



Display Terminal

Model 2622A



FEATURES

High Resolution Display

- 7 x 11 dot matrix in a 9 x 15 character cell
- Display enhancements: inverse video, half bright, underline and blinking
- 2 pages of display memory

Forms Mode

- Protected and unprotected fields.

Editing

- Character and block mode editing
 - modify mode
 - line mode
 - page mode
- Character and line, insert and delete
- Full cursor positioning and sensing
- Tabulation and margin control
- Memory lock

Ease of Use

- 8 user definable soft keys with 16 character labels
- Screen labeled function keys for terminal control
- Detached, typewriter-style keyboard
- Separate numeric pad
- Cursor column and row counter
- Menu driven field definition
- Soft configuration

Integral Thermal Printer (optional)

- Screen copy of character sets
- Screen copy of display enhancements: underline and box
- Compressed mode for 132 column lines sent programatically by the computer
- Expanded print for double-width characters

Character Sets

- 64 character line drawing set (optional)

Data Communications

- EIA standard RS232C
- 20mA current loop (optional)
- Full duplex asynchronous transmission
- Extensive handshaking

Reliability and Serviceability

- Self test capabilities for terminal, data communications and printer
- Modular design

Data Entry

The HP 2622A has been designed to fit data entry needs. Two pages of display memory, the optional line drawing set, and four display enhancements enable the HP 2622A to be tailored to meet data entry form requirements. The display enhancements which include inverse video, half bright, underline and blinking in all combinations, can be used to depict an existing paper form and to facilitate data entry. A familiar and clear form provides ready acceptance by previous users and accelerates training of new operators.

Forms mode which is supported by the HP 2622A improves data integrity and increases data throughput. Forms mode enables protected and unprotected fields. No data can be entered from the keyboard or computer into a protected field. This prevents the user from accidentally typing over part of the form. The unprotected fields are the fields where data is to be entered from the keyboard or computer.

Screen labeled user definable keys allows an application program to customize the keyboard to perform several operations with a single key stroke. The eight soft keys can be re-defined and re-labeled as different forms are used. Both local and remote functions can be performed to simplify the user interface. For example, keys could be programmed to perform a local copy, fill in a repetitious field, or move the cursor to a specific location. Typical remote functions which can be controlled by a soft key include calling a new program, selecting the next form, branching within a program to perform a task, or logging-off the computer. The ability to label the soft keys with 2 lines of 8 characters each gives extra flexibility and friendliness useful in data entry applications.

Vendor Name	Address	City	State	Zip	
PACIFIC TOOL INC	1273 CRECENT WAY	SAN JOSE	CALIFORNIA	95131	
Voucher Date	Units	Purchase And Assembly Details		Post Ref.	Cost
07 16 1980	98	FINISHED STEEL CASTINGS		874738	65.88
03 19 1980	749	TAPE TRANSPORT BACKPLATES		875483	9753.88
02 28 1980	13	MILLED FLANGE ASSEMBLY		748563	877.44
HEWLETT-PACKARD		INITIATED BY: H.C. DOUGLAS		DATE: 04 14 1980	

LINE MODIFY	MODIFY ALL	BLOCK MODE	REMOTE MODE	23 1	TERMINAL TEST	MEMORY LOCK	DISPLAY FUNCS	AUTO LF
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Typical Form



Keyboard

The keyboard was designed with the data entry operator in mind. The typewriter layout offers easy access to the Tab, Return and Enter keys. The Return key can be programmed with one or two characters to meet various systems' needs. Rapid numeric entry is made possible by the separate numeric pad with Minus Sign, Decimal Point and Tab keys.

Terminal configuration can be easily controlled by an application program. Once the terminal configuration has been set up, it can be locked from the user to prevent accidental changes. The function key lock can also be used to lock the soft keys on the screen.

Program Development

For the programmer, the HP 2622A has a lot of advanced features that increase user productivity. The two pages of display memory allow the programmer to scroll or page through 48 lines of code. Information can be logged to an internal printer before it rolls out of memory. Copy line, page, or memory, and 132 column pass through capability are also useful to the programmer.

