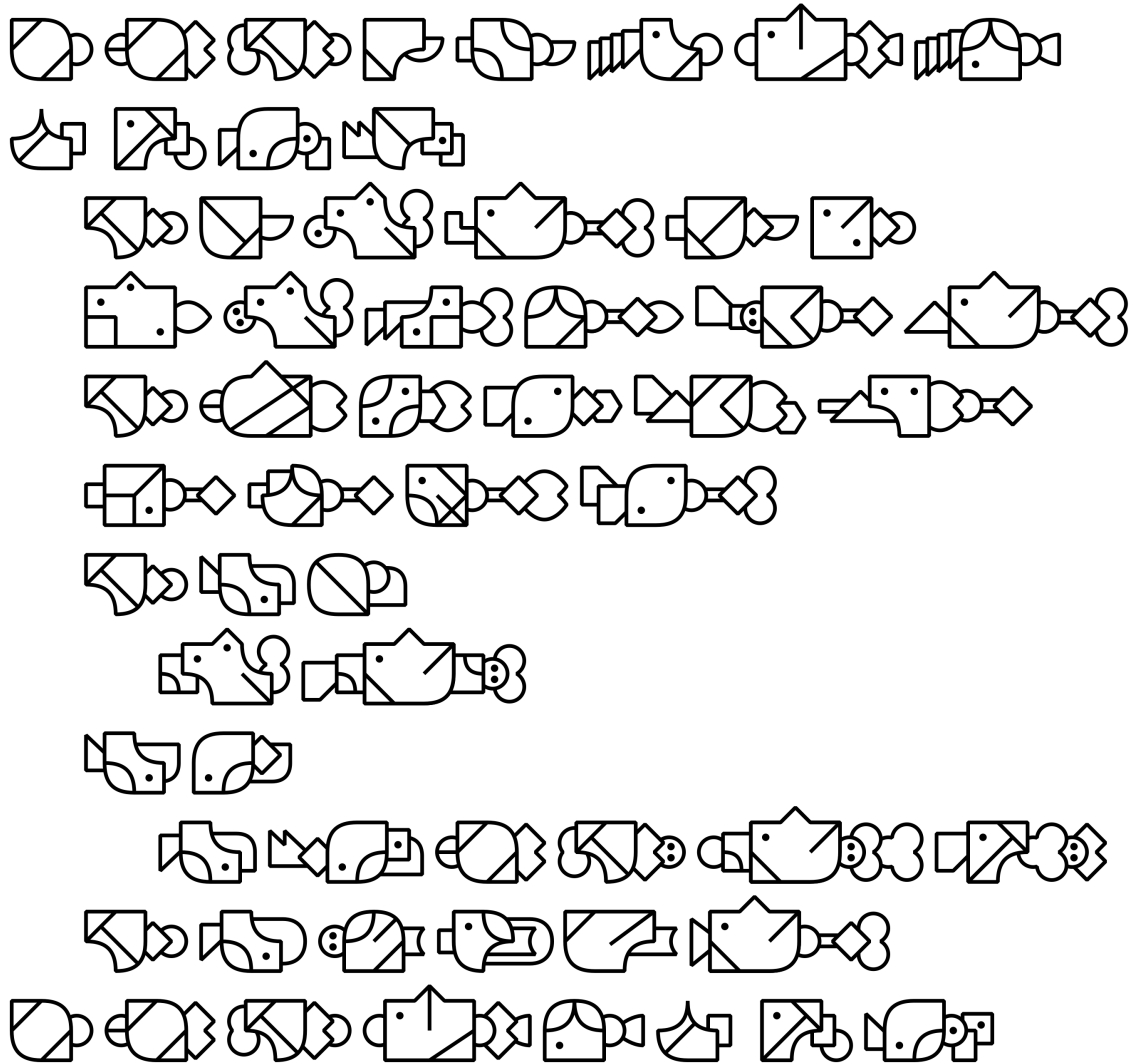# LTS Relay Torch – Sdefa

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February 2024

Phonology and Orthography

The twelve phonemes of Sdefa are the twelve pitch classes of the Western chromatic scale. Register, duration, dynamic, and any other factors besides pitch are all in free variation: any B flat, played on any instrument for any duration and at any dynamic, is considered to be the same. Examples given in this document are written in treble clef without rhythms, but could be played in many different ways.

