Alphanumeric Display Terminals—Basic Characteristics

A review of specific characteristics of alphanumeric display terminals.

Comparison charts on 277 commercially available models from 87 vendors are included.

For a general discussion of display terminals and buying guidance, including comprehensive user ratings, see Report C09-025-101 behind the Management/System Guides tab in Volume 1.

The accompanying comparison charts summarize the characteristics of 277 commercially available alphanumeric display terminals from 87 vendors. Nearly all of the information was supplied by the manufacturers during the months of February and March 1979. Their cooperation is acknowledged and greatly appreciated.

Datapro sent repeated requests for information to 106 companies known or believed to be in the display terminal business. The 87 usable responses summarized in our charts provide a comprehensive picture of the commercial display terminals that are currently available in the United States and Canada. *The absence of any specific company from our charts means that the company either failed to respond to our repeated information requests or was unknown to us.*

The chart entries and their significance are explained in the following paragraphs.

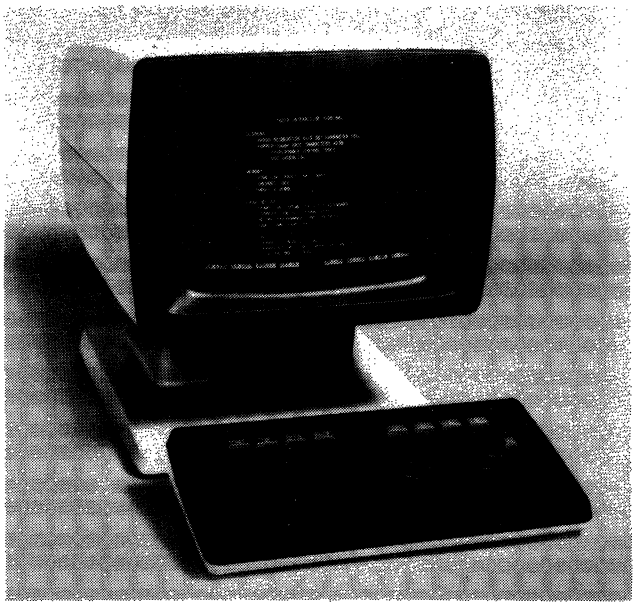
Terminal Description

Display terminals are available in one of two basic terminal configurations: *stand-alone* and *cluster*. Stand-alone units are typically those that contain all components that support the operation of the terminal including display, keyboard, interface, and power supply within a single cabinet. Auxiliary units such as printers, cassette tape drives, etc., are usually external devices. Sometimes a stand-alone unit includes separate cabinets for terminal control and keyboard/display sections, and it may even include one or two separate displays. A cluster configuration typically includes a terminal control unit and a number of individual cable-connected keyboard/display units, which can often be located several thousand feet from the controller. In some cases, the vendor provides a multiplexer that accommodates a cluster of stand-alone terminals. A *local cluster* arrangement refers to a terminal that can be attached directly to a computer I/O channel and can operate as an on-line peripheral subsystem. A *remote cluster* arrangement refers to a terminal that is connected to the host computer via a communications facility. The size of a cluster arrangement is defined by the *maximum number of displays per controller.*

Terminals that are designed to be hand-held, such as the Taumark Tera or the Termiflex HT Series, or to be hand-carried, like the Microterm ACT-1A (9 lbs.) or Terminal Data 675 (19 lbs.) are noted in the entry *portable case.*

Some terminals are designed as direct replacements for other terminals. In the alphanumeric display terminal market, replacement terminals fall into four principal categories: those designed to replace an IBM 3270 and/or 3275, those designed to replace an IBM 2260 and/or 2265, those designed to replace a Teletype Model 33 and 35 teleprinter, and those designed to replace a Teletype Model 40 display terminal. Some vendors provide compatibility with *other* terminals such as those produced by Burroughs, Digital Equipment, Honeywell, and Univac. For example, no fewer than six vendors—Ann Arbor, Infoton, Datamedia, Dataview, Teleray, and Ontel—are currently marketing units compatible with Digital Equipment's popular VT-52 terminal, and several more have plans to offer VT-52 compatibility in the near future.

Either of two types of compatibility may be offered: transmission compatibility or "plug-to-plug" compatibility. Transmission compatibility requirements include identical protocol, code and unit code structure, timing, ▷



Introduced in October 1978, the Hewlett-Packard 2621A CRT terminal typifies the newest "smart" terminals. Its clean-cut, attractive cabinet is suitable even for the most stylish office environments, and its detachable keyboard is designed for operator convenience. Standard features include two full pages of continuous scrolling memory, full editing functions, and eight program function keys. Its sister unit, the HP 2621P, has an 80-column serial printer integrated into the cabinet. Basic prices for the 2621A and 2621P are $1,450 and $2,250, respectively.

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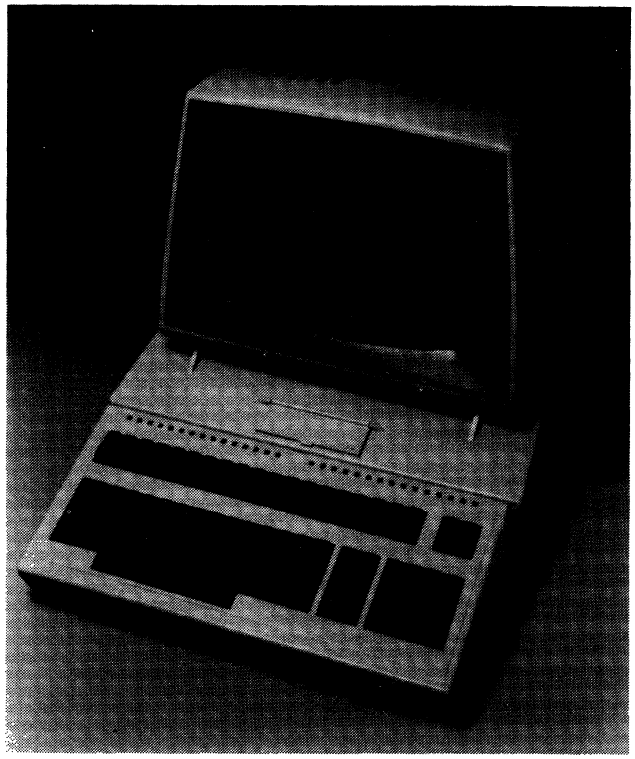
asynchronous or synchronous operation, and transmission speed. Some vendors even provide identical cables, which is a cost-effective consideration in a local cluster environment. Most vendors with transmission-compatible units offer additional features and functions that the original vendor's equipment does not have, implemented via minor changes in host software. Units with true plug-to-plug compatibility not only have identical transmission parameters, but also identical features and functions; no alteration to host software is necessary, but no enhancements beyond the original vendor's equipment are available. For example, although numerous vendors offer IBM 3270 compatibility, only a few, including Courier, Memorex, Telex, Trivex, and Wordstream (Genesis One), make a true plug-for-plug replacement for the 3277 display station.

Programmability for processor-controlled terminals can be implemented via a combination of different techniques. The entry *user-programmable* defines the capability for the terminal to operate under the direction of a user-created application program stored within the terminal. This requires the provision of an assembly-like language at the very least. Programmability via user-defined parameters or user-defined firmware refers to the use of fixed programs, such as a data entry program where the user defines field length and type, duplication, skipping, etc.

The entry *self diagnostics* denotes the terminal's capability to identify failures via self-generated test procedures. Failures are typically indicated by displayed text patterns, by indicator lamps, or by messages appearing on the 25th line of the display screen. Self-diagnostics are typically performed while the terminal is in the off-line mode.

Display Parameters

Printed information is generally arranged according to an orderly format consisting of a maximum number of printed lines per page and characters per line. This orderly arrangement is also used to characterize the arrangement of data display on the face of a CRT screen or other display device. The electronic circuitry that produces the display image is designed to a specified set of parameters that define the capacity (i.e., the maximum number of display positions) and the display format (i.e., the maximum number of displayable lines and displayable characters per line). The most common display capacity is 1920 characters arranged in 24 lines of 80 characters. A few vendors, including Alanthus, Datagraphics, DEC, and ECD, offer 132-character display lines, which can eliminate the need to revise or patch software designed for standard 132-column printers or to maintain dual sets of programs for 80-column and 132-column output. Information is displayed in a rectangular area smaller than the total surface area of the display device. The factors that determine the required size of the display area are the display arrangement and the size of the displayable characters, which is normally a fixed parameter.



One family of terminals that added new microprocessor-based models within the past year is the Lear-Siegler ADM Series. Not only do the two new models, the ADM-42 (pictured above) and the ADM-31, offer more features and functions than their predecessors, but they also cost less. Prices start at $1,450 for the ADM-31, which includes full editing functions and a two-page memory, and $1,795 for the more sophisticated ADM-42.

Symbol formation and the set of displayable symbols are functions of the character generator, which accepts coded characters (typically ASCII) from the computer and keyboard and converts them to a number of dots or strokes so that the form of the symbol or image can be displayed. In CRT's, characters are formed by a variety of techniques, including dots, strokes, starburst, or monoscope. The dot technique is by far the most popular. Each character is formed within a matrix of dots, and only those dots required to form the specific character are intensified. Typically, a dot matrix contains 35 dots arranged 7 dots high by 5 dots wide. Characters can be made clearer by increasing the number of dots within the matrix. The stroke technique forms characters by drawing short straight lines between specified points.

Solid-state display devices, such as plasma (gas) and LED (Light Emitting Diodes) are gaining popularity, but at present are generally limited to small display capacities consisting of a few characters. These typically form a character image in much the same way as a CRT display (i.e., via a dot matrix), though some form symbols through line segments.

Display arrangement, display medium, and symbol formation all have a great impact on display clarity. Test several units to decide which is easiest on the operator's eyes.

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Attention can be drawn to vital information and different types of significant data can be visually separated by the use of the following display features:

- Color—characters or fields can be separated by color, which can also be used to identify conditions or types of data. A few vendors, including Applied Digital, Intelligent Systems, Megadata, and Terminal Data, offer up to eight colors as a standard feature; several other vendors offer a color option.
- Reverse video—displays a *negative* image of data, i.e., data normally displayed in white on a dark background is displayed in black on a white background. Characters or fields can be displayed in reverse video.
- Programmable brightness levels—visually separates different kinds of displayed information by displaying each type of a different intensity level, such as a fixed format and the entered data.
- Character and/or field blinking—vital information consisting of a single character or an entire field is blinked to attract attention.

Some terminals offer several of these display features, which can be combined to produce even more effective results.

Some applications require viewing more data than can be displayed at one time. The following features satisfy this need:

- Roll (or scroll)—this feature moves all displayed lines of data up or down by one line as a new line is added and an existing one removed. In some cases, the first line is linked with the last so that the data is rolled but not lost. Typically, data is lost as it rolls off the screen. This feature permits the user to scan through a volume of data to locate key information.
- Paging—this feature stores two or more frames or *pages* of data and displays any selected page.

Although roll and paging features can be software implemented in the host computer, the comparison chart entry applies to *only* those terminals that implement the features via hardware or firmware.

Many terminals provide the roll feature, but relatively few provide paging. Some provide both features.

The cursor marks the position on the screen where the next character will be read or written from memory. Cursor controls enable the operator to maneuver the cursor on the screen and facilitate the input and output of data. Typical cursor controls include:

- Move left (L)—moves the cursor one space to the left, which can be from the initial character position of a line to the last character position of the previous line if the terminal features wraparound.
- Move right (R)—moves the cursor one space to the right, which can be from the last character position of a line to the first character position of the next line if the terminal features wraparound.
- Move up (U)—moves the cursor to the same position on the previous line, which can be from the first line to the last line if the terminal features wraparound.
- Move down (D)—moves the cursor to the same position on the following line, which can be from the last line to the first line if the terminal features wraparound.
- Home top (H)—moves the cursor to the initial character position of the first line.
- Home bottom—moves the cursor to the initial character position of the last line.
- Tab—moves the cursor forward to the next tab stop or backward to the previous tab stop (backtab).
- Return (RT)—moves the cursor to the initial character position of the next line; this is identical to the carriage return function of a typewriter.
- Backspace—moves the cursor one space to the left.
- Line Feed—moves the cursor to the same position on the following line.

Some cursors blink, others keep moving as long as the control key remains depressed. All cursors should be of the nondestructive type. Different manufacturers use a variety of symbols to indicate the cursor position on the

Probably the most significant new entrant in the alphanumeric display terminal market in the past year is Anderson Jacobson, which introduced its first CRT terminal, the AJ 510, in November 1978. Anderson Jacobson, a popular maker of teleprinter terminals, plans to add other CRT models to its offerings in 1979. The basic price of the AJ 510, a "smart" terminal featuring full editing functions, is $1,995; one- and two-year leases start at $89 and $81 per month, respectively.

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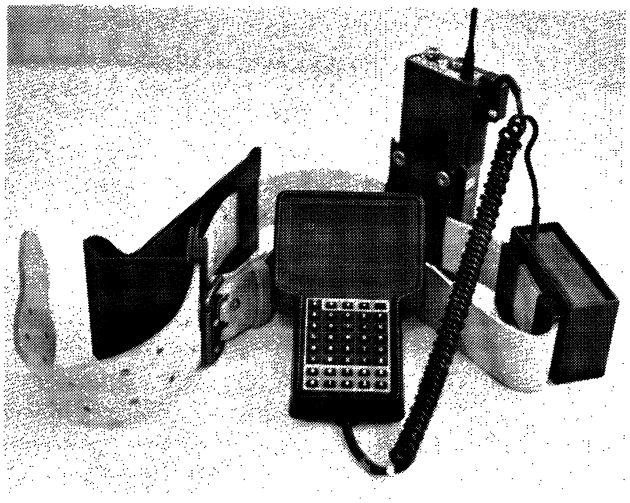
screen. Some terminals also have *addressable/readable cursors*, which enable the position of the cursor to be written or read by the host computer under program control.

Most businesses use printed forms for daily activities such as billing, ordering, payroll, etc. Some CRT terminals can duplicate the printed form on the face of the screen, and data can be keyed into the blank spaces just as the typist enters data into a printed form. This "fill-in-the-blanks" approach to data entry requires a *protected format* capability. Display terminals that incorporate this feature treat the fixed format differently from keyed data. Field identifiers such as "name" or "salesman number" are protected from inadvertent key entry, and data entry is confined to the variable fields (blank spaces) following the field identifiers. Some terminals automatically *tab* to the beginning of the next variable field immediately following the entry of the character that completes each field. The tab key is used where a field is partially filled.

Having completed entry into the fixed format, the operator transmits the data to the central computer. A feature called *partial screen transmit* promotes line economies by transmitting only the keyed data; the fixed format remains displayed and the "blanks" are erased for the next entry. This feature is also useful for transmitting only a portion of the displayed data such as a field, line, or block.

Editing features in a display terminal can consist of any combination of the functions listed below, although the best terminal for editing purposes would include all of them. Each function is performed with respect to the current position of the cursor. The desirable editing functions are:



The wide variety of equipment available within the category of general-purpose alphanumeric display terminals is illustrated by the Taumark Tera. Introduced in July 1978, the handheld Tera is a fully interactive terminal designed for applications where operator freedom of movement is required. It features a 40-key alphanumeric keyboard, a 64-character display, and a choice of ASCII or EBCDIC character sets. A belt-carried radio sends/receives data to/from a centrally located controller, which transmits to the host computer.

- Character insert—the capability to insert a character into an existing line of displayed text; the remaining characters shift to the right or "spread" to accommodate the added character. The spreading capability may terminate at the last character position of the line or at the last displayable position on the screen. Data is lost when it is spread beyond the termination point.

- Character delete—the capability to delete a character from an existing line of displayed text; the remaining text closes up when the character is deleted.

- Line insert—the capability to insert a line of text into existing text; the text spreads to accommodate the added line.

- Line delete—the capability to delete a line of text from existing text; the remaining text closes up when the line is deleted.

- Erase—the capability to erase a character, line of text, message, field, or the complete screen. Most terminals include character erase and some form of display erase, which may erase the entire contents of the display, just that portion following the cursor location, or a combination of both functions. Line erase is optional in many terminals.

- Character repeat—enters a continuous sequence of symbols as long as the appropriate key remains depressed.

Keyboard Parameters

Keyboard *style* defines the general arrangement of keys; e.g., typewriter or data entry (keypunch) style. Data entry keyboards have a numeric keypad embedded in the alphabetic part of the keyboard which is accessed via a numeric shift. The *character/code set* refers to the set of symbols that appear on the keytops and, in many cases, to the actual character codes generated for each key depression, such as ASCII, EBCDIC, APL, etc. Some terminals are available with more than one keyboard style to satisfy particular user needs.

Keyboards that can either fit flush against the display or be located some distance away via cable connection are referred to as *detachable* keyboards. This feature provides increased configuration flexibility and operator convenience.

Some terminals are available with *program function keys*. These are special keys whose character codes are interpreted by the user's program. A function key is used to

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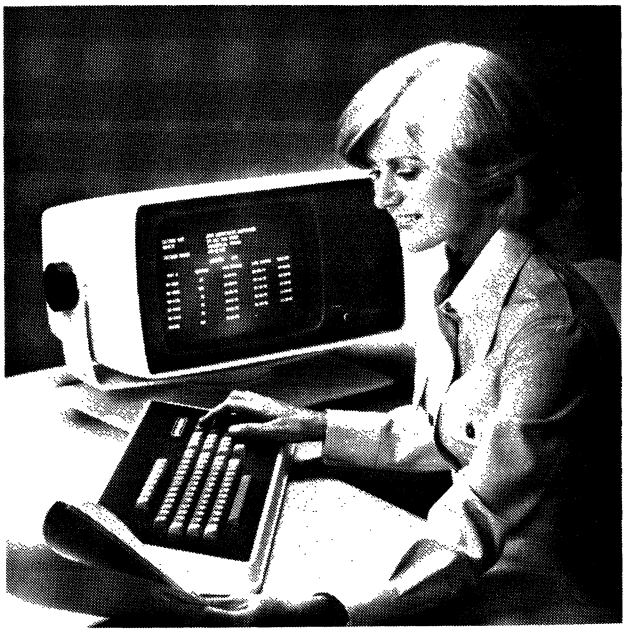

The Data General Dasher Model 6053 illustrates some of the human design factors that can make a terminal more convenient and easier to use. The monitor is pedestal-mounted, can be tilted and swiveled, and is fitted with a non-glare screen. The detachable keyboard features both a numeric and a function keypad, and can be placed up to four feet away from the monitor for operator convenience.

reduce the number of required input keystrokes to save time and reduce the number of input errors. Depressing one key could instruct the system to "sell one seat" or "call Chart A," for example.

A *numeric keypad* is a special keyboard feature that includes a set or block of 10 numeric keys, usually located to the right of the main keygroup. These numeric keys are arranged in an adding-machine format and are particularly useful for applications that require a high volume of numeric entries or arithmetic calculations.

Ancillary Devices

External I/O devices can add considerable flexibility to the applications possibilities for display terminals. A *cassette tape drive* or *diskette drive* can be used to store display formats, data to be transmitted, or user programs in the case of intelligent terminals. A *serial printer* provides hard copy when required.

These devices can usually be added to a terminal by the user via the terminal's RS-232 serial interface. The device is attached between the terminal and the external modem.

Although the above I/O devices are the most common, *other devices* can be and are used, such as industry-compatible 7- or 9-track magnetic tape drives, disk drives (cartridge or pack type), line printers, card readers, etc. Many units have an audible alarm which sounds whenever the operator's attention should be drawn to the prompting message area of the screen. Composite video permits multiple monitors to be attached to the terminal so that data may be viewed on more than one screen at the same time.

Transmission Parameters

Nearly every display terminal contains a communications interface that enables communications between the terminal and the central computer site. Mode and technique define the operating mode and the method in which data is transmitted. There are three operating modes: simplex (transmission in one direction only), half duplex (transmission both directions, but not simultaneously), and full duplex (simultaneous transmission in both directions).

Data is transmitted synchronously or asynchronously. Asynchronous transmission is characterized by the transmission of data in irregular spurts, where the duration of time can vary between successive transmitted characters; the transmission from an unbuffered teletypewriter is a good example. Synchronous transmission implies the transmission of data in a steady stream. The time interval between successive characters is always precisely the same. The communications interface either provides clocking or accepts external clocking signals from the data set.

Communications protocol refers to the type of line discipline (control code sequence and control characters) that the terminal employs. The two most commonly used protocols are ASCII and IBM's binary Synchronous Communications (BSC) technique. IBM's latest protocol, Synchronous Data Line Control (SDLC), will be widely used in the future. Other large mainframe vendors such as Burroughs, Honeywell, and Digital Equipment Corporation (DEC) have produced their own communications protocols.

The transmission *code* refers to the bit pattern of the transmitted characters. Two codes are prominent: EBCDIC and ASCII. The latter has been accepted as an industry and government standard, and is now the most commonly used code by display terminals.

The CRT terminal is a high-speed device that is usually capable of transmitting and receiving several thousand characters per second; however, it must run at a speed that is compatible with the communications system in which it is used. Most terminals are used on voice-grade facilities, which limit the transmission *speed* to a practical maximum of 4800 bits per second over the dial network and 9600 bits per second over leased or private lines.

Message *format* refers to the way data is transmitted, e.g., by block, by line, or by character. Terminals that are designed to be transmission-compatible with a Teletype unit transmit a character for each key depression. Buffered terminals transmit data in multi-character blocks. The line or block mode permits data to be composed and edited prior to each transmission and generally permits more efficient utilization of the communications facility. Some terminals offer manual selection between the modes.

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Multipoint operation characterizes terminals that are capable of operating in a multiple-terminals-per-line environment such as that employed by the IBM 3270 and 2260/2265 display terminals. Basic to implementing this capability is the ability of a terminal to distinguish a control message intended for it alone. Polling invites the terminals to send data. Addressing informs the terminal that a message from the central computer is coming, so that it will be conditioned to receive. Central control of the message traffic is maintained by the central computer.

Auto answer refers to the facility for unattended operation on the dial network whereby incoming calls are automatically answered and messages are received without human intervention.

Auto call refers to the facility for unattended operation on the dial network whereby outgoing calls are automatically "dialed" and messages are transmitted without human intervention.

Display terminals usually have a *terminal interface* that meets the standards of the EIA RS-232B/C specification or some other standard interface and connects to an external modem or acoustic telephone coupler.

Some terminals contain an *integral modem* that can be connected directly to a communications line. In some cases the vendor provides an integral *acoustic telephone coupler,* so that the terminal can be connected to a conventional telephone handset.

Pricing and Availability

Terminal pricing is provided for unit quantities (one terminal) unless otherwise specified. One- and two-year lease prices, including maintenance, and purchase prices are shown for the complete terminal (including keyboard, display, and controller) for stand-alone units, and for the keyboard/display station and terminal controller for cluster units.

Single entries generally indicate the price of the basic unit without options; price ranges show the price of the basic unit and the price of an expanded unit with all options, or the price of the low end and high end of a multiple-unit family. In general, all prices exclude ancillary devices. In some cases, the terminal vendor offers a lease term other than those shown, such as a 4- or 5-year lease or a 30- or 60-day, short-term rental. In such cases, the lease prices and terms appear in the Comments at the bottom of the charts.

Many terminal vendors do not lease their equipment, and in these cases you'll find dashes in the lease price entries. Also, a number of terminal makers sell their wares on an OEM basis only, for incorporation into systems supplied by other vendors. Quantity discounts, and discounts for educational and other institutions, are often available.

Date of first production delivery indicates when the first production model of each terminal was delivered (or is scheduled to be delivered) to a customer.

Display units installed to date shows how many display units of each type had been delivered to customers as of approximately March 1, 1979. All figures were supplied by the vendors themselves, and a number of companies chose not to release this information.

Serviced by specifies the party responsible for maintaining the terminal. In some cases the vendor provides total service; in others a national service organization is responsible. Service is sometimes rendered under the combined efforts of both the vendor and an independent service organization; usually in this situation, the vendor handles those areas close to his headquarters or where it has a multiplicity of installations, and the service company handles other geographical areas.

This Western Union terminal configuration, which includes a Video 200 terminal, a serial impact printer, and dual floppy disk drives, illustrates the types of ancillary devices which can be interfaced with display terminals. Other devices include cassette or cartridge tape drives, disk drives, line printers, magnetic stripe, card, and tape readers, optical character and bar code wand readers, and paper tape punches.

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Comments

Comments at the bottom of the charts describe significant or unusual features, capabilities, or applications which are not reflected in the standard entries.

Vendors

Listed below, for your convenience in obtaining additional information, are the full names and addresses of the 87 vendors whose products are summarized in the comparison charts.

Alanthus Data Communications Corporation (formerly Leasco), 6011 Executive Boulevard, Rockville, MD 20852. Telephone (301) 770-1150.

Anderson Jacobson, Incorporated, 521 Charcot Avenue, San Jose, CA 95131. Telephone (408) 263-8520.

Ann Arbor Terminals, Inc., 6107 Jackson Road, Ann Arbor, MI 48103. Telephone (313) 769-0926.

Applied Digital Data Systems, Inc., 100 Marcus Boulevard, Hauppauge, NY 11787. Telephone (516) 231-5400.

Applied Dynamics International, 3800 Stone School Rd., Ann Arbor, MI 48104. Telephone (313) 973-1300.

Beehive International, 4910 Amelia Earhart Drive, Box 25668, Salt Lake City, UT 84125. Telephone (801) 355-6000.

The Braegen Corporation, 20740 Valley Green Drive, Cupertino, CA 95014. Telephone (408) 255-4200.

Bunker Ramo Corporation, Trumbull Industrial Park, Trumbull, CT 06609. Telephone (203) 377-4141.

Burroughs Corporation, Room 4D20, Burroughs Place, Detroit, MI 48232. Telephone (313) 972-8068.

Cado Systems Corporation, 2730 Monterey Street, Torrance, CA 90503. Telephone (213) 320-9660.

Compugraphic Corporation, 80 Industrial Way, Wilmington, MA 01887. Telephone (617) 944-6555.

Computek, Inc., 63 Second Avenue, Burlington, MA 01803. Telephone (617) 272-8100.

Computer Optics, Inc., Berkshire Industrial Park, Bethel, CT 06801. Telephone (203) 744-6720.

Computer Peripheral Corporation, 1225 Connecticut Avenue, Bridgeport, CT 06607. Telephone (203) 333-8339.

Computer Peripheral Services Corporation, 3187-F Airway Avenue, Costa Mesa, CA 92626. Telephone (714) 540-0798.

Conrac Corporation, Conrac Division 600 N. Rimsdale Avenue, Covina, CA 91722. Telephone (213) 966-3511.

Control Data Corporation, 8100 34th Avenue South, Minneapolis, MN 55440. Telephone (612) 853-4656.

Courier Terminal Systems, Inc., a Division of ITT, 1515 W. 14th St., Tempe, AZ 85281. Telephone (602) 275-7555.

Data General Corporation, Route 9, Westboro, MA 01581. Telephone (617) 366-8911.

Data 100 Corporation, 6110 Blue Circle Drive, Minnetonka, MN 55343. Mailing address: P.O. Box 1222, Minneapolis, MN 55440. Telephone (612) 932-8000.

DatagraphiX, Inc., P.O. Box 82449, San Diego, CA 92138. Telephone (714) 291-9960.

Datamedia Corporation, 7300 N. Crescent Boulevard, Pennsauken, NJ 08110. Telephone (609) 665-2382.

Datapoint Corporation, 9725 Datapoint Drive, San Antonio, TX 78284. Telephone (512) 699-7000.

Dataview, Inc., 23A Dana Street, Malden, MA 02148. Telephone (617) 322-2244.

Delta Data Systems Corporation, Woodhaven Industrial Park, Cornwells Heights, PA 19020. Telephone (215) 639-9400.

Digi-log Systems, Inc., Babylon Road, Horsham, PA 19044. Telephone (215) 672-0800.

Digital Equipment Corporation (DEC), Main Street, Maynard, MA 01754. Telephone (617) 897-5111.

ECD Corporation, 196 Broadway, Cambridge, MA 02139. Telephone (617) 661-4400.

EECO, 1441 East Chestnut Avenue, Santa Ana, CA 92701. Telephone (714) 835-6000.

Elbit U.S.A. (a subsidiary of Elbit Computers, Ltd.), 8100 34th Avenue South, Box O, Minneapolis, MN 55440. Telephone (612) 853-7050.

Four-Phase Systems, Inc., 10700 N. De Anza Boulevard, Cupertino, CA 95014. Telephone (408) 255-0900.

Goodwood Data Systems, Ltd., (formerly I.P. Sharp Associates, Ltd.), 150 Rosamond Street, P.O. Box 210, Carleton Place, Ontario, Canada K7C 3P4. Telephone (613) 257-3610.

Harris Corporation, Data Communications Division, 16001 Dallas Parkway, P.O. Box 400010, Dallas, TX 75240. Telephone (214) 386-2000.

Hazeltine Corporation, Greenlawn, NY 11740. Telephone (516) 261-7000.

Hewlett-Packard, Data Terminals Division, 19400 Homestead Road, Cupertino, CA 95014. Telephone (408) 257-7000.

Honeywell Information Systems, Inc., 200 Smith Street, Waltham, MA 02154. Telephone (617) 890-8400.

Human Designed Systems, Inc., 3700 Market Street, Philadelphia, PA 19104. Telephone (215) 382-5000.

Incoterm Corporation, 65 Walnut Street, Wellesley Hills, MA 02181. Telephone (617) 237-2100.

Inforex, Inc., 21 North Avenue, Burlington, MA 18103. Telephone (617) 272-6470.

Informer, Inc., 8332 Osage Avenue, Los Angeles, CA 90045. Telephone (213) 649-2030.

Infoton, Inc., Second Avenue, Burlington, MA 01803. Telephone (617) 272-6660.

Intelligent Systems Corporation, 5965 Peachtree Corners East, Norcross, GA 30071. Telephone (404) 449-5961.

International Business Machines Corporation (IBM), Data Processing Division, 1133 Westchester Avenue, White Plains, NY 10604. Telephone (914) 696-1900.

International Business Machines Corporation (IBM), General Systems Division, 875 Johnson Ferry Road, N.E., Atlanta, GA 30342. Telephone (404) 256-7000.

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International Computers, Inc., Turnpike Plaza, 197 Highway 18, East Brunswick, NJ 08816. Telephone (201) 246-3400.

Intertec Data Systems Corporation, 2300 Broad River Road, Columbia, SC 29210. Telephone (803) 798-9100.

Jacquard Systems, 1639 11th Street, Santa Monica, CA 90404. Telephone (213) 450-6784.

Kustom Electronics, Inc., Data Communications Division, 1010 West Chestnut, Chanute, KS 66720. Telephone (316) 431-2700.

Lear Siegler, Inc., Data Products Division, 714 North Brookhurst Street, Anaheim, CA 92803. Telephone (714) 774-1010.

Megadata Computer and Communications Corporation, 35 Orville Drive, Bohemia, NY 11716. Telephone (516) 589-6800.

Memorex Corporation, Communications Group, 18922 Forge Drive, Cupertino, CA 95014. Telephone (408) 987-3412.

Micro-Term, Incorporated, 1314 Hanley Industrial Court, St. Louis, MO 63144. Telephone (314) 968-8151.

Mohawk Data Sciences Corporation, 1599 Littleton Road, Parsippany, NJ 07054. Telephone (201) 540-9080.

NCR Corporation, EDP Products, Building 26, 3rd Floor, Main & K Streets, Dayton, OH 45479. Telephone (513) 449-6620.

Olivetti Corporation of America, 500 Park Avenue, New York, NY 10022. Telephone (212) 371-5500.

Omron Systems, Inc., 432 Toyama Drive, Sunnyvale, CA 94086. Telephone (408) 734-8400.

Ontel Corporation, 250 Crossway Park Drive, Woodbury, NY 11797. Telephone (516) 364-2121.

Paradyne Corporation, 8550 Ulmerton Road, Largo, FL 33541. Telephone (813) 536-4771.

Perkin-Elmer Data Systems, Terminals Division, Route 10 and Emery Avenue, Randolph, NJ 07801. Telephone (201) 366-5550.

Perry Electronics, 2424 Atlantic Avenue, Raleigh, NC 27604. Telephone (919) 821-3700.

Phone 1, P.O. Box 1522, Rockford, IL 61110. Telephone (815) 962-8927.

Plantronics, Inc., 345 Encinal St., Santa Cruz, CA 95060. Telephone (408) 426-5858.

Quotron Systems, Inc., 5454 Beethoven Street, Los Angeles, CA 90066. Telephone (213) 398-2761.

Racal-Milgo, Incorporated, 8600 N.W. 41st Street, Miami, FL 33166. Telephone (305) 592-8600.

Randal Data Systems, Inc., 365 Maple Avenue, Torrance, CA 90503. Telephone (213) 320-8550.

Raytheon Data Systems Company, Division of Raytheon Company, 1415 Boston-Providence Turnpike, Norwood, MA 02062. Telephone (617) 762-6700.

SLM, Incorporated, 2366 Walsh Avenue, Santa Clara, CA 95050. Telephone (408) 727-1030.

Soroc Technology, Incorporated, 165 Freedom Avenue, Anaheim, CA 92801. Telephone (714) 992-2860.

Sycor, Inc., 100 Phoenix Drive, Ann Arbor, MI 48104. Telephone (313) 995-1121.

Systematics General Corporation, National Scientific Laboratories Division, 2922 Telestar Court, Falls Church, VA 22042. Telephone (703) 698-8500.

Tano Corporation, 4301 Poche Court West, New Orleans, LA 70129. Telephone (504) 254-3500.

Taumark, Incorporated, 6621 Century Avenue, Middleton, WI 53562. Telephone (608) 831-9291.

TEC, Inc., 2727 N. Fairview Avenue, Tucson, AZ 85705. Telephone (602) 792-2230.

Tektronix, Inc., PO Box 500, Beaverton, OR 97077. Telephone (503) 644-0161.

Teleram Communications Corporation, 2 Corporate Park Drive, White Plains, NY 10604. Telephone (914) 694-9270.

Teleray, Inc., P.O. Box 24064, Minneapolis, MN 55424. Telephone (612) 941-3300.

Teletype Corporation, 5555 Touhy Avenue, Skokie, IL 60077. Telephone (312) 982-2000.

Telex Computer Products, Inc., 6422 East 41st St., Tulsa OK 74135. Telephone (918) 627-1111.

