

WANG

LABORATORIES, INC.

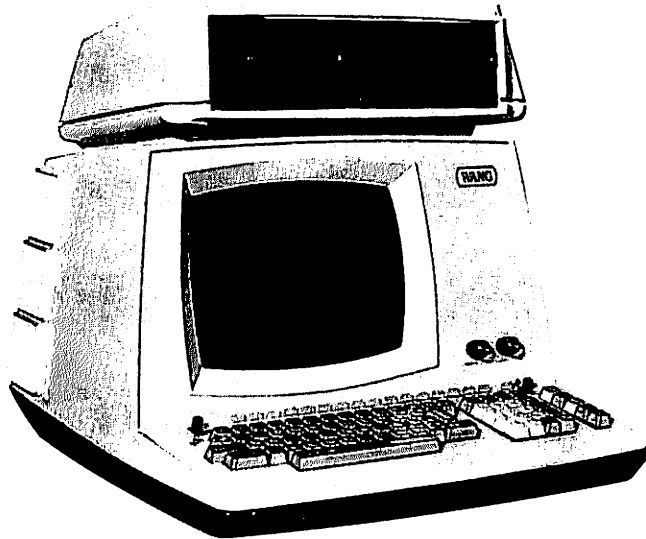
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DATA SHEET

The Wang Model 2210 integrated console contains a Cathode Ray Tube (CRT) video display, an Upper/Lowercase Alphanumeric/BASIC Keyword Keyboard, and Minidiskette Drive(s) in a compact desk-top console unit. The CRT display and keyboard provide a convenient means of communicating with the system, while the integrated minidiskette drive offers the added convenience of a direct access storage device. With the optional second minidiskette drive, one significantly increases the Model 2210's on-line productivity, storage capacity and provides for file backup. Two display sizes are available. The 2210 may be used with any 2200 Series Central Processing Unit (CPU) which supports disk operations.

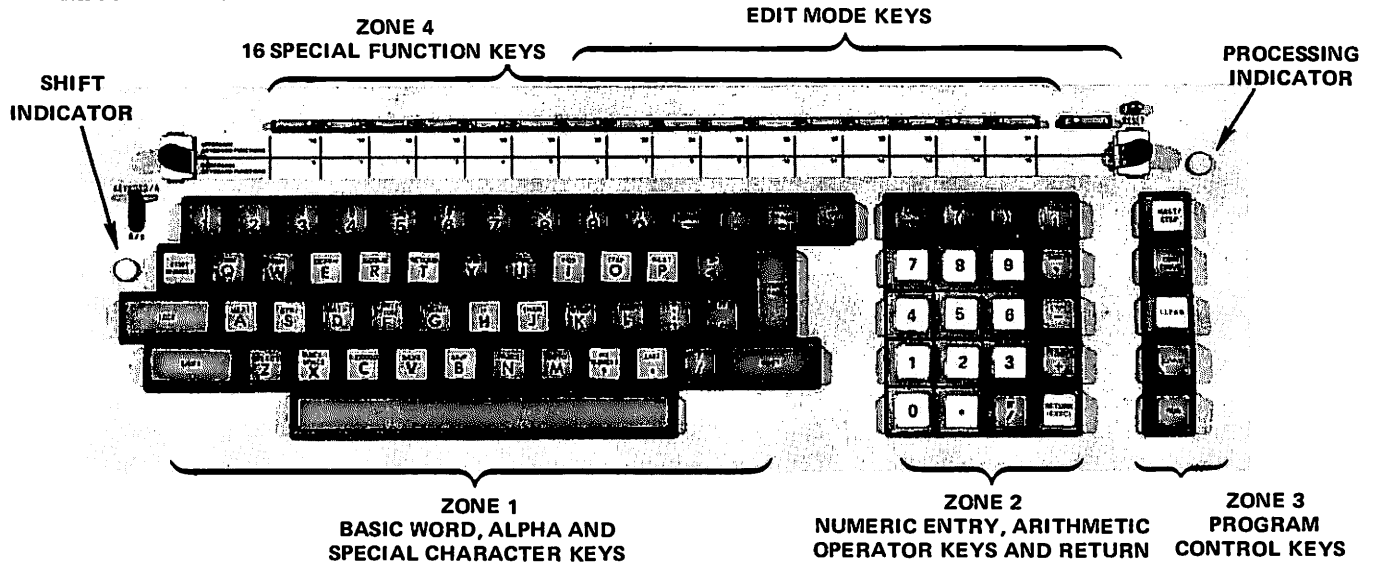
THE CRT DISPLAY

The CRT visually displays the result of each keystroke. The 12 in. (30.4 cm) diagonal screen has a display speed of approximately 65 microseconds per character, which allows the operator to instantly view the results of calculations, as well as program text and data. The Model 2210A display is 16 lines of 64 upper/lowercase characters per line. The Model 2210B display is 24 lines of 80 upper/lowercase characters per line. The screen brightness and contrast are user-adjustable to provide sharp, clear output for maximum viewer comfort. A number of CRT control characters can be used to manipulate the cursor (symbol indicating location of next input) under immediate or program control for specially formatted displays.



