DATA SHEET

The Model 2220 provides the user with a Cathode Ray Tube (CRT) display, a Single Tape Cassette Drive, and an Upper/Lowercase Alphanumeric/BASIC Keyboard self-contained in an integrated compact chassis. This peripheral, when combined with any System 2200 CPU, provides a minimum 2200 system.
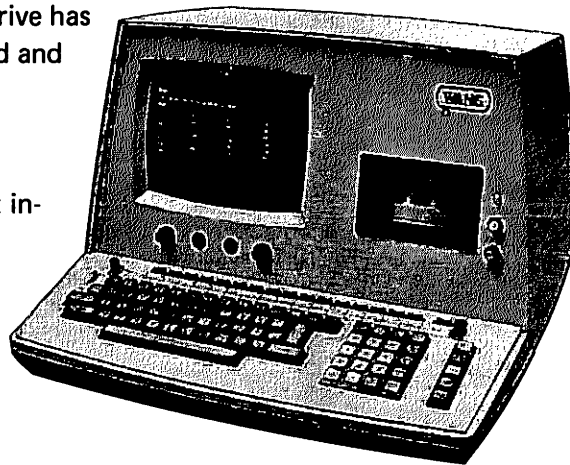
The Model 2220 integrated 9" diagonal CRT display allows the user to view instantly his calculations and program text. The display capacity is 16 lines with up to 64 characters per line. For a sharp and clear output on the CRT screen, brightness and contrast controls are provided.

A number of CRT control characters can be used to manipulate the cursor (symbol indicating next space for input) on the CRT under program control for specially formatted displays.

The display speed is approximately 65 microseconds/character. This speed allows a user to fill the CRT screen instantly.

The Model 2220 integrated Tape Cassette Drive provides fast, convenient and low cost storage of data and programs on magnetic tape cassettes. The tape cassette drive has two manual controls, one for high speed rewind and one for opening the tape drive door.

All data on cassettes is recorded twice to prevent data loss due to dirty or damaged tape. A maximum of 78,300 bytes of non-redundant information can be stored on a standard 150 ft. tape cassette. High speed rewind of cassettes is 7.5 feet/second.

MODEL 2220 CONSOLE-CRT/ KEYBOARD/SINGLE TAPE CASSETTE

The Model 2220 Integrated Upper/Lowercase Alphanumeric/BASIC Keyboard has two modes of operation: Keyword/A and A/a. The mode is selected by the toggle switch in the upper left-hand corner of the keyboard. In Keyword/A mode, shifted alpha keys produce BASIC words; unshifted alpha keys produce uppercase letters. A/a mode functions as a standard typewriter. Unshifted alpha keys produce lowercase letters; shifted alpha keys produce uppercase letters.

The Model 2220 integrated keyboard is divided into five zones.

Zone 1 contains BASIC words, alphanumeric and special character keys. Most BASIC words are generated with a single keystroke.

Zone 2 consists of numeric entry and arithmetic operator keys.

Zone 3 contains keys for program control and execution, namely: RESET (stops program listing and execution immediately, clears CRT screen and returns control to the user); HALT/STEP (causes program execution to halt upon completion of the current statement or to execute one line at a time); CONTINUE (continues program execution after a "STOP" verb has been executed or the "HALT/STEP" key has been touched); CLEAR (reinitializes program text and variable areas); LOAD (loads current or specified programs on tape into memory); and RUN (initiates execution of the program).

Zone 4 consists of the 16 user defined Special Function Keys which provide up to 32 subroutine entry points for the currently loaded BASIC program. (The Special Function Keys can be used for program entry points on any System 2200.)

Zone 5 contains the EDIT mode operator keys. Edit mode is available as a standard feature on the Systems 2200C, 2200S, and 2200T, and is available as an option on the Systems 2200A and 2200B.

EDIT   used to enter EDIT mode. When in EDIT mode, the following edit functions are available on the rightmost 8 Special Function keys.

RECALL   used to recall program line in memory to edit.

◄-----   moves the cursor five spaces to the left.

