

AccessionIndex: TCD-SCSS-T.20191108.002

Accession Date: 8-Nov-2019

Accession By: Dr.Brian Coghlan and Tom Kearney

Object name: DEC PDP-11/70 replica front panel

Vintage: c.2019

Synopsis: PiDP-11/70, modern replica of the PDP-11/70 minicomputer front panel, with emulation by a Raspberry Pi.

Description:

This item is a modern replica of the PDP-11/70 minicomputer front panel built from a kit of components supplied by Oscar Vermeulen in Switzerland, see [1] , plus a Raspberry Pi 3 Model B+. The functions are faithfully emulated by a modified version of MIT's software simulator SimH [2] running on the Raspberry Pi mounted on the rear of the unit. The kit has proven to be popular, and as of 2022, continues to be available [3].

The PDP-11/70, introduced in 1975, is a variant of the PDP-11 [4][5][6] first introduced in 1970. The PDP-11/70 was an evolution of the PDP-11/45 architecture, expanded to allow 4MB of memory on a private memory bus, 2kB of cache memory, and much faster I/O devices connected via its *Massbus*. At the time it provided the highest throughput of any PDP-11 variant.

Many thanks to Brian Coghlan and Tom Kearney for donating this item, and especially to Tom Kearney, Chief Technician of the School of Computer Science and Statistics, for building this item from the kit of components and the Raspberry Pi.

Thanks also to Tom Kearney for videos of the completed item [7][8].

The homepage for this catalog is at: <https://www.scss.tcd.ie/SCSSTreasuresCatalog/>
Click 'Accession Index' (1st column listed) for related folder, or 'About' for further guidance.
Some of the items below may be more properly part of other categories of this catalog, but are listed here for convenience.

Accession Index	Object with Identification
TCD-SCSS-T.20191108.002	DEC PDP-11/70 replica front panel. PiDP-11/70, modern replica of the PDP-11/70 minicomputer front panel, with emulation by a Raspberry Pi. c.2019.
TCD-SCSS-T.20151118.003	DEC PDP 11/84. Late model of the popular PDP-11 series made by DEC, with two RL02 disk drives and THR7000 external drive unit. S/N: ??? c.1985.
TCD-SCSS-T.20150615.001	DEC PDP 11/34. Rackmounted minicomputer with octal keypad, with RL01 disk drive and LA36 DECwriter printer, from the first dedicated TCD Library computer system. S/N: ??? c.1976.
TCD-SCSS-T.20150615.002	DEC PDP 11/24. Rackmounted minicomputer, with associated cartridge disks and documentation. S/N: ??? c.1981.
TCD-SCSS-T.20211003.001	DEC PDP 11/34. Rackmountable minicomputer with octal keypad. S/N: ??? c.1976.

TCD-SCSS-T.20151118.004	DEC M792E Unibus Boot ROM Board. Early diode-array ROM for booting the popular PDP-11 series made by DEC. Date-stamped 18-Sep-1974. c.1974.
TCD-SCSS-T.20121208.036	DEC VAX 11/780 LA120 Console Processor. LSI-11 based PDP11 console processor from VAX mainframe used by Dept.Computer Science from 1979-1988 (LSI-11 uses same WD9000 chipset as WD90 Pascal Microengine, see elsewhere in collection). c.1978.

References:

1. Obsolescence Guaranteed, *PiDP-11/70: RECREATING THE PDP-11/70*, see: <https://obsolescence.wixsite.com/obsolescence/pidp-11>
Last browsed to on 8-Nov-2019.
2. simh.trailing-edge.com, *Computer Simulation and History*, see: <http://simh.trailing-edge.com/>
<https://en.wikipedia.org/wiki/SIMH>
Last browsed to on 8-Nov-2019.
3. Tindie, *PDP-11 replica kit: the PiDP-11*, see: <https://www.tindie.com/products/obso/pdp-11-replica-kit-the-pidp-11/>
Last browsed to on 25-Aug-2022.
4. Wikipedia, *PDP-11*, see: <https://en.wikipedia.org/wiki/PDP-11>
Last browsed to on 30-Aug-2017.
5. Computer History Wiki, *PDP-11 Variations on a Theme*, see: <http://s3data.computerhistory.org/brochures/dec.pdp-11.1977.102646131.pdf>
Last browsed to on 16-Dec-2021.
6. J. Noel Chiappa, *Digital Equipment Corporation PDP-11 Recognition*, see: http://ana-3.lcs.mit.edu/~jnc/tech/pdp11/PDP-11_Models.html
Last browsed to on 16-Oct-2021.
7. Tom Kearney, *PiDP-11 video 1*, see: <https://www.scss.tcd.ie/SCSSTreasuresCatalog/hardware/TCD-SCSS-T.20191108.002/TCD-SCSS-T.20191108.002-vid01.mp4>
Last browsed to on 26-Aug-2022.
8. Tom Kearney, *PiDP-11 video 2*, see: <https://www.scss.tcd.ie/SCSSTreasuresCatalog/hardware/TCD-SCSS-T.20191108.002/TCD-SCSS-T.20191108.002-vid02.mp4>
Last browsed to on 26-Aug-2022.

