

CPU DESCRIPTION

The heart of the WANG System 2200 is the System 2200 Central Processing Unit (CPU).

The standard Central Processing Unit contains a 4K Random Access Memory (RAM), expandable in 4K increments to a maximum of 32K bytes, internally located within the CPU chassis. Because the BASIC language interpreter, 20K or 32K bytes of Read Only Memory (ROM), is separately hardwired into the Central Processing Unit, nearly the entire RAM is available to the user for programming use (only 700 bytes are reserved for system use). The System 2200, therefore, compares to a computer with a much larger memory where the BASIC compiler must be loaded into the RAM. The expandable memory feature, along with the hardwired BASIC interpreter, furnishes sufficient storage area for most programming applications.

The CPU is available in Model A, Model B or Model C configurations. The Model A offers a wide range of BASIC commands and statements and supports peripheral devices such as a CRT (Cathode Ray Tube), input keyboards, output writers and printers, tape cassette drives, and telecommunication controllers. The Model B offers all the Model A capabilities, along with added BASIC data manipulation statements to scan, analyze, convert, reduce and gather data in most formats. The Model B also includes a large number of statements to control additional peripheral devices such as plotters, disk drives, card and tape readers and teletype controllers. The Model 2200C contains all the features of the Model 2200B with the addition of a standard character Edit ROM and a number of new BASIC statements which offer the ability to clear specified common variables for an optimum use of memory space, enter any eight bit code through the keyboard, recognize and recover from errors under program control and exit from a special function or internal subroutine without a normal RETURN. The Model 2200C also includes a program protection feature which provides an error message if any attempt is made to modify a loaded protected program and features which provide faster program overlays from tape and disk. The Model A, Model B and Model C are available in all memory sizes (4K to 32K).

Four special options can be hardwired into the CPU. Option 1, the Matrix ROM (Read Only Memory), provides an extensive set of matrix operation statements.



CENTRAL PROCESSING UNIT
2200ABC

Option 2, the General I/O ROM, provides additional input and output statements which can vary signal sequence parameters to interface more easily non-standard peripherals and provide additional character and data conversion capability. Option 3, the Character Edit ROM, gives additional flexibility and ease in recalling and editing program lines and numeric or alpha numeric data input lines. Option 4, the CRT Audio Signal, is a programmable alarm to notify the operator of various conditions requiring attendance, such as errors, incoming messages, or program completion. Options 1 and 2 are operational with the Model B and Model C; Options 3 and 4 are operational with either the Model A or the Model B. Option 3 is standard with the Model C.

The standard System 2200 CPU chassis contains six slots for peripheral controller boards. For users with large system needs, the Model 2219 I/O Extended Chassis can be ordered. It provides a total of 11 peripheral device controller board slots. The Model A, Model B, and Model C, in any memory size, are available with either the standard chassis or the Model 2219 I/O Extended Chassis.

SYSTEM DESCRIPTION

A wide variety of interfaced peripheral equipment complements the System 2200 CPU, including a 16-line

Cathode Ray Tube (CRT), two input keyboards, output writers, three line printers, tape cassette drives, digital and analog plotters, a punched tape reader, a mark sense card reader, a hopper-feed punched card reader, a hopper-feed mark sense card reader, numerous disk drives with a wide range of capacities, a telecommunication interface, and various I/O controller interfaces for instrumentation and non-standard peripherals. Thus, the System 2200, with its range of CPU configurations and full line of add-on peripherals, offers you a custom configuration tailored to your particular needs.

The BASIC Keyword Keyboard enters entire BASIC language words (GOSUB . . . RETURN, IF . . . THEN, FOR . . . TO . . . NEXT, et cetera) with a single keystroke, minimizing errors and time consumed entering programs. An Alpha-Numeric Typewriter Keyboard is available for users already familiar with a typewriter or Teletype. The CRT (2216, 2216A) displays 15 lines (64 characters per line) of information at one time. A CRT and a keyboard, combined with the hardwired BASIC interpreter, make the System 2200 one of the most powerful and reliable computing systems available.

