

Introduction to Stokoe Notation

TAB or location



SIG or movement



DEZ or handshape

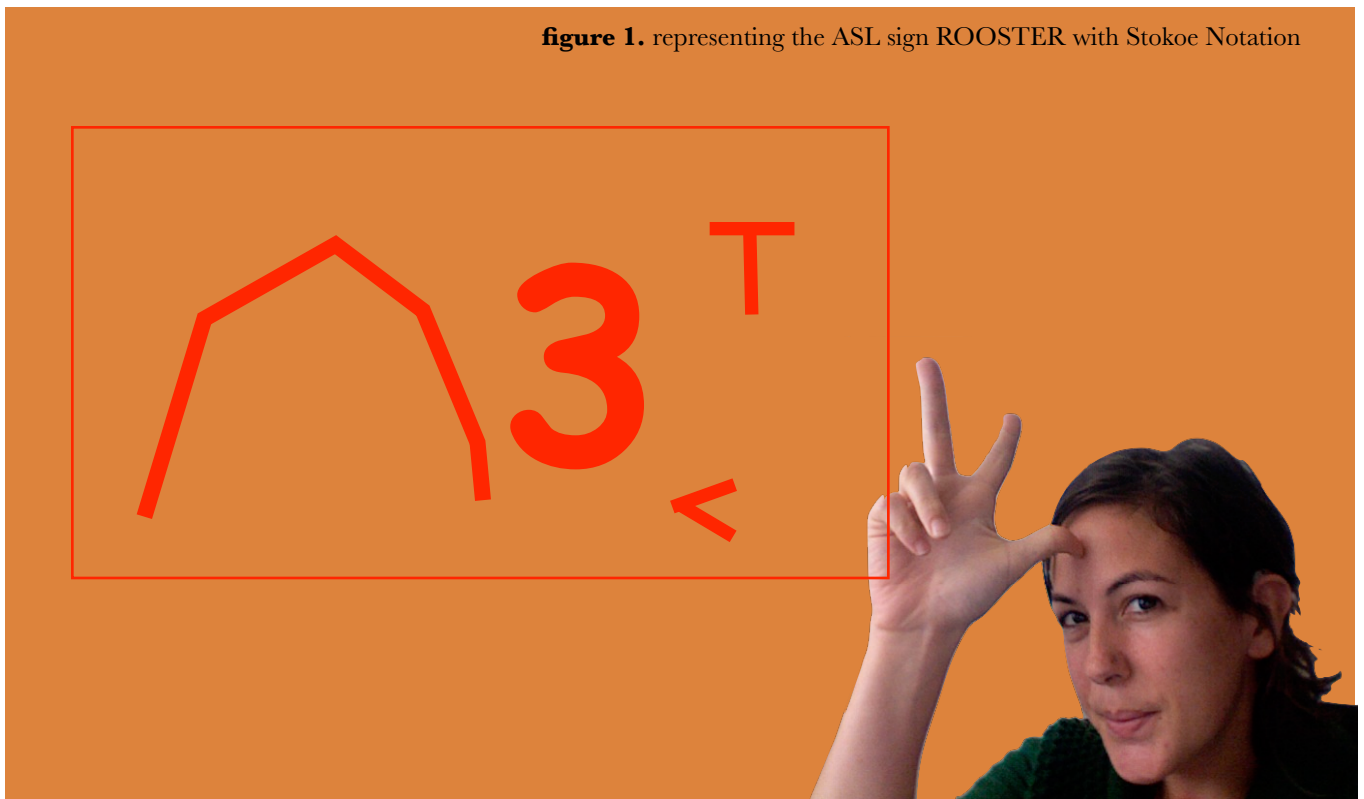


orientation

*NB: Emojis unfortunately were not available to DASL creators.
Emojis are not part of the Stokoe Notation symbol set.
They are only used for illustration here.*

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figure 1. representing the ASL sign ROOSTER with Stokoe Notation



Introduction: *Stokoe-ing it*

An Introduction to Stokoe's Notation System

A notation system is necessary for observing sign language behavior. Without a way of writing down signs, especially the parts of signs, we can hardly analyze the structure of language. To begin to understand how a language works, adequate representation of a sign or parts of a sign is necessary.