Termiflex Corporation, 17 Airport Road, Nashua, NH 03060. Telephone (603) 889-3883.

Terminal Data Corporation of Maryland, 11878 Coakley Circle, Rockville, MD 20852. Telephone (301) 881-7655.

Texas Instruments, Inc., Computer Systems Division, P.O. Box 2909, Mail Station 2222, Austin, TX 78769. Telephone (512) 250-7364.

Trivex, Inc., Information Systems Division, 3180 Red Hill Avenue, Costa Mesa, CA 92626. Telephone (714) 546-7781.

Univac Division, Sperry Rand Corporation, PO Box 500, Blue Bell, PA 19424. Telephone (215) 542-4011.

Wang Laboratories, Inc., One Industrial Avenue, Lowell, MA 01851. Telephone (617) 851-4111.

Western Union Data Services Company, 70 McKee Drive, P.O. Box 611, Mahwah, NJ 07430. Telephone (201) 529-1170.

Westinghouse Canada, Ltd., Box 5009, 777 Walker's Lane, Burlington, Ontario, Canada L7R 4B3. Telephone (416) 528-8811.

Wordstream, Inc., (formerly Genesis One), a subsidiary of Management Assistance, Inc. (MAI), 300 East 44th Street, New York, NY 10017. Telephone (212) 557-3500.

Zentec Corporation, 2400 Walsh Avenue, Santa Clara, CA 95050. Telephone (408) 246-7662.□

Alphanumeric Display Terminals—Basic Characteristics

SUPPLIER AND MODEL	Alanthus 203/1	Alanthus 204/1	Alanthus V-100	Anderson Jacobson AJ 510	Ann Arbor Terminals Model 400E
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	1	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	Opt.	No	No	No
User programmable	Yes, via user-defined firmware	Yes, via user-defined firmware	Yes	No	No
Self diagnostics	No	No	Yes	Std.	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	1920	480 to 1920
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80, 14 x 132	24 x 80	24 x 80 std.; 12 x 40, 24 x 40 opt.
Display area, h x w, inches	12-in. diag.	12-in. diag.	12-in. diag.	15-in. diag.	8 x 10; 15-in. diag.
Total displayable symbols	128	128	128	128 ASCII	64 std.; 95 opt.
Symbol formation	7 x 11 dot matrix	7 x 11 dot matrix	See comments	7 x 10 dot matrix	7 x 7 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	Yes	Std.	Std.
Programmable brightness levels	No	No	Yes	Std.	Std.
Character and/or field blinking	No	Std.	Std.	Std.	Char. std.
Roll	Up std.	Up std.	Up std.	Up std.	Std.
Paging	Up to 2 pages opt.	Up to 8 pages opt.	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Std.	Std.	Std.	Both std.	Add. std.; read opt.
Protected format	Std.	Std.	Std.	Std.	No
Partial screen transmit	Std.	Std.	Std.	Std.	No
Tabulation	Std.	Std.	Std.	Std.	Opt.
Character insert/delete	Std.	Std.	Std.	Std.	No
Line insert/delete	Std.	Std.	Std.	Std.	No
Erase	Char., line, page std.	Char., line, page std.	Char., line, page std.	Char., line, screen std.	Screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Data entry
Character/code set	128 ASCII	128 ASCII	128 ASCII	128 ASCII; APL opt.	128 ASCII
Detachability	No	Std.	Std.	No	Std.
Program function keys	Yes	Yes	Yes	No	Up to 36 opt.
Numeric keypad	Std.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	Opt.	Opt.	Opt.	Opt.	No
Diskette drive (floppy disk)	Opt.	Opt.	Opt.	Opt.	No
Serial printer	Opt.	Opt.	Opt.	Opt.	No
Other devices	Audible alarm std.	Audible alarm std.	Audible alarm std.	—	—
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Full-duplex	Half/full-duplex	Half/full-duplex std.
Technique	Asynchronous	Async. std./sync. opt.	Asynchronous	Asynchronous	Asynchronous
Communications protocol	ASCII—RS-232C	ASCII—RS-232C	ASCII—RS-232C	ASCII	—
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	110 to 19,200	110 to 19,200	110 to 19,200	110 to 9600	Up to 9600
Format: character, line, or block	Char., block	Char., block	Char. only	Char., line, page	Char. only
Multipoint operation (pollable/addr.)	Opt.	Opt.	No	No	No
Auto answer	Std.	Std.	Std.	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C, current loop	RS-232C, current loop	RS-232C std., current loop opt.	RS-232C	RS-232 std.; 20 mA opt.
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	70	90	85	89-95	—
Display station, 2 year lease, $/mo.	65	86	81	81-91	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,375	1,775	1,575	1,995-2,195	1,200
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	2/79	2/79	2/79	11/78	12/77
Display units installed to date	—	—	—	—	2000
Serviced by	Alanthus	Alanthus	Alanthus	Anderson Jacobson	Ann Arbor
COMMENTS			Display symbols include standard 7 x 9 dot matrix and double-width/double/height characters	40-char. graphics set std.	

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Ann Arbor Terminals 400E COMPAT	Ann Arbor Terminals 4080 COMPAT	Ann Arbor Terminals VT52 COMPAT	Ann Arbor Terminals ADM3A COMPAT	Applied Digital Data Systems (ADDS) Consul 520
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	1	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	Older Ann Arbor units	Ann Arbor K4080D	DEC VT-52	Lear Siegler ADM-3A	No
User programmable	No	No	No	No	No
Self diagnostics	No	No	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	256 to 1920	3200	1920	1920	1920
Display arrangement, lines x chars./line	8 x 32 to 24 x 80	40 x 80	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	15-inch diag.	15-inch diag.	15-inch diag.	15-inch diag.	8 x 10-inch diag.
Total displayable symbols	64 std.; 95 opt.	95	95	95	64
Symbol formation	7 x 7 dot matrix	7 x 7 dot matrix	7 x 7 dot matrix	7 x 7 dot matrix	5 x 7 dot matrix
Color	No	No	No	No	No
Reverse video	Std.	Std.	No	No	Jumper-selectable
Programmable brightness levels	Std.	Std.	No	No	No
Character and/or field blinking	Char. std.	Char. std.	No	No	No
Roll	Std.	Std.	Std.	Std.	Up std.
Paging	No	No	No	No	No
Cursor positioning: Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	L, R, U, D, H
Cursor blinking	Std.	Std.	Std.	No	Std.
Addressable/readable cursor	Std. add. only	Std. add. only	Std. add. only	Std. add. only	Std. address only
Protected format	No	No	No	No	No
Partial screen transmit	No	No	No	No	No
Tabulation	Opt.	Std.	Std.	No	No
Character insert/delete	No	No	No	No	No
Line insert/delete	No	No	No	No	No
Erase	Screen std.	Screen std.	Screen, line std.	Screen std.	Char., screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Teletype	Teletype	Typewriter	Teletype	Typewriter
Character/code set	128 ASCII	128 ASCII	128 ASCII	128 ASCII	ASCII
Detachability	Std.	Std.	Std.	Std.	Opt.
Program function keys	Up to 36 opt.	Up to 36 opt.	Up to 28 opt.	Up to 36 opt.	No
Numeric keypad	Std.	Std.	Std.	Std.	No
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	No	No	No
Serial printer	No	No	No	No	No
Other devices	—	—	—	—	Audible alarm std., composite video
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex std.	Half/full-duplex std.	Half/full-duplex std.	Half/full-duplex std.	Half/full-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Communications protocol	—	—	—	—	ASCII
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	110 to 9600	110 to 9600	110 to 9600	110 to 9600	Up to 9600
Format: character, line, or block	Char. only	Char. only	Char. only	Char. only	Char. only
Multipoint operation (pollable/addr.)	No	No	No	No	No
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232 std.; 20 mA opt.	RS-232 std.; 20 mA opt.	RS-232 std.; 20 mA opt.	RS-232 std.; 20 mA opt.	RS-232C, CCITT V.24, 20 mA
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	—	—	—	—
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,200	1,595	1,400	1,400	1,595
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	1/78	2/79	11/78	11/78	4/76
Display units installed to date	1000	—	100	50	6000
Serviced by	Ann Arbor	Ann Arbor	Ann Arbor	Ann Arbor	TRW/GE
COMMENTS	Terminal is available in 5 different display formats: 24 x 80, 24 x 40, 16 x 80, 16 x 32, and 8 x 32				

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Applied Digital Data Sys. (ADDS) Consul 580 & MRD 380	Applied Digital Data Systems (ADDS) MRD 460	Applied Digital Data Systems (ADDS) Consul 920	Applied Digital Data Sys. (ADDS) Consul 980 & MRD 980	Applied Digital Data Systems (ADDS) Consul 980A
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	1	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	3270/3275
Teletype compatibility	Std.	Std.	Std.	Std.	No
Other compatibility	No	No	No	No	No
User programmable	No	No	No	No	No
Self diagnostics	No	No	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	1920	1920
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	8 x 10; 12" diag.	9/25-inch diag.	8 x 10; 12" diag.	8 x 10; 12" diag.	8 x 10; 12" diag.
Total displayable symbols	64	64	96	96	96
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix
Color	No	8 colors std.	No	No	No
Reverse video	Jumper-selectable	Std.	Std.; selectable	Std.; selectable	Std.; selectable
Programmable brightness levels	No	2 std.	2 std.	2 std.	2 std.
Character and/or field blinking	No	Both std.	Both std., 2 speeds	Both std.; 2 speeds	Both std., 2 speeds
Roll	Std.	No	Up std.	Up std.	Up std.
Paging	No	No	No	No	No
Cursor positioning: Up, Down, Left, Right, Home, Return	L, R, U, D, H	U, D, L, R, H	L, R, U, D, H	L, R, U, D, H	L, R, U, D, H
Cursor blinking	Std.	Opt.	Std.	Std.	Std.
Addressable/readable cursor	Std. address. only	Both std.	Std.	Both std.	Both std.
Protected format	No	Std.	Std.	Std.	Std.
Partial screen transmit	No	No	Std.	Std.	Std.
Tabulation	No	Std.	Std.	Std.	Std.
Character insert/delete	Std.	No	No	Std.	Std.
Line insert/delete	No	No	No	Std.	Std.
Erase	Char., screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	ASCII	ASCII	ASCII	ASCII
Detachability	Opt.	Std.	Opt.	Opt.	Opt.
Program function keys	6 opt.	No	11 opt.	11 opt.	11 opt.
Numeric keypad	Std.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	RS-232 interface	RS-232 interface	No	RS-232 interface	RS-232 interface
Diskette drive (floppy disk)	RS-232 interface	RS-232 interface	No	RS-232 interface	RS-232 interface
Serial printer	Non-impact/impact	No	No	Impact, non-impact	Impact, non-impact
Other devices	Audible alarm std., composite video	None	Audible alarm std., composite video	Audible alarm std., composite video	Audible alarm std., composite video
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Async./sync.
Communications protocol	ASCII	ASCII	ASCII	ASCII	ASCII/BSC
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	Up to 9600	Up to 1500 cps	Up to 9600	Up to 9600	Up to 9600
Format: character, line, or block	Char. only	Char. only	Char./block	Char./block/line	Block/line
Multipoint operation (pollable/addr.)	No	No	No	No	Std.
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C, 20 mA	RS-232C, CCITT V.24, 20 mA TTL	RS-232C, 20 mA	RS-232C, 20 mA	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	—	—	—	—
Display station, 2 year lease, $/mo.	—	—	—	—	155
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,795 (Consul 580)	Contact vendor	2,600	2,800 (Consul 980)	2,700
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	'73 (580); '74 (380)	9/75	4/70	11/74, 4/75 (MRD)	6/75
Display units installed to date	25,000/1000	700	3000	8000	1000
Serviced by	TRW/GE	TRW/GE	TRW/GE	TRW/GE	TRW/GE
COMMENTS	Also available from NCR as Model 796-101; MRD 380 is rack-mount controller priced at $1,195			MRD 980 is rack-mount controller priced at $1,995; also available from NCR as Model 796-401	Available from NCR as Model 796-501

Alphanumeric Display Terminals— Basic Characteristics

SUPPLIER AND MODEL	Applied Digital Data Systems (ADDS) Consul 980B	Applied Digital Data Systems (ADDS) Envoy 620	Applied Digital Data Systems (ADDS) Regent 100	Applied Digital Data Systems (ADDS) Regent 200	Applied Dynamics International Series 60
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Either
Maximum displays/controller	1	1	No	No	10
Portable case	No	Yes	No	No	Yes
IBM compatibility	No	No	No	No	Opt.
Teletype compatibility	No	Std.	Std.	Std.	Std.
Other compatibility	Burroughs TD 800	No	No	No	Several opt.
User programmable	No	No	No	No	User-defined firmware
Self diagnostics	No	No	Std.	Std.	Opt.
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	1920	256 to 2000
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	24 x 80	8 x 32, 16 x 40, 20 x 50, 24 x 80, 25 x 80
Display area, h x w, inches	8 x 10; 12" diag.	2 x 3; 5" diag.	12-inch diag.	12-inch diag.	15-in. diag.
Total displayable symbols	96	64	128	128	64 std., 128 opt.
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	8 x 8	8 x 8	5 x 7 std., 7 x 9 opt.
Color	No	No	No	No	No
Reverse video	Std.	No	Std.	Std.	Std.
Programmable brightness levels	2 std.	No	2 std.	2 std.	Std.
Character and/or field blinking	Both std., 2 speeds	No	Std.	Std.	Std.
Roll	Up std.	Up std.	Up std.	Up std.	Std., switch-select.
Paging	No	No	No	No	Yes, up to 32 pgs.
Cursor positioning; Up, Down, Left, Right, Home, Return	L, R, U, D, H	U, D, L, R, H	Std.	Std.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	—	Std.
Addressable/readable cursor	Both std.	Std. addr. only	Both std.	Both std.	Both std.
Protected format	Std.	No	No	Std.	Opt.
Partial screen transmit	Std.	No	No	Std.	Opt.
Tabulation	Std.	No	No	Std.	Opt.
Character insert/delete	Std.	No	No	Opt.	Opt.
Line insert/delete	Std.	No	No	Opt.	Opt.
Erase	Char., line, screen	Char., screen std.	Page, line, screen std.	Std.	Std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Per customer specs.
Character/code set	128 ASCII	ASCII	128 ASCII	128 ASCII	Any
Detachability	Opt.	No	Opt.	Opt.	Yes
Program function keys	11 opt.	No	8/16 opt.	8/16 std.	Up to 48 opt.
Numeric keypad	Std.	No	Std.	Std.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	RS-232 interface	RS-232 interface	RS-232C	RS-232C	No
Diskette drive (floppy disk)	RS-232 interface	RS-232 interface	RS-232C	RS-232C	No
Serial printer	Impact, non-impact	Impact, non-impact	RS-232C	RS-232C	No
Other devices	Audible alarm std., composite video	Audible alarm std.	—	—	No
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Asynchronous	Asynchronous	Asynchronous	Async.
Communications protocol	ASCII/BSC	ASCII	ASCII	ASCII	Any
Code	ASCII	ASCII	ASCII	ASCII	ASCII std.
Speed, bits/second	Up to 9600	Up to 9600	75 to 9600	75 to 9600	55 to 19,200
Format: character, line, or block	Block/line	Char. only	Char.	Char./line/block	Char., line, block
Multipoint operation (pollable/addr.)	Std.	No	No	No	Opt.
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C, CCITT V.24, 20 mA	RS-232C, 20 mA	RS-232C, 20 mA	RS-232 std.; 20/60 mA, TTL opt.
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	Std.	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	132	—	—	—	—
Display station, 2 year lease, $/mo.	122	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	2,700	2,250	1,325-1,450	1,795-1,940	1,520
Controller, purchase, $	—	—	—	—	720
Date of first production delivery	2/77	10/75	8/77	9/77	9/78
Display units installed to date	700	500	15,000	5000	Over 700
Serviced by	TRW/GE	TRW/GE	—	—	ADI
COMMENTS			Features include terminal status line, limited graphics, and terminal bypass printing	Features include terminal status line, limited graphics, and terminal bypass printing	All units utilize the same hardware; firmware controlling 2 microprocessors customizes the unit to customer specifications without recurring engineering charges

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Beehive International B 550	Beehive International Micro Bee	Beehive International Micro Bee 1A	Beehive International Micro Bee 1S	Beehive International Micro Bee 2
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	1	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	Std.	Std.	Std.	See comments	Std.
Other compatibility	No	No	No	See comments	No
User programmable	Yes	—	—	Yes, via user-defined firmware	No
Self diagnostics	Std.	Std.	Std.	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	2000	1920	1920	1920	1920
Display arrangement, lines x chars./line	25 x 80	24 x 80 plus 25th status line	24 x 80	24 x 80 plus 25th status line	24 x 80 plus 25th status line
Display area, h x w, inches	6.5 x 8.4/7 x 9	8.5 x 6.5; 12" diag.	8.5 x 6.5; 12" diag.	8.5 x 6.5; 12" diag.	8.5 x 6.5; 12" diag.
Total displayable symbols	128/256 ASCII	128 ASCII	128 ASCII	128 ASCII	128 ASCII
Symbol formation	7 x 8 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix
Color	No	No (P4)	No (P4)	No (P4)	No (P4)
Reverse video	Std.	Std.	Std.	Std.	Std.
Programmable brightness levels	No	8-level video	8-level video	8-level video	8-level video
Character and/or field blinking	Both std.	Both std.	Both std.	Both std.	Both std.
Roll	Std., up & down	Roll or page std.	Roll or page std.	Roll or page std.	Roll or page std.
Paging	Std., 2 pages	Single page	Single page	Single page	Single page
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Blinking block	Blinking block	Blinking block	Blinking block
Addressable/readable cursor	Both std.	Both std.	Both std.	Both std.	Both std.
Protected format	Std.	No	No	No	Std.
Partial screen transmit	Std.	No	No	No	Std.
Tabulation	Std.	Forward tab	Forward tab	Forward tab	Forward/back std.
Character insert/delete	Std.	No	No	No	Both std.
Line insert/delete	Std.	No	No	No	Both std.
Erase	Char., line, screen std.	Screen, end-of-line, end-of-page	Screen, end-of-line, end-of-page	Screen, end-of-line, end-of-page	Line, screen, field, end-of-screen
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	128 ASCII	128 ASCII	128 ASCII	128 ASCII
Detachability	Std.	No	No	No	No
Program function keys	8 std.	No	12 user-defined std.	12 user-defined std.	12 std.
Numeric keypad	Std.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive		No	No	No	No
Diskette drive (floppy disk)		No	No	No	No
Serial printer		No	No	No	No
Other devices	Audible alarm std.	No	Std. bidirectional RS-232C aux. port	Std. bidirectional RS-232C aux. port	Std. bidirectional RS-232C aux. port
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Communications protocol	User specified	—	—	—	ASCII
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	Up to 19,200	110 to 19,200	110 to 19,200	110 to 19,200	110 to 19,200
Format: character, line, or block	Char./block	Character	Character	Character	Char., line, block, field
Multipoint operation (pollable/addr.)	No	No	No	No	No
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C, 20 mA std.	RS-232C, 20 mA std.	RS-232C, 20 mA std.	RS-232C, 20 mA
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	Purchase only	Purchase only	Purchase only
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	2,930 (base)	995	1,395	1,345	1,695
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	8/76	8/78	8/78	8/78	10/78
Display units installed to date	2300	—	—	—	—
Serviced by	Beehive, Sorbus, & WUDS	Beehive, Western Union	Beehive, Western Union	Beehive, Western Union	Beehive, Western Union
COMMENTS	Enhanced B 500; available with up to 48K RAM & 7K ROM or PROM 8080A microprocessor	Line lock/memory lock with invisible address pointer std.; 11-char. line drawing set; 16 non-displayable video attribute characters per display line; status and mode visible on 25th display line	All std. features of Micro Bee plus buffered bidirectional aux. port; permits split-speed operation between terminal and aux. device or CPU and aux. device	All std. features of Micro Bee 1A plus opt. emulation pkgs. for DEC VT52, Data General Dasher, ADDS Regent 100, Microdata Prism; also available without software as OEM unit	Fully buffered communications; full editing facilities; line drawing forms mode; capability to time-share aux. to main port and screen; line lock/memory lock, with invisible address pointer std.

Alphanumeric Display Terminals—Basic Characteristics

SUPPLIER AND MODEL	Braegen B-3	Bunker Ramo System 90	Burroughs TD 500 Series	Burroughs TD 730	Burroughs TD 830
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Cluster	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	32	32	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	3271/2, 1403, 2501	3270 BSC/SDLC	No	3275 opt.	3275 opt.
Teletype compatibility	No	No	No	No	No
Other compatibility	No	BR 2200	Burroughs	Burroughs	Burroughs
User programmable	Opt.	Yes	No	No	No
Self diagnostics	No	Yes	Yes	Yes	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	480/1920	480/960/1920	600	480	2000
Display arrangement, lines x chars./line	12 x 40, 24 x 80	12 x 40/80; 24 x 80	15 x 40	12 x 40	80 x 25
Display area, h x w, inches	12-inch diag.	Variable	5-/9-inch diag.	4.7 x 8.4	7.5 x 9
Total displayable symbols	196	96 ASCII	96 ASCII	64	128
Symbol formation	7 x 9 dot matrix	5 x 7 dot matrix	7 x 9 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix
Color	No	No	No	No	No
Reverse video	Std.	No	Std.	No	Std.
Programmable brightness levels	2 std.	3 std.	No	No	Std.
Character and/or field blinking	Std.	Both std.	No	Std.	Std.
Roll	Opt.	No	—	Std.	Std.
Paging	Opt.	No	—	Std.	Std.
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	—	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Opt.	—	Std.	Std.
Addressable/readable cursor	Std.	Both std.	—	Std.	Std.
Protected format	Std.	Std.	—	Std.	Std.
Partial screen transmit	Std.	Std.	—	Std.	Std.
Tabulation	Std.	Std.	—	Std.	Std.
Character insert/delete	Std.	Std.	—	Std.	Std.
Line insert/delete	Opt.	No	—	Std.	Std.
Erase	Char., field, screen std.	Std.	—	Std.	Std.
Character repeat	Std.	Opt.	—	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter, data entry, console	Typewriter	Typewriter or numeric/function	Typewriter	Typewriter
Character/code set	256 EBCDIC	96 ASCII/EBCDIC	128 ASCII	128 ASCII	128 ASCII
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	10 std., 15 opt.	32 std.	Yes	—	—
Numeric keypad	Opt.	Std.	Opt.	Opt.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	Single/dual	Single/dual
Diskette drive (floppy disk)	Std., single	Dual	No	No	No
Serial printer	Impact	Impact	No	Impact	Impact
Other devices	Alarm, disk, line printer, card reader	Audible alarm std., ID reader opt.	ID card reader, magnetic card reader	Line printers, audible alarm, ID card reader	Line printers, audible alarm, ID card reader
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half-duplex	Half/full-duplex	Half/full-duplex
Technique	Synchronous	Synchronous	Asynchronous	Async./sync.	Async./sync.
Communications protocol	BSC	BSC/SDLC	Burroughs	BSC/Burr.	BSC/Burr.
Code	ASCII, EBCDIC	ASCII/EBCDIC	ASCII	ASCII	ASCII
Speed, bits/second	1200 to 19,200	Up to 9600	Up to 9600	Up to 38,400	Up to 38,400
Format: character, line, or block	Char./block	Char./block	Block	Char./block	Char./block
Multipoint operation (pollable/addr.)	Std.	Std.	Std.	Std.	Std.
Auto answer	No	Opt.	No	No	No
Auto call	No	Opt.	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C
Integral modem	No	Opt.	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	60	Contact vendor	84-105	120-130	124-154
Display station, 2 year lease, $/mo.	52	—	—	—	—
Controller, 1 year lease, $/mo.	247	—	—	—	—
Controller, 2 year lease, $/mo.	227	—	—	—	—
Display station, purchase, $	2,250	1,510	1,975-2,450	2,715-2,865	2,796-2,951
Controller, purchase, $	9,000	8,260	—	—	—
Date of first production delivery	—	—	4/78	6/77	8/76
Display units installed to date	554	—	—	—	—
Serviced by	Braegen, Sorbus	Bunker Ramo	Burroughs	Burroughs	Burroughs
COMMENTS	256K bytes of memory; peripherals include 20-megabyte disk, serial and line printers; 7500-ft. coax std.; multi-drop and multiple IBM interface	System 90 supersedes the BR 2200 system; IBM 2260/2265 compatibility is optional			

Alphanumeric Display Terminals— Basic Characteristics

SUPPLIER AND MODEL	Cado System 20/IV	Cado System 40/IV	Cado System 20	Cado System 40	Compugraphic MDT-402
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster	Cluster	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	4	4	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	IBM2770/2780/3780	IBM2770/2780/3780	IBM2770/2780/3780	IBM2770/2780/3780	IBM 2780-BSC
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	No	No	No	No
User programmable	User-created pgms.	User-created pgms.	User-created pgms.	User-created pgms.	Yes
Self diagnostics	Std.	Std.	Std.	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	1920	1280
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	24 x 80	16 x 80
Display area, h x w, inches	12-in. diag.	5.25 x 11.25	12-in. diag.	5.25 x 11.25	4.75 x 6.875
Total displayable symbols	96 ASCII	127 ASCII	96 ASCII	127 ASCII	96 ASCII
Symbol formation	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	Std.	No	Std.	No	Std.
Programmable brightness levels	2 std.	2 std.	2 std.	2 std.	Std.
Character and/or field blinking	Std.	Std.	Std.	Std.	Std.
Roll	Up std.	Up & down std.	Up std.	Up & down std.	Up & down std.
Paging	No	3 std.	No	3 std.	2 page screen buffer
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt
Cursor blinking	Std.	No	Opt.	No	No
Addressable/readable cursor	Std.	Read opt., add. std.	Std.	Read opt.	Std.
Protected format	Std.	Std.	Std.	Std.	Programmable
Partial screen transmit	Std.	Std.	Std.	Std.	Programmable
Tabulation	Std.	Std.	Std.	Std.	Std.
Character insert/delete	Std.	Std.	Std.	Std.	Std.
Line insert/delete	Std.	Std.	Std.	Std.	Std.
Erase	Std.	Std.	Std.	Std.	Char., block, screen
Character repeat	Std.	Std.	Std.	Std.	No
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	128 ASCII	127 ASCII	128 ASCII	127 ASCII	128 ASCII
Detachability	No	Opt.	No	Opt.	No
Program function keys	16 std.	No	16 std.	No	18 std.
Numeric keypad	Std.	Opt.	Std.	Opt.	Std.
ANCILLARY DEVICES					
Cassette tape drive	Opt.	Opt.	Opt.	Opt.	No
Diskette drive (floppy disk)	1 to 3 (dual sided)	1 to 3 (dual sided)	2 to 6	2 to 6	Single mini-diskette
Serial printer	Impact	No	Impact	No	Impact
Other devices	—	Line printer	—	Line printer	—
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Async./sync.	Async./sync.
Communications protocol	ASCII/BSC	ASCII/BSC	ASCII/BSC	ASCII/BSC	ASCII/BSC
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII
Speed, bits/second	110 to 9600	110 to 9600	110 to 9600	110 to 9600	Up to 9600
Format: character, line, or block	Char./line/block	Char./line/block	Char./line/block	Char./line/block	Char./line/block
Multipoint operation (pollable/addr.)	No	No	No	No	No
Auto answer	Std.	Std.	Std.	Std.	Opt.
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C, 20 ma dc	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	—	—	—	—
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	—	—	—	—	4,500
Controller, purchase, $	19,845	25,495	13,995	17,995	—
Date of first production delivery	2nd qtr. 1978	2nd qtr. 1978	4/78	4/76	4th qtr. 1978
Display units installed to date	—	—	—	—	See comments
Serviced by	Cado	Cado or Teletype Corp.	Cado	Cado or Teletype Corp.	Compugraphic Corp.
COMMENTS					MDT-402 is based on MDT-350 intelligent text editing terminal, which began deliveries Oct. 1979; about 3000 are installed

Alphanumeric Display Terminals—Basic Characteristics

SUPPLIER AND MODEL	Computek Series 116	Computek 200 Series	Computek 216/10	Computek 216/30	Computer Optics CO:77/78
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Either	Stand-alone	Cluster	Either
Maximum displays/controller	1	4	1	4	32
Portable case	No	No	No	No	No
IBM compatibility	No	3270, 2260/2265	2780, BSC, SDLC	2780, BSC, SDLC	3270 Series
Teletype compatibility	—	Std.	Std.	Std.	No
Other compatibility	Opt.	ANPA/Teleram	Opt.	Opt.	No
User programmable	Yes	Yes	Yes	Yes	No
Self diagnostics	Std.	Yes	Std.	Std.	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	1920	960/2000	1920	1920	1920, 2560, 3440
Display arrangement, lines x chars./line	24 x 80	12/25 x 80	24 x 80	24 x 80	25 x 80, 32 x 80, 43 x 80
Display area, h x w, inches	12-in. diag.	12/15-inch diag.	12-inch diag.	12/15-inch diag.	15-in. diag.
Total displayable symbols	128 ASCII	128 ASCII	128/256 ASCII	128/256	96
Symbol formation	7 x 9 dot matrix	14 x 20 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	Std.	Std.	Std.	Std.	No
Programmable brightness levels	2 std.	2 std.	2 std.	2 std.	2 std.
Character and/or field blinking	Char., field	Char. std.; field opt.	Char., field	Char., field	No
Roll	Up, down via prog.	Std.	Up, down via prog.	Up, down via prog.	No
Paging	More than 3	Std.	More than 3	More than 3	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H	U, D, L, R, H, Rt.	U, D, L, R, H	U, D, L, R, H	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	Opt.
Addressable/readable cursor	Via program	Std.	Both std.	Both std.	No
Protected format	Via program	Std.	Via program	Via program	Std.
Partial screen transmit	Via program	Std.	Via program	Via program	Std.
Tabulation	Fwd. std. via prog.	Std.	Fwd. std. via prog.	Fwd. std. via prog.	Std.
Character insert/delete	Via program	Std.	Via program	Via program	Std.
Line insert/delete	Via program	Std.	Via program	Via program	Std.
Erase	Via program	Char., screen, line opt.	Std.	Std.	Char., field, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter, others	Typewriter, others	Typewriter, others	Typewriter, others	Typewriter, data entry, other
Character/code set	128 ASCII	128 ASCII	128 ASCII	128 ASCII	128 EBCDIC/ASCII
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	40	Up to 32	40	40	Up to 24 std.
Numeric keypad	Std.	Std.	Std.	Std.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	Single/dual	No	No	No
Diskette drive (floppy disk)	1-4 mini floppies	1-6 drives	1-4 drives	1-4 drives	3274 type only
Serial printer	No	Impact	Impact	Impact	Impact
Other devices	Audible alarm	Card readers, line printers, audible alarm	Line printer, audible alarm, 10-megabyte disk	10-megabyte disk, audible alarm	Line printer, light pen, etc.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half-duplex
Technique	Async.	Async./sync.	Async./sync.	Async./sync.	Sync.
Communications protocol	None	ASCII/BSC	BSC/SDLC	BSC/SDLC	BSC/SDLC
Code	ASCII	ASCII/EBCDIC	ASCII	ASCII	ASCII/EBCDIC
Speed, bits/second	75 to 9600	110 to 19,200	110 to 19,200	110 to 19,200	1200 to 9600
Format: character, line, or block	Char./block	Char./block	Char./block	Char./block	Block
Multipoint operation (pollable/addr.)	Opt.	Std.	Opt.	Std.	Std.
Auto answer	Opt.	Opt.	Opt.	Opt.	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	—	—	—	62
Display station, 2 year lease, $/mo.	—	—	—	—	58
Controller, 1 year lease, $/mo.	—	—	—	—	120-217
Controller, 2 year lease, $/mo.	—	—	—	—	100-170
Display station, purchase, $	—	—	—	—	1,880-2,250
Controller, purchase, $	—	—	—	—	4,000-7,000
Date of first production delivery	1/79	10/72	6/78	6/77	1st qtr. 1974
Display units installed to date	200	Over 3500	200	75	5000
Serviced by	Computek	Computek	Computek	Computek, G.A.	Computer Optics
COMMENTS	Contact vendor for pricing; pricing based upon OEM quantity	Contact vendor for pricing	Contact vendor for pricing; pricing based upon OEM quantity	Contact vendor for pricing; pricing based upon OEM quantity	

