altairsim — altairsim machine examples

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Machines that boot. Each directory here is self-contained: a `.toml` that describes the machine, the media it needs lying beside it, and a note saying what you will see. Copy any one of them anywhere and it still runs — a path inside a machine file resolves against **that file**, not against the directory you launched from.

Each directory has its own `README.md` (also distributed as `README.pdf`) saying what the machine is and what to type. Each directory also holds a `<dir>.zip` containing all of its files, so you can download that one file instead of the files one by one. You do not need both. Launch a machine by naming its machine file from inside its directory:

```
cd examples/acr
altairsim mitstapes.toml
```

These machines need the altairsim simulator.

What's new in 1.3.5

New machines:

- `fujinet/`: CP/M 2.2b with a **FujiNet** WiFi adapter. The example builds the FujiNet tools from source and carries them to your own disk.
- `d7a/`: **MUSIC3** on a **Cromemco D+7A**, and a CP/M machine that builds it from source.
- `pb1/`: burn a 2708 or 2716 EPROM with an **SSM PB1** board.
- `mpm2/`: **MP/M II 2.1** with two consoles.
- `cpnet/`: **CP/NET 1.2** on two Altairs, an MP/M II server and a CP/M 2.2 requester.
- `ps2int/`: **MITS Programming System II** from cassette, with the source for its bootstrap loader.

Changes:

- `tarbell/`: new CP/M 2.2 disk images.
- `cpnet/`: the requester disk now has `MAIL.COM`, `LOGIN.ASM` and `LOGOFF.ASM`.
- New versions of the host bridge utilities `W.COM`, `R.COM` and `HDIR.COM` on the 14 disk images that have them. `cdos.toml` now has the host bridge board.
- Each directory now has Markdown summaries of the board and operating system manuals.

Disk systems

	What it is
`cdos/`	**CDOS 2.58**, the CP/M 1.4 work-alike of Cromemco, on a **Cromemco 16FDC** with its own boot PROM, from an 8″ mixed-density diskette (`cdos.toml`). `A.`
`cpnet/`	**CP/NET 1.2** on two Altairs with **88-DCDD** 8″ floppies, joined by port B of each **88-2SIO**: an **MP/M II** server (`server.toml` , or `server-ss1.toml` with a CompuPro **System Support 1** in place of the 88-VI/RTC) and a **CP/M 2.2** requester (`requester.toml`) whose drive B: is drive A: of the server. Start the server first. `0A>` on the server, `A>` on the requester.
`diskbasic/`	**Altair Disk Extended BASIC 4.1** on an **88-DCDD** 8″ floppy, loaded by the DBL boot PROM (`diskbasic.toml`). `OK`
`fdcplus/`	**CP/M 2.2b** on an **FDC+**: from a serial drive server (`fdcplus-type7.toml`) or on the FDC+'s 1.5 MB floppy (`fdcplus-type5.toml`).
`fujinet/`	**CP/M 2.2b** on an **88-DCDD** 8″ floppy, with a **FujiNet** WiFi adapter on the second channel of an **88-2SIO**: `FUJIDIR` , `FUJIGET` , `FUJIPUT` and `WGET` reach a TNFS server or a web address (`fujinet.toml`). The example builds the tools from source, and carries them to your own disk. Name your serial device first. `A>`
`hdsk/`	**CP/M 2.2** booting off an Altair **88-HDSK** "**Datakeeper**" hard disk — an outboard controller moving whole sectors over an 88-4PIO — loaded by the HDBL PROM. `A0>`
`icom/`	**CP/M 2.2** and iCOM's own **FDOS** on an **iCOM FD3712/FD3812** 8″ floppy controller: single-density CP/M (`cpm22.toml`), double-density CP/M (`cpm22-3812.toml`), **FDOS-III** (`fdos-iii.toml`) and **FDOS-I** (`fdos-i.toml`). `A>` for CP/M, `!` for FDOS.
`mpm2/`	**MP/M II 2.1**, the multi-user system of Digital Research, on an Altair with **88-DCDD** 8″ floppies, an **88-2SIO** with two consoles and an **88-VI/RTC** for the tick (`mpm2.toml`), or a CompuPro **System Support 1** for the tick and the date (`mpm2-ss1.toml`). The disk boots into MP/M II with no CP/M. `0A>` on console 0, `1A>` on console 1 through `telnet localhost 8820` .
`sdsys/`	**SDOS 1.8B** and **SD Systems CP/M 2.2** on an **SD Systems SBC-200** Z80 single-board computer with a **VersaFloppy II** (`sdos.toml` , `cpm.toml`), the monitor alone (`sbc200.toml`), and a **VDB-8024** video console (`sbc200v.toml` , `sdosv.toml`). Press Enter, then `C` . `[A]` for SDOS, `A>` for CP/M.
`tarbell/`	**CP/M 2.2** that boots itself off a **Tarbell** floppy controller and its own 32-byte boot PROM: single density (`tarbell.toml` , `tarbell` #1011) and double density, with and without DMA (`tarbelldd.toml` , `tarbelldd-dma.toml`).

Tape, storage and I/O boards

	What it is
`acr/`	Mike Douglas's **MITS Tapes** CP/M disk and **WRTAPE**, the utility that writes any of the MITS distribution BASICs back out through an **88-ACR** — a bootable audio cassette you can then load on `basic4k` / `basic8k` / `ps2`, or on real hardware.
`pb1/`	An **SSM PB1** 2708/2716 EPROM programmer board and the SSM 8080 System Monitor: SSM's own burner programs from the PB1 manual burn a chip, and `SAVE` writes it out as an Intel HEX file (`pb1.toml`). `.`
`ps2int/`	**MITS Programming System II** from cassette: the monitor loads off an **88-ACR** tape, and the editor, the assemblers and the debugger load from their tapes. An **88-VI/RTC** gives the console an interrupt, so after `OPN ABS,AC` Ctrl-C stops a search of the cassette (`ps2int.toml`). `?`
`uio/`	**Altair 8K BASIC 3.2** from a cassette through one **88-UIO** board, which is the console and the cassette interface in one (`uio.toml`). `OK`

Graphics and games

	What it is
`cadzilla/`	The **CADzilla** graphics board's HD63484 ACRTC: `DRAWDEMO` shows every drawing command, one screen each, under CP/M.
`dazzler/`	A **Cromemco Dazzler**, 64×64 in 16 colors: Li-Chen Wang's **Kaleidoscope**, a pattern that wanders and recolors forever, **DZMBASIC**, Microsoft BASIC with `DZOP` graphics commands, under CP/M, the **Dazzler games** with joysticks and sound on a Cromemco D+7A, and Cromemco's **GDEMO** graphics demonstration.
`sol-20/`	A Processor Technology **Sol-20** with 1977 cassette games: TREK80, ATC, PAC-MAN and RAIDERS, each loading itself from its tape.

Sound

	What it is
`d7a/`	**MUSIC3**, a four-voice player of "The Star Spangled Banner" through a **Cromemco D+7A** on a Z80 at 4 MHz (`music3.toml`), and a CP/M machine with **M80** and **L80** that builds it from source (`music3-build.toml`). `A>` for the build machine.
`newtech/`	A **Newtech Model 6 Music Board**, a 6-bit D/A converter and a speaker: Newtech's own player, **MICROPLAY**, plays the score from the manual of the board, Scott Joplin's "**The Entertainer**".