE; Lo; 0; L;;;;; N;;;;
1D898; SIGNWRITING HAND-FIST LITTLE BENT; Lo; 0; L;;;;; N;;;;
1D899; SIGNWRITING HAND-FIST LITTLE TOUCHES THUMB; Lo; 0; L;;;;; N;;;;;
1D89A; SIGNWRITING HAND-FIST LITTLE THUMB; Lo; 0; L;;;;; N;;;;;
1D89B; SIGNWRITING HAND-HINGE LITTLE THUMB; Lo; 0; L;;;;; N;;;;
1D89C; SIGNWRITING HAND-FIST LITTLE INDEX THUMB; Lo; 0; L;;;;; N;;;;
1D89D; SIGNWRITING HAND-HINGE LITTLE INDEX THUMB; Lo; 0; L;;;;; N;;;;
1D89E; SIGNWRITING HAND-ANGLE LITTLE INDEX THUMB INDEX THUMB OUT; Lo; 0; L;;;;; N;;;;
1D89F;SIGNWRITING HAND-ANGLE LITTLE INDEX THUMB INDEX THUMB;Lo;0;L;;;;;N;;;;
1D8A0; SIGNWRITING HAND-FIST LITTLE INDEX; Lo; 0; L;;;;; N;;;;
1D8A1; SIGNWRITING HAND-CIRCLE LITTLE INDEX; Lo; 0; L;;;;; N;;;;
1D8A2; SIGNWRITING HAND-HINGE LITTLE INDEX; Lo; 0; L;;;;; N;;;;
1D8A3; SIGNWRITING HAND-ANGLE LITTLE INDEX; Lo; 0; L;;;;; N;;;;
1D8A4; SIGNWRITING HAND-FIST INDEX MIDDLE LITTLE; Lo; 0; L;;;; N;;;;
1D8A5; SIGNWRITING HAND-CIRCLE INDEX MIDDLE LITTLE; Lo; 0; L;;;; N;;;;
1D8A6; SIGNWRITING HAND-HINGE INDEX MIDDLE LITTLE; Lo; 0; L;;;;; N;;;;
1D8A7; SIGNWRITING HAND-HINGE RING; Lo; 0; L;;;;; N;;;;
1D8A8; SIGNWRITING HAND-ANGLE INDEX MIDDLE LITTLE; Lo; 0; L;;;;; N;;;;;
1D8A9; SIGNWRITING HAND-FIST INDEX MIDDLE CROSS LITTLE; Lo; 0; L;;;;; N;;;;
1D8AA; SIGNWRITING HAND-CIRCLE INDEX MIDDLE CROSS LITTLE; Lo; 0; L;;;;; N;;;;
1D8AB; SIGNWRITING HAND-FIST RING DOWN; Lo; 0; L;;;;; N;;;;
1D8AC; SIGNWRITING HAND-HINGE RING DOWN INDEX THUMB HOOK MIDDLE; Lo; 0; L;;;;; N;;;;
1D8AD; SIGNWRITING HAND-ANGLE RING DOWN MIDDLE THUMB INDEX CROSS; Lo; 0; L;;;;; N;;;;
1D8AE;SIGNWRITING HAND-FIST RING UP;Lo;0;L;;;;N;;;;
1D8AF; SIGNWRITING HAND-FIST RING RAISED KNUCKLE; Lo; 0; L;;;;; N;;;;
1D8B0; SIGNWRITING HAND-FIST RING LITTLE; Lo; 0; L;;;;; N;;;;;
1D8B1; SIGNWRITING HAND-CIRCLE RING LITTLE; Lo; 0; L;;;;; N;;;;
1D8B2; SIGNWRITING HAND-OVAL RING LITTLE; Lo; 0; L;;;;; N;;;;
1D8B3;SIGNWRITING HAND-ANGLE RING LITTLE;Lo;0;L;;;;;N;;;;
1D8B4;SIGNWRITING HAND-FIST RING MIDDLE;Lo;0;L;;;;N;;;;
1D8B5;SIGNWRITING HAND-FIST RING MIDDLE CONJOINED;Lo;0;L;;;;N;;;;
1D8B6; SIGNWRITING HAND-FIST RING MIDDLE RAISED KNUCKLES; Lo; 0; L;;;;; N;;;;
1D8B7; SIGNWRITING HAND-FIST RING INDEX; Lo; 0; L;;;;; N;;;;
1D8B8; SIGNWRITING HAND-FIST RING THUMB; Lo; 0; L;;;;; N;;;;
1D8B9;SIGNWRITING HAND-HOOK RING THUMB;Lo;0;L;;;;;N;;;;
1D8BA; SIGNWRITING HAND-FIST INDEX RING LITTLE; Lo; 0; L;;;;; N;;;;
1D8BB; SIGNWRITING HAND-CIRCLE INDEX RING LITTLE; Lo; 0; L;;;;; N;;;;
1D8BC;SIGNWRITING HAND-CURLICUE INDEX RING LITTLE ON;Lo;0;L;;;;;N;;;;
1D8BD; SIGNWRITING HAND-HOOK INDEX RING LITTLE OUT; Lo; 0; L;;;;; N;;;;
1D8BE; SIGNWRITING HAND-HOOK INDEX RING LITTLE IN; Lo; 0; L;;;;; N;;;;
1D8BF; SIGNWRITING HAND-HOOK INDEX RING LITTLE UNDER; Lo; 0; L; ;; ;; ;; ;;
1D8C0; SIGNWRITING HAND-CUP INDEX RING LITTLE; Lo; 0; L;;;;; N;;;;;
1D8C1; SIGNWRITING HAND-HINGE INDEX RING LITTLE; Lo; 0; L;;;;;; N;;;;;
1D8C2; SIGNWRITING HAND-ANGLE INDEX RING LITTLE OUT; Lo; 0; L;;;;; N;;;;
1D8C3;SIGNWRITING HAND-ANGLE INDEX RING LITTLE;Lo;0;L;;;;N;;;;
1D8C4; SIGNWRITING HAND-FIST MIDDLE DOWN; Lo; 0; L;;;;; N;;;;
1D8C5; SIGNWRITING HAND-HINGE MIDDLE; Lo; 0; L;;;;; N;;;;
1D8C6; SIGNWRITING HAND-FIST MIDDLE UP; Lo; 0; L;;;;; N;;;;
1D8C7; SIGNWRITING HAND-CIRCLE MIDDLE UP; Lo; 0; L;;;;; N;;;;
1D8C8; SIGNWRITING HAND-FIST MIDDLE RAISED KNUCKLE; Lo; 0; L;;;;; N;;;;
1D8C9; SIGNWRITING HAND-FIST MIDDLE UP THUMB SIDE; Lo; 0; L;;;;; N;;;;;
1D8CA; SIGNWRITING HAND-HOOK MIDDLE THUMB; Lo; 0; L;;;;; N;;;;
1D8CB;SIGNWRITING HAND-FIST MIDDLE THUMB LITTLE;Lo;0;L;;;;;N;;;;
1D8CC; SIGNWRITING HAND-FIST MIDDLE LITTLE; Lo; 0; L;;;;; N;;;;
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1D8CD; SIGNWRITING HAND-FIST MIDDLE RING LITTLE; Lo; 0; L;;;;; N;;;;;
1D8CE; SIGNWRITING HAND-CIRCLE MIDDLE RING LITTLE; Lo; 0; L;;;;; N;;;;
1D8CF;SIGNWRITING HAND-CURLICUE MIDDLE RING LITTLE ON;Lo;0;L;;;;;N;;;;
1D8D0; SIGNWRITING HAND-CUP MIDDLE RING LITTLE; Lo; 0; L;;;;; N;;;;
1D8D1;SIGNWRITING HAND-HINGE MIDDLE RING LITTLE;Lo;0;L;;;;;N;;;;
1D8D2; SIGNWRITING HAND-ANGLE MIDDLE RING LITTLE OUT; Lo; 0; L;;;;; N;;;;
1D8D3; SIGNWRITING HAND-ANGLE MIDDLE RING LITTLE IN; Lo; 0; L;;;;; N;;;;;
1D8D4; SIGNWRITING HAND-ANGLE MIDDLE RING LITTLE; Lo; 0; L;;;;; N;;;;
1D8D5; SIGNWRITING HAND-CIRCLE MIDDLE RING LITTLE BENT; Lo; 0; L;;;;; N;;;;
1D8D6;SIGNWRITING HAND-CLAW MIDDLE RING LITTLE CONJOINED;Lo;0;L;;;;N;;;;
1D8D7;SIGNWRITING HAND-CLAW MIDDLE RING LITTLE CONJOINED SIDE;Lo;0;L;;;;N;;;;
1D8D8; SIGNWRITING HAND-HOOK MIDDLE RING LITTLE CONJOINED OUT; Lo; 0; L;;;;; N;;;;;
1D8D9; SIGNWRITING HAND-HOOK MIDDLE RING LITTLE CONJOINED IN; Lo; 0; L; ;; ;; N; ;; ;;
1D8DA; SIGNWRITING HAND-HOOK MIDDLE RING LITTLE CONJOINED; Lo; 0; L;;;;; N;;;;
1D8DB; SIGNWRITING HAND-HINGE INDEX HINGED; Lo; 0; L;;;;; N;;;;
1D8DC;SIGNWRITING HAND-FIST INDEX THUMB SIDE;Lo;0;L;;;;;N;;;;
1D8DD;SIGNWRITING HAND-HINGE INDEX THUMB SIDE;Lo;0;L;;;;;N;;;;
1D8DE; SIGNWRITING HAND-FIST INDEX THUMB SIDE THUMB DIAGONAL; Lo; 0; L;;;;; N;;;;;
1D8DF;SIGNWRITING HAND-FIST INDEX THUMB SIDE THUMB CONJOINED;Lo;0;L;;;;N;;;; 1D8E0;SIGNWRITING HAND-FIST INDEX THUMB SIDE THUMB BENT;Lo;0;L;;;;N;;;;
1D8E1; SIGNWRITING HAND-FIST INDEX THUMB SIDE INDEX BENT; Lo; 0; L;;;;; N;;;;
1D8E2; SIGNWRITING HAND-FIST INDEX THUMB SIDE BOTH BENT; Lo; 0; L;;;;; N;;;;
1D8E3; SIGNWRITING HAND-FIST INDEX THUMB SIDE INDEX HINGE; Lo; 0; L;;;;; N;;;;
1D8E6;SIGNWRITING HAND-FIST INDEX THUMB HOOK;Lo;0;L;;;;;N;;;;;
1D8E7; SIGNWRITING HAND-FIST INDEX THUMB CURLICUE; Lo; 0; L;;;;; N;;;;
1D8E8;SIGNWRITING HAND-FIST INDEX THUMB CURVE THUMB INSIDE;Lo;0;L;;;;;N;;;;
1D8E9; SIGNWRITING HAND-CLAW INDEX THUMB CURVE THUMB INSIDE; Lo; 0; L;;;;; N;;;;;
1D8EA; SIGNWRITING HAND-FIST INDEX THUMB CURVE THUMB UNDER; Lo; 0; L;;;;; N;;;;;
1D8EB; SIGNWRITING HAND-FIST INDEX THUMB CIRCLE; Lo; 0; L;;;;; N;;;;
1D8EC;SIGNWRITING HAND-CUP INDEX THUMB;Lo;0;L;;;;;N;;;;
1D8ED; SIGNWRITING HAND-CUP INDEX THUMB OPEN; Lo; 0; L;;;;; N;;;;
1D8EE; SIGNWRITING HAND-HINGE INDEX THUMB OPEN; Lo; 0; L;;;;; N;;;;;
1D8EF; SIGNWRITING HAND-HINGE INDEX THUMB LARGE; Lo; 0; L;;;;; N;;;;
1D8F0; SIGNWRITING HAND-HINGE INDEX THUMB; Lo; 0; L;;;;; N;;;;
1D8F1;SIGNWRITING HAND-HINGE INDEX THUMB SMALL;Lo;0;L;;;;N;;;;
1D8F2;SIGNWRITING HAND-ANGLE INDEX THUMB OUT;Lo;0;L;;;;;N;;;;
1D8F3;SIGNWRITING HAND-ANGLE INDEX THUMB IN;Lo;0;L;;;;;N;;;;
1D8F4;SIGNWRITING HAND-ANGLE INDEX THUMB;Lo;0;L;;;;;N;;;;
1D8F5;SIGNWRITING HAND-FIST THUMB;Lo;0;L;;;;;N;;;;
1D8F6; SIGNWRITING HAND-FIST THUMB HEEL; Lo; 0; L;;;;; N;;;;
1D8F7; SIGNWRITING HAND-FIST THUMB SIDE DIAGONAL; Lo; 0; L; ;;;; N;;;;;
1D8F8; SIGNWRITING HAND-FIST THUMB SIDE CONJOINED; Lo; 0; L;;;; N;;;;
1D8F9; SIGNWRITING HAND-FIST THUMB SIDE BENT; Lo; 0; L;;;; N;;;;
1D8FA; SIGNWRITING HAND-FIST THUMB FORWARD; Lo; 0; L;;;;; N;;;;
1D8FB;SIGNWRITING HAND-FIST THUMB BETWEEN INDEX MIDDLE;Lo;0;L;;;;N;;;;
1D8FC;SIGNWRITING HAND-FIST THUMB BETWEEN MIDDLE RING;Lo;0;L;;;;N;;;;
1D8FD;SIGNWRITING HAND-FIST THUMB BETWEEN RING LITTLE;Lo;0;L;;;;;N;;;;;
1D8FE; SIGNWRITING HAND-FIST THUMB UNDER TWO FINGERS; Lo; 0; L; ;; ;; N; ;; ;;
1D8FF; SIGNWRITING HAND-FIST THUMB OVER TWO FINGERS; Lo; 0; L;;;;; N;;;;;
1D900; SIGNWRITING HAND-FIST THUMB UNDER THREE FINGERS; Lo; 0; L;;;;; N;;;;
1D901; SIGNWRITING HAND-FIST THUMB UNDER FOUR FINGERS; Lo; 0; L;;;;; N;;;;;
1D902;SIGNWRITING HAND-FIST THUMB OVER FOUR RAISED KNUCKLES;Lo;0;L;;;;;N;;;;
1D903;SIGNWRITING HAND-FIST;Lo;0;L;;;;;N;;;;;
1D904; SIGNWRITING HAND-FIST HEEL; Lo; 0; L;;;;; N;;;;
1D905; SIGNWRITING TOUCH SINGLE; Lo; 0; L;;;;; N;;;;;
1D906; SIGNWRITING TOUCH MULTIPLE; Lo; 0; L;;;;; N;;;;
1D907; SIGNWRITING TOUCH BETWEEN; Lo; 0; L;;;;; N;;;;
1D908; SIGNWRITING GRASP SINGLE; Lo; 0; L;;;;; N;;;;;
1D909;SIGNWRITING GRASP MULTIPLE;Lo;0;L;;;;;N;;;;
1D90A; SIGNWRITING GRASP BETWEEN; Lo; 0; L;;;;; N;;;;
1D90B; SIGNWRITING STRIKE SINGLE; Lo; 0; L;;;;; N;;;;
1D90C; SIGNWRITING STRIKE MULTIPLE; Lo; 0; L;;;;; N;;;;;
1D90D; SIGNWRITING STRIKE BETWEEN; Lo; 0; L;;;;; N;;;;
1D90E; SIGNWRITING BRUSH SINGLE; Lo; 0; L;;;;; N;;;;;
1D90F;SIGNWRITING BRUSH MULTIPLE;Lo;0;L;;;;;N;;;;
1D910; SIGNWRITING BRUSH BETWEEN; Lo; 0; L;;;;; N;;;;;
1D911; SIGNWRITING RUB SINGLE; Lo; 0; L;;;;; N;;;;;
1D912;SIGNWRITING RUB MULTIPLE;Lo;0;L;;;;N;;;;
1D913; SIGNWRITING RUB BETWEEN; Lo; 0; L;;;;; N;;;;;
1D914; SIGNWRITING SURFACE SYMBOLS; Lo; 0; L;;;;; N;;;;;
1D915; SIGNWRITING SURFACE BETWEEN; Lo; 0; L;;;;; N;;;;
1D916; SIGNWRITING SQUEEZE LARGE SINGLE; Lo; 0; L;;;;; N;;;;
1D917; SIGNWRITING SQUEEZE SMALL SINGLE; Lo; 0; L;;;;; N;;;;
1D918; SIGNWRITING SQUEEZE LARGE MULTIPLE; Lo; 0; L;;;;; N;;;;
1D919; SIGNWRITING SQUEEZE SMALL MULTIPLE; Lo; 0; L;;;;; N;;;;
1D91A; SIGNWRITING SQUEEZE SEQUENTIAL; Lo; 0; L;;;;; N;;;;
1D91B; SIGNWRITING FLICK LARGE SINGLE; Lo; 0; L;;;;; N;;;;
1D91C; SIGNWRITING FLICK SMALL SINGLE; Lo; 0; L;;;;; N;;;;
1D91D; SIGNWRITING FLICK LARGE MULTIPLE; Lo; 0; L;;;;; N;;;;
1D91E; SIGNWRITING FLICK SMALL MULTIPLE; Lo; 0; L;;;;; N;;;;;
1D91F; SIGNWRITING FLICK SEQUENTIAL; Lo; 0; L;;;;; N;;;;
1D920; SIGNWRITING SQUEEZE FLICK ALTERNATING; Lo; 0; L;;;;; N;;;;
1D921;SIGNWRITING MOVEMENT-HINGE UP DOWN LARGE;Lo;0;L;;;;;N;;;;
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1D922; SIGNWRITING MOVEMENT-HINGE UP DOWN SMALL; Lo; 0; L;;;; N;;;;
1D923; SIGNWRITING MOVEMENT-HINGE UP SEQUENTIAL; Lo; 0; L;;;;; N;;;;
1D924; SIGNWRITING MOVEMENT-HINGE DOWN SEQUENTIAL; Lo; 0; L;;;; N;;;;
1D925; SIGNWRITING MOVEMENT-HINGE UP DOWN ALTERNATING LARGE; Lo; 0; L;;;;; N;;;;
1D926; SIGNWRITING MOVEMENT-HINGE UP DOWN ALTERNATING SMALL; Lo; 0; L;;;;; N;;;;;
1D927; SIGNWRITING MOVEMENT-HINGE SIDE TO SIDE SCISSORS; Lo; 0; L; ;; ;; N; ;; ;;
1D928; SIGNWRITING MOVEMENT-WALLPLANE FINGER CONTACT; Lo; 0; L;;;;; N;;;;
1D929; SIGNWRITING MOVEMENT-FLOORPLANE FINGER CONTACT; Lo; 0; L;;;;; N;;;;
1D92A; SIGNWRITING MOVEMENT-WALLPLANE SINGLE STRAIGHT SMALL; Lo; 0; L;;;;; N;;;;
1D92B;SIGNWRITING MOVEMENT-WALLPLANE SINGLE STRAIGHT MEDIUM;Lo;0;L;;;;;N;;;;
1D92C;SIGNWRITING MOVEMENT-WALLPLANE SINGLE STRAIGHT LARGE;Lo;0;L;;;;N;;;;;
1D92D; SIGNWRITING MOVEMENT-WALLPLANE SINGLE STRAIGHT LARGEST; Lo; 0; L;;;;; N;;;;;
1D92E; SIGNWRITING MOVEMENT-WALLPLANE SINGLE WRIST FLEX; Lo; 0; L; ;; ;; N; ;; ;;
1D92F;SIGNWRITING MOVEMENT-WALLPLANE DOUBLE STRAIGHT;Lo;0;L;;;;;N;;;;;
1D930; SIGNWRITING MOVEMENT-WALLPLANE DOUBLE WRIST FLEX; Lo; 0; L;;;;; N;;;;
1D931; SIGNWRITING MOVEMENT-WALLPLANE DOUBLE ALTERNATING; Lo; 0; L;;;;; N;;;;
1D932; SIGNWRITING MOVEMENT-WALLPLANE DOUBLE ALTERNATING WRIST FLEX; Lo; 0; L;;;;; N;;;;
1D933;SIGNWRITING MOVEMENT-WALLPLANE CROSS;Lo;0;L;;;;;N;;;;
1D934; SIGNWRITING MOVEMENT-WALLPLANE TRIPLE STRAIGHT MOVEMENT; Lo; 0; L;;;; N;;;; 1D935; SIGNWRITING MOVEMENT-WALLPLANE TRIPLE WRIST FLEX; Lo; 0; L;;;; N;;;;;
1D936;SIGNWRITING MOVEMENT-WALLPLANE TRIPLE ALTERNATING;Lo;0;L;;;;;N;;;;
1D937; SIGNWRITING MOVEMENT-WALLPLANE TRIPLE ALTERNATING WRIST FLEX; LO; 0; L;;;;; N;;;;
1D938; SIGNWRITING MOVEMENT-WALLPLANE BEND SMALL; Lo; 0; L;;;;; N;;;;
1D939; SIGNWRITING MOVEMENT-WALLPLANE BEND MEDIUM; Lo; 0; L;;;;; N;;;;
1D93A;SIGNWRITING MOVEMENT-WALLPLANE BEND LARGE;Lo;0;L;;;;N;;;;
1D93B; SIGNWRITING MOVEMENT-WALLPLANE CORNER SMALL; Lo; 0; L;;;;; N;;;;
1D93C;SIGNWRITING MOVEMENT-WALLPLANE CORNER MEDIUM;Lo;0;L;;;;;N;;;;;
1D93D; SIGNWRITING MOVEMENT-WALLPLANE CORNER LARGE; Lo; 0; L;;;;; N;;;;
1D93E; SIGNWRITING MOVEMENT-WALLPLANE CORNER ROTATION; Lo; 0; L;;;;; N;;;;;
1D93F; SIGNWRITING MOVEMENT-WALLPLANE CHECK SMALL; Lo; 0; L;;;; N;;;;;
1D940; SIGNWRITING MOVEMENT-WALLPLANE CHECK MEDIUM; Lo; 0; L;;;;; N;;;;
1D941;SIGNWRITING MOVEMENT-WALLPLANE CHECK LARGE;Lo;0;L;;;;;N;;;;
1D942; SIGNWRITING MOVEMENT-WALLPLANE BOX SMALL; Lo; 0; L;;;;; N;;;;
1D943;SIGNWRITING MOVEMENT-WALLPLANE BOX MEDIUM;Lo;0;L;;;;;N;;;;
1D944; SIGNWRITING MOVEMENT-WALLPLANE BOX LARGE; Lo; 0; L;;;;; N;;;;
1D945; SIGNWRITING MOVEMENT-WALLPLANE ZIGZAG SMALL; Lo; 0; L;;;;; N;;;;
1D946; SIGNWRITING MOVEMENT-WALLPLANE ZIGZAG MEDIUM; Lo; 0; L; ;; ;; N; ;; ;;
1D947; SIGNWRITING MOVEMENT-WALLPLANE ZIGZAG LARGE; Lo; 0; L;;;;; N;;;;
1D948; SIGNWRITING MOVEMENT-WALLPLANE PEAKS SMALL; Lo; 0; L;;;;; N;;;;;
1D949; SIGNWRITING MOVEMENT-WALLPLANE PEAKS MEDIUM; Lo; 0; L;;;; N;;;;; 1D94A; SIGNWRITING MOVEMENT-WALLPLANE PEAKS LARGE; Lo; 0; L;;;;; N;;;;;
1D94B; SIGNWRITING TRAVEL-WALLPLANE ROTATION-WALLPLANE SINGLE; Lo; 0; L;;;; N;;;; 1D94C; SIGNWRITING TRAVEL-WALLPLANE ROTATION-WALLPLANE DOUBLE; Lo; 0; L;;;;; N;;;;
