Alphanumeric Display Terminals—Basic Characteristics

A discussion of the important basic characteristics of display terminals plus a summary of the characteristics of 261 commercially available alphanumeric display terminals from 88 vendors.

For a perspective of display terminals, including comprehensive user rating information, see Report C09-025-101 behind the Management/System Guides tab in Volume 1.

The accompanying comparison charts summarize the characteristics of 261 commercially available alphanumeric display terminals from 88 vendors. Nearly all of the information was supplied by the manufacturers during the months of February and March 1978. Their cooperation is acknowledged and greatly appreciated.

Datapro sent repeated requests for information to more than 90 companies known or believed to be in the display terminal business. The 88 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-carried in a suitcase-like enclosure 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, Honeywell, and Univac. Datapro included these five entries to define the category of compatibility. Compatibility requirements include identical protocol, code and unit code structure, timing, asynchronous or synchronous operation, and transmission speed. Some vendors even provide identical cables, which is a cost-effective consideration in a local cluster environment. At least two vendors (Genesis One and Memorex) provide compatible replacements for only the display station in an IBM 3270 cluster environment.

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 re-

IBM is not the only mainframe vendor whose products are emulated by others. Teleray, a division of Research, Inc., offers the Teleray 4041B, a Burroughs-compatible version of its microprocessor-based 4041 that is compatible with the Burroughs TD 830 standard protocol and operates with Burroughs standard network software. The 4041B is equipped with a 1920-character screen; two pages of buffering; a 96-character ASCII keyboard with 15 program function keys, edit and cursor control keys, and a numeric pad; and a Bell 102/113 or 202 modem interface. The full-blown terminal is priced at $2,195 and leases for $92 per month.

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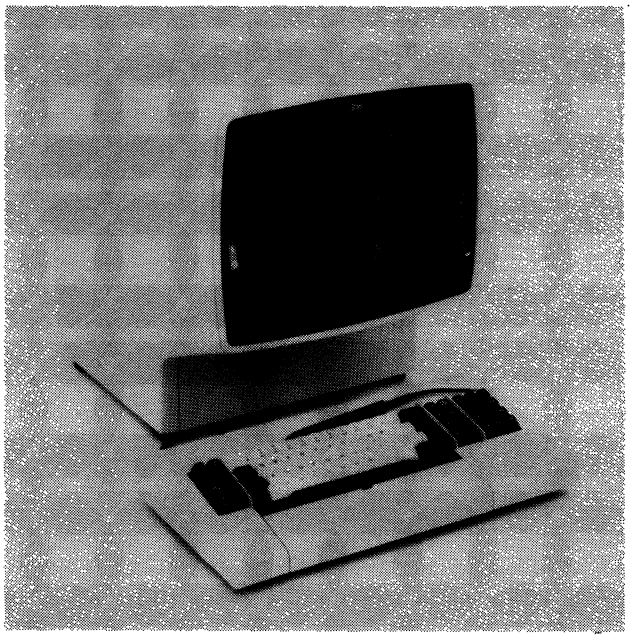

When the IBM 2260 had lost its competitive edge, the company introduced the 3270, which had most of the features that the independents had introduced to market their products successfully against IBM's. In May 1977, IBM again updated its display product line. The new 3278/3274 display/controller and the 3276 display with controller cut the price of a 3270 display configuration by up to 50 percent. New self-diagnostic features were also added. While IBM did not incorporate user programmability into the new units, it did introduce new, large-capacity display formats—2560 and 3440 characters.

quires the provision of an assembly-like language at the very least. Programmability via *user-defined parameters* 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 test patterns or by indicator lamps. 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). 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.

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.

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. Few display terminals offer color, primarily due to cost, but the few that do offer up to eight colors.

- 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

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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.

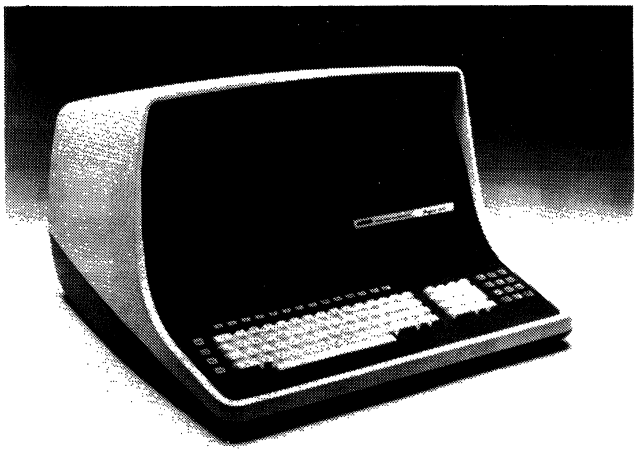
Although roll and paging features can be software implemented in the host computer, the comparison chart entry applies to *only* those terminals that implement the features via hardware or firmware.

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 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.



Applied Digital Data Systems, a leading manufacturer of low-cost, Teletype-compatible display terminals, introduced the microprocessor-based Regent 100 and 200 in June 1977. The models offer a variety of features and range from $1,325 to $1,940 (end user, quantity one) including options. The Regent 200 shown above features 8 program function keys, separate cursor keys, a numeric pad, diagnostic self-testing, cursor sensing and addressing, and 128 displayable symbols plus 11 graphic symbols.

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:

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- 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 style. 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.

Telex Terminal Communications is a manufacturer of IBM 3270-compatible display systems. The TC 277 display station features a 15-inch screen and is available with a 480- or 1920-character display capacity and a typewriter, data entry, or operator console keyboard. The display can be mixed with IBM display stations on either an IBM or Telex control unit.

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 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.

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

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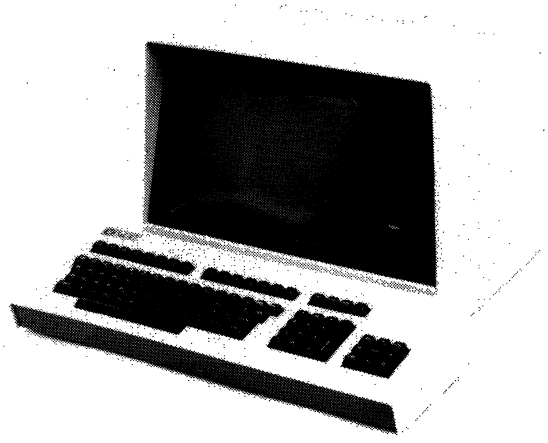
transmission of data in a steady stream. The time interval between successive characters is always precisely the same. The communications interface either provides clocking or accepts external clocking signals from the data set.

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.

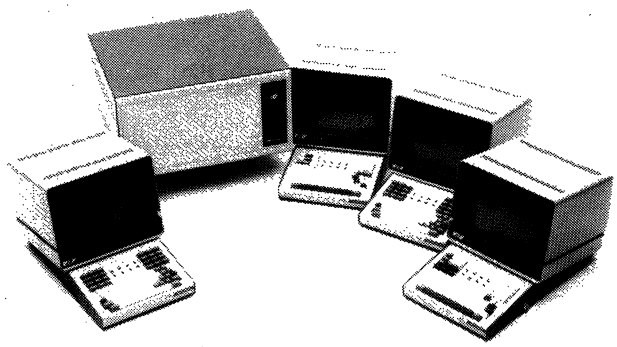
The transmission *code* refers to the bit pattern of the transmitted characters. Two codes are prominent: EBCDIC and ASCII. The latter has been accepted as an industry and government standard, and is now the most commonly used code by display terminals.

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 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



Infoton, another producer of low-cost, Teletype-compatible display terminals, unveiled the microprocessor-based Models 200 and 400 in June 1977. Both are available with a variety of keyboard styles and range in price from $1,195 to $1,595, depending on keyboard. The top-of-the-line Model 400 shown here is available with a host of features including numeric pad and 24 program function keys.



Incoterm, a prominent vendor of user-programmable display terminals, introduced the SPD 15/25 in September 1977. The microprocessor-based (Intel 8080A) product marks a dramatic departure from Incoterm's own minicomputer-based architecture. The terminal's processor (center) accommodates up to four 960- or two 1920-character display stations, a single- or dual-spindle diskette drive, and four optional I/O channels. Emulator programs are available for IBM, Honeywell, Burroughs, and Univac protocols.

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.

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 *acoustic telephone coupler*, so that the terminal can be connected to a conventional telephone handset.

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Pricing and Availability

Terminal pricing is provided for unit quantities (one terminal) unless otherwise specified. One- and two-year lease prices (where applicable) and purchase prices are shown for the display station and terminal controller.

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. 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.

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 has been delivered to customers as of approximately March 1, 1978. 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.

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 88 vendors whose products are summarized in the comparison charts.

Alanthus Data Communications Corporation (formerly Leasco), 20030 Century Boulevard, Germantown, Maryland 20767. Telephone (301) 428-0500.

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

Just a year after entering the display terminal market with the Model 770 Intelligent Terminal in March 1977, Texas Instruments introduced the 774/1 Intelligent Terminal System specifically designed for distributed processing environments. The new TI terminal system includes a TI 990 processor with 64K memory; accommodates one to four 1920-character display stations, one or two 150-cps Model 810 printers, and one to four diskette drives; and features dual communications ports. The system provides upward compatibility from the TI 770 and is supported by a memory-resident multitasking executive that provides operator communications, basic file management, task scheduling, and I/O. User programs are created via an enhanced version of the TPL 700 language. Emulation software will include TTY and IBM 3780 programs. The basic terminal is priced at $12,950. Deliveries are scheduled for April 1978.

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

Beehive International, 4910 Amelia Earhart Drive, Box 25668, Salt Lake City, Utah 84125. Telephone (801) 335-6000.

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

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

Burroughs Corporation, Business Machines Group, Room 2A38, Burroughs Place, Detroit, Michigan 48232. Telephone (313) 972-9115.

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

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

Computek, Inc., 143 Albany Street, Cambridge, Massachusetts 02139. Telephone (617) 272-8100.

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

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

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

Control Data Corporation, 8100 34th Avenue South, Minneapolis, Minnesota 55420. Telephone (612) 853-4656.

Courier Terminal Systems, Inc., 2202 E. University Drive, Phoenix, Arizona 85034. Telephone (602) 244-1392.

Data 100 Corporation, 6110 Blue Circle Drive, Minnetonka, Minnesota 55343. Mailing address: P.O. Box 1222, Minneapolis, Minnesota 55440. Telephone (612) 941-6500.

Data General Corporation, Route 9, Southboro, Massachusetts, 01772. Telephone (617) 485-9100.

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

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

Datapoint Corporation, 9725 Datapoint Drive, San Antonio, Texas 78284. Telephone (512) 696-4520.

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

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

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

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

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

Four-Phase Systems, Inc., 19333 Vallco Parkway, Cupertino, California 95014. Telephone (408) 255-0900.

Intertec Data Systems, a small manufacturer of electronic teleprinter terminals, introduced the Intertube, a microprocessor-based, Teletype-compatible display terminal, for the shockingly low price of $784, quantity one. Features include a 2000-character display (with status line); 128 displayable symbols plus 11 graphics; protected, constant, and print-only fields; conversational, message, or page transmission; and self-diagnostic firmware. That's a lot of terminal for the price.

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

Goodwood Data Systems, Ltd. (formerly I.P. Sharp Associates, Ltd.), 150 Rosamond Street, Carleton Place, Ontario, Canada 7C3P4. Telephone (613) 257-3610.

GTE Information Systems, Inc., One Stamford Forum, Stamford, Connecticut 06904. Telephone (203) 357-2000.

Harris Communications Systems, Inc., 11262 Indian Trail, P.O. Box 44076, Dallas, Texas 75234. Telephone (214) 620-4400.

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

Hendrix Electronics, Inc., 645 Harvey Road, Manchester, New Hampshire 03103. Telephone (603) 669-9050.

Hewlett-Packard, 1501 Page Mill Road, Palo Alto, California 94304. Telephone (415) 493-1501.

Honeywell Information Systems, Inc., 60 Walnut Street, Wellesley Hills, Massachusetts 02181. Telephone (617) 237-4100.

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

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

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

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

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

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

Intelligent Systems Corporation, 2405 Pine Forest Drive, Norcross, Georgia 30071. Telephone (404) 449-5961.

Interface Technology, Inc., 10506 Kahlmyer Drive, St. Louis, Missouri 63132. Telephone (314) 426-6880.

ICL, Incorporated, Turnpike Plaza, 197 Highway 18, East Brunswick, New Jersey 08816. Telephone (201) 246-3400.

International Telephone & Telegraph Corporation (ITT), Data Equipment & Systems Division, East Union Avenue, East Rutherford, New Jersey 07073. Telephone (201) 935-3900.

Intertec Data Systems Corporation, 1851 Interstate 85 South, Charlotte, North Carolina 28208. Telephone (704) 377-0300.

Jacquard Systems, 1639 11th Street, Santa Monica, California 90404. Telephone (213) 393-9784.

Kustom Electronics Inc., Data Communications Division, 1010 West Chestnut, Chanute, Kansas 66720. Telephone (316) 431-4380.

Lear Siegler, Inc., Electronic Instrumentation Division, 714 North Brookhurst Street, Anaheim, California 92803. Telephone (714) 774-1010.

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

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Memorex Corporation, Equipment Group, San Tomas at Central Expressway, Santa Clara, California 95052. Telephone (408) 987-3412.

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

NCR Corporation, EDP Products, Building 23, 3rd Floor, Main & K Streets, Dayton, Ohio 45409. Telephone (513) 449-6670.

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

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

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

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

Perry Electronics, 2424 Atlantic Avenue, Raleigh, North Carolina 27604. Telephone (919) 833-2554.

Pertec Business Systems, 17112 Armstrong Avenue, Santa Ana, California 92705. Telephone (714) 540-8340.

Plantronics, Inc., 385 Reed Street, Santa Clara, California 95050. Telephone (408) 249-1160.

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

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

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

Raytheon Data Systems Company, Division of Raytheon Company, 1415 Boston-Providence Turnpike, Norwood, Massachusetts 02162. Telephone (617) 762-6700.

Scientific Measurement Systems, Inc., 26 Olney Avenue, Cherry Hill, New Jersey 08003. Telephone (609) 424-5220.

Selecterm, Inc., 2 Audubon Road, Wakefield, Massachusetts 01880. Telephone (617) 246-1300.

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

Sycor, Inc., 100 Phoenix Drive, Ann Arbor, Michigan 48104. Telephone (313) 971-0900.

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

Tano Corporation, 4521 West Napoleon Avenue, Metairie, Louisiana 70001. Telephone (504) 888-4884.

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

Tektronix, Inc., PO Box 500, Beaverton, Oregon 97005. Telephone (503) 644-0161.

Teleram Communications Corporation, 1032 Mamaroneck Avenue, Mamaroneck, New York 10543. Telephone (914) 698-7789.

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

Teletype Corporation, 5555 Touhy Avenue, Skokie, Illinois 60076. Telephone (312) 982-2000.

Telex Terminal Communications, Inc., 3301 Terminal Drive, Raleigh, North Carolina 27611. Telephone (919) 834-5251.

Termiflex Corporation, 17 Airport Road, PO Box 1123, Nashua, New Hampshire 03060. Telephone (603) 889-3883.

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

Texas Instruments, Inc., Digital Systems Division, 12203 Southwest Freeway, P.O. Box 1444, Houston, Texas 77001. Telephone (713) 494-5115.

Trans-Lux Corporation, 625 Madison Avenue, New York, New York 10022. Telephone (212) PL 1-3110.

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

Univac Division, Sperry Rand Corporation, PO Box 500, Blue Bell, Pennsylvania 19422. Telephone (215) 542-4011.

Video Data Systems, 657 Old Willets Path, Hauppauge, New York 11787. Telephone (516) 234-1010.

Wang Laboratories, Inc., 836 North Street, Tewksbury, Massachusetts 01876. Telephone (617) 851-4111.

Western Union Data Services Company, 70 McKee Drive, Mahwah, New Jersey 07430. Telephone (201) 529-1170.

Westinghouse Canada, Ltd., Box 510, Hamilton, Ontario, Canada L8N 3K2. Telephone (416) 528-8811.

Wintek Corporation, 902 North 9th Street, Lafayette, Indiana 47904. Telephone (317) 742-6802.

Wyle Computer Products, a Division of Wyle Laboratories, 3200 Magruder Boulevard, Hampton, Virginia 23666. Telephone (804) 838-0122.

Zentec Corporation, 2368-C Walsh Avenue, San Clara, California 95050. Telephone (408) 246-7662.□

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Alanthus V-201	Alanthus V-202	Alanthus V-203	Ann Arbor Terminals DESIGN III KSR/RO	Ann Arbor Terminals Series 200 KSR/RO
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	Yes, via user-defined firmware	Yes, via user-defined firmware	No	No	No
Self diagnostics	No	No	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920 opt.	1920	1920	256-3200	256-3200
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	8 x 32 to 40 x 80	8 x 32 to 40 x 80
Display area, h x w, inches	7.5 x 9.25	7.5 x 9.25	7.5 x 9.25	14-inch diag.	9 to 23-inch diag.
Total displayable symbols	64/128	128	64/95	64 or 96	64 or 96
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7, 7 x 9 dot mat.	5 x 7, 7 x 9 dot mat.
Color	No	No	No	Opt.	Opt.
Reverse video	No	No	No	Opt.	Opt.
Programmable brightness levels	No	No	No	2 opt.	2 opt.
Character and/or field blinking	No	Std.	No	Both opt.	Both opt.
Roll	Up std.	Up std.	Up std.	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, 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	Opt.	Opt.
Addressable/readable cursor	Std.	Std.	Std., addressable	Std., addressable	Std., addressable
Protected format	Std.	Std.	No	Opt.	Opt.
Partial screen transmit	Std.	Std.	No	Opt.	Opt.
Tabulation	Std.	Std.	No	Opt.	Opt.
Character insert/delete	Std.	Std.	No	Opt.	Opt.
Line insert/delete	Std.	Std.	No	Opt.	Opt.
Erase	Char. std., line opt., screen std.	Char., line, screen std.	Char., screen std.	Char. std., line opt., screen std.	Char. std., line opt., screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Teletype	Teletype	Teletype
Character/code set	128 ASCII	128 ASCII	128 ASCII	ASCII	ASCII
Detachability	No	Std.	No	Std.	Std.
Program function keys	No	16 std.	No	No	No
Numeric keypad	Std.	Std.	Opt.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	No	No	No
Serial printer	Impact	Impact	Impact	No	No
Other devices	Audible alarm opt.	Audible alarm std.	Audible alarm std.	Audible alarm opt.	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	ASCII	ASCII	ASCII	ASCII	ASCII
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	110 to 19,200	110 to 19,200	110 to 19,200	Up to 9600	Up to 9600
Format: character, line, or block	Char./block	Char./block	Char. only	Char./block opt.	Char./block opt.
Multipoint operation (pollable/addr.)	Opt.	Opt.	No	Opt.	Opt.
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, current loop	RS-232C, CCITT, 20/60 ma. dc, TTL	RS-232C, CCITT, 20/60 ma. dc, TTL
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	85-101	110-130	50-66	—	—
Display station, 2 year lease, $/mo.	78-93	101-119	47-63	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,650-1,880	2,120-2,530	1,860-1,180	1,070-1,995	—
Controller, purchase, $	—	—	—	—	720-1,345
Date of first production delivery	4/75	4/75	10/76	12/73	5/70
Display units installed to date	Over 700	Over 700	Over 500	5,000	10,000
Serviced by	Alanthus	Alanthus	Alanthus	Ann Arbor	Ann Arbor
COMMENTS	Produced by Lear Siegler as the ADM-1	Produced by Lear Siegler as the ADM-2	Produced by Lear Siegler as the ADM-3	Terminals are available in a total of 6 display formats: 16 x 32, 24 x 40, 16 x 80, 20 x 50, 24 x 80, and 40 x 80. DESIGN III uses same circuitry as Series 200, but is housed in attractive casework. Series 200 is available as circuit boards with monitor in desk or rack mounting	

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Ann Arbor Terminals Model 400E	Applied Digital Data Sys. (ADDS) Consul 980 & MRD 980	Applied Digital Data Systems (ADDS) Consul 980A	Applied Digital Data Systems (ADDS) Consul 980B	Applied Digital Data Systems (ADDS) Envoy 620
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	Yes
IBM compatibility	No	No	3270/3275	No	No
Teletype compatibility	Std.	Std.	No	No	Std.
Other compatibility	No	No	No	Burroughs TD 800	No
User programmable	No	No	No	No	No
Self diagnostics	No	No	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	400-1920	1920	1920	1920	1920
Display arrangement, lines x chars./line	10 x 40 to 24 x 80	24 x 80	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	8 x 10	8 x 10; 12" diag.	8 x 10; 12" diag.	8 x 10; 12" diag.	2 x 3; 5" diag.
Total displayable symbols	64 std.; 96 opt.	96	96	96	64
Symbol formation	5 x 7, 7 x 10 dot mat.	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.; selectable	Std.; selectable	Std.	No
Programmable brightness levels	Std.	2 std.	2 std.	2 std.	No
Character and/or field blinking	Char., field std.	Both std.; 2 speeds	Both std., 2 speeds	Both std., 2 speeds	No
Roll	Std.	Up std.	Up std.	Up std.	Up std.
Paging	Up to 5 opt.	No	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	L, R, U, D, H	L, R, U, D, H	L, R, U, D, H	U, D, L, R, H
Cursor blinking	Std.	Opt.	No	Opt.	Opt.
Addressable/readable cursor	Add. std.; read opt.	Std. addressable	Std.	Std.	Std.
Protected format	Opt.	Std.	Std.	Std.	No
Partial screen transmit	Opt.	Std.	Std.	Std.	No
Tabulation	Opt.	Std.	Std.	Std.	No
Character insert/delete	Opt.	Std.	Std.	Std.	No
Line insert/delete	Opt.	Std.	Std.	Std.	No
Erase	Screen std.; char., line opt.	Char., line, screen std.	Char., line, screen std.	Char., line, screen	Char., screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Data entry	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	128 ASCII	ASCII	ASCII	128 ASCII	ASCII
Detachability	Std.	Opt.	Opt.	Opt.	No
Program function keys	Up to 36 opt.	11 opt.	11 opt.	11 opt.	No
Numeric keypad	Std.	Std.	Std.	Std.	No
ANCILLARY DEVICES					
Cassette tape drive	No	RS-232 interface	RS-232 interface	RS-232 interface	RS-232 interface
Diskette drive (floppy disk)	No	RS-232 interface	RS-232 interface	RS-232 interface	RS-232 interface
Serial printer	No	Impact (Centron.)	None	Impact/non-impact	Non-impact (NCR)
Other devices	—	Audible alarm std., composite video	Audible alarm std., composite video	Audible alarm std., composite video	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex std.	Half/full-duplex	Half duplex	Half-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Async./sync.	Async./sync.	Asynchronous
Communications protocol	—	ASCII	ASCII/BSC	ASCII/BSC	ASCII
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	Up to 9600	Up to 9600	Up to 9600	Up to 9600	Up to 9600
Format: character, line, or block	Char./block	Char./block	Block only	Block only	Char. only
Multipoint operation (pollable/addr.)	No	No	Std.	Std.	No
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232 std.; 20 ma opt.	RS-232C, 20 ma opt.	RS-232C	RS-232C	RS-232C, CCITT V.24, 20 ma
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	Std.
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	—	—	132	—
Display station, 2 year lease, $/mo.	—	—	155	122	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1210-1500	2,800 (Con. 980)	3,200	2,700	2,250
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	12/77	11/74, 4/75 (MRD)	6/75	2/77	10/75
Display units installed to date	200	5,000	400	200	300
Serviced by	Ann Arbor	TRW/GE	TRW/GE	TRW/GE	TRW/GE
COMMENTS	Terminal is available in 6 different display formats: 10x40, 12x40, 20x40, 24x40, 20x80, and 24x80	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—Equipment Specifications

SUPPLIER AND MODEL	Applied Digital Data Systems (ADDS) Consul 520	Applied Digital Data Sys. (ADDS) Consul 580 & MRD 380	Applied Digital Data Systems (ADDS) MRD 460	Applied Digital Data Sys. (ADDS) Consul 880A & MRD 780A	Applied Digital Data Systems (ADDS) Consul 920
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.	No	Std.
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-inch diag.	2 x 10; 12" diag.	9/25-inch diag.	8 x 10; 12" diag.	8 x 10; 12" diag.
Total displayable symbols	64	64	64	64	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	No	8 colors std.	No	No
Reverse video	No	No	Std.	No	Std.; selectable
Programmable brightness levels	No	No	2 std.	2 std.	2 std.
Character and/or field blinking	No	No	Both std.	Both std.	Both std., 2 speeds
Roll	Up std.	Std.	No	Up std.	Up std.
Paging	No	—	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	L, R, U, D, H	L, R, U, D, H	U, D, L, R, H	L, R, U, D, H	L, R, U, D, H
Cursor blinking	Opt.	Opt.	Opt.	No	Opt.
Addressable/readable cursor	Std. address only	Std. address. only	Std. address. only	Std. address. only	Std.
Protected format	No	No	Std.	Std.	Std.
Partial screen transmit	No	No	No	Std.	Std.
Tabulation	No	No	Std.	Std.	Std.
Character insert/delete	No	Std.	No	Std.	No
Line insert/delete	No	No	No	No	No
Erase	Char., screen std.	Char., screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	No	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	ASCII	ASCII	ASCII	ASCII
Detachability	Opt.	Opt.	Std.	No	Opt.
Program function keys	No	No	No	No	11 opt.
Numeric keypad	No	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	RS-232 interface	RS-232 interface	RS-232 interface	RS-232 interface
Diskette drive (floppy disk)	No	RS-232 interface	RS-232 interface	RS-232 interface	RS-232 interface
Serial printer	Impact	Non-impact	No	Non-impact	Non-impact (NCR)
Other devices	Audible alarm std., composite video	Audible alarm std.	None	None	Audible alarm std., composite video
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Asynchronous	
Communications protocol	ASCII	ASCII	ASCII	ASCII	ASCII
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	Up to 9600	Up to 9600	Up to 1500 cps	Up to 9600	Up to 9600
Format: character, line, or block	Char. only	Char. only	Char. only	Block only	Char./block
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, CCITT V.24, 20 ma	RS-232C, 20 ma opt.	RS-232C, CCITT V.24, 20 ma, TTL	RS-232C	RS-232C, 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.	—	—	—	—	—
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,595	1,795 (Consul 580)	Contact vendor	3,265 (880A); 3,845	2,600
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	4/76	'73 (580); '74 (380)	9/75	9/73	4/70
Display units installed to date	2,600	16,000/600	200	4,200/300	1,500
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		Also available from NCR as Model 796-301; MRD 780A is rack-mount controller priced at $2,825 to $3,170	