Wang Laboratories, Inc. provides full software and field support, enabling installation and operation of the system on the day it is delivered.

KEYBOARD OPERATIONS

BASIC STATEMENTS AND COMMANDS

Many BASIC statements and commands are single keystrokes, input into the System 2200 via the Model 2215 BASIC Keyword Keyboard, and require only one byte of memory.

On the Model 2222 Alphanumeric Typewriter Keyboard, the BASIC statements and commands must be typed one letter at a time, but still only take up the same amount of memory as the single-keystroke method, one byte per word.

MODEL A/B/C STATEMENTS AND COMMANDS

BACKSPACE	LET
CLEAR	LINE ERASE
COM	PRINT
CONTINUE	PRINTUSING-% (Image)
CR/LF	READ
DATA	REM
DATALOAD	RENUMBER
DATA RESAVE	RESET
DATASAVE	RESTORE
DEFFN	RETURN
DEFFN'	REWIND
DIM	RUN
FOR-TO/NEXT	SAVE
GOSUB	SELECT
GOSUB'	SKIP
GOTO	STATEMENT NUMBER
HALT/STEP	STEP
IF/THEN	STOP
IF END	TAB
INPUT	TRACE

ADDITIONAL MODEL B/C STATEMENTS AND COMMANDS

ADD	INIT
AND	KEYIN
BIN	ON/GOSUB
BOOL	ON/GOTO
CONVERT	OR
DATALOAD BT	PACK
DATALOAD	PLOT
DATASAVE BT	ROTATE
DATASAVE	UNPACK
HEXPRINT	XOR

ADDITIONAL MODEL C STATEMENTS

COM CLEAR	ON ERROR GOTO
DEFFN' HEX()	RETURN CLEAR

ADDITIONAL MODEL B/C DISK STATEMENTS AND COMMANDS

COPY	LIST DC
DATALOAD BA	LOAD DA (Command)
DATALOAD DA	LOAD DA (Statement)
DATALOAD DC	LOAD DC (Command)
DATALOAD DC OPEN	LOAD DC (Statement)
DATASAVE BA	MOVE
DATASAVE DA	MOVE END
DATASAVE DC	SAVE DA
DATASAVE DC CLOSE	SAVE DC
DATASAVE DC OPEN	SCRATCH
DBACKSPACE	SCRATCH DISK
DSKIP	VERIFY
LIMITS	

MATH AND STRING FUNCTIONS

Numerous mathematical functions, when used in System 2200 BASIC statements, are calculated to 13 significant digits. The math and string functions are preprogrammed (hardwired).

MODEL A FUNCTIONS

EXP	ABS	SIN	#PI(π)	ARCSIN	RND
LOG	INT	COS	SGN	ARCCOS	HEX
SQR	STR	TAN	LEN	ARCTAN	

ADDITIONAL MODEL B/C FUNCTIONS

POS	NUM	VAL
(Arguments of trigonometric functions can be expressed in Degrees, Radians, or Gradians)		

USER-DEFINED KEYS (MODEL A, MODEL B AND MODEL C)

All 32 Special Function Key operations on the Model A the Model B or the Model C can be defined by the user

and instantly redefined to meet changing requirements. The keys can be used to write, store, and then access with a single keystroke, commonly used character strings for text entry. Or the keys can access program subroutines directly from the keyboard.

ADDITIONAL MODEL C FEATURES

- Faster Program Overlaying:
Up to twice as fast via cassettes and up to five times faster via disk.
- Protection against accidental program malfunction by an operator.
- User defined keys also can be used to enter any 8-bit code or as multi-entry points to execute an entire program.