Other systems (e.g., glossing, signwriting, pictures, or videos) are not suitable for analysis of forms of signs themselves. These systems are not transparent (i.e., allows a person to immediately understand what is notated) or consistent (e.g., one gloss for a sign can mean different things for different people. DOG can elicit different variations of the sign, the fingerspelled version D-O-G, DOG (pat and snap), DOG (snap alone), and so on.).

William Stokoe, arguably the father of sign language linguistics, along with co-authors of *Dictionary of American Sign Language on Linguistic Principles* (1965) Carl Croneberg and Dorothy Casterline, created a notation system. The sign is divided into three parts: location, handshape, and movement. In Stokoe Notation, these are called *tabulation* (location), *designation* (handshape) and *signation* (movement). A fourth part was added later, orientation. Sets of symbols were created to represent different possibilities for each part of the sign.

In figure 1 above, we can see how the sign ROOSTER can be represented using the Stokoe Notation. The location is identified first, then the handshape. The orientation is noted immediately after the handshape in the subscript location. Then finally, movement is represented in the superscript location. Figure 2 on the right breaks down the Stokoe Notation for ROOSTER.

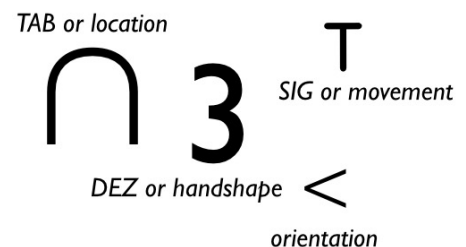


Figure 2. Labeling the different parts of representation for ROOSTER

RULES ON WRITING SIGNS

STOKOE NOTATION CONVENTIONS

1. There are 55 symbols to represent 55 different 'aspects' of signs.
2. These 55 aspects are divided into TAB (location), DEZ (handshape), SIG (movement), (and orientation, which was not explicitly included in Stokoe's work but shown here).
3. To write ASL signs, follow these guidelines:
 - a. TD^s or LH^m (signs with one movement)
 - b. TD^{ss} or LH_o^{mm} (signs with two ordered movements)
 - c. TD^{sss} or LH_o^{mmm} (signs with three ordered movements)
 - d. TDD^s or LHH_o^m (two handed signs) or $LH H^m$ (when hands have different orientation)
 - e. TD^s or LH_o^m (signs with simultaneous movements)
4. Here are some additional symbols and conventions for writing signs.
 - a. "When one hand rests on, or is held above the other, the symbol for the lower hand will be shown with a line above it" (xiii, Stokoe et al, 1965).



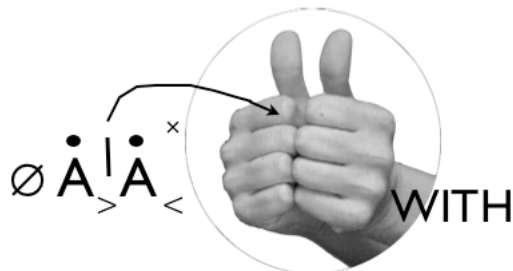
- b. "A line below the (DEZ (handshape)) symbol indicates that the hand is on top of the other DEZ symbol" (xiii, ibid)



RULES ON WRITING SIGNS

STOKOE NOTATION CONVENTIONS CONT.