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Applied Digital Data Systems (ADDS) Regent 100	Applied Digital Data Systems (ADDS) Regent 200	Beehive International Mini Bee 2	Beehive International B 150	Beehive International B 200
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	No	No	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	Std.	Std.	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	2000	1920	2000
Display arrangement, lines x chars./line	24 x 80	24 x 80	25 x 80	24 x 80	25 x 80
Display area, h x w, inches	12-inch diag.	12-inch diag.	6.5 x 8.4	6.5 x 8.4	6.5 x 8.4
Total displayable symbols	128	128	64 ASCII	95 ASCII	128 ASCII
Symbol formation	8 x 8	8 x 8	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.	No	No	Std.
Programmable brightness levels	2 std.	2 std.	2 std.	No	No
Character and/or field blinking	Std.	Std.	Both std.	Opt. char. only	No
Roll	Up std.	Up std.	Up std.	Up std.	Up std.
Paging	No	No			
Cursor positioning; Up, Down, Left, Right, Home, Return	Std.	Std.	L, R, U, D, H	U, D, L, R, H, Rt.	L, R, U, D, H, Rt.
Cursor blinking	Std.	Std.	No	Std.	Std.
Addressable/readable cursor	Both std.	Both std.	No	Std.address.only	Std. address. only
Protected format	No	Std.	Std.	Opt.	Std.
Partial screen transmit	No	Std.	Std.	Opt.	Std.
Tabulation	No	Std.	Std.	Opt.	Std.
Character insert/delete	No	Opt.	Std.	Opt.	No
Line insert/delete	No	Opt.	No	Char., opt.; line,	No
Erase	Page, line, screen	Std.	Char., line, screen	screen std.	Char., line, screen
Character repeat	Std.	Std.	std. Std.	Std.	std. Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	128 ASCII	128 ASCII	ASCII	128 ASCII	128 ASCII
Detachability	Opt.	Opt.	No	No	Std.
Program function keys	8/16 opt.	8/16 std.	—	16 opt.	No
Numeric keypad	Std.	Std.	No	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	RS-232C	RS-232C	Yes	No	RS-232 interface
Diskette drive (floppy disk)	RS-232C	RS-232C	Yes	No	RS-232 interface
Serial printer	RS-232C	RS-232C	No	RS-232C	RS-232 interface
Other devices	—	—	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	75 to 9600	75 to 9600	Up to 9600	15 to 19,200	Up to 9600
Format: character, line, or block	Char.	Char./line/block	Char./block	Char./block opt.	Char./block
Multipoint operation (pollable/addr.)	No	No	No	No	No
Auto answer	No	No	No	Std.	No
Auto call	No	No	No	No	No
Terminal interface	Both std.	Both std.	RS-232C	RS-232C; 20 ma dc current loop	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
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,325-1,450	1,795-1,940	1,795	1,595-1,770	2,395
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	8/77	9/77	8/73	6/76	4/74
Display units installed to date	2500	700	7,700	6000	1,400
Serviced by	—	—	Beehive, Sorbus, & WUDS	Beehive, Sorbus, & WUDS	Beehive, Sorbus, & WUDS
COMMENTS	Features include terminal status line, limited graphics, and terminal bypass printing	Features include terminal status line, limited graphics, and terminal bypass printing		An enhanced version of the earlier B 100	Formerly Mini Bee 4; deliveries began 4/74

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Beehive International B 300	Beehive International B 400	Beehive International B 550	Beehive International B 800	Braegen Virtual Terminal System
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Cluster	Cluster
Maximum displays/controller	1	1	1	16	36
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	—	IBM 3270 & 3780
Teletype compatibility	Std.	No	Std.	Std.	No
Other compatibility	No	Opt. protocols	No	—	No
User programmable	No	No	Yes	Yes, via BASIC, EASY & FORTRAN IV	Opt.
Self diagnostics	No	No	Std.	Std.	No
DISPLAY PARAMETERS					
Display positions, chars/display	2000	2000	2000	2000	480/1920
Display arrangement, lines x chars./line	25 x 80	25 x 80	25 x 80	25 x 80	12 x 40, 24 x 80
Display area, h x w, inches	6.5 x 8.4	6.5 x 8.4	6.5 x 8.4/7 x 9	6.5 x 8.4	12-inch diag.
Total displayable symbols	128 ASCII	128 ASCII	128/256 ASCII	128	128; up to 512 opt.
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	7 x 8 dot matrix	5 x 7 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	Std.	Std.	Std.	—	Std.
Programmable brightness levels	No	No	No	—	2 std.
Character and/or field blinking	Both std.	Both std.	Both std.	—	Std.
Roll	Std., up only	Std., up only	Std., up & down	Std., up only	Opt.
Paging	Std., forward & back	Std., forward & back	Std., 2 pages	—	—
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.	Both std.	Both std.	—	Std.
Protected format	Std.	Std.	Std.	—	Std.
Partial screen transmit	Std.	Std.	Std.	—	Std.
Tabulation	Std., forward & back	Std., forward & back	Std.	—	Std.
Character insert/delete	Std.	Std.	Std.	—	Std.
Line insert/delete	Std.	Std.	Std.	—	Opt.
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	—	Char., field, screen std.
Character repeat	Std.	Std.	Std.	—	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter; Selectric opt.	Typewriter, data entry
Character/code set	ASCII	ASCII	ASCII	128 ASCII	128 EBCDIC
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	8 std.	8 std.	8 std.	16 std.	10 std., 15 opt.
Numeric keypad	Std.	Std.	Std.	Std.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No		No	No
Diskette drive (floppy disk)	No	No		1 to 4 drives	Opt.
Serial printer	RS-232 interface	RS-232 interface		Impact	Impact
Other devices	Audible alarm std.	Audible alarm std.	Audible alarm std.	Disk drive, line printers, card readers & mag tape drive	—
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.	Synchronous
Communications protocol	ASCII	ASCII	User specified	ASCII/BSC	BSC, SDLC
Code	ASCII	ASCII	ASCII	ASCII	ASCII, EBCDIC
Speed, bits/second	Up to 9600	Up to 9600	Up to 19,200	110 to 9600	1200 to 19,200
Format: character, line, or block	Char./block	Char./block	Char./block	Block	Char./block
Multipoint operation (pollable/addr.)	Opt.	Std.	No	No	Std.
Auto answer	No	No	No	No	Opt.
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C; 200ma current loop	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	76
Display station, 2 year lease, $/mo.	—	—	—	—	65
Controller, 1 year lease, $/mo.	—	—	—	—	247
Controller, 2 year lease, $/mo.	—	—	—	—	227
Display station, purchase, $	3,295	3,695	2,930 (base)	5,945 (base)	2,250
Controller, purchase, $	—	—	—	—	9,000
Date of first production delivery	5/73	6/74	8/76	11/76	—
Display units installed to date	7800	150	1500	—	—
Serviced by	Beehive, Sorbus, & WUDS	Beehive, Sorbus, & WUDS	Beehive, Sorbus, & WUDS	Beehive, Sorbus, & WUDS	Sorbus
COMMENTS	Formerly Super Bee 2; deliveries began 5/73; 15-inch screen & rack mount optional	Formerly Super Bee 3; deliveries began 6/74; 15-inch screen & rack mount optional	Enhanced B 500; available with up to 48K RAM & 7K ROM or PROM 8080A microprocessor	Contains 16-bit processor compatible with Data General Nova 1200; 4K to 32K words of memory	Peripherals include serial & line printers, card readers, & a 4.8M-byte disk; 32K to 256K bytes of memory; supports up to 64 devices

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Bunker Ramo System 90	Burroughs TD 730	Burroughs TD 830	Cado System 20	Cado System 40
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster	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	3270 BSC/SDLC	3275 opt.	3275 opt.	IBM2770/2780/3780	IBM2770/2780/3780
Teletype compatibility	No	No	No	Std.	Std.
Other compatibility	BR 2200	Burroughs	Burroughs	No	No
User programmable	Yes	No	No	User-created pgms.	User-created pgms.
Self diagnostics	Yes	Yes	Yes	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	480/960/1920	480	2000	1920	1920
Display arrangement, lines x chars./line	12 x 40/80; 24 x 80	12 x 40	80 x 25	24 x 80	24 x 80
Display area, h x w, inches	Variable	4.7 x 8.4	7.5 x 9	12-in. diag.	5.25 x 11.25
Total displayable symbols	96 ASCII	64	128	96 ASCII	127 ASCII
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	Std.	Std.	No
Programmable brightness levels	3 std.	No	Std.	2 std.	2 std.
Character and/or field blinking	Both std.	Std.	Std.	Std.	Std.
Roll	No	Std.	Std.	Up std.	Up & down std.
Paging	No	Std.	Std.	No	3 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	Opt.	Std.	Std.	Opt.	No
Addressable/readable cursor	Both std.	Std.	Std.	Std.	Read opt.
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	Std.	Std.	Std.	Std.	Std.
Character repeat	Opt.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	96 ASCII/EBCDIC	128 ASCII	128 ASCII	128 ASCII	127 ASCII
Detachability	Std.	Std.	Std.	No	Opt.
Program function keys	32 std.	—	—	16 std.	No
Numeric keypad	Std.	Opt.	Opt.	Std.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	Single/dual	Single/dual	Opt.	Opt.
Diskette drive (floppy disk)	Dual	No	No	2 to 6	2 to 6
Serial printer	Impact	Impact	Impact	Impact	No
Other devices	Audible alarm std., ID reader opt.	Line printers, audible alarm, ID card reader	Line printers, audible alarm, ID card reader	—	Line printer
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Synchronous	Async./sync.	Async./sync.	Async./sync.	Async./sync.
Communications protocol	BSC/SDLC	BSC/Burr.	BSC/Burr.	ASCII/BSC	ASCII/BSC
Code	ASCII/EBCDIC	ASCII	ASCII	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	Up to 9600	Up to 38,400	Up to 38,400	110 to 9600	110 to 9600
Format: character, line, or block	Char./block	Char./block	Char./block	Char./line/block	Char./line/block
Multipoint operation (pollable/addr.)	Std.	Std.	Std.	No	No
Auto answer	Opt.	No	No	Std.	Std.
Auto call	Opt.	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C, 20 ma dc
Integral modem	Opt.	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Contact vendor	115-142	135-162	—	—
Display station, 2 year lease, $/mo.	—	108-132	120-153	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,510	3,635-4,585	4,285-5,235	—	—
Controller, purchase, $	8,260	—	—	13,995	17,995
Date of first production delivery	—	6/77	8/76	4/78	4/76
Display units installed to date	—	—	—	—	—
Serviced by	Bunker Ramo	Burroughs	Burroughs	Cado	Cado or Teletype Corp.
COMMENTS	System 90 supersedes the BR 2200 system; IBM 2260/2265 compatibility is optional				

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Cado System 20/IV	Cado System 40/IV	Compugraphic MDT-400	Computek Econotext	Computek 200 Series
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster	Cluster	Stand-alone	Either	Either
Maximum displays/controller	4	4	1	4	4
Portable case	No	No	No	Opt.; 75 lbs.	Opt.; 75 lbs.
IBM compatibility	IBM2770/2780/3780	IBM2770/2780/3780	IBM 2780-BSC	No	3270, 2260/2265
Teletype compatibility	Std.	Std.	Opt.	Std.	Std.
Other compatibility	No	No	No	No	No
User programmable	User-created pgms.	User-created pgms.	Yes	Yes	Yes
Self diagnostics	Std.	Std.	Std.	No	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1280	2000	960/2000
Display arrangement, lines x chars./line	24 x 80	24 x 80	16 x 80	25 x 80	12/25 x 80
Display area, h x w, inches	12-in. diag.	5.25 x 11.25	4.75 x 6.875	12-in. diag.	12/15 inch diag.
Total displayable symbols	96 ASCII	127 ASCII	128 ASCII	126 ASCII	128
Symbol formation	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	14 x 20 dot matrix	14 x 20 matrix
Color	No	No	No	No	No
Reverse video	Std.	No	Std.	Std.	Opt.
Programmable brightness levels	2 std.	2 std.	Std.	2 std.	2 std.
Character and/or field blinking	Std.	Std.	Std.	Char. std.; field opt.	Char.; field opt.
Roll	Up std.	Up & down std.	Up & down std.	Std.	Std.
Paging	No	3 std.	2 page screen buffer	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	U, D, L, R, H, Rt.	U, D, L, R, H
Cursor blinking	Std.	No	No	Std.	Opt.
Addressable/readable cursor	Std.	Read opt., add. std.	Addressable only	No	Std.
Protected format	Std.	Std.	Programmable	Opt.	Opt.
Partial screen transmit	Std.	Std.	Programmable	Opt.	Opt.
Tabulation	Std.	Std.	Std. forward only	Std.	Std.
Character insert/delete	Std.	Std.	Std.	Std.; delete only	Opt.
Line insert/delete	Std.	Std.	Std.	Std.; delete only	Opt.
Erase	Std.	Std.	Char., screen	Char. & screen std.; line opt.	Char. std., line opt. screen std.
Character repeat	Std.	Std.	Nc	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter; others
Character/code set	128 ASCII	127 ASCII	96 ASCII	128 ASCII/TTS	128 ASCII
Detachability	No	Opt.	No	Std.	Std.
Program function keys	16 std.	No	18 std.	10 std.	Up to 32
Numeric keypad	Std.	Opt.	Opt.	No	Std.
ANCILLARY DEVICES					
Cassette tape drive	Opt.	Opt.	No	No	Single/dual
Diskette drive (floppy disk)	1 to 3 (dual sided)	1 to 3 (dual sided)	Single mini-diskette	1 to 6 drives	1-6 drives
Serial printer	Impact	No	Impact	Impact	Impact
Other devices	—	Line printer	—	—	Card readers, line printers, 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.	Async./sync.
Communications protocol	ASCII/BSC	ASCII/BSC	BSC	ASCII/BSC	ASCII/BSC
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	110 to 9600	110 to 9600	Up to 9600	110 to 19,200	110 to 19,200
Format: character, line, or block	Char./line/block	Char./line/block	Char./block	Char./block	Char./block
Multipoint operation (pollable/addr.)	No	No	No	Std.	Std.
Auto answer	Std.	Std.	Opt.	Opt.	Opt.
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.	—	—	—	—	—
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	—	—	4,500	3,850 (basic)	5,000 (basic)
Controller, purchase, $	19,845	25,495	—	—	4,980
Date of first production delivery	2nd qtr. 1978	2nd qtr. 1978	—	1/78	10/72
Display units installed to date	—	—	—	10	Over 3500
Serviced by	Cado	Cado or Teletype Corp.	Compugraphic	Computek	Computek
COMMENTS			MDT-400 is based on MDT-350 intelligent text editing terminal, which began deliveries Oct. 1977; about 500 are installed	Designed for text editing	

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Computek 216 Series	Computer Optics CO:77/78	Computer Peripherals COPS Family	Conrac 480 Series	Control Data Model 711
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Either	Stand-alone	Stand-alone	St.-alone, multi-drop
Maximum displays/controller	4	32	1	1	1
Portable case	Opt.; 65 lbs.	No	No	No	No
IBM compatibility	3270	3270 Series	No	No	No
Teletype compatibility	Std.	No	Std.	Std.	No
Other compatibility	Opt.	No	See Comments	See comments	No
User programmable	Yes	User-defined hardware	No	Yes	No
Self diagnostics	Yes	Opt.	No	Opt.	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920	430 to 3440	1920	2000	1280
Display arrangement, lines x chars./line	24 x 80	12 x 40 to 43 x 80	24 x 80	25 x 80	16 x 80
Display area, h x w, inches	12/15 inch diag.	15-in. diag.	12-in. diag.	6.5 x 8.5	8 x 10
Total displayable symbols	128/256	96	96/128	128	64 to 96 opt.
Symbol formation	7 x 9 dot matrix	7 x 9 dot matrix	5 x 7/7 x 9	5 x 9 dot matrix	5 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	Opt.	No	Std.	No	Yes
Programmable brightness levels	2 std.	2 std.	No	2 std.	No
Character and/or field blinking	Char.; field opt.	No	No	Std.	No
Roll	Std.	No	Std.	Std.	Std.
Paging	Std.	No	No	Std.	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	Opt.	Opt.	Std.	Std.	Std.
Addressable/readable cursor	Std.	Std.	Both std.	Std.	No
Protected format	Via program	Std.	No	Std.	Opt.
Partial screen transmit	Opt.	Std.	No	Std.	Opt.
Tabulation	Std.	Std.	Std.; fwd. & backward	Std.	Std.
Character insert/delete	Via program	Std.	No	Std.	Opt.
Line insert/delete	Via program	Std.	No	Std.	Opt.
Erase	Char., line, screen std.	Char., line, screen std.	Field, line, screen std.	Char., line, screen std.	Char., screen std., line opt.
Character repeat	Std.		Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter; others	Typewriter, data entry, other	Typewriter	Typewriter	Typewriter
Character/code set	128 ASCII	Std.	128 ASCII	ASCII	ASCII
Detachability	Std.	Std.	Std.	No	No
Program function keys	Up to 32	Up to 24 std.	12 opt.	Up to 32	6
Numeric keypad	Std.	Std.	Opt.	Opt.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	1-6 drives	3274 Type only	No	Opt.	No
Serial printer	Impact	Impact	Impact	Opt.	Impact/non-impact
Other devices	10 MB disk, 9-tk. tape, audible alarm, ID reader, light pen	—	—	Audible alarm std.; parallel printer	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half-duplex
Technique	Async./sync.	Sync.	Asynchronous	Async./sync.	Synchronous
Communications protocol	ASCII/BSC/SDLC	BSC/SDLC	ASCII	ASCII; others opt.	ASCII/CDC BSC
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII	ASCII; others opt.	ASCII
Speed, bits/second	110 to 19,200	1200 to 9600	110 to 19,200	50 to 9600	2000 to 4800
Format: character, line, or block	Char./block	Block	Char./block	Char./block/line	Block
Multipoint operation (pollable/addr.)	Std.	Std.	No	Opt.	Std.
Auto answer	Opt.	No	No	Opt.	Std.
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C; 20-ma dc current loop	RS-232C, current loop	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	Opt.	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	78	39 to 113	—	110-140
Display station, 2 year lease, $/mo.	—	71	37 to 97	—	—
Controller, 1 year lease, $/mo.	—	212	—	—	—
Controller, 2 year lease, $/mo.	—	193	—	—	—
Display station, purchase, $	4,000 (basic)	2,600	750 to 1,750	1,600-4,000	3,969-4,662
Controller, purchase, $	—	6,800	—	—	—
Date of first production delivery	6/77	1st qtr. 1974	10/77	5/76	6/71
Display units installed to date	75	5000	500	Over 2500	1,000
Serviced by	Computek/GA	Computer Optics	Third party	Conrac	CDC
COMMENTS		Badge reader, light pen, etc., opt.	Emulators available for ADDS, DEC, Hazeltine, and Lear Siegler terminals; bar code reader and printer controller for terminal sharing are optional	Compatible with Burroughs TD700/800 & Univac U100/200; up to 49K bytes of RAM and PROM	

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Control Data Model 714	Control Data Model 751	Control Data Model 752	Control Data Model 92451	Control Data Model 92452
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster, multi-drop	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	15	1	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	No	Std.	Std.	Std.	Std.
Other compatibility	No	No	No	No	No
User programmable	No	No	No	No	No
Self diagnostics	No	Yes	Yes	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	640/1280	1920	1920	960; 1920 opt.	1920
Display arrangement, lines x chars./line	8/16 x 80	24 x 80	24 x 80	12 x 80; 24 x 80 opt.	12 x 80; 24 x 80 opt.
Display area, h x w, inches	8 x 10	12-inch diag.	12-inch diag.	8 x 5.25	8 x 5.25
Total displayable symbols	64; 96 opt.	128 ASCII	128 ASCII	128	128
Symbol formation	5 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	Yes	No	No	No	No
Programmable brightness levels	No	2 std.	2 std.	2 opt.	2 opt.
Character and/or field blinking	No	Both std.	Both std.	Both opt.	Both opt.
Roll	Std.	Std.; up & down	Std.; up & down	Up std.	No
Paging	No	Std.	Std.	2 pg. opt.	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	U, D, L, R, H
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	No	Std.	Std.	Std.	Std. address. only
Protected format	Opt.	Std.	No	Opt.	No
Partial screen transmit	Opt.	Std.	No	Opt.	No
Tabulation	Std.	Std.	No	Opt.	No
Character insert/delete	Opt.	Std.	No	Opt.	No
Line insert/delete	Opt.	Std.	No	Opt.	No
Erase	Char., screen std., line opt.	Char., line, screen std.	None	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	64/96 ASCII	64/96 ASCII	ASCII	ASCII
Detachability	No	Std.	Std.	Std.	Std.
Program function keys	6	No	No	4 std.	Opt.
Numeric keypad	Std.	Std.	Std.	Std.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	Single/dual drive	No	S-D opt.	No
Diskette drive (floppy disk)	No	No	No	S-D opt.	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	Synchronous	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Communications protocol	ASCII/CDC BSC	ASCII	ASCII	ASCII	ASCII
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	2000 to 4800	110 to 9600	110 to 9600	110 to 9600	110 to 9600
Format: character, line, or block	Block	Char./line/page	Char. only	Char./block/line	Char./block/line
Multipoint operation (pollable/addr.)	Std.	Opt.	No; current loop	Opt.	No
Auto answer	Std.	Opt.	No	Opt.	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C, current loop	RS-232C	RS-232C	RS-232 B/C, CCITT V.24	RS-232 B/C, CCITT V.24
Integral modem	No	No	No	Opt.	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	85-101	100-134	55	—	—
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	134-150	—	—	—	—
Display station, purchase, $	3,465-4,095	3,150-3,765	1,650-1,750	2,000-2,350	1,000-1,500
Controller, purchase, $	5,300-6,013	—	—	—	—
Date of first production delivery	7/73	9/76	3/77	10/75	3/76
Display units installed to date	500	Over 500	Over 500	—	—
Serviced by	CDC	CDC	CDC	CDC	CDC
COMMENTS				1K-6K RAM, 4K-8K PROM memory	Several versions available

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Courier 270	Courier 275	Courier 277	Courier 700	Data 100 Model 82
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster	Stand-alone	Cluster	Both	Cluster
Maximum displays/controller	32	—	32	32	16
Portable case	No	No	No	No	No
IBM compatibility	3270, full line	IBM 3275	IBM 3277	See Comments	3270 BSC, SDLC
Teletype compatibility	No	No	No	No	No
Other compatibility	No	No	No	No	No
User programmable	No	No	No	No	No
Self diagnostics	Std.	Std.	Std.	Std.	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	480 to 3440	480, 960, 1920	480, 1920	960, 1920	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 80, 24 x 80	24 x 80
Display area, h x w, inches	7 x 10	7 x 10	7 x 10	7 x 10	14-inch diag.
Total displayable symbols	64 std., 96 opt.	64 std., 96 opt.	64 std., 96 opt.	64 std., 96 opt.	96
Symbol formation	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 10 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	Opt., cursor only	No	No	Cursor only	No
Programmable brightness levels	2 std.	2 std.	2 std.	2 std.	2 std.
Character and/or field blinking	Field opt.	Field opt.	Field opt.	Std.	Opt.
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.	No	Opt.
Addressable/readable cursor	Both std.	Both std.	Both std.	Addressable std.	Yes
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	No	No	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, data entry, APL, console	Typewriter, data entry	Typewriter, data entry	Typewriter, data entry	Typewriter, data entry, others
Character/code set	64 ASCII, 96 EBC.	64 ASCII, 96 EBC.	64 ASCII, 96 EBC.	64 ASCII std., 96 opt.	96 ASCII
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	12 std., 24 opt.	6 std., 12 opt.	6 std., 12 opt.	10 std.	12 std., 6 opt.
Numeric keypad	Opt.	Opt.	Opt.	Opt.	—
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	Single	No	No	Cluster only	Single drive
Serial printer	Impact	Impact	No	Impact	Line printers
Other devices	—	—	—	—	Audible alarm std., switchable displays between Models 74, 78 & 82
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half-duplex	See Comments	Half-duplex	Half/full-duplex
Technique	Synchronous	Synchronous	See Comments	Synchronous	Synchronous
Communications protocol	BSC, SNA SDLC	BSC	See Comments	V.I.P.	BSC, SDLC
Code	ASCII, EBCDIC	ASCII, EBCDIC	See Comments	ASCII	EBCDIC
Speed, bits/second	9600	To 9600	See Comments	To 9600	Up to 9600
Format: character, line, or block	Block	Block	See Comments	Block	Block only
Multipoint operation (pollable/addr.)	Std.	Std.	See Comments	Std.	Std.
Auto answer	No	No	See Comments	No	Yes
Auto call	No	Yes	See Comments	No	No
Terminal interface	RS-232 B/C	RS-232 B/C	See Comments	RS-232	RS-232C
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	91 w/keyboard
Display station, 2 year lease, $/mo.	Contact vendor	Contact vendor	Contact vendor	Contact vendor	—
Controller, 1 year lease, $/mo.	Contact vendor	Contact vendor	Contact vendor	Contact vendor	252
Controller, 2 year lease, $/mo.	Contact vendor	Contact vendor	Contact vendor	Contact vendor	—
Display station, purchase, $	Contact vendor	Contact vendor	Contact vendor	Contact vendor	3,066 w/keyboard
Controller, purchase, $	—	—	Contact vendor	Contact vendor	9,942
Date of first production delivery	1974	1974	1977	1977	2/77
Display units installed to date	—	—	—	—	450
Serviced by	Courier	Courier	Courier	Courier	Data 100
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 Honeywell 7700 and 7760 VIP terminal systems	Available as a single- or dual-processor config. for on- and off-line data entry and batch processing

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Data General Model 6052	Data General Model 6053	DatagraphiX 132A	Datamedia Elite 1520 APL/ASCII	Datamedia Elite 1521A
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	Opt.; 40 lb.	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	No	Yes	No	No
User programmable	No	No	No	No	No
Self diagnostics	Yes	Yes	Yes	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	3,960	1920	1920
Display arrangement, lines x chars./line	24 x 80	24 x 80	30 x 132	24 x 80	24 x 80
Display area, h x w, inches	6 x 9	6 x 9	8 x 11	6 x 9	6 x 9
Total displayable symbols	64	96	96	64; 128 opt.	64; 128 opt.
Symbol formation	5 x 7 dot matrix	5 x 8 dot matrix	Charactron	5 x 7/9 dot matrix	5 x 7/9 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	No	2 std.	Yes	No	2 opt.
Character and/or field blinking	Both std.	Both std.	No	No	No
Roll	Up std.	Up std.	Yes	Up 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.	D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Yes	Std.; non-blink opt.	Std.; non-blink opt.
Addressable/readable cursor	Std.; address. only	Std.; address only	Yes	Std. address. only	Std. address. only
Protected format	No	No	No	No	No
Partial screen transmit	No	No	Yes	No	No
Tabulation	No	No	Yes	Std.	No
Character insert/delete	No	No	Yes	No	No
Line insert/delete	No	No	Yes	No	No
Erase	Line, screen std.	Line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Yes	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	64 ASCII	96 ASCII	128 ASCII	128 ASCII/APL	64/128 ASCII
Detachability	Std.	Std.	Yes	Std.	Std.
Program function keys	8 std.	11 std.	No	No	No
Numeric keypad	Std.	Std.	No	Opt.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	RS-232 interface
Diskette drive (floppy disk)	No	No	No	No	RS-232 interface
Serial printer	Impact	Impact	RS-232C	RS-232 interface	RS-232 interface
Other devices	Audible alarm std.	Audible alarm std.	Audible alarm	Audible alarm std.	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Full-duplex	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	APL/ASCII	ASCII
Speed, bits/second	110-19,200	110-19,200	110-9600 bps	50 to 9600	50 to 9600
Format: character, line, or block	Char. only	Char. only	Char., line, block	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-232C	RS-232C	RS-232C, current loop	RS-232C, CCITT V.24	RS-232C
Integral modem	No	No	No	Opt.	No
Integral acoustic coupler	No	No	No	Opt. in portable	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	226-263	85	65
Display station, 2 year lease, $/mo.	—	—	Conditional	85	65
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,990	2,290	3,950-4,450	2,150-2,200	1200-1250
Controller, purchase, $	400	400	—	—	—
Date of first production delivery	10/76	10/76	11/77	6/75	6/77
Display units installed to date	—	—	—	Over 1000	Over 1000
Serviced by	Data General	Data General	DatagraphiX	Datamedia	Datamedia
COMMENTS				For APL users; available in portable version with small screen	

