PERQ LN3000
Graphics Workstation
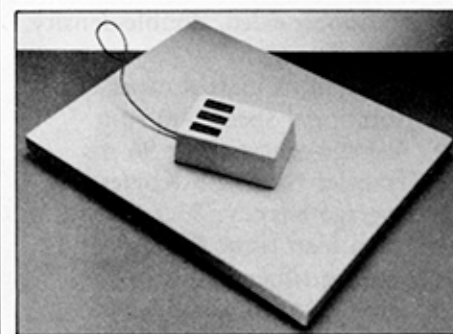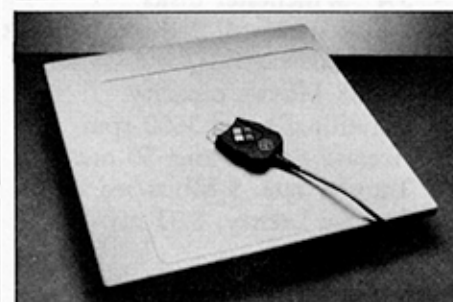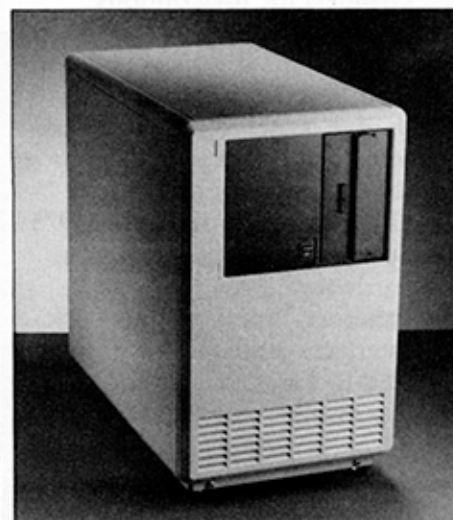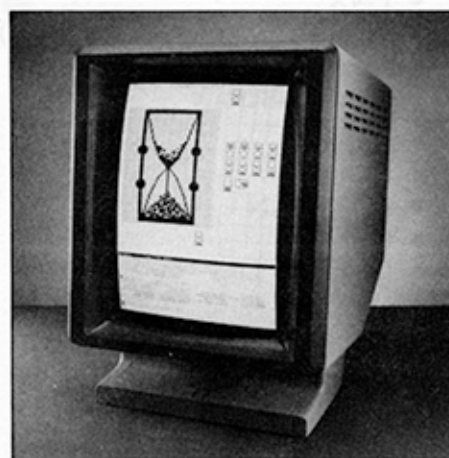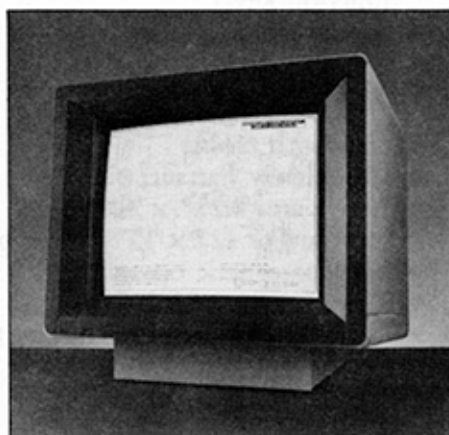
System

Integrated system comprising
- Base unit containing processor, memory, I/O controller and Winchester fixed disk
- High performance graphics display
- Graphics tablet with pointing device
- Alphanumeric keyboard

Designed to enhance the productivity of professional personnel, the PERQ™ LN3000 can easily be connected to LINQ™, PERQ Systems' local area network, or can operate as a self-contained workstation.

Processor

- Proprietary, bit-slice bipolar CPU with 170 ns. cycle time
- Microprogrammable to optimize speed and memory usage for programs written in specific higher order languages, including Pascal, C, FORTRAN 77, and Lisp to provide multiple instruction set architectures within a single workstation.
- 16K Writable Control Store
- Hardware RasterOp bitmap manipulation, enabling bit-addressed raster data to be moved at up to 32 Mbits/sec.
- 20 bit real address registers
- Hardware diagnostics implemented via microcode with results displayed automatically

Memory

- 1 to 2 Mbytes of MOS semi-conductor RAM with parity checking
- Memory cycles 64 bits every 680 ns.
- Approximately 200 Mbits/sec. aggregate memory bandwidth, shared equally between display and processor
- Integrated memory/display controller
- Screen bit-mapped directly from any area of memory

Displays

- Free standing, raster-scanned, bit-mapped CRT
- 60 Hz non-interlaced refresh rate
- 100 dots/inch resolution
- P4 white tube phosphor
- Hardware cursor user-definable up to 56 × 64 pixels
- Direct refresh from main memory
- Portrait screen 768 × 1024 pixels, 15" diagonal
- Landscape screen 1280 × 1024 pixels, 20" diagonal

Input/Output

- I/O controller (for high speed devices) multiplexes up to 6 simultaneous DMA channels at up to 10 Mbits/sec. each; two DMA channels for user options
- Dedicated microprocessor to control low speed devices
- Two RS232C interfaces: full duplex, synchronous/asynchronous serial data ports; speeds up to 9600 baud
- GPIB interface: IEEE 488-1975
- Speech and sound generation hardware
- Ethernet™ local area network interfaces available
- PLP-10 Laser Printer interface (optional)

Fixed disk units

- 5¼" Winchester disks
- 1 disk standard, 2nd integral disk optional
- 43-288 Mbytes capacity
- Rotational speed 3600 rpm
- Average access time: 30 ms.
- Transfer rate: 5 Mbits/sec.
- Average latency: 8.33 ms.

Floppy disk drive (optional)

- 8" double-sided, double-density, soft-sectored
- 1 Mbyte formatted capacity
- Rotational speed 360 rpm
- Average access time: 96 ms.
- Transfer rate: 62.5 Kbytes/sec.
- Average latency: 83.3 ms.
- Head load time: 50 ms.
- Settling time: 15 ms.
- Track to track seek: 3 ms.

Keyboard

- Detached, solid state keyboard stretches up to 8' from display
- 84 keys (including numeric keypad and four user-definable function keys)
- ASCII character code

Graphics tablets

Tablets with mouse
- Completely flat surface
- Active area 8.25" × 10.75" (portrait) or 12" × 10" (landscape)
- Electromagnetic operation
- Three button mouse
- Maximum distance from display 8'

Optional high resolution digitizer
- Active area 11" × 11"
- 0.005" resolution
- Choice of four button puck or stylus
- Maximum distance from base unit 8'

Operating systems

- Accent
- PNX
- PERQ Operating System (POS)

Optional software

- Pascal
- C
- FORTRAN
- Qnix™
- Common Lisp

Dimensions

- Base unit
  26" high × 15¼" wide × 30" deep
- Display
  portrait: 16½" high × 11½" wide × 14¾ deep
  landscape: 17¾" high × 19½" wide × 18" deep
- Keyboard
  1¾" high × 19" wide × 8½" deep
- Graphics tablets
  tablets: ½" high × 8¼" wide × 10¾" deep (portrait) ½" high × 12" wide × 10" deep (landscape)
  digitizer: 9⁄16" high × 15½" wide × 15½" deep

General information

Power requirements
- Source: 100/115/240 V
- Line frequency: 50/60 Hz
- 880 watts

Environment
- Operating temperature: 15° to 32° C.
- Relative humidity: 20% to 80%

Cabling
- All necessary cables for the minimum configuration are supplied.