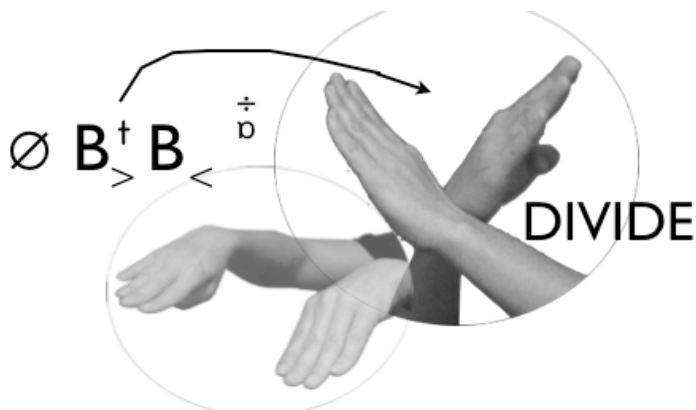
c. “A vertical line between the symbols indicates that the hands are side by side, close together, or touching” (xiii, *ibid*)



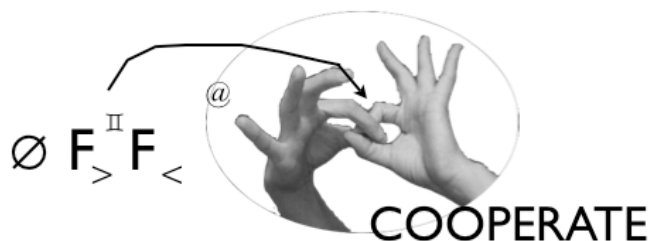
d. “A subscript symbol between (the DEZ (handshape) symbols) indicates that one hand is held behind with or without contact” (xiii, *ibid*)



e. A cross [t] between two DEZ (handshape) symbols indicates that the sign begins with the forearms, fingers, wrists, or hands crossed ((xiii, *ibid*)).



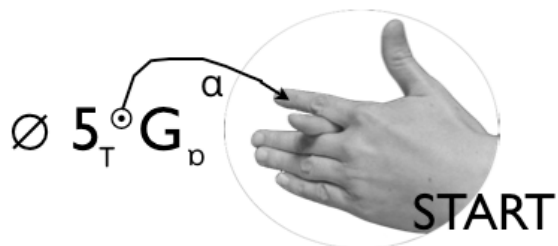
f. The linking SIG (movement) II between two DEZ (handshape) symbols indicates that the sign begins with hands or fingers clasped ((xiii, *ibid*))



RULES ON WRITING SIGNS

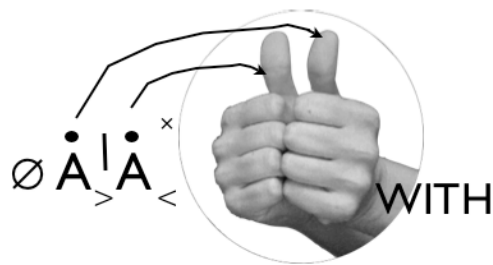
STOKOE NOTATION CONVENTIONS CONT.

g. The *entrant* SIG (movement) indicates one hand configuration within the other.
(xiii, *ibid*)

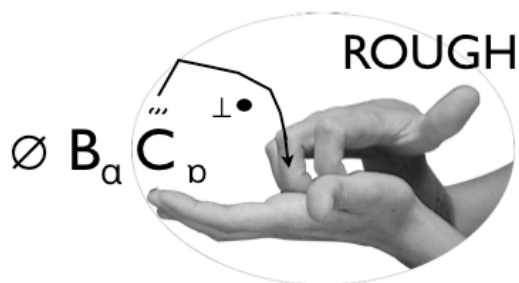


2. Special features

a. “A dot above a TAB or DEZ (location or handshape) symbol shows that the thumb or other finger not usually prominent is extended or used in the sig action” ((xiii, *ibid*)).



b. A triple mark above a DEZ (handshape) indicates that the fingers are bent
(xiii, *ibid*).



c. If the forearm is prominent, the forearm TAB symbol is placed in front of the DEZ (handshape) symbol (xiii, *ibid*).