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Datamedia Elite 2500A	Datamedia Elite 3025A and 3052A	Datamedia Elite 4000A	Datapoint 3600 & 3610	Datapoint 1130
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Either
Maximum displays/controller	1	1	1	1	4
Portable case	Opt., 40 lbs.	No	No	No	No
IBM compatibility	No	See comments	No	—	Opt.
Teletype compatibility	Std.	See comments	Std.	No	Opt.
Other compatibility	No	See comments	No	Datashare/Multiform	—
User programmable	No	No	Yes	No	Yes, several languages
Self diagnostics	No	Std.	No	No	—
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	1920	960
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	24 x 80	12 x 80
Display area, h x w, inches	6 x 9	6 x 9	6 x 9	5 x 8	3.5 x 7
Total displayable symbols	128	128	128 ASCII	96	96
Symbol formation	5 x 7/9 dot matrix	5 x 9 dot matrix	5 x 9 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix
Color	No	No	No	1 color std.	No
Reverse video	No	Std.	Std.	No	
Programmable brightness levels	2 std.	3 std.	2 std.	No	
Character and/or field blinking	Both std.	Both std.	Both std.	No	
Roll	Up std.	Up std.	Std., up & down	Up std.	All functions
Paging	No	Opt. on 3025A	2 pages std., 2 opt.	No	are
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.	programmable
Cursor blinking	Std.; non-blink opt.	Std.; non-blink opt.	Std.; non-blink opt.	Std.	
Addressable/readable cursor	Std.; address. only	Both std.	Addressable	Std. address. only	
Protected format	Std.	Std.	Std.	No	
Partial screen transmit	Std.	Std.	Std.	No	
Tabulation	Std.	Std. forward/back	Opt.	Std.	
Character insert/delete	Opt.	Std.	Opt.	No	
Line insert/delete	Opt.	Std.	Opt.	No	
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char. std.	
Character repeat	Std.	Std.	Std.	No	
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	128 ASCII	128 ASCII	128 ASCII	ASCII	No
Detachability	Std.	Std.	Std.	No	128 ASCII
Program function keys	8 std.	10 std.	Std.	No	11 opt.
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	No	1 to 4 drives
Serial printer	RS-232C interface	RS-232C interface	RS-232C interface	Impact	Impact
Other devices	Audible alarm std.	—	Audible alarm std.	Audible alarm std.	Matrix, belt, & drum printers & 7-/9-tk. mag-tape drives
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Full-duplex	Half/full-duplex
Technique	Asynchronous	Async./Sync.	Asynchronous	Asynchronous	Sync./Async.
Communications protocol	ASCII	ASCII	ASCII	ASCII	ASCII/BSC/SDLC
Code	ASCII	ASCII	CII	ASCII	ASCII/EBCDIC
Speed, bits/second	50 to 9600	50 to 9600	50 to 9600	110 to 9600	Up to 40.8K
Format: character, line, or block	Char./block	Char./line/block	Char./line/block	Char. only	Char./block
Multipoint operation (pollable/addr.)	No	Opt. on 3025A	Opt.	No	Opt.
Auto answer	No	No	No	No	Opt.
Auto call	No	No	No	No	Opt.
Terminal interface	RS-232C or 20 ma dc current	RS-232C or 20 ma dc current	RS-232C or 20 ma dc current	RS-232B/C	RS-232C
Integral modem	Opt.	No	Opt.	No	Opt., 103/202
Integral acoustic coupler	Opt.	No	No	No	Opt., 300 bps
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	85-95	85	—	77	—
Display station, 2 year lease, $/mo.	85-95	85	—	70	—
Controller, 1 year lease, $/mo.	—	—	—	—	313
Controller, 2 year lease, $/mo.	—	—	—	—	286
Display station, purchase, $	2,080-2,480	1700	—	1,950	—
Controller, purchase, $	—	—	1/77	—	13,790
Date of first production delivery	7/73	1/78	—	12/74	2/75
Display units installed to date	Over 1000 (all mdls.)	—	Datamedia	2,400	Over 500
Serviced by	Datamedia	Datamedia		Datapoint	Datapoint
COMMENTS					

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Datapoint 1150	Datapoint 1170	Datapoint 1500	Dataview Marquis	Dataview Marquis/X-Y
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Either	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	4	4	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	Opt.	Opt.	Opt. IBM 3780	No	No
Teletype compatibility	Opt.	Opt.	Opt.	Std.	No
Other compatibility	—	—	Opt.	No	No
User programmable	Yes, several languages	Yes, several languages	Yes, Data Bus & Dataform	No	No
Self diagnostics	—	—		Yes	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	960	960	1920	1920	1920
Display arrangement, lines x chars./line	12 × 80	12 × 80	24 × 80	24 × 80	24 × 80
Display area, h x w, inches	3.5 × 7	3.5 × 7	5.5 × 8.35	12-inch diagonal	7 × 9
Total displayable symbols	96	96	128	64	96
Symbol formation	5 x 7 dot matrix	5 × 7 dot matrix	5 × 7 dot matrix	5 × 7 dot matrix	7 × 9
Color	No	No	No	No	No
Reverse video			Std.	No	Std.
Programmable brightness levels				—	Std.
Character and/or field blinking				No	No
Roll	All functions are programmable	All functions are programmable	All functions are programmable	Yes	Std. up & down
Paging				No	No
Cursor positioning; Up, Down, Left, Right, Home, Return				Horiz. bottom line	U, D, L, R, H, Rt.
Cursor blinking				Yes	Std.
Addressable/readable cursor				Yes	Std. add., rd. opt.
Protected format				No	No
Partial screen transmit				No	No
Tabulation				No	Std. forward
Character insert/delete				No	No
Line insert/delete				No	No
Erase				Screen std.	Char. & screen std.
Character repeat				Yes	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	No	No	No	ASCII	128 ASCII
Detachability	128 ASCII	128 ASCII	128 ASCII	No	Opt.
Program function keys	11 opt.	11 opt.	5 std.	No	No
Numeric keypad	Std.	Std.	Std.	No	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	RS-232C interface
Diskette drive (floppy disk)	1 to 4 drives	1 to 4 drives	Dual drives	No	RS-232C interface
Serial printer	Impact	Impact	RS-232C interface	No	RS-232C interface
Other devices	Matrix, belt. & drum printers & 7-9-tk. mag. tape drives	Matrix, belt, & drum printers & 7-/9-tk. mag. tape drives	Freedom printer optional	Audible alarm	
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Sync./async.	Async./sync.	Asynchronous	Asynchronous
Communications protocol	ASCII/BSC/SDLC	ASCII/BSC/SDLC	ASCII	ASCII	ASCII
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII	ASCII/EBCDIC
Speed, bits/second	Up to 40.8K	Up to 40.8K	50 to 9600	Up to 9600	75 to 9600
Format: character, line, or block	Char./block	Char./block	Char./block	Char.	Char. only
Multipoint operation (pollable/addr.)	Opt.	Opt.	Opt.	No	No
Auto answer	Opt.	Opt.	Std.	No	No
Auto call	Opt.	Opt.	Opt.	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C, 20 & 60 ma current loop	RS-232C, 20 ma current loop
Integral modem	Opt., 103/202	Opt., 103/202	No	No	No
Integral acoustic coupler	Opt., 300 bps	Opt., 300 bps	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	—	Purchase only	—	—
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	475 (done)	529 (base)	—	—	—
Controller, 2 year lease, $/mo.	431 (base)	477 (base)	—	—	—
Display station, purchase, $	—	—	—	—	—
Controller, purchase, $	15,390 (base)	16,890 (base)	5,950	1,195	895-1,295
Date of first production delivery	9/76	7/77	9/77	1/77	9/77
Display units installed to date	Over 200	—	—	—	—
Serviced by	Datapoint	Datapoint	Datapoint	Dataview (factory)	Dataview (factory)
COMMENTS			Price includes dual diskette drives, processor with 4K ROM & 32K RAM, comm. interface, & software		

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Dataview Monarch	Dataview Titan	Delta Data Systems Model 4000	Delta Data Systems Model 4100	Delta Data Systems Model 4050
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	Opt.	Opt.	3270/2260/2265	No	No
Teletype compatibility	Std.	Opt.	Std.	Std.	Std.
Other compatibility	DEC; others opt.	Opt.	No	No	See Comments
User programmable	No	No	Opt.	No	Opt.
Self diagnostics	Std.	Std.	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	2000	2000	2000
Display arrangement, lines x chars./line	24 x 80	24 x 80	25 x 80	25 x 80	25 x 80
Display area, h x w, inches	7 x 9	7 x 9	6 x 11	6 x 11	6 x 11
Total displayable symbols	128	128	224	224	224
Symbol formation	7 x 9	7 x 9	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	2 std.	2 std.	Opt.	No	Opt.
Character and/or field blinking	No	Char. std.; field opt.	Both std.	Both std.	Both std.
Roll	Up & down std.	Up & down std.	Up & down std.	Up & down std.	Up & down std.
Paging	Opt., 2 pages	2 std.; 30 opt.	Std.	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	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Both std.	Both std.	Std.	Std.	Std.
Protected format	Opt.	Std.	Std.	Std.	Std.
Partial screen transmit	Opt.	Std.	Std.	Std.	Std.
Tabulation	Std.; back opt.	Std.; back opt.	Std.	Std.	Std.
Character insert/delete	Opt.	Std.	Std.	Std.	Std.
Line insert/delete	Opt.	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	128 ASCII/EBCDIC	128 ASCII/EBCDIC	ASCII; others opt.	128 ASCII; others opt.	ASCII; others opt.
Detachability	Opt.	Opt.	Opt.	No	Opt.
Program function keys	3 opt.	3 std.; others opt.	8 std.; other opt.	3 std.; 14 opt.	8 std.; others opt.
Numeric keypad	Std.	Std.	Std.	Yes	Std.
ANCILLARY DEVICES					
Cassette tape drive	RS-232C interface	RS-232C interface	RS-232C interface	RS-232C interface	RS-232C interface
Diskette drive (floppy disk)	RS-232C interface	RS-232C interface	RS-232C interface	RS-232C interface	RS-232C interface
Serial printer	RS-232C interface	RS-232C interface	Impact/non-impact	Impact	Impact/non-impact
Other devices	—	—	Audible alarm std.; light pen opt.	—	Audible alarm std., light pen opt.
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/SDLC	ASCII; others opt.	ASCII	ASCII; others opt.
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII; others opt.	ASCII	ASCII; others opt.
Speed, bits/second	75 to 19,200	75 to 19,200	110 to 9600	110 to 9600	110 to 9600
Format: character, line, or block	Char./block opt.	Char./line/block	Char./block	Char./block	Char./block
Multipoint operation (pollable/addr.)	Opt.	Std.	Opt.	Opt.	Opt.
Auto answer	No	No	Opt.	No	Opt.
Auto call	No	No	No	No	No
Terminal interface	RS-232C & 20 ma current loop	RS-232C & 20 ma current loop	RS-232C, current loop	RS-232C, current loop	RS-232C, 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	Purchase only	150
Display station, 2 year lease, $/mo.	—	—	113	—	138
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1435-1995	2,195 (base)	2,425	1,795	2,995
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	1/78	5/78	2/75	11/77	5/76
Display units installed to date	—	—	2000	—	1000
Serviced by	Dataview (factory)	Dataview (factory)	Delta & Sorbus	Delta & Sorbus	Delta & Sorbus
COMMENTS	Emulation protocol for several prominent terminals; Intel 8055; split data rates	Emulation protocol for several prominent terminals; Intel 8055; split data rates	Additional PROM or ROM with user program available up to 16K		Plug-to-plug replacement for Burroughs, Univac, & Honeywell displays

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Delta Data Systems Model 4300E	Delta Data Systems Model 4500	Delta Data Systems Model 6500	Digi-Log Microterm II	Digi-Log TeleComputer II
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Cluster	Stand-alone	Stand-alone
Maximum displays/controller	1	1	8	1	10
Portable case	No	No	No	No	Opt.; 22 lbs.
IBM compatibility	No	3270/2260/2265	IBM 3780	—	No
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	No	No	—	No
User programmable	No	Yes	Yes	Yes	No
Self diagnostics	No	Yes	Yes	Std.	No
DISPLAY PARAMETERS					
Display positions, chars/display	2000	2000	Uses any of	1920	1280/640
Display arrangement, lines x chars./line	25 x 80	25 x 80	the Delta 4000	24 x 80	16 x 40/80
Display area, h x w, inches	6 x 11	6 x 11	Series display	6 x 9	Variable
Total displayable symbols	224	224	stations except	128	64; 96 opt.
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	the Delta 4050	7 x 11 dot matrix	5 x 7 dot matrix
Color	No	No		No	No
Reverse video	Std.	Std.		Std.	No
Programmable brightness levels	Opt.	Opt.		Std.	No
Character and/or field blinking	Both std.	Both std.		Both std.	Both opt.
Roll	Up & down std.	Up & down std.		Std.	Up std.
Paging	2 std.; 2 opt.	Std.		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.
Cursor blinking	Std.	Std.		Std.	Opt.
Addressable/readable cursor	Std.	Std.		Std.	Opt., addressable only
Protected format	Std.	Std.		Std.	No
Partial screen transmit	Std.	Std.		Std.	No
Tabulation	Std.	Std.		Std.	No
Character insert/delete	Std.	Std.		Std.	No
Line insert/delete	Std.	Char. line		Std.	No
Erase	Char. line Screen std.	Screen std. Std.		Char., line, screen Std.	Screen std.
Character repeat	Std.	Std.		Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter		Typewriter	Teletype
Character/code set	128 ASCII	ASCII		128 ASCII	ASCII
Detachability	Opt.	Opt.		No	Yes
Program function keys	14 opt.	8 std.		28 std.	No
Numeric keypad	Std.	Std.		Std.	No
ANCILLARY DEVICES					
Cassette tape drive	RS-232C interface	Single/dual	No	RS-232C interface	RS-232 interface
Diskette drive (floppy disk)	RS-232C interface	Single/dual	1 to 6 drives	Single/dual drive	RS-232 interface
Serial printer	Impact	Impact/non-impact	Impact	Impact/non-impact	RS-232 interface
Other devices	—	Audible alarm std., light pen opt., others	—	—	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; others opt.	ASCII; others opt.	ASCII/BSC	Programmable	ASCII
Code	ASCII; others opt.	ASCII; others opt.	ASCII	Programmable	ASCII
Speed, bits/second	110 to 9600	110 to 9600	110 to 4800	50 to 19,200	75 to 9600
Format: character, line, or block	Char./block	Char./block	Block	Char./block	Char. only
Multipoint operation (pollable/addr.)	Opt.	Opt.	No	Programmable	No
Auto answer	No	No	No	Std.	No
Auto call	No	No	No	Std.	No
Terminal interface	RS-232C	RS-232B/C, current loop	RS-232C	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.	168-178	178-208	—	—	—
Display station, 2 year lease, $/mo.	154-163	163-190	—	—	—
Controller, 1 year lease, $/mo.	—	—	314 (base)	—	—
Controller, 2 year lease, $/mo.	3,500-3,755	3,750-4,450	290 (base)	—	—
Display station, purchase, $			—	6,170-9,175	250-350
Controller, purchase, $	—	—	5,960 (base)	—	1,395-1,570
Date of first production delivery	6/76	7/75	7/77	4/78	9/75
Display units installed to date	300	—	Over 30	—	Over 800
Serviced by	Delta & Sorbus	Delta & Sorbus	Delta & Sorbus	Third party	Digi-Log
COMMENTS	Designed for text editing	Memory can be any mix of ROM, PROM, and RAM up to 20K; software available	Features 32K to 64K bytes of RAM memory and two 8080 microprocessors	Software includes an IBM 2780 emulator and text processor; dual Z-80's	Over 2500 units delivered, including Models 33 and 209, now discontinued

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Digital Equipment Model VT-50	Digital Equipment Model VT-52	Digital Equipment Model VT-55	Digital Equipment Model VT-61/t	Digital Equipment DEC station 78
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	Yes
Self diagnostics	No	No	No	Yes	No
DISPLAY PARAMETERS					
Display positions, chars/display	960	1920	1920	1920	1920
Display arrangement, lines x chars./line	12 × 80	24 × 80	24 × 80	24 × 80	24 × 80
Display area, h x w, inches	8.7 × 4.3	8.7 × 4.3	8.7 × 4.3	8.7 × 4.3	8.7 × 4.3
Total displayable symbols	64	128	128	128	128
Symbol formation	5 × 7 dot matrix	7 × 7	7 × 7	7 × 8 dot matrix	7 × 7 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	Std.	No
Programmable brightness levels	No	No	No	No	No
Character and/or field blinking	No	No	No	No	No
Roll	Up std.	No	No	Up & down std.	Std., up only
Paging	No	No	No	No	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.	Std.	Std.	Std.
Addressable/readable cursor	No	Std., addressable only	Std., addressable only	Std.	Std.,addressable only
Protected format	No	No	No	Std.	Programmable
Partial screen transmit	No	No	No	Std.	Programmable
Tabulation	Std.	Std.	Std.	Std.	Std., forward & back
Character insert/delete	No	No	No	Std.	Programmable
Line insert/delete	No	No	No	Std.	Programmable
Erase	Line, screen std.	Line, screen std.	Line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	No	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	ASCII	128 ASCII	ASCII	128 ASCII
Detachability	No	No	No	No	No
Program function keys	4 std.	3 std.	3 std.	4 std.	No
Numeric keypad	No	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	No	No	Dual diskette drive
Serial printer	Non-impact	Non-impact	Non-impact	Non-impact	Parallel interface
Other devices	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	No	ASCII	ASCII	ASCII
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	75 to 9600	75 to 9600	75 to 9600	75 to 9600	50 to 19,200
Format: character, line, or block	char. only	Char. only	Char. only	Char./block	Char./block
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	RS-232C, 20 ma current loop	RS-232C, 20 ma current loop	RS-232C or 20 ma dc	RS-232C (two)
Integral modem	No	No	No	Opt.	No
Integral acoustic coupler	Opt.	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, $	1,450	2,310	2,750	3,100	7,995 (basic)
Controller, purchase, $	60	—	—	—	—
Date of first production delivery	9/74	12/75		3/76	9/77
Display units installed to date	—	—	—	—	—
Serviced by	DEC	DEC	DEC	DEC	DEC
COMMENTS	Provides local copy of displayed data via integral printer		Also provides graphics capability		Price includes LSI PDP-8 with 32K RAM, dual diskette drives, and all software

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Elbit DS 1920	Four-Phase Systems System IV/50	Four-Phase Systems System IV/40	Four-Phase Systems System IV/70	Genesis One Model G77C "The Plug"
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Either	Cluster	Cluster	Cluster
Maximum displays/controller	1	24	16	32	32
Portable case	No	No	No	No	No
IBM compatibility	No	3270, 2260/2265	3270, 2260/2265	3270, 2260/2265	3270
Teletype compatibility	Std.	No	No	No	No
Other compatibility	No	IBM 3770, others	IBM 2948, others	IBM 2948, others	No
User programmable	No	Yes	Yes	Yes	No
Self diagnostics	No	Yes	Yes	Yes	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1152/1920	1152/1920	1152/1920	480/1920
Display arrangement, lines x chars./line	24 × 80	24 × 48/80	24 × 48/80	24 × 48/80	12 × 40, 24 × 80
Display area, h x w, inches	8 × 5.24/6.3 × 10×2	7.25 × 10.25	7.25 × 10.25	7.25 × 10.25	7 × 10.5
Total displayable symbols	64/96/128	125	125	125	64
Symbol formation	5 × 8 dot matrix	7 × 9 dot matrix	7 × 9 dot matrix	7 × 9 dot matrix	5 × 7 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	No	3 std.	3 std.	3 std.	3 std.
Character and/or field blinking	Std.	Both std.	Both std.	Both std.	No
Roll	Up std.	Up & down std.	Up & down std.	Up & down std.	No
Paging	No	Multiple paging std.	Multiple paging std.	Multiple paging std.	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.	Opt.
Addressable/readable cursor	Std.	Std.	Std.	Std.	Std.
Protected format	Model 30	Std.	Std.	Std.	Std.
Partial screen transmit	Model 30	Std.	Std.	Std.	Std.
Tabulation	Model 30	Std.	Std.	Std.	Std.
Character insert/delete	Model 30	Std.	Std.	Std.	Std.
Line insert/delete	No	Std.	Std.	Std.	No
Erase	Line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter/data entry	Typewriter/data entry	Typewriter/data entry	Typewriter/data entry
Character/code set	96/128 ASCII	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	96 EBCDIC
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	Std.	12 std.	12 std.	12 std.	12 opt., 3 std.
Numeric keypad	Std.	Std.	Std.	Std.	Opt. 15 keys
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	Single	Single	Single	No
Serial printer	RS-232C interface	Impact	Impact	Impact	Impact
Other devices	Audible alarm std.	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.	Audible alarm, ID card reader, light pen opt.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	See Comments
Technique	Asynchronous	Async./sync.	Async./sync.	Async./sync.	—
Communications protocol	ASCII	BSC/SDLC	BSC/SDLC	BSC/SDLC	—
Code	ASCII	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	—
Speed, bits/second	110 to 9600	1200-9600	1200-9600	1200-9600	—
Format: character, line, or block	Char./block	Char./block	Char./block	Char./block	—
Multipoint operation (pollable/addr.)	No	Std.	Std.	Std.	—
Auto answer	No	Std.	Std.	Std.	—
Auto call	No	Opt.	Opt.	Opt.	—
Terminal interface	RS-232B/C 20 ma dc	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.	Purchase only	51	47	47	—
Display station, 2 year lease, $/mo.	—	48	—	—	113
Controller, 1 year lease, $/mo.	—	199	295	370	—
Controller, 2 year lease, $/mo.	—	199	—	—	—
Display station, purchase, $	1,150-1,784	2,415	1,915	1,915	3,800
Controller, purchase, $	—	17,085	13,865	16,000	—
Date of first production delivery	1/76	12/76	7/73	2/71	1/75
Display units installed to date	—	See IV/70	See IV/70	Over 35,000 (all)	5,000
Serviced by	Third party	Four-Phase	Four-Phase	Four-Phase	Sorbus
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	Replaces IBM 3277-2 Display station; plugs into IBM 3271-2 (remote) or 3272-2 (local) Control Units, System 370 via Local Display Adapter, or 3771

Alphanumeric Display Terminals—Equipment Specifications

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 × 80	24 × 80	24 × 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 × 7 dot matrix	5 × 7 dot matrix	5 × 7 dot matrix	5 × 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—Equipment Specifications

SUPPLIER AND MODEL	GTE Information Systems IS/7801/A & IS/7802	Harris Data Communications 804/810	Harris Data Communications 8170	Harris Data Communications 8180	Harris Data Communications 8210
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Either	Cluster	Either	Either
Maximum displays/controller	26 or 5	1	32	32	32
Portable case	No	No	No	No	No
IBM compatibility	3270/3275	2260/2265	3270 BSC, SDLC	3270 BSC, SDLC	No
Teletype compatibility	No	No	No	No	No
Other compatibility	No	No	IBM 2260/2265	—	Univac 100/200
User programmable	No	Yes	Yes	Yes	No
Self diagnostics	No	Yes	Yes	Yes	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	240/480/960/1920	4801/960/1920	480/960/1920	480/960/1920	960/1024/1920
Display arrangement, lines x chars./line	6/12×40; 12/24×80	12/24×40/80	12/24×40/80	12/24 × 40/80	12/24 × 80; 16 × 64
Display area; h x w, inches	7.5 × 9.5	7.5 × 9.5	12-inch diag.	12-inch diag.	12-inch diag.
Total displayable symbols	128	64; 96 opt.	128	128	96
Symbol formation	5 × 7 dot matrix	5 × 7 dot matrix	7 × 9 dot matrix	7 × 9 dot matrix	7 × 9 dot matrix
Color	No	No	No	No	No
Reverse video	Std.	No	No	No	No
Programmable brightness levels	2 std.	No	2 std.	2 std.	2 std.
Character and/or field blinking	Field std.	Std.	Std.	Std.	Std.
Roll	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	Std.	Std.	Std.	Std.	Std.
Protected format	Std.	Opt.	Std.	Std.	Std.
Partial screen transmit	No	Opt.	Std.	Std.	Std.
Tabulation	Std.	Std.	Std.	Std.	Std.
Character insert/delete	Std.	Opt.	Std.	Std.	Opt.
Line insert/delete	No	Opt.	Opt.	Opt.	Std.
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char. opt., line screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter/data entry/console	Typewriter/data entry	Typewriter/data entry/others	Typewriter/data entry/others	Typewriter/data entry/others
Character/code set	ASCII/EBCDIC	ASCII	EBCDIC/ASCII	EBCDIC/ASCII	96 ASCII
Detachability	Std.	No	Std.	Std.	Std.
Program function keys	12 std.	Std.	20	14	6
Numeric keypad	Opt.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	Dual	No	No	No
Diskette drive (floppy disk)	No	No	No	Opt. dual	Opt. dual
Serial printer	Impact	Impact	Impact	Impact	Impact
Other devices	Audible alarm std; light pen opt.	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.
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half/full-duplex	Half-duplex	Half-duplex	Half/full-duplex
Technique	Synchronous	Async./sync.	Synchronous	Synchronous	Async./sync.
Communications protocol	BSC	BSC	BSC/SDLC	BSC/SDLC	—
Code	ASCII/EBCDIC	ASCII/EBCDIC	EBCDIC/ASCII	EBCDIC/ASCII	ASCII
Speed, bits/second	1200 to 9600	110 to 9600	1200 to 9600	1200 to 9600	4800 to 9600
Format: character, line, or block	Block only	Char./block	Block	Block	Block
Multipoint operation (pollable/addr.)	Std.	Opt.	Std.	Std.	Std.
Auto answer	No	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.	120	75	See Comments	See Comments	See Comments
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	200-225	200			
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	3,136	1,500	—	—	—
Controller, purchase, $	5,696-6,496	7,000	—	—	—
Date of first production delivery	2/75, 4/75 (01A)	12/71	1974/1976	1974/1976	1975
Display units installed to date	3,000	Over 2,000	2,500	2,500	250
Serviced by	GTEIS	Harris	Harris	Harris	Harris
COMMENTS	Cluster limit for IS/7801 A is 5; prices for clusters over 8 for 7801/02 are substantially higher; contact vendor for 7801 A pricing	The 804 is a stand-alone system; the 810 a cluster system; former Sanders Data Systems products	Former Sanders Data Systems product; typical 6-display system rents for $2,120/mo. (3 yr.) and sells for $71,600	Former Sanders Data Systems product; typical 6-display system rents for $1,035/mo. (3 yr.) and sells for $38,060	Former Sanders Data Systems product; typical 31-display system rents for $4,015/mo. (3 yr.) and sells for $136,810

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Harris Data Communications 8220	Harris Data Communications 8770	Hazeltine 1000 & 1200	Hazeltine 1500 Series	Hazeltine 2000
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Either	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	32	32	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	No	No	Std.	Std.	Std.
Other compatibility	Burroughs TD 800	Honeywell 775/7700	No	No	No
User programmable	No	No	No	No	No
Self diagnostics	Yes	Yes	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	960/1920	960/1012/1920	960; 1920 (1200)	1920	1998; 2000
Display arrangement, lines x chars./line	12/24 × 80	12/24 x 80; 22 x 48	12/24 x 80 (1200)	24 x 80	22 x 74; 25 x 80
Display area, h x w, inches	12-inch diag.	12-inch diag.	4.6 x 9.2	6 x 9	6.0 x 8.5
Total displayable symbols	96	96	64 std.; 96 opt.	95	64 std.; 96 opt.
Symbol formation	7 x 9 dot matrix	7 x 9 dot matrix	5 x 7 dot matrix	7 x 10 dot matrix	5 x 7 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	Std.	No
Programmable brightness levels	2 std.	2 std.	No	Std.	2 std.
Character and/or field blinking	Std.	Std.	No	No	Field opt.
Roll	—	—	Up std.	Up std.	Up std.
Paging	No	No	No	No	Yes
Cursor positioning; Up, Down, Left, Right, Home, Return	U, 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	Std.	Std.	No	—	Opt.
Addressable/readable cursor	Std.	Std.	No	Both std.	Std. addressabie only
Protected format	Std.	Std.	No	Std.; 1510 & 1520	Std.
Partial screen transmit	Std.	Std.	No	Std.; 1510 & 1520	Std.
Tabulation	Std.	Std.	No	Std.	Std.
Character insert/delete	Std.	Std.	No	No	Std.
Line insert/delete	Std.	Std.	No	Std.	Std.
Erase	Char. opt., line, screen std.	Char. opt., line, screen std.	Char. std. (1200), screen std.	Char., line, screen std.	Char., screen std.
Character repeat	Std.	Std.	No	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter/data entry/others	Typewriter/data entry/others	Teletype	Typewriter	Teletype
Character/code set	96 ASCII	96 ASCII	ASCII	128 ASCII	ASCII
Detachability	Std.	Std.	No	No	Std.
Program function keys	12	36	No	Std., 1510 & 1520	No
Numeric keypad	Std.	Std.	No	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	Dual
Diskette drive (floppy disk)	Opt. dual	Opt. dual	No	No	No
Serial printer	Impact	Impact	Non-impact (1200)	RS-232C interface	Impact/non-impact
Other devices	Audible alarm std.	Audible alarm std.	Audible alarm std.		Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Sync.	Asynchronous	Asynchronous	Asynchronous
Communications protocol	—	—	ASCII	ASCII	ASCII
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	300 to 9600	2000 to 4800	110 to 9600	Up to 19,200	110 to 9600
Format: character, line, or block	Char./block	Block	Char. only	Char., line, block	Char./block
Multipoint operation (pollable/addr.)	Std.	Std.	No	No	No
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232B/C	RS-232C, 20-ma current loop	RS-232B/C
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	See Comments	65 (1200)	130-173	98
Display station, 2 year lease, $/mo.	—	—	44 (1200)	78-103	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	—	—	1,590 (1200)	1,225-1,650	2,250
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	1976	1976	6/73; 10/74 (1200)	6/7 1977	10/70
Display units installed to date	200	500	See 2000	See 2000	See Comments
Serviced by	Harris	Harris	TRW/Hazeltine	TRW/Hazeltine	TRW/Hazeltine
COMMENTS	Former Sanders Data Systems product; typical 24-display system rents for $1,355/mo. (3 yr.) and sells for $104,460	Former Sanders Data Systems product; typical 8-display system rents for $1,090/mo. (3 yr.) and sells for $39,700	Options include answerback and 202C or current loop interface; 1000 is only available refurbished for $750	Contain Intel 8080 microprocessor; Model 1520 has 2K print buffer	Options include answerback and 202C or current loop interface; over 65,000 Hazeltine displays (all models) have been delivered