SPECIFICATIONS

CENTRAL PROCESSING UNIT (CPU) SYSTEM 2200A, 2200B OR 2200C

*Average Execution Times (Milliseconds)

Add/Subtract	0.8
Multiply	3.8
Divide	7.4
Square Root	46.4
e^x	25.3
$\log_e x$	23.2
x^y	45.4
Integer	0.24
Absolute Value	0.02
Sign	0.25
Sin	38.3
Cos	38.9
Tan	78.5
Arctan	72.5
Read/Write Cycle	1.6 μ sec.

**Average execution times determined using Random Number Arguments with 13 digits of precision. Speeds are faster in calculations with arguments of less precision.*

Memory Size

4,096 steps (4K; expandable to 32K in 4K increments)

Weight

34 lb (15.4 kg)

Power Requirements

115 or 230 VAC \pm 10%, 50 or 60 Hz \pm 1/2 cycle

Operating Environment

50° F to 90° F (10° C to 32° C)
40% to 60% relative humidity

Peripheral Capacity

6 (expandable to a maximum of 11 with a Model 2219 I/O Extended Chassis)

Dynamic Range

10^{-99} to 10^{+99}

Subroutine Stacking

50

Size of CPU

Height	9 3/4 in. (24.8 cm)
Depth	16 in. (40.6 cm)
Width	17 in. (43.2 cm)

Weight

24 lb (10.9 kg)

Power Supply

Height	7 3/4 in. (19.7 cm)
Depth	8 3/4 in. (22.2 cm)
Width	19 in. (48.3 cm)

SYSTEM 2200 FEATURES

Immediate Mode

- In the Immediate Mode, the System 2200 executes unnumbered BASIC statements as one-line calculations. Multi-statement lines can be entered and executed without altering existing programs in memory.

Accuracy

- Arithmetic operations are performed with an accuracy of 13 digits. Most trigonometric and exponential functions are calculated to twelve digits of accuracy. Calculations are performed over a range of 10^{-99} to 10^{+99} .

Programming Mode

- Up to 286 variable names can be assigned to each of the following: simple numeric variables, numeric array variables, string variables, and string array variables.
- Either one- or two-dimensional numeric or alphanumeric string arrays can be used.
- The system provides for "multi-line, multi-argument subroutines".
- The system also processes "multi-statement lines", which save keystrokes and memory.
- A total of 16 Special Function Keys can be used for single-keystroke access of up to 32 subroutines, program functions, or entry of character strings. The 32 user-defined functions also can be accessed within a program.
- The amount of unused memory is indicated on the CRT when the END statement is included at the completion of a program. For example "FREE SPACE=31,202" (bytes).

Debugging and Error Diagnostics

- When errors occur in program entry or execution, the program line is displayed and a Diagnostic Error Pointer/Error Code indicates the approximate location in the program line where an error is made and identifies the cause of the error with an error code.
- The programmable TRACE mode traces the program, producing a printout or display whenever a program variable receives a new value or a program transfer is made.
- The HALT/STEP key executes and displays one program statement each time it is depressed, allowing a line-by-line analysis of the program.
- The ON ERROR GOTO (2200C) statement permits a program to execute error recognition and/or recovery procedures under program control.

Program Saving, Loading and Chaining

- Programs, or specified portions of programs, can be saved (recorded) on tape cassettes (or other selectable storage device) for future use. When needed, the programs are loaded into the System 2200 memory to replace or append an existing program. Loading can be executed from the keyboard, or under program control, to facilitate chained program operation. The command SAVE P protects a program from being copied on another tape or listed.
- In the Model 2200C, loaded protected programs cannot be accidentally modified. Any attempt to modify a loaded protected program results in an error message being displayed (ERR 44).
- Saved programs can be identified by an alphanumeric name and then loaded by searching for the specified program name with the LOAD command.

- Preformatting or predetermining record space size is not necessary. Tape and disk record and file updating is fast and easy.

Data Saving and Loading

- DATALOAD and DATASAVE commands read or write lists of variables and arrays from or onto a tape cassette or other selected storage device.
- The COM Clear statement clears some or all previously defined common variables for a more efficient use of memory space in program overlaying (chaining).

