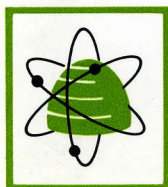


Beehive proves
modularity obsoletes obsolescence
with the
EXPANDABLE ONE

CRT terminal users are continually finding that the demand for expanding functions has made their terminal obsolete. Beehive, and only Beehive Models I, II, and III, with their unitized construction, enable the user to expand their terminal capabilities, change models, features, or functions in the field all in less than 2 minutes by just adding logic cards.

If you are just starting, start with Beehive . . . and maintain terminal capability! Avoid a future trade-in loss. Buy the one that can grow with your demands. Buy Beehive!



**BEEHIVE
TERMINALS**

A division of Beehive Medical Electronics, Inc.

MODEL I, MODEL II, MODEL III



BEEHIVE TERMINAL MODEL I

Video Teleprinter

The Model I provides the minimum functional capabilities required in an alphanumeric CRT display terminal. The unit is plug to plug compatible with the Teletype Models 33 and 35 teleprinters when the RS 232C type interface is used.

STANDARD FEATURES

- Standard 53 key teleprinter style keyboard
- 800 character storage and display (20 lines of 40 characters each)
- Parity generation and detection — Selectable
- Composite video output
- Four way control of non-destructive cursor
- Cursor home and screen clear keys
- Selectable plus variable control baud rates up to 2400 Baud
- Local, Half and Full duplex modes of operation
- EIA RS 232C Communications Interface
- 64 Character USACII Code — Lower case displayed as upper case



OPTIONS FOR MODELS I, II, and III

A: 80 character line — Doubles the storage and display capacity

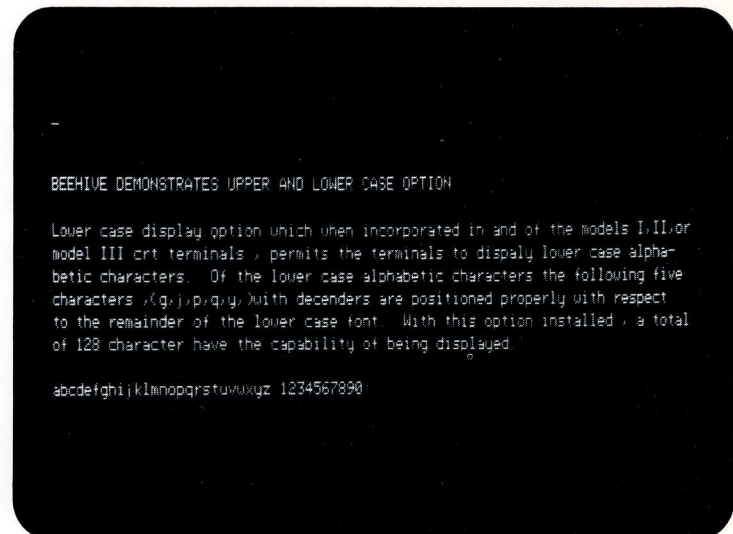
B: Parallel I/O — Replaces the basic serial I/O interface with an 8 bit parallel, character serial I/O interface for direct connection to a computer. Control is on a demand response basis in both directions.

D: Export Model option, which when incorporated in any of the Model I, II, or III CRT Terminals, enables the terminal to be operated from a 50 Hz, 200 to 260 volt power source.

This is not a field installable option and must be specified at the time of order.

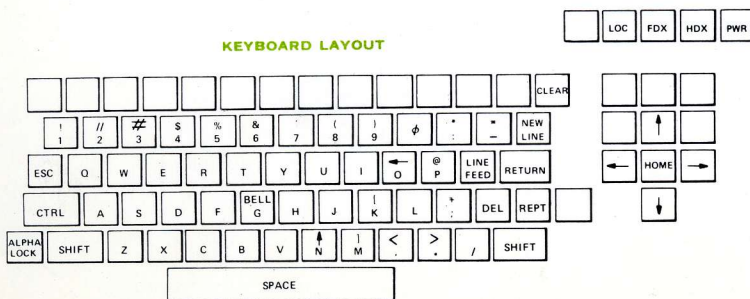
E: Lower Case Display, which when incorporated in any of the Model I-A, II-A, or III-A CRT Terminals, permits the terminal to display lower case alphabetic characters. Of the lower case alphabetic characters, the following five characters, i.e. (g, j, p, q, y), with descenders are positioned properly with the respect to the remainder of the lower case font. With this option installed, a total of 128 characters have the capability of being displayed.