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Computer Peripherals COPS Family	Computer Peripheral Services Corp. Model T-42	Conrac 480 Series	Control Data Model 714	Control Data Model 751
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Either	Stand-alone	Cluster	Stand-alone
Maximum displays/controller	1	32	1	15	1
Portable case	No	No	No	No	No
IBM compatibility	No	3270 BSC/SDLC opt.	No	No	No
Teletype compatibility	Std.	Opt.	Std.	No	Std.
Other compatibility	See comments	Omron, Hazel. 2000	See comments	No	No
User programmable	No	Via user-defined param./firmware	Yes	No	No
Self diagnostics	No	Std.	Opt.	No	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	2000	640/1280	1920
Display arrangement, lines x chars./line	24 x 80 plus 25th status line	24 x 80	25 x 80	8/16 x 80	24 x 80
Display area, h x w, inches	12-in. diag.	12-in. diag.	6.5 x 8.5	8 x 10	12-inch diag.
Total displayable symbols	96/128	128 ASCII	128	64; 96 opt.	128 ASCII
Symbol formation	5 x 7/7 x 9	7 x 9 dot matrix	5 x 9 dot matrix	5 x 9 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	Std.	Std.	No	Yes	No
Programmable brightness levels	No	2 std.	2 std.	No	2 std.
Character and/or field blinking	Both std. (COPS 20 only)	Field std.	Std.	No	Both std.
Roll	Up std.	Up, down std.	Std.	Std.	Up std.
Paging	Std. (COPS 20 only)	2 std., 8 opt.	Std.	No	Opt.
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt., New Line	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Both std.	Both std.	Std.	No	Std.
Protected format	Std. (COPS 20 only)	Std.	Std.	Opt.	Std.
Partial screen transmit	Std. (COPS 20 only)	Std.	Std.	Opt.	Std.
Tabulation	Std.; fwd. & backward	Fwd./back std.	Std.	Std.	Std.
Character insert/delete	Std. (COPS 20 only)	Std.	Std.	Opt.	Std.
Line insert/delete	Std. (COPS 20 only)	Std.	Std.	Opt.	Std.
Erase	Field, line, screen std.	Line, screen std.	Char., line, screen std.	Char., screen std., line opt.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter std., others opt.	Typewriter	Typewriter	Typewriter
Character/code set	128 ASCII	128 ASCII	ASCII	ASCII	64/96 ASCII
Detachability	Std.	Std.	No	No	Std.
Program function keys	12 opt.	Up to 32 opt.	Up to 32	6	No
Numeric keypad	Opt.	Std.	Opt.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	Single drive	No	No	Single/dual drive
Diskette drive (floppy disk)	No	Micro-floppy	Opt.	No	No
Serial printer	Impact	Impact, thermal	Opt.	Impact/non-impact	Impact/non-impact
Other devices	Bar code reader and printer controller for terminal sharing opt.	Parallel printer, bell, composite video	Audible alarm std.; parallel printer	Audible alarm std.	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Async./sync.	Async./sync.	Synchronous	Asynchronous
Communications protocol	ASCII	ASCII, SDLC	ASCII; others opt.	ASCII/CDC BSC	ASCII
Code	ASCII	ASCII std., EBC. opt.	ASCII; others opt.	ASCII	ASCII
Speed, bits/second	110 to 19,200	110 to 9600	50 to 9600	2000 to 4800	110 to 9600
Format: character, line, or block	Char./block	Char., line, block	Char./block/line	Block	Char./line/page
Multipoint operation (pollable/addr.)	Std. (COPS 20 only)	Opt.	Opt.	Std.	Opt.
Auto answer	No	Opt.	Opt.	Std.	Opt.
Auto call	No	No	No	No	No
Terminal interface	RS-232C; 20 mA dc current loop	RS-232C std., 20 mA opt.	RS-232C, current loop	RS-232C, current loop	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	Opt.	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	39 to 113	—	—	112-259	100-134
Display station, 2 year lease, $/mo.	37 to 97	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	134-150	—
Display station, purchase, $	750-1,395	2,295-3,280	1,600-4,000	4,490-10,108	3,150-3,765
Controller, purchase, $	—	Contact vendor	—	5,300-6,013	—
Date of first production delivery	10/77	11/78	5/76	7/73	9/76
Display units installed to date	Over 1000	12	Over 2500	500	Over 500
Serviced by	Third party	CPS Corp.	Conrac	CDC	CDC
COMMENTS	Emulators available for ADDS, DEC, Hazeltine, and Lear Siegler terminals; models are COPS 10 (Teletype-compatible) and COPS 20 (intelligent data entry terminal with standard editing features)	NASA-compatible; Telenet-compatible; Complete RJE systems available; custom emulations available on request	Compatible with Burroughs TD700/800 & Univac U100/200; up to 49K bytes of RAM and PROM		

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Control Data Model 752	Control Data Model 756	Control Data Model 92451	Control Data Model 92452	Control Data Model 92456
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	1	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	No	No	No	No
User programmable	No	No	No	No	No
Self diagnostics	Yes	Std.	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	960; 1920 opt.	1920	1920
Display arrangement, lines x chars./line	24 x 80	24 x 80	12 x 80; 24 x 80 opt.	12 x 80; 24 x 80 opt.	24 x 80
Display area, h x w, inches	12-inch diag.	12-in. diag.	8 x 5.25	8 x 5.25	8 x 5.25
Total displayable symbols	128 ASCII	128 ASCII	128	128	128 ASCII
Symbol formation	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	2 std.	2 std.	2 opt.	2 opt.	2 std.
Character and/or field blinking	Both std.	Both std.	Both opt.	Both opt.	Both std.
Roll	Up std.	Up std.	Up std.	No	Up std.
Paging	No	No	2 pg. opt.	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H	U, D, L, R, H	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Std., addr. only	Std., addr. only	Std.	Std. addr. only	Std., addr. only
Protected format	No	Std.	Opt.	No	Opt.
Partial screen transmit	No	Std.	Opt.	No	Std.
Tabulation	No	Std.	Opt.	No	Opt.
Character insert/delete	No	Std.	Opt.	No	Opt.
Line insert/delete	No	Std.	Opt.	No	Opt.
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	64/96 ASCII	64/96 ASCII	ASCII	ASCII	64/96 ASCII
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	No	12 std., 24 possible	4 std.	Opt.	8 std., 16 possible
Numeric keypad	Std.	Std.	Std.	Opt.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	S-D opt.	No	No
Diskette drive (floppy disk)	No	No	S-D opt.	No	No
Serial printer	Impact/non-impact	Impact/non-impact	Impact/non-impact	Impact/non-impact	Impact/non-impact
Other devices	Audible alarm std.	Audible alarm std.	Audible alarm std.	Audible alarm std.	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Communications protocol	ASCII	ASCII	ASCII	ASCII	ASCII
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	110 to 9600	110 to 9600	110 to 9600	110 to 9600	110 to 9600
Format: character, line, or block	Char. only	Char./block	Char./block/line	Char./block/line	Char./block
Multipoint operation (pollable/addr.)	No; current loop	No, current loop	Opt.	No	No, current loop
Auto answer	No	No	Opt.	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232 B/C, CCITT V.24	RS-232 B/C, CCITT V.24	RS-232C, CCITT V.24
Integral modem	No	No	Opt.	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	55	70	—	—	—
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,650-1,750	2,197	2,000-2,350	1,000-1,500	1,655-1,865
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	3/77	6/78	10/75	3/76	9/77
Display units installed to date	Over 500	—	—	—	—
Serviced by	CDC	CDC	CDC	CDC	CDC
COMMENTS			1K-6K RAM, 4K-8K PROM memory	Several versions available	Several versions available

Alphanumeric Display Terminals— Basic Characteristics

SUPPLIER AND MODEL	Courier 270	Courier 275	Courier 277	Courier 7700	Courier 7750
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster	Stand-alone	Cluster	Cluster	Either
Maximum displays/controller	32	—	32	32	4
Portable case	No	No	No	No	No
IBM compatibility	3270, full line	IBM 3275	IBM 3277	No	No
Teletype compatibility	No	No	No	No	No
Other compatibility	No	No	No	HIS VIP 7700/7760	HIS VIP 7700/7760
User programmable	No	No	No	No	No
Self diagnostics	Std.	Std.	Std.	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	480 to 3440	480, 960, 1920	480, 1920	960/1920	960/1920
Display arrangement, lines x chars./line	12 x 40; 12, 24, 32, or 43 x 80	12 x 40; 12, 24, 32, or 43 x 80	12 x 40, 24 x 80	12 x 24/80	12 x 24/80
Display area, h x w, inches	7 x 10	7 x 10	7 x 10	7 x 10, 15-in. diag.	7 x 10, 15-in. diag.
Total displayable symbols	64 std., 96 opt.	64 std., 96 opt.	64 std., 96 opt.	96 std., 128 opt.	96 std., 128 opt.
Symbol formation	7 x 9/12 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	8 x 10 dot matrix	8 x 10 dot matrix
Color	No	No	No	No	No
Reverse video	Opt., cursor only	No	No	Cursor	Cursor
Programmable brightness levels	2 std.	2 std.	2 std.	Std.	Std.
Character and/or field blinking	Field opt.	Field opt.	Field opt.	Both std.	Both std.
Roll	No	No	No	No	No
Paging	No	No	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Opt.	Opt.	Opt.	Std.	Std.
Addressable/readable cursor	Both std.	Both std.	Both std.	Addressable only	Addressable only
Protected format	Std.	Std.	Std.	Std.	Std.
Partial screen transmit	Std.	Std.	Std.	Std.	Std.
Tabulation	Std.	Std.	Std.	Fwd./back tab std.	Fwd./back tab std.
Character insert/delete	Std.	Std.	Std.	Std.	Std.
Line insert/delete	No	No	No	Std.	Std.
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen, variable fields std.	Char., line, screen, variable fields std.
Character repeat	Std.	Std.	Std.	Typamatic keys std.	Typamatic keys std.
KEYBOARD PARAMETERS					
Style	Typewriter, data entry, APL, console	Typewriter, data entry	Typewriter, data entry	Typewriter, data entry	Typewriter, data entry
Character/code set	64 ASCII, 96 EBC	64 ASCII, 96 EBC	64 ASCII, 96 EBC	96 ASCII; 128 opt.	96 ASCII; 128 opt.
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	12 std., 24 opt.	6 std., 12 opt.	6 std., 12 opt.	Std.	Std.
Numeric keypad	Opt.	Opt.	Opt.	Opt.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	Single	No	No	Single, dual opt.	No
Serial printer	Impact	Impact	No	Impact	Impact
Other devices	—	—	—	Mag. badge rdr., line printers, tilt/swivel base, line extenders, etc.	Mag. badge rdr., line printers, tilt/swivel base, line extenders, etc.
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half-duplex	See comments	Half/full-duplex	Half/full-duplex
Technique	Synchronous	Synchronous	See comments	Synchronous	Synchronous
Communications protocol	BSC, SNA SDLC	BSC	See comments	HIS VIP 7700/7760	HIS VIP 7700/7760
Code	ASCII, EBCDIC	ASCII, EBCDIC	See comments	ASCII	ASCII
Speed, bits/second	9600	To 9600	See comments	Up to 9600	Up to 9600
Format: character, line, or block	Block	Block	See comments	Block	Block
Multipoint operation (pollable/addr.)	Std.	Std.	See comments	Std.	Std.
Auto answer	No	No	See comments	Opt.	Opt.
Auto call	No	Yes	See comments	No	No
Terminal interface	RS-232 B/C	RS-232 B/C	See comments	RS-232C, CCITT	RS-232C, CCITT
Integral modem	No	No	See comments	No	No
Integral acoustic coupler	No	No	See comments	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Contact vendor	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Display station, 2 year lease, $/mo.	Contact vendor	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Controller, 1 year lease, $/mo.	Contact vendor	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Controller, 2 year lease, $/mo.	Contact vendor	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Display station, purchase, $	Contact vendor	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Controller, purchase, $	—	—	Contact vendor	Contact vendor	Contact vendor
Date of first production delivery	1974	1974	1977	1977	1977
Display units installed to date	—	—	—	—	—
Serviced by	ITT Courier	ITT Courier	ITT Courier	ITT Courier	ITT Courier
COMMENTS	Fully compatible with IBM 3270 Information Display System including 3271/2/4/6/7/8		Interfaces to IBM 3271, 3272, and 3790 controllers (or System/3) in same manner as on IBM 3277	Fully compatible with computers that support Honeywell VIP 7700/7760; redundant terminal controller opt.; integral line monitor function; format reveal mode; forms composition mode	Fully compatible with computers that support Honeywell VIP 7700/7760; integral line monitor function; format reveal mode; forms composition mode

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Data General Model 6052	Data General Model 6053	Data 100 Model 82	Data 100 Model 85	DatagraphiX 132A
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Cluster	Cluster	Stand-alone
Maximum displays/controller	1	1	16	16	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	3270 BSC	3270 BSC, HASP	No
Teletype compatibility	Std.	Std.	No	No	Std.
Other compatibility	No	No	No	IBM 2780/3780	No
User programmable	No	No	No	Yes, via RPG & COBOL	No
Self diagnostics	Yes	Yes	Yes	Yes	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	1920	3960
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	24 x 80	30 x 132
Display area, h x w, inches	6 x 9	6 x 9	14-inch diag.	14-in. diag.	8 x 11
Total displayable symbols	64	96	96	96	96
Symbol formation	5 x 7 dot matrix	5 x 8 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	Charactron
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	No	2 std.	2 std.	2 std.	Yes
Character and/or field blinking	Both std.	Both std.	Both std.	Both std.	No
Roll	Up std.	Up std.	No	No	Yes
Paging	No	No	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Std.; address. only	Std.; address only	Std. address only	Std. address only	Yes
Protected format	No	No	Std.	Std.	No
Partial screen transmit	Yes	Yes	Std.	Std.	Yes
Tabulation	No	No	Std.	Std.	Std.
Character insert/delete	No	No	Std.	Std.	Std.
Line insert/delete	No	No	Std.	Std.	Std.
Erase	Line, screen std.	Line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Teletype	Typewriter	Typewriter, data entry, keypunch	Typewriter, data entry, keypunch	Typewriter
Character/code set	64 ASCII	96 ASCII	96 ASCII	96 ASCII	128 ASCII
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	8 std.	11 std.	Up to 12 std.	Up to 12 std.	No
Numeric keypad	Std.	Std.	Opt.	Opt.	No
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	Single drive	No	No
Serial printer	Yes	Yes	Impact	Impact	RS-232C
Other devices	—	—	Aud. alarm, line printer, switchable displays bwtn. Models 74, 78, 82, & 85	Aud. alarm, line printers, switchable displays bwtn. Models 74, 78, 82, 85	Audible alarm
TRANSMISSION PARAMETERS					
Mode	Full-duplex	Full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Synchronous	Synchronous	Asynchronous
Communications protocol	ASCII	ASCII	BSC	BSC	ASCII
Code	ASCII	ASCII	EBCDIC	EBCDIC	ASCII
Speed, bits/second	110-19,200	110-19,200	Up to 9600	Up to 9600	110-9600
Format: character, line, or block	Char. only	Char. only	Block only	Block only	Char., line, block
Multipoint operation (pollable/addr.)	No	No	Std.	Std.	No
Auto answer	No	No	Yes	Yes	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C, 20 mA	RS-232C, 20 mA	RS-232C	RS-232C	RS-232C, 20 mA
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	71 w/keyboard	71 w/keyboard	226-265
Display station, 2 year lease, $/mo.	—	—	68 w/keyboard	68 w/keyboard	Conditional
Controller, 1 year lease, $/mo.	—	—	320 (see comments)	772 (see comments)	—
Controller, 2 year lease, $/mo.	—	—	300 (see comments)	738 (see comments)	—
Display station, purchase, $	1,990	2,290	2,352 w/keyboard	2,352 w/keyboard	3,950-4,450
Controller, purchase, $	400	400	10,500 (see comm.)	28,476 (see comm.)	—
Date of first production delivery	10/76	10/76	2/77	9/78	11/77
Display units installed to date	—	—	Over 1000	—	—
Serviced by	Data General	Data General	Data 100	Data 100	DatagraphiX
COMMENTS	Monitor tilts and swivels	Monitor tilts and swivels	Available as a single- or dual-processor config. for on- and off-line data entry and batch processing; controller price includes first display station, integrated diskette, and 24K bytes of memory	Avail. as an attached processor to another Data 100 system; communications is performed in attached processor; contr. price includes first display station, 10MB disk storage, & 128K-byte main memory	Memory buffer of 60 or 120 lines

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	DatagraphiX 132B	Datamedia Series 80	Datamedia Elite 1520 APL/ASCII Portable	Datamedia Elite 1521A	Datamedia Elite 3000A Series
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	1	1	1	1
Portable case	No	No	Std.; 40 lb.	No	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	No	No	No	See comments
User programmable	No	No	No	No	No
Self diagnostics	—	Std.	Std.	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	3960	2000	1920	1920	1920
Display arrangement, lines x chars./line	30 x 132	25 x 80	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	8 x 11	6 x 9	4 x 7	6 x 9	6 x 9
Total displayable symbols	96	128 ASCII	128 ASCII	128 ASCII	128 ASCII
Symbol formation	Charactron	5 x 9 dot matrix	5 x 9 dot matrix	5 x 9 dot matrix	5 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	Std.
Programmable brightness levels	Yes	3 std.	No	2 opt.	3 std.
Character and/or field blinking	No	Char., field std.	No	No	Char., field std.
Roll	Yes	Up, down std.	Up std.	Up std.	Up, down std.
Paging	Yes	2 pages opt.	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt., New line std.	U, D, L, R, H, Rt., New line std.	U, D, L, R, H, Rt., New line std.	U, D, L, R, H, Rt., New line std.
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Yes	Both std.	Std. address. only	Std. address only	Both std.
Protected format	Yes	Std.	No	No	Std.
Partial screen transmit	Yes	Std.	No	No	Std.
Tabulation	Std.	Fwd./back std.	Forward std.	Forward std.	Fwd./back std.
Character insert/delete	Std.	Std.	No	No	Std.
Line insert/delete	Std.	Std.	No	No	Std.
Erase	Std.	Char., line, screen std.	Char., line, page std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	128 ASCII	128 ASCII	128 ASCII + 32 APL	128 ASCII	128 ASCII
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	12 std.	10 std. + 10 opt.	No	Opt.	10 std.
Numeric keypad	Std.	Std.	No	Opt.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	RS-232C, parallel I/F	RS-232C interface	RS-232C interface	RS-232C interface
Diskette drive (floppy disk)	No	RS-232C, parallel I/F	RS-232C interface	RS-232C interface	RS-232C interface
Serial printer	RS-232C	RS-232C, parallel I/F	RS-232C interface	RS-232C interface	RS-232C interface
Other devices	Audible alarm	Audible alarm std.; printer sharing opt.	Audible alarm, composite video out std.	Audible alarm, composite video out std.	Audible alarm, composite video out std.
TRANSMISSION PARAMETERS					
Mode	Full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Async. or sync.	Asynchronous	Asynchronous	Asynchronous
Communications protocol	ASCII	ASCII	ASCII	ASCII	ASCII
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	110 to 9600	0 to 19,200	50 to 9600	50 to 9600	0 to 9600
Format: character, line, or block	Char., line, block	Char., line, block	Char. only	Char. only	Char., line, block
Multipoint operation (pollable/addr.)	No	Opt.	No	No	Opt.
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C, 20 mA	Dual RS-232C/20 mA	RS-232C, 20 mA	RS-232C; 20 mA opt	RS-232C std.; 20 mA opt.
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	Opt.	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	255-284	Contact vendor	105	65	75
Display station, 2 year lease, $/mo.	Conditional	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	4,450-4,950	—	2,495-2,795	1,200-1,250	1,595
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	11/78	—	6/75	6/77	2/78
Display units installed to date	—	—	Over 1000	Over 2000	2000
Serviced by	DatagraphiX	Datamedia	Datamedia	Datamedia	Datamedia
COMMENTS	Memory buffer of 60 or 120 lines				DEC VT-52, Data General Dasher 6053, Datamedia Elite 2500 compatibility available

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Datamedia Elite 3045 APL/ASCII	Datamedia Elite 3100A	Datamedia Elite 4000A	Datapoint 1130	Datapoint 1150
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Either	Either
Maximum displays/controller	1	1	1	4	4
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	Opt.	Yes
Teletype compatibility	Std.	Std.	Std.	Opt.	Yes
Other compatibility	No	DEC VT-100	No	—	—
User programmable	No	No	Yes	Yes, several languages	Yes, several languages
Self diagnostics	Std.	Std.	No	—	—
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1848-3168	1920	960	960
Display arrangement, lines x chars./line	24 x 80	24 x 80, 14/24 x 132	24 x 80	12 x 80	12 x 80
Display area, h x w, inches	6 x 9	6 x 9	6 x 9	3.5 x 7	3.5 x 7
Total displayable symbols	128 ASCII + 32 APL	128 ASCII	128 ASCII	96	96
Symbol formation	5 x 9 dot matrix	7 x 9 dot matrix	5 x 9 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix
Color	No	No	No	No	No
Reverse video	No	Std.	Std.	—	—
Programmable brightness levels	3 std.	Opt.	2 std.	—	—
Character and/or field blinking	Std.	Opt.	Both std.	—	—
Roll	Up, down std.	Std.	Std., up & down	All functions are programmable	All functions are programmable
Paging	No	No	2 pages std., 2 opt.		
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt., New Line std.	U, D, L, R, H, Rt., New Line std.	U, D, L, R, H, Rt.		
Cursor blinking	Std.	Std.	Std.; non-blink opt.		
Addressable/readable cursor	Both std.	—	Addressable		
Protected format	Std.	Opt.	Std.		
Partial screen transmit	Std.	Opt.	Std.		
Tabulation	Fwd./back std.	Std.	Opt.		
Character insert/delete	Char. insert std.	Opt.	Opt.		
Line insert/delete	No	Opt.	Opt.		
Erase	Char., line, screen std.	Char., line, screen std.	Chr., line, screen std.		
Character repeat	Std.	Std.	Std.		
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	128 ASCII + 32 APL	128 ASCII	128 ASCII	128 ASCII	128 ASCII
Detachability	Std.	Std.	Std.	No	No
Program function keys	10 std.	Std.	Std.	No	No
Numeric keypad	Std.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	RS-232C interface	RS-232C interface	RS-232C interface	No	No
Diskette drive (floppy disk)	RS-232C interface	RS-232C interface	RS-232C interface	1 to 4 drives	1 to 4 drives
Serial printer	RS-232C interface	RS-232C interface	RS-232C interface	Impact	RS-232
Other devices	Audible alarm, composite video std.	Aud. alarm, comp. video std.; limited graphics opt.	Audible alarm std.	Matrix, belt, & drum printers & 7-/9-tk. mag. tape drives	Matrix, belt, & drum printers & 7-9-tk. mag. tape drives
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Sync./Async.	Async./sync.
Communications protocol	ASCII	ASCII	ASCII	ASCII/BSC/SDLC	ASCII/BSC/SDLC
Code	ASCII	ASCII	ASCII	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	0 to 9600	50 to 9600	50 to 9600	Up to 40.8K	Up to 40.8K
Format: character, line, or block	Char., line, block	Char., line, block	Char./line/block	Char./block	Char./block
Multipoint operation (pollable/addr.)	No	No	Opt.	Opt.	Opt.
Auto answer	No	No	No	Opt.	Opt.
Auto call	No	No	No	Opt.	Opt.
Terminal interface	RS-232C std.; 20 mA opt.	RS-232C; 20 mA opt.	RS-232C or 20 mA	RS-232C	RS-232C
Integral modem	No	No	Opt.	Opt., 103/202	Opt., 103/202
Integral acoustic coupler	No	No	No	Opt., 300 bps	Opt., 300 bps
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	85	Contact vendor	Contact vendor	—	—
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	313	475
Controller, 2 year lease, $/mo.	—	—	—	286	431
Display station, purchase, $	1,795	—	—	—	—
Controller, purchase, $	—	—	—	13,790	15,390
Date of first production delivery	2/75	—	1/77	2/75	9/76
Display units installed to date	500	—	—	4500	Over 450
Serviced by	Datamedia	Datamedia	Datamedia	Datapoint	Datapoint
COMMENTS					

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Datapoint 1170	Datapoint 1500	Datapoint 1800	Datapoint 3600 & 3610
TERMINAL DESCRIPTION				
Stand-alone or cluster	Either	Stand-alone	Either	Stand-alone
Maximum displays/controller	4	1	4	1
Portable case	No	No	No	No
IBM compatibility	Yes	3780	Yes	No
Teletype compatibility	Yes	Yes	Yes	No
Other compatibility	—	Opt.	Opt.	Datashare/Multiform
User programmable	Yes, several languages	Yes, Data Bus & Dataform	Yes, see comments	No
Self diagnostics	—	Yes	Yes	No
DISPLAY PARAMETERS				
Display positions, chars/display	960	1920	1920	1920
Display arrangement, lines x chars./line	12 x 80	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	3.5 x 7	5.5 x 8.35	5.5 x 8.35	5 x 8
Total displayable symbols	96	128	128	96
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix
Color	No	No	No	No
Reverse video	—	Std.	Std.	No
Programmable brightness levels	—	—	—	No
Character and/or field blinking	—	—	—	No
Roll	All functions are programmable	All functions are programmable	All functions are programmable	Up std.
Paging				No
Cursor positioning; Up, Down, Left, Right, Home, Return				U, D, L, R, H, Rt.
Cursor blinking				Std.
Addressable/readable cursor				Std. address. only
Protected format				No
Partial screen transmit				No
Tabulation				Std.
Character insert/delete				No
Line insert/delete				No
Erase				Char. std.
Character repeat				No
KEYBOARD PARAMETERS				
Style	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	128 ASCII	128 ASCII	128 ASCII	ASCII
Detachability	No	Opt.	Std.	Opt.
Program function keys	No	5 std.	5 std.	No
Numeric keypad	Std.	Std.	Std.	Std.
ANCILLARY DEVICES				
Cassette tape drive	No	No	No	No
Diskette drive (floppy disk)	1 to 4 drives	2 or 4 drives	2-8 drives, double dens.	No
Serial printer	RS-232C interface	RS-232C interface	RS-232C interface	Impact
Other devices	Matrix, belt, & drum printers & 7-/9-tk. mag. tape drives	Freedom printer optional	Matrix, belt, drum printers; 7-/9-tk. mag. tape drives; card reader	Audible alarm std.
TRANSMISSION PARAMETERS				
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Full-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Asynchronous
Communications protocol	ASCII/BSC/SDLC	ASCII	ASCII/SDLC/BSC	ASCII
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII
Speed, bits/second	Up to 40.8K	50 to 9600	150 to 9600	110 to 9600
Format: character, line, or block	Char./block	Char./block	Char./block	Char. only
Multipoint operation (pollable/addr.)	Opt.	Opt.	Opt.	No
Auto answer	Opt.	Std.	Std.	No
Auto call	Opt.	Opt.	Opt.	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232B/C
Integral modem	Opt.; 103/202	No	No	No
Integral acoustic coupler	Opt.; 300 bps	No	No	No
PRICING AND AVAILABILITY				
Display station, 1 year lease, $/mo.	—	Purchase only	—	77
Display station, 2 year lease, $/mo.	—	—	—	70
Controller, 1 year lease, $/mo.	529	—	322	—
Controller, 2 year lease, $/mo.	477	—	298	—
Display station, purchase, $	—	—	—	1,950
Controller, purchase, $	16,890	5,950	10,550	—
Date of first production delivery	7/77	9/77	9/78	12/74
Display units installed to date	Over 200	3000	Over 200	20,000
Serviced by	Datapoint	Datapoint	Datapoint	Datapoint
COMMENTS		Price includes dual diskette drives, processor with 4K ROM & 32K RAM, comm. interface, & software	Programming languages include RPG Plus, COBOL, BASIC, DATABUS, DATAFORM	

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Dataview Marquis	Dataview Marquis/X-Y	Dataview Monarch	Dataview Monarch-52	Dataview Titan
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	1	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	Opt.	No	Opt.
Teletype compatibility	Std.	No	Std.	Std.	Opt.
Other compatibility	No	No	DEC; others opt.	No	Opt.
User programmable	No	No	No	No	No
Self diagnostics	Yes	Std.	Std.	No	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	1920	1920
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	12-inch diagonal	7 x 9	7 x 9	12-in. diagonal	7 x 9
Total displayable symbols	64	96	128	128 ASCII	128
Symbol formation	5 x 7 dot matrix	7 x 9	7 x 9	5 x 7 dot matrix	7 x 9
Color	No	No	No	No	No
Reverse video	No	Std.	Std.	No	Std.
Programmable brightness levels	—	Std.	2 std.	No	2 std.
Character and/or field blinking	No	No	No	No	Char. std.; field opt.
Roll	Yes	Std. up & down	Up & down std.	No	Up & down std.
Paging	No	No	Opt., 2 pages	No	2 std.; 30 opt.
Cursor positioning; Up, Down, Left, Right, Home, Return	Horiz. bottom line	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Yes	Std.	Std.	Std.	Std.
Addressable/readable cursor	Yes	Addr. std./read. opt.	Both std.	Std. addr. only	Both std.
Protected format	No	No	Opt.	No	Std.
Partial screen transmit	No	No	Opt.	No	Std.
Tabulation	No	Std. forward	Std.; back opt.	Std.	Std.; back opt.
Character insert/delete	No	No	Opt.	No	Std.
Line insert/delete	No	No	Opt.	No	Std.
Erase	Screen std.	Char. & screen std.	Char., line, screen std.	Line, screen std.	Char., line, screen std.
Character repeat	Yes	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	128 ASCII	128 ASCII/EBCDIC	ASCII	128 ASCII/EBCDIC
Detachability	No	Opt.	Opt.	No	Opt.
Program function keys	No	No	3 opt.	3 std.	3 std.; others opt.
Numeric keypad	No	Opt.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	RS-232C interface	RS-232C interface	No	RS-232C interface
Diskette drive (floppy disk)	No	RS-232C interface	RS-232C interface	No	RS-232C interface
Serial printer	No	RS-232C interface	RS-232C interface	No	RS-232C interface
Other devices	Audible alarm	—	—	Audible alarm std.	—
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Async./sync.	Asynchronous	Async./sync.
Communications protocol	ASCII	ASCII	ASCII/BSC	ASCII	ASCII/BSC/SDLC
Code	ASCII	ASCII/EBCDIC	ASCII/EBCDIC	ASCII	ASCII/EBCDIC
Speed, bits/second	Up to 9600	75 to 9600	75 to 19,200	75 to 9600	75 to 19,200
Format: character, line, or block	Char.	Char. only	Char./block opt.	Character	Char./line/block
Multipoint operation (pollable/addr.)	No	No	Opt.	No	Std.
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C, 20 & 60 mA current loop	RS-232C, 20 mA current loop	RS-232C & 20 mA current loop	RS-232C of 20 mA current loop std.	RS-232C & 20 mA current loop
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	—	—	—	—
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	805	895-1,295	1,435-1,995	1,360	2,195 (base)
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	1/77	9/77	1/78	12/78	5/78
Display units installed to date	—	—	—	—	—
Serviced by	Dataview (factory)	Dataview (factory)	Dataview (factory)	Dataview	Dataview (factory)
COMMENTS			Emulation protocol for several prominent terminals; Intel 8055; split data rates	Plug-for-plug replacement for DEC VT-52 and VT-100; keyboard layout is identical to VT-52	Emulation protocol for several prominent terminals; Intel 8055; split data rates

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Delta Data Systems Model 4000	Delta Data Systems Model 4050	Delta Data Systems Model 4100	Delta Data Systems Model 4300E	Delta Data Systems Model 4500
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	1	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	3270/2260/2265	No	No	No	3270/2260/2265
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	See comments	No	No	No
User programmable	Opt.	Opt.	No	No	Yes
Self diagnostics	No	No	No	No	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	2000	2000	2000	2000	2000
Display arrangement, lines x chars./line	25 x 80	25 x 80	25 x 80	25 x 80	25 x 80
Display area, h x w, inches	6 x 11	6 x 11	6 x 11	6 x 11	6 x 11
Total displayable symbols	224	224	224	224	224
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix
Color	No	No	No	No	No
Reverse video	Std.	Std.	Std.	Std.	Std.
Programmable brightness levels	Opt.	Opt.	No	Opt.	Opt.
Character and/or field blinking	Both std.	Both std.	Both std.	Both std.	Both std.
Roll	Up & down std.	Up & down std.	Up & down std.	Up & down std.,	Up & down std.
Paging	Std.	Std.	Std.	2 std.; 2 opt.	Std.
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Std.	Std.	Std.	Std.	Std.
Protected format	Std.	Std.	Std.	Std.	Std.
Partial screen transmit	Std.	Std.	Std.	Std.	Std.
Tabulation	Std.	Std.	Std.	Std.	Std.
Character insert/delete	Std.	Std.	Std.	Std.	Std.
Line insert/delete	Std.	Std.	Std.	Std.	Std.
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII; others opt.	ASCII; others opt.	128 ASCII; others opt	128 ASCII	ASCII
Detachability	Opt.	Opt.	No	Opt.	Opt.
Program function keys	8 std.; other opt.	8 std.; others opt.	3 std.; 14 opt.	14 opt.	8 std.
Numeric keypad	Std.	Std.	Yes	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	RS-232C interface	RS-232C interface	RS-232C interface	RS-232C interface	Single/dual
Diskette drive (floppy disk)	RS-232C interface	RS-232C interface	RS-232C interface	RS-232C interface	Single/dual
Serial printer	Impact/non-impact	Impact/non-impact	Impact	Impact	Impact/non-impact
Other devices	Audible alarm std.; light pen opt.	Audible alarm std.; light pen opt.	—	—	Audible alarm std., light pen opt., others
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Async./sync.	Async./sync.
Communications protocol	ASCII; others opt.	ASCII; others opt.	ASCII	ASCII; others opt.	ASCII; others opt.
Code	ASCII; others opt.	ASCII; others opt.	ASCII	ASCII; others opt.	ASCII; others opt.
Speed, bits/second	110 to 9600	110 to 9600	110 to 9600	110 to 9600	110 to 9600
Format: character, line, or block	Char./block	Char./block	Char./block	Char./block	Char./block
Multipoint operation (pollable/addr.)	Opt.	Opt.	Opt.	Opt.	Opt.
Auto answer	Opt.	Opt.	No	No	Opt.
Auto call	No	No	No	No	No
Terminal interface	RS-232C, current loop	RS-232C, current loop	RS-232C, current loop	RS-232C	RS-232B/C, current loop
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	122	150-170	Purchase only	168-178	178-208
Display station, 2 year lease, $/mo.	113	138-156	—	154-163	163-190
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	3,500-3,755	3,750-4,450
Display station, purchase, $	2,425	2,995-3,500	1,795	—	—
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	2/75	5/76	11/77	6/76	7/75
Display units installed to date	3000	4000	500	500	—
Serviced by	Delta & Sorbus	Delta & Sorbus	Delta & Sorbus	Delta & Sorbus	Delta & Sorbus
COMMENTS	Additional PROM or ROM with user program available up to 16K	Plug-to-plug replacement for Burroughs, Univac, & Honeywell displays		Design for text editing	Memory can be any mix of ROM, PROM, and RAM up to 20K; software available