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Hazeltine 3000	Hazeltine Modular One	Hendrix 5200/5200 B	Hendrix 6400	Hendrix 6500
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Cluster	Cluster
Maximum displays/controller	1	1	1	16	16
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	No
Teletype compatibility	No	Std.	No	Opt.	Opt.
Other compatibility	Customer specified	See Comments	No	No	No
User programmable	No	No	No	No	No
Self diagnostics	No	No	No	Yes	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	1998; 2000	1920	3072	1296	1296
Display arrangement, lines x chars./line	27 x 74; 25 x 80	24 x 80	32 x 96	18 x 72	18 x 72
Display area, h x w, inches	6.0 x 8.5	6.0 x 9.0	17-inch diag.	12-inch diag.	12-inch diag.
Total displayable symbols	64 std.; 96 opt.	64 std.; 96 opt.	128; 256	128; 256 opt.	128; 256 opt.
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	Std.	Std.	Std.	Std.
Programmable brightness levels	2 std.	2 std.	2 std. plus 2 opt.	2 std. plus 2 opt.	2 std. plus 2 opt.
Character and/or field blinking	Field opt.	Field opt.	No	Std.	Std.
Roll	Up std.	Up std.	Std.	Std.	Std.
Paging	Yes	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. (no cost)	Std.	Std.	Std.
Addressable/readable cursor	Std. addressable only	Std.	No	Std.	Std.
Protected format	Std.	Std.	No	Std.	Std.
Partial screen transmit	Std.	Opt.	Std.	Std.	Std.
Tabulation	Std.	Opt.	Opt.	Opt.	Opt.
Character insert/delete	Std.	Opt.	Std.	Std.	Std.
Line insert/delete	Std.	Opt.	Std.	Std.	Std.
Erase	Char., screen std.	Char., line, screen std.	Std.	Std.	Std.
Character repeat	Std.	Opt.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Teletype	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	ASCII	TTS	TTS	TTS
Detachability	Std.	Std.	No	Yes	Yes
Program function keys	No	8 opt.	No	Over 30	Over 30
Numeric keypad	Std.	Std.	No	No	No
ANCILLARY DEVICES					
Cassette tape drive	Dual	No	No	No	No
Diskette drive (floppy disk)	No	No	No	No	No
Serial printer	Impact/non-impact	No	No	Opt.	Opt.
Other devices	Audible alarm std.	Audible alarm std.	Paper tape reader, punch	Paper tape reader, punch, 2.4 MB disk, line printer, audible alarm	Paper tape reader, punch, 29 MB disk, line printer, audible alarm
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half-duplex	Half-duplex
Technique	Async.; sync. opt.	Async.; sync. opt.	Asynchronous	Asynchronous	Asynchronous
Communications protocol	User-defined	User-defined	TTS/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	Block only	Char.; block opt.	Char. only	Char. only	Char. only
Multipoint operation (pollable/addr.)	Std.	Opt.	No	No	No
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232B/C	RS-232B/C	RS-232C opt.	RS-232C opt.	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.	125	—	—	—	—
Display station, 2 year lease, $/mo.	110	—	—	—	—
Controller, 1 year lease, $/mo.	50-75	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	3,900	1,650	9,800-12,800	4,950	4,950
Controller, purchase, $	—	—	—	50,000-450,000	40,000-1,000,000
Date of first production delivery	3/74	2/76	1970	1972	1972
Display units installed to date	See 2000	See 2000	—	—	—
Serviced by	TRW/Hazeltine	TRW/Hazeltine	Hendrix	Hendrix	Hendrix
COMMENTS		Extensive choice of no-charge and low-cost options including emulators for Burroughs, Honeywell, & Univac displays	Designed for text editing and text publishing	Designed for text editing and text publishing	Designed for text editing and text publishing

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Hewlett-Packard 2640B	Hewlett-Packard 2641A	Hewlett-Packard 2645A	Hewlett-Packard 2648A	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	Opt.	Opt.	Opt.	Std.	
Other compatibility	No	No	No	No	No
User programmable	No	No	No	No	Yes
Self diagnostics	Yes	Yes	Yes	Std.	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	5 x 10	5 x 10	5 x 10	5 x 10	5 x 10
Total displayable symbols	64; 512 opt.	256; 512 opt.	64; 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	Std.	Std.	Std.	Std.	Std.
Programmable brightness levels	2 opt.	2 opt.	2 opt.	2 opt.	2 opt.
Character and/or field blinking	Opt.	Opt.	Opt.	Opt.	Opt.
Roll	Std.; up & down	Std., up & down	Std., up & down	Std., up & down	Opt.
Paging	Std.	Std.	Std.	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	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Std.	Both std.	Both std.	Std.	Both std.
Protected format	Std.	Std.	Std.	Std.	Opt.
Partial screen transmit	Std.	Std.	Std.	Std.	Opt.
Tabulation	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	Std.	Std.	Std.	No	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	Dual drive	Dual drive	Dual drive	Dual drive
Diskette drive (floppy disk)	No	No	No	No	No
Serial printer	Impact/non-impact	Impact/non-impact	Impact/non-impact	—	RS-232 interface
Other devices	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	Async./sync.	Async./sync.	Async./sync.	Async./sync.
Communications protocol	ASCII	ASCII/BSC	ASCII/BSC	ASCII/BSC	ASCII/BSC
Code	ASCII	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	Specified
Speed, bits/second	110 to 2400	110 to 9600	110 to 9600	110 to 9600	110 to 9600
Format: character, line, or block	Block/char.	Block/char.	Block/char.	Block/char.	Block/char.
Multipoint operation (pollable/addr.)	No	Opt.	Opt.	Opt.	Opt.
Auto answer	Opt.	Opt.	Opt.	Opt.	Opt.
Auto call	No	No	No	No	No
Terminal interface	RS-232C, current loop	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.	137	216	184	290	Purchase only
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	2,600	4,100	3,500	5,500	2,150-6,000
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	1/75	1/77	10/76	7/77	11/76
Display units installed to date	—	—	—	—	—
Serviced by	HP	HP	HP	HP	HP
COMMENTS	Over 25,000 264X terminals have been installed	Over 25,000 264X terminals have been installed	Over 25,000 264X terminals have been installed	Graphics capability with 360 x 720 dot matrix; plotting software	

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Honeywell VIP 7100/7105	Honeywell VIP 7200	Honeywell VIP 7700	Honeywell VIP7700R/7705R	Honeywell VIP 7760
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Either	Stand-alone	Cluster
Maximum displays/controller	1	1	10	10	8-32
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					

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Human Designed Systems Concept 100/APL	IBM 3271 Information Display System	IBM 3274 Information Display System	IBM 3275 Information Display System	IBM 3276 Information Display System
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Cluster	Cluster	Stand-alone	Cluster
Maximum displays/controller	1	32	32	1	8
Portable case	No	No	No	No	No
IBM compatibility	No	3270 System	3270 System	327	3270 System
Teletype compatibility	Std.	No	No	No	No
Other compatibility	No	No	No	No	No
User programmable	No	No	No	No	No
Self diagnostics	Yes, via user-defined firmware	No	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920	480/1920	See Comments	480/1920	See Comments
Display arrangement, lines x chars./line	24 x 80	12 x 40; 24 x 80	12 x 40/80; 24/32/43 x 80	12/24 x 80	40 x 80; 24/32/43 x 80
Display area, h x w, inches	12-inch diag.	14-inch diag.	14-inch diag.	— 14-inch diag.	14-inch diag.
Total displayable symbols	128 ASCII/APL	64	64/96	64	96
Symbol formation	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9/14	7 x 9 dot matrix	7 x 9/14
Color	No	No	No	No	No
Reverse video	Std.	No	No	No	No
Programmable brightness levels	2 std.	2 std.	2 std.	2 std.	2 std.
Character and/or field blinking	Std. char. only	No	No	No	No
Roll	Std., up & down	No	No	No	No
Paging	Opt., 9 pages	No	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R	U, D, L, R, H, Rt.	U, D, L, R	U, D, L, R, H, Rt.
Cursor blinking	Std.	No	Std.	No	No
Addressable/readable cursor	Std.	Std.,addressable only	Std.,addressable only	Std.;addressable only	Std.;addressable only
Protected format	Std.	Std.	Std.	Std.	Std.
Partial screen transmit	Std.	Std.	Std.	Std.	Std.
Tabulation	Std. forward & back	Std.	Std.	Std.	Std.
Character insert/delete	Std.	Std.	Std.	Std.	Std.
Line insert/delete	Std.	No	No	No	No
Erase	Char., line, screen, memory 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	Several	Several	Several	Several
Character/code set	128 ASCII	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	8 std.; 11 opt.	Std.	Std.	Opt.	Opt.
Numeric keypad	Std.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	3 peripheral Interfaces are standard	No	No	No	No
Diskette drive (floppy disk)		No	No	No	No
Serial printer		Impact	Impact	Impact	Impact
Other devices	—	Audible alarm, I.D. reader, light pen	Audible alarm, I.D. reader, light pen	Audible alarm, I.D. card reader, light pen opt.	Audible alarm I.D. card reader, light pen opt.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Synchronous	Synchronous	Synchronous	Synchronous
Communications protocol	ASCII	BSC/SDLC	BSC/SDLC	BSC/SDLC	BSC/SDLC
Code	ASCII	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	50 to 9600	1200 to 9600	1200 to 9600	1200 to 9600	1200 to 9600
Format: character, line, or block	Char./block	Block only	Block only	Block only	Block only
Multipoint operation (pollable/addr.)	No	Std.	Std.	Std.	Std.
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C, 20-ma current loop	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.	Purchase only	84-135	71-94	126-230	71-94
Display station, 2 year lease, $/mo.	—	71-115	60-80	107-196	60-80
Controller, 1 year lease, $/mo.	—	155-596	368-534	—	180-242
Controller, 2 year lease, $/mo.	—	132-504	313-453	—	153-207
Display station, purchase, $	1,575-3,450	2,990-4,214	2,700-3,600	4,525-7,844	2,700-3,600
Controller, purchase, $	—	4,735-12,398	14,040-19,855	—	6,885-9,315
Date of first production delivery	2/78	2nd qtr. 1972	2/78	2 qtr. 1972	2/78
Display units installed to date	—	—	—	—	—
Serviced by	HDS	IBM	IBM	IBM	IBM
COMMENTS.	Basic graphics; Concept APL has full APL set including overstrike symbols	See Report 70D-491-11 for details	Display positions available include 480, 960, 1920, 2560, and 3440; see Report 70D-491-11 for details	See Report 70D-491-11 for details	Display positions available include 960, 1920, 2560, and 3440; see Report 70D-491-11 for details

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	IBM 2260 Display Station	IBM 2265 Display Station	IBM 3790 Communication System	IBM System/32	IBM System/34
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster	Stand-alone	Cluster	Stand-alone	Cluster
Maximum displays/controller	24	1	16	1	8 local; 64 remote
Portable case	No	No	No	No	No
IBM compatibility	2260	2265	No	Yes	Yes
Teletype compatibility	No	No	No	No	No
Other compatibility	No	No	No	No	No
User programmable	No	No	No	Std., RPG II	Std., RPG II, BASIC, & FORTRAN
Self diagnostics	No	No	No	—	—
DISPLAY PARAMETERS					
Display positions, chars/display	240/480/960	960	480/1920	240	1920
Display arrangement, lines x chars./line	6/12 x 40; 12 x 80	15 x 64; 12 x 80	12 x 40; 24 x 80	6 x 40	24 x 80
Display area, h x w, inches	4 x 9	4.6 x 10.3	14-inch diag.	9-inch diag.	12-inch diag.
Total displayable symbols	64	64	64	64	96
Symbol formation	5 x 7 dot matrix	Stroke	7 x 9 dot matrix	—	8 x 16 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	Std.
Programmable brightness levels	No	No	2 std.	No	Std.
Character and/or field blinking	No	No	No	No	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	U, D, L, R	U, D, L, R	—	—
Cursor blinking	No	No	No	—	—
Addressable/readable cursor	Opt.,addressable line	Opt.,addressable line	Std.,addressable only	—	—
Protected format	Std.	Std.	Std.	—	—
Partial screen transmit	Std.	Std.	Std.	—	—
Tabulation	Opt.	Opt.	Std.	—	—
Character insert/delete	No	No	Std.	—	—
Line insert/delete	No	No	No	—	—
Erase	Line opt., screen std.	Line, screen std.	Char., line, screen std.	—	—
Character repeat	No	No	Std.	—	—
KEYBOARD PARAMETERS					
Style	Typewriter/numeric	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	ASCII	ASCII/EBCDIC	EBCDIC	EBCDIC
Detachability	Std.	Std.	Std.	No	Std.
Program function keys	No	No	Opt.	No	—
Numeric keypad	Opt.	No	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	No	Single drive	Single drive
Serial printer	IBM 1053-4	IBM 1053-4	IBM 3793	Impact	Impact
Other devices	No	No	Disk, remote terminals, audible alarm, I.D. reader, light pen	Disk, line printer, data recorder & mag. card reader/recorder	Disk, line printer, & MICR reader
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half-duplex	Half-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Asynchronous	Synchronous	Synchronous	Synchronous
Communications protocol	ASCII	ASCII	SDLC	BSC/SDLC	BSC/SDLC
Code	ASCII	ASCII	EBCDIC	Up to 4800/7200	Up to 9600
Speed, bits/second	1200/2400	1200/2400	1200/2400		
Format: character, line, or block	Block only	Block only	Block only	Block only	Block only
Multipoint operation (pollable/addr.)	Std.	Std.	Std.	Opt.	Opt.
Auto answer	No	No	No	Opt.	Opt.
Auto call	No	—	—	No	No
Terminal interface	RS-232C	RS-232C	RS-232C opt.	RS-232C	RS-232C
Integral modem	No	No	Opt.	Opt.; 1200/2400	Opt.; 1200/2400
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	43-75	183	See Comments	—	—
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	147-2,143	—	—	748 (base)	830
Controller, 2 year lease, $/mo.	—	—	—	680 (base)	755
Display station, purchase, $	1,342-2,260	4,700	—	—	—
Controller, purchase, $	18,215-91,478	—	—	33,560 (base)	27,900
Date of first production delivery	6/66	4/69	1st qtr. 1975	3/75	1/78
Display units installed to date	—	—	—	—	—
Serviced by	IBM	IBM	IBM	IBM	IBM
COMMENTS	Requires 2848 Display Control	For IBM 2770 or System/3 Model 6	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; see Report 70C-491-27 for details

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	IBM 5937	Incoterm SPD 320/330 & SPD 320/330LFC	Incoterm SPD 325	Incoterm SPD 10/20	Incoterm SPD 10/25
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Cluster	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	32	2	2	2
Portable case	No	No	No	No	No
IBM compatibility	3275	3270 BSC	3275	No	3275
Teletype compatibility	No	No	No	Std.	Std.
Other compatibility	No	No	No	No	No
User programmable	No	No	No	Yes	Yes
Self diagnostics	No	No	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	240	960/1920	480/960/1920	960/1920	960/2000
Display arrangement, lines x chars./line	6 x 40	12/24 x 40/80	12/24 x 40/80	15/30 x 64	12/25 x 80
Display area, h x w, inches	—	6.5 x 9	6.5 x 9	6.5 x 9	6.5 x 9
Total displayable symbols	44	64	64	64; 121 opt.	64; 128 opt.
Symbol formation	Gas panel	7 x 10 dot matrix	7 x 10 dot matrix	7 x 10; 8 x 14 (opt.)	7x10;8x12 (opt.) dot
Color	No	No	No	No	No
Reverse video	—	No	No	No	No
Programmable brightness levels	Std.	2 std.	2 std.	No	2 std.
Character and/or field blinking	—	Std.	Std.	Opt.	Opt.
Roll	Std.	No	No	Opt.	Opt.
Paging	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	Std.	Std.	Opt.	Opt.
Addressable/readable cursor	No	Std.	Std.	Std.	Std.
Protected format	Std.	Std.	Std.	Opt.	Opt.
Partial screen transmit	No	Std.	Std.	Opt.	Opt.
Tabulation	—	Std.	Std.	Opt.	Opt.
Character insert/delete	No	Std.	Std.	Opt.	Opt.
Line insert/delete	No	Std.	Std.	Opt.	Opt.
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen opt.	Char., line, screen opt.
Character repeat	No	Std.	Std.	Opt.	Opt.
KEYBOARD PARAMETERS					
Style	Block	Typewriter	Typewriter	Several	Several
Character/code set	ASCII/EBCDIC	EBCDIC	EBCDIC	Several	Several
Detachability	No	Std.	Std.	Std.	Std.
Program function keys	—	24 std.	24 std.	24 std.	24 std.
Numeric keypad	Std.	Std.	Std.	Opt.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	Single	No	No	No
Diskette drive (floppy disk)	No	Dual on LFC	No	Single/dual	Single/dual
Serial printer	No	Impact	Impact	Impact	Impact
Other devices	Remote sensors	Audible alarm std.	Audible alarm opt.	Card readers & punches; mag.tape drives, audible alarm	Card readers & punches; mag. tape drives, audible alarm
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Synchronous	Synchronous	Synchronous	Async./sync.	Async./sync.
Communications protocol	BSC/SDLC	BSC/SDLC	BSC/SDLC	BSC/SDLC	BSC/SDLC
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	1200 to 7200	1200 to 9600	1200 to 9600	Up to 9600	Up to 9600
Format: character, line, or block	Block only	Block only	Block only	Char./block	Char./block
Multipoint operation (pollable/addr.)	Std.	Std.	Std.	Opt.	Opt.
Auto answer	No	No	No	Opt.	Opt.
Auto call	—	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C
Integral modem	Opt., 1200 bps	No	No	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	385-494 (5-yr)	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	12,545-15,000	—	—	—	—
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	Mid 1976	1974	1974	6/70	11/74
Display units installed to date	—	Over 30,000	Over 30,000	Over 8,000	Over 30,000
Serviced by	IBM	Honeywell FED	Honeywell FED	Honeywell FED	Honeywell FED
COMMENTS	Data collection terminal for rugged factory environment; handles up to 16 lines to sensors	See Report 70D-495-01 for details on the Incoterm product line; Incoterm was acquired by Honeywell early in 1978		Extensive software support includes emulators and assemblers; up to 32 displays per line via multiplexer	Alternate display format is 15/31 x 64

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Incoterm SPD 15/25	Incoterm SPD 20/20 & SPD 20/30	Incoterm SPD 20/40	Inforex 7000 Standalone System	Inforex 7000 Cluster System
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster	Cluster	Cluster	Stand-alone	Cluster
Maximum displays/controller	4	32	32	1	8
Portable case	No	No	No	No	No
IBM compatibility	3277, BSC	3270	3270, 2260	2780/3780	2780/3780
Teletype compatibility	Std.	Std.	Std.	No	No
Other compatibility	Several	No	Several	No	No
User programmable	Yes	Yes	Yes	Yes	Yes
Self diagnostics	Std.	No	No	Yes	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	480 to 2048	960/1920	960/2000	1920	1920
Display arrangement, lines x chars./line	12/15/16/24 x 40/64/80	12/24 x 80	12/25 x 80	24 x 80	24 x 80
Display area, h x w, inches	6.5 x 9	6.5 x 9	6.5 x 9	6 x 8.4	6 x 8.4
Total displayable symbols	64; 128 opt.	64; 128 opt.	64; 128 opt.	64 ASCII	64 ASCII
Symbol formation	8 x 10 dot matrix	7 x 10; 8 x 12 opt.	7 x 10; 8 x 12 opt.	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	Opt.	2 std.	2 std.	2 std.	2 std.
Character and/or field blinking	Opt.	Opt.	Opt.	Field std.	Field std.
Roll	Opt.	Opt.	Opt.	Std., up & down	Std., up & down
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.	Both std.	Both 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.	No	No
Erase	Opt.	Char., line, screen opt.	Char., line, screen opt.	Char., screen std.	Char., screen std.
Character repeat	Opt.	Opt.	Opt.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Several	Several	Several	Typewriter	Typewriter
Character/code set	Several	Several	Several	64 ASCII	64 ASCII
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	24 std.	24 std.	24 std.	15 std.	15 std.
Numeric keypad	Opt.	Opt.	Opt.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	Single/dual	Single/dual	Single/dual	Dual/quad	Opt.
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	Audible alarm std.	10 MB disk, mag. tape, audible alarm, 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.	Synchronous	Synchronous
Communications protocol	BSC	BSC/SDLC	BSC/SDLC	BSC	BSC
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	Up to 9600	Up to 9600	Up to 9600	Up to 9600	Up to 9600
Format: character, line, or block	Char./block	Char./block	Char./block	Block only	Block only
Multipoint operation (pollable/addr.)	Std.	Opt.	Opt.	No	No
Auto answer	Opt.	Opt.	No	Yes	Yes
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	324	1,015-4,019
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	Contact vendor	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	—	—	Contact vendor	11,500	35,250-140,411
Controller, purchase, $	—	—	Contact vendor	—	—
Date of first production delivery	3/78	4/74	1977	4/77	4/77
Display units installed to date	Over 30,000	Over 30,000	Over 30,000	—	—
Serviced by	Honeywell FED	Honeywell FED	Honeywell FED	Inforex	Inforex
COMMENTS	Microprocessor-driven terminal controller	Extensive software support includes emulators and assemblers; alternate display format is 15/30 x 64		Base price includes one display station with processor memory and diskette drive; See Report 70D-499-21 for details	Base price includes one display station and disk drive; up to 10 MB disk available

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Informer D-301 and D-302	Informer D-303 and I-303	Informer I-301, R-301, I-302, & R-302	Informer M-501	Informer P301, P302, PA301, & PA302
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster	Cluster	Stand-alone	Stand-alone	Either
Maximum displays/controller	1 or up to 128	4	1	1	1 or up to 128
Portable case	No	No	No	No	Yes
IBM compatibility	No	3270 BSC opt.	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	No	No	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	512	480/1920	512	512	512
Display arrangement, lines x chars./line	16 x 32	12 x 40; 24 x 80	16 x 32	16 x 32	16 x 32
Display area, h x w, inches	3.5 x 4.5	3.5x4.5; 5.25x6.75	3.5 x 4.5	3.5 x 4.5	3.5 x 4.5
Total displayable symbols	64; 96 opt.	64 ASCII	64; 96 opt.	128	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	No	No	No	No
Programmable brightness levels	2 std.	Yes	2 std.	2 std.	2 std.
Character and/or field blinking	No	No	No	No	No
Roll	Up std. (301 only)	No	Up std. (301 only)	Up std.	Up std. (301 only)
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.	None	U, D, L, R, H, Rt.
Cursor blinking	Opt.	Std.	Opt.	Opt.	Opt.
Addressable/readable cursor	Std. addressable only	Std. addressable only	Std. addressable only	—	Std. addressable only
Protected format	No (301); std. (302)	Std.	Std. (302 only)	No	No (301); std. (302)
Partial screen transmit	No (301); opt. (302)	Std.	—	No	No (301); opt. (302)
Tabulation	No	Std.	No	No	No
Character insert/delete	No	No	No	No	No
Line insert/delete	No	No	No	No	No
Erase	Screen std.	Screen std.	Screen std.	Screen std.	Screen std.
Character repeat	Opt.	No	Opt.	No	Opt.
KEYBOARD PARAMETERS					
Style	Data entry	Typewriter/data entry	Typewriter	No keyboard	Data entry
Character/code set	ASCII	64 ASCII	ASCII	—	ASCII
Detachability	No	No	See comments	—	No
Program function keys	10 std.	10 std.	None	—	10 std.
Numeric keypad	Std.	Std. (D-303 only)	2 std.	—	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	No	No	No
Serial printer	Impact	Impact	Impact	No	Impact
Other devices	Audible alarm std.	Audible alarm std.	Audible alarm std.	None	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	50 to 9600	110 to 9600	110 to 9600	110 to 9600
Format: character, line, or block	Char.(301); blk.(302)	Block	Char.(301); blk.(302)	Char. only	Char.(301); blk.(302)
Multipoint operation (pollable/addr.)	Opt.	Std.	Opt.	No	Opt.
Auto answer	No (301); std. (302)	Std.	Std. (302 only)	No	No (301); std. (302)
Auto call	No (301); std. (302)	Std.	Std. (302 only)	No	No (301); std. (302)
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C
Integral modem	No	No	No	No	Opt.
Integral acoustic coupler	No	No	No	No	PA 301/302
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, $	2,390	3,230-10,430	1,890-2,390	1,590	2,080-2,480
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	8/73	8/76	10/72	8/73	2/76
Display units installed to date	3,500	1,000	3,500	75	75
Serviced by	Informer	Informer	Informer	Informer	Informer
COMMENTS	D-301 is stand-alone unit; D-302 is stand-alone or cluster	303 series terminals feature signature capture and display for verification	I units are designed for executive use, with keyboard in drawer; R units are rack mounted	M-500 is used as a monitor and does not have keyboard	PA301 & 302 models include an acoustic coupler

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Infoton Vistar/GTX	Infoton Vistar/Satellite	Infoton Vistar/2	Infoton Vistar/3	Infoton 200
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	1	1	1	—
Portable case	No	No	No	No	—
IBM compatibility	No	No	No	No	No
Teletype compatibility	Std.	Std.	Std.	Std.	Yes
Other compatibility	No	No	No	No	—
User programmable	No	No	No	No	No
Self diagnostics	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	18 x 24
Display area, h x w, inches	24 x 80	7 x 9	7 x 9	7 x 9	—
Total displayable symbols	64	96	128	128	—
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	9 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	Std.	Yes
Programmable brightness levels	No	No	2 std.	2 std.	No
Character and/or field blinking	No	No	No	Std.	No
Roll	Up std.	Up std.	Up std.	Up std.	Up
Paging	No	No	No	No	—
Cursor positioning; Up, Down, Left, Right, Home, Return	None	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	Std.	Std.	Std.	Std.
Protected format	No	No	Std.	Std.	No
Partial screen transmit	No	Std.	Std.	Std.	No
Tabulation	No	No	Std.	Std.	—
Character insert/delete	No	No	Std.	Std.	No
Line insert/delete	No	No	Std.	Std.	No
Erase	Char. opt., 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	Teletype	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	ASCII	ASCII	ASCII	ASCII
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	No	5 std.	6 std.	6 std.	12 std. (200/4 only)
Numeric keypad	No	Std.	Std.	Std.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	No	No	No	No
Serial printer	No	Ser./par. interface	Ser./par. interface	Ser./par. interface	RS-232C interface
Other devices	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	No	Opt.	Opt.	—
Code	ASCII	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	50 to 9600	50 to 9600	50 to 9600	50 to 9600	50 to 19,200
Format: character, line, or block	Char. only	Char./block	Char./block	Char./block	Char.
Multipoint operation (pollable/addr.)	No	No	Opt.	Opt.	No
Auto answer	No	No	Opt.	Opt	—
Auto call	No	No	No	No	—
Terminal interface	RS-232C, CCITT V.24	RS-232C, CCITT V.24	RS-232C, CCITT V.24	RS-232C, CCITT V.24	RS-232C; 20, 60-ma dc current
Integral modem	No	No	No	No	Opt.
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, $	1,335	1,975	3,075	3,075	1,195-1,295
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	4/76	4/76	3/75	6/76	8/77
Display units installed to date	1,000	300	500	200	—
Serviced by	Infoton & third party	Infoton & Sorbus	Infoton & Sorbus	Infoton & Sorbus	Infoton & Sorbus
COMMENTS					Five keyboards combine upper/lower case, program function keys, & numeric pad