1D94D; SIGNWRITING TRAVEL-WALLPLANE ROTATION-WALLPLANE ALTERNATING; Lo; 0; L;;;;; N;;;;;
1D94E; SIGNWRITING TRAVEL-WALLPLANE ROTATION-FLOORPLANE SINGLE; Lo; 0; L;;;;; N;;;;
1D950; SIGNWRITING TRAVEL-WALLPLANE ROTATION-FLOORPLANE ALTERNATING; Lo; 0; L;;;;; N;;;;;
1D951;SIGNWRITING TRAVEL-WALLPLANE SHAKING;Lo;0;L;;;;;N;;;;
1D952;SIGNWRITING TRAVEL-WALLPLANE ARM SPIRAL SINGLE;Lo;0;L;;;;;N;;;;;
1D953; SIGNWRITING TRAVEL-WALLPLANE ARM SPIRAL DOUBLE; Lo; 0; L;;;;; N;;;;
1D954; SIGNWRITING TRAVEL-WALLPLANE ARM SPIRAL TRIPLE; Lo; 0; L;;;;; N;;;;;
1D955; SIGNWRITING MOVEMENT-DIAGONAL AWAY SMALL; Lo; 0; L;;;;; N;;;;;
1D956; SIGNWRITING MOVEMENT-DIAGONAL AWAY MEDIUM; Lo; 0; L;;;;; N;;;;
1D957;SIGNWRITING MOVEMENT-DIAGONAL AWAY LARGE;Lo;0;L;;;;N;;;;
1D958;SIGNWRITING MOVEMENT-DIAGONAL AWAY LARGEST;Lo;0;L;;;;N;;;;
1D959; SIGNWRITING MOVEMENT-DIAGONAL TOWARDS SMALL; Lo; 0; L;;;;; N;;;;
1D95A; SIGNWRITING MOVEMENT-DIAGONAL TOWARDS MEDIUM; Lo; 0; L; ;; ;; N; ;; ;;
1D95B; SIGNWRITING MOVEMENT-DIAGONAL TOWARDS LARGE; Lo; 0; L;;;;; N;;;;
1D95C;SIGNWRITING MOVEMENT-DIAGONAL TOWARDS LARGEST;Lo;0;L;;;;;N;;;;;
1D95D; SIGNWRITING MOVEMENT-DIAGONAL BETWEEN AWAY SMALL; Lo; 0; L;;;;; N;;;;
1D95E;SIGNWRITING MOVEMENT-DIAGONAL BETWEEN AWAY MEDIUM;Lo;0;L;;;;N;;;;
1D95F;SIGNWRITING MOVEMENT-DIAGONAL BETWEEN AWAY LARGE;Lo;0;L;;;;;N;;;;
1D960; SIGNWRITING MOVEMENT-DIAGONAL BETWEEN AWAY LARGEST; Lo; 0; L;;;;; N;;;;;
1D961;SIGNWRITING MOVEMENT-DIAGONAL BETWEEN TOWARDS SMALL;Lo;0;L;;;;;N;;;;
1D962;SIGNWRITING MOVEMENT-DIAGONAL BETWEEN TOWARDS MEDIUM;Lo;0;L;;;;;N;;;;
1D963; SIGNWRITING MOVEMENT-DIAGONAL BETWEEN TOWARDS LARGE; Lo; 0; L;;;;; N;;;;
1D964; SIGNWRITING MOVEMENT-DIAGONAL BETWEEN TOWARDS LARGEST; Lo; 0; L;;;;; N;;;;
1D965; SIGNWRITING MOVEMENT-FLOORPLANE SINGLE STRAIGHT SMALL; Lo; 0; L;;;;; N;;;;
1D966; SIGNWRITING MOVEMENT-FLOORPLANE SINGLE STRAIGHT MEDIUM; Lo; 0; L;;;;; N;;;;
1D967; SIGNWRITING MOVEMENT-FLOORPLANE SINGLE STRAIGHT LARGE; Lo; 0; L;;;;; N;;;;
1D968; SIGNWRITING MOVEMENT-FLOORPLANE SINGLE STRAIGHT LARGEST; Lo; 0; L;;;;; N;;;;;
1D969; SIGNWRITING MOVEMENT-FLOORPLANE SINGLE WRIST FLEX; Lo; 0; L;;;;; N;;;;;
1D96A; SIGNWRITING MOVEMENT-FLOORPLANE DOUBLE STRAIGHT; Lo; 0; L; ;; ;; N; ;; ;;
1D96B; SIGNWRITING MOVEMENT-FLOORPLANE DOUBLE WRIST FLEX; Lo; 0; L;;;;; N;;;;;
1D96C; SIGNWRITING MOVEMENT-FLOORPLANE DOUBLE ALTERNATING; Lo; 0; L;;;;; N;;;;
1D96D;SIGNWRITING MOVEMENT-FLOORPLANE DOUBLE ALTERNATING WRIST FLEX;Lo;0;L;;;;N;;;;
1D96E;SIGNWRITING MOVEMENT-FLOORPLANE CROSS;Lo;0;L;;;;;N;;;;
1D96F;SIGNWRITING MOVEMENT-FLOORPLANE TRIPLE STRAIGHT MOVEMENT;Lo;0;L;;;;;N;;;;
1D970; SIGNWRITING MOVEMENT-FLOORPLANE TRIPLE WRIST FLEX; Lo; 0; L;;;;; N;;;;;
1D971; SIGNWRITING MOVEMENT-FLOORPLANE TRIPLE ALTERNATING MOVEMENT; Lo; 0; L;;;;; N;;;;;
1D972; SIGNWRITING MOVEMENT-FLOORPLANE TRIPLE ALTERNATING WRIST FLEX; Lo; 0; L;;;;; N;;;;;
1D973;SIGNWRITING MOVEMENT-FLOORPLANE BEND;Lo;0;L;;;;;N;;;;;
1D974; SIGNWRITING MOVEMENT-FLOORPLANE CORNER SMALL; Lo; 0; L;;;;; N;;;;;
1D975; SIGNWRITING MOVEMENT-FLOORPLANE CORNER MEDIUM; Lo; 0; L;;;;; N;;;;
1D976; SIGNWRITING MOVEMENT-FLOORPLANE CORNER LARGE; Lo; 0; L;;;; N;;;;
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1D977; SIGNWRITING MOVEMENT-FLOORPLANE CHECK; Lo; 0; L;;;; N;;;;
1D978; SIGNWRITING MOVEMENT-FLOORPLANE BOX SMALL; Lo; 0; L;;;;; N;;;;;
1D979; SIGNWRITING MOVEMENT-FLOORPLANE BOX MEDIUM; Lo; 0; L;;;;; N;;;;
1D97A; SIGNWRITING MOVEMENT-FLOORPLANE BOX LARGE; Lo; 0; L;;;;; N;;;;
1D97B; SIGNWRITING MOVEMENT-FLOORPLANE ZIGZAG SMALL; Lo; 0; L;;;;; N;;;;;
1D97C; SIGNWRITING MOVEMENT-FLOORPLANE ZIGZAG MEDIUM; Lo; 0; L;;;;; N;;;;
1D97D; SIGNWRITING MOVEMENT-FLOORPLANE ZIGZAG LARGE; Lo; 0; L;;;;; N;;;;;
1D97E; SIGNWRITING MOVEMENT-FLOORPLANE PEAKS SMALL; Lo; 0; L;;;;; N;;;;
1D97F;SIGNWRITING MOVEMENT-FLOORPLANE PEAKS MEDIUM;Lo;0;L;;;;;N;;;;;
1D980; SIGNWRITING MOVEMENT-FLOORPLANE PEAKS LARGE; Lo; 0; L;;;;; N;;;;
1D981; SIGNWRITING TRAVEL-FLOORPLANE ROTATION-FLOORPLANE SINGLE; Lo; 0; L;;;;; N;;;;
1D982;SIGNWRITING TRAVEL-FLOORPLANE ROTATION-FLOORPLANE DOUBLE;Lo;0;L;;;;N;;;;;
1D983; SIGNWRITING TRAVEL-FLOORPLANE ROTATION-FLOORPLANE ALTERNATING; Lo; 0; L;;;;; N;;;;;
1D984; SIGNWRITING TRAVEL-FLOORPLANE ROTATION-WALLPLANE SINGLE; Lo; 0; L;;;;; N;;;;;
1D985; SIGNWRITING TRAVEL-FLOORPLANE ROTATION-WALLPLANE DOUBLE; Lo; 0; L;;;;; N;;;;
1D986; SIGNWRITING TRAVEL-FLOORPLANE ROTATION-WALLPLANE ALTERNATING; Lo; 0; L;;;;; N;;;;;
1D987;SIGNWRITING TRAVEL-FLOORPLANE SHAKING;Lo;0;L;;;;;N;;;;
1D988; SIGNWRITING MOVEMENT-WALLPLANE CURVE QUARTER SMALL; Lo; 0; L;;;;; N;;;;
1D989; SIGNWRITING MOVEMENT-WALLPLANE CURVE QUARTER MEDIUM; Lo; 0; L;;;;; N;;;;;
1D98A; SIGNWRITING MOVEMENT-WALLPLANE CURVE QUARTER LARGE; Lo; 0; L;;;;; N;;;;;
1D98B; SIGNWRITING MOVEMENT-WALLPLANE CURVE QUARTER LARGEST; Lo; 0; L;;;;; N;;;;
1D98C; SIGNWRITING MOVEMENT-WALLPLANE CURVE HALF-CIRCLE SMALL; Lo; 0; L;;;;; N;;;;
1D98D; SIGNWRITING MOVEMENT-WALLPLANE CURVE HALF-CIRCLE MEDIUM; Lo; 0; L;;;;; N;;;;
1D98E;SIGNWRITING MOVEMENT-WALLPLANE CURVE HALF-CIRCLE LARGE;Lo;0;L;;;;;N;;;;
1D98F;SIGNWRITING MOVEMENT-WALLPLANE CURVE HALF-CIRCLE LARGEST;Lo;0;L;;;;;N;;;;;
1D990; SIGNWRITING MOVEMENT-WALLPLANE CURVE THREE-QUARTER CIRCLE SMALL; Lo; 0; L; ;; ;; N; ;; ;;
1D991;SIGNWRITING MOVEMENT-WALLPLANE CURVE THREE-QUARTER CIRCLE MEDIUM;Lo;0;L;;;;;N;;;;;
1D992; SIGNWRITING MOVEMENT-WALLPLANE HUMP SMALL; Lo; 0; L;;;;; N;;;;
1D993;SIGNWRITING MOVEMENT-WALLPLANE HUMP MEDIUM;Lo;0;L;;;;;N;;;;;
1D994; SIGNWRITING MOVEMENT-WALLPLANE HUMP LARGE; Lo; 0; L;;;;; N;;;;
1D995;SIGNWRITING MOVEMENT-WALLPLANE LOOP SMALL;Lo;0;L;;;;;N;;;;
1D996;SIGNWRITING MOVEMENT-WALLPLANE LOOP MEDIUM;Lo;0;L;;;;;N;;;;
1D997;SIGNWRITING MOVEMENT-WALLPLANE LOOP LARGE;Lo;0;L;;;;N;;;;
1D998;SIGNWRITING MOVEMENT-WALLPLANE LOOP SMALL DOUBLE;Lo;0;L;;;;;N;;;;;
1D999; SIGNWRITING MOVEMENT-WALLPLANE WAVE CURVE DOUBLE SMALL; Lo; 0; L;;;;; N;;;;;
1D99A; SIGNWRITING MOVEMENT-WALLPLANE WAVE CURVE DOUBLE MEDIUM; Lo; 0; L;;;;; N;;;;
1D99B; SIGNWRITING MOVEMENT-WALLPLANE WAVE CURVE DOUBLE LARGE; Lo; 0; L;;;;; N;;;;;
1D99C; SIGNWRITING MOVEMENT-WALLPLANE WAVE CURVE TRIPLE SMALL; Lo; 0; L;;;;; N;;;;
1D99D;SIGNWRITING MOVEMENT-WALLPLANE WAVE CURVE TRIPLE MEDIUM;Lo;0;L;;;;;N;;;;;
1D99E;SIGNWRITING MOVEMENT-WALLPLANE WAVE CURVE TRIPLE LARGE;Lo;0;L;;;;;N;;;;
1D99F; SIGNWRITING MOVEMENT-WALLPLANE CURVE THEN STRAIGHT; Lo; 0; L;;;;; N;;;;
1D9A0; SIGNWRITING MOVEMENT-WALLPLANE CURVED CROSS SMALL; Lo; 0; L;;;;; N;;;;
1D9A1;SIGNWRITING MOVEMENT-WALLPLANE CURVED CROSS MEDIUM;Lo;0;L;;;;;N;;;;
1D9A2; SIGNWRITING ROTATION-WALLPLANE SINGLE; Lo; 0; L;;;;; N;;;;;
1D9A3; SIGNWRITING ROTATION-WALLPLANE DOUBLE; Lo; 0; L;;;;; N;;;;;
1D9A4; SIGNWRITING ROTATION-WALLPLANE ALTERNATE; Lo; 0; L;;;;; N;;;;
1D9A5; SIGNWRITING MOVEMENT-WALLPLANE SHAKING; Lo; 0; L;;;;; N;;;;
1D9A6; SIGNWRITING MOVEMENT-WALLPLANE CURVE HITTING FRONT WALL; Lo; 0; L;;;;; N;;;;;
1D9A7;SIGNWRITING MOVEMENT-WALLPLANE HUMP HITTING FRONT WALL;Lo;0;L;;;;;N;;;;;
1D9A8; SIGNWRITING MOVEMENT-WALLPLANE LOOP HITTING FRONT WALL; Lo; 0; L;;;;; N;;;;
1D9A9; SIGNWRITING MOVEMENT-WALLPLANE WAVE HITTING FRONT WALL; Lo; 0; L;;;;; N;;;;
1D9AA; SIGNWRITING ROTATION-WALLPLANE SINGLE HITTING FRONT WALL; Lo; 0; L;;;;; N;;;;
1D9AB; SIGNWRITING ROTATION-WALLPLANE DOUBLE HITTING FRONT WALL; Lo; 0; L; ;; ; N; ;; ;;
1D9AC; SIGNWRITING ROTATION-WALLPLANE ALTERNATING HITTING FRONT WALL; Lo; 0; L;;;;; N;;;;
1D9AD; SIGNWRITING MOVEMENT-WALLPLANE CURVE HITTING CHEST; Lo; 0; L;;;;; N;;;;;
1D9AE; SIGNWRITING MOVEMENT-WALLPLANE HUMP HITTING CHEST; Lo; 0; L;;;;; N;;;;;
1D9AF; SIGNWRITING MOVEMENT-WALLPLANE LOOP HITTING CHEST; Lo; 0; L;;;;; N;;;;;
1D9B0; SIGNWRITING MOVEMENT-WALLPLANE WAVE HITTING CHEST; Lo; 0; L;;;;; N;;;;
1D9B1;SIGNWRITING ROTATION-WALLPLANE SINGLE HITTING CHEST;Lo;0;L;;;;;N;;;;
1D9B2;SIGNWRITING ROTATION-WALLPLANE DOUBLE HITTING CHEST;Lo;0;L;;;;;N;;;;;
1D9B3;SIGNWRITING ROTATION-WALLPLANE ALTERNATING HITTING CHEST;Lo;0;L;;;;;N;;;;
1D9B4;SIGNWRITING MOVEMENT-WALLPLANE WAVE DIAGONAL PATH SMALL;Lo;0;L;;;;;N;;;;
1D9B5;SIGNWRITING MOVEMENT-WALLPLANE WAVE DIAGONAL PATH MEDIUM;Lo;0;L;;;;;N;;;;;
1D9B6;SIGNWRITING MOVEMENT-WALLPLANE WAVE DIAGONAL PATH LARGE;Lo;0;L;;;;;N;;;;;
1D9B7;SIGNWRITING MOVEMENT-FLOORPLANE CURVE HITTING CEILING SMALL;Lo;0;L;;;;;N;;;;;
1D9B8; SIGNWRITING MOVEMENT-FLOORPLANE CURVE HITTING CEILING LARGE; Lo; 0; L;;;;; N;;;;
1D9B9; SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING CEILING SMALL DOUBLE; Lo; 0; L; ;; ;; ;; ;;
1D9BA; SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING CEILING LARGE DOUBLE; Lo; 0; L;;;;; N;;;;
1D9BB;SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING CEILING SMALL TRIPLE;Lo;0;L;;;;;N;;;;;
1D9BC;SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING CEILING LARGE TRIPLE;Lo;0;L;;;;;N;;;;
1D9BD; SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING CEILING SMALL SINGLE; Lo; 0; L; ;; ;; N; ;; ;;
1D9BE; SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING CEILING LARGE SINGLE; Lo; 0; L;;;;; N;;;;
1D9BF;SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING CEILING SMALL DOUBLE;Lo;0;L;;;;N;;;;
1D9C0; SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING CEILING LARGE DOUBLE; Lo; 0; L; ;; ;; N; ;; ;;
1D9C1; SIGNWRITING MOVEMENT-FLOORPLANE WAVE HITTING CEILING SMALL; Lo; 0; L;;;;; N;;;;;
1D9C2; SIGNWRITING MOVEMENT-FLOORPLANE WAVE HITTING CEILING LARGE; Lo; 0; L; ;; ;; N; ;; ;;
1D9C3;SIGNWRITING ROTATION-FLOORPLANE SINGLE HITTING CEILING;Lo;0;L;;;;;N;;;;;
1D9C4; SIGNWRITING ROTATION-FLOORPLANE DOUBLE HITTING CEILING; Lo; 0; L;;;;; N;;;;;
1D9C5; SIGNWRITING ROTATION-FLOORPLANE ALTERNATING HITTING CEILING; Lo; 0; L;;;;; N;;;;
1D9C6; SIGNWRITING MOVEMENT-FLOORPLANE CURVE HITTING FLOOR SMALL; Lo; 0; L; ;; ;; N; ;; ;;
1D9C7; SIGNWRITING MOVEMENT-FLOORPLANE CURVE HITTING FLOOR LARGE; Lo; 0; L;;;;; N;;;;;
1D9C8; SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING FLOOR SMALL DOUBLE; Lo; 0; L; ;; ;; ;; ;;
1D9C9; SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING FLOOR LARGE DOUBLE; Lo; 0; L; ;; ;; N; ;; ;
1D9CA; SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING FLOOR TRIPLE SMALL TRIPLE; Lo; 0; L;;;; N;;;;
1D9CB; SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING FLOOR TRIPLE LARGE TRIPLE; Lo; 0; L; ;; ;; ;; ;;
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1D9CC; SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING FLOOR SMALL SINGLE; Lo; 0; L; ;; ;; N; ;; ;;
1D9CD; SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING FLOOR LARGE SINGLE; Lo; 0; L; ;;;; N;;;;
1D9CE;SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING FLOOR SMALL DOUBLE;Lo;0;L;;;;;N;;;;;
1D9CF;SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING FLOOR LARGE DOUBLE;Lo;0;L;;;;;N;;;;
1D9D0; SIGNWRITING MOVEMENT-FLOORPLANE WAVE HITTING FLOOR SMALL; Lo; 0; L;;;;; N;;;;
1D9D1;SIGNWRITING MOVEMENT-FLOORPLANE WAVE HITTING FLOOR LARGE;Lo;0;L;;;;;N;;;;
1D9D2; SIGNWRITING ROTATION-FLOORPLANE SINGLE HITTING FLOOR; Lo; 0; L;;;;; N;;;;;
1D9D3;SIGNWRITING ROTATION-FLOORPLANE DOUBLE HITTING FLOOR;Lo;0;L;;;;;N;;;;
1D9D4; SIGNWRITING ROTATION-FLOORPLANE ALTERNATING HITTING FLOOR; Lo; 0; L; ; ; ; ; N; ; ; ;
1D9D5;SIGNWRITING MOVEMENT-FLOORPLANE CURVE SMALL;Lo;0;L;;;;N;;;;
1D9D6; SIGNWRITING MOVEMENT-FLOORPLANE CURVE MEDIUM; Lo; 0; L;;;;; N;;;;
1D9D7;SIGNWRITING MOVEMENT-FLOORPLANE CURVE LARGE;Lo;0;L;;;;;N;;;;;
1D9D8;SIGNWRITING MOVEMENT-FLOORPLANE CURVE LARGEST;Lo;0;L;;;;;N;;;;
1D9D9;SIGNWRITING MOVEMENT-FLOORPLANE CURVE COMBINED;Lo;0;L;;;;;N;;;;;
1D9DA; SIGNWRITING MOVEMENT-FLOORPLANE HUMP SMALL; Lo; 0; L;;;;; N;;;;
1D9DB; SIGNWRITING MOVEMENT-FLOORPLANE LOOP SMALL; Lo; 0; L;;;;; N;;;;
1D9DC;SIGNWRITING MOVEMENT-FLOORPLANE WAVE SNAKE;Lo;0;L;;;;;N;;;;
1D9DD;SIGNWRITING MOVEMENT-FLOORPLANE WAVE SMALL;Lo;0;L;;;;;N;;;;
1D9DE; SIGNWRITING MOVEMENT-FLOORPLANE WAVE LARGE; Lo; 0; L;;;;; N;;;;;
1D9DF; SIGNWRITING ROTATION-FLOORPLANE SINGLE; Lo; 0; L;;;;; N;;;;
1D9E0; SIGNWRITING ROTATION-FLOORPLANE DOUBLE; Lo; 0; L;;;;; N;;;;
1D9E1; SIGNWRITING ROTATION-FLOORPLANE ALTERNATING; Lo; 0; L;;;; N;;;;
1D9E2; SIGNWRITING MOVEMENT-FLOORPLANE SHAKING PARALLEL; Lo; 0; L;;;;; N;;;;
1D9E3;SIGNWRITING MOVEMENT-WALLPLANE ARM CIRCLE SMALL SINGLE;Lo;0;L;;;;N;;;;
1D9E4; SIGNWRITING MOVEMENT-WALLPLANE ARM CIRCLE MEDIUM SINGLE; Lo; 0; L;;;;; N;;;;
1D9E5; SIGNWRITING MOVEMENT-WALLPLANE ARM CIRCLE SMALL DOUBLE; Lo; 0; L;;;;; N;;;;
1D9E6; SIGNWRITING MOVEMENT-WALLPLANE ARM CIRCLE MEDIUM DOUBLE; Lo; 0; L;;;;; N;;;;