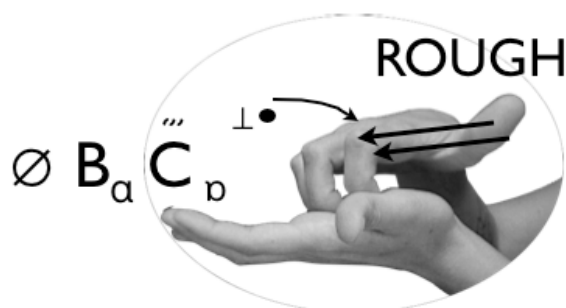
RULES ON WRITING SIGNS

STOKOE NOTATION CONVENTIONS CONT.

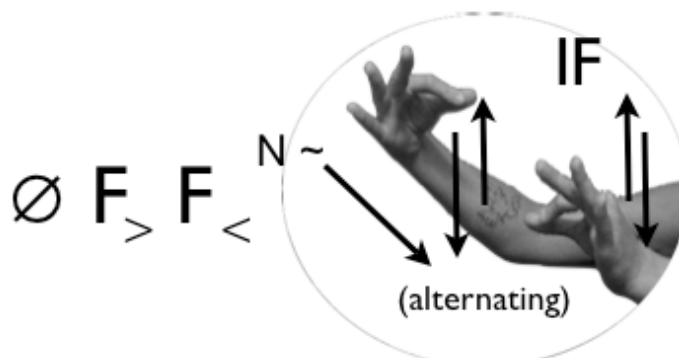
3. Three other marks are used to show SIG (movement) action more clearly.
 - a. “A dot above a SIG (movement) symbol indicates a short, sharp, tense or checked movement” (xiii, *ibid*).



- b. “A dot to the right of a SIG (movement) symbol indicates a repetition of the whole SIG (movement). Two dots indicate two or more repetitions” (xiiv, *ibid*).



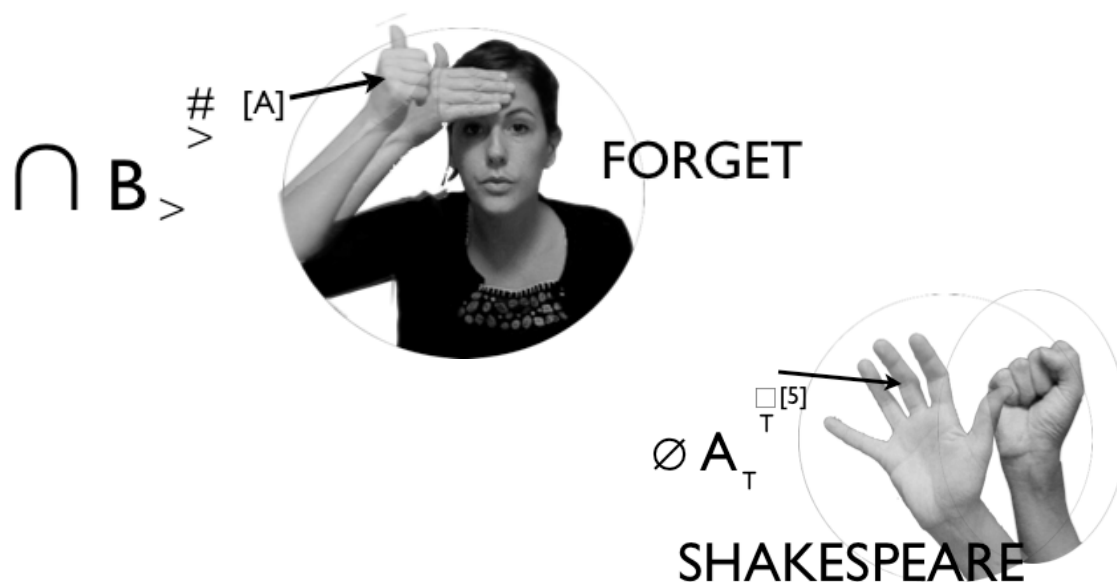
- c. The (~) symbol after a SIG (movement) symbol indicates that the action in a two-handed sign is alternated (xiiv, *ibid*).