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Infoton 400	Intelligent Systems Intecolor 8001	Interface Technology Model 736	International Computers Inc. 1501	International Computers Inc. 1502
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Either	Either
Maximum displays/controller	—	1	1	1	1
Portable case	—	No	No	No	No
IBM compatibility	No	No	No	BSC	BSC
Teletype compatibility	Yes	Std.	Std.	Opt.	Opt.
Other compatibility	—	ADDS	No	See Comments	See Comments
User programmable	—	Yes	Yes	User-created programs	User-created programs
Self diagnostics	—	—	—	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	2000	2000/3840	4/8/12/16	256	1920
Display arrangement, lines x chars./line	80 x 25	25 x 80; 48 x 80	1 x 16	4/8 x 32	24 x 80
Display area, h x w, inches	—	10 x 13	0.3inch-high chars.	5-inch diag.	12-inch diag.
Total displayable symbols	9 x 9 dot matrix	64; 192 opt.	15	64	64
Symbol formation	No	5 x 7 dot matrix	7-segment LED's	5 x 8 dot matrix	5 x 10 dot matrix
Color	No	8 std.	No	No	No
Reverse video	Yes	Opt.	No	No	No
Programmable brightness levels	No	No	No	No	No
Character and/or field blinking	Yes	Std.	No	Opt.	Opt.
Roll	Up	Opt.	No	Opt.	Opt.
Paging	—	Opt.	No	Programmable	Programmable
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	None	Programmable	Programmable
Cursor blinking	Yes	Std.	No	Programmable	Programmable
Addressable/readable cursor	Yes	Std.	No	Programmable	Programmable
Protected format	Yes	Opt.	No	Std.	Std.
Partial screen transmit	Yes	Std.	No	Std.	Std.
Tabulation	—	Std.	No	No	No
Character insert/delete	Yes	Opt.	No	No	Opt.
Line insert/delete	Yes	Opt.	No	No	Opt.
Erase	Char., line, screen Std.	Char., line, screen std.	Line	No	Opt.
Character repeat	Std.	Std.	No	No	No
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Numeric block	Keypunch, typewriter	Keypunch, typewriter
Character/code set	ASCII	192 ASCII	Numerics only	64	64
Detachability	Std.	Std.	No	No	Std.
Program function keys	8 std.; 24 opt.	16 opt.	8 std.	17 std.	17 std.
Numeric keypad	Std.	Opt.	Std.	Opt.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	Dual	Dual
Diskette drive (floppy disk)	No	Yes	No	No	No
Serial printer	RS-232C interface	Yes	No	Impact	Impact
Other devices	—	—	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	Async./sync.	Async./sync.
Communications protocol	—	ASCII	ASCII	Async./bisync.	Async./bisync.
Code	ASCII	ASCII	ASCII	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	50-19,200	110 to 9600	110 to 1200	1800 to 9600	1800 to 9600
Format: character, line, or block	Char./block	Char./block	Char. only	Char./line/block	Char./line/block
Multipoint operation (pollable/addr.)	Opt.	No	No	Std.	Std.
Auto answer	—	No	No	Opt.	Opt.
Auto call	—	No	No	Opt.	Opt.
Terminal interface	RS-232C; 20, 60 ma dc current	RS-232C	RS-232C, 20/60 ma dc	RS-232C, CCITT	RS-232C, CCITT
Integral modem	Opt.	No	No	No	No
Integral acoustic coupler	No	No	Opt.	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	—	197-450	346-600
Display station, 2 year lease, $/mo.	—	—	—	149-330	255-436
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,525-1,595	1,650	600	5,200-12,000	9,720-16,500
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	8/77	1975	8/74	1971	1974
Display units installed to date	—	2,500	500	6,000	500
Serviced by	Infoton & Sorbus	Third party	Interface Tech.	TRW/ICL	TRW/ICL
COMMENTS	Two keyboards feature 8 or 24 program function keys, upper/lower case, & numeric pad	Features standard & optional graphics modes; powered by an Intel 8080 microprocessor	Terminal contains an LED display and numeric keyboard	Compatible with Honeywell, Univac, & CDC; handles up to 63 peripherals including line printers and magnetic tape drives	Compatible with Honeywell, Univac, & CDC; handles up to 63 peripherals including line printers and magnetic tape drives

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	International Computers Inc. 1501-40	International Computers Inc. 1503	International Computers Inc. 2382/2381	International Computers Inc. 7502	ITT Model 3501 Asciscope
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Either	Stand-alone	Either	Stand-alone
Maximum displays/controller	1-16	1-16	10	24	1
Portable case	No	No	No	No	No
IBM compatibility	BSC	BSC	No	3270	No
Teletype compatibility	Opt.	Opt.	No	Yes	No
Other compatibility	See Comments	See Comments	No	No	No
User programmable	User-created programs				No
Self diagnostics	Std.	Std.	No	Yes	No
DISPLAY PARAMETERS					
Display positions, chars/display	256/1920	256/1920	1920	2000 or 1920	960
Display arrangement, lines x chars./line	4/8 x 32, 24 x 80	4/8 x 32, 24 x 80	24 x 80	24 x 80	12 x 80
Display area, h x w, inches	5-inch diag.	5-inch diag., 12 in.	8 x 12	7 x 10	5 x 8
Total displayable symbols	64	64	64	64	5 x 7 dot matrix
Symbol formation	5x8, 5x10 dot matrix	5x8, 5x10 dot matrix	7 x 9 dot matrix	5x7, 5x9 dot matrix	65
Color	No	No	No	No	5 x 7 dot matrix
Reverse video	No	No	No	No	No
Programmable brightness levels	No	No	Yes	Yes	No
Character and/or field blinking	Opt.	Opt.	Programmable	Yes	No
Roll	Opt.	Opt.	Yes	Yes	Std.
Paging	Programmable	Programmable	Yes	Programmable	No
Cursor positioning; Up, Down, Left, Right, Home, Return	Programmable	Programmable	Programmable	Programmable	U, D, L, R, H, Rt.
Cursor blinking	Programmable	Programmable	Yes	Yes	Std.
Addressable/readable cursor	Programmable	Programmable	Programmable	Programmable	No
Protected format	Std.	Std.	Yes	Yes	No
Partial screen transmit	Std.	Yes	No	Yes	Std.
Tabulation	No	No	Yes	Yes	No
Character insert/delete	No	Opt.	Std.	Yes	No
Line insert/delete	No	Opt.	Std.	Opt.	No
Erase	No	Opt.	Std.	Std.	Char., screen std.
Character repeat	No	No	No	No	Std.
KEYBOARD PARAMETERS					
Style	Keypunch, typewriter	Keypunch, typewriter	Typewriter	Typewriter, data entry	Teletype
Character/code set	64	64 ASCII	ASCII	ASCII	ASCII
Detachability	No	Std.	Yes	Yes	No
Program function keys	17 std.	17 std.	10	19	None
Numeric keypad	No	Std.	Yes	Yes	No
ANCILLARY DEVICES					
Cassette tape drive	Dual	Dual	No	Yes	No
Diskette drive (floppy disk)	2.5M fixed disk	Yes	No	Yes	No
Serial printer	Impact	Impact	No	Impact	Impact/non-impact
Other devices	—	—	—	—	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half-duplex (2381)	Half-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Async./sync.	Asynchronous
Communications protocol	Async./bisync.	Async./bisync.	Async./sync.	XBM	ASCII
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII	ASCII	ASCII
Speed, bits/second	1800 to 9600	1800 to 9600	2400	1200 to 9600	110/300/1200/2400
Format: character, line, or block	Char./line/block	Char./line/block	Char./line/block	Char./line/block	Char./block
Multipoint operation (pollable/addr.)	Std.	Opt.	Std.	Std.	No
Auto answer	Opt.	Opt.	No	No	No
Auto call	Opt.	Opt.	No	No	No
Terminal interface	RS-232C, CCITT	RS-232C, CCITT	No	RS-232C	RS-232C
Integral modem	No	No	No	No	Std.
Integral acoustic coupler	No	No	No	Opt.	Std.
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	470-342	672-1,123	—	67-200	74
Display station, 2 year lease, $/mo.	342-523	1,175-2,000	—	—	59
Controller, 1 year lease, $/mo.	—	—	—	252-1,159	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	13,623-22,000	18,000-30,000	3,900	2,330-3,500	2,195
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	1975	1974	1972	1975	12/72
Display units installed to date	500	500	10,000	20,000	1,000
Serviced by	TRW/ICL	TRW/ICL	TRW/ICL	ICL	ITT
COMMENTS	Compatible with Honeywell, Univac, & CDC; handles up to 63 peripherals including line printers and magnetic tape drives	Compatible with Honeywell, Univac, & CDC; handles up to 63 peripherals including line printers and magnetic tape drives	For use with ICL System Ten Computer	For use with ICL 2900 computers	

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	ITT Model 3100 Alphascope	Intertec Intertube	Jacquard J100 & J105	Jacquard J50	Kustom MCT-10
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Either	Either	Either	Stand-alone
Maximum displays/controller	1/4/8/16/32	255	30 J105's per J100	—	1
Portable case	No	No	No	No	No; mobile
IBM compatibility	2260/2265	Opt.	3270/3275	3270/3275	3275
Teletype compatibility	No	Std.	Std.	Std.	No
Other compatibility	No	Burr., Univac opt.	No	No	No
User programmable	No	User-defined parameters	Yes	Yes	No
Self diagnostics	No	Std.	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	240/480/960/1920	1920	1920	1920	256
Display arrangement, lines x chars./line	6/12/17/24x40/80	25 x 80	24 x 80	24 x 80	8 x 32
Display area, h x w, inches	5 x 8	12-inch diag.	8 x 10	8 x 10	3.38 x 9.18
Total displayable symbols	5 x 7 dot matrix	128 ASCII	96	96	64
Symbol formation	65	8 x 8	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix
Color	5 x 7 dot matrix	No	No	No	No
Reverse video	No	Std.	No	No	No
Programmable brightness levels	No	Std.	Std.	Std.	No
Character and/or field blinking	No	Std.	Std.	Std.	No
Roll	No	Std.	Std.	Std.	No
Paging	No	Std.	Std.	Std.	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
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	No	Both std.	Std.	Std.	No
Protected format	Opt.	Std.	Std.	Std.	No
Partial screen transmit	Opt.	Std.	Std.	Std.	Std.
Tabulation	Std.	Fwd. std., bk. tab opt.	Std.	Std.	No
Character insert/delete	Std.	Std.	Std.	Std.	No
Line insert/delete	No	Std.	Std.	Std.	No
Erase	Char., line, screen std.	Char./line/screen std.	Char., line, screen std.	Char., line, screen	Screen std.
Character repeat	Std.	Std.	Std.	Std.	No
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter, data entry	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	128 ASCII/EBCDIC	ASCII	ASCII	ASCII
Detachability	No	No	Std.	Std.	No
Program function keys	None	128 std.	20 std.	20 std.	11 std.
Numeric keypad	Opt.	Std.	Std.	Std.	No
ANCILLARY DEVICES					
Cassette tape drive	No	Single	No	No	No
Diskette drive (floppy disk)	No	Dual	Yes	Yes	No
Serial printer	Impact/non-impact	Impact	—	—	Non-impact
Other devices	Audible alarm std.	—	Disk and tape units audible alarm	Disk and tape units, audible alarm	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Async./sync.	Async./sync.	Async./sync.	Synchronous
Communications protocol	ASCII	ASCII, SDLC opt.	ASCII/BSC	ASCII/BSC	ASCII
Code	ASCII	ASCII, EBCDIC opt.	ASCII/EBCDIC	ASCII/EBCDIC	ASCII
Speed, bits/second	1200/2400/4800	Up to 19,200	110 to 9600	110 to 9600	886/1300
Format: character, line, or block	Block only	Char./line/block	Programmable	Programmable	Block only
Multipoint operation (pollable/addr.)	Std.	Std.	Programmable	Programmable	Std.
Auto answer	No	Opt.	Opt.	Opt.	Std.
Auto call	No	Opt.	No	No	No
Terminal interface	RS-232C	RS-232C std.; 20 ma opt.	RS-232C	RS-232C	—
Integral modem	No	No	Opt.	Opt.	Std.
Integral acoustic coupler	No	No	Opt.	Opt.	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	40-45	—	—	—	—
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	95-1,920	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,200-1,400	784-1,295	14,900/2,900	12,200	3,650
Controller, purchase, $	6,150-68,525	—	Contact vendor	Contact vendor	27,500-90,000
Date of first production delivery	9/70	3/78	3/74	1/77	3/72
Display units installed to date	1,000	—	100/300	16	1,000
Serviced by	ITT & third party	Intertec & third party	Sorbus	Sorbus	Kustom
COMMENTS		Uses Z-80 processor; 25th line is used for display of status messages; dealer discounts available	Purchase price for J100 includes 32K bytes of core memory and two floppy disks; 2K bytes of memory is included with the J105	Purchase price includes adapters for printer and communications	Mobile terminal for communication with two-way radio; contains plasma display

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Lear Siegler ADM-1A	Lear Siegler ADM-2	Lear Siegler ADM-3A	Lear Siegler VDP-400	Megadata System 700
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Either
Maximum displays/controller	1	1	1	1	8
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	3270, 2260/2265
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	Datapoint	Burroughs TD-800	No	No	Honeywell, Univac
User programmable	No	No	No	Yes	No
Self diagnostics	No	No	No	Std.	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	2000	960/1920/2160
Display arrangement, lines x chars./line	24 x 80	24 x 80	24 x 80	25 x 80	80 x 24/27; 64 x 24
Display area, h x w, inches	7.5 x 9.25	7.5 x 9.25	7.5 x 9.25	15-inch diag.	8.5 x 11
Total displayable symbols	96	128	64/96 opt.	128; 256 opt.	64 to 256
Symbol formation	5 x 7 dot matrix	5 x 9 dot matrix	5 x 7 dot matrix	7 x 9 dot matrix	7x9;8x10/12;12x15
Color	No	No	No	No	No
Reverse video	No	No	No	Std.	Std.
Programmable brightness levels	No	No	No	Std.	2 std.
Character and/or field blinking	No	Std.	No	Std.	Std.
Roll	Up std.	Up std.	Std., up only	Std., up & down	Up & down std.
Paging	No	No	No	Yes	Std.
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	D, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	No	No	No	Std.
Addressable/readable cursor	Std.	Std.	No	Both std.	Std.
Protected format	Std.	Std.	No	Std.	Std.
Partial screen transmit	Opt.	Std.	No	Std.	Std.
Tabulation	Std.	Std.	No	Both std.	Std.
Character insert/delete	Opt.	Std.	No	Std.	Std.
Line insert/delete	Opt.	Std.	No	Std.	Std.
Erase	Char., screen std.; line opt.	Char., line, screen std.	Char., screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Teletype	Typewriter	Typewriter
Character/code set	ASCII	ASCII	64 ASCII	128 ASCII	ASCII
Detachability	No	Std.	No	Std.	Std.
Program function keys	No	16 std.	No	16 std.	71 std.
Numeric keypad	Opt.	Std.	Opt.	Std.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	Single/dual
Diskette drive (floppy disk)	No	No	No	No	Single/dual
Serial printer	Impact	Impact	No	Impact	Impact/non-impact
Other devices	Audible alarm opt.	Audible alarm std.	Audible alarm std.	—	Mag. tape, disk, line printers, audible alarm, ID reader, light pen
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Async./sync.	Asynchronous	Async./sync.	Async./sync.
Communications protocol	ASCII	ASCII	ASCII	ASCII	ASCII/BSC/SDLC
Code	ASCII	ASCII	ASCII	ASCII	ASCII/EBCDIC
Speed, bits/second	110 to 9600	110 to 9600	110 to 19,200	110 to 9600	Up to 19,200
Format: character, line, or block	Char./block	Char./block	Char./block	Char./block	Char./block
Multipoint operation (pollable/addr.)	Opt.	Opt.	No	Opt.	Std.
Auto answer	No	No	Opt.	No	Opt.
Auto call	No	No	No	No	Opt.
Terminal interface	RS-232C, current loop	RS-232C, current loop	RS-232C, current loop	RS-232C, 20 ma current loop	RS-232C, CCITT V.24, 20/60 ma.
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	Purchase only	Third party lease
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,595	2,095	895	3,995	2,950-12,000
Controller, purchase, $	—	—	—	—	6,400-9,400
Date of first production delivery	8/73	6/74	1/76	10/77	2/76
Display units installed to date	See Comments	See Comments	See Comments	50	300
Serviced by	Lear Siegler & third party	Lear Siegler & third party	Lear Siegler & third party	Lear Siegler & third party	Megadata and third party
COMMENTS	Lear Siegler has delivered well over 20,000 displays of all models		The ADM-3A is also available in a kit version	Contains a 16-bit processor with 20K-32K bytes of ROM & 6K-32K bytes of RAM	Microprocessor-based terminal with 4K to 64K bytes of memory; uses DEC assembly language

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Megadata SiR-1000 C-4/8	Megadata System 700/WP	Megadata MC-77	Memorex 1377-4	Mohawk MDS Series 21
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Either	Cluster	Either
Maximum displays/controller	1	1	8	32	4
Portable case	No	No	No	No	No
IBM compatibility	3275, 2265	3275, 2265	3277	3270	3270/75, 2260/65
Teletype compatibility	Std.	Std.	Std.	No	No
Other compatibility	Burroughs, Univac	Burroughs, Univac	Hazeltine, Univac	No	No
User programmable	No	No	No	No	Yes
Self diagnostics	No	Yes	Opt. via user-defined firmware	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	1536	1600	1920	1920	480 or 1920
Display arrangement, lines x chars./line	64 x 24	80 x 20	80 x 24	80 x 24	12 x 40/24 x 80
Display area, h x w, inches	10 x 10	8.5 x 11	7.5 x 9.25	7 x 9.5	15-inch diag.
Total displayable symbols	192	128	128		128
Symbol formation	7 x 8 dot matrix	8 x 12 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix	7 x 9 dot matrix
Color	Std. 4 or 8	No	No	No	No
Reverse video	Opt.	Std.	No	No	Std.
Programmable brightness levels	Std.	Std.	Opt.	2 std.	Std.
Character and/or field blinking	Std.	Std.	Opt.	No	Std.
Roll	Std.	Std.	Std.	No	Std., field only
Paging	Opt.	Std.	Std.	No	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	U, D, L, R	Programmable U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	No	Std.
Addressable/readable cursor	Std.	Std.	Std.	Std.	Std., addressable
Protected format	Std.	Std.	Std.	Std.	Programmable
Partial screen transmit	Std.	Std.	Std.	Std.	Programmable
Tabulation	Std.	Std.	Std.	Std.	Programmable
Character insert/delete	Std.	Std.	Std.	Std.	Programmable
Line insert/delete	Std.	Std.	Std.	No	Programmable
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Programmable
Character repeat	Std.	Std.	Std.	Some keys	No
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter/data entry console	Typewriter/data entry
Character/code set	ASCII	ASCII	128 ASCII	EBCDIC	96 EBCDIC
Detachability	Opt.	Opt.	No	No	Std.
Program function keys	51	71	29 std.	12 std.	18 std.
Numeric keypad	Std.	Std.	Std.	Opt.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	Single/dual	Single/dual	No	No	No
Diskette drive (floppy disk)	Single/dual	Single/dual	Single/dual	No	1 to 3 drives
Serial printer	Impact	Impact	Impact	No	Impact
Other devices	Card reader, paper tape punch, audible alarm, ID card reader	Card reader, disk, paper tape punch, audible alarm, ID card reader		Audible alarm std., light pen opt.	Magnetic tape, cartridge disk
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Async./Sync.	Asynchronous	Synchronous	Synchronous
Communications protocol	ASCII	ASCII/BSC	ASCII	SDLC; BSC	BSC/SDLC
Code	ASCII	ASCII/EBCDIC	ASCII	ASCII/EBCDIC	EBCDIC
Speed, bits/second	Up to 19,200	Up to 19,200	Up to 19,200	1200-7200	600-9600
Format: character, line, or block	Char./block	Char./block	Char./block	Block	Block
Multipoint operation (pollable/addr.)	Std.	Std.	Std.	Std.	Opt.
Auto answer	Opt.	Opt.	No	No	Opt.
Auto call	—	Opt.	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C, 20 ma current loop	RS-232C	RS-232C
Integral modem	Opt.	Opt.	No	No	No
Integral acoustic coupler	Opt.	Opt.	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Third party lease	Third party lease	Third party lease	130-163	51-54
Display station, 2 year lease, $/mo.	—	—	—	110-143	48-51
Controller, 1 year lease, $/mo.	—	—	—	—	190-232
Controller, 2 year lease, $/mo.	—	—	—	3,800-4,775	180-220
Display station, purchase, $	5,000-7,500	5,800-7,500	2,250-3,250	—	1,978-2,131
Controller, purchase, $	—	—	—	—	6,270-7,660
Date of first production delivery	1973	12/74	1/77	5/76	5/77
Display units installed to date	Over 500	Over 100	1500	Over 10,000	—
Serviced by	Megadata and third party	Megadata and third party	Megadata and third party	Memorex	Mohawk
COMMENTS		Designed for text editing (word processing)		Microprocessor-based replacement for IBM 3277-2 Display Unit; attaches to IBM controller	Prices include one display unit and controller with one diskette drive; see Report 70D-642-08 for details

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	NCR 796 Series Models 101, 201, 301, & 401	Olivetti DE-520	Olivetti TCV-278	Olivetti TCV-280	Omron 8030 Series
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Cluster	Stand-alone
Maximum displays/controller	1	1	1	16	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	Std.	No
Teletype compatibility	Std.	Std.	Std.	No	Std.
Other compatibility	No	See Comments	No	No	Burroughs & Univac
User programmable	No	Yes	Yes	No	Opt.
Self diagnostics	No	Yes	Yes	Std.	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	1920	920	1920	1920	1920
Display arrangement, lines x chars./line	24 x 80	11 x 31	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	8 x 10	4.75 x 5.5	12-inch-diag.	15-inch diag.	8 x 10
Total displayable symbols	64; 96 (401)	64; 96	96	64/96 selectable	128; 224 opt.
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	9 x 14 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	Std.
Programmable brightness levels	2 std., 201,301,401	No	2 std.	2 std.	2 std.
Character and/or field blinking	Std., 201, 301, 401	Char. std.	No	Both std.	Field std.
Roll	Std.	No	Yes	No	Std.
Paging	—	Yes	No	No	Opt., up to 10 pages
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	Opt., 101 only	Opt.	Opt.	Std.	Std.
Addressable/readable cursor	Std.	Std.	Std.	Both std.	Std.
Protected format	Std.; 201, 301, 401	Std.	Std.	Std.	Std.
Partial screen transmit	Std.; 201, 301, 401	Std.	Std.	Std.	Std.
Tabulation	Std.	Yes	Yes	Std., forward/back	Std.
Character insert/delete	Std., 201 & 301	No	Std.	Std.	Std.
Line insert/delete	Std., 401 only	No	No	No	Std.
Erase	Screen std.	Char., line, screen std.	Char., screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter/data entry	Typewriter/data entry	Typewriter/data entry/keypunch	Typewriter/data entry
Character/code set	ASCII	ASCII/EBCDIC	ASCII/EBCDIC	128 ASCII/EBCDIC	128 ASCII
Detachability	No	No	Std.	Std.	No
Program function keys	—	None	12 opt.	12 opt.	16 std.
Numeric keypad	Std.	No	Opt.	Opt.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	Single/dual	No	No	No
Diskette drive (floppy disk)	No	Dual	Dual	No	Dual drive
Serial printer	Non-impact (NCR	Impact	Impact	Impact	RS-232 interface
Other devices	Audible alarm std. (101), opt. (201)	Audible alarm std.	Audible alarm std.	—	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Full-duplex	Full-duplex	Half/full duplex	Half/full-duplex
Technique	Asynchronous	Async./sync.	Async./sync.	Synchronous	Async./sync.
Communications protocol	ASCII	ASCII/BSC	ASCII/BSC	BSC/SDLC	ASCII/BSC
Code	ASCII	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	110 to 9600	110 to 4800	600 to 4800	1200 to 9600	Up to 9600
Format: character, line, or block	Char./block	Block only	Block only	Block	Char./block
Multipoint operation (pollable/addr.)	Std., 301 only	Std.	Std.	Std.	Opt.
Auto answer	No	Opt.	No	No	Opt.
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C, 20 ma current loop
Integral modem	Std., 201	No	No	No	No
Integral acoustic coupler	Opt., 201	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	80-150	—	—	57-99	Purchase only
Display station, 2 year lease, $/mo.	—	154-193	261	52-88	—
Controller, 1 year lease, $/mo.	—	—	—	110-269	—
Controller, 2 year lease, $/mo.	—	—	—	101-245	—
Display station, purchase, $	2,000-3,500	5,600-20,000	6,700	2,700-4,785	3,100-7,850 (base)
Controller, purchase, $	—	—	—	4,820-11,530	—
Date of first production delivery	1/74	2/71	11/76	4/78	8/76
Display units installed to date	13,000+ (all mdls.)	20,500	200	—	Over 500
Serviced by	NCR	Olivetti	Olivetti	Olivetti	Omron & third party
COMMENTS	Manufactured by ADDS as models 580 (101), 880 (201), and 880A (301)	Manufactured by Sycor, Inc. as Model 340; uses Olivetti TPS language; compatibility with Univac DCT 2000 and Burroughs available	Includes integral controller capable of supporting 24 IBM 3277-type terminals	Prices include 66-key keyboard; the TCV-280 is a Sycor 290 designed to Olivetti specs.	Uses Intel 8080 microprocessor with 8K to 64K RAM; contains 4K PROM loader