Program Editing

- The RENUMBER command assigns an entire program, or a specified segment of a program, with user-selectable, equally incremented statement numbers.
- Errors are corrected in a statement by backspacing in an unexecuted line to the point where the error was made and properly reentering the remainder of the line; deleting the entire line by reentering the line number, followed by a CR/LF command; or replacing the line completely by reentering the line number followed by the correct program statement. The Character EDIT ROM (Option 3), standard on the Model 2200C, provides cursor positioning and single character editing.
- Additional statements can be inserted into a program by entering a line numbered between two existing line numbers. The new line automatically is inserted between the two original line numbers.

Telecommunications

- The Model 2227 Telecommunications Controller allows local or remote asynchronous communication with other System 2200's or remote asynchronous telecommunications with "foreign" CPU's (IBM, Univac, Honeywell, et cetera). Transmission over dial-up or leased phone lines equipped with Bell 103A3 Datasets is at 100 to 300 baud or with Bell 202C Datasets at 110, 150, 300, 600 or 1,200 baud. To the foreign CPU, the System 2200 appears as a Teletype Model 33 or 35. When linked directly, within 124 feet, to other System 2200s, asynchronous transmission can be up to 1200 baud.
- The Model 2250 I/O Interface Controller (8-Bit-Parallel) transmits data at up to 10,000 (8-bit) characters per second asynchronously between System 2200s linked directly by a maximum 100-foot cable. The controller facilitates mass data transfer between System 2200 disks or equivalent 8-Bit Parallel devices.
- The Model 2207A I/O Interface Controller (RS-232-C) allows direct asynchronous input and output of data between a Teletype or other 8-level ASCII device and the System 2200. The controller is excellent for linking the System 2200 to a local unit or for monitoring instruments. Laboratory or medical instrumentation which is RS-232-C and 8-level ASCII-compatible can be supported, as well as Teletype 33, 35's equipped with EIA, RS-232-C adapters. Operation is selectable at 110, 150, 300, 600 or 1,200 baud. The controller can be used with the System 2200 CPU alone; the CRT is not required.

SYSTEM 2200 FEATURES (Cont.)

Handling and Formatting Large Data Files

- Alphanumeric string variables or string arrays can be defined, with elements of up to 64 characters in length. Arrays can be dimensioned up to 4,096 total elements (up to 255 in a subscript).
- Alphanumeric STR (string) operator can extract, modify, or insert a portion of a string value.
- The PRINTUSING statement prints data in any specified format; commas and decimal points can be inserted, along with floating \pm sign and dollar sign.
- With the WANG Output Writer, formatting output is easy and quick with program controlled TAB set and clear commands.

Device Selection

- The SELECT statement is used both in the Immediate Mode and under program control to select a device for particular I/O operations (PRINT, INPUT, TAPE, DISK).
- Device selections are maintained independently for input and output operations, allowing programs to be modified easily to work with any I/O device.

Disk Operation*

- The System 2200B/C can address numerous disk drive units with varying capacities from 0.25 to 10 megabytes.
- Each disk operates in two modes: automatic file cataloging and absolute sector addressing. With catalogue operations, programs and data files can be saved and accessed automatically by name, without keeping track of sector addresses on the disk. The absolute disk operations permit the user to specify disk sector addresses when saving

and loading programs and data. An extensive set of support operations is provided, including the ability to copy backup disk platters and list the catalogue index in a single statement.

Plotting Operation*

- A powerful BASIC statement (PLOT) controls any of the plotting devices offered with the Model B or the Model C.
- The plotters can perform any number up to 999 X and Y increments and can print entire words by using a single PLOT statement.
- The PLOT statement allows recursive plot arguments, and multi-plot arguments to optimize plotting efficiency.

Paper Tape Operation*

- Punched paper tape data can be read into the system via ASR teletypewriter or the WANG Punched Tape Reader. Any punched code format can be accepted, converted and processed.