Alphanumeric Display Terminals—Basic Characteristics

SUPPLIER AND MODEL	Delta Data 7100	Delta Data 7300	Delta Data 7500	Digi-Log Microterm II	Digi-Log TeleComputer II
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Either	Stand-alone	Stand-alone
Maximum displays/controller	1	1	15	1	10
Portable case	No	No	No	No	Opt.; 22 lbs.
IBM compatibility	No	No	3271/3277/3275	2780 opt.	No
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	No	No	—	No
User programmable	Std.	Std.	Std.	Yes	No
Self diagnostics	Std.	Std.	Yes	Yes	No
DISPLAY PARAMETERS					
Display positions, chars/display	2240	2240	2240	1920	1280/640
Display arrangement, lines x chars./line	28 x 80	28 x 80	28 x 80	24 x 80	16 x 40/80
Display area, h x w, inches	15-in. diag.	15-in. diag.	15-in. diag.	6 x 9	Variable
Total displayable symbols	128 std., 672 opt.	128 std., 672 opt.	128 std., 672 opt.	128	64; 96 opt.
Symbol formation	7 x 10 dot matrix	7 x 10 dot matrix	7 x 10 dot matrix	7 x 11 dot matrix	5 x 7 dot matrix
Color	No	No	No	No	No
Reverse video	Std.	Std.	Yes	Std.	No
Programmable brightness levels	Std.	Std.	Yes	Std.	No
Character and/or field blinking	Both std.	Both std.	Yes	Both std.	Both opt.
Roll	Up, down std.	Up, down std.	Yes	Std.	Up std.
Paging	3 std.; 15 opt.	3 std.; 15 opt.	Up to 15	Programmable	—
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Yes	Std.	Opt.
Addressable/readable cursor	Both std.	Both std.	Yes	Std.	Opt., addr. only
Protected format	Std.	Std.	Yes	Std.	No
Partial screen transmit	Std.	Std.	Yes	Std.	No
Tabulation	Std.	Std.	Yes	Std.	No
Character insert/delete	Std.	Std.	Yes	Std.	No
Line insert/delete	Std.	Std.	Yes	Std.	No
Erase	Char., line, screen, page, block std.	Same as 7100 plus word, sentence, para.	Same as 7100 plus word, sentence, para.	Char., line, screen Std.	Screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter, data entry	Typewriter	Typewriter, data entry	Typewriter	Teletype
Character/code set	ASCII	ASCII	ASCII/EBCDIC	128 ASCII	ASCII
Detachability	Std.	Std.	Std.	No	Yes
Program function keys	8 std., up to 20 opt.	8 std.; up to 20 opt.	Up to 20	26 std.	No
Numeric keypad	Std.	No	Opt.	Std.	No
ANCILLARY DEVICES					
Cassette tape drive	RS-232C interface	RS-232C interface	RS-232C interface	RS-232C interface	RS-232C interface
Diskette drive (floppy disk)	Parallel interface	Parallel interface	Parallel interface	Single/dual drive	RS-232C interface
Serial printer	Impact/non-imp. opt.	Impact/non-imp. opt.	Impact/non-imp. opt.	Impact/non-impact	RS-232C interface
Other devices	Audible alarm std.; split screen	Audible alarm std., split screen	Audible alarm std., split screen	—	5-inch portable CRT, audible alarm
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Async./sync.	Asynchronous
Communications protocol	ASCII	ASCII	ASCII, bisync., sync.	Programmable	ASCII
Code	ASCII	ASCII	ASCII, EBCDIC	Programmable	ASCII
Speed, bits/second	110 to 19,200	110 to 19,200	110 to 19,200	50 to 19,200	75 to 9600
Format: character, line, or block	Char., line, block	Char., line, block, para	Char., line, block, para	Char./block	Char. only
Multipoint operation (pollable/addr.)	No	No	Yes	Programmable	No
Auto answer	No	No	No	Std.	No
Auto call	No	No	No	Std.	No
Terminal interface	RS-232C, Mil-Std-188, RS-422, RS-423	RS-232C, Mil-Std-188, RS-422, RS-423	RS-232C, Mil-Std-188, RS-422, RS-423	RS-232C	RS-232C, CCITT, or 20/60 mA dc
Integral modem	No	No	No	No	Opt.
Integral acoustic coupler	No	No	No	No	Opt.
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	Purchase only	—	—
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	4,600	4,600	4,050	6,930	250-350
Controller, purchase, $	—	—	—	—	1,395-1,570
Date of first production delivery	6/78	6/78	12/77	4/78	9/75
Display units installed to date	—	—	—	100	Over 800
Serviced by	Delta & Sorbus	Delta & Sorbus	Delta & Sorbus	Third party	Digi-Log
COMMENTS	Additional PROM or RAM up to 64K optionally available; 16-bit TI 9900 microprocessor; floppy disk operating system and BASIC optionally available	Extensive text edit features, including justification, word, sentence, & para. copy and move, search; floppy disk operating system and BASIC optionally available	1K PROM & 16K RAM std. (64K opt.); 16-bit TI 9600 microprocessor; soft. avail. for editing, compatibility, & transmission features; prog. dev. sys. opt.; floppy disk operating sys. and BASIC opt.	Dual Z-80 microprocessors	Over 2500 units delivered, including Models 33 and 209, now discontinued

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Digital Equipment Model VT-52	Digital Equipment Model VT-55	Digital Equipment Model VT-61/t	Digital Equipment DEC station 78	Digital Equipment Model VT-100
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	1	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	No	No	No	No
User programmable	No	No	No	Yes	No
Self diagnostics	No	No	Yes	Yes (terminal)	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	1920	1920; 3168 opt.
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	24 x 80	24 x 80; 24 x 132 opt.
Display area, h x w, inches	8.7 x 4.3	8.7 x 4.3	8.7 x 4.3	8.7 x 4.3	8 x 4.5
Total displayable symbols	128	128	128	128	128
Symbol formation	7 x 7	7 x 7	7 x 8 dot matrix	7 x 7 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	Std.	No	Yes
Programmable brightness levels	No	No	No	No	Yes
Character and/or field blinking	No	No	No	No	Yes
Roll	No	No	Up & down std.	Std., up only	Up, down, smooth
Paging	No	No	Yes	Programmable	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Std., addressable only	Std., addressable only	Std.	Std., addressable only	Yes
Protected format	No	No	Std.	Programmable	No
Partial screen transmit	No	No	Std.	Programmable	No
Tabulation	Std.	Std.	Std.	Std., forward & back	Std. & program. tabs
Character insert/delete	No	No	Std.	Programmable	No
Line insert/delete	No	No	Std.	Programmable	No
Erase	Line, screen std.	Line, screen std.	Char., line, screen std.	Char., line, screen std.	Line, screen, partial line, partial screen
Character repeat	Std.	Std.	Std.	Std.	Yes
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	128 ASCII	ASCII	128 ASCII	ASCII
Detachability	No	No	No	No	Yes
Program function keys	3 std.	3 std.	19	No	4 std.
Numeric keypad	Std.	Std.	No	Std.	Yes
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	No	Up to 4 drives	No
Serial printer	Non-impact	Non-impact	No	Opt.	No
Other devices	Audible alarm std.	—	Audible alarm std.	Parallel printers opt.	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	See comments	See comments	See comments	Half/full-duplex	Full-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Async.; sync. opt.	Asynchronous
Communications protocol	No	ASCII	ASCII	ASCII	ASCII
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	75 to 9600	75 to 9600	75 to 9600	50 to 19,200	50 to 19,200
Format: character, line, or block	Char. only	Char. only	Char./block	Char./block	Char. only
Multipoint operation (pollable/addr.)	No	No	No	Std.	No
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C, 20 mA current loop	RS-232C, 20 mA current loop	RS-232C or 20 mA dc	RS-232C (two)	RS-232C; current loop opt.
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	Purchase only	Purchase only	Purchase only
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,900	2,750	3,275	8,250 (w/o support)	1,900
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	12/75	—	7/76	9/77	—
Display units installed to date	—	—	—	—	—
Serviced by	DEC	DEC	DEC	DEC	DEC
COMMENTS	Transmission modes are full-duplex and full-duplex with local copy	Also provides graphics capability; transmission modes are full-duplex and full-duplex with local copy	Transmission modes are full-duplex and full-duplex with local copy	Price includes LSI PDP-8 with 32K RAM, dual diskette drives, and use-only software license	ANSI std. escape sequences; all user controls and adjustments can be done from keyboard; customized parameters can be saved in non-volatile memory; line drawing set std.

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Digital Equipment PDT-11/110 & PDT-11/130	Digital Equipment PDT-11/151	ECD Smart ASCII	EECO Editor I	Elbit DS 1920
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Either	Stand-alone	Either	Stand-alone
Maximum displays/controller	4	4	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	3270	No	No
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	No	Yes	No	No
User programmable	Yes	Yes	Yes	No	No
Self diagnostics	Yes	Yes	Opt.	Yes	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920; 3168 opt.	1920; 3168 opt.	4096	1920	1920
Display arrangement, lines x chars./line	24 x 80; 24 x 132 opt.	24 x 80; 24 x 132 opt.	20 x 16 to 40 x 132	24 x 80	24 x 80
Display area, h x w, inches	8 x 4.5	8 x 4.5	8.25 x 11.0	12-in. diag.	8 x 5.24/6.3 x 10 x 2
Total displayable symbols	128	128	128 user-program.	128	64/96/128
Symbol formation	7 x 9 dot matrix	7 x 9 dot matrix	8 x 12 dot matrix	5 x 9 dot matrix	5 x 8 dot matrix
Color	No	No	Opt. colored fields	Opt.	No
Reverse video	Yes	Yes	User-selectable	Std.	No
Programmable brightness levels	Yes	Yes	No	2 std.	No
Character and/or field blinking	Yes	Yes	Std.; user-programmable	Std.	Std.
Roll	Up, down, smooth	Up, down, smooth	Std., up & down	Up std.	Up std.
Paging	No	No	Mult. page, scroll std.	Opt.	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	Std., 16 commands	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std., user-selectable	Std., user-selectable	Std.
Addressable/readable cursor	Yes	Yes	Std.	Both std.	Std.
Protected format	No	No	Std.	Std.	Model 30
Partial screen transmit	No	No	Std.	Std.	Model 30
Tabulation	Std. & program. tabs	Std. & program. tabs	Forward & back. std.	Std.	Model 30
Character insert/delete	No	No	Std.	Std.	Model 30
Line insert/delete	No	No	Std.	Std.	No
Erase	Line, screen, partial line, partial screen	Line, screen, partial line, partial screen	Char., word, line, para., buffer std.	Char., line, screen std.	Line, screen std.
Character repeat	Yes	Yes	Std.; all char.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter/data entry	Typewriter/data entry, or option	Typewriter
Character/code set	ASCII	ASCII	ASCII, APL, EBCDIC	128 ASCII	96/128 ASCII
Detachability	Yes	Yes	Std.	Std.	Std.
Program function keys	4 std., 19 opt.	4 std., 19 opt.	48 std.	16 std. (32 func.)	Std.
Numeric keypad	Yes	Yes	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	Yes (130 only)	No	Single std., dual opt.	No	No
Diskette drive (floppy disk)	No	Yes	Dual 8-in. floppy opt.	No	No
Serial printer	No	No	Daisy wheel opt.	Opt.	RS-232C interface
Other devices	Audible alarm std.	Audible alarm std.	Other sizes of CRT's	Aux. RS-232C interface, audible alarm std.	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Full-duplex	Full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Asynchronous	Asynchronous
Communications protocol	ASCII	ASCII	ASCII/BSC	ASCII	ASCII
Code	ASCII	ASCII	ASCII, EBCDIC	ASCII	ASCII
Speed, bits/second	50 to 9600	50 to 9600	110 to 9600	50 to 19,200	110 to 9600
Format: character, line, or block	Char. only	Char. only	Char., line, block std.	Char./segment/page	Char./block
Multipoint operation (pollable/addr.)	No	No	Std.	Burroughs TD800 opt	No
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C, 20 mA dc std.	RS-232B/C 20 mA dc
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	481 (rental)	Purchase only	Purchase only
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	3,900-6,000	6,920-7,920	7,700	1,750	1,150-1,784
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	1/79	10/78	6/78	2/77	1/76
Display units installed to date	19	400		2000+	—
Serviced by	DEC	DEC	ECD	EECO	Third party
COMMENTS	Compatible with PDP-11 software	Compatible with PDP-11 software	User-program. keyboard/char. set; foreign lang. char. sets avail.; 3-year rental, $383/mo.; 5-year rental, $301/mo.; can also be used as stand-alone or communicating work processor	Std. one-year warranty; programmable keyboard	

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Four-Phase Systems System IV/50	Four-Phase Systems System IV/40	Four-Phase Systems System IV/70	Four-Phase Systems System IV/90
TERMINAL DESCRIPTION				
Stand-alone or cluster	Cluster	Cluster	Cluster	Cluster
Maximum displays/controller	24	16	32	32
Portable case	No	No	No	No
IBM compatibility	3270, 2260/2265	3270, 2260/2265	3270, 2260/2265	3270, 2260/2265
Teletype compatibility	No	No	No	No
Other compatibility	IBM 3770, others	IBM 2948, others	IBM 2948, others	IBM 2948, others
User programmable	Yes	Yes	Yes	Yes
Self diagnostics	Yes	Yes	Yes	Yes
DISPLAY PARAMETERS				
Display positions, chars/display	1152/1920	1152/1920	1152/1920	1152/1920
Display arrangement, lines x chars./line	24 x 48/80	24 x 48/80	24 x 48/80	24 x 48/80
Display area, h x w, inches	7.25 x 10.25	7.25 x 10.25	7.25 x 10.25	7.25 x 10.25, 15" diag.
Total displayable symbols	125	125	125	125
Symbol formation	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix
Color	No	No	No	No
Reverse video	No	No	No	No
Programmable brightness levels	3 std.	3 std.	3 std.	3 std.
Character and/or field blinking	Both std.	Both std.	Both std.	Both std.
Roll	Up & down std.	Up & down std.	Up & down std.	Up & down std.
Paging	Multiple paging std.	Multiple paging std.	Multiple paging std.	Multiple paging std.
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.
Addressable/readable cursor	Std.	Std.	Std.	Std.
Protected format	Std.	Std.	Std.	Std.
Partial screen transmit	Std.	Std.	Std.	Std.
Tabulation	Std.	Std.	Std.	Std.
Character insert/delete	Std.	Std.	Std.	Std.
Line insert/delete	Std.	Std.	Std.	Std.
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS				
Style	Typewriter/data entry	Typewriter/data entry	Typewriter/data entry	Typewriter/data entry
Character/code set	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Detachability	Std.	Std.	Std.	Std.
Program function keys	12 std.	12 std.	12 std.	12 std.
Numeric keypad	Std.	Std.	Std.	Std.
ANCILLARY DEVICES				
Cassette tape drive	No	No	No	No
Diskette drive (floppy disk)	Single	Single	Single	No
Serial printer	Impact	Impact	Impact	Impact
Other devices	Disk drives & line printers, audible alarm opt.	Disk & tape drives, card reader, line printers, audible alarm opt.	Disk & tape drives, card reader, line printers, audible alarm opt.	Disk & tape drives, card reader, line printers, audible alarm opt.
TRANSMISSION PARAMETERS				
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Async./sync.
Communications protocol	BSC/SDLC	BSC/SDLC	BSC/SDLC	BSC/SDLC
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	1200-9600	1200-9600	1200-9600	1200-9600
Format: character, line, or block	Char./block	Char./block	Char./block	Char./block
Multipoint operation (pollable/addr.)	Std.	Std.	Std.	Std.
Auto answer	Std.	Std.	Std.	Std.
Auto call	Opt.	Opt.	Opt.	Opt.
Terminal interface	RS-232B/C	RS-232B/C	RS-232B/C	RS-232B/C
Integral modem	No	No	No	No
Integral acoustic coupler	No	No	No	No
PRICING AND AVAILABILITY				
Display station, 1 year lease, $/mo.	51	51	51	51
Display station, 2 year lease, $/mo.	—	—	—	—
Controller, 1 year lease, $/mo.	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Controller, 2 year lease, $/mo.	—	—	—	—
Display station, purchase, $	2,415	2,415	2,415	2,415
Controller, purchase, $	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Date of first production delivery	12/76	7/73	2/71	Third quarter 1978
Display units installed to date	See IV/90	See IV/90	See IV/90	Over 35,000 (all)
Serviced by	Four-Phase	Four-Phase	Four-Phase	Four-Phase
COMMENTS	Available with System IV/55, a small terminal with 1 or 2 display stations & limited capability for minor locations	Available with System IV/30; see IV/70	Available with System IV/30, a small terminal with 1 or 2 display stations & limited capability for minor locations	

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Goodwood Data Systems GDS-100	Goodwood Data Systems GDS-300	Goodwood Data Systems GDS-366	Goodwood Data Systems GDS-400	Goodwood Data Systems EDS-500
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Either	Cluster	Either	Either
Maximum displays/controller	1	8 or 16	32	16	4
Portable case	Yes	No	No	No	No
IBM compatibility	2701, 2741	3270, 2260/2265	2780/3780	3270, 2260/2265	3270, 2260/2265
Teletype compatibility	No	Std.	Std.	Std.	Std.
Other compatibility	No	No	No	No	No
User programmable	No	No	No	Yes	Yes
Self diagnostics	No	No	Yes	Yes	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	980/1920	256 to 1920	1920	1920	1920
Display arrangement, lines x chars./line	12/40, 24/80	8/32 to 24/80	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	Variable	Variable	12-inch diag.	12-inch diag.	12-inch diag.
Total displayable symbols	—	64; 96	64	64; 128 opt.	64
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix
Color	No	No	No	No	No
Reverse video	No	Opt.	Opt.	Std.	Opt.
Programmable brightness levels	No	No	No	Std.	Opt.
Character and/or field blinking	No	Char. only	Both std.	Both std.	Both std.
Roll	Up std.	No	No	Yes	Yes
Paging	No	No	Yes	Yes	Yes
Cursor positioning; Up, Down, Left, Right, Home, Return	L, R, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Opt.	No	Std.	Std.	Std.
Addressable/readable cursor	Addressable line	Addressable only	Yes	Readable	Addressable
Protected format	No	No	Std.	Std.	Std.
Partial screen transmit	No	No	Std.	Opt.	Std.
Tabulation	No	No	Std.	Std.	Std.
Character insert/delete	No	No	Std.	Std.	Std.
Line insert/delete	No	No	Std.	Std.	Std.
Erase	Screen	Line, screen	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	No	No	Std.	Std.	Opt.
KEYBOARD PARAMETERS					
Style	Typewriter	Any	Typewriter	Typewriter	Typewriter
Character/code set	APL	ASCII	ASCII	ASCII/CSA	ASCII/CSA
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	No	Any	16 opt.	16 opt.	16 opt.
Numeric keypad	No	Opt.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	Yes	Yes
Diskette drive (floppy disk)	No	No	Yes	Yes	Yes
Serial printer	No	No	Yes	Yes	—
Other devices	No	Light pen	Audible alarm opt.	Disk, audible alarm std.	Disk, audible alarm
TRANSMISSION PARAMETERS					
Mode	Full-duplex	Full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Async./sync.	Async./sync.	Async./sync.
Communications protocol	IBM 2741	ASCII	ASCII	ASCII	ASCII
Code	IBM Corresp.	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	134.5	1200 to 9600	300 to 9600	300 to 9600	300 to 9600
Format: character, line, or block	Char. only	No	Char. only	Char. only	Char. only
Multipoint operation (pollable/addr.)	No	No	No	No	No
Auto answer	No	No	No	Opt.	Opt.
Auto call	No	No	No	Opt.	Opt.
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	Std.	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Contact vendor	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	Contact vendor
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,800-2,200	Contact vendor	Contact vendor	Contact vendor	—
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	4/73	7/74	—	—	—
Display units installed to date	Over 100	—	—	—	—
Serviced by	Goodwood	Goodwood	Goodwood	Goodwood	Goodwood
COMMENTS	Portable controller with keyboard; uses video monitor; replaces the IBM 2741				

Alphanumeric Display Terminals— Basic Characteristics

SUPPLIER AND MODEL	Harris Data Communications 804/810	Harris Data Communications 8170	Harris Data Communications 8180	Harris Data Communications 8210	Harris Data Communications 8220
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Cluster	Either	Either	Either
Maximum displays/controller	1	32	32	32	32
Portable case	No	No	No	No	No
IBM compatibility	2260/2265	3270 BSC, SDLC	3270 BSC, SDLC	No	No
Teletype compatibility	No	No	No	No	No
Other compatibility	No	IBM 2260/2265	—	Univac 100/200	Burroughs TD 800
User programmable	Yes	Yes	Yes	No	No
Self diagnostics	Yes	Yes	Yes	Yes	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	480/960/1920	480/960/1920	480/960/1920	960/1024/1920	960/1920
Display arrangement, lines x chars./line	12/24 x 40/80	12/24 x 40/80	12/24 x 40/80	12/24 x 80; 16 x 64	12/24 x 80
Display area, h x w, inches	7.5 x 9.5	12-inch diag.	12-inch diag.	12-inch diag.	12-inch diag.
Total displayable symbols	64; 96 opt.	128	128	96	96
Symbol formation	5 x 7 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	No	2 std.	2 std.	2 std.	2 std.
Character and/or field blinking	Std.	Std.	Std.	Std.	Std.
Roll	No	—	—	—	—
Paging	No	No	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Std.	Std.	Std.	Std.	Std.
Protected format	Opt.	Std.	Std.	Std.	Std.
Partial screen transmit	Opt.	Std.	Std.	Std.	Std.
Tabulation	Std.	Std.	Std.	Std.	Std.
Character insert/delete	Opt.	Std.	Std.	Opt.	Std.
Line insert/delete	Opt.	Opt.	Opt.	Std.	Std.
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char. opt.; line, screen std.	Char. opt.; line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter/data entry	Typewriter/data entry/others	Typewriter/data entry/others	Typewriter/data entry/others	Typewriter/data entry/others
Character/code set	ASCII	EBCDIC/ASCII	EBCDIC/ASCII	96 ASCII	96 ASCII
Detachability	No	Std.	Std.	Std.	Std.
Program function keys	Std.	20	14	6	12
Numeric keypad	Std.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	Dual	No	No	No	No
Diskette drive (floppy disk)	No	No	Opt. dual	Opt. dual	Opt. dual
Serial printer	Impact	Impact	Impact	Impact	Impact
Other devices	Card reader disk, audible alarm, light pen, mag tape (810)	Audible alarm, light pen, I.D. card reader	Disk drive, audible alarm, light pen, I.D. card reader	Audible alarm std.	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half-duplex	Half-duplex	Half/full-duplex	Half-duplex
Technique	Async./sync.	Synchronous	Synchronous	Async./sync.	Async./sync.
Communications protocol	BSC	BSC/SDLC	BSC/SDLC	—	—
Code	ASCII/EBCDIC	EBCDIC/ASCII	EBCDIC/ASCII	ASCII	ASCII
Speed, bits/second	110 to 9600	1200 to 9600	1200 to 9600	4800 to 9600	300 to 9600
Format: character, line, or block	Char./block	Block	Block	Block	Char./block
Multipoint operation (pollable/addr.)	Opt.	Std.	Std.	Std.	Std.
Auto answer	Opt.	Opt.	Opt.	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	75	See comments	See comments	See comments	See comments
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	200				—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,500	—	—	—	—
Controller, purchase, $	7,000	—	—	—	—
Date of first production delivery	12/71	1974/1976	1974/1976	1975	1976
Display units installed to date	Over 2,000	12,000	2,500	2,500	2,000
Serviced by	Harris	Harris	Harris	Harris	Harris
COMMENTS	The 804 is a stand-alone system; 810 is a cluster system; former Sanders Data Systems products	Former Sanders Data Systems product; typical 6-display system rents for $477/mo. (3 yr.) and sells for $18,153	Former Sanders Data Systems product; typical 6-display system rents for $727/mo. (3 yr.) and sells for $25,600	Former Sanders Data Systems product; typical 4-display system rents for $427/mo. (3 yr.) and sells for $16,212	Former Sanders Data Systems product; typical 4-display system rents for $427/mo. (3 yr.) and sells for $16,212

Alphanumeric Display Terminals—Basic Characteristics

SUPPLIER AND MODEL	Harris Data Communications 8770	Hazeltine 1400/1410	Hazeltine 1500 Series	Hazeltine 2000	Hazeltine Modular One
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	32	1	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	No	Yes	Std.	Std.	Std.
Other compatibility	HIS 7700/7750	No	No	No	See comments
User programmable	No	No	No	No	No
Self diagnostics	Yes	No	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	960/1012/1920	1920	1920	1998; 2000	1920
Display arrangement, lines x chars./line	12/24 x 80; 22 x 48	24 x 80	24 x 80	22 x 74; 25 x 80	24 x 80
Display area, h x w, inches	12-inch diag.	6 x 9	6 x 9	6.0 x 8.5	6.0 x 9.0
Total displayable symbols	96	64 ASCII	95	64 std; 96 opt.	64 std.; 96 opt.
Symbol formation	7 x 9 dot matrix	5 x 7	7 x 10 dot matrix	5 x 7 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	Std.	No	Std.
Programmable brightness levels	2 std.	No	Std.	2 std.	2 std.
Character and/or field blinking	Std.	No	No	Field opt.	Field std.
Roll	—	Up std.	Up std.	Up std.	Up std.
Paging	No	No	No	Yes	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	No	—	Opt.	Opt. (no cost)
Addressable/readable cursor	Std.	Std.	Both std.	Std. addressable only	Std.
Protected format	Std.	No	Std.; 1510 & 1520	Std.	Std.
Partial screen transmit	Std.	No	Std.; 1510 & 1520	Std.	Std.
Tabulation	Std.	No	Std.	Std.	Std.
Character insert/delete	Std.	No	No	Std.	Std.
Line insert/delete	Std.	No	Std.	Std.	Std.
Erase	Char. opt., line, screen std.	Screen std.	Char., line, screen std.	Char., screen std.	Char., line, screen std.
Character repeat	Std.	No	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter/data entry/others	Teletype	Typewriter	Teletype	Typewriter
Character/code set	96 ASCII	128 ASCII	128 ASCII	ASCII	ASCII
Detachability	Std.	No	No	Std.	Std.
Program function keys	36	No	Std., 1510 & 1520	No	8 std.
Numeric keypad	Std.	Std. (1410 only)	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	Dual	No
Diskette drive (floppy disk)	Opt. dual	No	No	No	No
Serial printer	Impact	No	RS-232C interface	Impact/non-impact	No
Other devices	Audible alarm std.	No		Audible alarm std.	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Sync.	Asynchronous	Asynchronous	Asynchronous	Async.; sync. opt.
Communications protocol	—	ASCII	ASCII	ASCII	User-defined
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	2000 to 4800	Up to 9600	Up to 19,200	110 to 9600	110 to 9600
Format: character, line, or block	Block	Character	Char., line, block	Char./block	Char.; block opt.
Multipoint operation (pollable/addr.)	Std.	No	No	No	Opt.
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C, 20-mA dc current loop	RS-232B/C	RS-232B/C, 20 mA dc current loop
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	See comments	—	—	98	—
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	—	850 (1400); 900	1,225-1,650	2,250	2,050
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	1976	7/78	6/7 1977	10/70	2/76
Display units installed to date	2,500	See 2000	See 2000	See comments	See 2000
Serviced by	Harris	Hazeltine (factory)	TRW/Hazeltine	TRW/Hazeltine	TRW/Hazeltine
COMMENTS	Former Sanders Data Systems product; typical 4-display system rents for $427/mo. (3 yr.) and sells for $16,212	Said to be lowest IC-count terminals in industry; based on microcomputer technology; two-year warranty is standard	1500 Conversational Terminal; 1510 Buffered Terminal; 1520 Buffered Terminal with additional 2K Print Buffer	Options include answerback and 202C or current loop interface; over 90,000 Hazeltine displays (all models) have been delivered	Extensive choice of no-charge and low-cost options including emulators for Burroughs, Honeywell, & Univac displays

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Hewlett-Packard 2621A/P	Hewlett-Packard 2640B	Hewlett-Packard 2641A	Hewlett-Packard 2645A	Hewlett-Packard 2649A
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	1	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	Std.	Opt.	Opt.	Opt.	—
Other compatibility	No	No	No	No	No
User programmable	No	No	No	No	Yes
Self diagnostics	Std.	Yes	Yes	Yes	Opt.
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	1920	1920
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	12-inch diag.	5 x 10	5 x 10	5 x 10	5 x 10
Total displayable symbols	128 ASCII	128; 512 opt.	128; 512 opt.	128; 512 opt.	512 opt.
Symbol formation	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	Std.	Std.	Std.	Std.
Programmable brightness levels	No	2 opt.	2 opt.	2 opt.	2 opt.
Character and/or field blinking	No	Opt.	Opt.	Opt.	Opt.
Roll	Up, down std.	Std.; up & down	Std., up & down	Std., up & down	Opt.
Paging	2 pages std.	Std.	Std.	Std.	Std.
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, Home-up, Home-down, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Both std.	Std.	Both std.	Both std.	Both std.
Protected format	No	Std.	Std.	Std.	Opt.
Partial screen transmit	Char., line std.	Std.	Std.	Std.	Opt.
Tabulation	Fwd./back std.	Std.	Std.	Std.	Opt.
Character insert/delete	Std.	Std.	Std.	Std.	Opt.
Line insert/delete	Std.	Std.	Std.	Std.	Opt.
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen opt.
Character repeat	Std.	Std.	Std.	Std.	Opt.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	128 ASCII	128 ASCII	128 ASCII	128 ASCII	Specified
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	8 std.	8 std.	8 std.	8 std.	8 opt.
Numeric keypad	Embedded std.	Std.	Std.	Std.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	Dual drive	Dual drive	Dual drive
Diskette drive (floppy disk)	No	No	No	No	No
Serial printer	Integ. thermal (2621P)	Impact/non-impact	Impact/non-impact	Impact/non-impact	RS-232 interface
Other devices	No	Audible alarm std.	Audible alarm std.	Audible alarm std.	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Async./sync.	Async./sync.	Async./sync.
Communications protocol	ASCII	ASCII	ASCII/BSC	ASCII/BSC	ASCII/BSC
Code	ASCII	ASCII	ASCII/EBCDIC	ASCII/EBCDIC	Specified
Speed, bits/second	110 to 9600	110 to 2400	110 to 9600	110 to 9600	110 to 9600
Format: character, line, or block	Char., line	Block/char.	Block/char.	Block/char.	Block/char.
Multipoint operation (pollable/addr.)	No	No	Opt.	Opt.	Opt.
Auto answer	No	Opt.	Opt.	Opt.	Opt.
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C, current loop	RS-232C, current loop	RS-232C, current loop	RS-232C opt.
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	72.50/127.50	130	205	175	Purchase only
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,450/2,550	2,600	4,100	3,500	2,150-6,000
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	10/78	1/75	1/77	10/76	11/76
Display units installed to date	—	See comments	See comments	See comments	See comments
Serviced by	HP	HP	HP	HP	HP
COMMENTS	Interactive terminal with enhanced high-resolution display, 8 screen-labeled control keys, soft configuration, and integral 120-cps thermal printer (2621P only)	Over 45,000 264X terminals have been installed	Over 45,000 264X terminals have been installed	Over 45,000 264X terminals have been installed	Over 45,000 264X terminals have been installed

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Honeywell VIP 7100/7105	Honeywell VIP 7200	Honeywell VIP 7700	Honeywell VIP 7700R/ 7705R	Honeywell VIP 7760
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Either	Stand-alone	Cluster
Maximum displays/controller	1	1	10	1	8 to 32
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	Std.	Std.	No	No	No
Other compatibility	No	No	Honeywell	Honeywell	Honeywell
User programmable	No	No	No	No	No
Self diagnostics	No	No	Yes	Yes	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	960	1920	960/1920	1920	960/1920
Display arrangement, lines x chars./line	12 x 80	24 x 80	12/24 x 80	24 x 80	12/24 x 80
Display area, h x w, inches	12-inch diag.	12-inch diag.	5.5 x 8.5	12-inch diag.	6 x 9
Total displayable symbols	63/95	64/95	63; 96 opt.	63/95	96
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	No	Std.	No	No	No
Character and/or field blinking	No	Opt.	Std.	Both std.	Std.
Roll	Std., up only	Std., up only	No	No	No
Paging	No	No	No	No	Std.
Cursor positioning; Up, Down, Left, Right, Home, Return	L, R, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	No	Std.	Std.	Std.	Std.
Addressable/readable cursor	No	Std.	Std.; addressable only	Std.,addressable only	Std.
Protected format	No	No	Std.	Std.	Std.
Partial screen transmit	No	No	Std.	Std.	Std.
Tabulation	No	No	Std.	Std.	Std.
Character insert/delete	No	No	Std.	Std.	Std.
Line insert/delete	No	No	Std.	Std.	Std.
Erase	Screen std.	Line & screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	128 ASCII	128 ASCII	ASCII	128 ASCII	ASCII
Detachability	Std.	Std.	No	Std.	Opt.
Program function keys	Std.	14 std.	36 opt.	Std.	26 std.
Numeric keypad	No	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	Dual	No	No
Diskette drive (floppy disk)	No	No	No	No	Yes
Serial printer	No	No	Impact	Impact	Opt.
Other devices	Audible alarm std.	—	I.D. card reader opt.	No	No
TRANSMISSION PARAMETERS					
Mode	Full-duplex	Half/full-duplex	Half-duplex	Half-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Synchronous	Synchronous	Synchronous
Communications protocol	ASCII	ASCII	ASCII	Honeywell	VIP
Code	ASCII	ASCII	Honeywell	ASCII	ASCII
Speed, bits/second	75 to 4600	75 to 9600	2000 to 4800	2400/4800/9600	2400/4800/9600
Format: character, line, or block	Char. only	Char./block	Block only	Block only	Block only
Multipoint operation (pollable/addr.)	No	No	Std.	Std.	Std.
Auto answer	No	No	Opt.	Opt.	Opt.
Auto call	No	No	No	Opt.	No
Terminal interface	RS-232C, CCITT, or 20/60 mA dc	RS-232C, 20 mA current loop	RS-232C	RS-232C or CCITT	RS-232C, CCITT V.24
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	157-285	174	51
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	98	—	462
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,500	1,580-1,980	4,860-8,770	—	1,750
Controller, purchase, $	—	—	3,025	3,390-3,990	16,800
Date of first production delivery	12/76	5/77	10/73	3/77	5/76
Display units installed to date	Over 200	Over 500	Over 5000	Over 2000	Over 2000
Serviced by	Honeywell	Honeywell	Honeywell	Honeywell	Honeywell
COMMENTS				Up to 10 units can be multidropped on a single line	