Note: Option A, 80 character line, is a prerequisite for this option.



ACTUAL PHOTO OF LOWER CASE OPTION

KEYBOARD LAYOUT



MODEL CHANGES IN THE FIELD

It is possible to upgrade
Model I to Model II or Model III in the field!





BEEHIVE TERMINAL MODEL II

Buffered Video Teleprinter

The Model II provides the features of a Model I plus the additional features to enable use of the terminal in Batch oriented type applications.

MODEL II ADDITIONAL FEATURES

TAB: TAB SET, TAB CLEAR, and TAB. Permits inserting a tab "flag" at any character position on a line as indicated by the cursor position. The tab position remains available for character display.

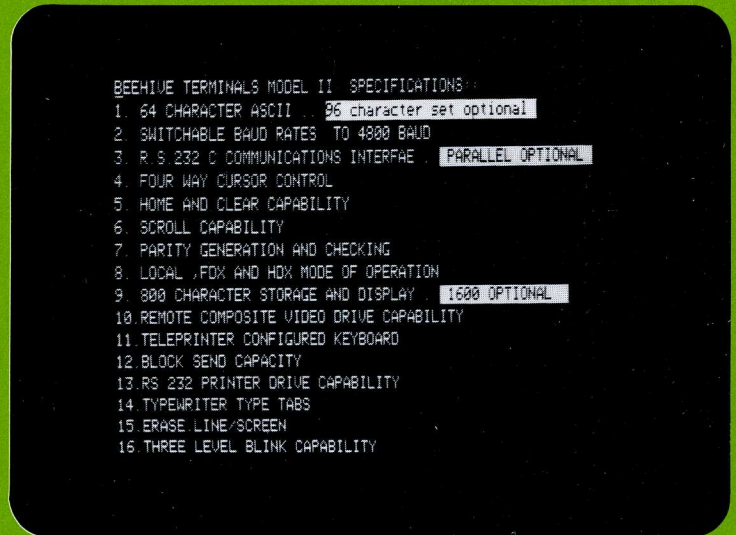
ERASE: Provides two Erase keys:
a. Erase to end of line (EOL). Erases all characters from cursor position to end of line.
b. Erase to end of screen (EOS). Erases all characters from the cursor position to the end of the screen.

SEND: Provides the ability to transmit a complete message or page of data for Batch applications. Depressing the End of Message key (EOM) causes the EOM symbol to be displayed at the cursor position and the cursor to return to the Home position. Depressing the SEND key or by a computer control will cause the data contained within the cursor home position and EOM symbol to be transmitted. The EOM character is also transmitted. The mode switch must be in the HDX position.

THREE LEVEL PRIORITY BLINK: incorporated in all Model II or III CRT Terminals, permits the display of a character, word or message to be either blinked (Level 1), reversed video (Level 2), or blinking reversed video (Level 3). It is possible to have all levels of the priority blink option active on an individual message. Activation of this option is available either from the keyboard or by the means of program control.

REMOTE PRINTER DRIVE: incorporated in all the Model II or III CRT Terminals, permits each terminal to be interfaced to any off-line Serial ASCII RS-232B printing device. The point of connection shall be through a connector at the rear connector panel. When the terminal is in the LOCAL mode and the SEND/PRINT Key is depressed, all of the displayed information from the cursor position to the EOM symbol shall be transmitted via the Print Connector to the remote (customer furnished) printing device. Computer has control of this feature, i.e. computer controlled print command.

A separate printer oscillator provides transmission rates up to a maximum of 4800 baud. The desired rate must be specified at time of order. An adjustment of plus or minus 20% of specified rate is available for customer fine tune.



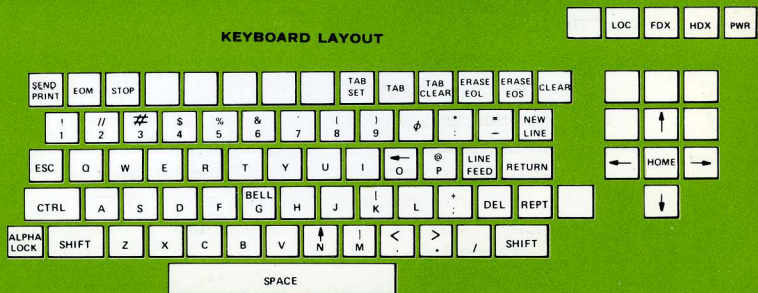
ACTUAL SCREEN PHOTO

BEEHIVE TERMINALS MODEL II SPECIFICATIONS:

