STR / generation 2 — User manual

Library: `src/lib2/str/2/`
Edition: 2026-11-18, source/document review (documentation only)
Qualification: CLARITAS Wave 5 source/native parity accepted for versioned code; separate working-source r003 17/17 emulator witness exists, not a fresh proof of every versioned integration.

What this member does

Provide six capacity-bounded NUL byte-string routines with explicit status codes and no UI/serial/math ownership.

Public interfaces

Entry point or group	Inputs, outputs and behavior
`STR_LEN`	`$10/11` src, `$12` cap; `$0` status, `$8` length.
`STR_COPY`	`$10/11` src, `$12` cap; `$13/14` dest, `$15` cap; status `$0`, copied length `$8`.
`STR_CMP`	Two bounded spans as above; `$8` FFh/00h/01h compare on success.
`STR_APPEND`	Copy-like pointers/caps; append source to destination; `$8` final length.
`STR_SKIPWS`	`$10/11` src, `$12` cap, `$13` offset; `$8` first non-whitespace, `$9` count.
`STR_INDEX`	Haystack+needle bounded spans; `$8` first zero-based match, `$0=5` if not found.

How to integrate

Include `str_abi.inc` once, selected method includes, and `str_copy.inc` whenever using `str_append.inc`. Initialize capacity/pointer registers, `CAL STR_*`, inspect `$0` before interpreting `$8/$9`.

Composition sketch (not an independently assembled client):

```
#INCLUDE (lib2/str/2/str_abi.inc)
#INCLUDE (lib2/str/2/str_copy.inc)
#INCLUDE (lib2/str/2/str_append.inc)
        ; Set RAM pointer/capacity pairs
        CAL     STR_APPEND
```

Environment, dependencies and memory

Current RAM bank selected by caller; 1..255-byte capacities include NUL. `$SY` names a register holding 1, stack valid. `str_abi.inc` status 0..5 (`STR_OK`, `STR_UNTR`, `STR_NOSP`, `STR_BCAP`, `STR_BOFF`, `STR_NFND`). Input registers preserved per source contract; IX/flags clobbered.

Limits and evidence

Do not use outdated `lib/str` paths or assume old r002a runtime behavior from dated notes. Historical `$SZ` alias bug was corrected in a separate working-source r003; verify actual versioned bytes and runtime.

This documentation does not introduce a new build or runtime PASS. Source equivalence, native assembler parity, emulator execution and physical-machine evidence remain distinct.

Actual source and further reference

- This exact member folder in Google Drive
- Source modules: `str_abi.inc`, `str_len.inc`, `str_copy.inc`, `str_cmp.inc`, `str_append.inc`, `str_skipws.inc`, `str_index.inc`.
- Further contracts/source notes: API.md, README.md. These may include dated donor paths or older acceptance statements.
- For a new consumer, pin exact source files and hashes, verify full include closure, inspect register/bank/resource conflicts and test the resulting application on each claimed target.

Praeteritum ad futurum servamus.