1D9E7;SIGNWRITING MOVEMENT-FLOORPLANE ARM CIRCLE HITTING WALL SMALL SINGLE;Lo;0;L;;;;N;;;;;
1D9E8; SIGNWRITING MOVEMENT-FLOORPLANE ARM CIRCLE HITTING WALL MEDIUM SINGLE; Lo; 0; L; ;; ;; N; ;; ;;
1D9E9; SIGNWRITING MOVEMENT-FLOORPLANE ARM CIRCLE HITTING WALL LARGE SINGLE; Lo; 0; L; ;; ;; N; ;; ;;
1D9EA; SIGNWRITING MOVEMENT-FLOORPLANE ARM CIRCLE HITTING WALL SMALL DOUBLE; Lo; 0; L;;;;; N;;;;;
1D9EB; SIGNWRITING MOVEMENT-FLOORPLANE ARM CIRCLE HITTING WALL MEDIUM DOUBLE; Lo; 0; L;;;;; N;;;;;
1D9EC; SIGNWRITING MOVEMENT-FLOORPLANE ARM CIRCLE HITTING WALL LARGE DOUBLE; Lo; 0; L; ;; ;; N; ;; ;;
1D9ED; SIGNWRITING MOVEMENT-WALLPLANE WRIST CIRCLE FRONT SINGLE; Lo; 0; L; ;; ;; ;; ;;
1D9EE; SIGNWRITING MOVEMENT-WALLPLANE WRIST CIRCLE FRONT DOUBLE; Lo; 0; L; ;; ;; N; ;; ;;
1D9EF; SIGNWRITING MOVEMENT-FLOORPLANE WRIST CIRCLE HITTING WALL SINGLE; Lo; 0; L;;;;; N;;;;;
1D9F0; SIGNWRITING MOVEMENT-FLOORPLANE WRIST CIRCLE HITTING WALL DOUBLE; Lo; 0; L;;;; N;;;;;
1D9F1; SIGNWRITING MOVEMENT-WALLPLANE FINGER CIRCLES SINGLE; Lo; 0; L;;;;; N;;;;
1D9F2;SIGNWRITING MOVEMENT-WALLPLANE FINGER CIRCLES DOUBLE;Lo;0;L;;;;;N;;;;
1D9F3;SIGNWRITING MOVEMENT-FLOORPLANE FINGER CIRCLES HITTING WALL SINGLE;Lo;0;L;;;;N;;;;
1D9F4; SIGNWRITING MOVEMENT-FLOORPLANE FINGER CIRCLES HITTING WALL DOUBLE; Lo; 0; L; ;; ;; N; ;; ;;
1D9F5; SIGNWRITING DYNAMIC ARROWHEAD SMALL; Lo; 0; L;;;;; N;;;;
1D9F6; SIGNWRITING DYNAMIC ARROWHEAD LARGE; Lo; 0; L;;;;; N;;;;
1D9F7; SIGNWRITING DYNAMIC FAST; Lo; 0; L;;;;; N;;;;;
1D9F8; SIGNWRITING DYNAMIC SLOW; Lo; 0; L; ; ; ; ; ; ; ; ;
1D9F9;SIGNWRITING DYNAMIC TENSE;Lo;0;L;;;;;N;;;;
1D9FA;SIGNWRITING DYNAMIC RELAXED;Lo;0;L;;;;;N;;;;
1D9FB;SIGNWRITING DYNAMIC SIMULTANEOUS;Lo;0;L;;;;;N;;;;
1D9FC; SIGNWRITING DYNAMIC SIMULTANEOUS ALTERNATING; Lo; 0; L; ;;;; ; N;;;;;
1D9FD; SIGNWRITING DYNAMIC EVERY OTHER TIME; Lo; 0; L;;;;; N;;;;
1D9FE; SIGNWRITING DYNAMIC GRADUAL; Lo; 0; L;;;;; N;;;;;
1D9FF;SIGNWRITING HEAD;Lo;0;L;;;;;N;;;;
1DA00;SIGNWRITING HEAD RIM;Mn;0;L;;;;;N;;;;
1DA01; SIGNWRITING HEAD MOVEMENT-WALLPLANE STRAIGHT; Mn; 0; L;;;; N;;;; 1DA02; SIGNWRITING HEAD MOVEMENT-WALLPLANE TILT; Mn; 0; L;;;; N;;;;
1DA03;SIGNWRITING HEAD MOVEMENT-FLOORPLANE STRAIGHT;Mn;0;L;;;;;N;;;;;
1DA04; SIGNWRITING HEAD MOVEMENT-WALLPLANE CURVE; Mn; 0; L;;;;; N;;;;;
1DA05; SIGNWRITING HEAD MOVEMENT-FLOORPLANE CURVE; Mn; 0; L;;;;; N;;;;
1DA06; SIGNWRITING HEAD MOVEMENT CIRCLE; Mn; 0; L;;;;; N;;;;
1DA07; SIGNWRITING FACE DIRECTION POSITION NOSE FORWARD TILTING; Mn; 0; L; ;; ;; N; ;; ;;
1DA08;SIGNWRITING FACE DIRECTION POSITION NOSE UP OR DOWN;Mn;0;L;;;;;N;;;;
1DA09:SIGNWRITING FACE DIRECTION POSITION NOSE UP OR DOWN TILTING;Mn;0;L;;;;;N;;;;
1DA0A; SIGNWRITING EYEBROWS STRAIGHT UP; Mn; 0; L;;;;; N;;;;
1DA0B; SIGNWRITING EYEBROWS STRAIGHT NEUTRAL; Mn; 0; L;;;;; N;;;;;
1DAOC; SIGNWRITING EYEBROWS STRAIGHT DOWN; Mn; 0; L;;;;; N;;;;
1DA0D; SIGNWRITING DREAMY EYEBROWS NEUTRAL DOWN; Mn; 0; L;;;;; N;;;;
1DA0E; SIGNWRITING DREAMY EYEBROWS DOWN NEUTRAL; Mn; 0; L;;;;; N;;;;
1DAOF; SIGNWRITING DREAMY EYEBROWS UP NEUTRAL; Mn; 0; L;;;;; N;;;;
1DA10;SIGNWRITING DREAMY EYEBROWS NEUTRAL UP;Mn;0;L;;;;;N;;;;
1DA11; SIGNWRITING FOREHEAD NEUTRAL; Mn; 0; L;;;;; N;;;;;
1DA12; SIGNWRITING FOREHEAD CONTACT; Mn; 0; L;;;;; N;;;;;
1DA13; SIGNWRITING FOREHEAD WRINKLED; Mn; 0; L;;;;; N;;;;;
1DA14; SIGNWRITING EYES OPEN; Mn; 0; L;;;;; N;;;;
1DA15; SIGNWRITING EYES SQUEEZED; Mn; 0; L;;;;; N;;;;;
1DA16; SIGNWRITING EYES CLOSED; Mn; 0; L;;;; N;;;;
1DA17; SIGNWRITING EYE BLINK SINGLE; Mn; 0; L;;;;; N;;;;
1DA18; SIGNWRITING EYE BLINK MULTIPLE; Mn; 0; L;;;;; N;;;;
1DA19; SIGNWRITING EYES HALF OPEN; Mn; 0; L;;;;; N;;;;
1DA1A; SIGNWRITING EYES WIDE OPEN; Mn; 0; L;;;;; N;;;;;
1DA1B; SIGNWRITING EYES HALF CLOSED; Mn; 0; L;;;;; N;;;;
1DA1C; SIGNWRITING EYES WIDENING MOVEMENT; Mn; 0; L;;;;; N;;;;;
1DA1D; SIGNWRITING EYE WINK; Mn; 0; L;;;;; N;;;;
1DA1E; SIGNWRITING EYELASHES UP; Mn; 0; L;;;;; N;;;;
1DA1F;SIGNWRITING EYELASHES DOWN;Mn;0;L;;;;;N;;;;
1DA20; SIGNWRITING EYELASHES FLUTTERING; Mn; 0; L;;;;; N;;;;;
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1DA21; SIGNWRITING EYEGAZE-WALLPLANE STRAIGHT; Mn; 0; L;;;; N;;;;;
1DA22; SIGNWRITING EYEGAZE-WALLPLANE STRAIGHT DOUBLE; Mn; 0; L;;;;; N;;;;
1DA23; SIGNWRITING EYEGAZE-WALLPLANE STRAIGHT ALTERNATING; Mn; 0; L;;;;; N;;;;
1DA24; SIGNWRITING EYEGAZE-FLOORPLANE STRAIGHT; Mn; 0; L;;;;; N;;;;
1DA25; SIGNWRITING EYEGAZE-FLOORPLANE STRAIGHT DOUBLE; Mn; 0; L;;;;; N;;;;;
1DA26; SIGNWRITING EYEGAZE-FLOORPLANE STRAIGHT ALTERNATING; Mn; 0; L;;;;; N;;;;
1DA27;SIGNWRITING EYEGAZE-WALLPLANE CURVED;Mn;0;L;;;;N;;;;
1DA28; SIGNWRITING EYEGAZE-FLOORPLANE CURVED; Mn; 0; L;;;;; N;;;;
1DA29; SIGNWRITING EYEGAZE-WALLPLANE CIRCLING; Mn; 0; L;;;;; N;;;;;
1DA2A;SIGNWRITING CHEEKS PUFFED;Mn;0;L;;;;;N;;;;
1DA2B; SIGNWRITING CHEEKS NEUTRAL; Mn; 0; L;;;;; N;;;;
1DA2C; SIGNWRITING CHEEKS SUCKED; Mn; 0; L;;;;; N;;;;;
1DA2D; SIGNWRITING TENSE CHEEKS HIGH; Mn; 0; L;;;;; N;;;;;
1DA2E; SIGNWRITING TENSE CHEEKS MIDDLE; Mn; 0; L;;;;; N;;;;
1DA2F; SIGNWRITING TENSE CHEEKS LOW; Mn; 0; L;;;;; N;;;;;
1DA30; SIGNWRITING EARS; Mn; 0; L;;;;; N;;;;
1DA31; SIGNWRITING NOSE NEUTRAL; Mn; 0; L;;;;; N;;;;
1DA32; SIGNWRITING NOSE CONTACT; Mn; 0; L;;;;; N;;;;
1DA33; SIGNWRITING NOSE WRINKLES; Mn; 0; L;;;;; N;;;;;
1DA34; SIGNWRITING NOSE WIGGLES; Mn; 0; L;;;;; N;;;;
1DA35; SIGNWRITING AIR BLOWING OUT; Mn; 0; L;;;;; N;;;;;
1DA36; SIGNWRITING AIR SUCKING IN; Mn; 0; L;;;;; N;;;;;
1DA37; SIGNWRITING AIR BLOW SMALL ROTATIONS; Lo; 0; L;;;;; N;;;;
1DA38; SIGNWRITING AIR SUCK SMALL ROTATIONS; Lo; 0; L;;;;; N;;;;;
1DA39; SIGNWRITING BREATH INHALE; Lo; 0; L;;;;; N;;;;
1DA3A; SIGNWRITING BREATH EXHALE; Lo; 0; L;;;;; N;;;;
1DA3B; SIGNWRITING MOUTH CLOSED NEUTRAL; Mn; 0; L;;;;; N;;;;
1DA3C; SIGNWRITING MOUTH CLOSED FORWARD; Mn; 0; L;;;;; N;;;;
1DA3D; SIGNWRITING MOUTH CLOSED CONTACT; Mn; 0; L;;;;; N;;;;
1DA3E; SIGNWRITING MOUTH SMILE; Mn; 0; L;;;;; N;;;;
1DA3F; SIGNWRITING MOUTH SMILE WRINKLED; Mn; 0; L;;;;; N;;;;
1DA40; SIGNWRITING MOUTH SMILE OPEN; Mn; 0; L;;;;; N;;;;
1DA41; SIGNWRITING MOUTH FROWN; Mn; 0; L;;;;; N;;;;
1DA42; SIGNWRITING MOUTH FROWN WRINKLED; Mn; 0; L;;;;; N;;;;;
1DA43; SIGNWRITING MOUTH FROWN OPEN; Mn; 0; L;;;;; N;;;;
1DA44; SIGNWRITING MOUTH OPEN CIRCLE; Mn; 0; L;;;;; N;;;;
1DA45; SIGNWRITING MOUTH OPEN FORWARD; Mn; 0; L;;;;; N;;;;
1DA46; SIGNWRITING MOUTH OPEN WRINKLED; Mn; 0; L;;;;; N;;;;
1DA47;SIGNWRITING MOUTH OPEN OVAL;Mn;0;L;;;;;N;;;;
1DA48; SIGNWRITING MOUTH OPEN OVAL WRINKLED; Mn; 0; L;;;; N;;;; 1DA49; SIGNWRITING MOUTH OPEN OVAL YAWN; Mn; 0; L;;;; N;;;;
1DA4A; SIGNWRITING MOUTH OPEN RECTANGLE; Mn; 0; L;;;;; N;;;;;
1DA4B; SIGNWRITING MOUTH OPEN RECTANGLE WRINKLED; Mn; 0; L;;;; N;;;;
1DA4C; SIGNWRITING MOUTH OPEN RECTANGLE YAWN; Mn; 0; L;;;;; N;;;;
1DA4D; SIGNWRITING MOUTH KISS; Mn; 0; L;;;;; N;;;;
1DA4E; SIGNWRITING MOUTH KISS FORWARD; Mn; 0; L;;;;; N;;;;
1DA4F;SIGNWRITING MOUTH KISS WRINKLED;Mn;0;L;;;;;N;;;;
1DA50; SIGNWRITING MOUTH TENSE; Mn; 0; L;;;;; N;;;;
1DA51; SIGNWRITING MOUTH TENSE FORWARD; Mn; 0; L;;;;; N;;;;;
1DA52; SIGNWRITING MOUTH TENSE SUCKED; Mn; 0; L;;;;; N;;;;
1DA53; SIGNWRITING LIPS PRESSED TOGETHER; Mn; 0; L;;;; N;;;;
1DA54;SIGNWRITING LIP LOWER OVER UPPER;Mn;0;L;;;;;N;;;;
1DA55; SIGNWRITING LIP UPPER OVER LOWER; Mn; 0; L;;;;; N;;;;;
1DA56;SIGNWRITING MOUTH CORNERS;Mn;0;L;;;;;N;;;;
1DA57; SIGNWRITING MOUTH WRINKLES SINGLE; Mn; 0; L;;;;; N;;;;
1DA58; SIGNWRITING MOUTH WRINKLES DOUBLE; Mn; 0; L;;;;; N;;;;;
1DA59; SIGNWRITING TONGUE STICKING OUT FAR; Mn; 0; L;;;;; N;;;;
1DA5A; SIGNWRITING TONGUE LICKING LIPS; Mn; 0; L;;;;; N;;;;
1DA5B; SIGNWRITING TONGUE TIP BETWEEN LIPS; Mn; 0; L;;;;; N;;;;
1DA5C; SIGNWRITING TONGUE TIP TOUCHING INSIDE MOUTH; Mn; 0; L;;;;; N;;;;
1DA5C;SIGNWRITING TONGUE INSIDE MOUTH RELAXED;Mn;0;L;;;;N;;;;;
1DA5E;SIGNWRITING TONGUE MOVES AGAINST CHEEK;Mn;0;L;;;;N;;;;
1DA5F; SIGNWRITING TONGUE CENTRE STICKING OUT; Mn; 0; L; ;; ; N; ;; ;; 1DA60; SIGNWRITING TONGUE CENTRE INSIDE MOUTH; Mn; 0; L; ;; ;; N; ;; ;;
1DA61;SIGNWRITING TEETH;Mn;0;L;;;;;N;;;;;
1DA62; SIGNWRITING TEETH MOVEMENT; Mn; 0; L;;;;; N;;;;
1DA63; SIGNWRITING TEETH ON TONGUE; Mn; 0; L;;;;; N;;;;
1DA64; SIGNWRITING TEETH ON TONGUE MOVEMENT; Mn; 0; L;;;;; N;;;;
1DA65;SIGNWRITING TEETH ON LIPS;Mn;0;L;;;;N;;;;
1DA66; SIGNWRITING TEETH ON LIPS MOVEMENT; Mn; 0; L;;;;; N;;;;; 1DA67; SIGNWRITING TEETH BITE LIPS; Mn; 0; L;;;;; N;;;;
1DA68; SIGNWRITING MOVEMENT-WALLPLANE JAW; Mn; 0; L;;;;; N;;;;
1DA69; SIGNWRITING MOVEMENT-FLOORPLANE JAW; Mn; 0; L;;;;; N;;;;
1DA6A; SIGNWRITING NECK; Mn; 0; L;;;;; N;;;;
1DA6B; SIGNWRITING HAIR; Mn; 0; L;;;; N;;;; 1DA6C; SIGNWRITING EXCITEMENT; Mn; 0; L;;;; N;;;;
1DA6D; SIGNWRITING SHOULDER HIP SPINE; Lo; 0; L;;;;; N;;;;
1DA6E; SIGNWRITING SHOULDER HIP POSITIONS; Lo; 0; L;;;;; N;;;;
1DA6F;SIGNWRITING WALLPLANE SHOULDER HIP MOVE;Lo;0;L;;;;;N;;;;
1DA70; SIGNWRITING FLOORPLANE SHOULDER HIP MOVE; Lo; 0; L;;;;; N;;;;
1DA71; SIGNWRITING SHOULDER TILTING FROM WAIST; Lo; 0; L;;;;; N;;;;;
1DA72; SIGNWRITING TORSO-WALLPLANE STRAIGHT STRETCH; LO; 0; L;;;; N;;;;
1DA73;SIGNWRITING TORSO-WALLPLANE CURVED BEND;Lo;0;L;;;;;N;;;;
1DA74;SIGNWRITING TORSO-FLOORPLANE TWISTING;Lo;0;L;;;;;N;;;;
1DA75; SIGNWRITING UPPER BODY TILTING FROM HIP JOINTS; Mn; 0; L;;;;; N;;;;
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1DA76; SIGNWRITING LIMB COMBINATION; Lo; 0; L;;;;; N;;;;
1DA77; SIGNWRITING LIMB LENGTH-1; Lo; 0; L;;;;; N;;;;
1DA78; SIGNWRITING LIMB LENGTH-2; Lo; 0; L;;;;; N;;;;;
1DA79; SIGNWRITING LIMB LENGTH-3; Lo; 0; L;;;;; N;;;;;
1DA7A; SIGNWRITING LIMB LENGTH-4; Lo; 0; L;;;;; N;;;;;
1DA7B; SIGNWRITING LIMB LENGTH-5; Lo; 0; L;;;;; N;;;;;
1DA7C; SIGNWRITING LIMB LENGTH-6; Lo; 0; L;;;;; N;;;;;
1DA7D; SIGNWRITING LIMB LENGTH-7; Lo; 0; L;;;;; N;;;;;
1DA7E; SIGNWRITING FINGER; Lo; 0; L;;;;; N;;;;
1DA7F; SIGNWRITING LOCATION-WALLPLANE SPACE; Lo; 0; L;;;;; N;;;;
1DA80; SIGNWRITING LOCATION-FLOORPLANE SPACE; Lo; 0; L;;;;; N;;;;;
1DA81; SIGNWRITING LOCATION HEIGHT; Lo; 0; L;;;;; N;;;;;
1DA82; SIGNWRITING LOCATION WIDTH; Lo; 0; L;;;;; N;;;;
1DA83; SIGNWRITING LOCATION DEPTH; Lo; 0; L;;;;; N;;;;
1DA84; SIGNWRITING LOCATION HEAD NECK; Mn; 0; L;;;;; N;;;;;
1DA85; SIGNWRITING LOCATION TORSO; Lo; 0; L;;;;; N;;;;;
1DA86; SIGNWRITING LOCATION LIMBS DIGITS; Lo; 0; L;;;;; N;;;;
1DA87;SIGNWRITING COMMA;Po;0;L;;;;;N;;;;;
1DA88; SIGNWRITING FULL STOP; Po; 0; L;;;;; N;;;;
1DA89; SIGNWRITING SEMICOLON; Po; 0; L;;;;; N;;;;;
1DA8A; SIGNWRITING COLON; Po; 0; L;;;;; N;;;;
1DA8B; SIGNWRITING PARENTHESIS; Po; 0; L;;;;; N;;;;;
1DA9B; SIGNWRITING FILL MODIFIER-2; Mn; 0; L;;;;; N;;;;
1DA9C; SIGNWRITING FILL MODIFIER-3; Mn; 0; L;;;;; N;;;;
1DA9D;SIGNWRITING FILL MODIFIER-4;Mn;0;L;;;;;N;;;;
1DA9E; SIGNWRITING FILL MODIFIER-5; Mn; 0; L;;;;; N;;;;;
1DA9F;SIGNWRITING FILL MODIFIER-6;Mn;0;L;;;;;N;;;;;
1DAA1; SIGNWRITING ROTATION MODIFIER-2; Mn; 0; L;;;;; N;;;;
1DAA2; SIGNWRITING ROTATION MODIFIER-3; Mn; 0; L;;;;; N;;;;
1DAA3; SIGNWRITING ROTATION MODIFIER-4; Mn; 0; L;;;;; N;;;;;
1DAA4; SIGNWRITING ROTATION MODIFIER-5; Mn; 0; L;;;;; N;;;;;
1DAA5; SIGNWRITING ROTATION MODIFIER-6; Mn; 0; L;;;;; N;;;;
1DAA6; SIGNWRITING ROTATION MODIFIER-7; Mn; 0; L;;;;; N;;;;
1DAA7; SIGNWRITING ROTATION MODIFIER-8; Mn; 0; L;;;;; N;;;;;
1DAA8; SIGNWRITING ROTATION MODIFIER-9; Mn; 0; L;;;;; N;;;;;
1DAA9; SIGNWRITING ROTATION MODIFIER-10; Mn; 0; L;;;;; N;;;;
1DAAA; SIGNWRITING ROTATION MODIFIER-11; Mn; 0; L;;;;; N;;;;;
1DAAB; SIGNWRITING ROTATION MODIFIER-12; Mn; 0; L;;;;; N;;;;
1DAAC; SIGNWRITING ROTATION MODIFIER-13; Mn; 0; L;;;;; N;;;;
1DAAD; SIGNWRITING ROTATION MODIFIER-14; Mn; 0; L;;;;; N;;;;
1DAAE; SIGNWRITING ROTATION MODIFIER-15; Mn; 0; L;;;;; N;;;;
1DAAF; SIGNWRITING ROTATION MODIFIER-16; Mn; 0; L;;;;; N;;;;
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11. Issues for future standardization. As stated above, there are *no issues* with the character set proposed here. It has been stable since 2008, having been formalized after 34 years of development. Encoding of the characters proposed here will greatly facilitate discussion of SignWriting characters in the abstract in an interchangeable way, and will facilitate further work on the encoding model (yet to be determined) for the layout of SignWriting characters. To facilitate further discussion for future standardization, the issues regarding that encoding model are presented below. But those issues should *not* delay the encoding of the graphic characters proposed in this document.