Either character or line mode can be used to enter or edit lines of a program. During normal character mode operation, the developer can use Modify Mode to edit and transmit a selected line from the terminal's memory. Insert and delete character keys on the keyboard make editing easy to perform. Operating in Line Mode allows the local editing features of the terminal to be used anytime.

The user definable soft keys are very useful to the program developer. A single key stroke can perform local or remote functions. For example, soft keys could issue a log-on command, a frequently used programming sequence, or often used terminal commands such as Print.



```
FORMIO1
10 FILES *,*
20 SYSTEM X1,"BUILD FDATA;rec=-132,,f,ascii"
30 SYSTEM X1,"FILE X=$stdin;rec=-256"
40 ASSIGN "FDATA",1,A1
50 ASSIGN "X",2,A1,WR
60 DIM A$(255),A1$(6),C$(3)
70 PRINT CTL(208),'27"F"27"A";
80 ENTER 255,X,A$
90 CONVERT A$(8;3) TO R
100 PRINT "This program creates basic statements that define the"
110 PRINT "FORM or other data in this terminal's memory.";LIN(3)
120 INPUT "Starting statement knumber, increment ?"A,B
130 SYSTEM T9,'27+";"
140 PRINT '27"h";
150 PRINT #1;"scr";END
160 FOR I=1 TO R
170 PRINT '27"D";
180 LINPUT #2:A$
190 IF UPS$(A$(1,3))="RUN" THEN 500
200 IF UPS$(A$(1,4))=">RUN" THEN 500
210 CONVERT A TO A1$
220 REM compensatej for imbedded " marks
230 c=-4
```

LINE MODIFY	MODIFY ALL	BLOCK MODE	REMOTE MODE *	25 5 IC	TERMINAL TEST	MEMORY LOCK	DISPLAY FUNCTNS	AUTO LF
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Typical Listing

Data Retrieval

The HP 2622A can make an immediate contribution to the interactive inquiry applications. Features such as multiple lines of memory, integral printer, modify mode and soft keys can make most existing inquiry programs more efficient and convenient to use. The two pages of memory allow the user to scroll or page through outputted data to locate the desired information.

Printing the needed output is no problem with the internal thermal printer. The HP 2622A combines the speed of a CRT with the convenience of hardcopy. Copy just what is needed with copy line, page and screen capability. The ability to log all data as it is received or as it rolls off of memory is also offered for the printer. This is especially useful if all of the information returned from the inquiry or program needs to be recorded.

The integral thermal printer is ideal for a quick copy. It has the added features of screen copy, compressed and expanded printing and report modes. For output that is formatted with the line drawing character set a perfect copy can be made on the printer. Compressed and expanded printing offer 132 characters per line and 40 characters per line respectively. The compressed mode is especially useful for reports that would be written for line printers. By using the printer pass through and compressed mode, 132 character lines can be printed on the 8 1/2 inch wide thermal paper. Report mode automatically formats data into pages of 60 line pages or into 64 line pages for the metric mode.

The Modify All Mode allows existing character mode operations to use the local editing capability without system modification. Because the HP 2622A keeps track of data sent by the computer, versus data entered from the keyboard, the operator can use local character insert and delete to edit replies to computer-generated questions. In Modify All Mode, each line of data entered from the keyboard is buffered until the return key is pressed at which time the data from the first location that the user typed in is sent to the computer.

Soft keys that have been programmed to perform repetitious tasks can also simplify interactive applications. These can be defined by a program or by the user. With the screen labels there is never any confusion as to the function performed by the keys.



Integral Thermal Printer



Device Control



Device Modes

Printer Control Function Keys — Screen Labels



Sample Soft Keys

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

Data Communication

The HP 2622A provides comprehensive point-to-point communications to a computer. Full duplex asynchronous transmission is supported. Flexible handshaking using hardware lines or control characters allows interfacing to a wide range of computers and printers. The HP 2622A responds to clear-to-send, ENQ/ACK, DC1/DC2, and XON/XOFF. Control of XON/XOFF can be used to manage data transfers from the computer.

Data communication set-up is simplified by a series of configuration menus. Default values provide for the most common choices.