- 64 CHARACTER ASCII 96 character set optional
- SWITCHABLE BAUD RATES TO 4800 BAUD
- R.S. 232 C COMMUNICATIONS INTERFAE PARALLEL OPTIONAL
- FOUR WAY CURSOR CONTROL
- HOME AND CLEAR CAPABILITY
- SCROLL CAPABILITY
- PARITY GENERATION AND CHECKING
- LOCAL, FDX AND HDX MODE OF OPERATION
- 800 CHARACTER STORAGE AND DISPLAY 1600 OPTIONAL
- REMOTE COMPOSITE VIDEO DRIVE CAPABILITY
- TELEPRINTER CONFIGURED KEYBOARD
- BLOCK SEND CAPABILITY
- RS 232 PRINTER DRIVE CAPABILITY
- TYPEWRITER TYPE TABS
- ERASE LINE/SCREEN
- THREE LEVEL BLINK CAPABILITY

MODEL CHANGES IN THE FIELD

It is possible to upgrade Model II or Model I to Model III in the field!





BEEHIVE TERMINAL MODEL III

Text Editing Buffered Video Teleprinter

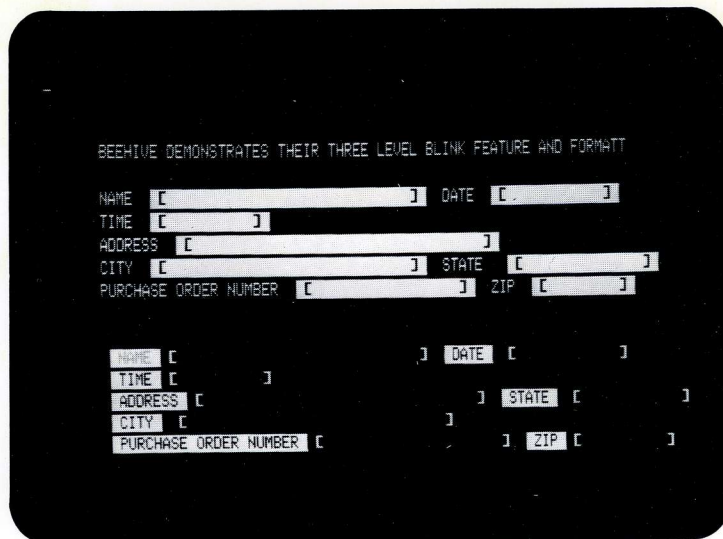
The Model III provides all the features and functional capabilities of the Model I and II plus the following features to enable the use of the terminal in a sophisticated time share environment where editing of formatted data is a necessity.

MODEL III ADDITIONAL FEATURES

FORMAT: Provides the ability for either the keyboard or Program control to display a fixed format with the appropriate blanks, which are to be filled in by the operator.

Variable data will be entered only between open ([]) and close (]) brackets. With the format enabled, only the variable data will be transmitted.

EDIT: This feature provides the operator with the ability to manipulate the displayed data with minimum effort. There are five keys associated with this feature, Insert Character, Delete Character, Insert Line, Delete Line and Page Edit.



ACTUAL PHOTO DEMONSTRATION OF 3 LEVEL BLINK FORMAT

ACCESSORIES AVAILABLE ON ALL MODELS

- TTY Current Loop Adapter
- Stand Alone Cassette
- Acoustic Coupler Cable
- Nova Computer Serial I/O Cable
- Hewlett Packard 2114-2116 Computer Serial I/O Cable

OPTIONS FOR MODELS I, II, and III

- A:** 80 character line — Doubles the storage and display capacity
- B:** Parallel I/O — Replaces the basic serial I/O interface with an 8 bit parallel, character serial I/O interface for direct connection to a computer. Control is on a demand response basis in both directions.
- D:** Export Model option, which when incorporated in any of the Model I, II, or III CRT Terminals, enables the terminal to be operated from a 50 Hz, 200 to 260 volt power source.