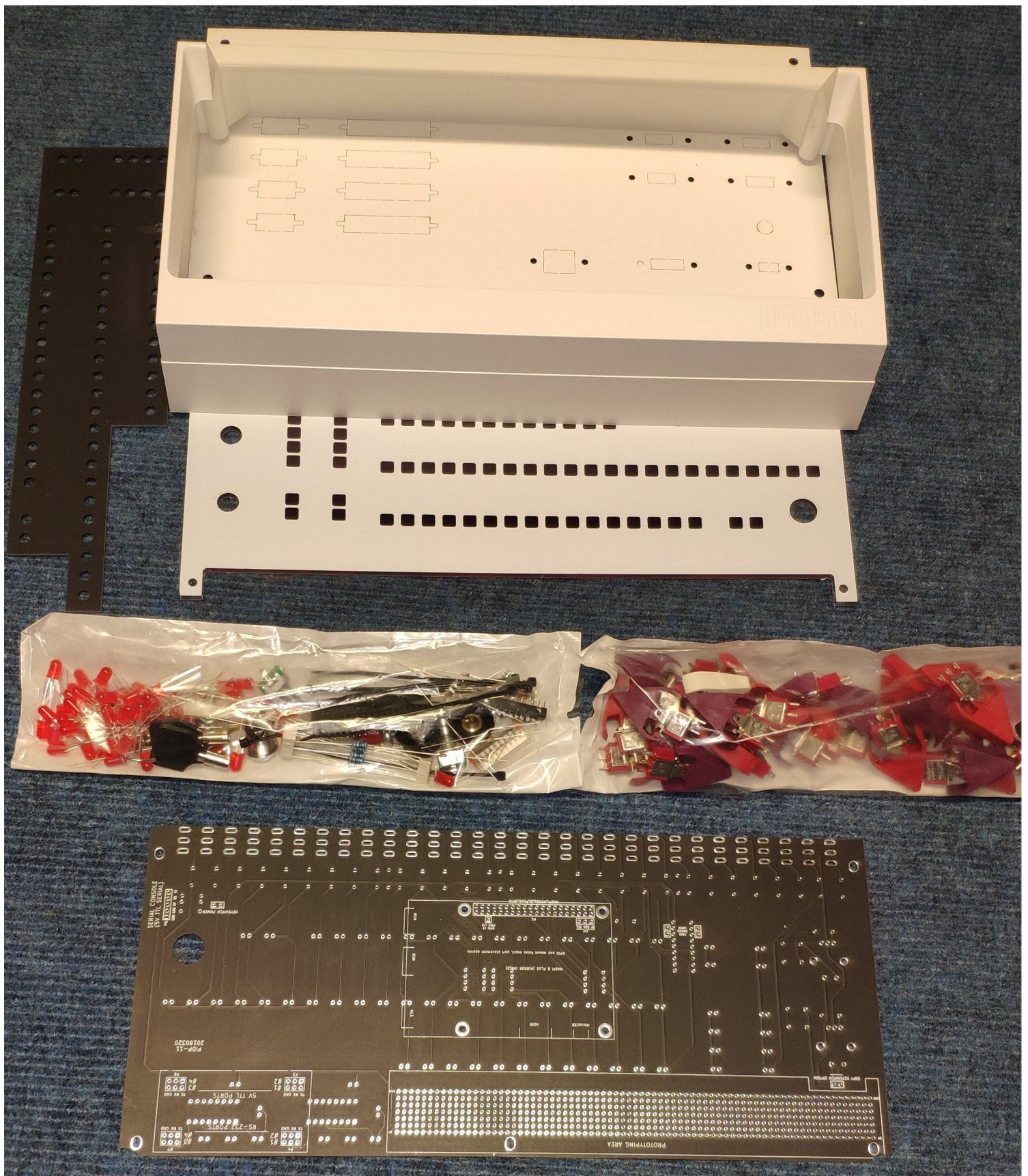


Figure 1: PiDP-11/70 kit of components