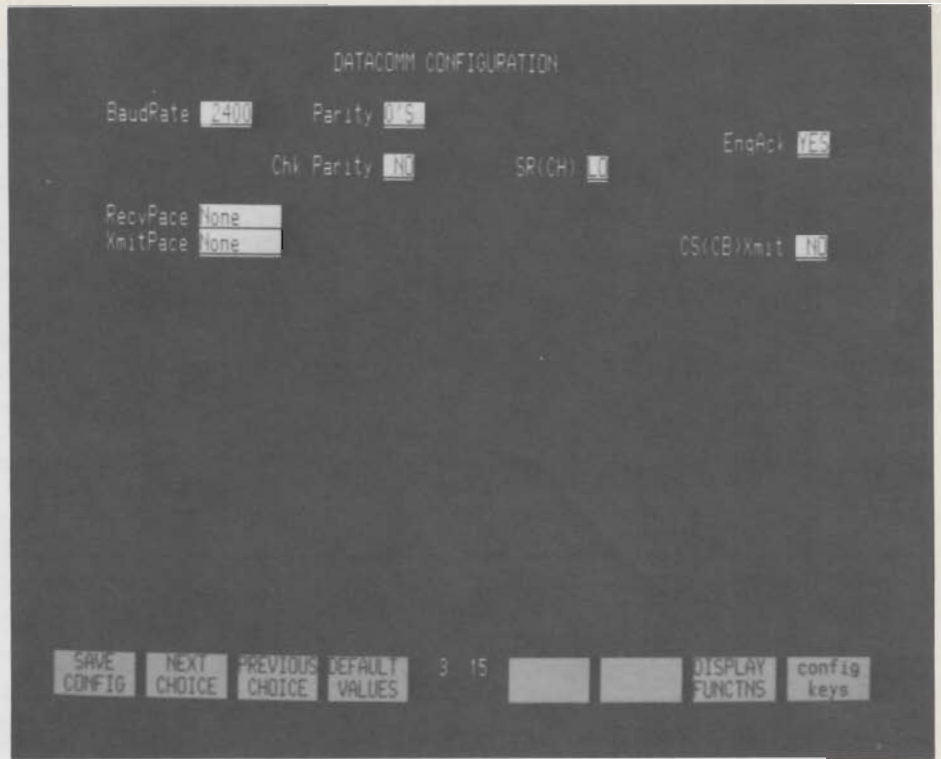
In addition to standard RS232C interfacing, the datacomm port can support the 13266A 20mA Current Loop Interface or the 13265A 300 Baud Modem.

Character Sets

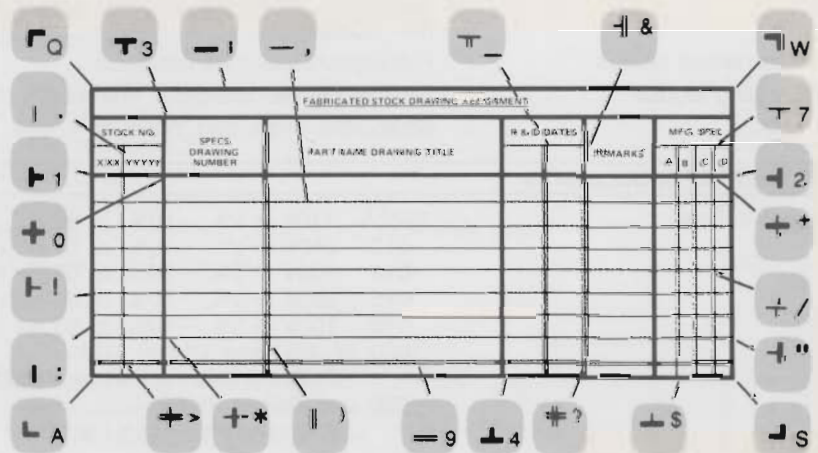
The HP 2622A offers 128 displayable ASCII characters. A 64 character line drawing character set is optionally available. The line drawing set provides the ability to make forms on the screen match existing paper forms.