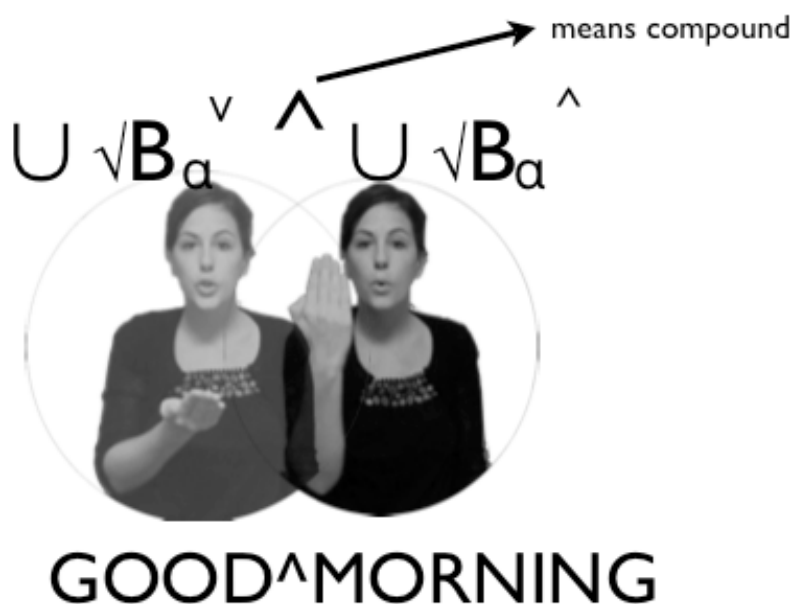
RULES ON WRITING SIGNS

STOKOE NOTATION CONVENTIONS CONT.

d. When the SIG (movement) action includes opening or closing, the DEZ (handshape) configuration changes. To show the ending handshape, the new DEZ symbol is shown in brackets. (xiiv, *ibid*).



e. For compound signs, use ^ between the transcription of each sign. (This is different from Stokoe notation.)



Location

Different symbols used to represent location in ASL

textual description taken or adapted from DASL (1965)

#	symbol	description	sign examples (in gloss)
1	∅	neutral space (not touching the body or hands)	NOTHING, PLAY, GIVE
2	○	face or whole head	SLEEP, WOW
3	∩	forehead or brow (upper face)	SUMMER, FATHER, HAT
4	Δ	mid-face, the eye and nose region	BUG, DON'T-MIND
5	U	chin, lower face	SOUR, DISAPPOINT, TELL
6	}	cheek, temple, ear, side of the face	KNOW, NEPHEW
7	Π	neck	THIRSTY, VAMPIRE
8	[]	trunk, body from shoulder to hips	CHINA, BRAVE, HAVE, MY/MINE
9	\	upper arm	TATTOO, SHOT
10	√	elbow, forearm	POOR, FOREIGN
11	ɑ	wrist on its back, facing up (supinated)	DOCTOR, PULSE
12	ɒ	wrist down, facing down (pronated)	ON, TIME

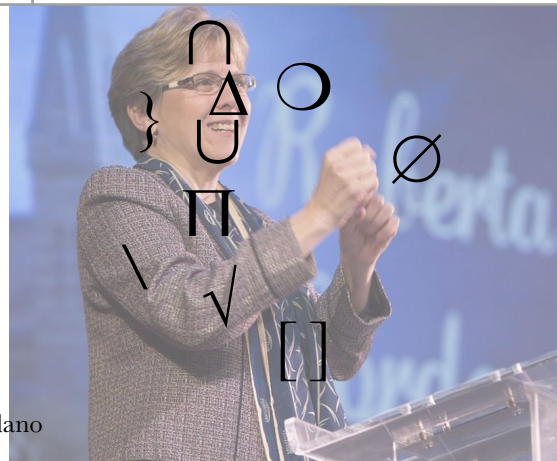









figure 5. Location symbols imposed on the image of President Cordano

image adapted from: <http://www.gallaudet.edu/office-of-the-president/bobbi-connects.html>
(accessed September 4, 2016)