Root words are fixed, in that they are always the same string of four or five pitch classes. Affixes are variable in their pitch classes, but this variation is not notated in the orthography of Sdefa so the details are not necessary for translating the text as given above.

Root words never contain repeated notes. This means that any note repetition (including an octave leap) signals a boundary between two morphemes. The boundaries between affixes and their associated roots, or between two affixes on the same root, are always signaled by repeated notes, so a repeated note always indicates the boundary between morphemes. However, the final note of one word and the first note of the next word may coincidentally be the same, so a repeated note is not necessarily a word-internal morpheme boundary. In examples in this document, word boundaries are indicated by full barlines and word-internal morpheme boundaries by half barlines.

Root words

Root words are written with a twelve-letter alphabet. Each four-note root is an approximate square, with each corner representing one of the notes, starting with the top left and moving counterclockwise. The letters are the corners of the squares, which for some letters are rounded or inverted. The letter shapes are rotated depending on where they appear in the word, so the third note of a word is rotated 180° from how it would appear if it was first in the word.

Five-note words are wider, also starting from the top left corner and moving counterclockwise, ending in the top middle. Depending on the exact notes, the two bottom corners may be stretched to fill the extra space.

Below, the letter for each phoneme is shown, first as it would appear in the top left corner of a glyph (as the first note of the word), then as the top edge (as the last note of a five-letter word).

pitch class	top left corner	top edge	pitch class	top left corner	top edge
C	⌐	∧	F♯ / G♭	�-flag	△
C♯ / D♭	⊠	⇧	G	⌡	⌣
D	▽	△	G♯ / A♭	⌒•	⊤•
D♯ / E♭	↖	⊤	A	⌐•	⌃•
E	⌒	—	A♯ / B♭	☐	◇
F	↖	↑	B	⬭	⬯

Note that the diagonal lines in the corner versions of pitch classes 1, 3, and 5 may extend past the center of the combined glyph, if no ambiguity would result.

Affixes

Prefixes and suffixes in Sdefa are three notes long, and vary in their exact pitches. However, in the Sdefa orthography they are not written with the same system as the root words, so their appearance does not change from one instance to the next. Each affix has its own shape that is drawn next to and overlapping with the word it is affixed to. The innermost affixes are slightly underneath the root word, the next ones out ones are underneath the innermost ones, and so on. One exception is the coordinating suffix, which is always underneath both suffixes that it joins together.

Affixes' shapes (and pitch contours) are not unique, but they are unique for a given possible position and word class. A given shape may have up to four meanings, as a prefix or an affix to either a verb or a noun. The meanings of affixes with the same shape are sometimes related, but sometimes not.

Grammar

Overview

Sdefa is mostly head-final, and has only two word classes (nouns and verbs). Verbs usually follow all of their nominal arguments, which may occur in any order. Modifiers usually precede the words they modify, but not in all cases. Sdefa uses stative verbs to express properties, so these usually follow the noun they modify.

Sdefa does not make frequent use of non-finite verb forms, and Sdefa texts are not clearly broken up into sentences or clauses. As a result, a given section of text may be translatable in several ways: "the population of the town," "people who are in the town," and "the people are in the town" are all valid translations of the same bit of text (example 12 below).

Names are used in Sdefa less frequently than they may be in other languages, in part because of the difficulty of borrowing a name from a spoken language. They are also not as necessary, as third-person pronouns can be used unambiguously in their place.

Sdefa texts tend not to repeat nouns frequently, using pronoun suffixes instead. However, repetition of certain significant words may occur as a musical element. This repetition may not necessarily contribute new information, but is there for musical structure and potentially to highlight the importance of those words to the text as a whole.

Pronomial Suffixes

Verbs are marked with suffixes to agree with each nominal argument. Intransitive verbs have one suffix slot, for the subject; transitive verbs have two, for the subject followed by the object; and ditransitive verbs similarly have three. Sdefa does not have standalone pronouns, as the suffixes fill that role.

There are six pronomial suffixes with fixed meanings: first person singular, first person plural, second person, interrogative, impersonal, and reflexive/reciprocal.

1

happy-1sɢ

I am happy.

2

see-1sg-2

I see you.

3

see-2-int

What do you see?

