

CONCEPT AVT-APL Display Terminal

The *concept* AVT-APL — the industry's first 132-column APL display conforming to the ANSI X3.64-1979 standard with DEC/VT100 software compatibility, and an extensive series of display, editing and communications features...and at a surprisingly low price.

The *concept* AVT-APL terminal is a unique "package of performance" that includes • full/true overstrike APL • upper/lower case ASCII • switchable 80/132 columns that retain the maximum memory contents • four pages of scrollable memory for easy refer-back (eight pages optional) • high-resolution amber phosphor monitor with etched faceplate for glare reduction (other colors available at no charge) • high-quality detached keyboard with retractile cord • 43 programmable function keys which store terminal commands and/or commonly used character sequences (e.g.)SAVE ,)FNS ,)VARS) • setup mode for easy terminal reconfiguration, and nonvolatile memory to permanently store that reconfiguration • optional printer port and flexible print commands to print any portion of display memory or "slave" print all newly displayed data • shared printer interface allows multiple *concept* terminals to share single hardcopy.

Unique capabilities such as windows (rectangular areas treated as a display within a display), multiple character sets (512 total characters), and multiple computer capabilities (for interaction with up to three computers or the transfer of data between them) allow the development of applications not possible on other terminals. The *concept* AVT-APL: a full complement of display, editing, and communications features to optimize productivity for the terminal operator, interactive user, and application developer.

- APL with full, true overstrike
- DEC software compatibility
- Conforms to ANSI X3.64-1979
- 128-character upper/lower case ASCII
- Switchable 80/132-column format
- Four full pages of display memory standard; eight pages optional
- Setup mode
- Non-volatile memory
- Windowing
- Printer output
- Graphics
- Wide range of applications capabilities
- Attractive housing suitable for front office applications
- Low price

HDS
human designed
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Human Designed Systems. We're redefining terminal performance.

CONCEPT AVT-APL Display Terminal

- Concept AVT-APL Four Page APL/ASCII
- Concept AVT Four-Page ASCII

GENERAL

Conforms to ANSI X3.64-1979, software compatibility with DEC VT100/VT52 terminals.

DISPLAY

Physical Dimensions: 15 1/4" W x 14 1/2" H x 16 1/2" D (38.7 cm x 36.8 cm x 41.9 cm).

Size/Type: 12" diagonal, 9" x 6" display area, high-quality direct-etch amber phosphor, 60Hz. CRT Saver reduces brightness when no characters entered or received for period of time.

Format: 25 lines by 80 or 132 columns, within a 96 x 80 or 56 x 132 memory size (four pages). 25th line displays status information only.

Character Generation: 7 x 11 dot matrix in 10 x 12 dot array (80 columns), 5 x 9 dot matrix in 7 x 10 dot array (132 columns).

Design Features: Tilt adjustment, recessed, hooded screen.

Character Attributes: APL with full true overstrike, ASCII with 128 U/L case characters with lower case descenders, blink*, reverse video, non-destructive underline, half bright*, protection*, non-display (security)*. Block attribute setting for fast generation of attributes for all characters in an area. Block character generation for quickfill of a display area. Standard characters include VT100 graphics, forms, line drawing, curve approximation, mathematical symbols, subscript/superscript characters, and control code display characters. *attributes available for all APL characters except overstruck operators.

Screen Attributes: White on black, or reverse, and normal/half-bright protected areas.

Windows: Rectangular areas of display memory of any size and in any location treated as a display within a display. A scrolling region is included for VT100 compatibility; is defined to be a specified group of lines within current window.

Setup Mode: Simple and convenient reconfiguration of many terminal characteristics.

Status Lines: Several lines showing the complete terminal configuration, and either displayed on the 25th line or transmitted in whole or in part to the host computer.

Line Drawing: Basic graphic characters allow easy form and graph generation. Horizontal/vertical line-drawing commands.

Cursor: Flashing underline or flashing reverse video block selectable. Controls — left, right, up, down, home. Absolute address reading and

writing. Save and restore cursor and attributes. Wraparound/no wraparound at end of line.

Tab: Forward/backward typewriter, form, auto.

KEYBOARD

Physical Dimensions: 17 1/2" W x 3" H x 8 3/4" D (44.4 cm x 7.6 cm x 22.2 cm).

Size/Type: 102 keys with typewriter-style layout — numeric, cursor control, function pads (43 programmable functions standard).

Design Features: Detached with retractile coiled cord, matte finish, click positive touch, N-key rollover, autorepeat on all keys.

Functions: Keyboard lock, bell enable/disable.

Programmable Function Keys: Character sequences generated by all function keys are user modifiable. Function keys can execute terminal commands and/or transmit characters. Memory is allocatable between display pages and function keys. Function keys are executable from communication lines.

Cursor Pad Control: Individual keys can be set to execute commands, transmit character sequences, execute and transmit, or be disabled. Application-mode for DEC compatibility.

Numeric Pad Control: Numeric mode, application mode (DEC compatibility) or programmable (as function keys).

COMMUNICATIONS

General: Asynchronous 9, 10 or 11 bit code, seven data bits, one or two stop bits. EIA RS232C, 15 baud rates (50-9600), even/odd/mark/space/no parity, parity checking of input, half/full duplex.

Buffer Overflow Control: Prevents buffer overflow by sending XOFF/XON characters.

CTS/RTS Protocol Control: Allows use of RS232 control lines for the control of terminal output.

STANDARD CONCEPT CAPABILITIES

General: All terminal commands are executable from the keyboard and communications line(s).

Self Test: RAM, ROM, NVM, and communications.

Text Editing: Insert character in line/window mode, delete character in line/window, erase in line/window, insert/delete line in window.

Form Editing: Insert/delete character in field, erase field/all unprotected fields/window.

Non-Volatile Memory: Permanent storage of terminal configuration. The NVM latent expression allows execution of a set of terminal commands upon power up or reset. Answerback message can be stored in NVM.

Message Characters: Special terminal control characters are modifiable (including the "escape" command character.)

Multiple Computers: Simple commands for directing data between communications lines and display. Ability to treat any line as the main line with regard to keyboard input.

Multiple Attribute/Window Lists: Allow simple/fast switching between alternate terminal configurations and display areas. Each communication line and keyboard can use its own window and/or attribute list.

Block Mode: When in block mode, no character transmission until transmit performed. Transmit field, any portion of line or window — unprotected or all.

Transparent Mode: Execute control codes or display their character symbols.

OPTIONS

Additional Memory: Eight pages (192 lines x 80 columns or 112 lines x 132 columns).

Video: Direct-etch white (P4), or green (P31).

Shared Printer Interface: Allows multiple CRTs to share one printer (or other peripheral) for hardcopy of the display or terminal I/O.

Multiple Character Sets: Up to four character sets selectable on an individual character basis (512 total characters), including extended graphics, foreign languages, and specials.

Auxiliary Communications: Two additional communications lines for multiple computer connection or local peripherals. Commands to print any portion of display or "slave" print all newly displayed data.

Communications: 20 mA.

Video Output: Class/demo presentations.

Foreign Version: 220/240 VAC, 50 Hz power.

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