

AccessionIndex: TCD-SCSS-T.20151118.003

Accession Date: 18-Nov-2015

Accession By: Prof.Doug Leith

Object name: DEC PDP 11/84

Vintage: c.1985

Synopsis: Late model of the popular PDP-11 series made by DEC, with two RL02 disk drives and THR7000 external drive unit. S/N: ???.

Description:

Digital Equipment Corporation was set up by Ken Olsen and Harlan Anderson of MIT in 1957 in Maynard, Massachusetts, USA. Although it had a number of very successful products like the PDP-8, PDP-10 and PDP-20, it was the PDP-11 family, designed by Harold McFarland, Gordon Bell, Roger Cady, et al, that became their signature products, highly popular 16-bit minicomputers, beginning with the PDP 11/15 and 11/20 in 1970 and ending with the PDP 11/93 and 11/94 in 1990, when they sold the product family to Mentec in Ireland. DEC's equally successful VAX-11 family were the immediate successors to the PDP-11 family.

The most memorable features of the PDP-11 architectures were memory-mapped I/O, and the register set of six general-purpose registers R0-5, the stack pointer SP and the instruction pointer IP. From the 2nd-generation PDP 11/45 there were dual register sets that supported Kernel, Supervisor and User privilege levels. Most models were able to run the DOS-11, RT-11, RSX-11, RSTS and MUMPS operating systems.

The PDP 11/84 was a late model of the PDP-11 family, introduced in 1985. It was a 22-bit Unibus version of the PDP 11/83 (which had an 18-bit Qbus), with a KTJ-11B Qbus-to-Unibus converter and a Unibus Map to translate 18-bit to 22-bit addresses. Its performance was about 0.72 MIPS.

Trivia1: The first official UNIX ran on a PDP 11/20 in 1970

Trivia2: The PDP 11/84 ancestry can be traced right back to the PDP 11/15 and 11/20:

- *The PDP 11/84 was a 22-bit Unibus version of the PDP 11/83.*
- *The PDP 11/83 was an upgrade of the PDP 11/73 with a faster 18MHz J11 CPU and a private memory interconnect (PMI) to speed up access to memory.*
- *The PDP 11/73 was the first machine to use the J11 CPU "11/70-on-a-chip" made by Harris Semiconductor, with 22-bit addressing and an external cache.*
- *The PDP 11/70 was an upgrade of the PDP 11/45, with its Fastbus replaced by a 32-bit memory bus, 22-bit addressing and a 2kB cache.*
- *The famous PDP 11/45 was a successor to the PDP 11/20, with wider (64-bit) microcode, much better performance, Schottky TTL logic, multiply and divide and N-bit shift instructions, 18-bit addressing, stack limit and dual register set, and options for memory management and FPU and Fastbus memory bus.*

The provenance and usage of the unit in this collection has yet to be ascertained. It is intended (with addition of a reel-to-reel tape drive) as a base for attempting recovery of contents from tapes in this collection, see the Software category of this catalog.

Accession Index	Object with Identification
TCD-SCSS-T.20151118.003.01	DEC PDP 11/84. S/N: ???
TCD-SCSS-T.20151118.003.02	DEC RL02 Disk Drive (1). S/N: ???
TCD-SCSS-T.20151118.003.03	DEC RL02 Disk Drive (2). S/N: ???
TCD-SCSS-T.20151118.003.04	THR7000 External Drive. S/N: ???