Card Reader Operation

- Punched or pencil marked data on mark sense cards can be optically read into the system, either by hand-feed with the Model 2214 Mark Sense Card Reader, or up to 300 cards per minute with the Model 2244A Hopper-Feed Mark Sense/Punched Card Reader. Standard 80-column cards, punched in Hollerith code with any standard key-punch, or punched in binary code, can be read at up to 300 cards per minute into the system with the Model 2234 Hopper-Feed Punched Card Reader.

PERIPHERAL EQUIPMENT

The *Model 2201 Output Writer* types numeric and upper and lower case alphabetic output from the System 2200 with full format control.

In the *Model 2202 Plotting Output Writer**, complete digital plotting is combined with the alphanumeric capability of the Model 2201. Thus, plots are easily titled and labeled. (Both the Model 2201 and the Model 2202 can be used as standard electric typewriters when not being used with the System 2200.)

With the *Model 2203 Punched Tape Reader**, raw paper tape data in any code format is automatically read to the system providing an efficient "data reduction" system. The reader supports 5, 6, 7 or 8 track paper tape.

✓The *Model 2207A I/O Interface Controller (RS-232-C)* allows attachment of a Model 33 Teletype as a terminal for the system, generating hardcopy and inputting programs and data stored on Teletype punched paper tape. It also supports the interface of other Teletype compatible instrumentation or terminals at 110, 150, 300, 600 or 1,200 baud.

The *Model 2212 Analog Flatbed Plotter** provides continuous line or point plotting of curves and data, as well as full alphanumeric labeling of problems solved with the System 2200.

With the *Model 2214 Mark Sense Card Reader*, data and programs can be entered directly into the system. With this low cost reader the cards are prepared "off-line" without tying up the keyboard (making the system more efficient) and are manually fed into the Model 2214.

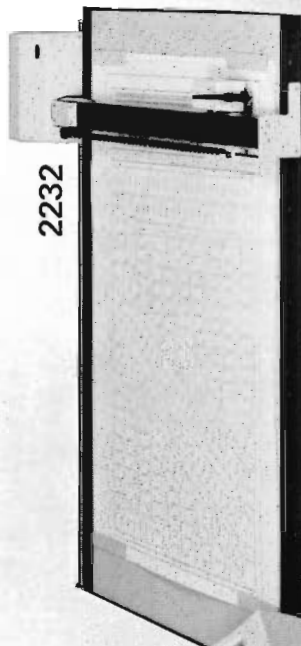
The *Model 2215 BASIC Keyword Keyboard* contains single keys for most BASIC language verbs and commands. The keyboard also contains all alphabetic characters as well as all control keys needed to program the System 2200.

✓The *Model 2216 CRT Executive Display* provides sixteen lines of 64 characters each, instantly displayed.

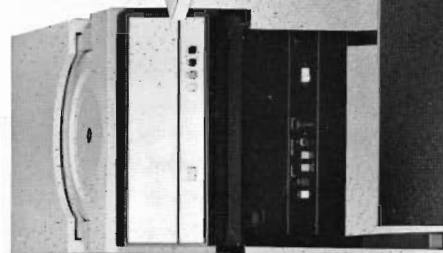
The *Model 2216A Upper and Lower Case CRT* provides 16 lines of 64 characters each in either upper or lower case alphanumeric characters.

*System 2200B/C peripherals only.