Alphanumeric Display Terminals—Basic Characteristics

SUPPLIER AND MODEL	Honeywell VIP 7801	Human Designed Systems Concept 100/APL	IBM 3271/3277 Information Display System	IBM 3274/3278 Information Display System	IBM 3275 Information Display System
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Cluster	Cluster	Stand-alone
Maximum displays/controller	1	1	32	32	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	3270 System	3270 System	3270 System
Teletype compatibility	Std.	Std.	No	No	No
Other compatibility	No	No	No	No	No
User programmable	No	Via user-defined parameters	No	No	No
Self diagnostics	Std.	No	Via host DEMF software	Via host DEMF software	Via host DEMF software
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	480/1920	See comments	1920
Display arrangement, lines x chars./line	24 x 80	24 x 80	12 x 40; 24 x 80	12 x 40; 12/24/32/43 x 80	24 x 80
Display area, h x w, inches	12-inch diag.	12-inch diag.	14-inch diag.	14-inch diag.	—
Total displayable symbols	106	128 ASCII/APL	64 std.; 120 APL opt.	64; 96; 120 APL	14-inch diag.
Symbol formation	7 x 10 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9/14, 7 x 11	64 std.; 120 APL opt.
Color	No	No	No	No	7 x 9 dot matrix
Reverse video	Std.	Std.	No	No	No
Programmable brightness levels	Std.	3 std.	2 std.	2 std.	No
Character and/or field blinking	Std.	Char. std.	No	No	2 std.
Roll	Std.	Std.; up & down	No	No	No
Paging	No	8 pages opt.	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R	U, D, L, R, H, Rt.	U, D, L, R
Cursor blinking	Opt.	Std.	No	Std.	No
Addressable/readable cursor	Both std.	Std.	Std.; addressable only	Std.,addressable only	Std.,addressable only
Protected format	Std.	Std.	Std.	Std.	Std.
Partial screen transmit	No8	Std.	Std.	Std.	Std.
Tabulation	Std.	Std. fwd./back/field	Std.	Std.	Std.
Character insert/delete	Std.	Std.	Std.	Std.	Std.
Line insert/delete	Std.	Std.	No	No	No
Erase	End-of-page, end-of-field	Char., line, screen, memory std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Several	Several	Several
Character/code set	128 ASCII	128 ASCII	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	12 std.	8 std.; 11 opt.	Std.	Std.	Opt.
Numeric keypad	Std.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	No	No	No
Serial printer	No	No	Impact	Impact	Impact
Other devices	Audible alarm	3 peripheral interfaces opt.	Audible alarm, I.D. reader, light pen, keylock	Aud. alarm, mag. slot reader, light pen, keylock, I.D. reader, Encrypt/Decrypt	Audible alarm, I.D. card reader, light pen, keylock
TRANSMISSION PARAMETERS					
Mode	Full-duplex—TWA	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Synchronous	Synchronous	Synchronous
Communications protocol	None	ASCII	BSC/SDLC	BSC/SDLC	BSC/SDLC
Code	ASCII	ASCII	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	110 to 9600	50 to 9600	1200 to 9600	1200 to 9600	1200 to 9600
Format: character, line, or block	Char , line, page	Char./block	Block only	Block only	Block only
Multipoint operation (pollable/addr.)	No	No	Std.	Std.	Std.
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C, 20 mA	RS-232C, 20 mA	RS-232C	RS-232C	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	Purchase only	84-168	71-112	f136-186
Display station, 2 year lease, $/mo.	—	—	71-143	60-95	116-158
Controller, 1 year lease, $/mo.	—	—	155-638	344-791	—
Controller, 2 year lease, $/mo.	—	—	132-540	293-671	—
Display station, purchase, $	2,885	1,575-2,500	2,990-4,954	2,700-4,275	4,735-6,440
Controller, purchase, $	—	—	4,735-13,028	13,190-28,600	—
Date of first production delivery	10/78	3/78	2nd qtr. 1972	2/78	2 qtr. 1972
Display units installed to date	500	—	—	—	—
Serviced by	Honeywell	HDS	IBM	IBM	IBM
COMMENTS	Horizontal and vertical line graphics form creation; 25th display line for status; usual attributes	Business Graphics std.; windowing capability std.; networking; programmable function keys; 256 user-defined displayable characters	See Report 70D-491-11 for details	Display positions available include 480, 960, 1920; 2560, and 3440; controller accommodates 3278 and 3277 display stations; see Report 70D-491-11 for details	See Report 70D-491-11 for details

Alphanumeric Display Terminals—Basic Characteristics

SUPPLIER AND MODEL	IBM 3276/3278 Information Display System	IBM 3790 Communication System	IBM System/32	IBM System/34	IBM 5250 Information Display System
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster	Cluster	Stand-alone	Cluster	Either
Maximum displays/controller	8	16	1	16 local; 64 remote	Up to 9
Portable case	No	No	No	No	No
IBM compatibility	3270 System	No	Yes	Yes	SDLC
Teletype compatibility	No	No	No	No	No
Other compatibility	No	No	No	No	No
User programmable	No	No	Std.; RPG II and assembler	Std.; RPG II, COBOL, assembler, FORTRAN	No
Self diagnostics	Via host DEMF software	No	Yes	Yes	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	See comments	480/1920	240	960, 1920	960, 1920
Display arrangement, lines x chars./line	12/24/32/43 x 80	12 x 40; 24 x 80	6 x 40	12/24 x 80	12/24 x 80
Display area, h x w, inches	14-inch diag.	14-inch diag.	9-inch diag.	12-/15-inch diag.	12-/15-inch diag.
Total displayable symbols	96; 120 APL opt.	64	96	96;188 Multi-Nat'l opt	96;188 Multi-Nat'l opt.
Symbol formation	7 x 9/14, 7 x 11	7 x 9 dot matrix	8 x 16 dot matrix	8 x 16 dot matrix	8 x 16 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	Std.	Std.
Programmable brightness levels	2 std.	2 std.	No	Std.	Std.
Character and/or field blinking	No	No	Std., total screen only	Std.	Std.
Roll	No	No	Yes	Std.	Std.
Paging	No	No	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R,	L, R	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	No	No	—	Std.	Std.
Addressable/readable cursor	Std.;addressable only	Std.,addressable only	Both std.	Both std.	Both std.
Protected format	Std.	Std.	No	Std.	Std.
Partial screen transmit	Std.	Std.	—	Std.	Std.
Tabulation	Std.	Std.	—	Std.	Std.
Character insert/delete	Std.	Std.	—	Std.	Std.
Line insert/delete	No	No	—	No	No
Erase	Char., line, screen std.	Char., line, screen std.	—	Char., field, screen std.	Char., field, screen std.
Character repeat	Std.	Std.	—	Std.	Std.
KEYBOARD PARAMETERS					
Style	Several	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII/EBCDIC	ASCII/EBCDIC	EBCDIC	EBCDIC	EBCDIC
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	Opt.	Opt.	24 std.	24 std.	24 std.
Numeric keypad	Std.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	Single drive	Sing./dual/magazine	No
Serial printer	Impact	IBM 3793	Impact	Impact	Impact
Other devices	Audible alarm, mag. slot reader, light pen, keylock, Encrypt/Decrypt	Disk, remote terminals, audible alarm, I.D. reader, light pen	Disk, line printer, data recorder & mag. card reader/recorder	Disk; line printer; aud. alarm; MICR, mag stripe, & multiple cassette readers	Mag. stripe reader, selector light pen, aud. alarm, keylock
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Synchronous	Synchronous	Synchronous	Synchronous	Synchronous
Communications protocol	BSC/SDLC	SDLC	BSC/SDLC	BSC/SDLC	BSC/SDLC
Code	ASCII/EBCDIC	EBCDIC	ASCII/EBCDIC	EBCDIC	EBCDIC
Speed, bits/second	1200 to 9600	1200/2400	Up to 4800/7200	Up to 9600	1200 to 9600
Format: character, line, or block	Block only	Block only	Block only	Block only	Block only
Multipoint operation (pollable/addr.)	Std.	Std.	Opt.	Opt.	Yes
Auto answer	No	No	Opt.	Opt.	Yes
Auto call	No	—	No	No	No
Terminal interface	RS-232C	RS-232C opt.	RS-232C	RS-232C	RS-232C, twinax cable
Integral modem	No	Opt.	Opt.; 1200/2400	Opt.; 1200/2400	Opt.
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	71-92	See Comments	—	See comments	—
Display station, 2 year lease, $/mo.	60-78	—	—	—	80/100/124
Controller, 1 year lease, $/mo.	167-229	—	825 (base, monthly)	—	—
Controller, 2 year lease, $/mo.	142-196	—	749 (base, 3-yr.lease)	—	164-204
Display station, purchase, $	2,700-3,510	—	—	—	3010/3740/4225
Controller, purchase, $	6,390-8,820	—	33,560 (base)	—	5,745-7,265
Date of first production delivery	2/78	1st qtr. 1975	3/75	1/78	1/78
Display units installed to date	—	—	—	—	—
Serviced by	IBM	IBM	IBM	IBM	IBM
COMMENTS	Display positions available include 960, 1920, 2560, and 3440; see Report 70D-491-11 for details	Remote shared-processor data entry system; pricing is complex and depends upon system configuration; see Report 70D-491-42 for details	Small business computer system; see Report 70C-491-25 for details	Small business computer system; pricing is complex and depends on config.; see Report 70D-491-42 for details	Workstations for IBM S/34, S/38, and Series/1; 5251-1/11 is remote cluster or local station; 5251-2/12 is remote cluster controller/station; 5252 is remote cluster or local dual station

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Incoterm SPD 15/25	Incoterm SPD 20/20 & SPD 20/30	Incoterm SPD 20/40	Incoterm SPD 315/315LFC	Incoterm SPD 320/330 & SPD 320/330LFC
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster	Cluster	Cluster	Mini-cluster	Cluster
Maximum displays/controller	8	32	32	4	32
Portable case	No	No	No	No	No
IBM compatibility	3277 BSC, SDLC	3270 SDLC	3270, 2260	3270 BSC, SDLC	3270 BSC, SDLC
Teletype compatibility	Std.	Std.	Std.	No	No
Other compatibility	Several	Several	Several	No	No
User programmable	Yes	Yes	Yes	Yes	No
Self diagnostics	Std.	No	No	Yes	No
DISPLAY PARAMETERS					
Display positions, chars/display	480 to 2000	960/2000	960/2000	960/1920/2000	960/1920
Display arrangement, lines x chars./line	12/15/16/24/25/ 30 x 40/64/80	12/15/16/24/25/ 30 x 40/64/80	12/15/16/24/25/ 30 x 40/64/80	12/24/25 x 80	12/24 x 40/80
Display area, h x w, inches	6.5 x 9	6.5 x 9	6.5 x 9	6.5 x 9	6.5 x 9
Total displayable symbols	64; 128 opt.	64; 128 opt.	64; 128 opt.	64	64
Symbol formation	8 x 10 dot matrix	8 x 10; 8 x 12 opt.	8 x 10; 8 x 12 opt.	8 x 10 dot matrix	7 x 10 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	2 std.	2 std.	2 std.	2 std.	2 std.
Character and/or field blinking	Opt.	Opt.	Opt.	Opt.	Std.
Roll	Opt.	Opt.	Opt.	No	No
Paging	Opt.	Opt.	Opt.	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D. L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Std.	Std.	Std.	Std.	Std.
Protected format	Opt.	Std.	Std.	Std.	Std.
Partial screen transmit	Opt.	Opt.	Opt.	Std.	Std.
Tabulation	Opt.	Opt.	Opt.	Std.	Std.
Character insert/delete	Opt.	Opt.	Opt.	Std.	Std.
Line insert/delete	Opt.	Opt.	Opt.	Std.	Std.
Erase	Opt.	Char., line, screen opt.	Char., line, screen opt.	Char., line std.; screen opt.	Char., line, screen std.
Character repeat	Opt.	Opt.	Opt.	—	Std.
KEYBOARD PARAMETERS					
Style	Several	Several	Several	Several	Typewriter
Character/code set	Several	Several	Several	ASCII/EBCDIC	EBCDIC/ASCII
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	24 std.	24 std.	24 std.	24 std.	24 std.
Numeric keypad	Opt.	Opt.	Opt.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	Single
Diskette drive (floppy disk)	Single/dual	Single/dual	Single/dual	Dual	Dual on LFC
Serial printer	Impact	Impact	Impact	Impact	Impact
Other devices	—	Card readers & punches, mag. tape drives, audible alarm	Disk, line printers, card readers, mag. tape, audible alarm	Line printers, audible alarm	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Synchronous	Synchronous
Communications protocol	BSC/SDLC/HDLC	BSC/SDLC/HDLC	BSC/SDLC/HDLC	BSC/SDLC	BSC/SDLC
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	Up to 9600	Up to 9600	Up to 9600	1200 to 9600	1200 to 9600
Format: character, line, or block	Char./block	Char./block	Char./block	Char./block	Block only
Multipoint operation (pollable/addr.)	Std.	Opt.	Opt.	Std.	Std.
Auto answer	Opt.	Opt.	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Contact vendor	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	Contact vendor	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	—	—	Contact vendor	—	—
Controller, purchase, $	—	—	Contact vendor	—	—
Date of first production delivery	3/78	4/74	1977	6/78	1974
Display units installed to date	—	—	—	—	—
Serviced by	Honeywell FED	Honeywell FED	Honeywell FED	Honeywell FED	Honeywell FED
COMMENTS	Microprocessor-driven terminal controller	Extensive software support includes emulators and assemblers; alternate display format is 15/30 x 64			See Report 70D-495-01 for details on the Incoterm product line; Incoterm was acquired by Honeywell early in 1978

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Incoterm SPD 815/815LFC	Inforex 7000 Standalone System	Inforex 7000 Cluster System	Informer 301 Series	Informer 302 Series
TERMINAL DESCRIPTION					
Stand-alone or cluster	Mini-cluster	Stand-alone	Cluster	Stand-alone	Stand-alone
Maximum displays/controller	4	1	8	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	2780/3780	2780/3780	No	No
Teletype compatibility	No	No	No	Std.	Std.
Other compatibility	Burroughs TD 820	No	No	No	No
User programmable	Yes	Yes	Yes	No	No
Self diagnostics	Yes	Yes	Yes	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	960/1920/2000	1920	1920	512; 1024 opt.	512
Display arrangement, lines x chars./line	12/24/25 x 80	24 x 80	24 x 80	16 x 32; 16 x 64 opt.	16 x 32
Display area, h x w, inches	6.5 x 9	6 x 8.4	6 x 8.4	3.5 x 4.5	3.5 x 4.5
Total displayable symbols	64	96 ASCII; 128 opt.	96 ASCII; 128 opt.	64 ASCII; 96 opt.	64 ASCII
Symbol formation	8 x 10 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	2 std.	2 std.	2 std.	2 std.	2 std.
Character and/or field blinking	Opt.	Field std.	Field std.	Char. opt.	No
Roll	No	No	No	Up std.	No
Paging	No	No	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Opt.	No
Addressable/readable cursor	Std.	Both std.	Both std.	Std. addressable only	Std. addressable only
Protected format	Std.	Std.	Std.	Std.	Std.
Partial screen transmit	Std.	Std.	Std.	No	No
Tabulation	Std.	Std.	Std.	No	Forward std.
Character insert/delete	Std.	Std.	Std.	No	No
Line insert/delete	Std.	No	No	No	No
Erase	Char., line std.; screen opt.	Char., screen std.	Char., screen std.	Screen, std.	Screen, unprotected
Character repeat	—	Std.	Std.	Opt.	No
KEYBOARD PARAMETERS					
Style	Several	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII/EBCDIC	96 ASCII, specials	96 ASCII, specials	ASCII	ASCII
Detachability	Std.	Std.	Std.	Opt.	Opt.
Program function keys	24 std.	15 std.	15 std.	10 std.	10 std.
Numeric keypad	Std.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	Dual	Dual/quad	Dual/quad	No	No
Serial printer	Impact	Impact	Impact	No	No
Other devices	Line printers, audible alarm	Audible alarm std.	40 MB disk, mag. tape, line printer	Audible alarm std.	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Asynchronous	Asynchronous
Communications protocol	Async./sync.	BSC	BSC	ASCII	ASCII
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII	ASCII
Speed, bits/second	1200 to 9600	Up to 4800	Upt o 4800	110 to 9600	110 to 9600
Format: character, line, or block	Char./block	Block only	Block only	Char.	Block
Multipoint operation (pollable/addr.)	Std.	No	No	No	Std.
Auto answer	No	Yes	Yes	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C; 20 mA opt.	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Contact vendor	463	711-3,000	—	—
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	—	15,000	30,000-100,000	850-1,895	1,595-1,995
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	3/79	4/77	4/77	10/72	10/74
Display units installed to date	—	20	Over 200 systems	—	—
Serviced by	Honeywell FED	Inforex	Inforex	Informer, third party	Informer, third party
COMMENTS		Base price includes one display station with processor memory and diskette drive	Base price includes one display station and 10 MB disk drive		

Alphanumeric Display Terminals— Basic Characteristics

SUPPLIER AND MODEL	Informer 304 Series	Infoton I-100	Infoton I-200	Infoton I-400	Intelligent Systems Intecolor 8001
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	—	—	—	1
Portable case	No	—	—	—	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	Std.	Yes	Yes	Yes	Std.
Other compatibility	No	See comments	No	Haz. 2000, Burr.	ADDS, Haz. 1500
User programmable	No	—	—	—	Yes
Self diagnostics	Std.	—	—	—	No
DISPLAY PARAMETERS					
Display positions, chars/display	512 to 1920	1920	1920	2000	2000/3840
Display arrangement, lines x chars./line	16 x 32, 12 x 40, 16 x 64, 24 x 80	24 x 80, plus 25th status line	24 x 80	25 x 80	25 x 80; 48/24 x 80 (reg./double-hgt.ch.)
Display area, h x w, inches	5.25 x 6.75	9 x 7	8.5 x 6	9 x 7	10 x 13
Total displayable symbols	128 ASCII	128	128	128	64; 192 opt.
Symbol formation	7 x 9 dot matrix	9 x 9 dot matrix	9 x 9 dot matrix	9 x 9 dot matrix	5 x 7 dot matrix
Color	No	No	No	No	8 fore.; 8 back. opt.
Reverse video	Std.	Std.	Std.	Std.	Opt.
Programmable brightness levels	2 std.	Std.	No	Std.	No
Character and/or field blinking	Char. std.	No	No	Std.	Std.
Roll	Up & down std.	Up std.	Up std.	Up std.	Up, down std.
Paging	Up to 4 pages std.	—	—	3 pages opt.	Opt.
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, R, L, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Selectable	Std.	Std.	Std.	Std.
Addressable/readable cursor	Both std.	Both std.	Addr. std.	Both std.	Std.
Protected format	Std.	Opt.	No	Std.	Opt.
Partial screen transmit	Std.	Opt.	No	Std.	Std.
Tabulation	Fwd./back std.	Fwd./back tab std.	Forward std.	Fwd./back/column.	Fwd. std.
Character insert/delete	Std.	Opt.	No	Std.	Opt.
Line insert/delete	No	Std.	Std.	Std.	Opt.
Erase	Char., line, screen std.	Char., line, screen std.	Screen, line std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	128 ASCII	128 ASCII	128 ASCII	192 ASCII
Detachability	Opt.	No	Std.	Std.	Std.
Program function keys	14 std.	16 opt.	12 opt.	8 std.; 24 opt.	16 opt.
Numeric keypad	Std.	Std.	Opt.	Std.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	No	No	Yes
Serial printer	RS-232C interface	RS-232C	RS-232C interface	RS-232C interface	Yes
Other devices	Audible alarm, composite video	Audible alarm std.; composite video opt.	Audible alarm std.	Audible alarm std.	—
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Communications protocol	ASCII	ASCII	ASCII	ASCII	ASCII
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	50 to 19,200	110 to 19,200	50 to 19,200	50-19,200	110 to 76.8K
Format: character, line, or block	Char., line, block	Char.; line, block opt.	Char.	Char., block, line	Char./block
Multipoint operation (pollable/addr.)	Selectable	No	No	Polling opt.	No
Auto answer	No	No	Opt.	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C, 20 mA opt.	RS-232C, 20 mA	RS-232C, 20/60 mA	RS-232C, 20/60 mA	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	Purchase only	Purchase only	Purchase only	Purchase only
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,395	849	1,195	1,525	1,275
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	12/78	12/78	6/77	6/77	4/76
Display units installed to date	—	See I-400	See I-400	35,000+ (all models)	5000
Serviced by	Informer, third party	Distributors, factory	Distrobutors, factory	Distributors, factory	Third party
COMMENTS		Emulates DEC VT-52, ADDS 520, 580, Hazeltine 1500, Lear Siegler ADM-3A; solid-state keyboard; metal case construction; 32-char. line drawing set; microprocessor-based	Bottom line entry or full screen entry mode std.; solid-state keyboard; metal case construction	Solid-state keyboard; metal case construction; microprocessor-based; 32-char. line drawing set opt.; buffered printer interface opt.	Features high resolution graphics: 160 x 192 std., 384 x 480 opt.; powered by an Intel 8080 microprocessor

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	International Computers Inc. 1501	International Computers Inc. 1501-43	International Computers Inc. 1503-43	International Computers Inc. 1505	Intertec Intertube II
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Either	Either	Either	Stand-alone
Maximum displays/controller	1	1-16	1-16	1	1
Portable case	No	No	No	No	No
IBM compatibility	BSC	BSC	BSC	BSC	Opt.
Teletype compatibility	Opt.	Opt.	Opt.	Opt.	Std.
Other compatibility	See comments	See comments	See comments	See comments	No
User programmable	User-created programs	User-created programs	—	User-created programs	User-defined parameters
Self diagnostics	Std.	Std.	Std.	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	256	256	256/1920	1920	1920
Display arrangement, lines x chars./line	8 x 32	8 x 32	8 x 32, 24 x 80	24 x 80	24 x 80, plus 25th status line
Display area, h x w, inches	5-inch diag.	5-inch diag.	5- or 12-inch diag.	12-inch diag.	12-inch diag.
Total displayable symbols	64	64	64	64	128 ASCII
Symbol formation	5 x 8 dot matrix	5 x 8 dot matrix	5x8, 5x10 dot matrix	5 x 10 dot matrix	8 x 8
Color	No	No	No	No	No
Reverse video	No	No	No	No	Std.
Programmable brightness levels	No	No	No	No	Std.
Character and/or field blinking	Opt.	Opt.	Opt.	Opt.	Std.
Roll	Opt.	Opt.	Opt.	Opt.	Std.
Paging	Programmable	Programmable	Programmable	Programmable	Std.
Cursor positioning; Up, Down, Left, Right, Home, Return	Programmable	Programmable	Programmable	Programmable	U, D, L, R, H, Rt.
Cursor blinking	Programmable	Programmable	Programmable	Programmable	Std.
Addressable/readable cursor	Programmable	Programmable	Programmable	Programmable	Both std.
Protected format	Std.	Std.	Std.	Std.	Std.
Partial screen transmit	Std.	Std.	Yes	Std.	Std.
Tabulation	No	No	No	No	Std.
Character insert/delete	No	No	Opt.	Opt.	Std.
Line insert/delete	No	No	Opt.	Opt.	Std.
Erase	No	No	Opt.	Opt.	Std.
Character repeat	No	No	No	No	Std.
KEYBOARD PARAMETERS					
Style	Keypunch, typewriter	Keypunch, typewriter	Keypunch, typewriter	Keypunch, typewriter	Typewriter
Character/code set	64	64	64 ASCII	64	ASCII
Detachability	No	No	Std.	Std.	No
Program function keys	17 std.	17 std.	17 std.	17 std.	14 std.
Numeric keypad	Opt.	No	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	Dual	Dual	Dual	Dual opt.	No
Diskette drive (floppy disk)	Opt.	—	Opt.	Opt.	No
Serial printer	Impact (char. & line)	Impact	Impact	Impact (char. & line)	Impact
Other devices	7 x 9-tk. mag. tape	5.0 or 10.0 megabyte fixed & removable disk; 7 & 9-tk. mag. tape	5.0 or 10.0 megabyte fixed & removable disk	7 & 9-tk. mag. tape	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Async./sync.	Asynchronous
Communications protocol	Async./bisync.	Async./bisync.	Async./bisync.	Async./bisync.	Async./bisync.
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII
Speed, bits/second	1800 to 9600	1800 to 9600	1800 to 9600	1800 to 9600	110 to 9600
Format: character, line, or block	Char./line/block	Char./line/block	Char./line/block	Char./line/block	Char./line/block
Multipoint operation (pollable/addr.)	Std.	Std.	Opt.	Std.	Opt.
Auto answer	Opt.	Opt.	Opt.	Opt.	Opt.
Auto call	Opt.	Opt.	Opt.	Opt.	Opt.
Terminal interface	RS-232C, CCITT	RS-232C, CCITT	RS-232C, CCITT	RS-232C, CCITT	RS-232C std.
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	147	499	529	161	—
Display station, 2 year lease, $/mo.	128	435	461	140	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	5,020	16,995	17,995	5,495	874
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	1971	1975	1974	1979	8/78
Display units installed to date	10,000	750	750	500 (1502 model)	—
Serviced by	TRW/ICL	TRW/ICL	TRW/ICL	TRW/ICL	Intertec & third party
COMMENTS	Compatible with IBM, Honeywell, Univac, & CDC; handles up to 63 peripherals including line printers and magnetic tape drives	Compatible with IBM, Honeywell, Univac, & CDC; handles up to 63 peripherals including line printers and magnetic tape drives	Compatible with IBM, Honeywell, Univac, & CDC; handles up to 63 peripherals including line printers and magnetic tape drives	Compatible with IBM, Honeywell, Univac, & CDC; handles up to 63 peripherals including line printers and magnetic tape drives	Uses Z-80 processor; single-board design; this is Intertec's "smart" terminal from a series of three terminals presently available; other units are either "dumb" or "programmable"

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Jacquard J100 & J105	Jacquard J500	Kustom MCT-10	Lear Siegler ADM-1A	Lear Siegler ADM-2
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	15 J105's per J100	1	1	1	1
Portable case	No	No	No; mobile	No	No
IBM compatibility	3270/75,2780,3780	3270/75,2780,3780	3275	No	No
Teletype compatibility	Std.	Std.	No	Std.	Std.
Other compatibility	Un. 1004, ICL, Burr.	Un. 1004, ICL, Burr.	No	Datapoint	Burroughs TD-800
User programmable	Yes	Yes	No	No	No
Self diagnostics	No	No	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	256	1920	1920
Display arrangement, lines x chars./line	24 x 80	24 x 80	8 x 32	24 x 80	24 x 80
Display area, h x w, inches	8 x 10	8 x 10	3.38 x 9.18	12-inch diag.	12-inch diag.
Total displayable symbols	96 std., 256 opt.	96 std., 256 opt.	64	96	128
Symbol formation	5 x 7 dot matrix	7 x 9 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	Yes	Yes	No	No	No
Programmable brightness levels	Std.	Std.	No	No	No
Character and/or field blinking	Std.	Std.	No	No	Std.
Roll	Std.	Std.	No	Up std.	Up std.
Paging	Std.	Std.	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H,	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	No
Addressable/readable cursor	Std.	Std.	No	Std.	Std.
Protected format	Std.	Std.	No	Std.	Std.
Partial screen transmit	Std.	Std.	Std.	Opt.	Std.
Tabulation	Std.	Std.	No	Std.	Std.
Character insert/delete	Std.	Std.	No	Opt.	Std.
Line insert/delete	Std.	Std.	No	Opt.	Std.
Erase	Char., line, screen std.	Char., line, screen std.	Screen std.	Char., screen std.; line opt.	Char., line, screen std.
Character repeat	Std.	Std.	No	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	ASCII	ASCII	ASCII	ASCII
Detachability	Std.	Std.	No	No	Std.
Program function keys	20 std.	20 std.	11 std.	No	16 std.
Numeric keypad	Std.	Std.	No	Opt.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	Yes	Yes	No	No	No
Serial printer	Yes	Yes	Non-impact	Impact	Impact
Other devices	Disk and tape units, aud. alarm, punch card and mag.card readers	Disk and tape units, aud. alarm, punch card and mag. card readers	Audible alarm std.	Audible alarm opt.	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Synchronous	Asynchronous	Async./sync.
Communications protocol	ASCII/BSC	ASCII/BSC	ASCII	ASCII	ASCII
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII	ASCII	ASCII
Speed, bits/second	110 to 4800	110 to 9600	886/1300	110 to 9600	110 to 9600
Format: character, line, or block	Programmable	Programmable	Block only	Char./block	Char./block
Multipoint operation (pollable/addr.)	Programmable	Programmable	Std.	Opt.	Opt.
Auto answer	Opt.	Opt.	Std.	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	—	RS-232C, current loop	RS-232C, current loop
Integral modem	No	No	Std.	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	596/116	368	—	Purchase only	Purchase only
Display station, 2 year lease, $/mo.	491/96	304	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	14,900/2,900	9,200	3,900	1,595	2,095
Controller, purchase, $	—	Contact vendor	27,500-90,000	—	—
Date of first production delivery	3/74	2/79	3/72	8/73	6/74
Display units installed to date	600/300	75	1,000	See comments	See comments
Serviced by	Sorbus	Sorbus	Kustom	Lear Siegler & third party	Lear Siegler & third party
COMMENTS	Price for J100 includes 32K bytes of core memory and two floppy disks; 2K bytes of memory is included with each J105	Price for J500 includes 64K bytes of semiconductor memory, two floppy disks, one printer controller, and two communications lines	Mobile terminal for communication with two-way radio; contains plasma display	Lear Siegler has delivered well over 20,000 displays of all models	Lear Siegler has delivered well over 20,000 displays of all models

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Lear Siegler ADM-3A	Lear Siegler ADM-31	Lear Siegler ADM-42	Megadata System 700	Megadata SiR-1000 C-4/8
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Either	Stand-alone
Maximum displays/controller	1	1	1	8	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	Any IBM exc. SDLC	Any IBM exc. SDLC
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	No	No	See comments	See comments
User programmable	No	No	No	No	No
Self diagnostics	No	No	No	Yes	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	2000	960/1920/2160	1536
Display arrangement, lines x chars./line	24 x 80	24 x 80	25 x 80	80 x 24/27; 64 x 24	64 x 24
Display area, h x w, inches	12-inch diag.	12-inch diag.	15-inch diag.	8.5 x 11	10 x 10
Total displayable symbols	64/96 opt.	128 ASCII	128 ASCII	64 to 256	192
Symbol formation	5 x 7 dot matrix	7 x 11 dot matrix	7 x 11 dot matrix	7x9;8x10/12;12x15	7 x 8 dot matrix
Color	No	No	No	No	Std. 4 or 8
Reverse video	No	Std.	Std.	Std.	Opt.
Programmable brightness levels	No	Std.	Std.	2 std.	Std.
Character and/or field blinking	No	Std.	Std.	Std.	Std.
Roll	Std., up only	Up std.	Up std.	Up & down std.	Std.
Paging	No	2 pages std.	2 std.; 4, 6, 8 opt.	Std.	Opt.
Cursor positioning; Up, Down, Left, Right, Home, Return	D, Rt.	U, D, L, R, H, Rt., new line	U, D, L, R, H, Rt., new line	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	No	—	—	Std.	Std.
Addressable/readable cursor	No	Std.	Std.	Std.	Std.
Protected format	No	Std.	Std.	Std.	Std.
Partial screen transmit	No	Std.	Std.	Std.	Std.
Tabulation	No	Std.	Std.	Std.	Std.
Character insert/delete	No	Std.	Std.	Std.	Std.
Line insert/delete	No	Std.	Std.	Std.	Std.
Erase	Char., screen std.	Std.	Std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Teletype	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	64 ASCII	128 ASCII	128 ASCII	ASCII	ASCII
Detachability	No	No	Std.	Std.	Opt.
Program function keys	No	1 std. (2-key seq.)	16 std.	71 std.	51
Numeric keypad	Opt.	Std.	Std.	Opt.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	Single/dual	Single/dual
Diskette drive (floppy disk)	No	No	No	Single/dual	Single/dual
Serial printer	No	Impact	Impact	Impact/non-impact	Impact
Other devices	Audible alarm std.	Audible alarm std.	Audible alarm std.	Mag. tape, disk, line printers, audible alarm, ID reader, light pen	Card reader, paper tape punch, audible alarm, ID card reader
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half-duplex
Technique	Asynchronous	Asynchronous	Async.; sync. opt.	Async./sync.	Async./sync.
Communications protocol	ASCII	ASCII	ASCII	ASCII/BSC/SDLC	ASCII
Code	ASCII	ASCII	ASCII	ASCII/EBCDIC	ASCII
Speed, bits/second	110 to 19,200	50 to 9600	50 to 9600	Up to 19,200	See comments
Format: character, line, or block	Char./block	Char./block	Char./block	Char./block	Char./block
Multipoint operation (pollable/addr.)	No	Opt.	Opt.	Std.	Std.
Auto answer	Opt.	No	No	Opt.	Opt.
Auto call	No	No	—	Opt.	No
Terminal interface	RS-232C, current loop	RS-232, 20 mA current loop	RS-232, 20 mA current loop	RS-232C, CCITT V.24, 20/60 mA	RS-232C
Integral modem	No	No	No	Opt.	Opt.
Integral acoustic coupler	No	No	No	Opt.	Opt.
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	Purchase only	Third-party lease	Third-party lease
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	895	1,450	1,795	4,000-12,000	5,000-7,500
Controller, purchase, $	—	—	—	6,400-9,400	—
Date of first production delivery	1/76	8/78	8/78	2/76	1973
Display units installed to date	See comments	500	500	Over 4000	Over 500
Serviced by	Lear Siegler & third party	Lear Siegler & third party	Lear Siegler & third party	Megadata & third party	Megadata & third party
COMMENTS	The ADM-3A is also available in a kit version; Lear Siegler has delivered well over 20,000 displays of all models			Microprocessor-based terminal with 4K to 64K bytes of memory; uses DEC assembly language; other compatibilities include Burroughs, Univac, Honeywell, & Hazeltine	Compatibilities include Burroughs, Univac, Honeywell, & Hazeltine, transmission speed up to 9600 bps (async.) or 19,200 bps (sync.)