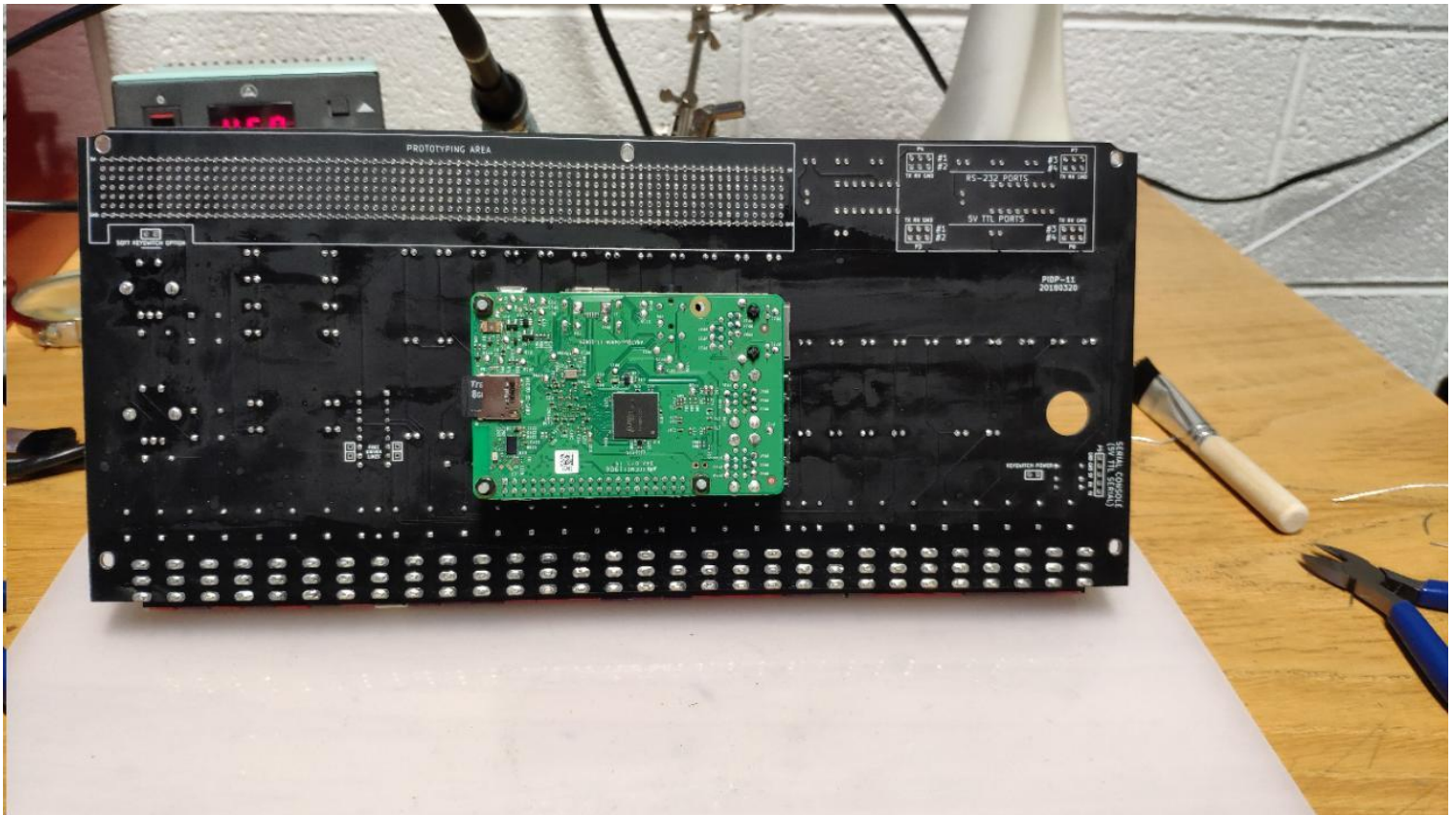


Figure 2: PiDP-11/70 rear view during assembly

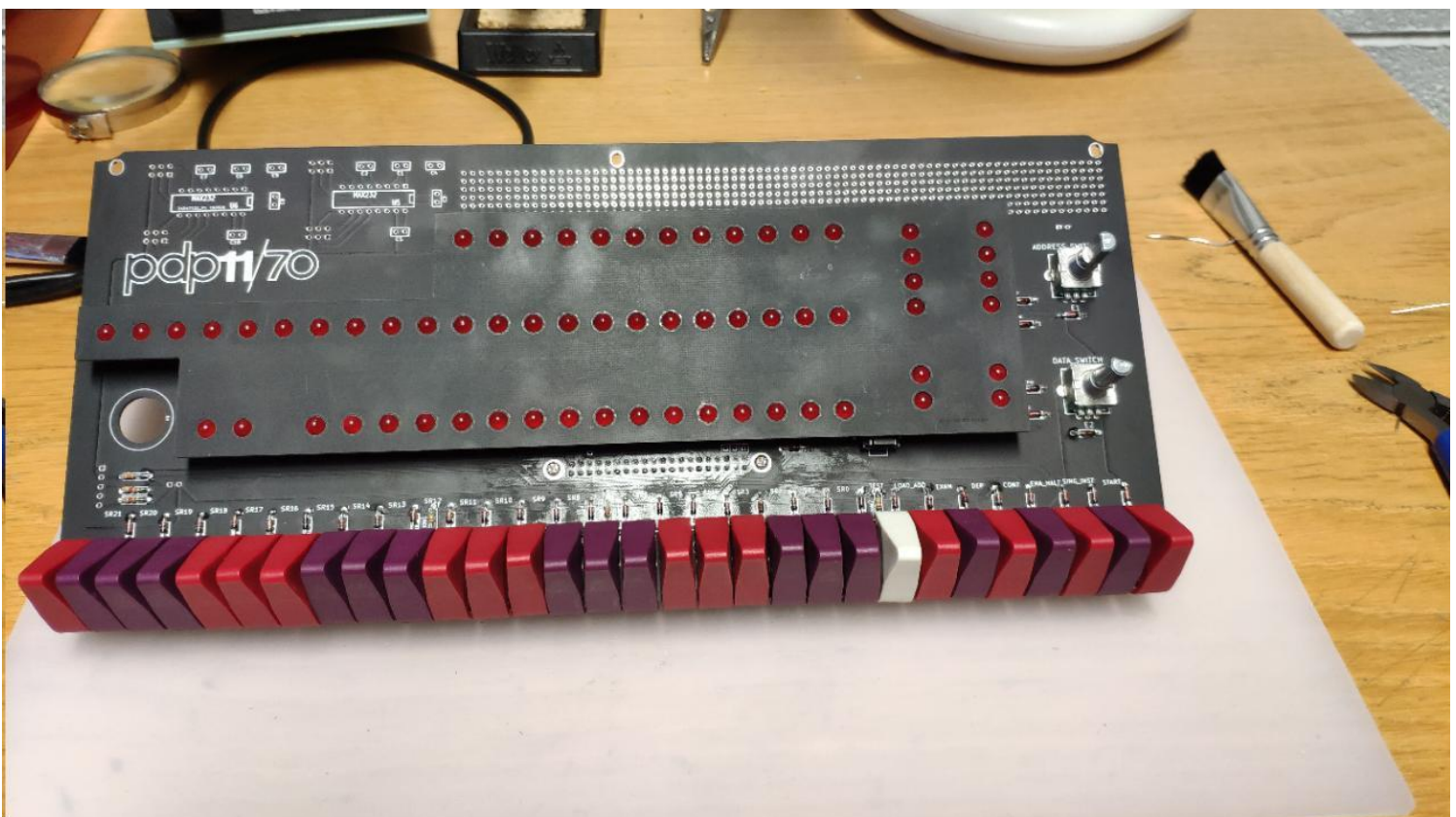


Figure 3: PiDP-11/70 front view during assembly



Figure 4: PiDP-11/70 front view, completed