Encoding Model Issues (as presented by SignWriting programmer Steve Slevinski).

The symbol set is stable and widely accepted. The main structures of signs and punctuations in lanes are understood. The major unresolved issue with encoding SignWriting deals with layout. While every sign has a defined center, how to define the sign itself is still unresolved.

The main issue of layout is how the writer will use the system. The balance between complexity and usability from the writer's perspective is of primary importance. It must always be remembered that the writer decides the symbols and their placement. Anything else is a different writing system.

The second issue of layout involve comparison. Signs can quickly be scanned for the symbols used; however, the relative position of the symbols require an analysis of the layout. The different layouts offer different approaches for evaluation.

The third issues of layout involves variability. There are two types of variability. The first, interpersonal variability, occurs when writers pick different symbols and different details. Inter-personal variability is part of the writing system that layout can not resolve. The second, intra-personal variability, occurs when writers use the same symbols, but in slightly different positions. With layout choices, it is possible to reduce the intra-personal variability, but this reduction may harm the writing system by imposing too many restrictions on the writer.

A fourth issues of layout involves elegance and beauty. Some may consider one type of layout to be superior to another based on subjective personal opinions. SignWriting is a unique script. The ultimate choice of layout should be based on the writer's experience, comparison, and variability.

In Figure 4 above, the various layout options are identified for the sign sentence "Hello World." which contains 2 signs and 1 punctuation mark.

Freeform Layout. With freeform layout, the writer decides what symbols to use and the exact symbol position. The freeform layout offers the greatest flexibility for the writer and the greatest intra-personal variability.

Cartesian Coordinates. Cartesian coordinates specify X and Y coordinates for the top, left of the symbol glyph. The coordinates of the symbols relate to the center of the canvas. This is the current method for writing. The writer is presented with a canvas and positions each symbol independently.

Polar Coordinates. Polar coordinates specify an angle and a distance from the center of the sign to the center of each symbol. The current cartesian data can be exported to this format.

Restricted Layout. It is possible to impose restrictions on symbol placement thereby limiting the intra-personal variability of sign spellings.

Generic Restrictions. Instead of allowing any coordinates, it may be possible to limit the options. For example, with polar coordinates, only allow specific angles and specific distances. This has not been evaluated.

Specific Restrictions. It may be possible to perform a statistical analysis of the symbols used to come up with a limited number of attachment points around each symbol and a small list of predefined distances between symbols. This information would be symbol specific and could greatly reduce the intra-personal variability if successfully implemented.

Non-form Layout. Some would argue that the writer should not determine the form of a sign, but should input linguistic analysis and let the layout/font manager determine the best representation for the written sign. This would change the script from a writing system into computer aided design, requiring concepts that are not part of the script and are not part of the writer's thought processes. The idea would make for an interesting project, but it is not about encoding SignWriting.

Absolute versus Relative Positioning. Any of the above layout options have two choices for positioning. The freeform layouts defined above use absolute positioning, where the position of each symbol relates to the center of the sign. It may be possible to interrelate the position of the symbols. Relative positioning would create some type of linked list for symbol positions. The position of each symbol would be defined based on the position of the previous symbol in the list. The viability and usability of relative positioning is unknown and has not been investigated.

- **12. Glyphs.** The glyphs in this proposal were produced from original drawings by Adam Frost, processed by Steve Slevinski and Martin Hosken, and cleaned up and further processed by Michael Everson.
- **13. Acknowledgements.** This project was made possible in part by a grant from the Center For Sutton Movement Writing.

14. Bibliography

The main online sources for Signwriting are:

- http://www.signwriting.org
- http://www.signbank.org in particular http://www.signbank.org/iswa/
- http://www.signpuddle.net

SignWriting Instruction and Reference Manuals

SignWriting: Sign Languages are Written Languages. Part 1: SignWriting Basics by Valerie Sutton http://www.signwriting.org/archive/docs6/sw0550-SignWriting-Manual-Part1-Basics.pdf

SignWriting: Sign Languages are Written Languages. Part 2: SignWriting Hand Symbols by Valerie Sutton and Adam Frost

http://signwriting.org/archive/docs7/sw0618_SignWriting_Hand_Symbols_Manual_Sutton_Frost.pdf SignWriting Alphabet Manual, ISWA 2010. The International SignWriting Alphabet by Valerie Sutton http://www.signwriting.org/archive/docs7/sw0636_SignWriting_Alphabet_Manual_2010.pdf Lessons in SignWriting Textbook by Valerie Sutton

http://www.SignWriting.org/archive/docs2/sw0116-Lessons-SignWriting.pdf

Lessons in SignWriting Video Series. Manual 1: Introduction to SignWriting, Transcript of English Voiceover for Video 1

http://www.SignWriting.org/archive/docs1/sw0009-Intro-SignWriting.pdf

Lessons in SignWriting Video Series. Manual 2: SignWriting Basics Manual, Transcript of English Voiceover for Video 2

http://www.SignWriting.org/archive/docs1/sw0010-SignWriting-Basics.pdf

A Cross-linguistic Guide to SignWriting: A Phonetic Approach. In English, with Spanish Sign Language examples, by Steve & Dianne Parkhurst

http://signwriting.org/archive/docs7/sw0617_Cross_Linguistic_Guide_SignWriting_Parkhurst.pdf

SignoEscritura: Un sistema completo para escribir y leer las lenguas de signos. In Spanish, with Spanish Sign Language examples by Steve and Dianne Parkhurst

http://www.signwriting.org/archive/docs5/sw0494-SignoEscritura-Parkhurst-ES-LSE.pdf

SignWriting: A Complete System for Writing and Reading Signed Languages by Steve and Dianne Parkhurst (English Translation of SignoEscritura Textbook from Spain)

http://www.signwriting.org/archive/docs5/sw0493-SWLessonsBook-Parkhurst-EngLSE.pdf

Handbuch zur Gebärdenschrift (SignWriting Handbook) In German, with German Sign Language examples by Stefan Wöhrmann, published by Birgit Jacobsen

http://www.suttonshop.com/ecommerce/pages/products_sw_detail.jsp?id=54.0

http://www.astrid-krueger-medizin.de/buchbe/gebaerden.htm

http://www.kestner.de/n/verlag/produkte/gschrift/gschrift-einfuehrung.htm

Das Gebärdenbuch (German Sign Language book) with SignWriting illustrations, Books 1 and 2. By

Birgit Jacobsen, German signs written in SignWriting by Stefan Woehrmann

http://www.suttonshop.com/ecommerce/pages/products_sw_detail.jsp?id=53.0

http://www.suttonshop.com/ecommerce/pages/products_sw_detail.jsp?id=56.0

Lições Sobre o SignWriting. Translation of Valerie Sutton's Lessons in SignWriting Textbook into Portuguese and Brazilian Sign Language (LIBRAS), by Dr. Marianne Stumpf, with additional lessons in writing LIBRAS by Marianne Stumpf

http://www.signwriting.org/archive/docs5/sw0472-BR-Licoes-SignWriting.pdf

TegnSkrift: Innføring i Tegnskrift. by Professor Dr. Ingvild Roald, Vestlandet Kompetansesenter, Bergen http://www.signwriting.org/archive/docs4/sw0304-NO-TegnSkrift-Laerebok-06.pdf

Kurs i TegnSkrift (Self-Study Guide for learning SignWriting) by Professor Dr. Ingvild Roald http://www.signwriting.org/archive/docs6/sw0514-NO-TEGNSKRIFT-Selvinstruerende.pdf

Leçons en SignWriting 2002: lire et écrire les mouvements des langues des signes. Traduction des leçons

de SignWriting en français, by Anne-Claude Prélaz Girod, French-Switzerland

http://www.signwriting.org/archive/docs3/sw0221-Lecons-SW-Francais-1.pdf

http://www.signwriting.org/archive/docs3/sw0222-Lecons-SW-Francais-2.pdf

http://www.signwriting.org/archive/docs3/sw0223-Lecons-SW-Francais-3.pdf

http://www.signwriting.org/archive/docs3/sw0224-Lecons-SW-Francais-4.pdf

http://www.signwriting.org/archive/docs4/sw0301-CHfr-lecons-internet-1-15.pdf

http://www.signwriting.org/archive/docs4/sw0302-CHfr-lecons-internet-16-30.pdf

Writing American Sign Language Grammar. Lesson 1.

http://www.SignWriting.org/archive/docs1/sw0011-ASL-Grammar-01.pdf

Writing American Sign Language Grammar. Lesson 2.

http://www.SignWriting.org/archive/docs1/sw0012-ASL-Grammar-02.pdf

Writing American Sign Language classifiers at Salk Institute.

http://www.SignWriting.org/archive/docs1/sw0013-Salk-Institute-SW.pdf

The Gospel According to John in Written American Sign Language. Translator: Nancy Romero. Editor:

Lucinda O'Grady Batch. San Diego: Center for Sutton Movement Writing, 2010. Second Edition.

ISBN: 978-0-914336-47-1

	1D80	1D81	1D82	1D83	1D84	1D85	1D86	1D87	1D88	1D89	1D8A	1D8B	1D8C	1D8D	1D8E
0	1D800	1 D810	1D820	1D830	1D840	% 1D850	1D860	1D870	□ 1D880	ብ 1D890	1D8A0	1D8B0	1D8C0	3 1D8D0	1D8E0
1	J 1D801		1D821	1D831	1D841	알 ን 1D851	<u> </u>	1 1 D871	> 1D881	1 D891	J 1D8A1	1D8B1	1D8C1	1D8D1	1D8E1
2	1D802	1 D812	1D822	1D832	1D842	1D852	Ŭ 1D862	1D872	1D882	1D892	1D8A2	1D8B2	1D8C2	1D8D2	1D8E2
3	1D803	1D813	♣ 1D823	Љ 1D833	1D843	1D853	∐ - 1D863	① 1D873	1D883	1D893	1D8A3	1D8B3	1D8C3	1D8D3	1D8E3
4	1D804	1D814	1D824	1D834	当	1D854	∐ > 1D864	O 1D874	1D884	\(\) 1D894	1D8A4	1D8B4	廿 1D8C4	1D8D4	1D8E4
5	1D805	∐ 1D815	1D825	1D835	7 <u>7</u>	1D855	1D865	O 1D875	1D885	1D895	8	<u></u>	1D8C5	% 1D8D5	1D8E5
6	- ☐ 1D806	1D816	1D826	1D836	1D846	1D856	1D866	O 1D876	廿	1D896	1D8A6	☐ 1D8B6	1D8C6	1D8D6	1D8E6
7	J 1D807	김 1D817	1D827	1D837	(1D857	□ 1D867	1 D877	8	`□ 1D897	1D8A7	1D8B7	1D8C7	∜ 1D8D7	1D8E7
8	1D808	1D818	1D828	1D838	∐ 1D848	1D858	□ 1D868	1D878	1D888	ြ 1D898	1D8A8	□ ∕ 1D8B8		1D8D8	1D8E8
9	☐ 1D809	1D819	1 D829	1D839	T 1D849	1D859	 1D869	1D879	1D889	1 D899	1D8A9	1D8B9	☐ 1D8C9	1D8D9	↑] 1D8E9
Α] 1D80A	∆ 1D81A	1 D82A	1D83A	⊡ 1D84A	1D85A	T]	1 D87A	1D88A	□ 1D89A	%	∐ 1D8BA	₫ 1D8CA	1D8DA	1 □ 1D8EA
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С	☐ 1D80C	1D81C	→ □ 1D82C	1D83C	业	☐ 1D85C	1D86C		<u></u>	廿	1D8AC	1D8BC	1D8CC	1D8DC	1D8EC
D	d	1D81D	廿 1D82D	∏	当 ,	□ 1D85D	① 1D86D	1D87D	1D88D	1D89D	1D8AD	1D8BD	1D8CD	1D8DD	1D8ED
E	1D80E	1D81E	∐ 1D82E	1D83E	☆ 1D84E	□ ′ 1D85E	1D86E	7] 1D87E	≟ 1D88E	1D89E	☐ 1D8AE	≱∰ 1D8BE	∜ 1D8CE	☐ 1D8DE	1D8EE
F	J 1D80F	∂ 1D81F	∐ 1D82F	₹ □	≌ ∕ 1D84F	□ > 1D85F	℃ 1D86F) 1D87F	1D88F	1D89F	☐ 1D8AF	1D8BF	⅓ 1D8CF	1D8DF	1D8EF