There is also a coordinating suffix, which allows for multiple pronomial suffixes to occupy a single slot. This is the only affix that is always shown underneath all adjoining glyphs.

4

happy-1sg-and-2

You and I are happy.

Third-person suffixes are assigned as needed, almost like ad-hoc noun classes. There are twenty-nine possible suffix forms without fixed meanings (in addition to the six with fixed meanings), each of which may be assigned to any noun. The first time a noun is used, it has one of these suffixes applied to it; from that point forward, that suffix may be used on a verb to show that noun's role as one of the verbs nominal arguments. This allows a verb to follow its nominal arguments by a considerable distance without any resulting ambiguity, and for multiple verbs to share nominal arguments without repetition.

In this document, these suffixes are written as 3 (for third person) with a subscript, which simply indicates the order in which the suffixes appear within the text. The glyphs for these suffixes are arbitrary unfilled shapes (contrasted with the six fixed pronomial suffixes, which all have at least one dot or line within them).

5

cat-3$_1$ see-1sg-3$_1$

I see a/the cat.

It's not just the first instance of a noun that must have a suffix; in fact, every Sdefa word must have at least one suffix. If the same noun is used multiple times to refer to the same referent, it must have the same suffix each time. This repetition is rare, though, as a noun may be used once at the beginning of a Sdefa text, and that same pronoun may be used much later and still unambiguously refer to that noun.

If multiple instances of the same noun have different suffixes, then they refer to different individuals.


6

cat-3$_1$ cat-3$_2$ see-3$_1$-3$_2$

One cat sees another cat.

At times the same third-person suffix may be applied to more than one noun. Depending on the context, this can have a few possible meanings. The most likely possibility is that the two nouns refer to the same thing, describing it in different ways. Most often this will occur with some separation between the two instances of the noun, allowing the author to obliquely refer to something in more than one way.

7
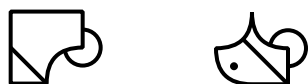
this_place-3$_1$ meadow-3$_1$

this place, a meadow

Another possibility is that the two nouns refer to things that are not exactly the same, but are close enough for the distinction not to matter. This may be two things of the same type, or a group of things vs. a member or subset of that group; most often this will occur with the same noun root but differing prefixes.

6

Relationship Verbs

Sdefa has a category of verbs that express a (generally static) relationship between their two or more nominal arguments. For example, the Sdefa word for "friend" is a verb, essentially "to be friends with."

8

cat-3_1 horse-3_2 be_friends-3_1-3_2

The cat and the horse are friends.

Relationship verbs are a potential exception to the rule about verbs following all of their nominal arguments. Because a relationship verb in a way defines one or more of its arguments already, there need not necessarily be another noun to define them further.

9

friend-3_1-1SG   smart-3_1

My friend is smart.

Noun Prefixes

Noun prefixes convey information about number and deixis. By default, Sdefa nouns are singular or mass nouns. There are prefixes for the plural and paucal, as well as zero, "many," and "all."
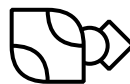

10

PL-horse-3_1

horses

11

many-horse-3_1

many horses

There is also a prefix to create mass or group nouns.

12
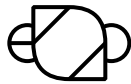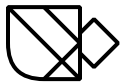
town-3_1 mass-person-3_2 in-3_2-3_1

the population of the town   or   *a group of people are in the town*

The "generic" prefix (GEN) is used to talk about a generic or prototypical example of the noun, to that type of thing as a whole, or to one or more unspecified members of a group. Depending on context and preference, it could be translated as "[thing]s," "a typical [thing]," "most [thing]s," etc. The generic prefix often co-occurs with (and has the same form as) the habitual prefix for verbs.

15

this-PL-blueberry-3_1 green-3_1

These blueberries are green.

16

GEN-blueberry-3_1 blue-3_1

Blueberries are blue.   or   *A typical blueberry is blue.*

17
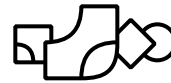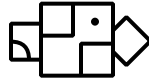
GEN-blueberry-3_1 GEN-bird-3_2 HAB-eat-3_2-3_1

Birds eat blueberries.

There are two noun prefixes that could be translated as the determiners "this" and "that." They may be used spatially, to refer to something near the speaker or listener respectively. When combined with the word {C B A G} "thing," they may be used more abstractly to create dialogue tags or to otherwise reference something that was said or mentioned.