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Ontel OP-1	Perkin-Elmer Fox-1100	Perkin-Elmer Owl-1200	Perry PE 9000 Series	Pertec Model 7100
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Stand-alone	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	4	1	1	1	1
Portable case	No	No	No	No	Yes
IBM compatibility	3275, 2780	No	No	No	No
Teletype compatibility	Std.	Std.	No	Std.	Std.
Other compatibility	Hazeltine 2000	No	No	No	No
User programmable	Yes	No	No	No	No
Self diagnostics	Yes	No	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	1600/1920/2000	1920	1920	480/1280/1920	960/1920
Display arrangement, lines x chars./line	20/24/25 × 80	24 × 80	24 × 80	8 × 60; 16/24 × 80	12/24 × 80
Display area, h x w, inches	7 × 10	12-inch-diag.	12-inch-diag.	9-/12-inch diag.	5.5 × 8.25
Total displayable symbols	128/256	96 ASCII	96 ASCII	64/96	64; 96 opt.
Symbol formation	5 × 10/13 × 11 dot	7 × 11 dot matrix	7 × 11 dot matrix	5 × 7 dot matrix	7 × 9 dot matrix
Color	No	No	No	No	No
Reverse video	Std.	Opt.	Std.	No	Std.
Programmable brightness levels	2 std.	No	2 std.	No	No
Character and/or field blinking	Both std.	No	Std.	Std. (9700)	No
Roll	Up & down std.	Up std.	Up. std.	Up std. (9900)	Std.
Paging	—	No	No	Opt. (9900)	—
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,
Cursor blinking	Std.	Opt.	Opt.	Std.	Std.
Addressable/readable cursor	Std.	Std.	Std.	Std., address.	Std.
Protected format	Std.	No	Std.	No	Std.
Partial screen transmit	Std.	No	Std.	No	Std.
Tabulation	Std.	Std.	Std.	No	Std.
Character insert/delete	Std.	No	Std.	Opt. (9900)	Std.
Line insert/delete	Std.	No	Std.	Opt. (9900)	Std.
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.	Screen std.	Line opt., screen std.
Character repeat	Std.	Std.	Std.	Std. (9900)	Std.
KEYBOARD PARAMETERS					
Style	Teletype	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	128 ASCII	128 ASCII	64/128 ASCII	ASCII
Detachability	Std.	No	Opt.	No	Std.
Program function keys	38 std.	No	16 std.	No	5 std.; 11 opt.
Numeric keypad	Std.	Opt.	Std.	Std.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	1 to 4 drives	No	No	RS-232 interface	No
Diskette drive (floppy disk)	1 to 4 drives	No	No	RS-232 interface	No
Serial printer	Impact/non-impact	Impact/non-impact	Impact/non-impact	Impact	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	Async./sync. opt.	Asynchronous	Asynchronous	Asynchronous	Async./sync.
Communications protocol	ASCII/BSC	ASCII	ASCII	ASCII	ASCII
Code	ASCII/EBCDIC	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	Up to 2400/9600	75 to 9600	75 to 9600	50 to 9600	Up to 9600
Format: character, line, or block	Char./block	Char. only	Char./block	Char./block	Char./block
Multipoint operation (pollable/addr.)	Opt.	No	Opt.	No	Std.
Auto answer	Opt.	No	No	No	Std.
Auto call	No	No	No	No	No
Terminal interface	RS-232C, 20 ma. dc	RS-232C, CCITT, or 20 ma. dc	RS-232C, CCITT, or 20 ma. dc	RS-232C, 20/60 ma. dc opt.	RS-232C
Integral modem	Opt.	No	No	No	Opt.
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Sold OEM only	Purchase only	Purchase only	Purchase only	Sold OEM only
Display station, 2 year lease, $/mo.	—	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,695-5,550	1,440 (base)	2,195	975-2,250	2,250
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	11/74	2/77	3/77	7/77	4/74
Display units installed to date	Over 3,500	—	—	600	Over 7,000
Serviced by	Third party	Perkin-Elmer	Perkin-Elmer	Perry and third party	Pertec
COMMENTS	Price based on quantity of 100; 10- or 20-megabyte disk drive; IBM-compatible tape drives available			Several models of Centronics printers are available	Above price is based on quantity of 250 to 500

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Plantronics VU Set DS-150A/C	Quotron Series 800	Racal-Milgo ICC 40 + Data Display System	Racal-Milgo ICC 40+ MPL Data Display Sys.	Racal-Milgo System 400
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Cluster	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	1	24	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	No	3270, 2260	2265	No	3275, 2265
Teletype compatibility	Std.	Std.		No	No
Other compatibility	No	No	No	AT&T #8A1	Honeywell, Univac
User programmable	No	Yes	No	No	No
Self diagnostics	No	Std.	Std.	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	64/128	1200/1920	1920	1920	960/1920
Display arrangement, lines x chars./line	4/8 × 16	20/24 × 60/80	24 × 80	24 × 80	12/24 × 80
Display area, h x w, inches	3-inch diag.	48 × 64; 6 × 8	5.75 × 10.5	5.75 × 10.5	5.75 × 10.5
Total displayable symbols	64	96	7 × 11 dot matrix	7 × 11 dot matrix	7 × 11 dot matrix
Symbol formation	5 × 7 dot matrix	14 × 22 dot matrix	127	127 ASCII	127 ASCII
Color	No	No	7 × 11 dot matrix	7 × 11 dot matrix	7 × 11 dot matrix
Reverse video	No	Opt.	Std.; cursor only	Opt.	Std.
Programmable brightness levels	No	No.	2 std.	2 std.	3 std.
Character and/or field blinking	Both std.	Opt.	Both opt.	Opt.	Std.
Roll	No	No	Opt.	Std., up & down	No
Paging	No	No	Opt.	—	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.
Cursor blinking	No	Std.	No	No	No
Addressable/readable cursor	No	Std., address. only	Std., address. only	Std., address. only	Std., address. only
Protected format	No	Opt.	Opt.	Opt.	Std.
Partial screen transmit	No	Opt.	Std.	Std.	Std.
Tabulation	No	Opt.	Opt.	Opt.	Std.
Character insert/delete	No	Opt.	Std.	Std.	Std.
Line insert/delete	No	Opt.	Std.	Std.	Std.
Erase	Screen std.	Char., screen std.	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	No	Opt.	Std.	No	Std.
KEYBOARD PARAMETERS					
Style	Touch-Tone; 12 keys or typewriter	Block/typewriter	Typewriter	Typewriter	Typewriter
Character/code set	DTMF; 128 ASCII	ASCII	127 ASCII	127 ASCII	127 ASCII
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	No	10 opt.	Opt.	No	16 opt.
Numeric keypad	No	No	No	Opt.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	No	Single	No	No	No
Serial printer	No	Impact/non-impact	Impact	Impact	Impact
Other devices	Audible alarm std.	Disk, mag tape, printers, card reader, audible alarm	Audible alarm std.	Audible alarm std.	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Async./sync.	Async./sync.	Asynchronous	Async./sync.
Communications protocol	ASCII	ASCII/BSC/Baudot	ASCII	Bell 8A1	IBM, HIS, Univac
Code	ASCII/DTMF	ASCII/EBCDIC	ASCII	ASCII	ASCII
Speed, bits/second	110, 150, 300	37.5 to 9600	Up to 3600	1200 to 4800	50 to 9600
Format: character, line, or block	Char. only	Char./block	Char./block	Char./block	Char./block
Multipoint operation (pollable/addr.)	No	Opt.	Opt.	Std.	Std.
Auto answer	No	Opt.	Opt.	Opt.	Opt.
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C	RS-232C
Integral modem	Std.	No	Opt.	No	No
Integral acoustic coupler	No	No	No	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	See Comments	—	140-170	161-191	150-180
Display station, 2 year lease, $/mo.	—	—	125-146	140-161	145-175
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	4,550-5,750
Controller, purchase, $	—	26,975-120,000	—	—	—
Date of first production delivery	4/73	9/71	2/75	2/76	10/76
Display units installed to date	4,000	17,000	Over 500	Over 1000	Over 300
Serviced by	Local telephone co.	Quotron	ICC	ICC	ICC
COMMENTS	Leased to user by local telephone co. for about $30 to $55 per month; unit attaches directly to telephone set	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 Termi-Net 1200; calculator firmware is optional		Printer prices include buffer and interface

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Randal Data Systems RDS 1	Randal Data Systems Link 100	Randal Data Systems Link 200	Raytheon Data Systems PTS-100	Raytheon Data Systems PTS-1200
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Either	Either	Either	Either
Maximum displays/controller	1	2	17	32	24
Portable case	No	No	No	No	No
IBM compatibility	No	3270/3275 BSC	3270/3275 BSC	3270 BSC, 2260/5	2780, 3780, 3271
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	No	No	Univac, PARS	No
User programmable	No	Yes	Yes	Yes	Yes
Self diagnostics	No	Yes	Yes	Yes	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	960/1920	960/1920	960/1920	480/960/1920	480/960/1920
Display arrangement, lines x chars./line	12/24 × 80	12/24 × 80	12/24 × 80	12,15,16,24,30 lin.	12/24 × 40 or 80
Display area, h x w, inches	6.5 × 8.4	6.5 × 8.4	6.5 × 8.4	7 × 10	8.5 × 11
Total displayable symbols	96 ASCII	96 ASCII	96 ASCII	64; 96 opt.	96
Symbol formation	5 × 7 dot matrix	5 × 7 dot matrix	5 × 7 dot matrix	7 × 7/9 dot matrix	7 × 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	No	Both std.	Both std.
Roll	Up std.	Up std.	Up std.	—	Up & down std.
Paging	No	Std.	Std.	No	Any no. 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	No	No	No	Std.	Std.
Addressable/readable cursor	Std., address. only	Std., address. only	Std., address. only	Std.	Std.
Protected format	Std.	Std.	Std.	Std.	Std.
Partial screen transmit	Std.	Std.	Std.	Std.	Std.
Tabulation	No	No	No	Std.	Std.
Character insert/delete	No	Opt.	Opt.	Std.	Std.
Line insert/delete	No	Opt.	Opt.	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/data entry	Typewriter/data entry
Character/code set	96 ASCII	96 ASCII	96 ASCII	96 ASCII/EBCDIC	96 ASCII/EBCDIC
Detachability	No	No	No	Std.	Std.
Program function keys	No	16 std.	16 std.	12 std.	12 std.
Numeric keypad	Std.	Std.	Std.	Opt.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	4 drives max.	Single
Diskette drive (floppy disk)	Single	2-4 drives	No	No	No
Serial printer	Impact	Impact	Impact	Impact	Impact
Other devices	Audible alarm std.	Card reader, disk, mag. tape, audible alarm	Card reader, disk, mag. tape, audible alarm	Disk, card reader, audible alarm, ID reader	Disk, card reader, audible alarm, ID reader
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Full-duplex	Full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Async./sync.	Async./sync.	Async./sync.	Synchronous
Communications protocol	ASCII	BSC	BSC	BSC/PARS/U 100	BSC
Code	ASCII	ASCII	ASCII	ASCII/EBCDIC	EBCDIC
Speed, bits/second	Up to 9600	Up to 9600	Up to 9600	Up to 9600	Up to 9600
Format: character, line, or block	Char./block	Char./block	Char./block	Block only	Block only
Multipoint operation (pollable/addr.)	No	No	No	Std.	Std.
Auto answer	No	Opt.	Opt.	Opt.	Opt.
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C, CCITT V.24	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	Purchase only	45	45
Display station, 2 year lease, $/mo.	—	—	—	40	40
Controller, 1 year lease, $/mo.	—	—	—	242-568	242-568
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,950-2,400	1,950-2,400	1,950-2,400	1,630	1,630
Controller, purchase, $	—	12,750 (base)	27,500 (base)	5,670-24,100	5,670-24,100
Date of first production delivery	9/75	9/75	9/76	9/72	11/74
Display units installed to date	Over 400	Over 100	Over 100	50,000	See PTS-100
Serviced by	RDS	RDS	RDS	Raytheon	Raytheon
COMMENTS				Alternate display formats are 15/30 × 64. Number of units installed includes PTS-100 and PTS-200	Includes PTS-100 components; see Report 70D-710-02

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Raytheon Data Systems PTS-1200 MKI	Raytheon Data Systems PTS-1200 MKII	Scientific Measurement Systems SMS 1920	Selecterm ADDS 980	Soroc IQ 120
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster	Cluster	Stand-alone	Stand-alone	Stand-alone
Maximum displays/controller	8	24	1	1	1
Portable case	No	No	No	No	No
IBM compatibility	3271 BSC,2780,3T80	3271 BSC,2780,3780	No	No	No
Teletype compatibility	No	Opt.	Std.	Std.	Std.
Other compatibility	No	No	No	No	No
User programmable	Yes	Yes	No	No	No
Self diagnostics	Yes	Yes	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	960/1920	960/1920	1920	1920	1920
Display arrangement, lines x chars./line	12/24 × 80	12/24 × 80	24 × 80	24 × 80	24 × 80
Display area, h x w, inches	15-inch diag.	15-inch diag.	7 × 10	8 × 10	12-inch diag.
Total displayable symbols	96	96	64; 95 opt.	96	96
Symbol formation	7 × 9 dot matrix	7 × 9 dot matrix	5 × 7 dot matrix	5 × 7 dot matrix	5 × 7 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	Std.	Std.	No
Programmable brightness levels	2 std.	2 std.	2 std.	2 std.	2 std.
Character and/or field blinking	Std.	Std.	No	Std.	No
Roll	Std., up & down	Std., up & down	Up std.	Std.	Std., up only
Paging	Std.	Std.	Single page	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,	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Opt.	No
Addressable/readable cursor	Both std.	Both std.	Std., address. only	Std., address. only	Std., address. only
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.	No
Line insert/delete	Std.	Std.	Std.	Std.	No
Erase	Char., line, screen std.	Char., line, screen std.	Char., line, screen std	Char., screen std.	Line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter/data entry	Typewriter/data entry	Teletype/key punch	Typewriter	Typewriter
Character/code set	96 ASCII/EBCDIC	96 ASCII/EBCDIC	ASCII	ASCII	96 ASCII
Detachability	Std.	Std.	No	No	No
Program function keys	12 std.	12 std.	—	Opt.	No
Numeric keypad	Std.	Std.	11 std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	Single	Single	Single	Single	No
Diskette drive (floppy disk)	No	No	Single	No	No
Serial printer	Impact	Impact	Impact	RS-232C interface	No
Other devices	—	—	None	Audible alarm std.	—
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Synchronous	Synchronous	Async./sync. opt.	Asynchronous	Asynchronous
Communications protocol	BSC	BSC	SDLC	ASCII	ASCII
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII	ASCII	ASCII
Speed, bits/second	Up to 9600	Up to 9600	50 to 19,200	110 to 9600	75 to 19,200
Format: character, line, or block	Block	Block	Char./block	Char./block	Char./block
Multipoint operation (pollable/addr.)	Opt.	Opt.	No	No	No
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C, 20 ma	RS-232C, 20 ma.	RS-232C, 20 ma current loop
Integral modem	No	No	No	No	
Integral acoustic coupler	No	No	No	Opt.	
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	51	51	—	88	Purchase only
Display station, 2 year lease, $/mo.	46	46	—	—	—
Controller, 1 year lease, $/mo.	631	554	—	—	—
Controller, 2 year lease, $/mo.	568	500	—	—	—
Display station, purchase, $	2,030	2,030	2,245	1,895	995
Controller, purchase, $	23,120	23,555	—	—	—
Date of first production delivery	6/78	6/78	9/74	9/73	11/76
Display units installed to date	—	—	225	2,000	4,000
Serviced by	Raytheon	Raytheon	SMS	Selecterm	Sorac
COMMENTS	Controller price includes 64K memory & 10-megabyte disk	Controller price includes 64K memory	Mfd. by Applied Digital Data Systems as Consul 580; $50 factory maintenance charge	Mfd. by Applied Digital Data Systems as Consul 980	

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Sycor 255	Sycor 251	Sycor 258	Sycor 291	Sycor 296
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Cluster	Either	Cluster	Cluster
Maximum displays/controller	1	32	24	16	8
Portable case	No	No	No	No	No
IBM compatibility	3275	3270	3270/3275 BSC	3270 BSC/SDLC	3270 BSC/SDLC
Teletype compatibility	No	No	No	No	No
Other compatibility	No	No	No	No	No
User programmable	No	No	Yes	No	No
Self diagnostics	Yes	Yes	Yes	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	480/1920	480/1920	480/1920	1920	1920
Display arrangement, lines x chars./line	12 x 40; 24 x 80	12 x 40; 24 x 80	12 x 40; 24 x 80	24 x 80	24 x 80
Display area, h x w, inches	4.5 x 8.2; 5.8 x 8.5	4.5 x 8.2; 5.8 x 8.5	—	15-inch diag.	15-inch diag.
Total displayable symbols	64; 96 opt.	64; 96 opt.	64; 96	64; 96	64; 96
Symbol formation	9 x 7 dot matrix	9 x 7 dot matrix	9 x 7 dot matrix	9 x 7 dot matrix	9 x 7 dot matrix
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	3 std.	3 std.	3 std.	2 std.	2 std.
Character and/or field blinking	Field std.	Field std.	Field std.	No	No
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	Std.	Std.	Std.	Std., addressable only	Std., addressable only
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.	Opt.	No	No
Erase	Char., screen std.	Char., screen std.	Char., screen std.	Char., screen std.	Char., screen std.
Character repeat	Partial	Partial	Partial	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter/data entry	Typewriter/data entry	Typewriter/data entry	Typewriter/data entry/keypunch	Typewriter/data entry/keypunch
Character/code set	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	12 opt.	12 opt.	12 opt.	12 opt.	12 opt.
Numeric keypad	Opt.	Opt.	Opt.	Opt.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	Dual	Dual	Dual	No	No
Serial printer	Impact	Impact	Impact	Impact	Impact
Other devices	Audible alarm, ID card reader std. light pen opt.	Audible alarm, ID card reader std. light pen opt.	Audible alarm, ID card reader std. light pen opt.	ID card reader & light pen opt.	ID card reader & light pen opt.
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half-duplex	Half-duplex	Half/full-duplex	Half/full-duplex
Technique	Synchronous	Synchronous	Synchronous	Synchronous	Synchronous
Communications protocol	BSC	BSC	BSC	BSC/SDLC	BSC/SDLC
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	1200 to 4800	1200 to 4800	1200 to 4800	1200 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.	Std.	Std.	Std.
Auto answer	Yes	Yes	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.	142-331	108-306	177-447	57	57
Display station, 2 year lease, $/mo.	—	—	—	45	45
Controller, 1 year lease, $/mo.	—	111-156	—	269	167
Controller, 2 year lease, $/mo.	—	—	—	214	135
Display station, purchase, $	5,378-11,660	3,450-10,220	3,540-10,220	2,700	2,700
Controller, purchase, $	—	2,850-4,330	4,800-6,600	11,530	7,520
Date of first production delivery	10/73	10/73	10/73	12/77	12/77
Display units installed to date	Over 12,000	Over 12,000	Over 12,000	—	—
Serviced by	Sycor & Sorbus	Sycor & Sorbus	Sycor & Sorbus	Sycor	Sycor
COMMENTS					

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Sycor 340	Sycor 350	Sycor 351	Sycor 410	Sycor 440
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Either
Maximum displays/controller	1	1	1	1	8
Portable case	No	No	No	No	No
IBM compatibility	No	2770, 2780, 3780	2770, 2780, 3780	2770, 2780, 3780	2770, 2780, 3780
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	No	No	No	No
User programmable	No	Yes	Yes	Yes	Yes
Self diagnostics	No	No	No	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	578	576	576	576	576
Display arrangement, lines x chars./line	9 x 64	9 x 64	9 x 64	9 x 64	9 x 64
Display area, h x w, inches	7.75 x 5.5	9 x 9	9 x 9	7 x 9.5	7 x 9.5
Total displayable symbols	62	64 ASCII	64 ASCII	64 ASCII	64 ASCII
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	No	No	No	No
Programmable brightness levels	No	No	No	3 opt.	3 opt.
Character and/or field blinking	No	Char. std.	Char. std.	Char. std.	Char. std.
Roll	Up opt.	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	Std.	No	No	No	No
Tabulation	Std.	Std.	Std.	Std.	Std.
Character insert/delete	No	No	No	No	No
Line insert/delete	No	No	No	No	No
Erase	Char., screen std.	Std.	Std.	Std.	Std.
Character repeat	No	No	No	No	No
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter/data entry	Typewriter/data entry	Typewriter/data entry	Typewriter/data entry
Character/code set	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	64 ASCII	64 ASCII
Detachability	No	Std.	Std.	—	—
Program function keys	Yes	—	—	23 std.	23 std.
Numeric keypad	Std.	Std.	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	Single/dual	No	No	Single	Single
Diskette drive (floppy disk)	Dual	1 or 2 dual	1 or 2 dual	Single	Single
Serial printer	Impact	Impact	Impact	Impact	Impact
Other devices	Card reader, line printers, 7-/9-tk. mag. tape units, audible alarm	Card reader, line printers, mag. tape, audible alarm	Card reader, line printers, mag tape, audible alarm	Card reader, line printers, mag. tape, audible alarm	Card reader, line printers, mag tape, audible alarm
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half-duplex	Half-duplex	Half-duplex	Half-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Async./sync.	Async./sync.
Communications protocol	ASCII/BSC	BSC	BSC	BSC	BSC
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	75 to 4800	110 to 4800	110 to 4800	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.)	No	No	No	Yes	Yes
Auto answer	Opt.	Std.	Std.	Std.	Std.
Auto call	Opt.	Std.	Std.	Opt.	Opt.
Terminal interface	RS-232C opt.	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.	187-593	292-809	400-917	600-954	44-54
Display station, 2 year lease, $/mo.	123-536	—	—	—	—
Controller, 1 year lease, $/mo.	—	Included	Included	Included	444-609
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	6,600-23,720	9,600-26,100	16,100-31,700	21,150-33,020	1,800-2,300
Controller, purchase, $	—	—	Included	Included	14,865-22,965
Date of first production delivery	2/71	9/75	7/76	7/76	3/76
Display units installed to date	Over 32,000	Over 1700	Over 1700	1200	1200
Serviced by	Sycor & Sorbus	Sycor & Sorbus	Sycor & Sorbus	Sycor & Sorbus	Sycor & Sorbus
COMMENTS	See Report 70D-792-01 for details on the Sycor line of intelligent data entry terminals				

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Sycor 405	Sycor 445	Systematics General Tempest T5177	Systematics General Tempest T5175	Systematics General Tempest T5101
TERMINAL DESCRIPTION					
Stand-alone or cluster	Cluster	Cluster	Cluster	Stand-alone	Stand-alone
Maximum displays/controller	2	8	32	1	1
Portable case	No	No	No	No	No
IBM compatibility	—	—	3270	3275	No
Teletype compatibility	—	—	No	No	Std.
Other compatibility	—	—	No	No	No
User programmable	Std. via TAL 2000, BASIC & COBOL	Std. via TAL 2000, BASIC & COBOL	No	No	No
Self diagnostics	Std.	Std.	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	2000	2000	1920	1920	1920
Display arrangement, lines x chars./line	25 x 80	25 x 80	24 x 80	24 x 80	24 x 80
Display area, h x w, inches	7.75 x 10.4	7.75 x 10.4	12-inch diag.	12-inch diag.	12-inch diag.
Total displayable symbols	64; 96	64; 96	128	128	128
Symbol formation	7 x 12 dot matrix	7 x 12 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	No
Programmable brightness levels	Std.	Std.	2 std.	2 std.	2 std.
Character and/or field blinking	Std.	Std.	Std.	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	—	—	No	No	No
Addressable/readable cursor	—	—	Both std.	Both std.	Both std.
Protected format	—	—	Std.	Std.	Std.
Partial screen transmit	—	—	Std.	Std.	Std.
Tabulation	—	—	Std.	Std.	Std.
Character insert/delete	—	—	Std.	Std.	Std.
Line insert/delete	—	—	Std.	Std.	Std.
Erase	—	—	Char., line, screen std.	Char., line, screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter/data entry	Typewriter/data entry	Typewriter	Typewriter	Typewriter
Character/code set	128 ASCII	128 ASCII	128 ASCII/EBCDIC	128 ASCII/EBCDIC	128 ASCII/EBCDIC
Detachability	Std.	Std.	Std.	Std.	Std.
Program function keys	—	—	16 std.	16 std.	16 std.
Numeric keypad	—	—	Std.	Std.	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	Single drive	No	No	No
Diskette drive (floppy disk)	2 or 4 drives	Single drive	No	No	No
Serial printer	Impact	Impact	Impact	Impact	Impact
Other devices	Line printer & 9-tk. mag. tape drive	Disk drives, line printers, & 9-tk. mag. tape drive	—	—	—
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half/full-duplex	—	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	—	Synchronous	Async./sync. opt.
Communications protocol	BSC/SDLC	BSC/SDLC	—	BSC	ASCII
Code	ASCII/EBCDIC	ASCII/EBCDIC	—	ASCII/EBCDIC	ASCII
Speed, bits/second	Up to 9600	Up to 9600	—	2400 to 4800	110 to 9600
Format: character, line, or block	Block	Block	—	Block	Block
Multipoint operation (pollable/addr.)	No	No	—	Std.	Std.
Auto answer	No	No	—	No	No
Auto call	Opt.	Opt.	—	No	No
Terminal interface	RS-232C	RS-232C (2)	—	RS-232C; MIL STD 188-C	RS-232C
Integral modem	No	No	—	No	No
Integral acoustic coupler	No	No	—	No	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	83	65	Contact vendor	Contact vendor	Contact vendor
Display station, 2 year lease, $/mo.	76	59	—	—	—
Controller, 1 year lease, $/mo.	167	555	—	—	—
Controller, 2 year lease, $/mo.	155	510	—	—	—
Display station, purchase, $	3,600	2,800	4,950-5,500	5,500-6,300	4,450-4,950
Controller, purchase, $	6,250	22,500	—	—	—
Date of first production delivery	Third qtr. 1978	Third qtr. 1978	6/77	12/77	1/76
Display units installed to date	—	—	—	—	—
Serviced by	Sycor	Sycor	Self & third party	Self & third party	Self & third party
COMMENTS	Available with 64K- or 80K-byte memory & Sycor link	Available with 64K- to 256K-byte memory, 5 to 70 megabytes of disk, & Sycorlink	Replaces IBM 3277-2 Display Station on IBM 3271 or 3272 Control Units; local copy printer		

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Tano Outpost 7	TEC, Inc. Model 70	TEC, Inc. Models 410/415, 420/425, & 430/435	TEC, Inc. Model 440	TEC, Inc. Models 450/455 & 460/465
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	33/35, 40	Std.	No	Std.	Std. (450/455)
Other compatibility	Yes	See Comments	No	No	No
User programmable	Yes	No	No	No	No
Self diagnostics	Yes	No	No	No	No
DISPLAY PARAMETERS					
Display positions, chars/display	1920	2000	1000/1920	1920	1000/1920
Display arrangement, lines x chars./line	24 x 80	25 x 80	20 x 50; 24 x 80	24 x 80	20 x 50; 24 x 80
Display area, h x w, inches	12-inch diag.	6 x 9	6 x 9	6 x 9	6 x 9
Total displayable symbols	128	126 ASCII	64	64	64
Symbol formation	7 x 9 dot matrix	7 x 9 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.	Opt.	Opt.	No	No
Programmable brightness levels	2 std.	Opt.	No	No	No
Character and/or field blinking	Both std.	Opt.	Std.	No	Std.
Roll	Std., up & down	Up std.	Std.	Std.	Std.
Paging	Std.	3 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.	Rt., LF, BS	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	Std.	Std.	Std.
Addressable/readable cursor	Std.	Both std.	Std.	No	Std.
Protected format	Std.	Opt.	Std.	No	Std.
Partial screen transmit	Std.	Opt.	No	No	Std.
Tabulation	Std.	Opt.	Std.	No	Std.
Character insert/delete	Std.	Opt.	Std.	No	Std.
Line insert/delete	Std.	Opt.	Std.	No	Std.
Erase	Char., line, screen std.	Char., screen std., line opt.	Line, screen std.	Char., screen std.	Line, screen std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Typewriter/data entry	Typewriter, TTY	Teletype	Teletype	TTY/typewriter
Character/code set	ASCII/EBCDIC	128 ASCII	64 ASCII	64 ASCII	ASCII
Detachability	No	Std.	Std.	Std.	Std.
Program function keys	10 std.	8 std.	No	No	None
Numeric keypad	Std.	Opt.	Opt.	None	Std., opt., 450/455
ANCILLARY DEVICES					
Cassette tape drive	Single/dual	—	No	No	No
Diskette drive (floppy disk)	RS-232C interface	Single	No	No	Single
Serial printer	RS-232C interface	Impact, non-impact	RS-232 interface	RS-232 interface	RS-232 interface
Other devices	Audible alarm std., ID card reader opt.	—	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. std., sync. opt.	Asynchronous	Asynchronous	Asynchronous
Communications protocol	ASCII/EBCDIC	See Comments	ASCII	ASCII	ASCII/Burroughs
Code	ASCII/EBCDIC	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	110 to 9600	50-9600	110 to 9600	110 to 9600	110 to 9600
Format: character, line, or block	Char./line/page	Char./line, blk. opt.	Block only	Char. only	Char./block
Multipoint operation (pollable/addr.)	Yes	Opt.	Std. (420/425)	No	Std., 460/465
Auto answer	No	No	No	No	No
Auto call	No	No	No	No	No
Terminal interface	RS-232C or 20 ma dc	RS-232C, TTL std.; 20/60 ma dc opt.	RS-232C, 20/60 ma. dc	RS-232C, 20/60 ma. dc	RS-232C, 20/60 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.	213	—	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, $	2,660-3,240	1,535-1,975	2,440-2,700	1,920	2,480
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	4/77	4/77	2/70	1/72	'70; '74, 460/465
Display units installed to date	125	800	6,000 (all mdls.)	850	4,480
Serviced by	Tano & third party	TEC & Sorbus	TEC	TEC	TEC
COMMENTS	Terminals are available with APL and extended ANSI BASIC	Compatible with Uniscope, VIP 7700, & TD 830; rack-mount AVA; emulators available for Univac, Honeywell, & Burroughs	Models 410/415 have parallel (TTL logic) interface; 420/425 have serial interface; rack-mounted units available		Rack mount available