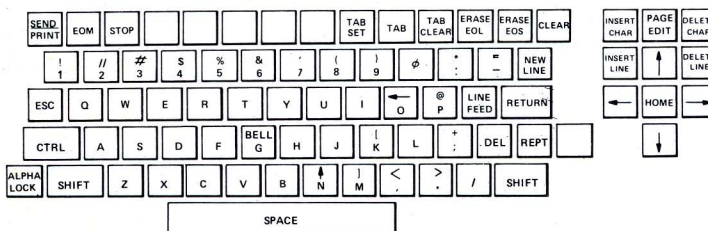
This is not a field installable option and must be specified at the time of order.

- E:** Lower Case Display, which when incorporated in any of the Model I-A, II-A, or III-A CRT Terminals, permits the terminal to display lower case alphabetic characters. Of the lower case alphabetic characters, the following five characters, i.e. (g, j, p, q, y), with descenders are positioned properly with the respect to the remainder of the lower case font. With this option installed, a total of 128 characters have the capability of being displayed.

Note: Option A, 80 character line, is a prerequisite for this option.



KEYBOARD LAYOUT



BEEHIVE TERMINALS

A division of Beehive Medical Electronics, Inc.

1473 South 6th West • Salt Lake City, Utah 84104
(801) 487-0741 TWX 910-925-5271



| | |
|---------------------------------|---|
| DISPLAY FORMAT | 20 lines x 40 characters |
| DISPLAY SIZE | Approximately 6" high x 9" wide |
| CRT SIZE | 12" Rectangular |
| CHARACTER SIZE | 0.1" wide x 0.2" high (approximate) |
| CHARACTER TYPE | 5 x 7 dot matrix |
| CHARACTER SET | 64 Character (USASCII) |
| CHARACTER GENERATION | MOS Read Only Memory |
| REFRESH RATE | 60 Hz |
| REFRESH MEMORY | MOS dynamic shift register |
| PAGE OVERFLOW | Upward Scroll. Top line is lost |
| PARITY | Parity (VRC) is checked on all received and transmitted characters. Selectable Odd, Even or no parity. If no parity is desired, the parity bit may be strapped high or low. A parity error is indicated by a "?" in the character position containing the error. |
| CURSOR CONTROL | 5 way (left, right, up, down and home) |
| CURSOR TYPE | Non-destructive, underscore |
| COMMUNICATIONS INTERFACE | EIA RS232B. Fully compatible with Western Electric Data Sets 103, 202, and 201 and equivalent commercial modems. Will accept external clocking for synchronous operation. |
| TRANSMISSION RATE | Serial — up to 2400 BPS asynchronous or synchronous, 7 level, 11 unit code (2 stop bits) at 110 BPS, 10 unit code (1 stop bit) at all higher speeds. Data rate will be switch selectable on the back panel. Switch shall have five positions marked: 110, 150, 300, Variable High and Variable Low The variable positions shall be controlled by screw driver adjust control and offer continuous range between 300/900 and 900 - 2400 BPS. Fixed range have fine adjust. |
| TRANSMISSION CODE | USACII |
| OPERATOR CONTROLS | Front panel: Power on/off, Contrast, brightness, FDX, HDX, Local Back panel: Baud rate |
| INPUT POWER | 117V AC $\pm 10\%$, 50/60 Hz — Front panel lighted (220/240V. optional) on/off switch |
| OVERLOAD PROTECTION | Power supply and CRT individually fused. Spare fuse clip provided |
| OPERATING TEMPERATURE | +10°C to +40°C Convection cooling |
| TERMINAL SIZE | 14" high x 16" wide x 21" deep |
| TERMINAL EXTERIOR FINISH | ARMORHIDE Textured Vinyl |
| TERMINAL COLORS | Light Blue — optional Off-White — standard |
| I/O CONNECTORS | BNC — Video Output Standard 25 pin RS232B connector — standard Parallel I/O — optional Printer/Cassette I/O |
| KEYBOARD | Integral with the terminal. Layout for each Model shall be as indicated. |
| VIDEO OUTPUT | Provides composite video signal capable of driving up to 500' of coaxial cable when terminated in 75 OHM. The signal is capable of driving most standard TV monitors or customer provided distribution amplifier for multiple monitor installations. Standard TV receivers may be driven if modified to delete the internal synchronizing and video/audio signals. |
| DUAL INTENSITY DISPLAY | When in the local mode all control functions except New Line (NL) are stored in memory and displayed as lightly detensified characters and they shall all be non-active except NEW LINE which is a lightly detensified "H" active, i.e., performs function of CR and LR. When the terminal is in an on-line mode, all control characters are active and not displayed. |

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