Alphanumeric Display Terminals— Basic Characteristics

SUPPLIER AND MODEL	Megadata Series 2001 Workstation	Megadata MC-77	Memorex 1377-4	Micro-Term ACT-IA	Micro-Term ACT-V
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Either	Cluster	Stand-alone	Stand-alone
Maximum displays/controller	1	8	32	1	1
Portable case	No	No	No	Yes (9 lbs.)	No
IBM compatibility	Any IBM exc. SDLC	3277	3277-2	No	No
Teletype compatibility	Std.	Std.	No	Std.	Std.
Other compatibility	See comments	Hazeltine, Univac	No	No	No
User programmable	No	No	No	No	No
Self diagnostics	Yes	Opt. via user-defined firmware	Std.	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	1600	1920	1920	1024	1920
Display arrangement, lines x chars./line	80 x 20	80 x 24	24 x 80	16 x 64	24 x 80, 48 x 39
Display area, h x w, inches	8.5 x 11	7.5 x 9.25	7 x 9.5	Monitor-dependent	6.5 x 9
Total displayable symbols	128	128	—	96	128
Symbol formation	8 x 12 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	5 x 9 dot matrix	5 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	Std.	No	No	No	No
Programmable brightness levels	Std.	Opt.	2 std.	No	2
Character and/or field blinking	Std.	Opt.	No	No	No
Roll	Std.	Std.	No	Up, down std.	Up, down std.
Paging	Std.	Std.	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H	U, D, L, R, Rt.	U, D, L, R, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	No	No	No
Addressable/readable cursor	Std.	Std.	Std.	No	Both std.
Protected format	Std.	Std.	Std.	No	Std.
Partial screen transmit	Std.	Std.	Std.	No	Std.
Tabulation	Std.	Std.	Std.	No	Fwd., next unprot.
Character insert/delete	Std.	Std.	Std.	No	Std.
Line insert/delete	Std.	Std.	No	No	Std.
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	No	Line, screen std.
Character repeat	Std.	Std.	Some keys	No	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter/data entry console	Typewriter	Typewriter
Character/code set	ASCII	128 ASCII	EBCDIC/ASCII	128 ASCII	128 ASCII
Detachability	Opt.	No	No	Std.	No
Program function keys	71	29 std.	12 std.	No	No
Numeric keypad	Std.	Std.	Opt.	No	Std.
ANCILLARY DEVICES					
Cassette tape drive	Single/dual	No	No	No	No
Diskette drive (floppy disk)	Single/dual	Single/dual	No	No	No
Serial printer	Impact	Impact	No	No	No
Other devices	Card reader, disk, paper tape punch, audible alarm, ID card reader	—	Audible alarm std., light pen opt.	See comments	See comments
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Full-duplex	Half/full-duplex
Technique	Async./sync.	Asynchronous	Synchronous	Asynchronous	Asynchronous
Communications protocol	ASCII/BSC	ASCII	SDLC; BSC	Serial ASCII	Serial ASCII
Code	ASCII/EBCDIC	ASCII	ASCII/EBCDIC	ASCII	ASCII
Speed, bits/second	See comments	Up to 19,200	1200-19,200	110 to 19,200	110 to 9600
Format: character, line, or block	Char./block	Char./block	Block	Character	Char., line, block std.
Multipoint operation (pollable/addr.)	Std.	Std.	Std.	No	No
Auto answer	Opt.	No	No	No	No
Auto call	Opt.	No	No	No	No
Terminal interface	RS-232C	RS-232C, 20mA current loop	RS-232C	RS-232C std.	RS-232C, 20 mA std.
Integral modem	Opt.	No	No	No	No
Integral acoustic coupler	Opt.	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Third-party lease	Third-party lease	130	—	—
Display station, 2 year lease, $/mo.	—	—	110	—	—
Controller, 1 year lease, $/mo.	—	—	220	—	—
Controller, 2 year lease, $/mo.	—	—	190	—	—
Display station, purchase, $	12,500-15,000	2,150-3,250	3,800	400 (+ monitor)	865
Controller, purchase, $	—	—	6,050	—	—
Date of first production delivery	6/77	1/77	5/76	6/76	9/78
Display units installed to date	Over 100	1500	Over 25,000	Over 2000	Over 1500
Serviced by	Megadata & third party	Megadata & third party	Memorex	Dealers, factory	Dealers, factory
COMMENTS	Includes dual floppy disk drives and 55-cps bidirectional printer; compat. with Burr., Univac, Honeywell, & Hazel.; transmission speed up to 9600 bps (async.) or 19,200 bps (sync.)		Microprocessor-based replacement for IBM 3277-2 Display Unit; attaches to Memorex or IBM controller; 25th display line for line and column indicators and systems status	Provides composite video signal (RS-170) to drive any std. closed-circuit monitor; monitors may be "daisy-chained" to gain multiple viewing areas	Also features a uni-directional RS-232C serial ASCII printer port whose data rate (110-9600 bps) is independent of the CPU-terminal rate

Alphanumeric Display Terminals—Basic Characteristics

SUPPLIER AND MODEL	Micro-Term MIME-I	Mohawk MDS Series 21	NCR 796 Series Models 101, 301, & 401	NCR 796-501	Olivetti TCV-280 System BS-281 & BS-286
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Either	Stand-alone	Stand-alone	Cluster
Maximum displays/controller	1	4	1	1	16 (281); 8 (286)
Portable case	No	No	No	No	No
IBM compatibility	—	3270/75, 2260/65	No	No	3270 BSC & SDLC
Teletype compatibility	Std.	Yes	Std.	No	No
Other compatibility	Several	No	No	NCR BSC	No
User programmable	No	Yes	No	No	No
Self diagnostics	No	Std.	No	No	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	1920	480 or 1920	1920	1920	1920
Display arrangement, lines x chars./line	24 x 80	12 x 40/24 x 80	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	6.5 x 9	15-inch diag.	8 x 10	8 x 10; 12-in. diag.	15-in. diag.
Total displayable symbols	128	128	64; 96 (401)	96	64
Symbol formation	5 x 9 dot matrix	7 x 9 dot matrix	5 x 7 dot matrix	5 x 7	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	Std.	No	Std., selectable	No
Programmable brightness levels	2	Std.	2 std., 301, 401	2 std.	2 std.
Character and/or field blinking	No	Std.	Std., 301, 401	Both std.	Both std.
Roll	Up, down std.	Std., field only	Std.	Std.	No
Paging	No	Programmable	—	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	Programmable U, D, L, R, H, Rt.	U, D, L, R, H	U, D, L, R, H	U, D, L, R, H, Rt.
Cursor blinking	No	Std.	Opt. 101 only	—	Std.
Addressable/readable cursor	Both std.	Std., addressable	Std.	Addressable std.	Both std.
Protected format	Std.	Programmable	Std.; 301, 401	Std.	Std.
Partial screen transmit	Std.	Programmable	Std.; 301, 401	Std.	Std.
Tabulation	Fwd., next unprot.	Programmable	Std.	Std.	Fwd./ back std.
Character insert/delete	No	Programmable	Std., 301	Std.	Std.
Line insert/delete	Std.	Programmable	Std., 401 only	Std.	No
Erase	Line, screen std.	Programmable	Screen std.	Screen std.	Char., line, screen std.
Character repeat	Std.	No	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter/data entry	Typewriter	Typewriter	Typewriter, data entry
Character/code set	128 ASCII	96 EBCDIC	ASCII	128 ASCII	ASCII/EBCDIC
Detachability	No	Std.	No	No	Std.
Program function keys	No	18 std.	—	No	12 opt.
Numeric keypad	Std. (inlaid)	Opt.	Std.	Std.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	1 std., 3 opt.	No	No	No
Serial printer	No	Impact	Yes	Impact, non-impact	Impact
Other devices	See comments	Magnetic tape, 25 MB cartridge disk, 10 or 20 MB fixed disk	Audible alarm std. (101)	Parallel printer	Audible alarm, ID reader, light pen
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half-duplex	Half/full-duplex
Technique	Asynchronous	Async./sync.	Asynchronous	Synchronous	Synchronous
Communications protocol	Serial ASCII	BSC/SDLC	ASCII	ASCII, BSC	BSC/SDLC
Code	ASCII	EBCDIC/ASCII	ASCII	ASCII	ASCII/EBCDIC
Speed, bits/second	110 to 9600	600-9600	110 to 9600	Up to 9600	1200 to 9600
Format: character, line, or block	Char., line, blk. std.	Char., block	Char./block	Line/block	Block
Multipoint operation (pollable/addr.)	No	Opt.	Std., 301 only	Std.	Std.
Auto answer	No	Opt.	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C, 20 mA std.	RS-232C	RS-232C	RS-232C	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	51-54	80-150	155	—
Display station, 2 year lease, $/mo.	—	48-51	—	145 (3-year)	—
Controller, 1 year lease, $/mo.	—	190-232	—	—	—
Controller, 2 year lease, $/mo.	—	180-220	—	—	—
Display station, purchase, $	—	1,978-2,131	2,000-3,500	3,750	2,080
Controller, purchase, $	—	6,270-7,660	—	—	7,690(281); 3,080
Date of first production delivery	8/78	5/77	1/74	8/76	10/78
Display units installed to date	Over 1000	Over 5,000 stations	20,000+ (all models)	Over 1000	300 (281); 300 (286)
Serviced by	Dealers, factory	Mohawk	NCR	NCR	Olivetti
COMMENTS	Tailors responses to control codes to mimic the ACT-IV, ADM-3A, VT-52, Hazeltine 1500; a serial RS-232C printer port with independent data rate is also std.	Prices include one display unit and controller with one diskette drive; see Report 70D-642-08 for details	Manufactured by ADDS as models 580 (101) and 880A (301)		The internal controller is capable of supporting up to 16 (281) or 8 (286) Olivetti TCV-287 or other IBM 3277-type terminals

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Olivetti TC 800	Omron 8030 Series	Ontel OP-1	Ontel OP-1/R	Ontel OP-1/RW
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Stand-alone	Either	Either	Either
Maximum displays/controller	16	1	4	1	1
Portable case	No	No	No	No	No
IBM compatibility	3270/2848/2980	No	3275, 2780	BSC/SDLC	BSC/SDLC
Teletype compatibility	No	Std.	Std.	Std.	Std.
Other compatibility	See comments	Burroughs & Univac	Hazeltine 2000	See comments	See comments
User programmable	Via user-created soft. (assem., PL/1)	Opt.	Yes	Yes	Yes
Self diagnostics	Yes	Yes	Yes	Yes	—
DISPLAY PARAMETERS					
Display positions, chars/display	260, 480, 1920	1920	1600/1920/2000	1920	1920
Display arrangement, lines x chars./line	10 x 26, 12 x 40, 24 x 80	24 x 80	20/24/25 x 80	24 x 80	24 x 80
Display area, h x w, inches	6-/15-in. diag.	8 x 10	7 x 10	14-in. diag.	14-in. diag.
Total displayable symbols	96; 128 Kata. opt.	128; 224 opt.	128/256	128/256	128/256
Symbol formation	5x7, 7x9 dot matrix	9 x 14 dot matrix	5 x 10/13 x 11 dot	5 x 11/9 x 11 dot	7 x 9/9 x 11 dot
Color	No	No	No	No	No
Reverse video	No	Std.	Std.	Std.	Std.
Programmable brightness levels	Std.	2 std.	2 std.	2 std.	4 std.
Character and/or field blinking	Both std.	Field std.	Both std.	Both std.	Both std.
Roll	Up, down std.	Std.	Up & down std.	Up & down std.	Up, down, horiz. std.
Paging	Std.	Opt., up to 10 pages	Yes	4 pages std.	8 pages std.
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Both std.	Std.	Std.	Std.	Std.
Protected format	Std.	Std.	Std.	Std.	Std.
Partial screen transmit	Std.	Std.	Std.	Std.	Std.
Tabulation	Fwd./back std.	Std.	Std.	Std.	Std.
Character insert/delete	Std.	Std.	Std.	Std.	Std.
Line insert/delete	Std.	Std.	Std.	Std.	Std.
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen, block std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter/data entry	Teletype	Teletype	Typewriter
Character/code set	ASCII, EBCDIC	128 ASCII	ASCII	256 ASCII	256 ASCII
Detachability	Std.	No	Std.	Std.	Std.
Program function keys	19 std.	16 std.	38 std.	38 std.	38 std.
Numeric keypad	Std.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	Sing./dual/maga.	No	1 to 4 drives	Up to 4 drives	Up to 4 drives
Diskette drive (floppy disk)	Sing./dual/maga.	Dual drive	1 to 4 drives	Up to 4 drives	Up to 4 drives
Serial printer	Impact	RS-232 interface	Impact/non-impact	Impact/non-impact	Impact
Other devices	Audible alarm, magnetic stripe & optical char. readers	Audible alarm std.	Audible alarm std.	Audible alarm	Audible alarm
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync./SDLC	Async./sync.	Async./sync. opt.	Async./sync.	Async./sync.
Communications protocol	Program. (see com.)	ASCII/BSC	ASCII/BSC	BSC/SDLC	BSC/SDLC
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	600 to 9200	Up to 9600	Up to 2400/9600	Up to 9600	Up to 9600
Format: character, line, or block	Char./block	Char./block	Char./block	Char./block	Char./block
Multipoint operation (pollable/addr.)	Std.	Opt.	Opt.	Std.	Std.
Auto answer	Std.	Opt.	Opt.	Opt.	Opt.
Auto call	No	No	No	Opt.	Opt.
Terminal interface	RS-232C, 20 mA curr. loop, IPSO	RS-232C, 20mA current loop	RS-232C, 20 mA dc	RS-232C, 20 mA	RS-232C, 20 mA
Integral modem	No	No	Opt.	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Contact vendor for pricing	Purchase only	Sold OEM only	Sold OEM only	Sold OEM only
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	—	3,100-7,850 (base)	1,695-5,550	1,345-1,870	1,595-2,670
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	First qtr. 1976	8/76	11/74	9/78	2/79
Display units installed to date	30,000	Over 500	Over 5,000	Over 1000	—
Serviced by	Olivetti	Omron & third party	Third party	Third party	Third party
COMMENTS	Can interface with Univac DCT-1000, Burroughs B 700, NCR 270, and GOL-11	Uses Intel 8080 microprocessor with 8K to 64K RAM; contains 4K PROM loader	Price based on quantity of 100; 10- or 20-megabyte disk drive; IBM-compatible tape drives available	IBM-compatible tape/hard disk interface; down-stream loading or PROM-based; other compatibilities include DEC VT-52A, Univac Uniscope 200, and Burroughs TD 800	Word-wrap std., down-stream loadable or PROM-based; designed for word procesisng; other compatibilities include DEC VT-52A, Univac Uniscope 200, and Burroughs TD 800

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Paradyne 7801 CRT Console	Paradyne 7802 Visual Display Unit 77	Perkin-Elmer Model 1100	Perkin-Elmer Owl-1200	Perkin-Elmer Bantam-550
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster	Cluster	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	15	6	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	Yes	No	No	No
Teletype compatibility	Std.	No	Std.	Std.	Std.
Other compatibility	IBM 1052	No	No	No	No
User programmable	No	No	No	No	No
Self diagnostics	No	No	No	No	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	1920	1920
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	8 x 10; 12-in. diag.	1-2in. diag.	12-inch diag.	12-inch diag.	12-inch diag.
Total displayable symbols	64	96 ASCII	128 ASCII	128 ASCII	128 ASCII
Symbol formation	5 x 7 dot matrix	7 x 11 dot matrix	7 x 11 dot matrix	7 x 11 dot matrix	5 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	Std.	Opt.	Std.	Std., switchable
Programmable brightness levels	No	2 std.	No	2 std.	No
Character and/or field blinking	No	No	No	Std.	No
Roll	Up std.	No	Up std.	Up std.	Std.
Paging	No	No	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	No	No	Opt.	Opt.	No
Addressable/readable cursor	Std. addr. only	Std.	Std.	Std.	Addressable std.
Protected format	No	Std.	No	Std.	No
Partial screen transmit	No	Std.	No	Std.	No
Tabulation	No	Std.	Std.	Std.	Fixed tab stops
Character insert/delete	No	Std.	No	Std.	No
Line insert/delete	No	Std.	No	Std.	No
Erase	Char., screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., screen std.
Character repeat	No	Std.	Std.	Std.	Repeat key std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	128 ASCII	128 ASCII	128 ASCII	128 ASCII
Detachability	No	No	No	No	No
Program function keys	No	16 std.	No	16 std.	No
Numeric keypad	No	Std.	Opt.	Std.	Std., "shadowed"
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	No	No	No
Serial printer	No	Yes	Impact/non-impact	Impact/non-impact	Via "wye" aux. port
Other devices	Audible alarm std., composite video	Audible alarm std.	Audible alarm std.	Audible alarm std.	Audible alarm opt.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Communications protocol	Paradyne SDLC	Paradyne SDLC	ASCII	ASCII	Teletype
Code	EBCDIC	EBCDIC	ASCII	ASCII	ASCII
Speed, bits/second	Up to 9600	75 to 9600	75 to 9600	75 to 9600	110 to 9600
Format: character, line, or block	Char. only	Char./block	Char. only	Char./block	Character
Multipoint operation (pollable/addr.)	No	No	No	Opt.	No
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C, CCITT, or 20 mA dc	RS-232C, CCITT, or 20 mA dc	RS-232C std., 20 mA dc opt.
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	—	Purchase only	Purchase only	Leases from dealers only
Display station, 2 year lease, $/mo.	134	155	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	3,000	3,800	1,514 (base)	2,195	966
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	7/76	10/77	2/77	3/77	12/78
Display units installed to date	73	84	—	—	—
Serviced by	Paradyne	Paradyne	Perkin-Elmer	Perkin-Elmer	Perkin-Elmer
COMMENTS	Display used as 1052-compatible unit for PIX II Data Communication System console	Display used as 3270-compatible unit for PIX II Data Communication System			

Alphanumeric Display Terminals—Management Perspective and Equipment Specifications

SUPPLIER AND MODEL	NCR 7900 Model 3	NCR 7901	Northern Telecom Inc. 294-1B	Northern Telecom Inc. 294C/294-51C/ 296C	Paradyne 9440
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Local cluster	Cluster	Either
Maximum displays/controller	1	—	32	32/12/8	3
Transportability	No	No	No	No	No
IBM compatibility	No	No	3274-IB	3270 BSC/SNA	1052
Teletype compatibility	Std.	Std.	No	No	No
Other compatibility	—	—	—	—	—
DISPLAY PARAMETERS					
Display capacity, no. of chars.	2000	1920	1920, 2560, 3440	1920, 2560, 3440	1920
Memory capacity, no. char./lines/pages	—	—	—	—	—
Screen arrangement, lines x chars./line	25 x 80	24 x 80	24 x 80, 32 x 80, 43 x 80	24 x 80; 32 x 80; 43 x 80	24 x 80
Screen area, diagonal, inches	12	12	15	15	12
Tilt/swivel screen	No	Tilt std.	Tilt std.	Tilt std.	Tilt std.
Total displayable symbols	128 ASCII	96 ASCII	96	96	128 ASCII/EBCDIC
Symbol formation	7 x 7 dot matrix	5 x 7 dot matrix	7 x 12, 7 x 9 dot	7x9, 7x12 dot matrix	7 x 14 dot matrix
Character phosphor	P31 green std.	P31 green std.	Green std.	Green std.	P39 green
Color capability	No	No	No	No	No
Programmable field/char. highlighting via:					
Underline	Std.	Std.	No	No	No
Blink	Std.	Std.	No	No	No
Blank	Std.	Std.	No	No	Std.
Bold	No	No	Std.	Std.	No
Reverse	Std.	Std.	No	No	No
Double size	No	No	No	No	No
Scroll	No	No	No	No	Std.
Paging	No	No	No	No	No
Selectable cursor blinking	Std.	Std.	Std.	Std.	No
Addressable/readable cursor	Both std.	Addressable only	Addressable only	Addressable only	Both std.
Protected format	Std.	No	Std.	Std.	No
Partial screen transmit	Std.	No	Std.	Std.	Std.
Split screen/windows	No	No	No	No	No
Tabulation	Fwd./back std.	No	Std.	Std.	No
Character insert/delete	Std.	No	Std.	Std.	No
Line insert/delete	Std.	No	No	No	No
Erase	Char./line/screen std.	Screen std.	Char./screen std.	Char./screen std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter, data entry, keypunch	Typewriter, data entry, keypunch	Typewriter
Character/code set	128 ASCII	96 ASCII	ASCII/EBCDIC	ASCII/EBCDIC	ASCII
Detachability	Opt.	Std.	Std.	Std.	Std.
Program function keys	No	No	24 opt.	24 opt.	24 std.
Numeric keypad	Std., touch-tone opt.	Std.	Opt.	Opt.	Opt.
ANCILLARY DEVICES					
Serial printer, type and speed	Opt.	Serial interface	Impact, 72-180 cps	Impact, 72-180 cps	Impact
Line printer, type and speed	Opt.	No	Belt, 300 lpm	Belt, 300 lpm	No
Composite video	No	No	No	No	Opt.
Port for cust.-supplied devices	Opt.	Std.	Opt.	Opt.	No
Other vendor-supplied devices	—	—	ID badge reader, light pen opt.	ID badge reader, light pen opt.	Light pen, keylock
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Synchronous	Synchronous	Asynchronous
Communications protocol	ASCII	ASCII	BSC/SDLC	BSC/SDLC	Paradyne SDLC
Code	ASCII	ASCII	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	50-9600	110-19,200	1200-9600	1200-9600	Up to 19,200
Format; character, line, or block	Line/page	Character	Block	Block	Character
Multipoint operation (pollable/addr.)	Both std.	No	Std.	Std.	No
Terminal interface	RS-22-C	RS-232-C	RS-232-C	RS-232-C	RS-232-C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 2-year lease, $/mo.	160-166	—	—	—	134
Controller, 2-year lease, $/mo.	—	—	—	—	33
Display station, purchase, $	3,500-3,670	850	1,870	1,870	3,000
Controller, purchase, $	—	—	8,995	6,925/4,250/3,200	1,000
Monthly prime-shift maint., $/mo.	33	15	—	—	27
Date of announcement	—	2/82	2/82	1/82, 2/82 (294-51C)	11/80
Date of first production delivery	—	5/82	2/82	2/81, 2/82 (294-51C)	1/81
Display units installed to date	—	—	—	—	200
Serviced by	—	NCR	NTI	NTI	Paradyne
COMMENTS				Models 294C and 294-51C also feature display capacity of 3564 char. (27 x 132)	

Alphanumeric Display Terminals—Management Perspective and Equipment Specifications

SUPPLIER AND MODEL	Paradyne 9476	Paradyne 9478	Perkin-Elmer 550B/550E	Perkin-Elmer 550S	Perkin-Elmer 1245/1251
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Either	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	32	32	1	1	1
Transportability	No	No	No	No	No
IBM compatibility	3276-looks local	3278	No	No	No
Teletype compatibility	No	No	Std.	Std.	Std.
Other compatibility	—	—	—	—	—
DISPLAY PARAMETERS					
Display capacity, no. of chars.	1920	1920	1920	1920	2000
Memory capacity, no. char./lines/pages	—	—	80/24/1	80/48/2	80/24/1
Screen arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	24 x 80	24 x 80
Screen area, diagonal, inches	15	15	12	12	12
Tilt/swivel screen	Tilt std.	Tilt std.	No	No	Tilt std.
Total displayable symbols	128 ASCII/EBCDIC	128 ASCII/EBCDIC	128 ASCII	128 ASCII	128 ASCII, 32 forms
Symbol formation	8 x 16 dot matrix	8 x 16 dot matrix	5 x 9 dot matrix	5 x 9 dot matrix	7 x 11 dot matrix
Character phosphor	P39 green	P39 green	P4 white std.; P31 green/amber opt.	P4 white std.; P31 green/amber opt.	P4 white std.; P31 green/amber opt.
Color capability	No	No	No	No	No
Programmable field/char. highlighting via:					
Underline	Std.	Std.	No	No	Std.
Blink	Std.	Std.	No	Std.	Std.
Blank	Std.	Std.	No	Std.	Std.
Bold	Std.	Std.	No	No	No
Reverse	Std.	Std.	No	Std.	Std.
Double size	No	No	No	No	No
Scroll	No	No	Up std.	Up/down std.	Up std.
Paging	No	No	No	2 opt.	No
Selectable cursor blinking	Std.	Std.	No	No	Std.
Addressable/readable cursor	Both std.	Both std.	Addressable only	Both std.	Both std.
Protected format	Std.	Std.	No	Std.	Std.
Partial screen transmit	Std.	Std.	No	No	Std.
Split screen/windows	No	No	No	No	No
Tabulation	Std.	Std.	Fwd. std.	Fwd/back std.	Fwd./back std.
Character insert/delete	Std.	Std.	No	Std.	Std.
Line insert/delete	No	No	No	Std.	Std.
Erase	Std.	Std.	Line/screen std.	Char./line/screen std.	Char./line/screen std.
KEYBOARD PARAMETERS					
Style	Typewriter, data entry, WP	Typewriter, data entry, WP	Typewriter	Typewriter	Typewriter
Character/code set	ASCII/EBCDIC	ASCII/EBCDIC	128 ASCII	128 ASCII	128 ASCII
Detachability	Std.	Std.	No	No	Opt.
Program function keys	24 std.	24 std.	No	8 std.	24/32 opt.
Numeric keypad	Std.	Std.	Std. (550E)	Std.	Opt.
ANCILLARY DEVICES					
Serial printer, type and speed	45/150 letter/dot	45/150 letter/dot	Thermal, 96 cps	Thermal, 96 cps	Thermal, 96 cps
Line printer, type and speed	300/600 band	300/600 band	Thermal, 180 lpm	Thermal, 180 lpm	No
Composite video	Opt.	Opt.	No	No	No
Port for cust.-supplied devices	Opt.	Opt.	Std.	Std.	Std.
Other vendor-supplied devices	Light pen, keylock	Light pen, keylock	—	—	Light pen
TRANSMISSION PARAMETERS					
Mode	Full-duplex	Full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Synchronous	Synchronous	Asynchronous	Asynchronous	Asynchronous
Communications protocol	Paradyne SDLC	Paradyne SDLC	—	—	—
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII	ASCII	ASCII
Speed, bits/second	256KB	256KB	110-9600	50-19,200	110-9600
Format; character, line, or block	Block	Block	Character	Char./block	Char./line/block
Multipoint operation (pollable/addr.)	Std.	No	No	No	Std.
Terminal interface	RS-232-C	RS-232-C	RS-232-C; 20mA opt.	RS-232-C; 20mA opt.	RS-232-C; 20mA opt.
Integral modem	Opt.	Opt.	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 2-year lease, $/mo.	166	77	Contact vendor	Contact vendor	Contact vendor
Controller, 2-year lease, $/mo.	95	135	—	—	—
Display station, purchase, $	5,850	3,000	Contact vendor	Contact vendor	Contact vendor
Controller, purchase, $	2,500	4,000	—	—	—
Monthly prime-shift maint., $/mo.	30	20	—	—	—
Date of announcement	11/80	11/80	—	—	—
Date of first production delivery	1/81	1/81	—	—	—
Display units installed to date	400	1,200	—	—	—
Serviced by	Paradyne	Paradyne	Perkin-Elmer	Perkin-Elmer	Perkin-Elmer
COMMENTS	All remote connected devices appear as local channel attached; no need for remote software; Paradyne CRTs use loop technology.		International character sets/keyboards available.	International character sets/keyboards available.	International character sets/keyboards.

Alphanumeric Display Terminals— Basic Characteristics

SUPPLIER AND MODEL	Perry PE 9000 Series	Phone 1 P1-11	Phone 1 P1-14	Plantronics VU Set DS-150C
TERMINAL DESCRIPTION				
Stand-alone or cluster	Stand-alone	Either	Either	Stand-alone
Maximum displays/controller	1	24	24	1
Portable case	No	No	No	No
IBM compatibility	No	3272/3271 Controllers	3272/3271 Controllers	No
Teletype compatibility	Std.	Std.	Std.	Std.
Other compatibility	No	No	No	No
User programmable	No	No	No	No
Self diagnostics	No	Std.	Std.	No
DISPLAY PARAMETERS				
Display positions, chars/display	480/1280/1920	1920	1920	64/128
Display arrangement, lines x chars./line	8 x 60; 16/24 x 80	24 x 80	24 x 80	4/8 x 16
Display area, h x w, inches	9-/12-inch diag.	12-inch diag.	12-inch diag.	3-inch diag.
Total displayable symbols	64/96	128	128	64
Symbol formation	5 x 7 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	5 x 7 dot matrix
Color	No	No	No	No
Reverse video	No	No	No	No
Programmable brightness levels	No	Std.	Std.	No
Character and/or field blinking	Std. (9700)	No	No	Both std.
Roll	Up std. (9900)	Up std.	Up std.	No
Paging	Opt. (9900)	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H	U, D, L, R, H	—
Cursor blinking	Std.	No	No	No
Addressable/readable cursor	Std. address	Both std.	Both std.	No
Protected format	No	Std.	Std.	No
Partial screen transmit	No	Std.	Std.	No
Tabulation	No	Fwd./back tab std.	Fwd./back tab std.	No
Character insert/delete	Opt. (9900)	Std.	Std.	No
Line insert/delete	Opt. (9900)	Std.	Std.	No
Erase	Screen std.	Line, screen std.	Line, screen std.	Screen std.
Character repeat	Std. (9900)	Std.	Std.	No
KEYBOARD PARAMETERS				
Style	Typewriter	Typewriter	Typewriter	Touch-Tone or alphanumeric
Character/code set	64/128 ASCII	ASCII	ASCII	DTMF; 97 ASCII
Detachability	No	No	No	Std.
Program function keys	No	32 std.	32 std.	No
Numeric keypad	Std.	Std.	Std.	No
ANCILLARY DEVICES				
Cassette tape drive	RS-232 interface	No	No	No
Diskette drive (floppy disk)	RS-232 interface	No	No	No
Serial printer	Impact	Impact	Impact	No
Other devices	Audible alarm std.	Audible alarm	Audible alarm, hand-fed card reader	—
TRANSMISSION PARAMETERS				
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Async./sync.	Async./sync.	Asynchronous
Communications protocol	ASCII	TTY, BSC	TTY, BSC	ASCII
Code	ASCII	ASCII, EBCDIC	ASCII, EBCDIC	ASCII
Speed, bits/second	50 to 9600	To 9600	To 9600	110, 150, 300
Format: character, line, or block	Char./block	Char./block	Char./block	Char. only
Multipoint operation (pollable/addr.)	No	Std.	Std.	No
Auto answer	No	Opt.	Opt.	No
Auto call	No	No	No	No
Terminal interface	RS-232C, 20/60 mA dc opt.	RS-232C	RS-232C	RS232C
Integral modem	No	Opt.	Opt.	Std.
Integral acoustic coupler	No	Opt.	Opt.	No
PRICING AND AVAILABILITY				
Display station, 1 year lease, $/mo.	Purchase only	40	40	See comments
Display station, 2 year lease, $/mo.	—	33	33	—
Controller, 1 year lease, $/mo.	—	415 (3271 compat.)	415 (3271 compat.)	—
Controller, 2 year lease, $/mo.	—	332 (3271 compat.)	332 (3271 compat.)	—
Display station, purchase, $	975-2,250	850	850	—
Controller, purchase, $	—	8,300	8,300	—
Date of first production delivery	7/77	9/76	9/76	4/73
Display units installed to date	—	185	185	4,000
Serviced by	Perry and third party	Phone 1 exchange	Phone 1 exchange	Local telephone co.
COMMENTS	Several models of Centronics printers are available	Basic station is TTY compatible; Phone 1 emulation controllers provide for IBM 3271 compatibility	Basic station is TTY compatible; Phone 1 emulation controllers provide for IBM 3271 compatibility	Leased to user by local telephone co. for about $30 to $55 per month; unit attaches directly to telephone set or private line

Alphanumeric Display Terminals—Basic Characteristics

SUPPLIER AND MODEL	Quotron Series 800	Racal-Milgo ICC 40+ Data Display System	Racal-Milgo ICC 40+ MPL Data Display System	Racal-Milgo System 400	Randal Data Systems RDS 1
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	24	1	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	3270, 2260	2265	No	3275, 2265	No
Teletype compatibility	Std.	—	No	No	Std.
Other compatibility	No	No	AT&T #8A1	Honeywell, Univac	No
User programmable	Yes	No	No	No	No
Self diagnostics	Std.	Std.	Std.	Std.	No
DISPLAY PARAMETERS					
Display positions, chars/display	1200/1920	1920	1920	960/1920	960/1920
Display arrangement, lines x chars./line	20/24 x 60/80	24 x 80	24 x 80	12/24 x 80	12/24 x 80
Display area, h x w, inches	48 x 64; 6 x 8	5.75 x 10.5	5.75 x 10.5	5.75 x 10.5	6.5 x 8.4
Total displayable symbols	96	127	127 ASCII	127 ASCII	96 ASCII
Symbol formation	14 x 22 dot matrix	7 x 11 dot matrix	7 x 11 dot matrix	7 x 11 dot matrix	5 x 7 dot matrix
Color	No	No	No	No	No
Reverse video	Opt.	Std.; cursor only	Opt.	Std.	No
Programmable brightness levels	No	2 std.	2 std.	3 std.	2 std.
Character and/or field blinking	Opt.	Both opt.	Opt.	Std.	No
Roll	No	Opt.	Std., up & down	No	Up std.
Paging	No	Opt.	—	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	No	No	No	No
Addressable/readable cursor	Std., address. only	Std., address. only	Std., address only	Std., address only	Std., address only
Protected format	Opt.	Opt.	Opt.	Std.	Std.
Partial screen transmit	Opt.	Std.	Std.	Std.	Std.
Tabulation	Opt.	Opt.	Opt.	Std.	No
Character insert/delete	Opt.	Std.	Std.	Std.	No
Line insert/delete	Opt.	Std.	Std.	Std.	No
Erase	Char., screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Opt.	Std.	No	Std.	Std.
KEYBOARD PARAMETERS					
Style	Block/typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	127 ASCII	127 ASCII	127 ASCII	96 ASCII
Detachability	Std.	Std.	Std.	Std.	No
Program function keys	10 opt.	Opt.	No	16 opt.	No
Numeric keypad	No	No	Opt.	Opt.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	Single	No	No	No	Single
Serial printer	Impact/non-impact	Impact	Impact	Impact	Impact
Other devices	Disk, mag tape, printers, card reader, audible alarm	Audible alarm std.	Audible alarm std.	Audible alarm std.	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Asynchronous	Async./sync.	Asynchronous
Communications protocol	ASCII/BSC/Baudot	ASCII	Bell 8A1	IBM, HIS, Univac	ASCII
Code	ASCII/EBCDIC	ASCII	ASCII	ASCII/EBCDIC	ASCII
Speed, bits/second	37.5 to 9600	Up to 3600	1200 to 4800	50 to 9600	Up to 9600
Format: character, line, or block	Char./block	Char./block	Char./block	Char./block	Char./block
Multipoint operation (pollable/addr.)	Opt.	Opt.	Std.	Std.	No
Auto answer	Opt.	Opt.	Opt.	Opt.	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C
Integral modem	No	Opt.	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	140-170	161-191	135-160	Purchase only
Display station, 2 year lease, $/mo.	—	125-146	140-161	130-155	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,200-1,500	3,750-4,195	4,585-5,020	4,455-4,950	1,950-2,400
Controller, purchase, $	26,975-120,000	—	—	—	—
Date of first production delivery	9/71	2/75	2/76	10/76	9/75
Display units installed to date	17,000	Over 500	Over 1000	Over 2000	Over 400
Serviced by	Quotron	ICC/Racal-Milgo	ICC/Racal-Milgo	ICC/Racal-Milgo	RDS
COMMENTS	Display-oriented minicomputer system; 16-bit processor has 750-nanosecond cycle time	40+10 printer is a modified Okidata CP 110; 40+20 printer is a modified GE TermiNet 1200; calculator firmware is optional		Printer prices include buffer and interface	

