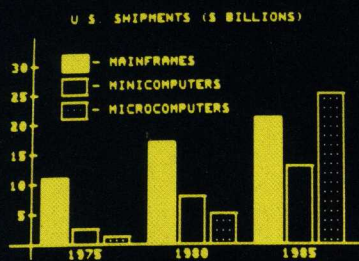


# A PICTURE'S WORTH:

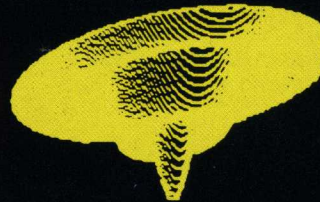


## \*\* GRAPHICS CAPABILITIES \*\*

- ◆ HIGH PERFORMANCE GRAPHICS
- ◆ TEKTRONIX 4010 COMPATIBILITY
- ◆ AUTOMATIC SCALING (1023x1023) WITH 250x512 RESOLUTION
- ◆ ALPHA MODE (35 LINES x 73 COLUMNS)
- ◆ OPTIONAL JOYSTICK
- ◆ CONNECTION TO LOW COST PRINTER FOR GRAPHICS HARDCOPY
- ◆ ASCII AND APL CHARACTER SETS
- ◆ BLOCK FILL, DOTTED/DASHED LINES

## \*\* DISPLAY TERMINAL CAPABILITIES \*\*

- ◆ APL WITH FULL, TRUE OVERSTRIKE
- ◆ ANSI STANDARD, DEC COMPATIBLE
- ◆ 80/132 COLUMNS, WINDOWING
- ◆ 4 PAGES OF MEMORY STANDARD (UP TO 8)
- ◆ 43 PROGRAMMABLE FUNCTIONS
- ◆ 128 CHARACTER U/L CASE ASCII
- ◆ HIGH RESOLUTION AMBER PHOSPHOR
- ◆ SETUP MODE, NVM, PRINTER OUTPUT



**and APL too.**

Whether used in video display mode or in its high-performance graphics mode, Human Designed Systems' concept GVT-APL has more to offer at its price for applications developers, interactive users, and terminal operators than any other APL terminal available today.

**HDS** human designed systems, inc.

# CONCEPT GVT-APL™ Graphic Display Terminal

A practical resolution for your APL business and analysis graphics requirements

The Human Designed Systems' concept GVT-APL Graphics Display Terminal. Combining high-performance graphics with the industry's standard for interactive APL display terminals. Providing features which extend beyond the capabilities of the Tektronix® 4013...and at a price that makes it the

industry's best APL graphics terminal buy. And, whether used in video display mode or in its high-performance graphics mode, offering more at its price for terminal operators, interactive users, and applications developers than any other APL terminal available today.

## In graphics mode...

The *concept* GVT-APL provides software compatibility with the Tektronix 4013 with a full/true overstrike APL character set and its standard vector (780 x 1024), alpha (35 lines by 73 columns) and GIN (graphical input) modes. It provides many capabilities beyond those of the 4013 — including full upper/lower case ASCII character set, vector and character erasure or write-over, block fill, memory dump and load, dotted and dashed lines, hardcopy production via attachment to a low-cost printer, and graphics memory dim. Graphics memory can be accessed by either of the terminal's two standard bidirectional communications interfaces.

These capabilities make the *concept* GVT-APL ideally suited for a wide range of graphics applications:

- Quick and simple data analysis and presentation of low-resolution business graphics (e.g. bar and pie charts, and curve fitting)
- Low-cost and fast method to preview and print high-resolution complex graphic presentations
- Practical, low-cost solution for low-resolution CAD/CAM applications

## ■ Concept GVT-APL Four-Page APL-ASCII

## ■ Concept GVT Four-Page ASCII

### GRAPHICS MODE FUNCTIONAL CAPABILITIES

#### Vector Mode

Vector draw or block fill  
Resolution: 250 x 512 scaled from  
780 x 1024.

Data levels: black, white, opposite  
(write-over)

Line types: normal, dotted, dot-dashed,  
short-dashed, long dashed.

#### Alpha Mode

Character sets: 96-character APL with  
full/true overstrike and 96-character  
upper/lower case ASCII selectable.  
Selection can be stored in non-volatile  
memory (required for compatibility).

Screen format: 35 lines by 73 columns  
Character formation: 6 x 6 within a 7 x 7  
dot matrix

Auto wraparound to second column on  
page full

Cursor controls: up, down, left, right

#### GIN Mode (Graphical Input)

Use of cursor controls (up, down, left,  
right) or optional joystick

#### Additional Capabilities

Memory dump/load  
Print graphics memory  
Transmit status  
Dim graphics memory  
Ability to power up in graphics mode  
(required for true 4013 software  
compatibility)

### INTERACTIVE DISPLAY MODE FUNCTIONAL CAPABILITIES

#### Same as concept AVT-APL

See product specification DN 2301-8211-3

### PHYSICAL CHARACTERISTICS

#### General

Dimensions: Monitor — 15¼" W x 14½" H x  
16½" D (38.7 cm x 36.8 cm x 41.9 cm).

Keyboard — 17½" W x 3" H x

8¾" D (44.4 cm x 7.6 cm x 22.2 cm).

Power: 115 VAC; 60 Hz  
optional: 220/240 VAC, 50 Hz

Weight: 38 lbs. (17.27 kg)

#### Memory

Size: Graphics — one page.

Interactive display — four pages (96  
80-column lines) standard; (eight pages  
optional: 192 80-column lines)

Graphics memory and 24 lines of  
interactive display memory are displayed  
simultaneously at all times

Either memory may be set to be  
non-visible.

#### Display

12-inch diagonal high-quality direct-etch  
amber (ALA) phosphor. No-cost options  
include direct-etch white (P4) or green  
(P31)

## In interactive display mode...

The *concept* GVT-APL offers all of the capabilities of the industry's APL terminal leader — the *concept* AVT™-APL. In addition to full/true overstrike APL, these capabilities include ANSI X3.64-1979 standard conformance, DEC® software compatibility, four pages of memory, 80/132 columns, windows, easy-to-use setup mode, 43 fully programmable functions, multiple character sets, non-volatile memory for permanent terminal reconfiguration, text editing and data entry applications functionality, two bidirectional communications interfaces for simultaneous connection to multiple computers, block mode and much more — to provide the perfect tool for all your APL terminal needs. Please see the *concept* AVT-APL product specification (DN 2301-8211-3) for a complete description of these capabilities.

As ASCII-only version (*concept* GVT) is offered, which provides software compatibility with the Tektronix 4010.

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DEC is a registered trademark of Digital Equipment Corporation.  
Tektronix is a registered trademark of Tektronix, Inc.

#### Keyboard

Detached via retractile coiled cord  
102 keys with numeric, cursor control and  
function pads standard. Forty-three  
programmable functions.

#### Communications

Code: ASCII

Type: Two bidirectional RS232C interfaces  
(20 mA current loop optional), 50-9600  
baud (15 rates)

Parity: even, odd, none, mark, space

Duplex: half/full

Stop bits: one or two

Controls: XON/XOFF and EIA CTS/RTS  
handshake

#### Graphics Options

Joystick: alternate  
GIN mode input



## HDS

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