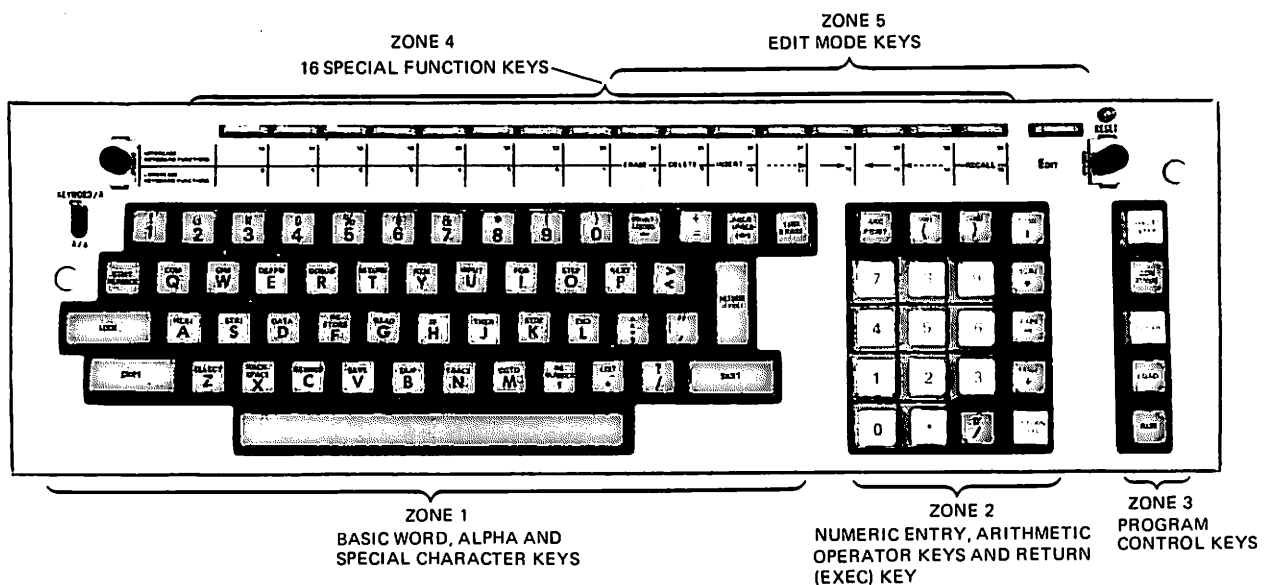◄——   moves the cursor a single space to the left.

-----►   moves the cursor five spaces to the right.

——►   moves the cursor a single space to the right.

INSERT   expands a line for additional text and data entry by inserting a space character. at the current CRT cursor position.

DELETE   deletes the character at the current CRT cursor position.

ERASE   erases a line from the current CRT cursor position to the end of the line.

ZONE 4
16 SPECIAL FUNCTION KEYS

ZONE 5
EDIT MODE KEYS

ZONE 1
BASIC WORD, ALPHA AND
SPECIAL CHARACTER KEYS

ZONE 2
NUMERIC ENTRY, ARITHMETIC
OPERATOR KEYS AND RETURN
(EXEC) KEY

ZONE 3
PROGRAM
CONTROL KEYS

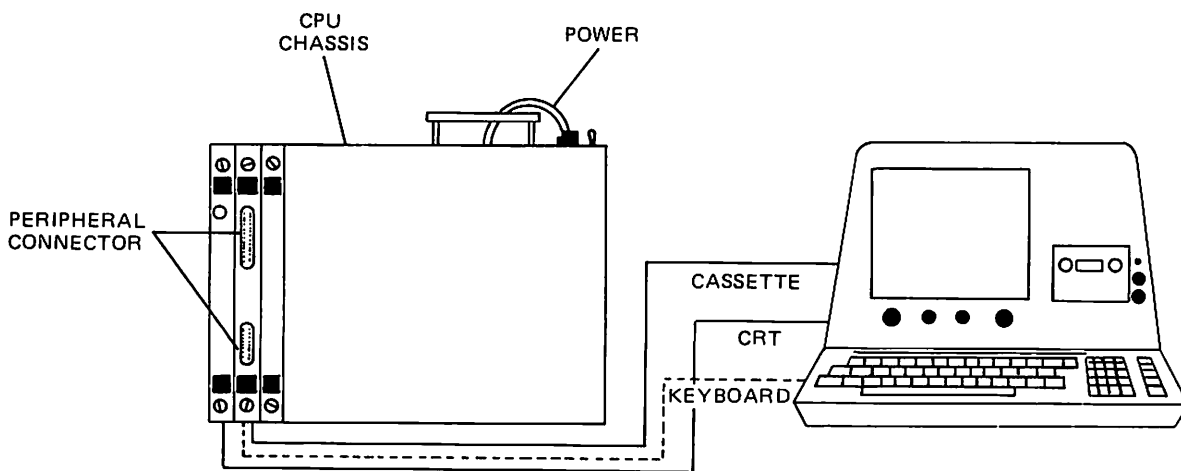| FEATURES	BENEFITS
Model 2220 Integrated CRT	Displays up to 1024 characters of current programs, calculations, results, data and printed output.
Model 2220 Integrated Tape Cassette Drive	Provides fast, convenient and low cost storage of data and programs.
Model 2220 Integrated BASIC Keyboard	Most BASIC words are entered as single keystrokes. Alpha characters can be entered in either upper or lowercase; all numerics and many mathematic functions are entered with a single keystroke. It also can be used as a standard typewriter keyboard.
EDIT Mode	Facilitates editing of lines of program text recalled from memory or data being input and displayed on the CRT without having to retype the entire line. Available as a standard feature with the Systems 2200C and 2200S, and as an option on the Systems 2200A and 2200B.
Compact size, light in weight	Allows efficient use of available office space and permits easy relocation.