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Randal Data Systems Link 100	Randal Data Systems Link 200	Raytheon Data Systems PTS-100	Raytheon Data Systems PTS-1200 MKI	Raytheon Data Systems PTS-1200 MKII
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Either	Either	Cluster	Cluster
Maximum displays/controller	2	17	32	8	24
Portable case	No	No	No	No	No
IBM compatibility	3270/3275 BSC	3270/3275 BSC	3274/6 BSC, 2260/5	3271 BSC,2780,3780	3271 BSC,2780,3780
Teletype compatibility	Std.	Std.	Std.	No	Opt.
Other compatibility	No	No	Univac, PARS	IBM HASP	IBM HASP
User programmable	Yes	Yes	Yes	Yes	Yes
Self diagnostics	Yes	Yes	Yes	Yes	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	960/1920	960/1920	480/960/1920	960/1920	960/1920
Display arrangement, lines x chars./line	12/24 x 80	12/24 x 80	12, 15, 16, 24, 30 lin.	12/24 x 80	12/24 x 80
Display area, h x w, inches	6.5 x 8.4	6.5 x 8.4	7 x 10	15-inch diag.	15-inch diag.
Total displayable symbols	96 ASCII	96 ASCII	64; 96 opt.	96	96
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	7 x 7/9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	2 std.	2 std.	2 std.	2 std.	2 std.
Character and/or field blinking	No	No	Both std.	Std.	Std.
Roll	Up std.	Up std.	—	Std., up & down	Std., up & down
Paging	Std.	Std.	No	Std.	Std.
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	No	No	Std.	Std.	Std.
Addressable/readable cursor	Std., address. only	Std., address. only	Std.	Both std.	Both std.
Protected format	Std.	Std.	Std.	Std.	Std.
Partial screen transmit	Std.	Std.	Std.	Std.	Std.
Tabulation	No	No	Std.	Std.	Std.
Character insert/delete	Opt.	Opt.	Std.	Std.	Std.
Line insert/delete	Opt.	Opt.	Std.	Std.	Std.
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter/data entry	Typewriter/data entry	Typewriter/data entry
Character/code set	96 ASCII	96 ASCII	96 ASCII/EBCDIC	96 ASCII/EBCDIC	96 ASCII/EBCDIC
Detachability	No	No	Std.	Std.	Std.
Program function keys	16 std.	16 std.	12 std.	12 std.	12 std.
Numeric keypad	Std.	Std.	Opt.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	4 drives max.	Single	Single
Diskette drive (floppy disk)	2-4 drives	No	No	No	No
Serial printer	Impact	Impact	Impact	Impact	Impact
Other devices	Card reader, disk, mag. tape, audible alarm	Card reader, disk, mag. tape, audible alarm	Disk, card reader, audible alarm, ID reader, line printer	Disk, card reader, ID reader, audible alarm, line printer, mag. tape	Disk, card reader, ID reader, audible alarm, line printer, mag. tape
TRANSMISSION PARAMETERS					
Mode	Full-duplex	Full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Synchronous	Synchronous
Communications protocol	BSC	BSC	BSC/PARS/U 100	BSC	BSC
Code	ASCII	ASCII	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	Up to 9600	Up to 9600	Up to 9600	Up to 14,400	Up to 19,200
Format: character, line, or block	Char./block	Char./block	Block only	Block	Block
Multipoint operation (pollable/addr.)	No	No	Std.	Opt.	Opt.
Auto answer	Opt.	Opt.	Opt.	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C, CCITT V.24	RS-232C	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	51	51	51
Display station, 2 year lease, $/mo.	—	—	46	46	46
Controller, 1 year lease, $/mo.	—	—	116-391	631	1,010
Controller, 2 year lease, $/mo.	—	—	104-351	568	911
Display station, purchase, $	1,950-2,400	1,950-2,400	2,030	2,030	2,030
Controller, purchase, $	12,750 (base)	27,500 (base)	5,710-13,950	23,120	37,055
Date of first production delivery	9/75	9/76	9/72	6/78	6/78
Display units installed to date	Over 100	Over 100	65,000 (all models)	See PTS-100	See PTS-100
Serviced by	RDS	RDS	Raytheon	Raytheon	Raytheon
COMMENTS			Alternate display formats are 15/30 x 64. Number of units installed includes PTS-100 and PTS-200	Controller price includes 64K memory & 10-megabyte disk expandable to 40 megabytes of useable storage	Controller price includes 64K memory & 10-megabyte disk expandable to 250 megabytes of useable storage

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	SLM, Inc. VT48	Soroc IQ 120	Soroc IQ 140	Sycor 251	Sycor 255
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Cluster	Stand-alone
Maximum displays/controller	4	1	1	32	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	3270	3275
Teletype compatibility	Yes	Std.	Std.	No	No
Other compatibility	No	No	No	No	No
User programmable	Yes	No	No	No	Yes
Self diagnostics	Yes	No	No	Yes	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	3840	1920	1920	480/1920	480/1920
Display arrangement, lines x chars./line	48 x 80	24 x 80	24 x 80	12 x 40; 24 x 80	12 x 40; 24 x 80
Display area, h x w, inches	15-inch diag.	12-inch diag.	12-inch diag.	4.5 x 8.2; 5.8 x 8.5	4.5 x 8.2; 5.8 x 8.5
Total displayable symbols	256	96	96	64; 96 opt.	64; 96 opt.
Symbol formation	5 x 7 dot matrix	5 x 9 dot matrix	5 x 9 dot matrix	9 x 7 dot matrix	9 x 7 dot matrix
Color	4 shades gray	No	No	No	No
Reverse video	Std.	No	Std.	No	No
Programmable brightness levels	Std.	2 std.	2 std.	2 std.	2 std.
Character and/or field blinking	Std.	No	Std.	Field std.	Field std.
Roll	Std.	Std., up only	Std., up only	No	No
Paging	4 pages opt.	No	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	No	Std.	Std.	Std.
Addressable/readable cursor	Std.	Std., address only	Both std.	Std.	Std.
Protected format	Std.	Std.	Std.	Std.	Std.
Partial screen transmit	Opt.	Std.	Std.	Std.	Std.
Tabulation	Std.	Std.	Std.	Std.	Std.
Character insert/delete	Std.	No	Std.	Std.	Std.
Line insert/delete	Std.	No	Std.	No	No
Erase	Std.	Line, screen std.	Line, screen std.	Char., screen std.	Char., screen std.
Character repeat	Std.	Std.	Std.	Partial	Partial
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter/data entry	Typewriter/data entry
Character/code set	128 ASCII/128 spec.	96 ASCII	96 ASCII	ASCII/EBCDIC	ASCII/EBCDIC
Detachability	No	No	Std.	Std.	Std.
Program function keys	23 std.	No	16 std.	12 opt.	12 opt.
Numeric keypad	Std.	Std.	Std.	Opt.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	Single	No	No	No	No
Diskette drive (floppy disk)	Single/dual	No	No	Dual	Dual
Serial printer	RS-232 interface	No	No	Impact	Impact
Other devices	No	—	—	Audible alarm, ID card reader std. light pen opt.	Audible alarm, ID card reader std. light pen opt.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half-duplex	Half-duplex
Technique	Async./sync.	Asynchronous	Asynchronous	Synchronous	Synchronous
Communications protocol	ASCII	ASCII	ASCII	BSC	BSC
Code	ASCII	ASCII	ASCII	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	110 to 19,200	75 to 19,200	110 to 19,200	1200 to 4800	1200 to 4800
Format: character, line, or block	Char./block	Char./block	Char./block	Block only	Block only
Multipoint operation (pollable/addr.)	Std.	No	Opt.	Std.	Std.
Auto answer	Std.	No	No	Yes	Yes
Auto call	Opt.	No	No	No	No
Terminal interface	RS-232C	RS-232C, 20 mA current loop	RS-232C, 20 mA current loop	RS-232C	RS-232C
Integral modem	Opt.	No	No	No	No
Integral acoustic coupler	Opt.	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	Purchase only	Purchase only	37	113
Display station, 2 year lease, $/mo.	—	—	—	30	83
Controller, 1 year lease, $/mo.	—	—	—	133	—
Controller, 2 year lease, $/mo.	—	—	—	113	—
Display station, purchase, $	1,500-6,300	995	1,495	3,420	4,730
Controller, purchase, $	—	—	—	4,330	—
Date of first production delivery	11/78	11/76	8/78	10/73	10/73
Display units installed to date	—	10,000	500	Over 13,000	Over 13,000
Serviced by	Third party	Soroc	Soroc	Sycor & Sorbus	Sycor & Sorbus
COMMENTS	Optional vector graphics, 480 x 512 resolution programmable; memory expansion to 64K; BASIC, PASCAL available				

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Sycor 258	Sycor 291	Sycor 296	Sycor 340	Sycor 350
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Cluster	Cluster	Stand-alone	Stand-alone
Maximum displays/controller	24	16	8	1	1
Portable case	No	No	No	No	No
IBM compatibility	3270/3275 BSC	3270 BSC/SDLC	3270 BSC/SDLC	No	2770, 2780, 3780
Teletype compatibility	No	No	No	Std.	Std.
Other compatibility	No	No	No	No	No
User programmable	Yes	No	No	No	Yes
Self diagnostics	Yes	Std.	Std.	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	480/1920	1920	1920	578	576
Display arrangement, lines x chars./line	12 x 40; 24 x 80	24 x 80	24 x 80	9 x 64	9 x 64
Display area, h x w, inches	—	15-inch diag.	15-inch diag.	7.75 x 5.5	9 x 9
Total displayable symbols	64; 96	64; 96	64; 96	62	64 ASCII
Symbol formation	9 x 7 dot matrix	9 x 7 dot matrix	9 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	2 std.	2 std.	2 std.	No	No
Character and/or field blinking	Field std.	No	No	No	Char. std.
Roll	No	No	No	Up opt.	No
Paging	No	No	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Std.	Std.; addressable only	Std.; addressable only	No	No
Protected format	Std.	Std.	Std.	Std.	Std.
Partial screen transmit	Std.	Std.	Std.	Std.	No
Tabulation	Std.	Std.	Std.	Std.	Std.
Character insert/delete	Std.	Std.	Std.	No	No
Line insert/delete	No	No	No	No	No
Erase	Char., screen std.	Char., screen std.	Char., screen std.	Char., screen std.	Std.
Character repeat	Partial	Std.	Std.	No	No
KEYBOARD PARAMETERS					
Style	Typewriter/data entry	Typewriter/data entry/keypunch	Typewriter/data entry/keypunch	Typewriter	Typewriter/data entry
Character/code set	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Detachability	Std.	Std.	Std.	No	Std.
Program function keys	12 opt.	12 opt.	12 opt.	Yes	—
Numeric keypad	Opt.	Opt.	Opt.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	Single/dual	No
Diskette drive (floppy disk)	Dual	No	No	Dual	1 or 2 dual
Serial printer	Impact	Impact	Impact	Impact	Impact
Other devices	Audible alarm, ID card reader std. light pen opt.	ID card reader & light pen opt.	ID card reader & light pen opt.	Card reader, line printers, 7-/9-tk. mag. tape units, audible alarm	Card reader, line printers, mag. tape, audible alarm
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half/full-duplex	Half/full-duplex	Half-duplex	Half-duplex
Technique	Synchronous	Synchronous	Synchronous	Async./sync.	Async./sync.
Communications protocol	BSC	BSC/SDLC	BSC/SDLC	ASCII/BSC	BSC
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	1200 to 4800	1200 to 9600	1200 to 9600	75 to 4800	110 to 4800
Format: character, line, or block	Block only	Block only	Block only	Char./block	Char./block
Multipoint operation (pollable/addr.)	Std.	Std.	Std.	No	No
Auto answer	Opt.	No	No	Opt.	Std.
Auto call	No	No	No	Opt.	Std.
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C opt.	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	37	56	56	150-593	225-809
Display station, 2 year lease, $/mo.	30	45	45	123-536	203-670
Controller, 1 year lease, $/mo.	185	269	167	—	Included
Controller, 2 year lease, $/mo.	94	214	135	—	—
Display station, purchase, $	3,420	2,700	2,700	6,600-23,720	9,600-26,100
Controller, purchase, $	6,250	11,530	7,520	—	—
Date of first production delivery	10/73	12/77	12/77	2/71	9/75
Display units installed to date	Over 13,000	—	—	Over 32,000	Over 1700
Serviced by	Sycor & Sorbus	Sycor	Sycor	Sycor & Sorbus	Sycor & Sorbus
COMMENTS				See Report 70D-792-01 for details on the Sycor line of intelligent data entry terminals	

Alphanumeric Display Terminals— Basic Characteristics

SUPPLIER AND MODEL	Sycor 351	Sycor 405	Sycor 410	Sycor 440	Sycor 445
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Cluster	Stand-alone	Either	Cluster
Maximum displays/controller	1	2	1	8	8
Portable case	No	No	No	No	No
IBM compatibility	2770, 2780, 3780	2770, 2780, 3780	2770, 2780, 3780	2770, 2780, 3780	2770, 2780, 3780
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	—	No	IBM 360/20	IBM 360/20, 3270
User programmable	Yes	Std. via TAL 2000, BASIC & COBOL	Yes	Yes	Std. via TAL 2000, BASIC & COBOL
Self diagnostics	No	Std.	Std.	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	576	2000	576	576	2000
Display arrangement, lines x chars./line	9 x 64	25 x 80	9 x 64	9 x 64	25 x 80
Display area, h x w, inches	9 x 9	7.75 x 10.4	7 x 9.5	7 x 9.5	7.75 x 10.4
Total displayable symbols	64 ASCII	64; 96	64 ASCII	64 ASCII	64; 96
Symbol formation	5 x 7 dot matrix	7 x 12 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	7 x 12 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	No	Std.	3 opt.	3 opt.	Std.
Character and/or field blinking	Char. std.	Std.	Char. std.	Char. std.	Std.
Roll	No	No	No	No	No
Paging	No	No	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	No	No	No	No	No
Protected format	Std.	Std.	Std.	Std.	Std.
Partial screen transmit	No	Std.	No	No	Std.
Tabulation	Std.	Std.	Std.	Std.	Std.
Character insert/delete	No	No	No	No	No
Line insert/delete	No	No	No	No	No
Erase	Std.	Std.	Std.	Std.	Std.
Character repeat	No	Std.	No	No	Std.
KEYBOARD PARAMETERS					
Style	Typewriter/data entry	Typewriter/data entry	Typewriter/data entry	Typewriter/data entry	Typewriter/data entry
Character/code set	ASCII/EBCDIC	128 ASCII	64 ASCII	64 ASCII	128 ASCII
Detachability	Std.	Std.	—	—	Std.
Program function keys	—	10 std.	23 std.	23 std.	10 std.
Numeric keypad	Std.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	Single	Single	Single drive
Diskette drive (floppy disk)	1 or 2 dual	2 or 4 drives	Single	Single	Single drive
Serial printer	Impact	Impact	Impact	Impact	Impact
Other devices	Card reader, line printers, mag tape, audible alarm	Line printer & 9-tk. mag. tape drive	Card reader, line printers, mag. tape, audible alarm	Card reader, line printer, mag. tape, audible alarm	Disk drives, line printers, & 9-tk. mag. tape drive
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half/full-duplex	Half-duplex	Half-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Async./sync.	Async./sync.
Communications protocol	BSC	BSC/SDLC	BSC	BSC	BSC/SDLC
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	110 to 4800	Up to 9600	110 to 9600	110 to 9600	Up to 9600
Format: character, line, or block	Char./block	Block	Char./block	Char./block	Block
Multipoint operation (pollable/addr.)	No	No	No	No	No
Auto answer	Std.	Std.	Std.	Std.	Std.
Auto call	Std.	Opt.	Opt.	Opt.	Opt.
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C (2)
Integral modem	No	Opt.	No	No	Opt.
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	400-917	72	517-842	36-40	54
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	Included	203	Included	528	463
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	16,000-31,700	2,880	22,800-34,200	1,440-1,600	2,160
Controller, purchase, $	Included	8,120	Included	21,120	18,520
Date of first production delivery	7/76	Third qtr. 1978	7/76	3/76	Third qtr. 1978
Display units installed to date	Over 1700	—	1200	1200	—
Serviced by	Sycor & Sorbus	Sycor	Sycor & Sorbus	Sycor & Sorbus	Sycor
COMMENTS		Available with 64K-memory & Sycorlink			Available with 64K- to 256K-byte memory, 5 to 308 megabytes of disk, & Sycorlink

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Systematics General T5101 Tempest CRT	Systematics General T5145 Tempest CRT	Systematics General T5175 Tempest Plug-to-Plug	Systematics General T5177 Tempest Plug-to-Plug	Tano Outpost 7
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Cluster display only	Stand-alone
Maximum displays/controller	1	1	1	32	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	3275	3277	No
Teletype compatibility	Std.	Std.	No	No	33/35, 40
Other compatibility	Opt.	Opt.	No	No	Yes
User programmable	No	Std. via user program	No	No	Yes
Self diagnostics	No	No	No	No	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	1920	1920
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	12-inch diag.	127mm. x 254 mm.	12-inch diag.	12-inch diag.	12-inch diag.
Total displayable symbols	128 ASCII	128 ASCII	128 ASCII	128 ASCII	128
Symbol formation	5 x 9 dot matrix	7 x 9 dot matrix	5 x 9 dot matrix	5 x 9 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	Std.	No	No	Std.
Programmable brightness levels	2 std.	3 std.	2 std.	2 std.	2 std.
Character and/or field blinking	Std.	Std.	Std.	Std.	Both std.
Roll	Up std.	Up, down std.	No	No	Std., up & down
Paging	No	3 pages opt.	Opt.	Opt.	Std.
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	No	Std.	No	No	Std.
Addressable/readable cursor	Both std.	Both std.	Both std.	Both std.	Std.
Protected format	Std.	Std.	Std.	Std.	Std.
Partial screen transmit	Std.	Std.	Std.	Std.	Std.
Tabulation	Fwd./back std.	Fwd./back std.	Fwd./back std.	Fwd./back std.	Std.
Character insert/delete	Std.	Std.	Std.	Std.	Std.
Line insert/delete	Std.	Std.	Std.	Std.	Std.
Erase	Char., line std.	Char., line, screen std.	Char., line std.	Char., line std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter/data entry
Character/code set	128 ASCII	64 ASCII	128 ASCII/EBCDIC	128 ASCII/EBCDIC	ASCII/EBCDIC
Detachability	Std.	Std.	Std.	Std.	No
Program function keys	32 std.	8 std.	12 std.	12 std.	10 std.
Numeric keypad	Std.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	Dual drive opt.	No	No	Single/dual
Diskette drive (floppy disk)	No	No	No	No	RS-232C interface
Serial printer	Impact opt.	Impact opt.	Impact opt.	Impact opt.	Audible alarm std.,
Other devices	—	Graphics	—	—	ID card reader opt.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Async./sync.
Communications protocol	ASCII	ASCII	ASCII	ASCII	ASCII/EBCDIC
Code	ASCII	ASCII	ASCII	ASCII	ASCII/EBCDIC
Speed, bits/second	110 to 9600	110 to 9600	2400 to 4800	2400 to 4800	110 to 9600
Format: character, line, or block	Block	Char./line/block	Block	Block	Char./line/page
Multipoint operation (pollable/addr.)	Opt.	Opt.	Std.	Std.	Yes
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C, Mil. Std. 188C	RS-232C, Mil Std. 188C	RS-232C, Mil. Std. 188C	—	RS-232C or 20 mA dc
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Contact vendor	Contact vendor	Contact vendor	Contact vendor	213
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	4,950	7,400-10,000	6,300	5,500	2,660-3,240
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	1/76	6/78	12/77	6/77	4/77
Display units installed to date	—	—	—	—	250
Serviced by	Self & third party	Self & third party	Self & third party	Self & third party	Tano & third party
COMMENTS	Tempest CRT's are tested to meet the Tempest criteria of NACSEM 5100	Utilizes Hewlett-Packard 2600 family of CRT's; tested to meet Tempest criteria of NACSEM 5100	See T5101 comments	See T5101 comments	Terminals are available with APL and extended ANSI BASIC

Alphanumeric Display Terminals—Basic Characteristics

SUPPLIER AND MODEL	Tano Outpost II	Taumark Tera System Handheld Terminal	TEC, Inc. Model 70	TEC, Inc. Models 410/415, 420/425, & 430/435	TEC, Inc. Model 440
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Radio network cluster	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	250	1	1	1
Portable case	Yes (60 lbs.)	Yes	No	No	No
IBM compatibility	No	3270 BSC	No	No	No
Teletype compatibility	Yes	Std. (controller)	Std.	No	Std.
Other compatibility	Any serial ASCII host	To customer reqs.	See comments	No	No
User programmable	Yes, via BASIC-II, STRUBAL, or assem.	On custom systems	No	No	No
Self diagnostics	Yes (OPX-I program)	On custom systems	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920	64	2000	1000/1920	1920
Display arrangement, lines x chars./line	24 x 80	4 x 16	25 x 80	20 x 50; 24 x 80	24 x 80
Display area, h x w, inches	12-in. diag.	2.5 x 3.62	6 x 9	6 x 9	6 x 9
Total displayable symbols	128 ASCII	64 ASCII std.	126 ASCII	64	64
Symbol formation	5 x 7, 7 x 9	5 x 7 dot matrix	7 x 9 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix
Color	No	No	No	No	No
Reverse video	Std.	No	Opt.	Opt.	No
Programmable brightness levels	2 std.	No	Opt.	No	No
Character and/or field blinking	Both std.	No	Opt.	Std.	No
Roll	Std., up & down	Up, down std.	Up std.	Std.	Std.
Paging	2 pages std.	1920-char. buffer opt.	3 opt.	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H	Right, left, line advance	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	Rt., LF, BS
Cursor blinking	Std.	No	Std.	Std.	Std.
Addressable/readable cursor	Both std.	Addr. std., read. opt.	Both std.	Std.	No
Protected format	Std.	16 one-line formats std.	Opt.	Std.	No
Partial screen transmit	Std.	Std.	Opt.	No	No
Tabulation	5-space fwd. tab std.	No	Opt.	Std.	No
Character insert/delete	No	No	Opt.	Std.	No
Line insert/delete	No	No	Opt.	Std.	No
Erase	Char., line, screen std.	Char., line, screen std.	Char., screen std., line opt.	Line, screen std.	Char., screen std.
Character repeat	Normal and fast	No	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	40-key alphanumeric std., others opt.	Typewriter, TTY	Teletype	Teletype
Character/code set	96 ASCII	64 ASCII std.	128 ASCII	64 ASCII	64 ASCII
Detachability	No	No	Std.	Std.	Std.
Program function keys	No	Opt.	8 std.	No	No
Numeric keypad	Std.	Std.	Opt.	Opt.	None
ANCILLARY DEVICES					
Cassette tape drive	No	No	—	No	No
Diskette drive (floppy disk)	1 std. + 1 opt.	No	Single	No	No
Serial printer	Opt. serial interface	No	Impact, non-impact	RS-232 interface	RS-232 interface
Other devices	Audible alarm std.	Bar code reader, A/D probe, audible alarm, battery-low indicator	Magnetic stripe card reader; audible alarm std.	Audible alarm std.	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Software for async.	Async., sync., bisync.	Async. std., sync. opt.	Asynchronous	Asynchronous
Communications protocol	ASCII	ASCII std., BSC opt.	See comments	ASCII	ASCII
Code	ASCII	ASCII std.,EBCDIC opt.	ASCII	ASCII	ASCII
Speed, bits/second	110 to 9600	600 to 50K (controller)	50-9600	110 to 9600	110 to 9600
Format: character, line, or block	Char., line, block	Block	Char./line, blk. opt.	Block only	Char. only
Multipoint operation (pollable/addr.)	Std.	Std. (terminals)	Opt.	Std. (420/425)	No
Auto answer	Opt.	No	No	No	No
Auto call	Opt.	No	No	No	No
Terminal interface	RS-232C or 20 mA	RS-232C, 20mA (controller)	RS-232C, TTL std.; 20/60 mA dc opt.	RS-232C, 20/60 mA dc	RS-232C, 20/60 mA dc
Integral modem	No	Std. (terminal)	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	Lease through third party	—	Purchase only	Purchase only
Display station, 2 year lease, $/mo.	—		—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	2,395	4,695 (incl. radio)	1,535-1,975	2,440-2,700	1,920
Controller, purchase, $	—	9,960 (serial ASCII)	—	—	—
Date of first production delivery	7/78	7/78	4/77	2/70	1/72
Display units installed to date	196	—	1800	7000 (all mdls.)	1200
Serviced by	Tano, Eclectic	Taumark, Inc.	TEC	TEC	TEC
COMMENTS		Provides 2-way on-line comm. via FM radio bwtn. mobile personnel & base station controller, which controls network & converts radio protocol to acceptable digital format for host computers	Compatible with Uniscope; rack-mount AVA	Models 410/415 have parallel (TTL logic) interface; 420/425 have serial interface; rack-mounted units available	

Alphanumeric Display Terminals—Basic Characteristics

SUPPLIER AND MODEL	TEC, Inc. Models 450/455 & 460/465	TEC, Inc. Model 500	TEC, Inc. Model 570	TEC, Inc. Models 1401, 1440, 1445, 2401, & 2402	Tektronix 4024
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	1	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	Std.
Teletype compatibility	Std. (450/455)	Std.	Std.	Std.	No
Other compatibility	No	ADM 3A	No	No	No
User programmable	No	No	Via user-defined firmware	No	No
Self diagnostics	No	No	Std.	No	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	1000/1920	2000	2000	960 (1401) 1920	2720
Display arrangement, lines x chars./line	20 x 50; 24 x 80	25 x 80	25 x 80	12/24 x 80	34 x 80
Display area, h x w, inches	6 x 9	6 x 9	6 x 9	6 x 9	6.7 x 9
Total displayable symbols	64	126 ASCII	128 ASCII	64/96/128	64/96; 128 opt.
Symbol formation	5 x 7 dot matrix	7 x 9 dot matrix	6 x 8	5 x 7 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	Std.	Std.	No	No
Programmable brightness levels	No	No	Std.	2 std.; 1401 & 240x	2 std.
Character and/or field blinking	Std.	No	Std.	Std.; 1401 & 240x	Both std.
Roll	Std.	Up std.	Up std.	Std.	Std.
Paging	No	No	3 pages opt.	No	Std.
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.; LF, BS (1440)	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	No
Addressable/readable cursor	Std.	Both std.	Both std.	Std.; 1401 & 240x	Yes
Protected format	Std.	No	Std.	Std.; 1401 & 240x	Yes
Partial screen transmit	Std.	No	Std.	Std.; 1401 & 240x	Std.
Tabulation	Std.	No	Std.	Std.; 1401 & 240x	Std.
Character insert/delete	Std.	No	Std.	No	Std.
Line insert/delete	Std.	No	Std.	No	Std.
Erase	Line, screen std.	Char., screen std.	Char., line, screen std.	Screen std.	Std.
Character repeat	Std.	Yes	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	TTY/typewriter	Teletype	Typewriter	Teletype	Typewriter
Character/code set	ASCII	128 ASCII	128 ASCII	ASCII	128 ASCII
Detachability	Std.	No	Opt.	Std.	Std.
Program function keys	None	No	7 std.	None	12
Numeric keypad	Std., opt., 450/455	Opt.	Opt.	Opt.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	—	No	RS-232 interface	No
Diskette drive (floppy disk)	Single	Single	Single	No	No
Serial printer	RS-232 interface	Impact, non-impact	Non-impact, impact	RS-232 interface	Impact (4642)
Other devices	Audible alarm std.	—	—	Audible alarm std.	4631 Hard Copy Unit, 4924 Cartridge Tape Drive, 4662 Plotter
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Communications protocol	ASCII/Burroughs	ASCII	TTY	ASCII	ASCII
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	110 to 9600	50-9600	50 to 19,200	110 to 9600	50 to 4800
Format: character, line, or block	Char./block	Char.	Char., line, block	Char./block	Block
Multipoint operation (pollable/addr.)	Std., 460/465	No	No	No	Opt.
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C, 20/60 mA dc	RS-232C, TTL, 20/60 mA dc opt.	RS-232C, TTL, 20/60 mA std.	RS-232C, 20/60 mA dc	RS-232C, 20 mA current loop
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	Purchase only	Purchase only	Purchase only
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	2,480	995	1,115-1,425	1,125-1,725	2,995 (base)
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	70; 74, 460/465	4/78	3/79	11/74 to 4/75	--
Display units installed to date	6500	600	100	7000	—
Serviced by	TEC	TEC	TEC	TEC	Tektronix
COMMENTS	Rack mount available; Models 460/465 offer Burroughs TD 800 polling protocol			Model 2402 is a 2401 with lower case alphabetics	Has 4K to 32K memory; 32 line drawing characters

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Tektronix 4025	Teleram P1888	Teleram 2277	Teleray 1061	Teleray 3541
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Either	Stand-alone	Stand-alone
Maximum displays/controller	1	1	15	1	1
Portable case	No	Yes (22 lbs.)	Transportable (35 lbs.)	No	No
IBM compatibility	Std.	No	Programmable	No	No
Teletype compatibility	No	Std.	Opt.	Std.	Std.
Other compatibility	No	See comments	Most minicomputers	DEC VT-52	No
User programmable	No	Yes	Via user-defined parameters	Via user-defined parameters	No
Self diagnostics	Yes	Yes	Opt.	—	No
DISPLAY PARAMETERS					
Display positions, chars/display	2720	884	1840	1920	1920
Display arrangement, lines x chars./line	34 x 80	17 x 52	23 x 80; one status line	24 x 80; 24 x 40 (oversize)	24 x 80
Display area, h x w, inches	6.7 x 9	4.5 x 5.5	7.2 x 9.6; 12-in. diag.	6.5 x 8.5	6.5 x 8.5
Total displayable symbols	64/96; 128 opt.	128; second set opt.	128; 256 opt.	96 + 32 control codes	64
Symbol formation	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	5 x 7 dot matrix
Color	No	No	No	No	No
Reverse video	Std.	Yes	Std.	Std.	Opt.
Programmable brightness levels	2 std.	Yes	Std.	Std.	No
Character and/or field blinking	Both std.	Yes	Std.	Std.	No
Roll	Std.	Up, down std.	Up, down std.	Up, std.	Up std.
Paging	Std.	Unlimited pages	Unlimited pages	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	D, L, R, H, Rt.
Cursor blinking	No	No	Opt.	Std.	No
Addressable/readable cursor	Yes	Std.	Std.	Both std.	No
Protected format	Yes	Yes	Opt.	Std.	No
Partial screen transmit	Std.	Std.	Std.	Std.	No
Tabulation	Std.	Std.	Fwd. std.; back opt.	Fwd./back std.	Opt.
Character insert/delete	Std.	Std.	Std.	Std.	No
Line insert/delete	Std.	Std.	Std.	Std.	No
Erase	Std.	Char., word, text area std.	Char., word, text area std.	Char., line, screen std.	Screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter, N-key rollover	Teletype
Character/code set	128 ASCII	128 ASCII	128 ASCII	128 ASCII	ASCII
Detachability	Std.	Yes	Opt.	Std.	Opt.
Program function keys	12	No	Up to 10 opt.	—	No
Numeric keypad	Std.	Opt.	Opt.	—	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	Yes	Single	No	No
Diskette drive (floppy disk)	No	Yes	Single built-in	Single opt.	Single drive
Serial printer	Impact (4642)	Yes	Impact, non-impact	Impact opt.	Impact
Other devices	4631 Hard Copy Unit, 4924 Cartridge Tape Drive, 4662 Plotter	Through RS-232C interface	Line pinters, modem, tape punches, etc.	Audible alarm std.	TV monitors, audible alarm
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Communications protocol	ASCII	ASCII	ASCII	ASCII	ASCII
Code	ASCII	ASCII, TTS, BAUDOT	ASCII	ASCII	ASCII
Speed, bits/second	Up to 9600	110 to 1200	Selec., 110 to 9600	50 to 9600	50 to 9600
Format: character, line, or block	Block	Block	Char., line, block	Char.to block—G levs	Char. only
Multipoint operation (pollable/addr.)	Opt.	Std.	Std.	No	No
Auto answer	No	Std.	Std.	Std.	No
Auto call	No	Opt.	Opt.	No	No
Terminal interface	RS-232C, 20 mA current loop	RS-232C	RS-232C	RS-232C; current loop opt.	RS-232C, TTL, or 20 mA dc
Integral modem	No	Yes	Opt.	No	Opt.
Integral acoustic coupler	No	Std.	Std.	No	Opt.
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	Purchase only	79	65
Display station, 2 year lease, $/mo.	—	—	—	71	62
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	3,595 (base)	5,495	6,495	1,090 (list)	1,150
Controller, purchase, $	—	—	Varies with size	—	—
Date of first production delivery	—	10/74	4/78	9/78	7/76; 1/75 (3511)
Display units installed to date	—	—	—	1800	Over 8000
Serviced by	Tektronix	Teleram, GE	Teleram, GE	Teleray	Western Union
COMMENTS	Has 4K to 32K memory; can have 6 char. sets; up to 31 char. sets with Graphics option	216K char. cassette storage; 18 x 13 x 7 in. size; compatible with all ASCII computer systems and devices which accept EIA std. inputs	Text-editing/communications terminal; virtual scroll allows variable-length inputs up to 14,000 words; automatically acquired directory displays all items recorded on diskette	115/230V,50/60Hz, std.; wide/narrow char. display; secure fields (blanking); independent I/O and peripheral speeds; 3K ROM, 4K RAM memory & snap-in modules; no-tools servicing; plug-in IC's	Rack mount, remote monitors, and other customs available; also bar code readers, cluster printer config., and other peripheral attachments

