

VibeDrone400 — User Guide

A browser-based Microbee Premium PC85 / Z80 emulator

WHAT THIS IS

VibeDrone400 (VD400) is a single self-contained HTML file that emulates a genuine Microbee Premium PC85 — Z80 CPU instructions execute against official Microbee Technology ROM images, not a simplified approximation. It runs entirely in your browser — nothing is ever uploaded anywhere. The ROM files you supply are cached locally via your browser's own storage so you only need to provide them once; anything you explicitly save — programs, printer output, data files — downloads to your own device the normal way, like any other file.

QUICK START

If you just want to get running as fast as possible: open the file, supply `premium_pc85_a.rom` and `premium_pc85_b.rom` when prompted, and you'll land at a classic BASIC 5.29e prompt within a couple of seconds. Everything else in this guide — the ROMS menu, ROM SLOTS (PAK cartridges and the Shell ROM), and Disk BASIC 6.35e — is optional extra capability you can add at any point afterwards, in any order, without starting over.

GETTING STARTED: SUPPLYING ROM FILES

VD400 does not, and will not, ship with any Microbee ROM content built in — those ROMs are Microbee Technology's own copyrighted material. The first time you open VD400, or any time its cache has been cleared, it will show a ROM picker asking for:

- ROM A — the 16K BASIC ROM (required)
- ROM B — the 8K BASIC ROM (required)
- Disk BASIC 6.35e — `mwb635e.com`, 22,400 bytes (optional here — only needed to run Disk BASIC programs; you can skip this and supply it later).

Once supplied, every file is cached locally in your browser (IndexedDB) and will be there automatically next time you open VD400 — you should only ever need to do this once per browser, unless you deliberately clear the cache.

THE ROMS MENU

Click the ROMS button in the control bar to open ROM management:

- ADD/UPDATE ROM — reopens the ROM picker at any time, without clearing what you've already loaded. Use this to add Disk BASIC 6.35e later, or to replace ROM A/B.
- RUN 5.29 — switches straight to classic BASIC 5.29e with no program loaded.

- RUN 6.35e — switches to Disk BASIC 6.35e. If you haven't supplied mwb635e.com yet, it will prompt you for it and then continue automatically — no need to click RUN 6.35e a second time.
- FORGET ROM — clears every cached ROM file, including any loaded PAK ROMs and the Shell ROM, returning VD400 to a completely fresh state.

LOADING AND SAVING PROGRAMS

The LOAD button opens a file picker accepting BASIC program files (.mwb, .bas, .txt, .bee) as well as PAK ROM images (.rom, .pak — see below). The SAVE button saves whatever program is currently in memory as a .mwb file. Programs load by being typed in as genuine keystrokes through the real BASIC line editor, exactly as if you had typed them yourself — this is what makes tokenisation and line numbering come out correctly for older or unusually-formatted files.

If you're running Disk BASIC 6.35e, the DATA SAVE and DATA LOAD buttons handle a separate kind of file — the data records a running program writes and reads through its own OUT#3/IN#3 cassette-style storage convention. DATA SAVE downloads any such files a program has created during your session; DATA LOAD lets you bring one back in. These are unrelated to LOAD/SAVE above, which deal with the BASIC program itself rather than the data it reads and writes while running.

ROM SLOTS: PAK CARTRIDGES AND THE SHELL ROM

Click ROM SLOTS in the control bar to open the ROM slot panel. It lists seven positions, ROM C through ROM I (ROM A and B are reserved for the BASIC ROMs themselves): eg premium_pc85_c.rom thru premium_pc85_i.rom

- ROM C, E, F, G, H, I — six genuine PAK cartridge positions. Use Load... to assign a .rom/.pak cartridge image to the positions C thru I; once loaded it's cached the same way as the base ROMs and will still be there next time you open VD400. Select switches to that cartridge; the currently running one is marked Active.
- ROM D — reserved specifically for the real PC85 Shell ROM (the system menu), rather than a general-purpose PAK position. VD400 checks it against the real Shell's checksum and tells you whether the file was recognised.

Switching a PAK ROM this way is exactly equivalent to typing PAK n at the BASIC prompt yourself — both use the same real hardware mechanism, just via a button instead of a keyword.

DISPLAY AND PERFORMANCE

- PHOSPHOR — opens a swatch picker to tint the screen: the real native Microbee 16-colour palette, or any single colour rendered as a phosphor tint (amber and green among them), matched for brightness so games keep their normal contrast whatever colour you pick.
- BOOST — opens a slider to adjust screen brightness relative to the surrounding page, from -20% to +20%.

- GT — cycles CPU speed between the real 2MHz, a faster 3.375MHz, and a much faster 6.75MHz.
- VDU — toggles a real hardware effect: at higher speeds, the CPU genuinely gives up part of its cycles to the video display circuitry, just as it would on real hardware. Toggle this on if you want that authentic slowdown reflected during heavy screen activity.

OTHER CONTROLS

- RESET — a full cold boot: reinitialises memory and restarts BASIC. Any PAK ROMs you've loaded stay loaded (real hardware reset doesn't clear out what's loaded in PAK sockets), but any unsaved program is lost.
- WARM — a warm reboot, equivalent to a warm restart on real hardware: restarts BASIC without the full reinitialisation a cold RESET does. Any PAK ROM in use is deselected, since a warm restart hands control back to BASIC itself.
- SAVE — save the current BASIC program as a .mwb file.
- DATA SAVE / DATA LOAD — save or load a running program's own data files (Disk BASIC 6.35e OUT#3/IN#3 storage — see "Loading and Saving Programs" above).
- PASTE — types clipboard text in as keystrokes.
- PAUSE — pauses or resumes CPU emulation.
- PRINT — downloads anything sent to LPRINT as a text file.
- KBD — opens an on-screen keyboard, useful on mobile devices.
- SCREEN — switches the display to fullscreen and back.

SAVING A MEMORY DUMP

Click bee icon at the top of the page to save a complete snapshot of memory (addresses 0000–FFFF) as DUMP.TXT: it is primarily a diagnostic and debugging aid rather than something needed for everyday use.

A FEW THINGS WORTH KNOWING

- VD400 keeps everything local to your own browser. Nothing you load or type is ever uploaded anywhere.
- If you switch browsers or clear site data, you'll need to supply your ROM files again — this is expected, not a fault.
- Exiting a PAK ROM's program returns you to whatever actually launched it. If you started it by typing PAK n yourself, exiting returns you to BASIC — not the Shell menu — even if the Shell is loaded, since the Shell wasn't what launched it in that case.
- Disk BASIC 6.35e and classic BASIC 5.29e are two different, separately-licensed programs. Loading one does not give you the other — each needs its own file supplied once.

- PAK ROMs are read-only in this emulator, matching real hardware — a PAK ROM's own program can't accidentally overwrite itself.

GETTING HELP

This beta release of VD400 does not currently include an in-app help panel or machine-code monitor — this guide is the primary reference for ROM setup, the ROM SLOTS panel, and the control bar. Most surprises in the interface turn out to be VD400 faithfully reproducing genuine Microbee PC85 behaviour rather than something going wrong. To provide quick installation this is a minified beta, under 100K for upload to the Microbee Technology Forum