OPTIONS

Option 30 — Upper/Lowercase CRT Display

The Upper/Lowercase CRT Display (OP-30) permits the displaying of upper and lowercase characters on the Model 2220 integrated CRT screen. Additional characters are provided with this option; these characters, with their respective HEX codes are: left braces (7B), right braces (7D), equivalent sign (7E), broken vertical line (7C), solid rectangle (7F), and prime symbol (60).

Option 31 — Audio Alarm

The Audio Alarm (OP-31) provides a programmed signal using code HEX(07) (the ASCII Bell code). There are a variety of uses for this option; for example, gaining the operator's attention when special conditions occur during program execution, or signalling the end of a program or a segment of a program.

A unique feature of the Model 2220 is the cassette drive/keyboard controller board. This board accepts both the Model 2220 Single Tape Cassette Drive connector and the Model 2220 Upper/Lowercase Alphanumeric/BASIC Keyboard connector, thereby making available an additional I/O slot for any one of Wang's full line of peripheral devices.

DATA SHEET

SPECIFICATIONS

Unit Size
Height . . . . 13½ in. (34.3 cm)
Depth . . . . 20½ in. (52 cm)
Width . . . . 19¾ in. (50.2 cm)

Weight
48 lb (21.7 kg)

Display Size
9 in. diagonal (22.9 cm)

Capacity
16 lines, 64 characters/line

Character Size
Height . . . . .125 in. (.32 cm)
Width . . . . .125 in. (.32 cm)

Cabling
Three 8 ft (2.4m) cables to controllers
One 8 ft (2.4m) cord to power source

Power Requirements
115 or 230 VAC ± 10%
50 or 60 Hz ± 1 Hz
125 watts

Operating Environment
50°F to 90°F (10°C to 32°C)
20% to 80% relative humidity

Recommended Relative Humidity
35% to 65%

ORDERING SPECIFICATIONS

An Integrated Cathode Ray Tube (CRT), Tape Cassette Drive and Upper/Lowercase Alpha-numeric/BASIC Keyboard. The CRT must be capable of displaying 16 lines, each 64 characters in length — the CRT must measure 9" diagonally.

A Tape Cassette Drive capable of storing and recalling data and program information for the Wang System 2200. The Tape Drive must be able to drive a cassette holding 150' of magnetic tape on which can be recorded 78,300 bytes and transfer at an effective rate of 326 bytes/second including all gaps and redundant recording. Use of the Tape Cassette Drive must not require pre-formatting of tapes.

An input keyboard with typewriter characters, most of the BASIC language verbs and commands as single keystroke entries, and Numerics (0-9). Trig functions, mathematic operators and control keys are also standard on the keyboard, in addition to 16 special function keys capable of accessing 32 user-defined operations. When combined with a CPU containing the EDIT ROM, the Model 2220 must be capable of editing lines of program text recalled from memory or data being input and displayed on the CRT.

The Model 2220 must have the following options:

Option 30, Upper/Lowercase CRT; Option 31, Audio Alarm.

Standard Warranty Applies

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

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