	1D8F	1D90	1D91	1D92	1D93	1D94	1D95	1D96	1D97	1D98	1D99	1D9A	1D9B	1D9C
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1	1D8F0 1D8F1	1D900 III 1D901	1D910 @ 1D911	1D920 ^ 1D921	1D930 ₩↑ 1D931	1D940 1D941	1D950 1D951	1D960 f 1D961	1D970 +++ 1D971	1D980 1D981	1D990 1D991	1D9A0 *** ** ** ** ** ** ** ** ** ** ** ** *	1D9B0 1D9B1	1D9C0 1 D9C1
2	1D8F2	1D901	@@ 1D912	^ 1D922	<u>₩</u> ↑ 1D932	1D941 1D942	1D951	1D961	1D972	1D981	1D991 1D992	1D9A2	1D9B1	1D9C2
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4	1D8F3	1D903	1D913	1D923	1D933	1D943	1D953	1D963	1D973	1D983	1D993	1D9A3	1D9B3	1D9C3
5	1D8F4	1D904 *	1D914 ————————————————————————————————————	1D924	1D934	1D944	1D954	1D964	1D974	1D984	1D994	1D9A4	1D9B4	1D9C4
6	1D8F5	1D905 **	1D915	1D925 ≪	1D935 ↑₩↑	1D945	1D955	1D965	1D975	1D985	1D995	1D9A5	1D9B5	1D9C5
7	1D8F6	1D906 *	1D916	1D926	1D936	1D946	1D956	1D966	1D976	1D986	1D996	1D9A6	1D9B6	1D9C6
8	1D8F7	1D907 +	1D917	1D927	1D937	1D947	1D957	1D967	1D977	1D987	1D997	1D9A7	1D9B7	1D9C7
9	1D8F8	1D908	1D918	1D928	1D938	1D948	1D958	1D968	1D978	1D988	1D998	1D9A8	1D9B8	1D9C8
	1D8F9	1D909	1D919	1D929	1D939	1D949	1D959	1D969	1D979	1D989	1D999	1D9A9	1D9B9	1D9C9
Α	1D8FA	 + 1D90A	1D91A	↑ 1D92A	1D93A	1D94A	1D95A	↑↑ 1D96A	1D97A	1D98A	1D99A	1D9AA	1D9BA	1D9CA
В	☐ 1D8FB	# 1D90B	o 1D91B	1D92B	1D93B	1D94B	1D95B	<u>↑↑</u> 1D96B	1D97B	1D98B	1D99B	1D9AB	1D9BB	1D9CB
С	1D8FC	## 1D90C	o 1D91C	1D92C	1D93C	1D94C	1D95C	↓↑ 1D96C	1D97C	1D98C	1D99C	1D9AC	1D9BC	1D9CC
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	1D9D2	1D9E2	1D9F2	1DA02	1DA12	1DA22	1DA32	1DA42	1DA52	1DA62	1DA72	1DA82		1DAA2
3	11	(5)	()	Ô		ህብ ብህ	(†)		©			5		SW R4
	1D9D3	1D9E3	1D9F3	1DA03	1DA13	1DA23	1DA33	1DA43	1DA53	1DA63	1DA73	1DA83		1DAA3
4	10004	(()		\bigcirc	$\langle \uparrow \uparrow \rangle$	(8)	<u></u>	9		<u> </u>			SW R5
	1D9D4	1D9E4	1D9F4	1DA04	1DA14	1DA24	1DA34	1DA44	1DA54	1DA64	1DA74 •	1DA84		1DAA4
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6	K	(A		(°)	(4,4)		*		-	X	₹		SW R7
	1D9D6	1D9E6	1D9F6	1DA06	1DA16	1DA26	1DA36	1DA46	1DA56	1DA66	1DA76	1DA86		1DAA6
7	1D9D7	6	∠ 1D9F7	1DA07	(20 C) 1DA17	1DA27	\! <i>!</i> 1DA37	1DA47	() 1DA57	1DA67	 1DA77	1DA87		SW R8
	וטפטו	ID9E7	ID9F7		IDAI7	IDAZI	IDASI	IDA47	IDAST	IDA07	IDATT	IDA67		IDAA7
8	1000°	G	10000		(0.0)	10438	\ /	(0)	(C.)	↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑	10.79	10.00		SW R9
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	1D9D9	1D9E9	1D9F9	1DA09	1DA19	1DA29	1DA39	1DA49	1DA59	1DA69	IDA79	IDA09		1DAA9
Α	1D9DA	D9EA	≈ 1D9FA	1DA0A	1DA1A	1DA2A	6 1DA3A	1DA4A	1DA5A)·(1DA6A	1DA7A	1DA8A		SW R 11
	IDVDA	IDVLA	15017		IDAIA	IDALA	IDAVA			15/10/1	IDAIA	IDAUA		15,777
В	1D9DB	1D9EB	1D9FB	1DA0B	1DA1B	00 1DA2B	1DA3B	1DA4B	1DA5B	1DA6B	 1DA7B	1DA8B	SW F2 1DA9B	R12
													r	r1
С	← 1D9DC	1D9EC	€ 1D9FC	1DA0C	(00) 1DA1C	DA2C	√	(D)	1DA5C	1DA6C	l 1DA7C		SW F3 1DA9C	R13
	.2.20	.5320	.5010							.2,100	.5.110	<i>}</i>	r1	
D	1D9DD	ð 1D9ED	1D9FD	1DA0D	1DA1D	1DA2D	1DA3D	1DA4D	1DA5D	1DA6D	I 1DA7D		1DA9D	SW R14
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Ε	↑↑ ID9DE	5	O 1D9FE	1DA0E	1DA1E	1DA2E	1DA3E	(ĵ•ĵ) 1DA4E	1DA5E	1 DA6E	「		SW F 5	SW R15
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	1D9DF	1D9EF	1D9FF	1DA0F	1DA1F	1DA2F	1DA3F	1DA4F	1DA5F	1DA6F	1DA7F	VIIIIII	1DA9F	1DAAF

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			4 D 0 0 7		
		hapes with index finger	1D827	3	SIGNWRITING HAND-FIST INDEX MIDDLE UP SPREAD THUMB FORWARD
1D800 1D801	9 9	SIGNWRITING HAND-FIST INDEX SIGNWRITING HAND-CIRCLE INDEX	1D828	ъ	SIGNWRITING HAND-FIST INDEX MIDDLE THUMB CUPPED
1D802	Д	SIGNWRITING HAND-CUP INDEX	1D829	Ф	SIGNWRITING HAND-FIST INDEX MIDDLE
1D803 1D804	ᆸ	SIGNWRITING HAND-OVAL INDEX SIGNWRITING HAND-HINGE INDEX	1D82A	₽	THUMB CIRCLED SIGNWRITING HAND-FIST INDEX MIDDLE THUMB HOOKED
1D805 1D806	-1 -√	SIGNWRITING HAND-ANGLE INDEX SIGNWRITING HAND-FIST INDEX BENT	1D82B	3 D	SIGNWRITING HAND-FIST INDEX MIDDLE
1D807	d	SIGNWRITING HAND-CIRCLE INDEX BENT	1D82C	≉□	THUMB HINGED SIGNWRITING HAND-FIST THUMB BETWEEN
1D808	Ð	SIGNWRITING HAND-FIST THUMB UNDER INDEX BENT	1D82D	4	INDEX MIDDLE STRAIGHT SIGNWRITING HAND-FIST INDEX MIDDLE
1D809	₫	SIGNWRITING HAND-FIST INDEX RAISED KNUCKLE	1D82E	_	CONJOINED THUMB SIDE SIGNWRITING HAND-FIST INDEX MIDDLE
1D80A 1D80B	∃ ₫	SIGNWRITING HAND-FIST INDEX CUPPED SIGNWRITING HAND-FIST INDEX HINGED	1D82F	4	CONJOINED THUMB SIDE CONJOINED SIGNWRITING HAND-FIST INDEX MIDDLE
1D80C 1D80D	₫ ð	SIGNWRITING HAND-FIST INDEX HINGED LOW SIGNWRITING HAND-CIRCLE INDEX HINGE	1D830	d	CONJOINED THUMB SIDE BENT SIGNWRITING HAND-FIST MIDDLE THUMB
					HOOKED INDEX UP
finge		hapes with index and middle	1D831	R	SIGNWRITING HAND-FIST INDEX THUMB HOOKED MIDDLE UP
1D80E	اء لا	SIGNWRITING HAND-FIST INDEX MIDDLE	1D832	ď	SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED HINGED THUMB SIDE
1D80F	В	SIGNWRITING HAND-CIRCLE INDEX MIDDLE	1D833	ð	SIGNWRITING HAND-FIST INDEX MIDDLE CROSSED THUMB SIDE
1D810 1D811	ð	SIGNWRITING HAND-FIST INDEX MIDDLE BENT SIGNWRITING HAND-FIST INDEX MIDDLE	1D834	d	SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED THUMB FORWARD
1D812	ď	RAISED KNUCKLES SIGNWRITING HAND-FIST INDEX MIDDLE	1D835	Ъ	SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED CUPPED THUMB FORWARD
1D813	d	HINGED SIGNWRITING HAND-FIST INDEX UP MIDDLE	1D836	ф	SIGNWRITING HAND-FIST MIDDLE THUMB CUPPED INDEX UP
1D814	ď	HINGED SIGNWRITING HAND-FIST INDEX HINGED	1D837	뀌	SIGNWRITING HAND-FIST INDEX THUMB CUPPED MIDDLE UP
1D815	Ь	MIDDLE UP SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED	1D838	ф	SIGNWRITING HAND-FIST MIDDLE THUMB CIRCLED INDEX UP
1D816	a	SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED INDEX BENT	1D839	Ф	SIGNWRITING HAND-FIST MIDDLE THUMB CIRCLED INDEX HINGED
1D817	đ	SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED MIDDLE BENT	1D83A	*⊟	SIGNWRITING HAND-FIST INDEX THUMB ANGLED OUT MIDDLE UP
1D818	3	SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED CUPPED	1D83B	4₽	SIGNWRITING HAND-FIST INDEX THUMB ANGLED IN MIDDLE UP
1D819	3	SIGNWRITING HAND-FIST INDEX MIDDLE CONJOINED HINGED	1D83C	씸	SIGNWRITING HAND-FIST INDEX THUMB CIRCLED MIDDLE UP
1D81A	ል	SIGNWRITING HAND-FIST INDEX MIDDLE CROSSED		╗	SIGNWRITING HAND-FIST INDEX MIDDLE THUMB CONJOINED HINGED
1D81B	ð	SIGNWRITING HAND-CIRCLE INDEX MIDDLE CROSSED	1D83E	₹□	SIGNWRITING HAND-FIST INDEX MIDDLE THUMB ANGLED OUT
1D81C	8	SIGNWRITING HAND-FIST MIDDLE BENT OVER INDEX	1D83F	₹□	SIGNWRITING HAND-FIST INDEX MIDDLE THUMB ANGLED
1D81D	4	SIGNWRITING HAND-FIST INDEX BENT OVER MIDDLE	1D840	4	SIGNWRITING HAND-FIST MIDDLE THUMB ANGLED OUT INDEX UP
Hand	lel	hapes with index and middle	1D841	4	SIGNWRITING HAND-FIST MIDDLE THUMB ANGLED OUT INDEX CROSSED
		and thumb	1D842	4	SIGNWRITING HAND-FIST MIDDLE THUMB ANGLED INDEX UP
_		SIGNWRITING HAND-FIST INDEX MIDDLE THUMB	1D843	₽	SIGNWRITING HAND-FIST INDEX THUMB HOOKED MIDDLE HINGED
1D81F	4	SIGNWRITING HAND-CIRCLE INDEX MIDDLE THUMB	Hand	dsl	hapes with four fingers
1D820	ᅪ	SIGNWRITING HAND-FIST INDEX MIDDLE STRAIGHT THUMB BENT	1D844	씸	SIGNWRITING HAND-FLAT FOUR FINGERS
1D821	2-	SIGNWRITING HAND-FIST INDEX MIDDLE BENT THUMB STRAIGHT	1D845	43	SIGNWRITING HAND-FLAT FOUR FINGERS BENT
1D822	뀹	SIGNWRITING HAND-FIST INDEX MIDDLE THUMB BENT	1D846	Ü	SIGNWRITING HAND-FLAT FOUR FINGERS HINGED
1D823	ď	SIGNWRITING HAND-FIST INDEX MIDDLE HINGED SPREAD THUMB SIDE	1D847	A	SIGNWRITING HAND-FLAT FOUR FINGERS CONJOINED
1D824	라	SIGNWRITING HAND-FIST INDEX UP MIDDLE HINGED THUMB SIDE	1D848	Ħ	SIGNWRITING HAND-FLAT FOUR FINGERS CONJOINED SPLIT
1D825	占	SIGNWRITING HAND-FIST INDEX UP MIDDLE HINGED THUMB CONJOINED	1D849	Э	SIGNWRITING HAND-CLAW FOUR FINGERS CONJOINED
1D826	₽	SIGNWRITING HAND-FIST INDEX HINGED MIDDLE UP THUMB SIDE	1D84A	G	SIGNWRITING HAND-FIST FOUR FINGERS CONJOINED BENT
		MINDLE OF THOMB SIDE			

1D84B ¬	SIGNWRITING HAND-HINGE FOUR FINGERS CONJOINED	1D87C	٦	SIGNWRITING HAND-HINGE OPEN THUMB FORWARD
	CONJOINED	1D87D	_	SIGNWRITING HAND-HINGE
Hands	hapes with five fingers	1D87E		
	•		7	SIGNWRITING HAND-HINGE SMALL
1D84C ₺	SIGNWRITING HAND-FLAT FIVE FINGERS	1D87F	λ	SIGNWRITING HAND-HINGE OPEN THUMB SIDE
40040	SPREAD	1D880	₽	SIGNWRITING HAND-HINGE THUMB SIDE
1D84D 🛎	SIGNWRITING HAND-FLAT HEEL FIVE FINGERS	1D881	b	SIGNWRITING HAND-HINGE OPEN NO THUMB
1D04E %	SPREAD	1D882	70	SIGNWRITING HAND-HINGE NO THUMB
1D84E ₺	SIGNWRITING HAND-FLAT FIVE FINGERS	1D883	40	SIGNWRITING HAND-HINGE THUMB SIDE
10015	SPREAD FOUR BENT			TOUCHING INDEX
1D84F ⇔	SIGNWRITING HAND-FLAT HEEL FIVE FINGERS SPREAD FOUR BENT	1D884	 0	SIGNWRITING HAND-HINGE THUMB BETWEEN
1D850 🕸	SIGNWRITING HAND-FLAT FIVE FINGERS			MIDDLE RING
1D000 TP	SPREAD BENT	1D885	Z)	SIGNWRITING HAND-ANGLE
1D851 ⇔	SIGNWRITING HAND-FLAT HEEL FIVE FINGERS	Шала	J_ I	hamaa uulth littla fimman
10001 1	SPREAD BENT		15	hapes with little finger
1D852 ⅓	SIGNWRITING HAND-FLAT FIVE FINGERS	1D886	占	SIGNWRITING HAND-FIST INDEX MIDDLE RING
15002 0	SPREAD THUMB FORWARD	1D887	8	SIGNWRITING HAND-CIRCLE INDEX MIDDLE
1D853 🗈	SIGNWRITING HAND-CUP FIVE FINGERS			RING
.2000	SPREAD	1D888	#	SIGNWRITING HAND-HINGE INDEX MIDDLE
1D854 🗈	SIGNWRITING HAND-CUP FIVE FINGERS			RING
.200.	SPREAD OPEN	1D889	4	SIGNWRITING HAND-ANGLE INDEX MIDDLE
1D855 🗈	SIGNWRITING HAND-HINGE FIVE FINGERS			RING
	SPREAD OPEN	1D88A	*	SIGNWRITING HAND-HINGE LITTLE
1D856 ≉	SIGNWRITING HAND-OVAL FIVE FINGERS	1D88B	쌈	SIGNWRITING HAND-FIST INDEX MIDDLE RING
	SPREAD			BENT
1D857 🕆	SIGNWRITING HAND-FLAT FIVE FINGERS	1D88C	Ш	SIGNWRITING HAND-FIST INDEX MIDDLE RING
	SPREAD HINGED			CONJOINED
1D858 🕆	SIGNWRITING HAND-FLAT FIVE FINGERS	1D88D		SIGNWRITING HAND-HINGE INDEX MIDDLE
	SPREAD HINGED THUMB SIDE			RING CONJOINED
1D859 🕆	SIGNWRITING HAND-FLAT FIVE FINGERS	1D88E	₿	SIGNWRITING HAND-FIST LITTLE DOWN
	SPREAD HINGED NO THUMB	1D88F	#	SIGNWRITING HAND-FIST LITTLE DOWN
1D85A 0	SIGNWRITING HAND-FLAT			RIPPLE STRAIGHT
1D85B @	SIGNWRITING HAND-FLAT BETWEEN PALM	1D890	솀	SIGNWRITING HAND-FIST LITTLE DOWN
	FACINGS			RIPPLE CURVED
1D85C =	SIGNWRITING HAND-FLAT HEEL	1D891	Ф.	SIGNWRITING HAND-FIST LITTLE DOWN
1D85D ₽	SIGNWRITING HAND-FLAT THUMB SIDE			OTHERS CIRCLED
1D85E ⇒	SIGNWRITING HAND-FLAT HEEL THUMB SIDE	1D892	ъ	SIGNWRITING HAND-FIST LITTLE UP
1D85F ♪	SIGNWRITING HAND-FLAT THUMB BENT	1D893	ъ	SIGNWRITING HAND-FIST THUMB UNDER
1D860 a	SIGNWRITING HAND-FLAT THUMB FORWARD			LITTLE UP
1D861 4	SIGNWRITING HAND-FLAT THOMB FORWARD SIGNWRITING HAND-FLAT SPLIT INDEX	1D894	ъ	SIGNWRITING HAND-CIRCLE LITTLE UP
IDOOI I	THUMB SIDE	1D895	à	SIGNWRITING HAND-OVAL LITTLE UP
1D862 🛚	SIGNWRITING HAND-FLAT SPLIT CENTER	1D896	4	SIGNWRITING HAND-ANGLE LITTLE UP
		1D897	ъ	SIGNWRITING HAND-FIST LITTLE RAISED
1D863 ₺	SIGNWRITING HAND-FLAT SPLIT CENTER THUMB SIDE	15001	_	KNUCKLE
1D864 ₺		1D898	ь	SIGNWRITING HAND-FIST LITTLE BENT
1D864 ₺	SIGNWRITING HAND-FLAT SPLIT CENTER THUMB SIDE BENT	1D899	₽_	SIGNWRITING HAND-FIST LITTLE TOUCHES
1D865 r	SIGNWRITING HAND-FLAT SPLIT LITTLE	10000	_	THUMB
45000		1D89A	ъ	SIGNWRITING HAND-FIST LITTLE THUMB
	SIGNWRITING HAND-CLAW	1D89B		SIGNWRITING HAND-HINGE LITTLE THUMB
1D867 ™	SIGNWRITING HAND-CLAW THUMB SIDE	1D89C		SIGNWRITING HAND-FIST LITTLE INDEX
1D868 ¬	SIGNWRITING HAND-CLAW NO THUMB	10030	L	THUMB
1D869 =	SIGNWRITING HAND-CLAW THUMB FORWARD	1D89D	اد	SIGNWRITING HAND-HINGE LITTLE INDEX
1D86A ◀	SIGNWRITING HAND-HOOK CURLICUE	10000	U	THUMB
1D86B ₪	SIGNWRITING HAND-HOOK	1D89E	*	SIGNWRITING HAND-ANGLE LITTLE INDEX
1D86C 🗈	SIGNWRITING HAND-CUP OPEN	IDOUL	-	THUMB INDEX THUMB OUT
1D86D 🗊	SIGNWRITING HAND-CUP	1D89F	4	SIGNWRITING HAND-ANGLE LITTLE INDEX
1D86E ₻	SIGNWRITING HAND-CUP OPEN THUMB SIDE	10001	_	THUMB INDEX THUMB
1D86F ⊅	SIGNWRITING HAND-CUP THUMB SIDE	1D8A0	A	SIGNWRITING HAND-FIST LITTLE INDEX
1D870	SIGNWRITING HAND-CUP OPEN NO THUMB	1D8A1	A	SIGNWRITING HAND-CIRCLE LITTLE INDEX
1D871 n	SIGNWRITING HAND-CUP NO THUMB	1D8A2	∄	SIGNWRITING HAND-HINGE LITTLE INDEX
40000	SIGNWRITING HAND-CUP OPEN THUMB	1D8A3	4	
1D8/2 b	FORWARD	IDOMO	40	DIGIT WINTTING HAND-ANGLE LITTLE INDEA
1D873 ೨	SIGNWRITING HAND-CUP THUMB FORWARD	Hand	del	hapes with ring finger
40074	SIGNWRITING HAND-CURLICUE OPEN			. • •
40075		1D8A4	月	SIGNWRITING HAND-FIST INDEX MIDDLE
	SIGNWRITING HAND-CURLICUE	40045		LITTLE
1D876 o	SIGNWRITING HAND-CIRCLE	1D8A5	Ą	SIGNWRITING HAND-CIRCLE INDEX MIDDLE
1D877 ⊲	SIGNWRITING HAND-OVAL	40040		LITTLE
1D878 ⊸	SIGNWRITING HAND-OVAL THUMB SIDE	1D8A6	귉	SIGNWRITING HAND-HINGE INDEX MIDDLE
1D879 ¬	SIGNWRITING HAND-OVAL NO THUMB	10047	,si	LITTLE
1D87A ⊲	SIGNWRITING HAND-OVAL THUMB FORWARD	1D8A7	4	SIGNWRITING HAND-HINGE RING
1D07D \	CICNIVIDITING HAND HINGE ODEN			