Figure 1: PDP 11/84 three-quarter view

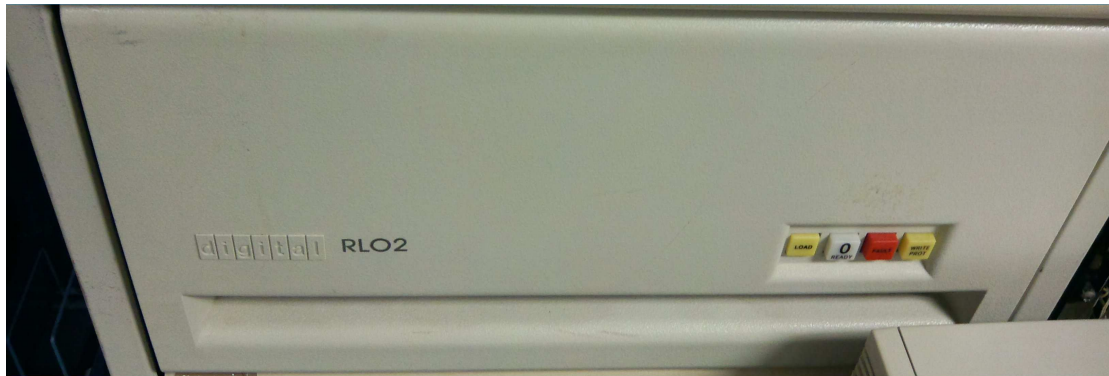


Figure 2: PDP 11/84 RL02 Disk Drive (1) front view



Figure 3: PDP 11/84 processor front view

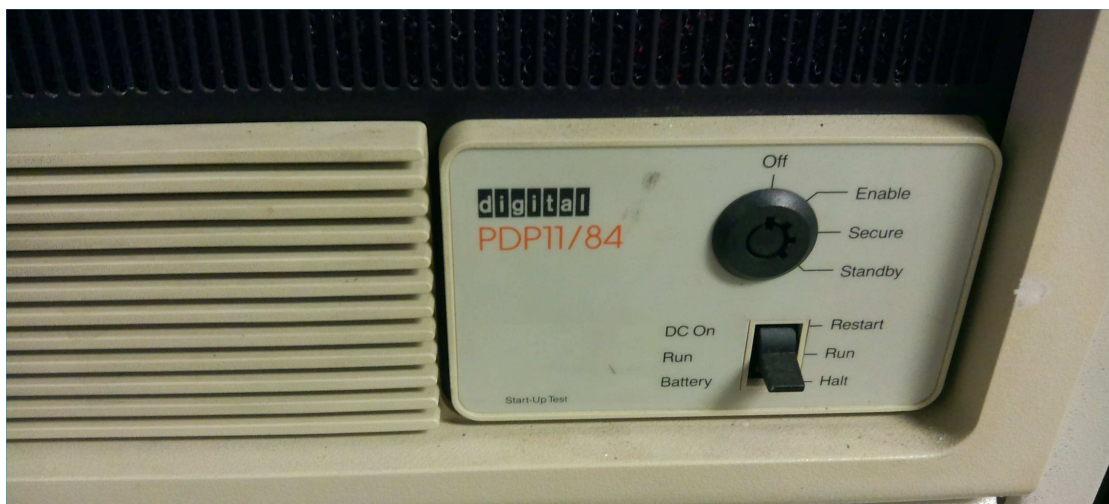


Figure 4: PDP 11/84 processor control panel closeup

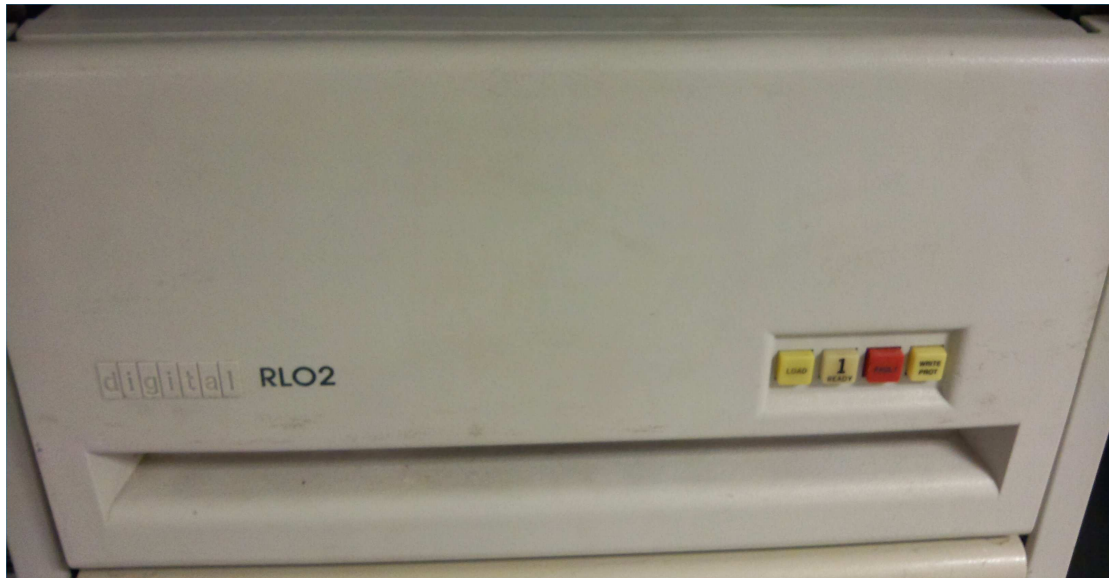


Figure 5: PDP 11/84 RL02 Disk Drive (2) front view



Figure 6: PDP 11/84 Disk Drive (2) control panel closeup



Figure 7: PDP 11/84 THR7000 front view



Figure 8: PDP 11/84 THR7000 left front closeup



Figure 9: PDP 11/84 THR7000 right front closeup