KEYBOARD / generation 3 — User manual

Library: `src/lib2/keyboard/3/`
Edition: 2026-11-18, source/document review (documentation only)
Qualification: Accepted CLARITAS source/native parity including public K540_RAW symbol repair; SHIFT/CAPS/ editor runtime and physical-machine qualification remain separate.

What this member does

K540 keyboard matrix event service with CAPS latch, one-shot SHIFT, and a four-entry keyboard session adapter.

Public interfaces

Entry point or group	Inputs, outputs and behavior
`K540_INIT / K540_RESET`	Initialize/clear borrowed keyboard mode RAM.
`K540_GET`	Blocking press/release; `$17` event, `$0` key, `$13` mode.
`K540_MODE`	Read current CAPS/SHIFT mode from RAM to `$13`.
`K540_RAW`	Exposed raw scan entry used by consumers.
`KBD_INIT / KBD_EVENT / KBD_RESET / KBD_RELEASE`	Card-local keyboard-session wrappers.

How to integrate

Include `keyv540.inc` once, then `keyv540.s`; optionally `keyboard.s` for session wrapper. `CAL KBD_INIT`, repeat `CAL KBD_EVENT`, inspect `$17/$0/$13`, then `CAL KBD_RESET` before host keyboard resumes.

Composition sketch (not an independently assembled client):

```
#INCLUDE (lib2/keyboard/3/keyv540.inc)
; Supply the dependencies, RAM, bank context and symbols described above.
        CAL     K540_INIT
```

Environment, dependencies and memory

Borrowed RAM1 `09E4h`, valid stack, correct ROM placement and no concurrent host CRTKY. Events include `K540_EV_CHAR`, `MENU`, `BRK`, `CAPS`, `SHIFT`; CAPS=40h, SHIFT=80h. Clobbers documented in keyv540.inc.

Limits and evidence

`K540_RAW` is intentionally public; `_K540_*` internals are not. Verify SHIFT one-shot and editor interaction on the actual consumer before claiming runtime PASS.

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: `keyv540.inc`, `keyv540.s`, `keyboard.s`.
- Further contracts/source notes: keyv540.inc. 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.