1D87B > SIGNWRITING HAND-HINGE OPEN

120110		5 ' ' -	10.	g
1D8A8 ₦	SIGNWRITING HAND-ANGLE INDEX MIDDLE	1D8D3	*	SIGNWRITING HAND-ANGLE MIDDLE RING LITTLE IN
1D8A9 🕹	SIGNWRITING HAND-FIST INDEX MIDDLE CROSS LITTLE	1D8D4	-₩	SIGNWRITING HAND-ANGLE MIDDLE RING LITTLE
1D8AA ತ	SIGNWRITING HAND-CIRCLE INDEX MIDDLE CROSS LITTLE	1D8D5	B	SIGNWRITING HAND-CIRCLE MIDDLE RING
1D8AB ₩ 1D8AC ₩	SIGNWRITING HAND-FIST RING DOWN SIGNWRITING HAND-HINGE RING DOWN	1D8D6	\$	SIGNWRITING HAND-CLAW MIDDLE RING LITTLE CONJOINED
1D8AD *	INDEX THUMB HOOK MIDDLE SIGNWRITING HAND-ANGLE RING DOWN	1D8D7	1	SIGNWRITING HAND-CLAW MIDDLE RING LITTLE CONJOINED SIDE
40045	MIDDLE THUMB INDEX CROSS SIGNWRITING HAND-FIST RING UP	1D8D8	N	SIGNWRITING HAND-HOOK MIDDLE RING LITTLE CONJOINED OUT
1D8AE b 1D8AF b	SIGNWRITING HAND-FIST RING RAISED KNUCKLE	1D8D9	4	SIGNWRITING HAND-HOOK MIDDLE RING LITTLE CONJOINED IN
1D8B0 b	SIGNWRITING HAND-FIST RING LITTLE	1D8DA	4	SIGNWRITING HAND-HOOK MIDDLE RING LITTLE CONJOINED
1D8B1 ₺ 1D8B2 ₫	SIGNWRITING HAND-CIRCLE RING LITTLE	1D8DB	4	SIGNWRITING HAND-HINGE INDEX HINGED
	SIGNWRITING HAND-OVAL RING LITTLE	1D8DC		SIGNWRITING HAND-FIST INDEX THUMB SIDE
1D8B3 →	SIGNWRITING HAND-ANGLE RING LITTLE	1D8DD		SIGNWRITING HAND-HINGE INDEX THUMB
1D8B4 ₺	SIGNWRITING HAND-FIST RING MIDDLE	.2022		SIDE
1D8B5 &	SIGNWRITING HAND-FIST RING MIDDLE CONJOINED	1D8DE	4	SIGNWRITING HAND-FIST INDEX THUMB SIDE THUMB DIAGONAL
1D8B6 =	SIGNWRITING HAND-FIST RING MIDDLE RAISED KNUCKLES	1D8DF	Ч	SIGNWRITING HAND-FIST INDEX THUMB SIDE THUMB CONJOINED
1D8B7 ⅓ 1D8B8 ৮	SIGNWRITING HAND-FIST RING INDEX SIGNWRITING HAND-FIST RING THUMB	1D8E0	₽	SIGNWRITING HAND-FIST INDEX THUMB SIDE THUMB BENT
1D8B9 à	SIGNWRITING HAND-HOOK RING THUMB	1D8E1	4	SIGNWRITING HAND-FIST INDEX THUMB SIDE INDEX BENT
Hands 1D8BA 🖞	hapes with middle finger SIGNWRITING HAND-FIST INDEX RING LITTLE	1D8E2	₽	SIGNWRITING HAND-FIST INDEX THUMB SIDE BOTH BENT
1D8BB ⊎	SIGNWRITING HAND-CIRCLE INDEX RING LITTLE	1D8E3	₫	SIGNWRITING HAND-FIST INDEX THUMB SIDE INDEX HINGE
1D8BC ಅ	SIGNWRITING HAND-CURLICUE INDEX RING LITTLE ON	1D8E4	Ь	SIGNWRITING HAND-FIST INDEX THUMB FORWARD INDEX STRAIGHT
1D8BD ₦	SIGNWRITING HAND-HOOK INDEX RING LITTLE OUT	1D8E5	đ	SIGNWRITING HAND-FIST INDEX THUMB FORWARD INDEX BENT
1D8BE ₦	SIGNWRITING HAND-HOOK INDEX RING LITTLE IN	1D8E6 1D8E7	₽	SIGNWRITING HAND-FIST INDEX THUMB HOOK SIGNWRITING HAND-FIST INDEX THUMB
1D8BF ∦	SIGNWRITING HAND-HOOK INDEX RING LITTLE UNDER	1D8E8	^□	CURLICUE SIGNWRITING HAND-FIST INDEX THUMB
1D8C0 #	SIGNWRITING HAND-CUP INDEX RING LITTLE			CURVE THUMB INSIDE
1D8C1 ∄	SIGNWRITING HAND-HINGE INDEX RING LITTLE	1D8E9	٦	SIGNWRITING HAND-CLAW INDEX THUMB CURVE THUMB INSIDE
1D8C2 ◀	SIGNWRITING HAND-ANGLE INDEX RING LITTLE OUT	1D8EA	₽	SIGNWRITING HAND-FIST INDEX THUMB CURVE THUMB UNDER
1D8C3 ◀	SIGNWRITING HAND-ANGLE INDEX RING LITTLE	1D8EB	Ф	SIGNWRITING HAND-FIST INDEX THUMB CIRCLE
1D8C4 ₩	SIGNWRITING HAND-FIST MIDDLE DOWN	1D8EC	Э	SIGNWRITING HAND-CUP INDEX THUMB
1D8C5 →	SIGNWRITING HAND-HINGE MIDDLE	1D8ED		SIGNWRITING HAND-CUP INDEX THUMB OPEN
1D8C6 ∆	SIGNWRITING HAND-FIST MIDDLE UP	1D8EE	户	SIGNWRITING HAND-HINGE INDEX THUMB
1D8C7 ം	SIGNWRITING HAND-CIRCLE MIDDLE UP			OPEN
1D8C8 🏻 🗅	SIGNWRITING HAND-FIST MIDDLE RAISED KNUCKLE	1D8EF	Н	SIGNWRITING HAND-HINGE INDEX THUMB LARGE
1D8C9	SIGNWRITING HAND-FIST MIDDLE UP THUMB SIDE	1D8F0 1D8F1	В	SIGNWRITING HAND-HINGE INDEX THUMB SIGNWRITING HAND-HINGE INDEX THUMB
1D8CA 🗗	SIGNWRITING HAND-HOOK MIDDLE THUMB			SMALL
1D8CB ₺	SIGNWRITING HAND-FIST MIDDLE THUMB LITTLE		70	SIGNWRITING HAND-ANGLE INDEX THUMB OUT
1D8CC ⅓	SIGNWRITING HAND-FIST MIDDLE LITTLE	1D8F3 1D8F4	P	SIGNWRITING HAND-ANGLE INDEX THUMB IN SIGNWRITING HAND-ANGLE INDEX THUMB
	hapes with index finger and	Hand	lsk	hapes with thumb
thumb		1D8F5		SIGNWRITING HAND-FIST THUMB
1D8CD ₺	SIGNWRITING HAND-FIST MIDDLE RING LITTLE	1D8F6	D-	SIGNWRITING HAND-FIST THUMB HEEL
1D8CE ₺	SIGNWRITING HAND-CIRCLE MIDDLE RING LITTLE	1D8F7	D-	SIGNWRITING HAND-FIST THUMB SIDE DIAGONAL
1D8CF ₺	SIGNWRITING HAND-CURLICUE MIDDLE RING LITTLE ON	1D8F8		SIGNWRITING HAND-FIST THUMB SIDE CONJOINED

SIGNWRITING HAND-CUP MIDDLE RING LITTLE 1D8F9 D 1D8D0 🐧

1D8D1 ∄ SIGNWRITING HAND-HINGE MIDDLE RING LITTLE

SIGNWRITING HAND-ANGLE MIDDLE RING LITTLE OUT 1D8D2 ⊀

SIGNWRITING HAND-FIST THUMB SIDE BENT 1D8FA

SIGNWRITING HAND-FIST THUMB FORWARD

SIGNWRITING HAND-FIST THUMB BETWEEN INDEX MIDDLE 1D8FB □

1D8F	C t	b	SIGNWRITING HAND-FIST THUMB BETWEEN	Mov	em	nent indicators
1D8F	D a	7	MIDDLE RING SIGNWRITING HAND-FIST THUMB BETWEEN	1D92A	+	SIGNWRITING MOVEMENT-WALLPLANE
		-	RING LITTLE	4 D00 D		SINGLE STRAIGHT SMALL
1D8F		9	SIGNWRITING HAND-FIST THUMB UNDER TWO FINGERS	1D92B	Î •	SIGNWRITING MOVEMENT-WALLPLANE SINGLE STRAIGHT MEDIUM
1D8F	F	9	SIGNWRITING HAND-FIST THUMB OVER TWO FINGERS	1D92C		SIGNWRITING MOVEMENT-WALLPLANE SINGLE STRAIGHT LARGE
1D90	0 1	9	SIGNWRITING HAND-FIST THUMB UNDER THREE FINGERS	1D92D		SIGNWRITING MOVEMENT-WALLPLANE SINGLE STRAIGHT LARGEST
1D90	1 .	9	SIGNWRITING HAND-FIST THUMB UNDER FOUR FINGERS	1D92E	₾	SIGNWRITING MOVEMENT-WALLPLANE SINGLE WRIST FLEX
1D90	2 t	5	SIGNWRITING HAND-FIST THUMB OVER FOUR RAISED KNUCKLES	1D92F	^	SIGNWRITING MOVEMENT-WALLPLANE DOUBLE STRAIGHT
1D90		_	SIGNWRITING HAND-FIST	1D930	<u>##</u>	SIGNWRITING MOVEMENT-WALLPLANE DOUBLE WRIST FLEX
1D90	4 .	-	SIGNWRITING HAND-FIST HEEL	1D931	ψħ	SIGNWRITING MOVEMENT-WALLPLANE
Co	nta	C	t movement indicators	40000		DOUBLE ALTERNATING
1D90	5 ,	*	SIGNWRITING TOUCH SINGLE	1D932	<u>##</u>	SIGNWRITING MOVEMENT-WALLPLANE DOUBLE ALTERNATING WRIST FLEX
1D90		*	SIGNWRITING TOUCH MULTIPLE	1D933	₽	SIGNWRITING MOVEMENT-WALLPLANE CROSS
1D90		*	SIGNWRITING TOUCH BETWEEN	1D934	***	SIGNWRITING MOVEMENT-WALLPLANE
1D90	^		SIGNWRITING GRASP SINGLE	40005		TRIPLE STRAIGHT MOVEMENT
1D90 1D90		+	SIGNWRITING GRASP MULTIPLE	1D935	<u> </u>	SIGNWRITING MOVEMENT-WALLPLANE TRIPLE WRIST FLEX
1D90			SIGNWRITING GRASP BETWEEN SIGNWRITING STRIKE SINGLE	1D936	πψπ	SIGNWRITING MOVEMENT-WALLPLANE
1D30			SIGNWRITING STRIKE MULTIPLE			TRIPLE ALTERNATING
1D90			SIGNWRITING STRIKE BETWEEN	1D937	<u> </u>	SIGNWRITING MOVEMENT-WALLPLANE
1D90		Ð	SIGNWRITING BRUSH SINGLE	1D938	¢	TRIPLE ALTERNATING WRIST FLEX SIGNWRITING MOVEMENT-WALLPLANE BEND
1D90		0	SIGNWRITING BRUSH MULTIPLE	10330	"	SMALL
1D91		ĐΙ	SIGNWRITING BRUSH BETWEEN	1D939	¢	SIGNWRITING MOVEMENT-WALLPLANE BEND
1D91 1D91			SIGNWRITING RUB SINGLE	40004	n	MEDIUM
1D91		@ @I	SIGNWRITING RUB MULTIPLE SIGNWRITING RUB BETWEEN	1D93A	Ţ	SIGNWRITING MOVEMENT-WALLPLANE BEND LARGE
1D91			SIGNWRITING RUB BETWEEN SIGNWRITING SURFACE SYMBOLS	1D93B	t ∟	SIGNWRITING MOVEMENT-WALLPLANE
1D91		<u>.</u>	SIGNWRITING SURFACE BETWEEN			CORNER SMALL
Ein		,		1D93C	Ŀ	SIGNWRITING MOVEMENT-WALLPLANE CORNER MEDIUM
	_	ľ	movement indicators	1D93D	Ĺ	SIGNWRITING MOVEMENT-WALLPLANE
1D91 1D91	_		SIGNWRITING SQUEEZE LARGE SINGLE SIGNWRITING SQUEEZE SMALL SINGLE	40005	=	CORNER LARGE
1D91	^		SIGNWRITING SQUEEZE LARGE MULTIPLE	1D93E	P	SIGNWRITING MOVEMENT-WALLPLANE CORNER ROTATION
1D91			SIGNWRITING SQUEEZE SMALL MULTIPLE	1D93F	Þ	SIGNWRITING MOVEMENT-WALLPLANE
1D91		1	SIGNWRITING SQUEEZE SEQUENTIAL	10010	•	CHECK SMALL
1D91	^	•	SIGNWRITING FLICK LARGE SINGLE	1D940	Þ	SIGNWRITING MOVEMENT-WALLPLANE CHECK MEDIUM
1D91 1D91			SIGNWRITING FLICK SMALL SINGLE SIGNWRITING FLICK LARGE MULTIPLE	1D941	Þ	SIGNWRITING MOVEMENT-WALLPLANE
1D91			SIGNWRITING FLICK LARGE MULTIPLE SIGNWRITING FLICK SMALL MULTIPLE			CHECK LARGE
1D91	F '	90	SIGNWRITING FLICK SEQUENTIAL	1D942	Û	SIGNWRITING MOVEMENT-WALLPLANE BOX SMALL
			SIGNWRITING SQUEEZE FLICK ALTERNATING	1D943	Ù	SIGNWRITING MOVEMENT-WALLPLANE BOX MEDIUM
Fin 1D92	_		movement indicators SIGNWRITING MOVEMENT-HINGE UP DOWN	1D944	Ĺ	SIGNWRITING MOVEMENT-WALLPLANE BOX LARGE
		•	LARGE	1D945	ħ	SIGNWRITING MOVEMENT-WALLPLANE
1D92			SIGNWRITING MOVEMENT-HINGE UP DOWN SMALL	1D946	ħ	ZIGZAG SMALL SIGNWRITING MOVEMENT-WALLPLANE
1D92	3	}	SIGNWRITING MOVEMENT-HINGE UP SEQUENTIAL	1D947	Ħ	ZIGZAG MEDIUM SIGNWRITING MOVEMENT-WALLPLANE
1D92	4	ķ	SIGNWRITING MOVEMENT-HINGE DOWN SEQUENTIAL	1D948	\$	ZIGZAG LARGE SIGNWRITING MOVEMENT-WALLPLANE PEAKS
1D92	5 ,		SIGNWRITING MOVEMENT-HINGE UP DOWN ALTERNATING LARGE	1D949	3	SMALL SIGNWRITING MOVEMENT-WALLPLANE PEAKS
1D92	6 ,		SIGNWRITING MOVEMENT-HINGE UP DOWN ALTERNATING SMALL	1D94A		MEDIUM SIGNWRITING MOVEMENT-WALLPLANE PEAKS
1D92	7 2	2	SIGNWRITING MOVEMENT-HINGE SIDE TO SIDE SCISSORS			LARGE
1D92	8	•	SIGNWRITING MOVEMENT-WALLPLANE	1D94B		SIGNWRITING TRAVEL-WALLPLANE ROTATION-WALLPLANE SINGLE
1D92	9 .	•	FINGER CONTACT SIGNWRITING MOVEMENT-FLOORPLANE	1D94C		SIGNWRITING TRAVEL-WALLPLANE ROTATION-WALLPLANE DOUBLE
			FINGER CONTACT	1D94D	牵	SIGNWRITING TRAVEL-WALLPLANE ROTATION-WALLPLANE ALTERNATING

1D94E

Sutton SignWriting

1D94E	4	SIGNWRITING TRAVEL-WALLPLANE ROTATION-FLOORPLANE SINGLE	1D974	£	SIGNWRITING MOVEMENT-FLOORPLANE CORNER SMALL
1D94F	#	SIGNWRITING TRAVEL-WALLPLANE ROTATION-FLOORPLANE DOUBLE	1D975	Ĺ	SIGNWRITING MOVEMENT-FLOORPLANE CORNER MEDIUM
1D950	1	SIGNWRITING TRAVEL-WALLPLANE ROTATION-FLOORPLANE ALTERNATING	1D976	Ĺ	SIGNWRITING MOVEMENT-FLOORPLANE CORNER LARGE
1D951 1D952	#	SIGNWRITING TRAVEL-WALLPLANE SHAKING	1D977	Þ	SIGNWRITING MOVEMENT-FLOORPLANE CHECK
	₽	SIGNWRITING TRAVEL-WALLPLANE ARM SPIRAL SINGLE	1D978	tı	SIGNWRITING MOVEMENT-FLOORPLANE BOX SMALL
1D953	# #	SIGNWRITING TRAVEL-WALLPLANE ARM SPIRAL DOUBLE	1D979	t	SIGNWRITING MOVEMENT-FLOORPLANE BOX MEDIUM
1D954		SIGNWRITING TRAVEL-WALLPLANE ARM SPIRAL TRIPLE	1D97A	Ĺ	SIGNWRITING MOVEMENT-FLOORPLANE BOX
1D955	#	SIGNWRITING MOVEMENT-DIAGONAL AWAY SMALL	1D97B	4	LARGE SIGNWRITING MOVEMENT-FLOORPLANE
1D956	#	SIGNWRITING MOVEMENT-DIAGONAL AWAY MEDIUM	1D97C	4	ZIGZAG SMALL SIGNWRITING MOVEMENT-FLOORPLANE
1D957	∯ n	SIGNWRITING MOVEMENT-DIAGONAL AWAY LARGE	1D97D	4	ZIGZAG MEDIUM SIGNWRITING MOVEMENT-FLOORPLANE
1D958	Ħ	SIGNWRITING MOVEMENT-DIAGONAL AWAY LARGEST	1D97E	4	ZIGZAG LARGE SIGNWRITING MOVEMENT-FLOORPLANE
1D959	¥	SIGNWRITING MOVEMENT-DIAGONAL TOWARDS SMALL	1D97F	1	PEAKS SMALL SIGNWRITING MOVEMENT-FLOORPLANE
1D95A	Ĥ	SIGNWRITING MOVEMENT-DIAGONAL TOWARDS MEDIUM	1D980	4	PEAKS MEDIUM SIGNWRITING MOVEMENT-FLOORPLANE
1D95B	Ŧ	SIGNWRITING MOVEMENT-DIAGONAL TOWARDS LARGE	1D981	4	PEAKS LARGE SIGNWRITING TRAVEL-FLOORPLANE
1D95C	Ħ	SIGNWRITING MOVEMENT-DIAGONAL TOWARDS LARGEST	1D982	#	ROTATION-FLOORPLANE SINGLE SIGNWRITING TRAVEL-FLOORPLANE
1D95D	Î	SIGNWRITING MOVEMENT-DIAGONAL BETWEEN AWAY SMALL	1D983	\$	ROTATION-FLOORPLANE DOUBLE SIGNWRITING TRAVEL-FLOORPLANE
1D95E	1	SIGNWRITING MOVEMENT-DIAGONAL BETWEEN AWAY MEDIUM	1D984	*	ROTATION-FLOORPLANE ALTERNATING SIGNWRITING TRAVEL-FLOORPLANE
1D95F	I	SIGNWRITING MOVEMENT-DIAGONAL BETWEEN AWAY LARGE	1D985	**	ROTATION-WALLPLANE SINGLE SIGNWRITING TRAVEL-FLOORPLANE
1D960	I	SIGNWRITING MOVEMENT-DIAGONAL BETWEEN AWAY LARGEST	1D986	幸	ROTATION-WALLPLANE DOUBLE SIGNWRITING TRAVEL-FLOORPLANE
1D961	Ħ	SIGNWRITING MOVEMENT-DIAGONAL BETWEEN TOWARDS SMALL	1D987	‡	ROTATION-WALLPLANE ALTERNATING SIGNWRITING TRAVEL-FLOORPLANE SHAKING
1D962	f	SIGNWRITING MOVEMENT-DIAGONAL BETWEEN TOWARDS MEDIUM	1D988	5)	SIGNWRITING MOVEMENT-WALLPLANE CURVE QUARTER SMALL
1D963	Î	SIGNWRITING MOVEMENT-DIAGONAL BETWEEN TOWARDS LARGE	1D989	5)	SIGNWRITING MOVEMENT-WALLPLANE CURVE QUARTER MEDIUM
1D964	Π	SIGNWRITING MOVEMENT-DIAGONAL BETWEEN TOWARDS LARGEST	1D98A	5	SIGNWRITING MOVEMENT-WALLPLANE CURVE QUARTER LARGE
1D965	+	SIGNWRITING MOVEMENT-FLOORPLANE SINGLE STRAIGHT SMALL	1D98B)	SIGNWRITING MOVEMENT-WALLPLANE CURVE QUARTER LARGEST
1D966	1	SIGNWRITING MOVEMENT-FLOORPLANE SINGLE STRAIGHT MEDIUM	1D98C	5	SIGNWRITING MOVEMENT-WALLPLANE CURVE HALF-CIRCLE SMALL
1D967	↑	SIGNWRITING MOVEMENT-FLOORPLANE SINGLE STRAIGHT LARGE	1D98D	9	SIGNWRITING MOVEMENT-WALLPLANE CURVE HALF-CIRCLE MEDIUM
1D968		SIGNWRITING MOVEMENT-FLOORPLANE SINGLE STRAIGHT LARGEST	1D98E	5	SIGNWRITING MOVEMENT-WALLPLANE CURVE HALF-CIRCLE LARGE
1D969	±	SIGNWRITING MOVEMENT-FLOORPLANE SINGLE WRIST FLEX	1D98F)	SIGNWRITING MOVEMENT-WALLPLANE CURVE HALF-CIRCLE LARGEST
1D96A	**	SIGNWRITING MOVEMENT-FLOORPLANE DOUBLE STRAIGHT	1D990	5	SIGNWRITING MOVEMENT-WALLPLANE CURVE THREE-QUARTER CIRCLE SMALL
1D96B	<u> **</u>	SIGNWRITING MOVEMENT-FLOORPLANE DOUBLE WRIST FLEX	1D991	9	SIGNWRITING MOVEMENT-WALLPLANE CURVE THREE-QUARTER CIRCLE MEDIUM
1D96C	+ †	SIGNWRITING MOVEMENT-FLOORPLANE DOUBLE ALTERNATING	1D992	3	SIGNWRITING MOVEMENT-WALLPLANE HUMP SMALL
1D96D	<u>+↑</u>	SIGNWRITING MOVEMENT-FLOORPLANE DOUBLE ALTERNATING WRIST FLEX	1D993	3	SIGNWRITING MOVEMENT-WALLPLANE HUMP MEDIUM
1D96E	← Î-	SIGNWRITING MOVEMENT-FLOORPLANE CROSS	1D994	3	SIGNWRITING MOVEMENT-WALLPLANE HUMP LARGE
1D96F	+++		1D995	9	SIGNWRITING MOVEMENT-WALLPLANE LOOP SMALL
1D970	***	SIGNWRITING MOVEMENT-FLOORPLANE TRIPLE WRIST FLEX	1D996	9	SIGNWRITING MOVEMENT-WALLPLANE LOOP MEDIUM
1D971	+↓+	SIGNWRITING MOVEMENT-FLOORPLANE TRIPLE ALTERNATING MOVEMENT	1D997	9	SIGNWRITING MOVEMENT-WALLPLANE LOOP LARGE
1D972	<u>+++</u>	SIGNWRITING MOVEMENT-FLOORPLANE TRIPLE ALTERNATING WRIST FLEX	1D998	N COD	SIGNWRITING MOVEMENT-WALLPLANE LOOP SMALL DOUBLE
10073	+	CICNIVIDITALE MOVEMENT ELOODDI ANE DEND			