13

this-thing-3_1 say-1SG-3_1 FUT-go-1SG

I said, "I'll go."

14

PST-go-1SG   that-thing-3_1 say-1SG-3_1

"I went," I said.

Negation

Verbs are negated with a prefix:

18

NEG-happy-1SG

I am not happy.

9

Tense

Sdefa has future, present, and past tense prefixes. Tense is never obligatory, so verbs unmarked for tense may be implied to be in any tense, depending on context. Generally tense 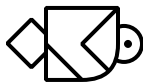is marked at the beginning of a section and unmarked afterward as long as it still applies. However, a repeated tense marker may be used if desired.

19

PST-sleep-1SG   dream-1SG

I slept and I dreamed.

The future and past tense suffixes may be reduplicated to convey further future and past respectively. If there is already a past-tense context, then the intended meaning of a repeated past-tense prefix is likely something like the past perfect; if there is not, then the meaning is simply "a long time ago."

20
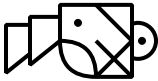
PST-PST-leave-1SG

I had left.   or   *I left a long time ago.*

Aspect and Mood

There are various prefixes to indicate different verbal aspects and moods. The inchoative prefix (INCH) indicates the beginning of a state or action.

21
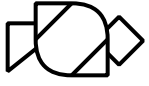
PST-INCH-sleep-1SG

I fell asleep.

The iterative aspect indicates a repeated action. When used with a relationship verb, it indicates one or more degrees of separation.

22

that-person-3_1 ITER-friend-1SG-3_1

That person is a friend of a friend of mine.
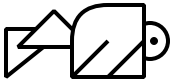
The habitual mood expresses habitual actions, and as previously noted commonly co-occurs with the generic noun prefix (see example 17).
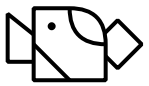
The jussive mood expresses desires and commands; it doubles as an optative. Agreement marking is as with any other verb.

23

JUSS-eat-1PL

Let's eat.

24

this-bug-3_1 JUSS-eat-2-3_1

Eat this bug.

Degree

There is a set of verbal prefixes, usually used with stative verbs, which alter the degree to which something is true. They double as comparatives, so a verb marked with one of these prefixes can take a second nominal argument (the comparand).

25

house-3_1 very-green-3_1

The house is very green.

Causatives

The causative prefix increases the valency of a verb by one, adding an agent that causes the described action. The added agent is the first nominal argument of the modified verb. It does not neccessarily indicate that the action was caused intentionally.

26
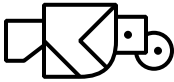
CAUS-happy-2-1SG

You made me happy.

Linked Verbs

Some verb prefixes are used to link two verbs together. In some cases, the marked verb is the first of the two, and in other cases it is the second. One prefix in the first category is the benefactive, which indicates that the marked verb's action is intended to bring about the action of the following verb.

27

BEN-sleep-1SG   lie_down-1SG

I lay down to sleep.

With the benefactive, the marked verb is irrealis: in the above example, the speaker may or may not have actually gotten to sleep. The marking on the benefactive verb and the verb it modifies may differ:

28

BEN-sleep-2   quiet-1SG

I was quiet for you to (be able to) sleep.

Verbs may be marked with a prefix that makes them into adverbs. Such a verb may be used to describe the manner of an action (modifying a verb which describes a path), to tell the location of an event, or to specify the nature of the other verb's action in some way. An adverb always immediately precedes the verb it modifies. Note that adverbs, like nominalized verbs, still must have all necessary suffixes, which can lead to some repetitive marking.

29

ADV-quiet-2   sing-2

You sing quietly.
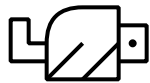
As with the benefactive, the suffix marking on adverbs may differ from the verbs they modify. However, the subject will almost always be the same, so usually the difference will be in object suffixes, or the lack of an object suffix on one of the two verbs.

30

house-3_1 ADV-run-1SG   enter-1SG-3_1

I ran into the house.   (lit. "I entered the house running")

Some other verb prefixes link two verbs together but are marked on the second verb of the pair. As above, the verbs must occur back-to-back. The relationship between the two verbs may be temporal, as with the simultaneous prefix:

31

quiet-1sg   sɪᴍ-sleep-2

I was quiet while you slept.