Reliability/Serviceability

The HP 2622A terminal provides several levels of self test capability including a "power on test" which provides a complete test of the terminal including memory, a terminal test which does not disturb data, a data comm test, and a printer test.



Data Comm Menu



Line Drawing Set

Specifications

GENERAL

Screen Size:	150 mm (6 inches) × 215 mm (8.5 inches); diagonal 262 mm (10.4 inches)
Screen Capacity:	24 lines × 80 columns (1920 characters). 25th and 26th for labeling of function/softkeys.
Character Generation:	7 × 11 enhanced dot matrix with 1/2 dot shifting; 9 × 15 dot character cell; non-interlaced raster scan.
Character Size:	2.4 mm (.094 inches) × 3.5 mm (.138 inches).
Character Set:	Upper/lower case, displayable control codes. Optional line drawing set.
Cursor:	Blinking-underline.
Display Enhancements:	Inverse video, half bright, underline, blinking.
Refresh Rate:	60 Hz (50 Hz optional)
Tube Phosphor:	P4
Implosion Protection:	Tension band.
Memory:	2 pages of memory with or without enhancements. 128 bytes of non-volatile configuration memory (battery powered).
Keyboards:	Full ASCII code keyboard; eight screen labelled keys; cursor controls; 14 key numeric pad; auto-repeat; N-key roll-over; detached with 1.2M (4 foot) cable.

DATA COMMUNICATIONS

Data Rate:	110, 134.5, 150, 300, 600, 1200, 1800, 2400, 4800, 9600 baud. Operation with control codes, escape sequences, integral printer, or baud rates above 4800 may require CPU supplied delays or handshakes. Typical printer throughput is 60 cps. Full 24 × 80 line character screen copies in 19 seconds.
Asynchronous Datacomm Interface (50 pin):	EIA standard RS232C and CCITT V.24; fully compatible with Bell 103A, 212 modems. Hardware and XON/XOFF handshaking available. Accessory interfaces provide current loop (HP 13266A), and 300 baud US modem (HP 13265A).
Transmission Modes:	Full asynchronous transmission.
Operating Modes:	On-line; off-line; character, line modify, line and block
Parity:	Selectable; even, odd, none, zero, one

POWER REQUIREMENTS

Input Voltage:	2622A 110V (+5%, -10%) at 60 HZ (±5%) -013 240V (+5%, -10%) at 50 Hz (±5%) -014 100V (+5%, -10%) at 60 Hz (±5%) -015 220V (+5%, -10%) at 50 Hz (±5%) -016 100V (+5%, -10%) at 50 Hz (±5%) -050, or -050 and -014 or -016 115V (+10%, -25%) at 50/60 Hz -050 and -013 or -015 230V (+10%, -15%) at 50 Hz (±5%)
Power Consumption:	75W
with Option -050	170W

ENVIRONMENTAL CONDITIONS

Temperature, Free Space	Non-Operating: -40 to +60°C (-40 to +140°F)
Ambient:	Operating: 0 to +55°C (+32 to +131°F)
with Option -050:	Operating: +5 to +40°C (+41 to +104°F)
Humidity:	5 to 95% (non-condensing)
with Option -050	5 to 80% (non-condensing)
Altitude:	Non-Operating: Sea level to 15240 meters (50,000 feet) Operating: Sea level to 4572 meters (15,000 feet)
Vibration and Shock:*	Vibration: 0.38 mm (0.015") pp, 5 to 55 Hz, 3 axis Shock: 20 g, 11 ms, 1/2 sine

*Type tested to qualify for normal shipping and handling in original shipping container.

PRODUCT SAFETY

Product Meets:	U.L. requirements for: EDP equipment, office appliances, teaching equipment CSA requirements for: EDP equipment
with Option -050	Also complies with VDE, SEV, and BSI.