Handshape

Different symbols used to represent handshape in ASL



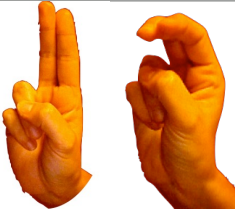
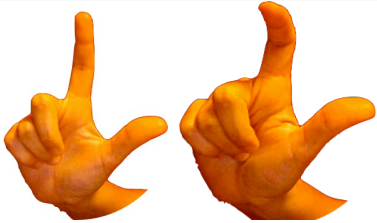

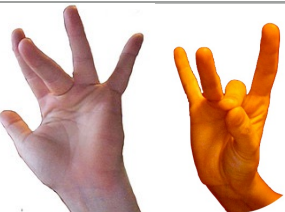
textual description taken or adapted from DASL (1965)

symbol	description	pictures
B	Flat hand with fingers extended and together. Thumb in varying positions (closed, extended). Sometimes fingers are bent.	
A	Compact hand closed into fist. Thumb in varying positions (closed, extended, under index finger). Looks like 'a', 's', or 't' of manual alphabet	
G	Index finger points from the fist (which may be closed or slightly open). Looks like "1" of manual numeration or 'g' or sometimes like 'd' of manual alphabet	
C	Curved hand. Looks like 'c' of manual alphabet.	
5	All fingers are spread. Fingers and thumb in varying positions (fully extended, slightly bent or hooked). Looks like "5" or "4" of manual numeration. The ones with bent fingers are known as the claw hand.	
V	Index and second fingers extended and spread apart. Fingers can be fully extended or bent. Looks like "v" of manual alphabet or "2" of manual numeration.	
O	Tapered hand where the fingers are curved and squeezed together over thumb. Sometimes not all of the fingers are extended (which is also known as the baby-O handshape). Looks like 'o' of manual alphabet or "0" of manual numeration.	

Handshape cont.

Different symbols used to represent handshape in ASL


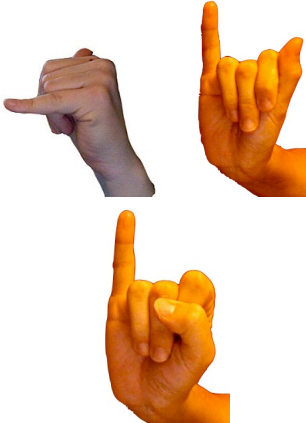




textual description taken or adapted from DASL (1965)

symbol	description	pictures
F	The index finger and thumb are extended and bent while the rest of the fingers are fully extended and spread. Looks like “f” of manual alphabet or “9” of manual numeration.	
X	Hook hand where the index finger is bent in a hook and the other fingers are folded into a fist. The thumb tip may touch fingertip. Looks like “x” of manual alphabet.	
H	Index and second finger are extended and closed (or not spread). Looks like “h” or “u” of manual alphabet.	
L	Thumb and index finger are held in right angle, known as angle hand. The other fingers are usually bent into palm. Looks like “l” of manual alphabet.	
Y	Thumb and pinky are spread out and extended from the fist, known as “horns” hand. Or the index finger and pinky are extended, with the thumb extended or not.	
8	Middle finger is bent in from spread hand and the thumb may touch fingertip. Looks like “8” from manual numeration. When the thumb does not touch the middle finger, this is known as “open-8”.	

Handshape cont.

Different symbols used to represent handshape in ASL

textual description taken or adapted from DASL (1965)

symbol	description	pictures
K	Index finger points from fist and thumb touches pinky, like 'k' and 'p' of manual alphabet	
I	Little finger is extended from fist. Looks like "i" of manual alphabet.	
R	Middle finger crossed over index finger. Looks like "r" of manual alphabet.	
W	Thumb and pinky are bent and touching. The other fingers are extended and spread. Looks like "w" of manual alphabet or "3" of American gesture	
3	Thumb, index and middle fingers are extended and spread. Ring and pinky fingers are folded in. Looks like "3" of manual numeration.	
E	All fingers are folded in and touching the side of the thumb which is folded across the palm. Looks like "e" of manual alphabet.	