MODEL 2210 CRT / KEYBOARD /
MINI-DISKETTE CONSOLE

THE 2210 KEYBOARD



The keyboard is the system controller. It allows you to enter and execute programs, data, and commands.

The Model 2210 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 2210 integrated keyboard is divided into four 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 specified programs from disk 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.

In EDIT mode, certain special function keys become system defined EDIT mode operator keys. Edit mode is available as a standard feature on all System 2200's.

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 a program line from memory for 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.

In addition to the above Edit Mode Functions, the 2200 VP offers:

BEGIN moves the cursor to the beginning of the current text line.

END moves the cursor to the end of the current text line.

↑ moves the cursor up to the previous CRT line (current text line must occupy more than one line on the CRT).

↓ moves the cursor down to the next line on the CRT (current text line must occupy more than one line on the CRT).

THE MINIDISKETTE

The Minidiskette drive provides reliable, low-cost direct access storage capability to the System 2200.

Disk operations are convenient and uncomplicated. Platter formatting, which initially defines each sector's control and user bytes, is automatic, at the touch of a single button, and the advanced BASIC I/O statements make file accessing fast and simple. Files can be maintained on a disk in one (or both) of two modes. In the Automatic File Cataloging mode, the user can save and load program and data files by name with no concern for where or how the files are actually stored. The system, itself, automatically keeps track of the size and location of each file.

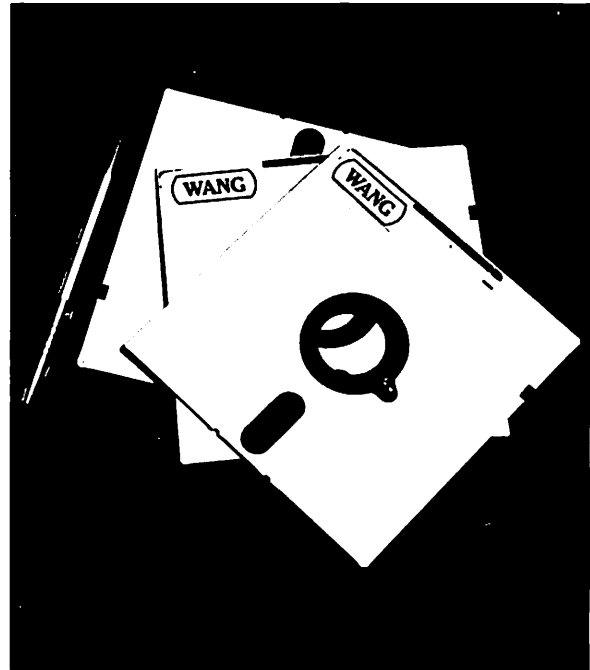
Absolute Sector Addressing permits the user to design his own File operating and management system by addressing specific sectors on the disk directly.

To increase the reliability of the disk unit, a Cyclic Redundancy Check (CRC) and Longitudinal Redundancy Check (LRC) are performed automatically on every sector of the disk as it is being read. Any errors are reported immediately. In addition, an optional read-after-write verification test can be specified with the appropriate BASIC commands.

The 2210 standard configuration contains a single minidiskette drive which utilizes the removable, easy-to-store minidiskette platters. Protected from dust and abrasion by a tough, flexible, plastic envelope, the magnetic recording surface is divided into 35 concentric circular tracks, and each track divided into 10 sectors. Each sector, numbered sequentially from 0 to 349, can store 256 bytes of information, for a total storage capacity of 89,600

bytes. Minidiskettes can be write-protected, to guard valuable data against accidental overwriting or erasure.

With the optional dual drive, the on-line storage capacity of the system is doubled to 179.2K bytes. Furthermore, dual drives assure adequate backup, since you can copy either the entire contents, or any specific portion of one miniplatter onto a second. Off-line storage is limited only by the number of diskettes available.