2221/2261

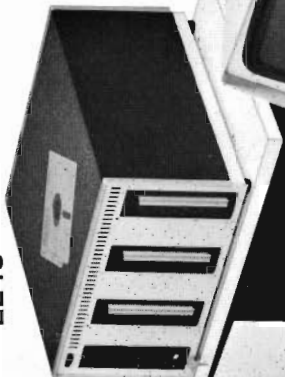


2232

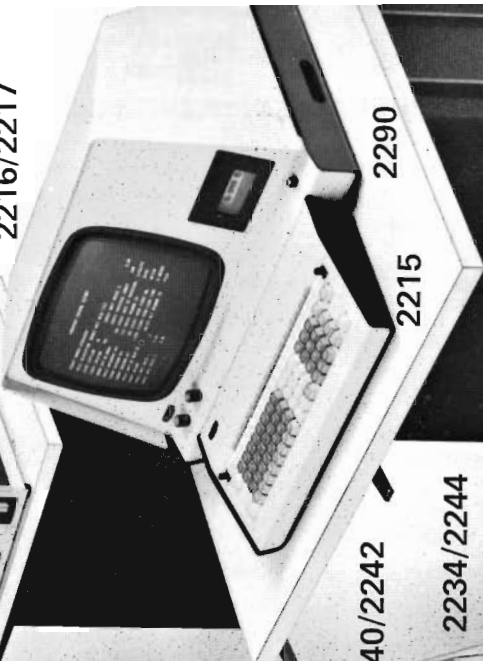


2230

2243



2216/2217

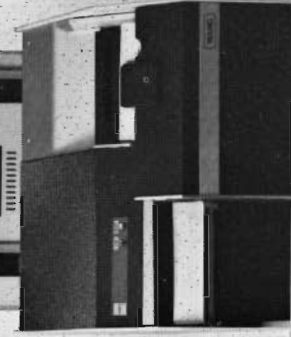


2290

2215

2240/2242

2234/2244

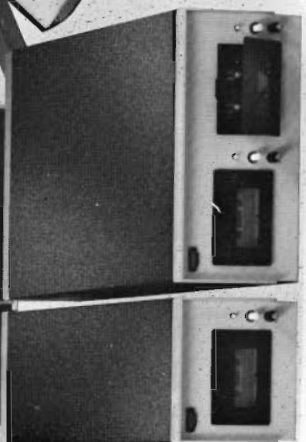


2222E

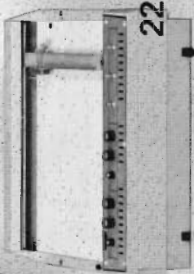


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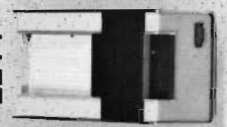
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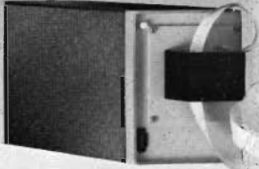
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2214



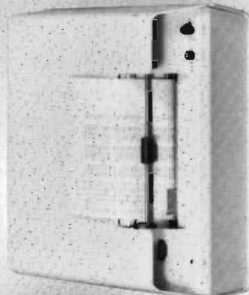
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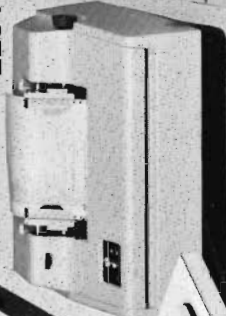
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2241



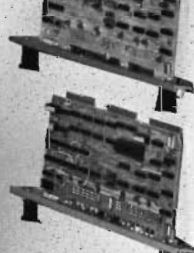
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2224



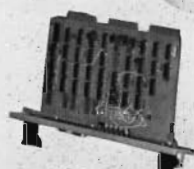
2202



2227

2252

2252



PERIPHERAL EQUIPMENT (Cont.)

The *Model 2217 Single Tape Cassette Drive* is fast and easy to operate. The magnetic tape cassette provides a low cost bulk storage system for both programs and data. A 150-foot tape has a capacity of 78,000 (8-bit) bytes, with a transfer rate of 326 bytes per second.

Ⓞ The *Model 2216/2217 Combined CRT Executive Display/Single Tape Cassette Drive* is what its name implies — a CRT and tape drive housed in the same chassis. The tape drive and controls are located to the right of the CRT screen.

The *Model 2216A/2217 combined Upper and Lower Case CRT/Single Tape Drive* houses the upper/lower case CRT and a tape drive in one space-saving chassis.