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	TEC, Inc. Model 500	TEC, Inc. Models 1401, 1440, 1445, 2401, & 2402	Tektronix 4024	Tektronix 4025	Teleram P-1800
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	Std.	Std.	No
Teletype compatibility	Std.	Std.	No	No	Std.
Other compatibility	ADM 3A	No	No	No	See Comments
User programmable	No	No	No	No	User-defined firmware
Self diagnostics	No	No	—	—	No
DISPLAY PARAMETERS					
Display positions, chars/display	2000	960 (1400) 1920	2720	2720	616
Display arrangement, lines x chars./line	25 x 80	12/24 x 80	34 x 80	34 x 80	14 x 44
Display area, h x w, inches	6 x 9	6 x 9	6.7 x 9	6.7 x 9	4.5 x 5.5
Total displayable symbols	126 ASCII	64/96/128	64/96; 128 opt.	64/96; 128 opt.	127
Symbol formation	7 x 9 dot matrix	5 x 7 dot matrix	8 x 14 dot matrix	8 x 14 dot matrix	7 x 9 dot matrix
Color	No	No	No	No	No
Reverse video	Std.	No	No	Std.	No
Programmable brightness levels	No	2 std.; 1401 & 240x	2 std.	2 std.	No
Character and/or field blinking	No	Std.; 1401 & 240x	Both std.	Both std.	No
Roll	Up std.	Std.	Std.	Std.	Up & down
Paging	No	No	Std.	Std.	No
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.; LF, BS (1440)	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	Std.	Std.	—	—	No
Addressable/readable cursor	Both std.	Std.; 1401 & 240x	—	—	Std.
Protected format	No	Std.; 1401 & 240x	—	—	No
Partial screen transmit	No	Std.; 1401 & 240x	Std.	Std.	Std.
Tabulation	No	Std.; 1401 & 240x	Std.	Std.	Std.
Character insert/delete	No	No	Std.	Std.	Std.
Line insert/delete	No	No	Std.	Std.	Std.
Erase	Char./screen std.	Screen std.	Std.	Std.	Char./line/screen
Character repeat	Yes	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Teletype	Teletype	Typewriter	Typewriter	Typewriter
Character/code set	128 ASCII	ASCII	128 ASCII	128 ASCII	ASCII
Detachability	No	Std.	Std.	Std.	No
Program function keys	No	None	12	12	No
Numeric keypad	Opt.	Opt.	Std.	Std.	Single
ANCILLARY DEVICES					
Cassette tape drive	—	RS-232 interface	No	No	Single
Diskette drive (floppy disk)	Single	No	No	No	RS-232C interface
Serial printer	Impact, non-impact	RS-232 interface	Impact (4642)	Impact (4642)	RS-232C interface
Other devices	—	Audible alarm std.	4631 Hard copy unit, 4924 Cartridge Tape Drive, & 4662 Plotter		I.D. card reader
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, TTY, others
Speed, bits/second	50-9600	110 to 9600	50 to 4800	Up to 9600	110-1200
Format: character, line, or block	Char.	Char./block	Block	Block	Block
Multipoint operation (pollable/addr.)	No	No	Opt.	No	Std.
Auto answer	No	No	No	No	Std.
Auto call	No	No	No	No	No
Terminal interface	RS-232C, TTL, 20/60 ma dc opt.	RS-232C, 20/60 ma dc	RS-232C, 20 ma current loop	RS-232C, 20 ma current loop	RS-232C
Integral modem	No	No	No	No	No
Integral acoustic coupler	No	No	No	No	Std.
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	—	Purchase only	Purchase only	Purchase only	450
Display station, 2 year lease, $/mo.	—	—	—	—	250
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	995	1,125-1,725	2,995 (base)	3,595 (base)	4,995
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	4/78	11/74 to 4/75	—	—	10/74
Display units installed to date	50	4,500	—	—	Over 500
Serviced by	TEC & Sorbus	TEC	Tektronix	Tektronix	Teleram
COMMENTS		Model 2402 is a 2401 with lower case alphabetics	Has 4K to 32K memory; 32 line drawing characters	Has 4K to 32K memory; can have 6 char. sets; up to 31 char. sets with Graphics option	Compatible with DEC, Data General, General Automation, & other mini systems

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Teleray 3541	Teleray 3741	Teleray 3841	Teleray 3931	Teleray 4041
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	No	No	No	No	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	1920	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	6.5 x 8.5	8 x 10	6.5 x 8.5
Total displayable symbols	64	95; 64 opt.	95; 64 opt.	95 ASCII/APL std.	95; 64 opt.
Symbol formation	5 x 7 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.	Opt.	Std.
Programmable brightness levels	No	No	No	No	2 std.
Character and/or field blinking	No	No	No	No	Std.
Roll	Up std.	Up std.	Up std.	Up std.	Std., up & down
Paging	No	No	1 std.	No	2 std.; 8 opt.
Cursor positioning; Up, Down, Left, Right, Home, Return	D, L, R, H, Rt.	D, L, R, H, Rt.	U, D, L, R, H, Rt.	D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	No	No	Opt.	No	Std.
Addressable/readable cursor	No	No	Std. addressable only	No	Std.
Protected format	No	No	No	No	Std.
Partial screen transmit	No	No	No	No	Std.
Tabulation	Opt.	Opt.	Opt.	Std.	Fwd./back std.
Character insert/delete	No	No	No	No	Std.
Line insert/delete	No	No	No	No	Std.
Erase	Screen std.	Screen std.	Char., line, screen, std.	Screen std.	Char., line, screen, memory std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Teletype	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	ASCII	ASCII	ASCII/APL	ASCII
Detachability	Opt.	Opt.	Opt.	Opt.	Opt.
Program function keys	No	No	No	No	30 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 drive
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	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	ASCII	ASCII	ASCII
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. only	Char./block
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, TTL, or 20 ma dc	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.
Integral modem	Opt.	Opt.	Opt.	Opt.	Opt.
Integral acoustic coupler	Opt.	Opt.	Opt.	Opt.	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	65	72	81	109	73 w/o maint.
Display station, 2 year lease, $/mo.	62	69	77	104	69 w/o maint.
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,150	1,250	1,350	1,960	1,750
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	7/76; 1/75 (3511)	1/77; 7/74 (3711)	1/77; 4/76 (3811)	3/75	6/77
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	Rack mount, remote monitors, and other customs available; also bar code readers, cluster printer config., and other peripheral attachments			Composite video and peripheral port standards; optional on other models	Memory is composed of 3K to 6K ROM and 2K to 16K RAM

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Teleray 4041 BB	Teletype Model 40/1	Teletype Model 40/2	Teletype Model 40/3	Teletype Model 40/4
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Either	Cluster
Maximum displays/controller	1	1	1	3	24
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	3270 BSC
Teletype compatibility	No	Std.	Std.	No	No
Other compatibility	Burroughs	No	No	No	No
User programmable	No	No	No	No	No
Self diagnostics	Std.	Std.	Std.	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	3840; others opt.	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	6.5 x 8.5	5.25 x 11.25	5.25 x 11.25	5.25 x 11.25	5.25 x 11.25
Total displayable symbols	95; 64 opt.	127	127	127	127
Symbol formation	5 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	No	No	No
Programmable brightness levels	2 std.	2 opt.	2 opt.	2 opt.	3 std.
Character and/or field blinking	Both std.	Std., char. only	Std., char. only	Std., char. only	Field std.
Roll	Std.	Std., up & down	Std., up & down	Std., up & down	No
Paging	2 std.; 8 opt.	Opt., 2/3 pages	Opt., 2/3 pages	Opt., 2/3 pages	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	Opt.
Addressable/readable cursor	Std.	No	No	No	Std.
Protected format	Std.	Opt.	Opt.	Opt.	Std.
Partial screen transmit	Std.	Std.	Std.	Std.	Std.
Tabulation	Fwd./backward std.	Opt.	Opt.	Opt.	Yes
Character insert/delete	Std.	Std.	Std.	Std.	Std.
Line insert/delete	Std.	Std.	Std.	Std.	Std.
Erase	Char., line, screen, memory std.	Screen std.	Screen std.	Char., line, screen std.	Screen std.
Character repeat	Std.	Partial	Partial	Partial	Partial
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	Burroughs Poll	127 ASCII	127 ASCII	127 ASCII	96 ASCII/EBCDIC
Detachability	Opt.	No	No	Std.	Opt.
Program function keys	15 opt.	No	No	No	12 std.
Numeric keypad	Opt.	No	No	No	No
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	Single opt.	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.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half-duplex	Half/full-duplex	Half-duplex	Half-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Synchronous
Communications protocol	Burroughs	ASCII	ASCII	ASCII	BSC
Code	Burroughs	ASCII	ASCII	ASCII	ASCII/EBCDIC
Speed, bits/second	50 to 9600	1050/1200	110 to 4800	1050/1200	2400/4800/9600
Format: character, line, or block	Char.,line,block,mem.	Line/block	Block/char.	Block only	Block only
Multipoint operation (pollable/addr.)	Std.	No	No	Std.	Std.
Auto answer	No	Std.	Std.	Std.	Std.
Auto call	No	No	No	No	No
Terminal interface	RS-232C; 20 ma dc, two wire direct opt.	RS-232C	RS-232C or 20/60 ma dc	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.	81 w/o maint.	Purchase only	Purchase only	Purchase only	Purchase only
Display station, 2 year lease, $/mo.	76 w/o maint.	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,950	3,066-3,781	3,214-3,881	3,458-3,785	960-1,184
Controller, purchase, $	—	—	—	1,165	5,143-43,135
Date of first production delivery	1/78	10/73	10/73	10/73	11/75
Display units installed to date	Over 8000	—	—	—	—
Serviced by	Western Union	Teletype & Bell	Teletype & Bell	Teletype & Bell	Teletype & Bell
COMMENTS	BB signifies Burroughs compatibility	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	Compatible with the IBM 3270; also available from AT&T (Bell System) as Dataspeed 40/4

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Teleray 3541	Teleray 3741	Teleray 3841	Teleray 3931	Teleray 4041
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	No	No	No	No	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	1920	1920	1920	1920	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	6.5 x 8.5	8 x 10	6.5 x 8.5
Total displayable symbols	64	95; 64 opt.	95; 64 opt.	95 ASCII/APL std.	95; 64 opt.
Symbol formation	5 x 7 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.	Opt.	Std.
Programmable brightness levels	No	No	No	No	2 std.
Character and/or field blinking	No	No	No	No	Std.
Roll	Up std.	Up std.	Up std.	Up std.	Std., up & down
Paging	No	No	1 std.	No	2 std.; 8 opt.
Cursor positioning; Up, Down, Left, Right, Home, Return	D, L, R, H, Rt.	D, L, R, H, Rt.	U, D, L, R, H, Rt.	D, L, R, H, Rt.	U, D, L, R, H, Rt.
Cursor blinking	No	No	Opt.	No	Std.
Addressable/readable cursor	No	No	Std. addressable only	No	Std.
Protected format	No	No	No	No	Std.
Partial screen transmit	No	No	No	No	Std.
Tabulation	Opt.	Opt.	Opt.	Std.	Fwd./back std.
Character insert/delete	No	No	No	No	Std.
Line insert/delete	No	No	No	No	Std.
Erase	Screen std.	Screen std.	Char., line, screen, std.	Screen std.	Char., line, screen, memory std.
Character repeat	Std.	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	Teletype	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	ASCII	ASCII	ASCII/APL	ASCII
Detachability	Opt.	Opt.	Opt.	Opt.	Opt.
Program function keys	No	No	No	No	30 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 drive
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	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	ASCII	ASCII	ASCII
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. only	Char./block
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, TTL, or 20 ma dc	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.
Integral modem	Opt.	Opt.	Opt.	Opt.	Opt.
Integral acoustic coupler	Opt.	Opt.	Opt.	Opt.	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	65	72	81	109	73 w/o maint.
Display station, 2 year lease, $/mo.	62	69	77	104	69 w/o maint.
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,150	1,250	1,350	1,960	1,750
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	7/76; 1/75 (3511)	1/77; 7/74 (3711)	1/77; 4/76 (3811)	3/75	6/77
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	Rack mount, remote monitors, and other customs available; also bar code readers, cluster printer config., and other peripheral attachments			Composite video and peripheral port standards; optional on other models	Memory is composed of 3K to 6K ROM and 2K to 16K RAM

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Teleray 4041 BB	Teletype Model 40/1	Teletype Model 40/2	Teletype Model 40/3	Teletype Model 40/4
TERMINAL DESCRIPTION					
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Stand-alone	Either
Maximum displays/controller	1	1	1	1	1, 2, or 24
Portable case	No	No	No	No	No
IBM compatibility	No	No	No	No	3270 BSC
Teletype compatibility	No	Std.	Std.	No	No
Other compatibility	Burroughs	No	No	No	No
User programmable	No	No	No	No	No
Self diagnostics	Std.	Std.	Std.	Std.	Std.
DISPLAY PARAMETERS					
Display positions, chars/display	3840; others opt.	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	6.5 x 8.5	5.25 x 11.25	5.25 x 11.25	5.25 x 11.25	5.25 x 11.25
Total displayable symbols	95; 64 opt.	127	127	127	127
Symbol formation	5 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	No	No	No
Programmable brightness levels	2 std.	2 opt.	2 opt.	2 opt.	3 std.
Character and/or field blinking	Both std.	Std., char. only	Std., char. only	Std., char. only	Field std.
Roll	Std.	Std., up & down	Std., up & down	Std., up & down	No
Paging	2 std.; 8 opt.	Opt., 2/3 pages	Opt., 2/3 pages	Opt., 2/3 pages	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	Opt.
Addressable/readable cursor	Std.	No	No	No	Std.
Protected format	Std.	Opt.	Opt.	Opt.	Std.
Partial screen transmit	Std.	Std.	Std.	Std.	Std.
Tabulation	Fwd./backward std.	Opt.	Opt.	Opt.	Yes
Character insert/delete	Std.	Std.	Std.	Std.	Std.
Line insert/delete	Std.	Std.	Std.	Std.	Std.
Erase	Char., line, screen, memory std.	Screen std.	Screen std.	Char., line, screen std.	Screen std.
Character repeat	Std.	Partial	Partial	Partial	Partial
KEYBOARD PARAMETERS					
Style	Typewriter	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	Burroughs Poll	127 ASCII	127 ASCII	127 ASCII	96 ASCII/EBCDIC
Detachability	Opt.	No	No	Std.	Opt.
Program function keys	15 opt.	No	No	No	12 std.
Numeric keypad	Opt.	No	No	No	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	No
Diskette drive (floppy disk)	Single opt.	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.
TRANSMISSION PARAMETERS					
Mode	Half/full-duplex	Half-duplex	Half/full-duplex	Half-duplex	Half-duplex
Technique	Asynchronous	Asynchronous	Asynchronous	Asynchronous	Synchronous
Communications protocol	Burroughs	ASCII	ASCII	ASCII	BSC
Code	Burroughs	ASCII	ASCII	ASCII	ASCII/EBCDIC
Speed, bits/second	50 to 9600	1050/1200	110 to 4800	1050/1200	2400/4800/9600
Format: character, line, or block	Char.,line,block,mem.	Line/block	Block/char.	Block only	Block only
Multipoint operation (pollable/addr.)	Std.	No	No	Std.	Std.
Auto answer	No	Std.	Std.	Std.	Std.
Auto call	No	No	No	No	No
Terminal interface	RS-232C; 20 ma dc, two wire direct opt.	RS-232C	RS-232C or 20/60 ma dc	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.	81 w/o maint.	Purchase only	Purchase only	Purchase only	Purchase only
Display station, 2 year lease, $/mo.	76 w/o maint.	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	1,950	3,066-3,781	3,214-3,881	3,458-3,785	960-1,184
Controller, purchase, $	—	—	—	1,165	5,143-43,135
Date of first production delivery	1/78	10/73	10/73	10/73	11/75
Display units installed to date	Over 8000	—	—	—	—
Serviced by	Western Union	Teletype & Bell	Teletype & Bell	Teletype & Bell	Teletype & Bell
COMMENTS	BB signifies Burroughs compatibility	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	Compatible with the IBM 3270; 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

Alphanumeric Display Terminals—Equipment Specifications

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.	No	No	No
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.	No	No	No
Line insert/delete	Std.	Std.	Opt.	No	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.	No	No	No
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 opt.	Audible alarm opt.	Audible alarm std.	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	110-1200	1200 & others
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	1000	1000
Serviced by	TTC	TTC	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 $220 (PS/1A, 6 lbs.) or $390 (PS/2, 1.5 lbs.); TC/1 Termi-coupler includes acoustic coupler, power supply, and case for HT/2 and sells for $580; HT/5 features 2 rows of 6 status lights; HT/3 & HT/4 Internal Rechargeable Battery Option, $200		

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Termiflex HT/5 Handheld Terminal	Termiflex HT/8 Handheld Terminal	Terminal Data Corp. 650	Terminal Data Corp. 675 & 675-1	Texas Instruments 770
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	No	Yes; 19 lbs.	No
IBM compatibility	No	No	—	—	3780
Teletype compatibility	Std.	Std.	Std.	Std.	Std.
Other compatibility	No	No	TI Silent 700	TI Silent 700	TI 742
User programmable	No	No	Yes	No	Yes
Self diagnostics	—	—	Yes	Yes	Yes
DISPLAY PARAMETERS					
Display positions, chars/display	12	80	1920-3840	1024	1920
Display arrangement, lines x chars./line	2 x 6	4 x 20	24 x 80; 48 x 80 opt.	16 x 64	24 x 80
Display area, h x w, inches	2 x 4	2 x 4	19-inch diag.	9-inch diag.	6 x 9; 12-inch
Total displayable symbols	None	128 ASCII	96	64, 96	96 ASCII
Symbol formation	—	5 x 7 dot LED matrix	7 x 9	5 x 7	7 x 9 dot matrix
Color	No	No	8 std.	No	No
Reverse video	No	No	Std.	No	Std.
Programmable brightness levels	No	No	No	No	2 std.
Character and/or field blinking	No	No	Yes	No	Programmable
Roll	No	Std., up & down	Opt.	No	Std.
Paging	No	No	No	No	Std.
Cursor positioning; Up, Down, Left, Right, Home, Return	No	No	U, D, L, R, H, Rt.	No	Yes
Cursor blinking	No	No	Std.	No	Std.
Addressable/readable cursor	No	No	Both std.	No	Both std.
Protected format	No	No	Opt.	No	Std.
Partial screen transmit	No	No	Opt.	No	Std.
Tabulation	No	No	Std.	No	Std.
Character insert/delete	No	No	Opt.	No	Std.
Line insert/delete	No	No	Opt.	No	No
Erase	Screen std.	Screen std.	Char., line, screen std.	Std.	Char., line std., screen prog.
Character repeat	Std.	Std.	Std.	No	Std.
KEYBOARD PARAMETERS					
Style	Modified "Touch-tone"	Modified "Touch-tone"	Typewriter, data entry	Typewriter, data entry	Typewriter
Character/code set	128 ASCII	128 ASCII	ASCII	ASCII	128 ASCII
Detachability	No	No	No	Std.	No
Program function keys	No	No	Opt.	No	8 std.
Numeric keypad	No	—	Opt.	No	Std.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	Dual mini-cart.
Diskette drive (floppy disk)	No	No	Single	Single	No
Serial printer	No	No	Impact	Impact	Integral (opt.)
Other devices	None	Audible alarm std.	—	—	Line printer, 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	Async./sync.
Communications protocol	ASCII	ASCII	Asynchronous	Asynchronous	ASCII/BSC
Code	ASCII	ASCII	ASCII	ASCII	ASCII/EBCDIC
Speed, bits/second	1200 & others	110/150/300/1200	110 to 9600	110 to 9600	110 to 4800
Format: character, line, or block	Char. only	Char. only	Char.	Char.	Char./block
Multipoint operation (pollable/addr.)	No	No	Opt.	No	Programmable
Auto answer	No	No	Opt.	No	Opt.
Auto call	No	No	Opt.	No	Opt.
Terminal interface	RS-232C, 20 ma dc current	RS-232C, 20 ma dc current	RS-232C	RS-232C	RS-232C
Integral modem	No	No	No	675-1 only	Opt.
Integral acoustic coupler	No	No	—	—	No
PRICING AND AVAILABILITY					
Display station, 1 year lease, $/mo.	Purchase only	Purchase only	125-250/mo.	45-125 mo.	210
Display station, 2 year lease, $/mo.	—	—	110-250/mo.	39-125 mo.	210
Controller, 1 year lease, $/mo.	—	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—	—
Display station, purchase, $	495	3,995	1,650 up	795-995 (base)	4,995
Controller, purchase, $	—	—	—	—	—
Date of first production delivery	2/77	12/76	9/76	3/77 (7/77, 675-1)	6/77
Display units installed to date	100	100	—	—	—
Serviced by	Termiflex	Termiflex	Terminal Data	Terminal Data	TI
COMMENTS	See Comments on previous page	See Comments on previous page			Based on 16-bit TMS 9900 microprocessor; contains 24K ROM and 8K-24K RAM; 200K bytes/minicartridge

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Trans-Lux Vidi News (monitor only)	Trans-Lux News Jet (monitor only)	Trivex 40/80	Trivex Plus 70	Univac Uniscope 100
TERMINAL DESCRIPTION					
Stand-alone or cluster	Either	Either	Either	Either	Stand-alone
Maximum displays/controller	Unlimited	Unlimited	32	32	1
Portable case	No	No	No	No	No
IBM compatibility	No	No	2260/2265	3270/3275	No
Teletype compatibility	No	Std.	No	No	No
Other compatibility	No	No	No	No	Univac
User programmable	No	No	No	No	No
Self diagnostics	No	No	No	Yes	No
DISPLAY PARAMETERS					
Display positions, chars/display	576	288	240/480/960	1920	960/1024
Display arrangement, lines x chars./line	12 x 48	6 x 48	6/12 x 40; 12 x 80	25 x 80	12 x 80; 16 x 64
Display area, h x w, inches	11 or 23 inch diag.	24 x 87	6 x 9	8 x 11	5 x 10
Total displayable symbols	All Baudot	All Baudot, ASCII	64	64; 96	64; 96 opt.
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	7 x 9 dot matrix	Stroke
Color	No	No	No	No	No
Reverse video	No	No	No	No	No
Programmable brightness levels	No	No	No	2 std.	No
Character and/or field blinking	No	No	Std.	Std.	Std.
Roll	No	Up std.	No	No	Via software
Paging	No	No	No	No	—
Cursor positioning; Up, Down, Left, Right, Home, Return	None	None	U, D, L, R, H, Rt.	U, D, L, R	U, D, L, R, H, Rt.
Cursor blinking	No	No	Opt.	Opt.	Std.
Addressable/readable cursor	No	No	Std.	Std.	Std.
Protected format	No	No	Std.	Std.	Std.
Partial screen transmit	No	No	No	Std.	Std.
Tabulation	No	No	Std.	Std.	Std.
Character insert/delete	No	No	Std.	Std.	Std.
Line insert/delete	No	No	Std.	No	Std.
Erase	No	No	Char., line, screen std.	Char., screen std.	Char., line, screen std.
Character repeat	No	No	Std.	Std.	Std.
KEYBOARD PARAMETERS					
Style	No keyboard	No keyboard	Typewriter/ data entry	Typewriter/data entry/console	Typewriter
Character/code set	—	—	ASCII	EBCDIC	ASCII
Detachability	—	—	Std.	Std.	No
Program function keys	—	—	No	12 opt.	4 std.
Numeric keypad	—	—	Std.	Opt.	Opt.
ANCILLARY DEVICES					
Cassette tape drive	No	No	No	No	Dual
Diskette drive (floppy disk)	No	No	No	No	No
Serial printer	No	No	Impact	Impact	Impact/non-imp't.
Other devices	None	None	None	Audible alarm std., I.D. card reader, light pen opt.	Audible alarm std.
TRANSMISSION PARAMETERS					
Mode	Half-duplex	Half-duplex	Half-duplex	Half-duplex	Half-duplex
Technique	Asynchronous	Asynchronous	Async./sync.	Synchronous	Async./sync.
Communications protocol	—	—	ASCII	BSC/SDLC	ASCII (Univac)
Code	Baudot	Baudot, ASCII	ASCII	EBCDIC	ASCII
Speed, bits/second	50 to 150	50 to 150	Up to 9600	110-9600	Up to 9600
Format: character, line, or block	Char. only	Char. only	Block only	Block only	Block only
Multipoint operation (pollable/addr.)	No	No	Std.	Std.	Std.
Auto answer	No	No	No	Opt.	Std.
Auto call	No	No	No	No	No
Terminal interface	RS-232C/loop	RS-232C/loop	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.	24.50	275	—	85	150-168
Display station, 2 year lease, $/mo.	24.50	250	—	96	—
Controller, 1 year lease, $/mo.	175	—	—	150 (remote)	53-76 (mux)
Controller, 2 year lease, $/mo.	160	—	—	135 (remote)	—
Display station, purchase, $	—	14,000	—	2,900	3,945-4,365
Controller, purchase, $	3,000	—	—	4,185	2,036-2,849 (mux)
Date of first production delivery	—	—	4/71	5/75	5/70
Display units installed to date	—	—	4,000	Over 2,000	—
Serviced by	Translux	Translux	Trivex	Trivex	Univac
COMMENTS	Dedicated to the brokerage industry; attaches to Trans-Lux teleprinter	Dedicated to the brokerage industry; attaches to Trans-Lux teleprinter		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