Date: 2012-10-14

1D973 t SIGNWRITING MOVEMENT-FLOORPLANE BEND

1D999	8	SIGNWRITING MOVEMENT-WALLPLANE WAVE CURVE DOUBLE SMALL	1D9BE	Ą	SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING CEILING LARGE SINGLE
1D99A	8	SIGNWRITING MOVEMENT-WALLPLANE WAVE CURVE DOUBLE MEDIUM	1D9BF	4	SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING CEILING SMALL DOUBLE
1D99B	\$	SIGNWRITING MOVEMENT-WALLPLANE WAVE CURVE DOUBLE LARGE	1D9C0	₹	SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING CEILING LARGE DOUBLE
1D99C	\$	SIGNWRITING MOVEMENT-WALLPLANE WAVE CURVE TRIPLE SMALL	1D9C1	t,	SIGNWRITING MOVEMENT-FLOORPLANE WAVE HITTING CEILING SMALL
1D99D	3	SIGNWRITING MOVEMENT-WALLPLANE WAVE CURVE TRIPLE MEDIUM	1D9C2	ţ	SIGNWRITING MOVEMENT-FLOORPLANE WAVE HITTING CEILING LARGE
1D99E	Ş	SIGNWRITING MOVEMENT-WALLPLANE WAVE CURVE TRIPLE LARGE	1D9C3	1	WAVE HIT ING CELLING LANGE SIGNWRITING ROTATION-FLOORPLANE SINGLE HITTING CELLING
1D99F	\$	SIGNWRITING MOVEMENT-WALLPLANE CURVE THEN STRAIGHT	1D9C4	11	SIGNWRITING ROTATION-FLOORPLANE DOUBLE HITTING CEILING
1D9A0	8	SIGNWRITING MOVEMENT-WALLPLANE CURVED CROSS SMALL	1D9C5	11	SIGNWRITING ROTATION-FLOORPLANE ALTERNATING HITTING CEILING
1D9A1	*	SIGNWRITING MOVEMENT-WALLPLANE CURVED CROSS MEDIUM	1D9C6	t	SIGNWRITING MOVEMENT-FLOORPLANE CURVE HITTING FLOOR SMALL
1D9A2 1D9A3	*	SIGNWRITING ROTATION-WALLPLANE SINGLE SIGNWRITING ROTATION-WALLPLANE	1D9C7	t	SIGNWRITING MOVEMENT-FLOORPLANE CURVE HITTING FLOOR LARGE
1D9A4	常	DOUBLE SIGNWRITING ROTATION-WALLPLANE	1D9C8	t	SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING FLOOR SMALL DOUBLE
1D9A5	*	ALTERNATE SIGNWRITING MOVEMENT-WALLPLANE	1D9C9	t,	SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING FLOOR LARGE DOUBLE
1D9A6	5-	SHAKING SIGNWRITING MOVEMENT-WALLPLANE	1D9CA		SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING FLOOR TRIPLE SMALL TRIPLE
1D9A7	\$	CURVE HITTING FRONT WALL SIGNWRITING MOVEMENT-WALLPLANE HUMP	1D9CB	îų,	SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING FLOOR TRIPLE LARGE TRIPLE
1D9A8	a	HITTING FRONT WALL SIGNWRITING MOVEMENT-WALLPLANE LOOP	1D9CC	ŧ	SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING FLOOR SMALL SINGLE
1D9A9	2	HITTING FRONT WALL SIGNWRITING MOVEMENT-WALLPLANE WAVE	1D9CD	ŧ	SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING FLOOR LARGE SINGLE
1D9AA	<u>*</u>	HITTING FRONT WALL SIGNWRITING ROTATION-WALLPLANE SINGLE	1D9CE	PE.	SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING FLOOR SMALL DOUBLE
1D9AB		HITTING FRONT WALL SIGNWRITING ROTATION-WALLPLANE	1D9CF	Ē	SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING FLOOR LARGE DOUBLE
1D9AC		DOUBLE HITTING FRONT WALL SIGNWRITING ROTATION-WALLPLANE	1D9D0	ર	SIGNWRITING MOVEMENT-FLOORPLANE WAVE HITTING FLOOR SMALL
1D9AD		ALTERNATING HITTING FRONT WALL SIGNWRITING MOVEMENT-WALLPLANE	1D9D1	1	SIGNWRITING MOVEMENT-FLOORPLANE WAVE HITTING FLOOR LARGE
1D9AE	3	CURVE HITTING CHEST SIGNWRITING MOVEMENT-WALLPLANE HUMP	1D9D2	ŧ	SIGNWRITING ROTATION-FLOORPLANE SINGLE HITTING FLOOR
1D9AF	<i>"</i>	HITTING CHEST SIGNWRITING MOVEMENT-WALLPLANE LOOP	1D9D3	tt	SIGNWRITING ROTATION-FLOORPLANE DOUBLE HITTING FLOOR
1D9B0	<i>*</i>	HITTING CHEST SIGNWRITING MOVEMENT-WALLPLANE WAVE	1D9D4	th	SIGNWRITING ROTATION-FLOORPLANE ALTERNATING HITTING FLOOR
1D9B0	5	HITTING CHEST SIGNWRITING ROTATION-WALLPLANE SINGLE	1D9D5	~	SIGNWRITING MOVEMENT-FLOORPLANE CURVE SMALL
		HITTING CHEST SIGNWRITING ROTATION-WALLPLANE	1D9D6	~	SIGNWRITING MOVEMENT-FLOORPLANE CURVE MEDIUM
		DOUBLE HITTING CHEST	1D9D7	\sim	SIGNWRITING MOVEMENT-FLOORPLANE CURVE LARGE
1D9B3		SIGNWRITING ROTATION-WALLPLANE ALTERNATING HITTING CHEST	1D9D8	\sim	SIGNWRITING MOVEMENT-FLOORPLANE CURVE LARGEST
1D9B4	\$	SIGNWRITING MOVEMENT-WALLPLANE WAVE DIAGONAL PATH SMALL	1D9D9	5	SIGNWRITING MOVEMENT-FLOORPLANE
1D9B5	ĵ (SIGNWRITING MOVEMENT-WALLPLANE WAVE DIAGONAL PATH MEDIUM	1D9DA	~	CURVE COMBINED SIGNWRITING MOVEMENT-FLOORPLANE
1D9B6	⋛	SIGNWRITING MOVEMENT-WALLPLANE WAVE DIAGONAL PATH LARGE	1D9DB	ĸ	HUMP SMALL SIGNWRITING MOVEMENT-FLOORPLANE LOOP
1D9B7	1	SIGNWRITING MOVEMENT-FLOORPLANE CURVE HITTING CEILING SMALL	1D9DC	←	SMALL SIGNWRITING MOVEMENT-FLOORPLANE
1D9B8	1	SIGNWRITING MOVEMENT-FLOORPLANE CURVE HITTING CEILING LARGE	1D9DD	\sim	
1D9B9	Ŷ	SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING CEILING SMALL DOUBLE	1D9DE	€	WAVE SMALL SIGNWRITING MOVEMENT-FLOORPLANE
1D9BA	•1	SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING CEILING LARGE DOUBLE	1D9DF	4	WAVE LARGE SIGNWRITING ROTATION-FLOORPLANE SINGLE
1D9BB	₼,	SIGNWRITING MOVEMENT-FLOORPLANE HUMP HITTING CEILING SMALL TRIPLE	1D9E0	*	SIGNWRITING ROTATION-FLOORPLANE DOUBLE
1D9BC	₽Ŋ		1D9E1	*	SIGNWRITING ROTATION-FLOORPLANE ALTERNATING
1D9BD	4	SIGNWRITING MOVEMENT-FLOORPLANE LOOP HITTING CEILING SMALL SINGLE	1D9E2	#	SIGNWRITING MOVEMENT-FLOORPLANE SHAKING PARALLEL

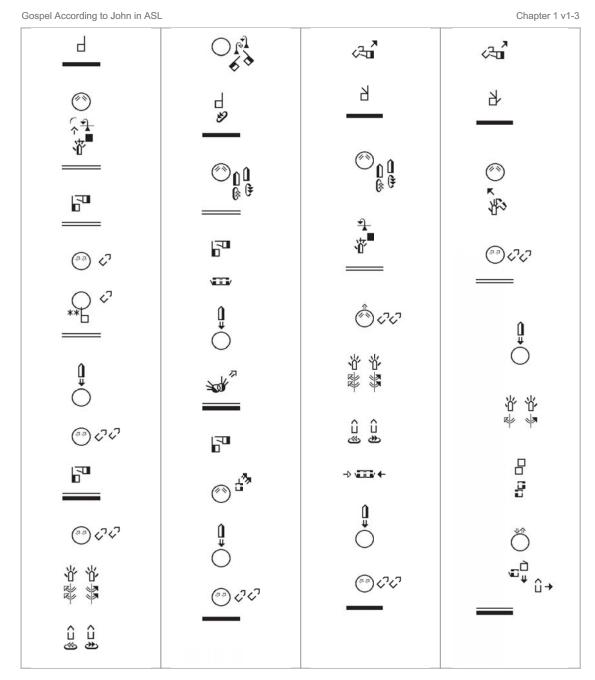
1D9E3 👲	SIGNWRITING MOVEMENT-WALLPLANE ARM	1DA0C ூ	SIGNWRITING EYEBROWS STRAIGHT DOWN
	CIRCLE SMALL SINGLE	1DA0D ①	SIGNWRITING DREAMY EYEBROWS NEUTRAL
1D9E4 🗇	SIGNWRITING MOVEMENT-WALLPLANE ARM		DOWN
	CIRCLE MEDIUM SINGLE	1DA0E ♡	SIGNWRITING DREAMY EYEBROWS DOWN
1D9E5 ७	SIGNWRITING MOVEMENT-WALLPLANE ARM		NEUTRAL
4D0E0 #	CIRCLE SMALL DOUBLE	1DA0F 🖱	SIGNWRITING DREAMY EYEBROWS UP
1D9E6 ♥	SIGNWRITING MOVEMENT-WALLPLANE ARM CIRCLE MEDIUM DOUBLE	4D440 @	NEUTRAL
1D9E7 &	SIGNWRITING MOVEMENT-FLOORPLANE ARM	1DA10 ⊖	SIGNWRITING DREAMY EYEBROWS NEUTRAL UP
IDSLI 6	CIRCLE HITTING WALL SMALL SINGLE	1DA11 🗇	SIGNWRITING FOREHEAD NEUTRAL
1D9E8 🖟	SIGNWRITING MOVEMENT-FLOORPLANE ARM	1DA11 ①	SIGNWRITING FOREHEAD CONTACT
12020	CIRCLE HITTING WALL MEDIUM SINGLE	1DA12 ①	SIGNWRITING FOREHEAD WRINKLED
1D9E9 🖟	SIGNWRITING MOVEMENT-FLOORPLANE ARM	1DA13 ①	
	CIRCLE HITTING WALL LARGE SINGLE	1DA14 ⊖	SIGNWRITING EYES OPEN SIGNWRITING EYES SQUEEZED
1D9EA ₽	SIGNWRITING MOVEMENT-FLOORPLANE ARM	1DA15 ⊖	•
	CIRCLE HITTING WALL SMALL DOUBLE	1DA10 ①	SIGNWRITING EYES CLOSED SIGNWRITING EYE BLINK SINGLE
1D9EB ﴾	SIGNWRITING MOVEMENT-FLOORPLANE ARM	1DA17 ①	SIGNWRITING EYE BLINK MULTIPLE
1D9EC 🖟	CIRCLE HITTING WALL MEDIUM DOUBLE	1DA10 ©	SIGNWRITING EYES HALF OPEN
IDSEC 6	SIGNWRITING MOVEMENT-FLOORPLANE ARM CIRCLE HITTING WALL LARGE DOUBLE	1DA13 ©	SIGNWRITING EYES WIDE OPEN
1D9ED ∌	SIGNWRITING MOVEMENT-WALLPLANE WRIST	1DA1B ⊕	SIGNWRITING EYES HALF CLOSED
IDOLD 0	CIRCLE FRONT SINGLE	1DA1C @	SIGNWRITING EYES WIDENING MOVEMENT
1D9EE *	SIGNWRITING MOVEMENT-WALLPLANE WRIST	1DA1D ⊕	SIGNWRITING EYE WINK
	CIRCLE FRONT DOUBLE	IDAID O	• squeezed eve blink
1D9EF ഴ	SIGNWRITING MOVEMENT-FLOORPLANE	1DA1E 👄	1 2
15050	WRIST CIRCLE HITTING WALL SINGLE	1DA1E ⊕ 1DA1F ⊕	SIGNWRITING EYELASHES UP SIGNWRITING EYELASHES DOWN
1D9F0 ⊷	SIGNWRITING MOVEMENT-FLOORPLANE		
10051	WRIST CIRCLE HITTING WALL DOUBLE	1DA20 ⊕ 1DA21 ⊕	SIGNWRITING EYELASHES FLUTTERING
1D9F1 ಂ	SIGNWRITING MOVEMENT-WALLPLANE FINGER CIRCLES SINGLE	IDAZI O	SIGNWRITING EYEGAZE-WALLPLANE STRAIGHT
1D9F2 °	SIGNWRITING MOVEMENT-WALLPLANE	1DA22 ⊕	SIGNWRITING EYEGAZE-WALLPLANE
10012 0	FINGER CIRCLES DOUBLE	IDINEE O	STRAIGHT DOUBLE
1D9F3 0	SIGNWRITING MOVEMENT-FLOORPLANE	1DA23 ⊕	SIGNWRITING EYEGAZE-WALLPLANE
	FINGER CIRCLES HITTING WALL SINGLE		STRAIGHT ALTERNATING
1D9F4 0	SIGNWRITING MOVEMENT-FLOORPLANE	1DA24 ⊕	SIGNWRITING EYEGAZE-FLOORPLANE
	FINGER CIRCLES HITTING WALL DOUBLE		STRAIGHT
Dynam	vice indicators	1DA25 ⊜	SIGNWRITING EYEGAZE-FLOORPLANE
•	ics indicators	1DA26 ♡	STRAIGHT DOUBLE
1D9F5 🛕	SIGNWRITING DYNAMIC ARROWHEAD SMALL	1DA26 ூ	SIGNWRITING EYEGAZE-FLOORPLANE STRAIGHT ALTERNATING
1D9F6 _	SIGNWRITING DYNAMIC ARROWHEAD LARGE	1DA27 ⊜	SIGNWRITING EYEGAZE-WALLPLANE CURVED
1D9F7 _	SIGNWRITING DYNAMIC FAST	1DA28	SIGNWRITING EYEGAZE-WALLI EANE CORVED SIGNWRITING EYEGAZE-FLOORPLANE
1D9F8 ~		ID/(Z0 C	CURVED
1D9F9 ~	SIGNWRITING DYNAMIC TENSE	1DA29 😁	SIGNWRITING EYEGAZE-WALLPLANE
1D9FA ~	SIGNWRITING DYNAMIC RELAXED		CIRCLING
1D9FB	SIGNWRITING DYNAMIC SIMULTANEOUS	1DA2A ∙	SIGNWRITING CHEEKS PUFFED
1D9FC	SIGNWRITING DYNAMIC SIMULTANEOUS ALTERNATING	1DA2B ○	SIGNWRITING CHEEKS NEUTRAL
1D9FD		1DA2C ⊖	SIGNWRITING CHEEKS SUCKED
4D0FF	SIGNWRITING DYNAMIC EVERY OTHER TIME	1DA2D ⊖	SIGNWRITING TENSE CHEEKS HIGH
ID9FE o	SIGNWRITING DYNAMIC GRADUAL	1DA2E ⊖	SIGNWRITING TENSE CHEEKS MIDDLE
Heads	hanes	1DA2F ⊖	SIGNWRITING TENSE CHEEKS LOW
1D9FF O	•	1DA30 ♀	2.01
		1DA31 ①	SIGNWRITING NOSE NEUTRAL
1DA00 ♡ 1DA01 ఄ	SIGNWRITING HEAD RIM	1DA32	SIGNWRITING NOSE CONTACT
1DA01 O	SIGNWRITING HEAD MOVEMENT-WALLPLANE STRAIGHT	1DA33	SIGNWRITING NOSE WRINKLES
1DA02 💍	SIGNWRITING HEAD MOVEMENT-WALLPLANE	1DA34 ®	SIGNWRITING NOSE WIGGLES
ID/IOZ		1DA35 ≥ ≤	SIGNWRITING AIR BLOWING OUT
1DA03 👶	TILT	40400	SIGNWRITING AIR BLOWING OUT
	SIGNWRITING HEAD MOVEMENT-	1DA36 ≨	SIGNWRITING AIR SUCKING IN
1DA04 O		1DA36 ≨ 1DA37 w	SIGNWRITING AIR SUCKING IN SIGNWRITING AIR BLOW SMALL ROTATIONS
IDAU4	SIGNWRITING HEAD MOVEMENT- FLOORPLANE STRAIGHT SIGNWRITING HEAD MOVEMENT-WALLPLANE	1DA36 🗐 1DA37 w 1DA38 w	SIGNWRITING AIR SUCKING IN SIGNWRITING AIR BLOW SMALL ROTATIONS SIGNWRITING AIR SUCK SMALL ROTATIONS
	SIGNWRITING HEAD MOVEMENT- FLOORPLANE STRAIGHT SIGNWRITING HEAD MOVEMENT-WALLPLANE CURVE	1DA36 == 1DA37 w 1DA38 w 1DA39 •	SIGNWRITING AIR SUCKING IN SIGNWRITING AIR BLOW SMALL ROTATIONS SIGNWRITING AIR SUCK SMALL ROTATIONS SIGNWRITING BREATH INHALE
1DA04 ©	SIGNWRITING HEAD MOVEMENT- FLOORPLANE STRAIGHT SIGNWRITING HEAD MOVEMENT-WALLPLANE CURVE SIGNWRITING HEAD MOVEMENT-	1DA36 1DA37 1DA38 1DA39 1DA3A 6	SIGNWRITING AIR SUCKING IN SIGNWRITING AIR BLOW SMALL ROTATIONS SIGNWRITING AIR SUCK SMALL ROTATIONS SIGNWRITING BREATH INHALE SIGNWRITING BREATH EXHALE
1DA05 칩	SIGNWRITING HEAD MOVEMENT- FLOORPLANE STRAIGHT SIGNWRITING HEAD MOVEMENT-WALLPLANE CURVE SIGNWRITING HEAD MOVEMENT- FLOORPLANE CURVE	1DA36	SIGNWRITING AIR SUCKING IN SIGNWRITING AIR BLOW SMALL ROTATIONS SIGNWRITING AIR SUCK SMALL ROTATIONS SIGNWRITING BREATH INHALE SIGNWRITING BREATH EXHALE SIGNWRITING MOUTH CLOSED NEUTRAL
1DA05 े	SIGNWRITING HEAD MOVEMENT- FLOORPLANE STRAIGHT SIGNWRITING HEAD MOVEMENT-WALLPLANE CURVE SIGNWRITING HEAD MOVEMENT- FLOORPLANE CURVE SIGNWRITING HEAD MOVEMENT CIRCLE	1DA36	SIGNWRITING AIR SUCKING IN SIGNWRITING AIR BLOW SMALL ROTATIONS SIGNWRITING AIR SUCK SMALL ROTATIONS SIGNWRITING BREATH INHALE SIGNWRITING BREATH EXHALE SIGNWRITING MOUTH CLOSED NEUTRAL SIGNWRITING MOUTH CLOSED FORWARD
1DA05 칩	SIGNWRITING HEAD MOVEMENT- FLOORPLANE STRAIGHT SIGNWRITING HEAD MOVEMENT-WALLPLANE CURVE SIGNWRITING HEAD MOVEMENT- FLOORPLANE CURVE SIGNWRITING HEAD MOVEMENT CIRCLE SIGNWRITING FACE DIRECTION POSITION	1DA36	SIGNWRITING AIR SUCKING IN SIGNWRITING AIR BLOW SMALL ROTATIONS SIGNWRITING AIR SUCK SMALL ROTATIONS SIGNWRITING BREATH INHALE SIGNWRITING BREATH EXHALE SIGNWRITING MOUTH CLOSED NEUTRAL SIGNWRITING MOUTH CLOSED FORWARD SIGNWRITING MOUTH CLOSED CONTACT
1DA05 े	SIGNWRITING HEAD MOVEMENT- FLOORPLANE STRAIGHT SIGNWRITING HEAD MOVEMENT-WALLPLANE CURVE SIGNWRITING HEAD MOVEMENT- FLOORPLANE CURVE SIGNWRITING HEAD MOVEMENT CIRCLE	1DA36 # 1DA37 # 1DA38 # 1DA3A # 1DA3B	SIGNWRITING AIR SUCKING IN SIGNWRITING AIR BLOW SMALL ROTATIONS SIGNWRITING AIR SUCK SMALL ROTATIONS SIGNWRITING BREATH INHALE SIGNWRITING BREATH EXHALE SIGNWRITING MOUTH CLOSED NEUTRAL SIGNWRITING MOUTH CLOSED FORWARD SIGNWRITING MOUTH CLOSED CONTACT SIGNWRITING MOUTH SMILE
1DA05 Ĉ 1DA06 Ĉ 1DA07 ⊙	SIGNWRITING HEAD MOVEMENT- FLOORPLANE STRAIGHT SIGNWRITING HEAD MOVEMENT-WALLPLANE CURVE SIGNWRITING HEAD MOVEMENT- FLOORPLANE CURVE SIGNWRITING HEAD MOVEMENT CIRCLE SIGNWRITING FACE DIRECTION POSITION NOSE FORWARD TILTING	1DA36	SIGNWRITING AIR SUCKING IN SIGNWRITING AIR BLOW SMALL ROTATIONS SIGNWRITING AIR SUCK SMALL ROTATIONS SIGNWRITING BREATH INHALE SIGNWRITING BREATH EXHALE SIGNWRITING MOUTH CLOSED NEUTRAL SIGNWRITING MOUTH CLOSED FORWARD SIGNWRITING MOUTH CLOSED CONTACT SIGNWRITING MOUTH SMILE SIGNWRITING MOUTH SMILE
1DA05 Ĉ 1DA06 Ĉ 1DA07 ⊙	SIGNWRITING HEAD MOVEMENT- FLOORPLANE STRAIGHT SIGNWRITING HEAD MOVEMENT-WALLPLANE CURVE SIGNWRITING HEAD MOVEMENT- FLOORPLANE CURVE SIGNWRITING HEAD MOVEMENT CIRCLE SIGNWRITING FACE DIRECTION POSITION NOSE FORWARD TILTING SIGNWRITING FACE DIRECTION POSITION NOSE UP OR DOWN SIGNWRITING FACE DIRECTION POSITION	1DA36	SIGNWRITING AIR SUCKING IN SIGNWRITING AIR BLOW SMALL ROTATIONS SIGNWRITING AIR SUCK SMALL ROTATIONS SIGNWRITING BREATH INHALE SIGNWRITING BREATH EXHALE SIGNWRITING MOUTH CLOSED NEUTRAL SIGNWRITING MOUTH CLOSED FORWARD SIGNWRITING MOUTH CLOSED CONTACT SIGNWRITING MOUTH SMILE SIGNWRITING MOUTH SMILE SIGNWRITING MOUTH SMILE WRINKLED SIGNWRITING MOUTH SMILE OPEN
1DA05	SIGNWRITING HEAD MOVEMENT- FLOORPLANE STRAIGHT SIGNWRITING HEAD MOVEMENT-WALLPLANE CURVE SIGNWRITING HEAD MOVEMENT- FLOORPLANE CURVE SIGNWRITING HEAD MOVEMENT CIRCLE SIGNWRITING FACE DIRECTION POSITION NOSE FORWARD TILTING SIGNWRITING FACE DIRECTION POSITION NOSE UP OR DOWN SIGNWRITING FACE DIRECTION POSITION NOSE UP OR DOWN TILTING	1DA36	SIGNWRITING AIR SUCKING IN SIGNWRITING AIR BLOW SMALL ROTATIONS SIGNWRITING AIR SUCK SMALL ROTATIONS SIGNWRITING BREATH INHALE SIGNWRITING BREATH EXHALE SIGNWRITING MOUTH CLOSED NEUTRAL SIGNWRITING MOUTH CLOSED FORWARD SIGNWRITING MOUTH CLOSED CONTACT SIGNWRITING MOUTH SMILE SIGNWRITING MOUTH SMILE SIGNWRITING MOUTH SMILE WRINKLED SIGNWRITING MOUTH SMILE OPEN SIGNWRITING MOUTH FROWN
1DA05 ○ 1DA06 ○ 1DA07 ○ 1DA08 ○ 1DA09 ○ 1DA0A ③	SIGNWRITING HEAD MOVEMENT- FLOORPLANE STRAIGHT SIGNWRITING HEAD MOVEMENT-WALLPLANE CURVE SIGNWRITING HEAD MOVEMENT- FLOORPLANE CURVE SIGNWRITING HEAD MOVEMENT CIRCLE SIGNWRITING FACE DIRECTION POSITION NOSE FORWARD TILTING SIGNWRITING FACE DIRECTION POSITION NOSE UP OR DOWN SIGNWRITING FACE DIRECTION POSITION NOSE UP OR DOWN TILTING SIGNWRITING EYEBROWS STRAIGHT UP	1DA36	SIGNWRITING AIR SUCKING IN SIGNWRITING AIR BLOW SMALL ROTATIONS SIGNWRITING AIR SUCK SMALL ROTATIONS SIGNWRITING BREATH INHALE SIGNWRITING BREATH EXHALE SIGNWRITING MOUTH CLOSED NEUTRAL SIGNWRITING MOUTH CLOSED FORWARD SIGNWRITING MOUTH CLOSED CONTACT SIGNWRITING MOUTH SMILE SIGNWRITING MOUTH SMILE SIGNWRITING MOUTH SMILE WRINKLED SIGNWRITING MOUTH FROWN SIGNWRITING MOUTH FROWN
1DA05	SIGNWRITING HEAD MOVEMENT- FLOORPLANE STRAIGHT SIGNWRITING HEAD MOVEMENT-WALLPLANE CURVE SIGNWRITING HEAD MOVEMENT- FLOORPLANE CURVE SIGNWRITING HEAD MOVEMENT CIRCLE SIGNWRITING FACE DIRECTION POSITION NOSE FORWARD TILTING SIGNWRITING FACE DIRECTION POSITION NOSE UP OR DOWN SIGNWRITING FACE DIRECTION POSITION NOSE UP OR DOWN TILTING	1DA36	SIGNWRITING AIR SUCKING IN SIGNWRITING AIR BLOW SMALL ROTATIONS SIGNWRITING AIR SUCK SMALL ROTATIONS SIGNWRITING BREATH INHALE SIGNWRITING BREATH EXHALE SIGNWRITING MOUTH CLOSED NEUTRAL SIGNWRITING MOUTH CLOSED FORWARD SIGNWRITING MOUTH CLOSED CONTACT SIGNWRITING MOUTH SMILE SIGNWRITING MOUTH SMILE SIGNWRITING MOUTH SMILE WRINKLED SIGNWRITING MOUTH FROWN SIGNWRITING MOUTH FROWN SIGNWRITING MOUTH FROWN WRINKLED SIGNWRITING MOUTH FROWN OPEN
1DA05 ○ 1DA06 ○ 1DA07 ○ 1DA08 ○ 1DA09 ○ 1DA0A ③	SIGNWRITING HEAD MOVEMENT- FLOORPLANE STRAIGHT SIGNWRITING HEAD MOVEMENT-WALLPLANE CURVE SIGNWRITING HEAD MOVEMENT- FLOORPLANE CURVE SIGNWRITING HEAD MOVEMENT CIRCLE SIGNWRITING FACE DIRECTION POSITION NOSE FORWARD TILTING SIGNWRITING FACE DIRECTION POSITION NOSE UP OR DOWN SIGNWRITING FACE DIRECTION POSITION NOSE UP OR DOWN TILTING SIGNWRITING EYEBROWS STRAIGHT UP	1DA36	SIGNWRITING AIR SUCKING IN SIGNWRITING AIR BLOW SMALL ROTATIONS SIGNWRITING AIR SUCK SMALL ROTATIONS SIGNWRITING BREATH INHALE SIGNWRITING BREATH EXHALE SIGNWRITING MOUTH CLOSED NEUTRAL SIGNWRITING MOUTH CLOSED FORWARD SIGNWRITING MOUTH CLOSED CONTACT SIGNWRITING MOUTH SMILE SIGNWRITING MOUTH SMILE SIGNWRITING MOUTH SMILE WRINKLED SIGNWRITING MOUTH FROWN SIGNWRITING MOUTH FROWN