The *Model 2218 Dual Tape Cassette Drive* consists of two tape drives housed in a single unit. The tape drives are identical in operation and performance to the Model 2217. One controller board operates both tape drives, but both tape drives operate independently, with separate device addresses.

Ⓟ The *Model 2219 I/O Extended Chassis* is a CPU option which lengthens the CPU by approximately six inches and provides an additional five I/O connector slots (for a total capacity of 11 peripheral devices).

On the *Model 2221 Line Printer*, hardcopy output is printed at 150 characters per second or 60 to 200 lines per minute, depending upon line length.

The *Model 2222 Alpha-Numeric Typewriter Keyboard* enables upper and lower case alphabetic, numeric and system control instructions to be typed directly into the system, from a keyboard arranged like a typewriter.

The *Model 2224 Disk Multiplexer** allows the use of four System 2200 Central Processing Units with a single disk unit, to maximize use of the disk unit.

The *Model 2227 Telecommunications Controller* allows local or remote asynchronous communication with other System 2200s or remote telecommunications with "foreign" CPUs (IBM, Univac, Honeywell, et cetera). With the Model 2227, the System 2200 becomes an "intelligent terminal".

Three available versions of the *Model 2230 Fixed/Removable Disk Drive** provide storage for 1.25, 2.5 and 5 megabytes of information.

The *Model 2231 Line Printer* provides permanent hardcopy output at 100 characters per second with up to 80 characters per line or 60 to 150 lines per minute, depending upon line length.

The *Model 2232A Digital Flatbed Plotter** provides continuous line or point plotting of curves and data. The plotting surface is 31 inches by 48 inches. The plotter uses any type of paper including vellum, linen and Mylar. Fiber tip, ballpoint, or drafting pens can be used.

The *Model 2234A Hopper-Feed Punched Card Reader** reads up to three hundred cards per minute and can stack

550 cards in the input and output hoppers. An 80-column card can be punched with Hollerith or binary code.

Two versions of the *Model 2240 Dual Removable Flexible Disk Drive** provide storage for either 262,144 bytes or 524,287 bytes of information. Both disk drives accept the removable, compact platters, which easily can be stored when not in use.

The *Model 2242 Single Removable Flexible Disk Drive** is similar to the Model 2240, but houses one drive and provides storage for 262,144 bytes of information.

The *Model 2243 Triple Removable Flexible Disk Drive** contains three disk drives, and provides storage for 786,431 bytes of information. The removable, compact platters (used in the Model 2240, 2242, and 2243) are interchangeable between the three disk drives of the unit.

The *Model 2244A Hopper-Feed Mark Sense/Punched Card Reader** reads up to 300 cards per minute and can stack 550 cards in the input or output hoppers. The Model 2244 reads standard 80-column punch cards (the same card used with the Model 2234); 80-column optical mark sense cards without clock marks (either punched or marked in pencil); and optical mark sense cards with timing marks and 80 columns or less of data (punched or marked). Data can be in Hollerith or binary code.

The *Model 2250 I/O Interface Controller (8-Bit-Parallel)* allows interface of external equipment enabling parallel 8-bit data to be transmitted from or received by the system.

The *Model 2252 Input Interface Controller (BCD 10-Digit-Parallel)*, an input only interface, is directly compatible to most digital meters for on-line applications. It automatically converts each BCD digit to an ASCII equivalent code. It also can receive up to 40 bits of parallel binary data.

The *Model 2260 Fixed/Removable Disk Drive* provides ten megabytes (10,027,008 total bytes) of on-line storage. The unit's total storage capacity is divided equally between two separate disk platters, one of which can be removed and replaced.

The *Model 2261 High-Speed Printer* utilizes two bidirectional printing heads to print up to 330 characters per second, or 125 lines per minute, with a maximum of 132 characters per line.