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Univac Uniscope 200	Univac UTS 400	Video Data System 100 Series	Video Data Systems CG 1000
TERMINAL DESCRIPTION				
Stand-alone or cluster	Stand-alone	Either	Stand-alone	Stand-alone
Maximum displays/controller	1	3 or 6	32	32
Portable case	No	No	Opt.	Yes
IBM compatibility	No	No	No	No
Teletype compatibility	No	No	Std.	Std.
Other compatibility	Univac	Univac	No	No
User programmable	No	User-created programs	No	No
Self diagnostics	No	Std.	No	No
DISPLAY PARAMETERS				
Display positions, chars/display	1536/1920	960-1920	256-1920	256/512
Display arrangement, lines x chars./line	24 x 64/80	12 x 80 to 24 x 64/80	8 x 32 to 24 x 80	8/16 x 32
Display area, h x w, inches	7 x 10	7 x 10	Variable	Variable
Total displayable symbols	64; 96 opt.	64; 96 opt.	64	64
Symbol formation	7 x 9 dot matrix	7 x 9 dot matrix	7 x 8; 10 x 14 dot	10 x 14 dot matrix
Color	No	No	No	No
Reverse video	No	No	Opt.	Opt.
Programmable brightness levels	No	Std.	No	No
Character and/or field blinking	Std.	Both std.	Char. opt.	Char. std.
Roll	Via software	Std.	Opt. up	No
Paging	—	—	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.
Cursor blinking	Std.	Std.	Opt.	Opt.
Addressable/readable cursor	Std.	Std.	No	Both std.
Protected format	Std.	Std.	No	No
Partial screen transmit	Std.	Std.	No	No
Tabulation	Std.	Std.	Opt.	Std.
Character insert/delete	Std.	Std.	No	No
Line insert/delete	Std.	Std.	No	Opt.
Erase	Char., line, screen std.	Char., line, screen std.	Char., screen std., line opt.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS				
Style	Typewriter	Typewriter	Typewriter	Typewriter
Character/code set	ASCII	ASCII	ASCII	ASCII
Detachability	No	Std.	Std.	Opt.
Program function keys	4 std.	4 std.; 18 opt.	5 opt.	No
Numeric keypad	Opt.	Std.	No	Opt.
ANCILLARY DEVICES				
Cassette tape drive	Dual	Dual	RS-232 interface	RS-232 interface
Diskette drive (floppy disk)	No	Dual	No	No
Serial printer	Impact/non-impact	Impact/non-impact	No	No
Other devices	Audible alarm std.	—	I.D. card reader std.	I.D. card reader std.
TRANSMISSION PARAMETERS				
Mode	Half-duplex	Half-duplex	Half/full-duplex	Half/full-duplex
Technique	Async./sync.	Async./sync.	Async./sync.	Asynchronous
Communications protocol	ASCII (Univac)	ASCII (Univac)	ASCII	ASCII
Code	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	Up to 9600	Up to 9600	Up to 9600	Up to 1200
Format: character, line, or block	Block only	Block	Char./block	Block only
Multipoint operation (pollable/addr.)	Std.	Std.	No	No
Auto answer	Std.	Std.	Opt.	No
Auto call	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C
Integral modem	No	No	Opt.	No
Integral acoustic coupler	No	No	Opt.	No
PRICING AND AVAILABILITY				
Display station, 1 year lease, $/mo.	169-187	282-346 (master)	Purchase only	Purchase only
Display station, 2 year lease, $/mo.	—	—	—	—
Controller, 1 year lease, $/mo.	53-76 (mux)	165-280	—	—
Controller, 2 year lease, $/mo.	—	—	—	—
Display station, purchase, $	4,620-5,038	7,560-11,520 (instr.)	—	—
Controller, purchase, $	2,036-2,849 (mux)	4,454-9,375	495-1,995	1,995-4,995
Date of first production delivery	2/75	9/76	3/73	3/75
Display units installed to date	—	—	250	50
Serviced by	Univac	Univac	VDS	VDS
COMMENTS	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 on purchase of display station	Controller uses video monitor for display; also available in printed circuit boards	Controller uses video monitor for display

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Wang Laboratories PCS	Wang Laboratories PCS-II	Wang Laboratories WCS-15	Wang Laboratories WCS-40
TERMINAL DESCRIPTION				
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Cluster
Maximum displays/controller	1	1	1	8
Portable case	Yes	Yes	No	No
IBM compatibility	2741	2780, 3780, 3741	Yes	Yes
Teletype compatibility	Std.	Std.	Std.	Std.
Other compatibility	Burroughs	Burroughs TC 500	Burroughs	Burroughs
User programmable	Yes	Yes	Yes	Yes
Self diagnostics	No	Opt.	Opt.	Opt.
DISPLAY PARAMETERS				
Display positions, chars/display	1024	1024/1920	1024/1920	1920
Display arrangement, lines x chars./line	16 x 24	16 x 24/24 x 80	16 x 24/24 x 80	24 x 80
Display area, h x w, inches	5.5 x 7.5	5.5 x 7.5	7.5 x 9.5	7.5 x 9.5
Total displayable symbols	96 ASCII	96 ASCII	96 ASCII	96 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 7/7 x 9 dot
Color	No	No	No	No
Reverse video	No	No	No	No
Programmable brightness levels	No	No	No	No
Character and/or field blinking	No	No	No	No
Roll	Up std.	Up std.	Up std.	Up std.
Paging	No	No	No	No
Cursor positioning; Up, Down, Left, Right, Home, Return	Programmable	Programmable	Programmable	Programmable
Cursor blinking	No	No	No	No
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	No	No	No	No
KEYBOARD PARAMETERS				
Style	Typewriter	Typewriter	Typewriter	Data entry
Character/code set	96 ASCII	96 ASCII	96 ASCII	96 ASCII
Detachability	No	No	No	No
Program function keys	32 std.	32 std.	32 std.	32 std.
Numeric keypad	Std.	Std.	Std.	Std.
ANCILLARY DEVICES				
Cassette tape drive	Single	No	No	No
Diskette drive (floppy disk)	No	Single/dual	Single/dual/triple	Single/dual/triple
Serial printer	Impact	Impact	Impact	Impact
Other devices	Printers from 40 cps to 600 lpm, audible alarm	Printers from 40 cps to 600 lpm, audible alarm	—	—
TRANSMISSION PARAMETERS				
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Async./sync.	Async./sync.	Async./sync.
Communications protocol	—	ASCII/BSC/BUR	ASCII/BSC/BUR	ASCII/BSC/BUR
Code	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC	ASCII/EBCDIC
Speed, bits/second	110 to 9600	75 to 9600	75 to 9600	75 to 9600
Format: character, line, or block	Char./block	Char./block	Char./block	Char./block
Multipoint operation (pollable/addr.)	No	Opt.	Opt.	Opt.
Auto answer	Yes	Opt.	Opt.	Opt.
Auto call	No	Opt.	Opt.	Opt.
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C
Integral modem	Yes	No	No	No
Integral acoustic coupler	No	No	No	No
PRICING AND AVAILABILITY				
Display station, 1 year lease, $/mo.	270	310	510	—
Display station, 2 year lease, $/mo.	243	279	459	—
Controller, 1 year lease, $/mo.	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—
Display station, purchase, $	5,400	6,200	10,200	46,650
Controller, purchase, $	—	1,000	2,000	2,000
Date of first production delivery	4/76	4/77	10/77	1/78
Display units installed to date	231	560	—	—
Serviced by	Wang Labs.	Wang Labs.	Wang Labs.	Wang Labs.
COMMENTS	Basic prices above include cassette tape drive	Each additional emulator is priced at $200; basic prices above include single diskette drive		

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Western Union Data Services Video 100	Westinghouse Models 1600 & 1600 DE	Westinghouse Model 1620	Westinghouse Model 1625
TERMINAL DESCRIPTION				
Stand-alone or cluster	Stand-alone	Either	Either	Either
Maximum displays/controller	1	24	—	32
Portable case	Opt.	No	No	No
IBM compatibility	No	No	No	No
Teletype compatibility	Std.	Std. (1600)	Std.	Std.
Other compatibility	No	No	No	User specified
User programmable	No	No	No	No
Self diagnostics	No	No	No	Std.
DISPLAY PARAMETERS				
Display positions, chars/display	960/1920	1600	1920	1920
Display arrangement, lines x chars./line	12/24 x 80	24 x 80	24 x 80	24/18/12 x 80
Display area, h x w, inches	5.5 x 8.25	6 x 8	6.5 x 8.5	6.5 x 8.5
Total displayable symbols	64; 95 opt.	64; 96 opt.	64; 96 opt.	128; 256 opt.
Symbol formation	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	5 x 7/9 dot matrix
Color	No	No	No	No
Reverse video	No	No	No	Std.
Programmable brightness levels	No	No	No	Std.
Character and/or field blinking	No	Char. std.	No	Field std.
Roll	No	Up std.	Up std.	Std.
Paging	No	—	—	3/5 pages opt.
Cursor positioning; Up, Down, Left, Right, Home, Return	L, R, Rt.; U, D, H opt.	U, D, L, R, H, Rt.	L, R, Rt.	U, D, L, R, H, Rt.
Cursor blinking	No	Std.	No	No
Addressable/readable cursor	Opt., addressable only	Std., addressable	No	Std.
Protected format	No	Std.	No	Std.
Partial screen transmit	No	Std.	No	Std.
Tabulation	No	Std.	No	Std.
Character insert/delete	No	Std.	No	Std.
Line insert/delete	No	Std.	No	Std.
Erase	None	Char., line, screen std.	Char., screen std.	Char., line, screen std.
Character repeat	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS				
Style	Typewriter	Typewriter/data entry	Typewriter	Typewriter
Character/code set	ASCII	ASCII	ASCII	ASCII
Detachability	No	Opt.; std., DE	Opt.	Std.
Program function keys	No	9 std., DE only	No	24 on 16 keys
Numeric keypad	Opt.	Std.	Opt.	Std.
ANCILLARY DEVICES				
Cassette tape drive	Single	No	Interface only	RS-232 interface
Diskette drive (floppy disk)	Single/dual	No	No	Opt.
Serial printer	Impact	Interface only	Interface only	RS-232 interface
Other devices	Audible alarm std.	Audible alarm std.	Audible alarm std.	—
TRANSMISSION PARAMETERS				
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Asynchronous	Async./sync.	Asynchronous	Async./sync.
Communications protocol	ASCII	ASCII	ASCII	User defined
Code	ASCII	ASCII	ASCII	ASCII
Speed, bits/second	110 to 19,200	110 to 9600	110 to 2400	50 to 9600
Format: character, line, or block	Char. only	Char./block	Char. only	Char./block
Multipoint operation (pollable/addr.)	No	Opt.; std., DE	No	Opt.
Auto answer	Opt.	No	No	No
Auto call	No	No	No	No
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232 B/C, CCITT V.24
Integral modem	No	No	No	Opt.
Integral acoustic coupler	No	No	No	No
PRICING AND AVAILABILITY				
Display station, 1 year lease, $/mo.	65	—	—	—
Display station, 2 year lease, $/mo.	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—
Display station, purchase, $	860	3,300	1,700	3,100
Controller, purchase, $	—	4,000	—	4,000
Date of first production delivery	12/75	12/71; 1/75, DE	1/75	11/76
Display units installed to date	5,000	—	500	3,000
Serviced by	Western Union Data Service	Third party	Third party	Third party
COMMENTS	Built by Lear Siegler as ADM-3 and ADM-3A	Optional printer interfaces for Centronics 101A, 102A, and 306 printers; 1600 DE designed for on-line data entry	Switch-selectable data rates; single logic PC board	Controller is standard CRT with addition of one plug-in module; interconnection of CRTs is via two twisted pairs

Alphanumeric Display Terminals—Equipment Specifications

SUPPLIER AND MODEL	Westinghouse Model 1630	Wintek Model B-R-B	Wyle Series 8000 & 9000	Zentec Model 9003
TERMINAL DESCRIPTION				
Stand-alone or cluster	Stand-alone	Stand-alone	Stand-alone	Either
Maximum displays/controller	—	1	16; 32 (9000)	2
Portable case	No	No	No	Yes
IBM compatibility	Opt.	No	3275, 2265	3270/3275 BSC
Teletype compatibility	Std.	No	No	Std.
Other compatibility	No	No	No	SDLC opt.
User programmable	No	No	No	Yes
Self diagnostics	—	Yes	No	Yes
DISPLAY PARAMETERS				
Display positions, chars/display	1920	1280	480/960/1920	1920
Display arrangement, lines x chars./line	23/24 x 64/80	16 x 80	12 x 40/80; 24 x 80	24 x 80
Display area, h x w, inches	6.5 x 9	5.5 x 7	7 x 9	15-inch-diag.
Total displayable symbols	96	64	64	128
Symbol formation	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
Reverse video	Std.	No	Opt. 9000 only	Std.
Programmable brightness levels	No	No	2 std., 9000 only	Std.
Character and/or field blinking	Std.	No	Opt., 9000 only	Std.
Roll	Opt.	Up std.	Opt., 9000 only	Std., up & down
Paging	—	—	Opt., 9000 only	2 pages opt.
Cursor positioning; Up, Down, Left, Right, Home, Return	U, D, L, R, H, R	L, R	U, D, L, R, H	U, D, L, R, H, Rt.
Cursor blinking	Std.	No	Opt., std. 9000	Std.
Addressable/readable cursor	Std.	No	Std.	Std.
Protected format	Std.	—	Std.	Std.
Partial screen transmit	Std.	—	Std.	Std.
Tabulation	Std.	—	Std.	Std.
Character insert/delete	Std.	Std.	Std.	Std.
Line insert/delete	Std.	No	Std., 9000 only	Std.
Erase	Char., line, screen std.	Char. std.	Char., line, screen std.	
Character repeat	Std.	Std.	Std.	Std.
KEYBOARD PARAMETERS				
Style	Typewriter	Teletype	Typewriter/data entry	Typewriter
Character/code set	ASCII/EBCDIC	ASCII	ASCII	ASCII
Detachability	Std.	Std.	Std., 9000 only	Std.
Program function keys	Opt.	No	12 std., 9000 only	32 std.
Numeric keypad	No	No	Opt.	Std.
ANCILLARY DEVICES				
Cassette tape drive	No	Single	Opt., 9000 only	RS-232C
Diskette drive (floppy disk)	No	No	Opt., 9000 only	1, 2 or 3 drives
Serial printer	Buffered interface	No	Impact	Impact
Other devices	Interface for card reader	None	Audible alarm opt. (9000 only)	Audible alarm std.
TRANSMISSION PARAMETERS				
Mode	Half/full-duplex	Half/full-duplex	Half/full-duplex	Half/full-duplex
Technique	Synchronous	Asynchronous	Async./Sync.	Async./Sync. opt.
Communications protocol	ASCII	ASCII	ASCII/BSC	ASCII, BSC, SDLC
Code	ASCII	ASCII	ASCII/EBCDIC	ASCII
Speed, bits/second	Up to 9600	110 to 9600	1200 to 9600	110 to 9600
Format: character, line, or block	Block only	Char. only	Block only	Char./block
Multipoint operation (pollable/addr.)	Std.	Opt.	Std.	Opt.
Auto answer	Std.	Opt.	Opt., 9000 only	Opt.
Auto call	—	Opt.	No	Opt.
Terminal interface	RS-232C	RS-232C	RS-232C	RS-232C MIL-188 B/C
Integral modem	No	Opt.	No	No
Integral acoustic coupler	No	Opt.	No	No
PRICING AND AVAILABILITY				
Display station, 1 year lease, $/mo.	—	Purchase only	Contact vendor	—
Display station, 2 year lease, $/mo.	—	—	—	—
Controller, 1 year lease, $/mo.	—	—	—	—
Controller, 2 year lease, $/mo.	—	—	—	—
Display station, purchase, $	Contact vendor	875	Contact vendor	3,900-8,000
Controller, purchase, $	—	—	—	3,900 (basic)
Date of first production delivery	3rd qtr. 1975	1/76	1972; 1975 (9000)	6/75
Display units installed to date	—	Over 200	—	Over 3,000
Serviced by	Third party	Wintek	Wyle or third party	Zentec & third party
COMMENTS	Microprocessor-based unit uses Intel 8080 with up to 6K PROM		Discounts available based on lease term & number of units per system; 9000 is microprogrammable	Microprocessor-based unit (Intel 8080) with 6K to 64K bytes of memory

Char., line, screen std.

Alphanumeric Display Terminals—Basic Characteristics

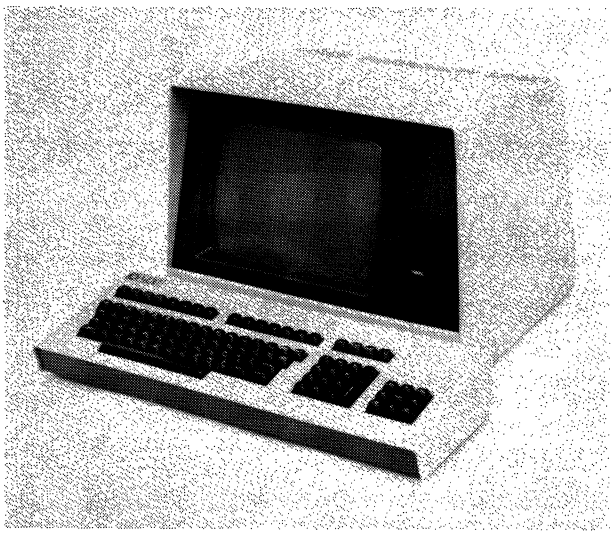
transmission of data in a steady stream. The time interval between successive characters is always precisely the same. The communications interface either provides clocking or accepts external clocking signals from the data set.

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.

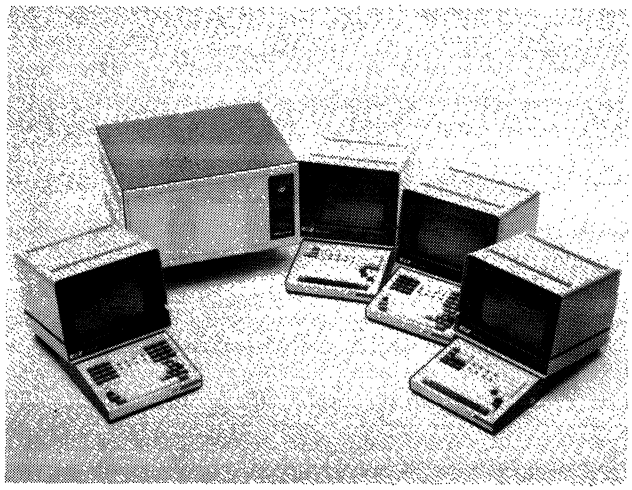
The transmission *code* refers to the bit pattern of the transmitted characters. Two codes are prominent: EBCDIC and ASCII. The latter has been accepted as an industry and government standard, and is now the most commonly used code by display terminals.

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 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



Infoton, another producer of low-cost, Teletype-compatible display terminals, unveiled the microprocessor-based Models 200 and 400 in June 1977. Both are available with a variety of keyboard styles and range in price from $1,195 to $1,595, depending on keyboard. The top-of-the-line Model 400 shown here is available with a host of features including numeric pad and 24 program function keys.



Incoterm, a prominent vendor of user-programmable display terminals, introduced the SPD 15/25 in September 1977. The microprocessor-based (Intel 8080A) product marks a dramatic departure from Incoterm's own minicomputer-based architecture. The terminal's processor (center) accommodates up to four 960- or two 1920-character display stations, a single- or dual-spindle diskette drive, and four optional I/O channels. Emulator programs are available for IBM, Honeywell, Burroughs, and Univac protocols.

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.

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 *acoustic telephone coupler*, so that the terminal can be connected to a conventional telephone handset.

Alphanumeric Display Terminals—Basic Characteristics

Pricing and Availability

Terminal pricing is provided for unit quantities (one terminal) unless otherwise specified. One- and two-year lease prices (where applicable) and purchase prices are shown for the display station and terminal controller.

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. 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.

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 has been delivered to customers as of approximately March 1, 1978. 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.

Comments

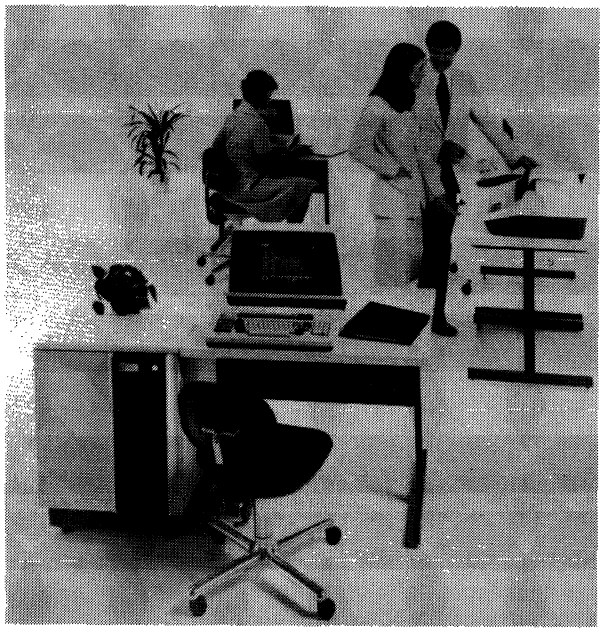
Comments at the bottom of the charts describe significant or unusual features, capabilities, or applications which are not reflected in the standard entries.

Vendors

Listed below, for your convenience in obtaining additional information, are the full names and addresses of the 88 vendors whose products are summarized in the comparison charts.

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

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



Just a year after entering the display terminal market with the Model 770 Intelligent Terminal in March 1977, Texas Instruments introduced the 774/1 Intelligent Terminal System specifically designed for distributed processing environments. The new TI terminal system includes a TI 990 processor with 64K memory; accommodates one to four 1920-character display stations, one or two 150-cps Model 810 printers, and one to four diskette drives; and features dual communications ports. The system provides upward compatibility from the TI 770 and is supported by a memory-resident multitasking executive that provides operator communications, basic file management, task scheduling, and I/O. User programs are created via an enhanced version of the TPL 700 language. Emulation software will include TTY and IBM 3780 programs. The basic terminal is priced at $12,950. Deliveries are scheduled for April 1978.

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

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

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

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

Burroughs Corporation, Business Machines Group, Room 2A38, Burroughs Place, Detroit, Michigan 48232. Telephone (313) 972-9115.

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

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

Computek, Inc., 63 2nd Avenue, Burlington, Massachusetts 01803. Telephone (617) 272-8100.

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

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

Alphanumeric Display Terminals—Basic Characteristics

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

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

Courier Terminal Systems, Inc. 1515 W. 14th Street, Tempe, Arizona 85281. Telephone (602) 275-7555.

Data 100 Corporation, 6110 Blue Circle Drive, Minnetonka, Minnesota 55343. Mailing address: P.O. Box 1222, Minneapolis. Minnesota 55440. Telephone (612) 941-6500.

Data General Corporation, 15 Turnpike Road, Southboro, Massachusetts 01581. Telephone (617) 485-9100.

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

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

Datapoint Corporation, 9725 Datapoint Drive, San Antonio, Texas 78274. Telephone (512) 699-7000.

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

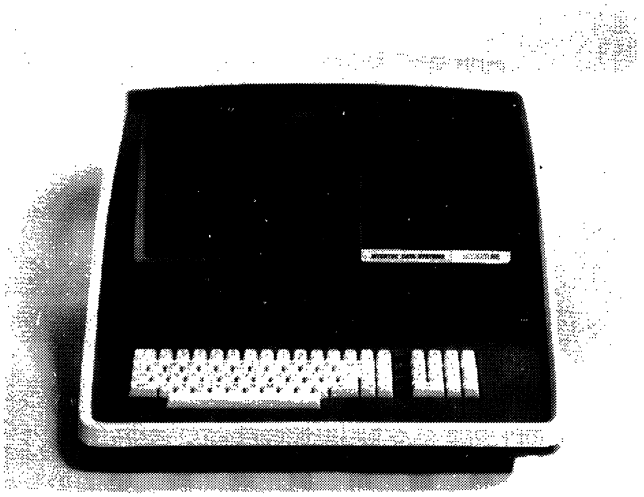
Delta Data Systems Corporation, Woodhaven Industrial Park, Cornwells Heights, Pennsylvania 19020. Telephone (215) 639-9400.

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

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

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

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



Intertec Data Systems, a small manufacturer of electronic teleprinter terminals, introduced the Intertube, a microprocessor-based, Teletype-compatible display terminal, for the shockingly low price of $784, quantity one. Features include a 2000-character display (with status line); 128 displayable symbols plus 11 graphics; protected, constant, and print-only fields; conversational, message, or page transmission; and self-diagnostic firmware. That's a lot of terminal for the price.

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

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

GTE Information Systems, Inc., One Stamford Forum, Stamford, Connecticut 06904. Telephone (203) 357-2000.

Harris Communications Systems, Inc., 11262 Indian Trail, P.O. Box 44076, Dallas, Texas 75234. Telephone (214) 620-4400.

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

Hendrix Electronics, Inc., 645 Harvey Road, Manchester, New Hampshire 03103. Telephone (603) 669-9050.

Hewlett-Packard, 1501 Page Mill Road, Palo Alto, California 94304. Telephone (415) 856-1501.

Honeywell Information Systems, Inc. 200 Seventh Street, Waltham, Massachusetts 02154. Telephone (617) 237-4100.

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

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

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

Inforex, Inc., 21 North Avenue, Burlington, Massachusetts 01803. Telephone (617) 272-6470

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

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

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

Interface Technology, Inc., 10500 Kahlmyer Drive, St. Louis, Missouri 63132. Telephone (314) 426-6880.

ICL, Incorporated, Turnpike Plaza, 197 Highway 18, East Brunswick, New Jersey 08816. Telephone (201) 246-3400.

International Telephone & Telegraph Corporation (ITT), Data Equipment & Systems Division, East Union Avenue, East Rutherford, New Jersey 07073. Telephone (201) 935-3900.

Intertec Data Systems Corporation, 2300 Broad River Road, Columbia, North Carolina 29210. Telephone (803) 789-9100.

Jacquard Systems, 1639 11th Street, Santa Monica, California 90404. Telephone (213) 393-9784.

Kustom Electronics Inc., Data Communications Division, 1010 West Chestnut, Chanute, Kansas 66720. Telephone (316) 431-4380.

Lear Siegler, Inc., Electronic Instrumentation Division, 714 North Brookhurst Street, Anaheim, California 92803. Telephone (714) 774-1010.

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

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Memorex Corporation, Equipment Group, San Tomas at Central Expressway, Santa Clara, California 95052. Telephone (408) 987-3412.

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

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

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

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

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

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

Perry Electronics, 2424 Atlantic Avenue, Raleigh, North Carolina 27604. Telephone (919) 833-2554.

Pertec Business Systems, 17112 Armstrong Avenue, Irvine, California 92714. Telephone (714) 540-8340.

Plantronics, Inc., 385 Reed Street, Santa Clara, California 95050. Telephone (408) 249-1160.

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

Racal-Milgo, Incorporated, 8600 N.W. 41st Street, Miami, Florida 33162. Telephone (305) 592-8600.

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

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

Scientific Measurement Systems, Inc., 26 Olney Avenue, Cherry Hill, New Jersey 08003. Telephone (609) 424-5220.

Selecterm, Inc., 2 Audubon Road, Wakefield, Massachusetts 01880. Telephone (617) 246-1300.

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

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

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

Tano Corporation, 4521 West Napoleon Avenue, Metairie, Louisiana 70001. Telephone (504) 888-4884.

TEC, Inc., 2727 N. Fairview Avenue, Tucson, Arizona 8570[illegible] Telephone (602) 792-2230.

Tektronix, Inc., PO Box 500, Beaverton, Oregon 97077. Telephon (503) 644-0161.

Teleram Communications Corporation, 1032 Mamaroneck Avenue Mamaroneck, New York 10543. Telephone (914) 698-7789.

Teleray, Inc., P.O. Box 24064, Minneapolis, Minnesota 5542[illegible] Telephone (612) 941-3300.

Teletype Corporation, 5555 Touhy Avenue, Skokie, Illinois 6007 Telephone (312) 982-2000.

Telex Terminal Communications, Inc., 3301 Terminal Driv Raleigh, North Carolina 27604. Telephone (919) 834-5251.

Termiflex Corporation, 17 Airport Road, PO Box 1123, Nashu New Hampshire 03060. Telephone (603) 889-3883.

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

Texas Instruments, Inc., Digital Systems Division, 12201 Southwe Freeway, P.O. Box 1444, Stafford, Texas 77477. Telephone (71 491-5115.

Trans-Lux Corporation, 625 Madison Avenue, New York, Ne York 10022. Telephone (212) PL 1-3110.

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

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

Video Data Systems, 185 Ovol Drive, Central Islip, New Yo 111722. Telephone (516) 234-1010.

Wang Laboratories, Inc., 1 Industrial Avenue, Lowell, Mass chusetts 01851. Telephone (617) 851-4111.

Western Union Data Services Company, 70 McKee Drive, Mahwa New Jersey 07430. Telephone (201) 529-1170.

Westinghouse Canada, Ltd., Box 510, Hamilton, Ontario, Canad L8N 3K2. Telephone (416) 528-8811.

Wintek Corporation, 902 North 9th Street, Lafayette, Indian 47904. Telephone (317) 742-6802.

Wyle Computer Products, a Division of Wyle Laboratories, 320 Magruder Boulevard, Hampton, Virginia 23665. Telephone (80 838-0122.

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