PHYSICAL SPECIFICATIONS

Display Monitor Weight:	16.8 kg (37 pounds)
with Option-050:	19.0 kg (42 pounds)
Keyboard Weight:	2.0 kg (4.4 pounds)
Display Monitor Dimensions:	380 mmW x 475 mmD x 440 mmH (15.0"W x 18.7"D x 17.3"H); 665 mmD (26.2"D) including keyboard)
Keyboard Dimensions:	430 mmW x 190 mmD x 75 mmH (17.0"W x 7.5"D x 3.0"H)

PRODUCT SUPPORT

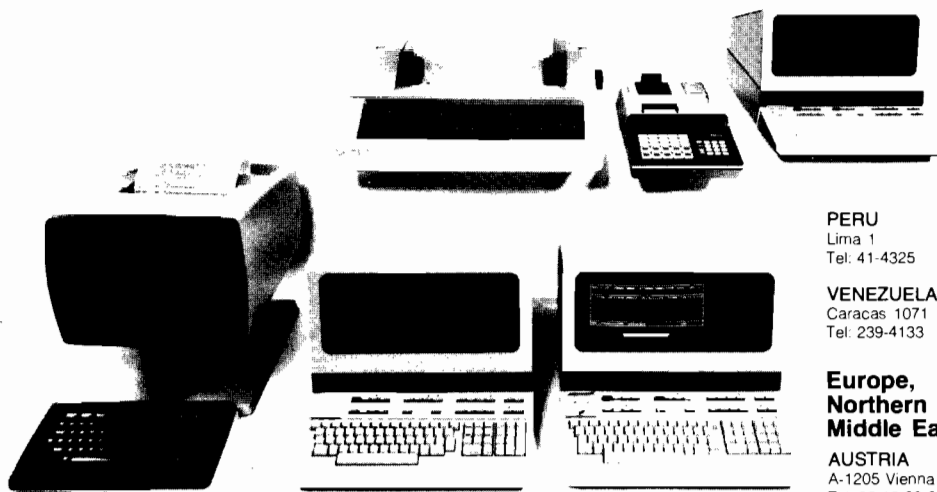
Hardware Supplied:	HP 2622A Display Terminal Option 050 Integral Printer (includes two rolls of paper).
Documentation Supplied:	HP 2622A User's Manual (02622-90001) HP 2622A Reference Manual (02622-90002)
Documentation Available:	HP 2622A Service Manual (02622-90003)
HP Systems Support:	Refer to appropriate HP system data sheet for use and support of the HP 2622A on these systems. When this product is used in a customer-assembled system, the overall operational responsibility of the system rests with the customer.
Warranty:	The HP 2622A is warranted against defects in materials and workmanship. Contact the local HP Sales Office for terms and conditions. NOTE: For warranty coverage on the 2622A Option 050, HP qualified printer paper must be used (HP 92160A or HP 92160B).
Maintenance:	HP maintenance agreements are available for 2622A support after the warranty period. Contact the local HP Sales Office for terms and conditions.

Ordering Information

Product	Option	Description	Price
2622A	—	Display Terminal. Forms mode, 4 display enhancements, 2 pages of display memory, 8 labeled soft keys, and an extended keyboard with numeric pad. 60 Hz, 110 volt operation.	\$2075
	-013	240V, 50 Hz operation	N/C
	-014	100V, 60 Hz operation	N/C
	-015	220V, 50 Hz operation	N/C
	-016	100V, 50 Hz operation	N/C
	-050	Integral forms copy thermal printer, 120 characters-per-second using 8-1/2 inch wide paper	\$1210
	-202	Line Drawing Character set.	\$105
	Accessories		
Cables (50 Pin)	13222C	RS232C cable — female, 2 meters	\$ 53
	13222M	European modem cable — male, 5 meters	\$ 79
	13222N	U.S. modem cable — male, 5 meters	\$ 79
	13222W	HP 300 System cable	\$ 74
	13222Y	RS232C EMP protect cable — male, 5 meters	\$ 53
	13265A	300 baud modem — Bell 103 compatible	\$395
	13266A	Current loop interface — 20mA	\$195
	92160A	Package of blue thermal paper, 8-1/2" x 100' (24 rolls)	\$105
	92160B	Package of black thermal paper, 8-1/2" x 100' (24 rolls)	\$120
	1420-0259	4.2 volt battery	\$ 9.75
02620-60056	Data comm loopback test connector	\$ 18	

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