The *Model 2262 XY Digitizer* provides the capability to digitize single points or curves at a resolution of $\pm .005$ inches over the entire digitizing surface. ✓

The *Model 2290 CPU/Peripheral Stand* stores the System 2200 CPU (either the standard or the Model 2219 I/O Extended Chassis) and the Power Supply. The stand includes four electrical outlets and a master ON/OFF switch located on the front. The table top can hold a CRT and keyboard, or any other peripheral device. ✓

The *Model 2291 Flatbed Plotter/Peripheral Stand* provides a sturdy surface for the Model 2232 Flatbed Plotter.

*System 2200B/C peripherals only.

ORDERING SPECIFICATIONS

SYSTEM 2200A

A keyboard programmable Central Processing Unit (CPU) with hardwired BASIC language. The CPU must have at least 4,096 bytes of memory, expandable in 4,096 byte increments to 32,588 bytes. The CPU must be capable of supporting any or all of a large number of peripheral devices: cathode ray tube display (16 lines by 64 characters per line), Selectric output typewriter, an input keyboard of either typewriter characters or single keystroke BASIC language verbs, an 80 or 132 column line printer, an 80 column thermal printer, a 132 column high-speed printer, single or dual magnetic tape cassette drives, and telecommunications between central processing units. The CPU must support Option 3 Character Editor ROM and Option 4 2216 CRT Audio Signal.

SYSTEM 2200B

A keyboard programmable Central Processing Unit (CPU) with hardwired BASIC language. The CPU must have at least 4,096 bytes of memory, expandable in 4,096 increments to 32,588 bytes. The CPU must be capable of supporting any or all of a large number of peripheral devices: cathode ray tube display (16 lines by 64 characters per line); a Selectric output typewriter; plotters capable of either single point or continuous line plots; an input keyboard of either typewriter characters or single keystroke BASIC language verbs; an 80 or 132 column line printer; a 132 column high-speed printer; a fixed/removable disk drive with a capacity of 1.25, 2.5, or 10 megabytes of information; a single removable flexible disk drive with a capacity of 262,144 bytes of information; a dual removable flexible disk drive with a capacity of either 262,144 or 524,287 bytes of information; a triple removable flexible disk drive with a capacity of 786,431 bytes of information; single or dual magnetic tape cassette drives; X-Y Digitizer; Teletype interface; the capability of telecom-

SYSTEM 2200B (Cont.)

munication between central processing units; a 300 card per minute hopper-feed punched card reader and a hopper-feed mark sense/punched card reader (with Option 2); and 8 bit and 10 digit parallel interface. The CPU must support Option 1 Matrix ROM, Option 2 General I/O ROM, Option 3 Character Editor ROM and Option 4 2216 CRT Audio Signal.

SYSTEM 2200C

A keyboard programmable Central Processing Unit (CPU) with hardwired BASIC language. The CPU must have at least 4,096 bytes of memory, expandable in 4,096 increments to 32,588 bytes. The Character EDIT mode must be a standard feature. The CPU must be capable of supporting any or all of a large number of peripheral devices: cathode ray tube display (16 lines by 64 characters per line); a Selectric output typewriter; plotters capable of either single point or continuous line plots; an input keyboard of either typewriter characters or single keystroke BASIC language verbs; an 80 or 132 column line printer; a 132 column high-speed printer; a fixed/removable disk drive with a capacity of 1.25, 2.5, or 10 megabytes of information; a single removable flexible disk drive with a capacity of 262,144 bytes of information; a dual removable flexible disk drive with a capacity of either 262,144 or 524,287 bytes of information; a triple removable flexible disk drive with a capacity of 786,431 bytes of information; single or dual magnetic tape cassette drives; X-Y Digitizer; Teletype interface; the capability of telecommunication between central processing units; a 300 card per minute hopper-feed punched card reader and a hopper-feed mark sense/punched card reader (with Option 2); and 8 bit and 10 digit parallel interface. The CPU must support Option 1 Matrix ROM, Option 2 General I/O ROM and Option 4 2216 CRT Audio Signal.

Wang Laboratories reserves the right to change specifications without prior notice.

WANG

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