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Teleray 3741	Teleray 3841	Teleray 3931	Teleray 4041	Teleray 4041 BB
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	1	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	Std.	Std.	Std.	Std.	No
Other compatibility	No	No	No	No	Burroughs
User programmable	No	No	No	No	No
Self diagnostics	No	No	No	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	3840; others opt.	3840; others opt.
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	6.5 x 8.5	6.5 x 8.5	8 x 10	6.5 x 8.5	6.5 x 8.5
Total displayable symbols	95; 64 opt.	95; 64 opt.	95 ASCII/APL std.	95; 64 opt.	95; 64 opt.
Symbol formation	5 x 9 dot matrix	5 x 9 dot matrix	5 x 9 dot matrix	5 x 9 dot matrix	5 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	Opt.	Opt.	Opt.	Std.	Std.
Programmable brightness levels	No	No	No	2 std.	2 std.
Character and/or field blinking	No	No	No	Std.	Both std.
Roll	Up std.	Up std.	Up std.	Std., up & down	Std.
Paging	No	1 std.	No	2 std.; 8 opt.	2 std.; 8 opt.
Cursor positioning; Up, Down, Left, Right, Home, Return	D, L, R, H, Rt.	U, D, L, R, H, Rt.	D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	No	Opt.	No	Std.	Std.
Addressable/readable cursor	No	Std. addressable only	No	Std.	Std.
Protected format	No	No	No	Std.	Std.
Partial screen transmit	No	No	No	Std.	Std.
Tabulation	Opt.	Opt.	Std.	Fwd./back std.	Fwd./backward std.
Character insert/delete	No	No	No	Std.	Std.
Line insert/delete	No	No	No	Std.	Std.
Erase	Screen std.	Char., line, screen std.	Screen std.	Char., line, screen, memory std.	Char., line, screen, memory std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewrtier	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	ASCII	ASCII/APL	ASCII	Burroughs Poll
Detachability	Opt.	Opt.	Opt.	Opt.	Opt.
Program function keys	No	No	No	30 opt.	15 opt.
Numeric keypad	Opt.	Opt.	Opt.	Opt.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	Single drive	Single drive	Single drive	Single drive	Single opt.
Serial printer	Impact	Impact	Impact	Impact	Impact
Other devices	TV monitors, audible alarm	TV monitors, audible alarm	TV monitors, audible alarm	TV monitors, audible alarm	—
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Communications protocol	ASCII	ASCII	ASCII	ASCII	Burroughs
Code	ASCII	ASCII	ASCII	ASCII	Burroughs
Speed, bits/second	50 to 9600	50 to 9600	50 to 9600	50 to 9600	50 to 9600
Format: character, line, or block	Char. only	Char. only	Char. only	Char./block	Char.,line,block,mem.
Multipoint operation (pollable/addr.)	No	No	No	No	Std.
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C, TTL, or 20 mA dc	RS-232C, TTL, or 20 mA dc	RS-232C, TTL, or 20 mA dc	RS-232C, 20 mA dc opt.	RS-232C; 20 mA dc, two-wire direct opt.
Integral modem	Opt.	Opt.	Opt.	Opt.	No
Integral acoustic coupler	Opt.	Opt.	Opt.	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	72	81	109	73 w/o maint.	81 w/o maint.
Display station, 2 year lease, $/mo.	69	77	104	69 w/o maint.	76 w/o maint.
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,250	1,350	1,690	1,750	1,950
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	1/77; 7/74 (3711)	1/77; 4/76 (3811)	3/75	6/77	1/78
Display units installed to date	Over 8000	Over 8000	Over 8000	Over 8000	Over 8000
Serviced by	Western Union	Western Union	Western Union	Western Union	Western Union
COMMENTS			Composite video and peripheral port standards; optional on other models	Memory is composed of 3K to 6K ROM and 2K to 16K RAM	BB signifies Burroughs compatibility

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Teletype Model 40/1	Teletype Model 40/2	Teletype Model 40/3	Teletype Model 40/4	Teletype Model 4540 Series
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Either	Either
Maximum displays/controller	1	1	1	1, 2, or 24	1 to 32
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	3270 BSC	3270 BSC
Teletype compatibility	Std.	Std.	No	No	No
Other compatibility	No	No	No	No	No
User programmable	No	No	No	No	No
Self diagnostics	Std.	Std.	Std.	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	1920	1920
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	5.25 x 11.25	5.25 x 11.25	5.25 x 11.25	5.25 x 11.25	5.25 x 11.25
Total displayable symbols	127	127	127	127	127
Symbol formation	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	2 opt.	2 opt.	2 opt.	3 std.	3 std.
Character and/or field blinking	Std., char. only	Std., char. only	Std., char. only	Field std.	Field std.
Roll	Std., up & down	Std., up & down	Std., up & down	No	No
Paging	Opt., 2/3 pages	Opt., 2/3 pages	Opt., 2/3 pages	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	No	No	No	Opt.	Opt.
Addressable/readable cursor	No	No	No	Std.	Std.
Protected format	Opt.	Opt.	Opt.	Std.	Std.
Partial screen transmit	Std.	Std.	Std.	Std.	Std.
Tabulation	Opt.	Opt.	Opt.	Yes	Yes
Character insert/delete	Std.	Std.	Std.	Std.	Std.
Line insert/delete	Std.	Std.	Std.	Std.	Std.
Erase	Screen std.	Screen std.	Char., line, screen std.	Screen std.	Screen std.
Character repeat	Partial	Partial	Partial	Partial	Partial
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter, data entry	Typewriter, data entry
Character/code set	127 ASCII	127 ASCII	127 ASCII	96 ASCII/EBCDIC	96 ASCII/EBCDIC
Detachability	No	No	Std.	Opt.	Opt.
Program function keys	No	No	No	12 std.	12 std.
Numeric keypad	No	No	No	Opt. (typewriter keyboard only)	Opt. (typewriter keyboard only)
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	No	No	No
Serial printer	Impact	Impact	Impact	Impact	Impact
Other devices	Audible alarm std.	Audible alarm std.	Audible alarm std.	Audible alarm std.	Audible alarm std., magnetic stripe reader opt.
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half/full-duplex	Half-duplex	Half-duplex	Half-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Synchronous	Synchronous
Communications protocol	ASCII	ASCII	ASCII	BSC	BSC
Code	ASCII	ASCII	ASCII	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	1050/1200	110 to 4800	1050/1200	2400/4800/9600	2400/4800/9600
Format: character, line, or block	Line/block	Block/char.	Block only	Block only	Block only
Multipoint operation (pollable/addr.)	No	No	Std.	Std.	Std.
Auto answer	Std.	Std.	Std.	Std.	Std.
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C or 20/60 mA dc	RS-232C	RS-232C	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	Purchase only	Purchase only	Purchase only
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	3,066-3,781	3,214-3,881	3,458-3,785	960-1,184	2,200-2,550
Controller, purchase, $	—	—	1,165	5,143-43,135	3,775-5,464
Date of first production delivery	10/73	10/73	10/73	11/75	3/79
Display units installed to date	—	—	—	—	—
Serviced by	Teletype & Bell	Teletype & Bell	Teletype & Bell	Teletype & Bell	Teletype & Bell
COMMENTS	For use on the dial network (DDD); also available from AT&T (Bell System) as Dataspeed 40, and from leasing companies	For use on the dial network (DDD); also available from AT&T (Bell System) as Dataspeed 40, and from leasing companies	For multipoint leased-line operation; also available from AT&T (Bell System) as Dataspeed 40, and from leasing companies	Also available from AT&T(Bell System)as Dataspeed 40/4; Mini-cluster supports up to 3 devices; Maxi cluster supports up to 36 devices; Stand-alone available in private line or dial-up version	Also available from AT&T (Bell System) as Dataspeed 4540; requires only ordinary two-twisted-pair wires for connection up to 5000 feet from controller to display

Alphanumeric Display Terminals— Basic Characteristics

SUPPLIER AND MODEL	Telex Terminal Communications TC 275	Telex Terminal Communications TC 277	Termiflex HT/2 Handheld Terminal	Termiflex HT/3 Handheld Terminal	Termiflex HT/4 Handheld Terminal
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Cluster	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	32	1	1	1
Portable case	No	No	Yes	Yes	Yes
IBM compatibility	3275	3270	No	No	No
Teletype compatibility	No	No	Std.	Std.	Std.
Other compatibility	No	No	No	No	No
User programmable	No	No	No	No	No
Self diagnostics	No	No	—	—	—
DISPLAY PARAMETERS					
Display positions, chars/display	480/1920	480/1920	20	12	24
Display arrangement, lines x chars./line	12 x 40; 24 x 80	12 x 40; 24 x 80	2 x 10	1 x 12	2 x 12
Display area, h x w, inches	14-inch diag.	14-inch diag.	2 x 4	2 x 4	2 x 4
Total displayable symbols	96	96	128 ASCII	96 ASCII	96 ASCII
Symbol formation	7 x 9/7 x 8 dot matrix	7 x 9/7 x 8 dot matrix	5 x 7 dot LED matrix	5 x 7 dot LED matrix	5 x 7 dot LED matrix
Color	1 std.	1 std.	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	2 std.	2 std.	No	No	No
Character and/or field blinking	No	No	No	No	No
Roll	No	No	Std., up & down	No	No
Paging	No	No	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	L, R, U, D, H, Rt.	L, R, U, D, H, Rt.	Left, Right	Home	Home
Cursor blinking	No	No	Std.	No	No
Addressable/readable cursor	Std.	Std.	No	No	No
Protected format	Std.	Std.	No	No	No
Partial screen transmit	Std.	Std.	No	No	No
Tabulation	Std.	Std.	No	No	No
Character insert/delete	Std.	Std.	Yes	Yes	Yes
Line insert/delete	Std.	Std.	Opt.	Opt.	Opt.
Erase	Char., line, screen std.	Char., line, screen std.	Screen std.	Screen std.	Screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter/data entry	Typewriter/data entry	Modified "Touch-tone"	Modified "Touch-tone"	Modified "Touch-tone"
Character/code set	ASCII/EBCDIC	ASCII/EBCDIC	128 ASCII	128 ASCII	128 ASCII
Detachability	Std.	Std.	No	No	No
Program function keys	Opt.	Opt.	No	No	No
Numeric keypad	Std.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	No	No	No
Serial printer	Impact	Line/impact-matrix	No	No	No
Other devices	Audible alarm, light pen, mag. stripe reader opt.	Audible alarm, light pen, mag. stripe reader opt.	None	None	None
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Synchronous	Synchronous	Asynchronous	Asynchronous	Asynchronous
Communications protocol	BSC/SDLC	BSC/SDLC	ASCII	ASCII	ASCII
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII	ASCII	ASCII
Speed, bits/second	1200 to 4800	1200 to 9600	110/150/300/1200	110-2400	110-2400
Format: character, line, or block	Block only	Block only	Char. only	Char. only	Char. only
Multipoint operation (pollable/addr.)	Std.	Std.	No	Opt.	Opt.
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C, 20 mA dc current	RS-232C, 20 mA dc current	RS-232C, 20 mA dc current
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	104-113	86-95	Purchase only	Purchase only	Purchase only
Display station, 2 year lease, $/mo.	90-98	60-68	—	—	—
Controller, 1 year lease, $/mo.	—	115	—	—	—
Controller, 2 year lease, $/mo.	—	100	—	—	—
Display station, purchase, $	4,110	2,200	1,995	795	1,195
Controller, purchase, $	—	3,500	—	—	—
Date of first production delivery	1/74	2/74	6/74	1/77	1/77
Display units installed to date	—	—	Over 1000	Over 1000	Over 1000
Serviced by	Telex Computer Products	Telex Computer Products	Termiflex	Termiflex	Termiflex
COMMENTS	Lease prices quoted are exclusive of maintenance	Lease prices quoted are exclusive of maintenance	All models display data via red LED's; external power supplies sell for $295 (PS/1A, 6 lbs.) or $175 (PS/5, 2 lbs.); HT/5 features 2 rows of six Status lights; HT/3 and HT/4 have Internal Rechargeable Battery Option for $200		

Alphanumeric Display Terminals—
Basic Characteristics

SUPPLIER AND MODEL	Termiflex HT/5 Handheld Terminal	Termiflex HT/6 Handheld Terminal	Termiflex HT/7 Handheld Terminal	Termiflex HT/8 Handheld Terminal	Terminal Data Corp. 650
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	1	1	1	1
Portable case	Yes	Yes	Yes	Yes	No
IBM compatibility	No	No	No	No	—
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	No	No	No	TI Silent 700
User programmable	No	No	No	No	Yes
Self diagnostics	—	—	—	—	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	12	20	40	80	1920/3840
Display arrangement, lines x chars./line	2 x 6	1 x 20	2 x 20	4 x 20	24 x 80; 48 x 80 opt.
Display area, h x w, inches	2 x 4	2 x 4	2 x 4	2 x 4	19-inch diag.
Total displayable symbols	None	128 ASCII	128 ASCII	128 ASCII	96
Symbol formation	—	5 x 7 dot LED matrix	5 x 7 dot LED matrix	5 x 7 dot LED matrix	7 x 9
Color	No	No	No	No	8 std.
Reverse video	No	No	No	No	Std.
Programmable brightness levels	No	No	No	No	No
Character and/or field blinking	No	No	No	No	Yes
Roll	No	Up, down std.	Up, down std.	Std., up & down	Opt.
Paging	No	No	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	No	Left, Right, Home	Left, Right, Home	Left, Right, Home	U, D, L, R, H, Rt.
Cursor blinking	No	Std.	Std.	Std.	Std.
Addressable/readable cursor	No	No	No	No	Both std.
Protected format	No	No	No	No	Opt.
Partial screen transmit	No	No	No	No	Opt.
Tabulation	No	No	No	No	Std.
Character insert/delete	No	Std.	Std.	Std.	Opt.
Line insert/delete	No	No	No	No	Opt.
Erase	Screen std.	Screen std.	Screen std.	Screen std.	Char.,line,screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Modified "Touch-tone"	Modified "Touch-tone"	Modified "Touch-tone"	Modified "Touch-tone"	Typewriter, data entry
Character/code set	128 ASCII	128 ASCII	128 ASCII	128 ASCII	ASCII
Detachability	No	No	No	No	No
Program function keys	No	No	No	No	Opt..
Numeric keypad	Std.	Std.	Std.	Std.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	No	No	Single
Serial printer	No	No	No	No	Impact
Other devices	None	Audible alarm std.	Audible alarm std.	Audible alarm std.	—
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Communications protocol	ASCII	ASCII	ASCII	ASCII	Asynchronous
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	110-2400	110/150/300/1200	110/150/300/1200	110/150/300/1200	110 to 9600
Format: character, line, or block	Char. only	Char. only	Char. only	Char. only	Char.
Multipoint operation (pollable/addr.)	No	No	No	No	Opt.
Auto answer	No	No	No	No	Opt.
Auto call	No	No	No	No	Opt.
Terminal interface	RS-232C, 20 mA dc current	RS-232C, 20 mA dc current	RS-232C, 20 mA dc current	RS-232C, 20 mA dc current	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	—
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	Purchase only	Purchase only	125-250
Display station, 2 year lease, $/mo.	—	—	—	—	110-250
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	495	1,795	2,595	3,995	1,650 up
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	2/77	6/78	9/78	12/76	9/76
Display units installed to date	100	100	100	100	—
Serviced by	Termiflex	Termiflex	Termiflex	Termiflex	Terminal Data
COMMENTS	See Comments on previous page	See Comments on previous page	See Comments on previous page	See Comments on previous page	

Alphanumeric Display Terminals— Basic Characteristics

SUPPLIER AND MODEL	Terminal Data Corp. 675 & 675-1	Texas Instruments 770	Texas Instruments 771	Texas Instruments DS1	Trivex 40/80
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Either
Maximum displays/controller	1	1	1	1	32
Portable case	Yes; 19 lbs.	No	No	No	No
IBM compatibility	—	2780/3780	3780	3780	2260/2265
Teletype compatibility	Std.	Std.	Std.	Std.	No
Other compatibility	TI Silent 700	TI 742	TI 742	TI 742	No
User programmable	No	Yes	Yes	Yes	No
Self diagnostics	Yes	Yes	Yes	Yes	No
DISPLAY PARAMETERS					
Display positions, chars/display	1024	1920	1920	1920	240/480/960
Display arrangement, lines x chars./line	16 x 64	24 x 80	24 x 80	24 x 80	6/12 x 40; 12 x 80
Display area, h x w, inches	9-inch diag.	6 x 9; 12-inch	6 x 9; 12-inch	6 x 9; 12-inch	6 x 9
Total displayable symbols	64, 96	96 ASCII	96 ASCII	96 ASCII	64
Symbol formation	5 x 7	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	5 x 7 dot matrix
Color	No	Via graphics option	No	No	No
Reverse video	No	Std.	Std.	Std.	No
Programmable brightness levels	No	2 std.	2 std.	2 std.	No
Character and/or field blinking	No	Programmable	Programmable	Programmable	Std.
Roll	No	Std.	Std.	Std.	No
Paging	No	Std.	Std.	Std.	No
Cursor positioning; Up, Down, Left, Right, Home, Return	No	Yes	Yes	Yes	U, D, L, R, H, Rt.
Cursor blinking	No	Std.	Std.	Std.	Opt.
Addressable/readable cursor	No	Both std.	Both std.	Both std.	Std.
Protected format	No	Std.	Std.	Std.	Std.
Partial screen transmit	No	Std.	Std.	Std.	No
Tabulation	No	Std.	Std.	Std.	Std.
Character insert/delete	No	Std.	Std.	Std.	Std.
Line insert/delete	No	No	No	No	Std.
Erase	Std.	Char., line std., screen prog.	Char., line std., screen prog.	Char., line std., screen prog.	Char., line, screen std.
Character repeat	No	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter, data entry	Typewriter	Typewriter	Typewriter	Typewriter/data entry
Character/code set	ASCII	128 ASCII	128 ASCII	128 ASCII	ASCII
Detachability	Std.	No	No	No	Std.
Program function keys	No	8 std.	8 std.	8 std.	No
Numeric keypad	No	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	Dual mini-cart.	No	No	No
Diskette drive (floppy disk)	Single	No	Up to 4 drives	Up to 4 drives	No
Serial printer	Impact	Integral (opt.)	Integral (opt.)	Integral (opt.)	Impact
Other devices	—	Line printer, audible alarm	Line printer, audible alarm	Line printer, audible alarm	None
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half-duplex
Technique	Asynchronous	Async./sync.	Async./sync.	Async./sync.	Async./sync.
Communications protocol	Asynchronous	ASCII/BSC	ASCII/BSC	ASCII/BSC	ASCII
Code	ASCII	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII
Speed, bits/second	110 to 9600	110 to 4800	110 to 4800	110 to 4800	Up to 9600
Format: character, line, or block	Char.	Char./block	Char./block	Char./block	Block only
Multipoint operation (pollable/addr.)	No	Programmable	Programmable	Programmable	Std.
Auto answer	No	Opt.	Opt.	Opt.	No
Auto call	No	Opt.	Opt.	Opt.	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C
Integral modem	675-1 only	Opt.	Opt.	Opt.	No
Integral acoustic coupler	—	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	45-125 mo.	210	—	—	—
Display station, 2 year lease, $/mo.	39-125 mo.	210	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	795-995 (base)	4,995	7,450	9,450	—
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	3/77 (7/77, 675-1)	6/77	8/78	4/79	4/71
Display units installed to date	—	—	—	—	4,000
Serviced by	Terminal Data	TI	TI	TI	Trivex
COMMENTS		Based on 16-bit TMS 9900 microprocessor; contains 24K ROM and 8K-24K RAM; 200K bytes/minicartridge	Based on 16-bit TMS 9900 microprocessor; contains 64K RAM	Based on 16-bit TMS 9900 microprocessor; contains 64K RAM; has file structure compatible with TI DS990 computer family	

Alphanumeric Display Terminals— Basic Characteristics

SUPPLIER AND MODEL	Trivex Plus 70	Univac Uniscope 100	Univac Uniscope 200	Univac UTS 400	Wang Laboratories PCS-II
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Stand-alone	Stand-alone	Either	Stand-alone
Maximum displays/controller	32	1	1	3 or 6	1
Portable case	No	No	No	No	Yes (72 lbs.)
IBM compatibility	3270/3275	No	No	No	2780,3780,3741,2741
Teletype compatibility	No	No	No	No	Std.
Other compatibility	No	Univac	Univac	Univac	IBM HASP, Burr.
User programmable	No	No	No	User-created progs., assembler or COBOL	Yes, via user-created software
Self diagnostics	Yes	No	No	Std.	Opt.
DISPLAY PARAMETERS					
Display positions, chars/display	1920	960/1024	1536/1920	960-1920	1024/1920
Display arrangement, lines x chars./line	25 x 80	12 x 80; 16 x 64	24 x 64/80	12 x 80 to 24 x 64/80	16 x 64/24 x 80
Display area, h x w, inches	8 x 11	5 x 10	7 x 10	7 x 10	5.5 x 7.5
Total displayable symbols	64; 96	64; 96 opt.	64; 96 opt.	64; 96 opt.	96 ASCII
Symbol formation	7 x 9 dot matrix	Stroke	7 x 9 dot matrix	7 x 9 dot matrix	5 x 7/7 x 9 dot
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	2 std.	No	No	Std.	No
Character and/or field blinking	Std.	Std.	Std.	Both std.	No
Roll	No	Via software	Via software	Std.	Up std.
Paging	No	—	—	—	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	Programmable
Cursor blinking	Opt.	Std.	Std.	Std.	No
Addressable/readable cursor	Std.	Std.	Std.	Std.	Std.
Protected format	Std.	Std.	Std.	Std.	Std.
Partial screen transmit	Std.	Std.	Std.	Std.	Std.
Tabulation	Std.	Std.	Std.	Std.	Std.
Character insert/delete	Std.	Std.	Std.	Std.	Std.
Line insert/delete	No	Std.	Std.	Std.	Std.
Erase	Char., screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	No
KEYBOARD PARAMETERS					
Style	Typewriter/data entry/console	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	EBCDIC	ASCII	ASCII	ASCII	96 ASCII
Detachability	Std.	No	No	Std.	No
Program function keys	12 opt.	4 opt.	4 opt.	4 std.; 18 opt.	32 std.
Numeric keypad	Opt.	Opt.	Opt.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	Dual	Dual	Dual	No
Diskette drive (floppy disk)	No	No	No	Dual	Single/dual
Serial printer	Impact	Impact/non-impact	Impact/non-impact	Impact/non-impat	Impact
Other devices	Audible alarm std., I.D. card reader, light pen opt.	Audible alarm std.	Audible alarm std.	Magnetic stripe reader opt.	Printers from 40 cps to 600 lpm, audible alarm
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half-duplex	Half-duplex	Half-duplex	Half/full-duplex
Technique	Synchronous	Async./sync.	Async./sync.	Async./sync.	Async./sync.
Communications protocol	BSC/SDLC	ASCII (Univac)	ASCII (Univac)	ASCII (Univac)	ASCII/BSC/Burr.
Code	EBCDIC	ASCII	ASCII	ASCII	ASCII/EBC./Baud.
Speed, bits/second	110-9600	Up to 9600	Up to 9600	Up to 9600	75 to 9600
Format: character, line, or block	Block only	Block only	Block only	Block	Char./block
Multipoint operation (pollable/addr.)	Std.	Std.	Std.	Std.	Opt. (Burroughs)
Auto answer	Opt.	Std.	Std.	Std.	Opt.
Auto call	No	No	No	No	Opt.
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	85	155-173	174-192	233-297 (master)	—
Display station, 2 year lease, $/mo.	96	—	—	—	—
Controller, 1 year lease, $/mo.	150 (remote)	53-76 (mux)	53-76 (mux)	149-264	—
Controller, 2 year lease, $/mo.	135 (remote)	—	—	—	—
Display station, purchase, $	2,900	3,945-4,365	4,620-5,038	6,030-9,990 (mast.)	4,800
Controller, purchase, $	4,185 (remote)	2,036-2,849 (mux)	2,036-2,849 (mux)	3,944-8,865	See comments
Date of first production delivery	5/75	5/70	2/75	9/76	4/77
Display units installed to date	Over 3,000	—	—	—	700
Serviced by	Trivex	Univac	Univac	Univac	Wang Labs.
COMMENTS	Local price for 1-year lease of controller is $187; $170 for 2-year lease; $5,390 for purchase	Two multiplexers can be cascaded to accommodate up to 31 terminals	Two multiplexers can be cascaded to accommodate up to 31 terminals	Prices for slave units are $128 on 1-year lease for display station, $4,440 for purchase of display station	Unit is portable and is fully programmable using Wang Extended BASIC language; supports full range of Wang printers and plotters; controller price is $750 (async.) or $1,500 (sync.)

Alphanumeric Display Terminals— Basic Characteristics

SUPPLIER AND MODEL	Wang Laboratories WCS-15	Wang Laboratories 2200-T	Wang Laboratories 2200-MVP	Western Union Data Services Video 100	Western Union Data Services Video 200
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Cluster	Stand-alone	Stand-alone
Maximum displays/controller	1	1	8	1	1
Portable case	No	No	No	Opt.	No
IBM compatibility	2741,2780,3780,3741	See comments	BSC	No	No
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	IBM HASP, Burr.	Burr. TC/TD Series	Burr. TC/TD Series	no	No
User programmable	Yes, via user-created software	Yes, via user-created software	Yes, via user-created software	No	No
Self diagnostics	Opt.	Opt.	Opt.	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	1024/1920	1024/1920	1920	960/1920	2000
Display arrangement, lines x chars./line	16 x 64/24 x 80	16 x 64/24 x 80	24 x 80	12/24 x 80	25 x 80
Display area, h x w, inches	7.5 x 9.5	7.5 x 9.5	7.5 x 9.5	5.5 x 8.25	7 x 10, 12-in. diag.
Total displayable symbols	96 ASCII	96 ASCII	96 ASCII	64; 95 opt.	95 ASCII
Symbol formation	5 x 7/7 x 9 dot	5 x 7/7 x 9 dot	5 x 7/7 x 9 dot	5 x 7 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	Std.
Programmable brightness levels	No	No	No	No	Std.
Character and/or field blinking	No	No	No	No	Std.
Roll	Up std.	Up std.	Up std.	No	Up std.
Paging	No	No	No	No	2 pages opt.
Cursor positioning; Up, Down, Left, Right, Home, Return	Programmable	Programmable	Programmable	L, R, Rt.; U, D, H opt.	U, D, L, R, H, Rt.
Cursor blinking	No	No	Yes	No	Std.
Addressable/readable cursor	Std.	Std.	Std.	Opt., addr. only	Both std.
Protected format	Std.	Std.	Std.	No	Std.
Partial screen transmit	Std.	Std.	Std.	No	Std.
Tabulation	Std.	Std.	Std.	No	Fwd./back tab std.
Character insert/delete	Std.	Std.	Std.	No	Std.
Line insert/delete	Std.	Std.	Std.	No	Std.
Erase	Char., line, screen std.	Char., line, screen std.	Std.	None	Char., line, screen std.
Character repeat	No	No	No	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Data entry	Typewriter	Typewriter
Character/code set	96 ASCII	96 ASCII	96 ASCII	ASCII	128 ASCII
Detachability	No	No	No	No	Std.
Program function keys	32 std.	32 std.	32 std.	No	8 std.
Numeric keypad	Std.	Std.	Std.	Opt.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	Single	Single
Diskette drive (floppy disk)	Single/dual/triple	Single/dual triple	Single/dual/triple	Single/dual	Single or dual drive
Serial printer	Impact	Impact	Impact	Impact	Impact
Other devices	Printers from 40 cps to 600 lpm; audible alarm	Printers from 40 cps to 600 lpm; audible alarm	Audible alarm (terminals); local, extended local, or remote mode; printer support	Audible alarm std.	Audible alarm, buffered or unbuffered printer interface
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Asynchronous	Asynchronous
Communications protocol	ASCII/BSC/Burr.	ASCII/BSC/Burr.	ASCII/BSC/Burr.	ASCII	ASCII
Code	ASCII/EBC./Baud.	ASCII/EBC./Baud.	ASCII/EBC./Baud.	ASCII	ASCII
Speed, bits/second	75 to 9600	75 to 9600	75 to 19,200	110 to 19,200	50 to 19,200
Format: character, line, or block	Char./block	Char./block	Char./block	Char. only	Char./block
Multipoint operation (pollable/addr.)	Opt. (Burr.)	Opt. (Burroughs)	Burr. mode only	No	Opt.
Auto answer	Opt.	Opt.	Std.	Opt.	Std.
Auto call	Opt.	Opt.	Opt.	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C, 20 mA dc std.
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	—	—	65	100
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	8,700	10,400	46,650 (8 terminals)	860	1,850
Controller, purchase, $	See comments	750 (async.)/1500	2,000	—	—
Date of first production delivery	10/77	3/75	1/78	12/75	7/78
Display units installed to date	—	—	—	5,000	150
Serviced by	Wang Labs.	Wang Labs.	Wang Labs.	Western Union Data Services	Western Union Data Services
COMMENTS	Fully programmable Wang Extended BASIC language; supports full range of Wang printers, plotters, and graphics; controller price is $750 (async.) or $1,500 (sync.)	IBM compatibilities include 2741, 2780, 3780, 3741, 3275, and HASP; unit is fully programmable and supports full range of peripherals; 3275-emulation controller costs $1,700		Built by Lear Siegler as ADM-3 and ADM-3A	

Alphanumeric Display Terminals—Basic Characteristics

SUPPLIER AND MODEL	Westinghouse Model 1625	Wordstream, Inc. (Genesis One) Model G77C "The Plug"	Zentec ZMS-50	Zentec ZMS-70	Zentec ZMS-90
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Cluster	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	32	32	1	1	1
Portable case	No	No	Yes	Yes	Yes
IBM compatibility	No	3270	Programmable	Programmable	Programmable
Teletype compatibility	Std.	No	Std.	Std.	Std.
Other compatibility	Honeywell, Univac	No	Programmable	Programmable	Programmable
User programmable	No	No	Via user-created firmware/software	Via user-created firmware/software	Via user-created firmware/software
Self diagnostics	Std.	No	Std.	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	2000	2000	2000
Display arrangement, lines x chars./line	24/18/12 x 80	24 x 80	25 x 80	25 x 80	25 x 80
Display area, h x w, inches	6.5 x 8.5	7 x 10.5	12-in. diag.	15-in. diag.	15-in. diag.
Total displayable symbols	128; 256 opt.	64	128 ASCII	128/256 prog. font	128 ASC./prog. font
Symbol formation	5 x 7/9 dot matrix	5 x 7 dot matrix	7 x 9	7 x 9	7 x 9
Color	No	No	No	No	No
Reverse video	Std.	No	Std.	Std.	Std.
Programmable brightness levels	Std.	3 std.	2 std.	2 std.	2 std.
Character and/or field blinking	Field std.	No	Field std.	Both std.	Both std.
Roll	Std.	No	Opt.	Up, down std.	Up, down std.
Paging	3/5 pages opt.	No	2 std., multiple opt.	Multiple std.	Multiple std.
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H	U, D, L, R, H	U, D, L, R, H
Cursor blinking	No	Opt.	Std.	Std.	Std.
Addressable/readable cursor	Std.	Std.	Addr. std.	Addr. std.	Addr. std.
Protected format	Std.	Std.	Opt.	Std.	Std.
Partial screen transmit	Std.	Std.	Opt.	Std.	Std.
Tabulation	Std.	Std.	Fwd./back tab std.	Fwd./back tab std.	Fwd./back tab std.
Character insert/delete	Std.	Std.	Opt.	Std.	Opt.
Line insert/delete	Std.	No	Opt.	Std.	Opt.
Erase	Char., line, screen std.	Char., screen std.	Char., block opt.	Char., block, word, paragraph std.	Char., block opt.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter/data entry	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	96 EBCDIC	128 ASCII	208 ASCII	208 ASCII
Detachability	Std.	Std.	No	Yes	Yes
Program function keys	24 on 16 keys	12 opt., 3 std.	24 32	32	32
Numeric keypad	Std.	Opt. 15 keys	Opt.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	RS-232 interface	No	—	—	—
Diskette drive (floppy disk)	Opt.	No	No	Dual mini std.	Dual regular std.
Serial printer	RS-232 interface	Impact	Opt.	Opt.	Opt.
Other devices	—	Audible alarm, ID card reader, light pen opt.	Audible alarm std.	Audible alarm std., 8" diskette drives	Audible alarm std., various options
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	See comments	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	—	Sync./async.	Sync./async.	Sync./async.
Communications protocol	User defined	—	BSC	BSC; SDLC opt.	BSC; SDLC opt.
Code	ASCII	—	ASCII std.; others	ASCII std.; others	ASCII std.; others
Speed, bits/second	50 to 9600	—	110 to 19,200	110 to 19,200	110 to 19,200
Format: character, line, or block	Char./block	—	Char., block	Char., block	Char., block
Multipoint operation (pollable/addr.)	Opt.	—	Programmable	Programmable	Programmable
Auto answer	No	—	Yes	Yes	Yes
Auto call	No	—	No	No	No
Terminal interface	RS-232 B/C, V.24	—	RS-232C, 20 mA	RS-232C 20 mA, RS-422	RS-232C, 20 mA, RS-422
Integral modem	No	—	No	No	No
Integral acoustic coupler	No	—	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	—	—	—	—
Display station, 2 year lease, $/mo.	—	85	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	3,100	3,040	1,700 (qty. 100+)	4,600 (qty. 100+)	3,300 (qty. 100+)
Controller, purchase, $	4,000	—	—	—	—
Date of first production delivery	11/76	1/75	6/78	8/78	8/78
Display units installed to date	3,000	17,000	500 plus	100 plus	100 plus
Serviced by	Third party	Sorbus	Zentec and third party	Zentec and third party	Zentec and third party
COMMENTS	Controller is standard CRT with addition of one plug-in module; interconnection of CRT's is via two twisted pairs	Relaces IBM 3277-2 Display Station; plugs into IBM 3271-2 (remote), 3271-2 (local), or 3791 (remote) Control Units and Local Display Adapter for System/3	Low-cost 8080A-based terminal with similar video features as ZMS-70/90; intelligent forms and editing capability; allows user code to be "down-loaded"; up to 16K RAM	Features similar to ZMS-90, but including built-in minidiskette drives; diskette-based operating system with editor, assembler, and utilities; up to 64K RAM	Successor to 9003 Series; features 8080A CPU, soft character generator; list-driven video architecture, diskette-based operating system software; up to 64K RAM