FEATURES

Model 2210 Integrated CRT

Model 2210 Integrated Keyboard

Model 2210 Integrated Minidiskette Drive(s)

Self-contained, Compact Lightweight Chassis

Automatic File Management and Security

Modular Design

BENEFITS

Large, easy-to-read displays of up to 1,920 characters of system input and output are available instantaneously.

Standard typewriter and numeric pads facilitate keyboard use. Most BASIC commands, numerics, and mathematic functions can be entered as single keystrokes.

Allows significant economy, speed, and storage capability. Platters are easily handled, stored, copied, and replaced.

Allows efficiency use of available office space and permits easy relocation.

CRC, LRC, write-protect, and other optional features guarantee data integrity and security. Automatic formatting and cataloging facilitate file creation and maintenance.

Options allow you to tailor your system. Gives you the most latitude for the least cost.

DATA SHEET

SPECIFICATIONS

Unit Dimensions

Height 18-3/4 in. (47.7 cm)
Depth 20-1/2 in. (52 cm)
Width 19-3/4 in. (50.2 cm)

Approximate Net Weight

51 lb (23 kg)

Display

Approximate Size 12 in. (30.4 cm)

Capacity

2210A 1024 char, 16 lines, 64 char/line
2210B 1920 char, 24 lines, 80 char/line

Character Size

Model 2210A

Height 0.20 in. (0.51 cm)
Width 0.12 in. (0.30 cm)

Model 2210B

Height 0.16 in. (0.41 cm)
Width 0.09 in. (0.23 cm)

Keyboard

Upper/Lowercase Alphanumeric/BASIC Keyword Keyboard with full typewriter and numeric pads, mathematical function keys, arithmetic operator, special function and edit keys.

Minidiskette

5-1/4 in. (13.3 cm) diameter with write-protect notch

Sectors 350
Tracks 35
Bytes 89,600
Sectors/Track 10
Bytes/Sector 256
Average Access Time 533 ms
Average Latency Time 100 ms
Speed 300 rpm
Transfer Rate 125k bits/sec

Power Requirements

115 or 230 VAC $\pm 10\%$
50 or 60 Hz ± 1 Hz
150 Watts

Cable

One 8-ft. (2.4m) 3-prong AC Power Cord
Three 8-ft. (2.4m) controller cords

Controller:

One - triple plug - 36 pin (keyboard/diskette printer)
One - single plug (CRT)

Operating Environment

50° to 90° F (10° to 32° C)
20% to 80% Relative Humidity
35% to 65% Recommended Relative Humidity

Fuses

1 Amp at 220 VAC
2 Amps at 115 VAC

OPERATING SPECIFICATIONS:

An integrated Cathode Ray Tube (CRT), Minidiskette Drive and Upper/Lowercase Alphanumeric/BASIC Keyboard. The CRT must be capable of displaying up to 24 lines, each 80 characters in length and must measure 12" diagonally.

A minidiskette drive capable of storing and recalling data and program information for the Wang System 2200. The disk drive must be capable of driving a minidiskette platter at 300 RPM on which can be recorded 89,600 bytes and transfer at an effective rate, 125 kilobits per second. Pre-formatting of minidiskettes must be automatically performed by the unit.

An input keyboard with standard typewriter and numeric keypads must be provided to enter most BASIC language verbs and commands as single keystroke entries. Trigonometric functions, mathematic operators and control keys also must be standard on the keyboard, in addition to 16 Special Function Keys capable of accessing up to 32 user-defined operations. When combined with a CPU containing the EDIT capability the Model 2210 must be capable of editing lines of program text recalled from memory or data being input and displayed on the CRT.

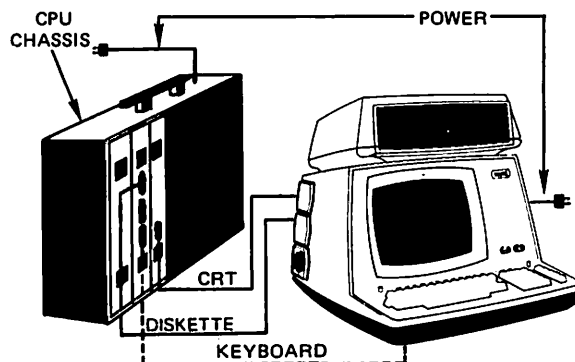
The 2210 may have the following options:

Dual Minidiskette Drives

Option 31 - Audio Alarm
Option 32 - Keyboard Clicker

Standard Warranty Applies

MODEL 2210/CPU CONFIGURATION



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

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