Movement

Different symbols used to represent movement in ASL

textual description taken or adapted from DASL (1965)

#	symbol	description	sign example (in gloss)
1	^	Upward movement	UP, GHOST
2	v	Downward movement	DOWN, DECIDE
3	N	Up and down movement	STAR, JUDGE
4	>	Rightward movement	RIGHT
5	<	Leftward movement	LEFT
6	Z	Side to side movement	NOTHING-TO-IT
7	T	Movement toward signer	ME
8	⊥	Movement away from signer	YOU, CAT
9	I	Back and forth movement	COMMUTE, DESCRIBE
10	α	Supinating rotation (twisting palm up)	FRANCE
11	ρ	Pronating rotation (twisting palm down)	PROTEST
12	ω	Twisting movement (palm up and down)	KIND-OF
13	η	Nodding or bending action	PRETEND-TO-UNDERSTAND, PREACH
14	@	Circular action	WONDER, FRIDAY, COOPERATE
15	□	Opening action (final handshape shown in brackets)	SHAKESPEARE, HATE
16	#	Closing action (final handshape shown in brackets)	TAKE-OFF, ZOOM-OFF, STICKY
17	e	Wiggling action of fingers	COLOR
18) (Convergent action (approaching)	EXACT, MEET, JOIN (beginning)
19	×	Contractual action (touching)	TOUCH, HIT
20	II	Linking action (grasping)	MEAT, COOPERATE, JOIN (end)
21	†	Crossing action	DIVIDE (beginning)
22	⊙	Entering action	PENETRATE
23	÷	Divergent action (moving away, separating)	DIVIDE (end), DIPLOMA (end)
24	‘ ’	interchanging action	CHAIN

Orientation

Different symbols used to represent orientation in ASL

textual description taken or adapted from DASL (1965)

#	symbol	description	example of sign (in gloss)
1	Ⓐ	Palm is facing up (supinated)	THING
2	Ⓑ	Palm is facing down (pronated)	CHILDREN
3	Ⓒ	Palm is facing signer	MY/MINE
4	Ⓓ	Palm is facing away from signer	YOURS, THEIRS
5	Ⓔ	Palm facing your right	GALLAUDET
6	Ⓕ	Palm facing your left	BLACK
7	Ⓖ	Finger(s) pointing upward	UP, HONOR
8	Ⓥ	Finger(s) pointing downward	DOWN, HANDS-IN-DIRTY-BATHWATER
9	Ⓘ	Palm alternates between facing signer and facing away from signer	CHAIN

EXAMPLES

In this section you'll see two examples of signs notated using Stokoe Notation. You'll find a textual description of the different parts and the appropriate symbols to represent the parts.

SIGN gloss

location: description of location, symbol

handshape: description of handshape, symbol

orientation: description of orientation, symbol

movement: description of movement, symbol

STOKOE NOTATION and picture of sign

ZOOM-OFF

location: on the wrist of passive hand, symbol α

handshape: L-handshape then baby-O handshape, symbols L and O

orientation: facing away from signer, symbol \perp

movement: away from signer and closing, symbol \perp and symbol # with last handshape in brackets, [O]



CHAIN

location: neutral space, \emptyset

handshape: two F-handshapes, symbols F F

orientation: one is away from the signer and the other is facing the signer, then they alternate, symbol \perp

movement: movement to the right, alternation, and grasping movement, as well as repetition symbols $>$, \perp , \sim , \bullet

$> \perp \bullet$

$\emptyset F_{\perp} \sim F_{\perp}$

REFERENCES

Stokoe, W.C., Casterline, D.C., Croneberg, C.G. (1965). *A dictionary of American Sign Language on linguistic principles*. Silver Spring, MD: Linstok.

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