The relationship may also have to do with cause and effect. The resultative prefix indicates that the action of the marked verb occurs as a result of the action of the previous verb.

32

tired-1sg   ʀᴇs-sleep-1sg

I was tired, so I slept.

The resultative, causative, and benefactive have some potential overlap in meaning, but are all distinct. The causative adds a nominal argument to indicate the cause, whereas the resultative and benefactive both involve two verbs. The benefactive conveys intention but not necessarily completion of the intended result, whereas neither the causative nor the resultative convey intention (positively or negatively), and both do indicate that the cause and effect both occur.

Verbal Coordination

There is a verbal coordinator, but it is only used in specific circumstances; generally, the two verbs are simply juxtaposed, as in the first example in the section on tense. The coordinating prefix is generally used when the meaning of another prefix is to be "distributed" across more than one verb.

33

hungry-1sg   ʀᴇs-ɪɴᴄʜ-sit-1sg   and-eat-1sg

I was hungry, so I sat down and ate.

In the above example, the "and" prefix is used to show that eating is also a result of being hungry; if the resulative prefix were repeated instead, then eating would be a result of sitting

Nominalization

Verbs may be nominalized with a prefix, so that another verb may take the nominalized verb as one of its arguments. They retain all suffix marking for agreement, and gain a final suffix slot that refers to the nominalized verb.

34

NOM-dance-1SG-3$_1$ want-1SG-3$_1$

I want to dance.

35

NOM-dance-2-3$_1$ want-1SG-3$_1$

I want you to dance.

Lexicon

Suffixes

Any suffix that does not appear below is a third-person pronomial suffix.

⊙ 1SG

⊙ 1PL

▪ 2

◨ INT

◪ IMPRS

▭ and

Noun Prefixes

⊙ PL

⊙ many

⊖ group, mass noun

◇ zero

◪ generic

◣ this, these, the following

◥ that, those, the preceding

Verb Prefixes

◇   NEG

◻   PST (past)

▷   FUT (future)

▷   SIM (simultaneous)

8   ITER (iterative)

△   INCH (inchoative)

⋀   JUSS (jussive)

◫   HAB (habitual)

⌐   BEN (benefactive)

◺   RES (resultative)

◿   CAUS (causative)

□   ADV (adverb derivation)

○   NOM (nominalization)

⊙   very, COMP (comparative)

▭   and

Roots

A B♭ A C A   bush, shrub (n)

A B C♯ D   exit, leave, move away from (vt)

A C A F   bring, lead, take (vt)

A C D C F   respect (vt)

A D E F C   collect, gather, harvest (vt)

A E D G   live, be alive (vi)

A E G B   follow (vt) — the subject follows the object in time, usually without (much of a) gap; it is the next event in a series of events

A F G D   be associated, be connected, be together (vt) — the subject and object are associated in some way. The meaning is usually not physical proximity, but a shared quality, cultural association, connection of meaning, etc.

A G C A   be around, surround (vt)

A G F G A   blueberry (n)

B A B A   be home to (vt) — relationship verb; the subject is the object's home.

B A C B   learn about, learn how to do (vt)

B C D B   see (vt)

B C D E♭   day (n)

C B♭ A F	quick, fast (vi)
C B A G	thing, something (n) — very generic, can refer to any physical item or to something intangible
C B C B	at, during, in, on (vt)
C D E♭ F	happy (vi)
C D E F	enter, go into (vt)
C D G C	here, this place (n)
D♯ E F E	ask (vt, vd) — the subject is the asker; if only one object suffix is present, it is the question being asked; if two are present, then the second is the person being asked and the third is the question.
D C E♭ F	outside of (vt)
D E D E	person (n)
D E G F E	go by, pass (vi) — refers to periods of time
D G E♭ C	be the parent of (vt) — relationship verb: the subject is the parent of the object, and the object is the child of the subject.
E A B C	say, tell (vt, vd) — the subject is the speaker; if only one object suffix is present, it is that which is said, a story being told, etc.; if two are present, then the second is the person being spoken to and the third is the message.
E A E A	fall, drop (vi)
E E♭ D D♭ C	bee (n)
F E D C	forest, woods (n)

F E G C   listen to, pay attention to (vt)

F♯ E D B   run (vi)

G A B♭ A   create, make, produce (vt)

G E♭ C G   story (n)