Sutton SignWriting

1DA45 SIGNWRITING MOUTH OPEN FORWARD	1DA7D SIGNWRITING LIMB LENGTH-7				
1DA46 SIGNWRITING MOUTH OPEN WRINKLED	1DA7E ¬ SIGNWRITING FINGER				
1DA47 SIGNWRITING MOUTH OPEN OVAL					
1DA48 SIGNWRITING MOUTH OPEN OVAL WRINKLED	Location bases				
1DA49 🕟 SIGNWRITING MOUTH OPEN OVAL YAWN	1DA7F 🕀 SIGNWRITING LOCATION-WALLPLANE SPACE				
1DA4A © SIGNWRITING MOUTH OPEN RECTANGLE	1DA80 SIGNWRITING LOCATION-FLOORPLANE SPACE				
1DA4B SIGNWRITING MOUTH OPEN RECTANGLE	1DA81 🛔 SIGNWRITING LOCATION HEIGHT				
WRINKLED	1DA82 A SIGNWRITING LOCATION WIDTH				
1DA4C SIGNWRITING MOUTH OPEN RECTANGLE	1DA83 蕀 SIGNWRITING LOCATION DEPTH				
YAWN 1DA4D ⊙ SIGNWRITING MOUTH KISS	1DA84 SIGNWRITING LOCATION HEAD NECK				
1DA4D SIGNWRITING MOUTH KISS 1DA4E SIGNWRITING MOUTH KISS FORWARD	1DA85 💆 SIGNWRITING LOCATION TORSO				
1DA4F © SIGNWRITING MOUTH KISS YORWARD	1DA86 ₹ SIGNWRITING LOCATION LIMBS DIGITS				
1DA50 SIGNWRITING MOUTH TENSE	Punctuation				
1DA51 SIGNWRITING MOUTH TENSE FORWARD					
1DA52 SIGNWRITING MOUTH TENSE SUCKED	1DA87 SIGNWRITING COMMA				
1DA53 SIGNWRITING LIPS PRESSED TOGETHER	1DA88 — SIGNWRITING FULL STOP				
1DA54 SIGNWRITING LIP LOWER OVER UPPER	1DA89 — SIGNWRITING SEMICOLON				
1DA55 ○ SIGNWRITING LIP UPPER OVER LOWER	1DA8A — SIGNWRITING COLON				
1DA56 ⊖ SIGNWRITING MOUTH CORNERS	1DA8B SIGNWRITING PARENTHESIS				
1DA57 SIGNWRITING MOUTH WRINKLES SINGLE	• is a closing parenthesis when used with				
1DA58 G SIGNWRITING MOUTH WRINKLES DOUBLE	1DAA5 signwriting rotation modifier-5				
1DA59 SIGNWRITING TONGUE STICKING OUT FAR	Fill modifiers				
1DA5A 💿 SIGNWRITING TONGUE LICKING LIPS					
1DA5B SIGNWRITING TONGUE TIP BETWEEN LIPS	1DA9B SIGNWRITING FILL MODIFIER-2				
1DA5C SIGNWRITING TONGUE TIP TOUCHING INSIDE	1DA9C SIGNWRITING FILL MODIFIER-3				
MOUTH	1DA9D SIGNWRITING FILL MODIFIER-4				
1DA5D SIGNWRITING TONGUE INSIDE MOUTH RELAXED	1DA9E SIGNWRITING FILL MODIFIER-5 1DA9F SIGNWRITING FILL MODIFIER-6				
1DA5E SIGNWRITING TONGUE MOVES AGAINST	TDA9F [F6] SIGN WRITING FILL MODIFIER-0				
CHEEK	Rotation modifiers				
1DA5F © SIGNWRITING TONGUE CENTRE STICKING OUT	1DAA1 SIGNWRITING ROTATION MODIFIER-2				
1DA60 SIGNWRITING TONGUE CENTRE INSIDE	1DAA2 SW SIGNWRITING ROTATION MODIFIER-3				
MOUTH	1DAA3 W SIGNWRITING ROTATION MODIFIER-4				
1DA61	1DAA4 SW SIGNWRITING ROTATION MODIFIER-5				
	1DAA5 SW SIGNWRITING ROTATION MODIFIER-6				
1DA63	1DAA6 SW SIGNWRITING ROTATION MODIFIER-7				
1DA65 SIGNWRITING TEETH ON TONGOE MOVEMENT	1DAA7 SS SIGNWRITING ROTATION MODIFIER-8				
1DA66 SIGNWRITING TEETH ON LIPS MOVEMENT	1DAA8 SIGNWRITING ROTATION MODIFIER-9				
1DA67 • SIGNWRITING TEETH BITE LIPS	1DAA9 SIGNWRITING ROTATION MODIFIER-10				
1DA68 SIGNWRITING MOVEMENT-WALLPLANE JAW	1DAAA SW SIGNWRITING ROTATION MODIFIER-11				
1DA69 SIGNWRITING MOVEMENT-FLOORPLANE JAW	1DAAB SIGNWRITING ROTATION MODIFIER-12				
1DA6A SIGNWRITING NECK	1DAAC SW SIGNWRITING ROTATION MODIFIER-13				
1DA6B \(\Omega\) SIGNWRITING HAIR	1DAAD SW SIGNWRITING ROTATION MODIFIER-14				
1DA6C SIGNWRITING EXCITEMENT	1DAAE SIGNWRITING ROTATION MODIFIER-15				
	1DAAF SIGNWRITING ROTATION MODIFIER-16				
Body shapes					
1DA6D _ SIGNWRITING SHOULDER HIP SPINE					
1DA6E - SIGNWRITING SHOULDER HIP POSITIONS					

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1DA6D	SIGNWRITING SHOULDER HIP SPINE
1DA6E ⊸	SIGNWRITING SHOULDER HIP POSITIONS
1DA6F	SIGNWRITING WALLPLANE SHOULDER HIP
	MOVE
1DA70	SIGNWRITING FLOORPLANE SHOULDER HIP
	MOVE
1DA71 —	SIGNWRITING SHOULDER TILTING FROM
4D 4 70	WAIST
1DA72 <u></u>	SIGNWRITING TORSO-WALLPLANE STRAIGHT STRETCH
1DA73	SIGNWRITING TORSO-WALLPLANE CURVED
IDAIS =	REND
1DA74 🛌	SIGNWRITING TORSO-FLOORPLANE TWISTING
1DA75 💍	SIGNWRITING UPPER BODY TILTING FROM HIP
	JOINTS
1DA76 ×	SIGNWRITING LIMB COMBINATION
1DA77 I	SIGNWRITING LIMB LENGTH-1
1DA78	SIGNWRITING LIMB LENGTH-2
1DA79	SIGNWRITING LIMB LENGTH-3
1DA7A	SIGNWRITING LIMB LENGTH-4
1DA7B ı	SIGNWRITING LIMB LENGTH-5
1DA7C	SIGNWRITING LIMB LENGTH-6

15. Additional figures.



1 In the beginning the Word already existed. The Word was with God, and the Word was God. 2
He existed in the beginning with God. 3 God created everything through him, and nothing was created except through him. NLT

Figure 6. The beginning of the Gospel of John in American Sign Language, written in SignWriting.

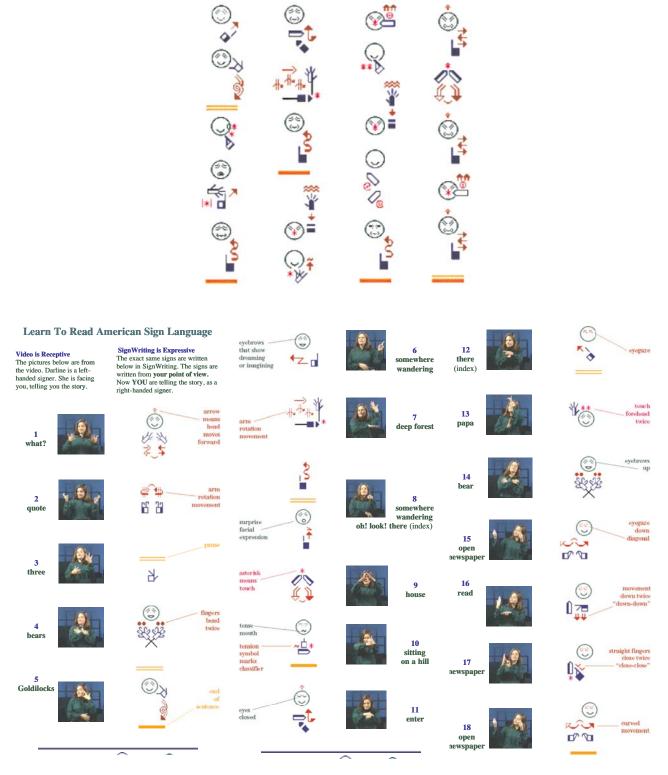


Figure 7. Above, a paragraph from the Golidlocks story written in American Sign Language; below, the beginning of the Golidlocks story is taught to beginning readers using a combination of 1) the English gloss for the meaning of each sign, 2) photos from the ASL video, 3) the SignWriting of each sign on the video, and 4) an explanation in English teaching the SignWriting symbols to students.

A. Administrative

1. Title

Proposal for encoding Sutton SignWriting in the UCS

2. Requester's name

Michael Everson, Martin Hosken, Stephen Slevinski, and Valerie Sutton

3. Requester type (Member body/Liaison/Individual contribution)

Individual contribution.

4. Submission date

2012-10-14

- 5. Requester's reference (if applicable)
- 6. Choose one of the following:
- 6a. This is a complete proposal

No.

6b. More information will be provided later

Yes

B. Technical - General

1. Choose one of the following:

1a. This proposal is for a new script (set of characters)

Yes.

1b. Proposed name of script

SignWriting.

1c. The proposal is for addition of character(s) to an existing block

No.

- 1d. Name of the existing block
- 2. Number of characters in proposal

672.

3. Proposed category (A-Contemporary; B.1-Specialized (small collection); B.2-Specialized (large collection); C-Major extinct; D-Attested extinct; E-Minor extinct; F-Archaic Hieroglyphic or Ideographic; G-Obscure or questionable usage symbols)

Category A.

4a. Is a repertoire including character names provided?

Yes.

4b. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?

Yes.

4c. Are the character shapes attached in a legible form suitable for review?

Yes.

5a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?

Michael Everson, Martin Hosken, Stephen Slevinski, Adam Frost.

5b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.).

Michael Everson, FontLab.

6a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?

Yes.

 $6b. \ Are \ published \ examples \ of \ use \ (such \ as \ samples \ from \ newspapers, magazines, or \ other \ sources) \ of \ proposed \ characters \ attached?$

Yes.

7. Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?

Yes.

8. Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at http://www.unicode.org for such information on other scripts. Also see UAX #44 http://www.unicode.org/reports/tr44/ and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

See above.

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? If YES, explain.

No.

2a. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?

Yes.

2b. If YES, with whom?

Valerie Sutton, Steve Slevinski, Albert Bickford, Stuart Thiessen.

2c. If YES, available relevant documents

3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Reference:

See above.

4a. The context of use for the proposed characters (type of use; common or rare)

Common.

4b. Reference

5a. Are the proposed characters in current use by the user community?

Yes.

5b. If YES, where? Reference:

Schools and daily life.

6a. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?

No.

6b. If YES, is a rationale provided?

6c. If YES, reference

7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?

Voc

8a. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?

No

8b. If YES, is a rationale for its inclusion provided?

8c. If YES, reference

9a. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?

No.

9b. If YES, is a rationale for its inclusion provided?

9c. If YES, reference

10a. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character?

No.

10b. If YES, is a rationale for its inclusion provided?

10c. If YES, reference

11a. Does the proposal include use of combining characters and/or use of composite sequences?

Vec

11b. If YES, is a rationale for such use provided?

Yes.

11c. If YES, reference

See §4 above, and http://www.evertype.com/standards/iso10646/pdf/signwritingsequences.txt.

11d. Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?

No.

11e. If YES, reference

12a. Does the proposal contain characters with any special properties such as control function or similar semantics?

No.

12b. If YES, describe in detail (include attachment if necessary)

13a. Does the proposal contain any Ideographic compatibility character(s)?

No.

13b. If YES, is the equivalent corresponding unified ideographic character(s) identified? If YES, reference