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# DATA SHEET

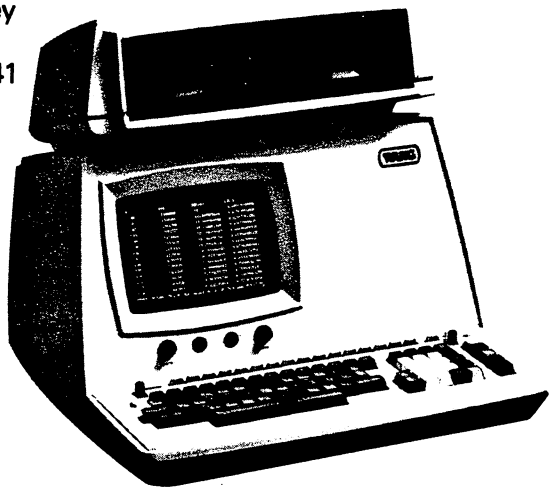
Wang's PCS-IIA is a compact desktop computer with exceptional on-line storage capabilities. In addition to self-contained minidiskette storage, the PCS-IIA contains a disk multiplexer controller that enables it to access a Model 2260B or Model 2260BC fixed/removable disk drive attached to a larger 2200 System. Up to three PCS-IIA's can be "daisy-chained" together to allow shared use of common disk files yet place independent processing and local storage capabilities wherever they are needed. With the PCS-IIA, Wang combines standalone processing power, local minidiskette storage, and the expandability of disk multiplexing to make a uniquely flexible unit at an affordable price.

Residing within the PCS-IIA is a central processor with a standard 8K byte random access memory (RAM), expandable to 16K, 24K, or 32K bytes. Only 700 bytes of this memory are used for system "housekeeping" purposes, leaving all remaining RAM available to the user. A 42.5K-byte BASIC language interpreter, hardwired in read-only-memory (ROM), executes Wang's BASIC language instruction set. With the many interactive programming and debugging features of Wang BASIC, learning time as well as program development time are minimized. With the PCS-IIA, both first-time and experienced computer operators and programmers have standalone computing capability located where data generation takes place.

In addition to its powerful central processor and disk multiplexer, the PCS-IIA combines the following features in one self-contained unit:

- a typewriter-like keyboard, with numeric pad and Special Function Keys for simplified data entry and program control,
- a 9-inch (diagonal measure) cathode ray tube (CRT) with a 1024-character display capacity (standard) or 1920-character capacity (optional),
- a minidiskette drive for high-speed, random access data storage operations (a second minidiskette drive is optional), and
- a printer/plotter connector for plug-in installation of one of Wang's optional hardcopy output devices.

A wide range of data transmission and reception capabilities can be added to the standalone computer capabilities of the PCS-IIA by including an optional communications controller in the system. With either of Wang's microprocessor-based communications controllers, separate tasks related to data transmisson/reception can be performed concurrently by the central processor and the communications controller. With the Option 62 asynchronous controller and Wang-supplied software, a PCS-IIA can emulate a Teletype Terminal or an IBM 2741 Selectric Typewriter Terminal. Alternatively, the Option 62B synchronous/asynchronous communications controller, together with a Wang-supplied turnkey software package, supports batch transmission to or from a host system via IBM's 2780, 3780, or 3741 Binary Synchronous Communications protocol.



PCS IIA

The PCS-IIA was designed to solve the problem encountered by customers who need to combine local processing capability and storage with extended on-line storage at an economical price. The unit is an ideal solution for customers whose present needs are small, but who anticipate future growth. When expanded computing needs dictate purchase of a larger Wang 2200 System, the PCS-IIA can be used as a disk Workstation to share a common disk data base with the larger system, thus preventing obsolescence of equipment. The PCS-IIA also is geared to owners of larger 2200 Systems who wish to distribute processing capabilities and localized storage about an existing 2200 site, with each system having access to a common data base. The multiplexer is designed to allow up to three PCS-IIA's to be used at different locations to access a common disk, while providing independent processing power and local minidiskette storage to users at each PCS-IIA site.

**Operation of the Multiplexer**

The PCS-IIA must be connected to a Wang 2230MXA-1 master multiplexer controller installed in a 2200T, VP, or MVP CPU. The PCS-IIA may then access the disk attached to the master controller, as well as the built-in minidiskette drive standard on the PCS-IIA itself.

The 2230MXA-1 board in the host CPU polls all attached CPU's on an equal priority basis until a system is detected attempting to access the disk. Control of the disk is then passed to the requesting CPU, which is permitted to execute a single disk statement. Polling then continues in the normal fashion. For operations such as on-line updating of a commonly shared file, a programmable "hog mode" enables one system to obtain exclusive control of the disk until such an operation is completed. This "hog mode" prevents undesirable interference during critical file maintenance.

**Field Upgradability**

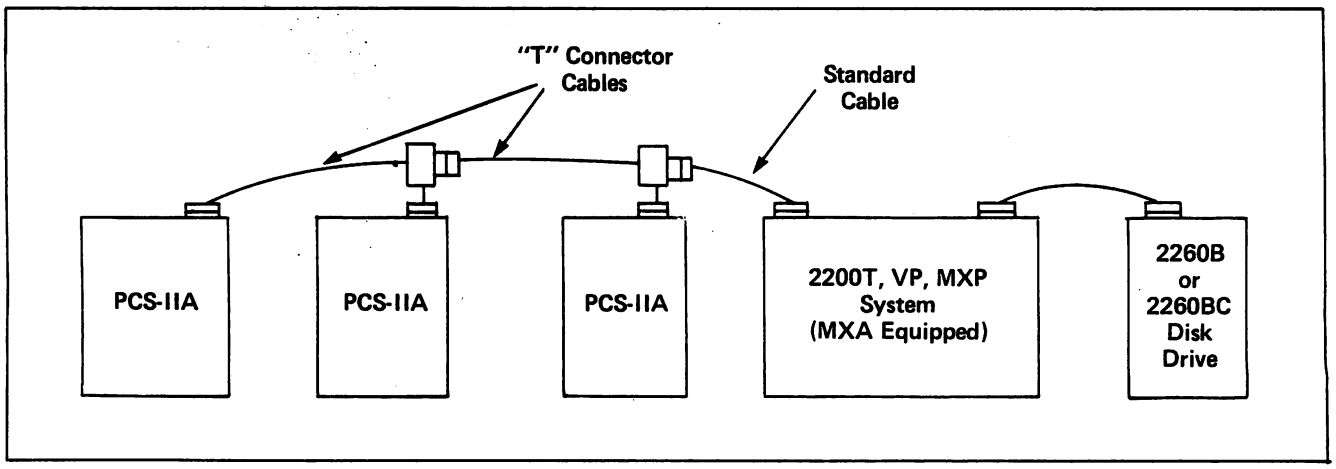
Existing PCS-II's can be field upgraded to PCS-IIA's by a Wang Service Representative. One of the two existing printer jacks is replaced by the output jack of the multiplexer board which is installed in the PCS-II. Because of the design of the board, it is necessary to specify the line voltage and frequency of your PCS-II, as well as the display capacity of your CRT screen, when ordering the retrofit kit.

**Economy with Multiplexing**

In addition to the advantage of flexibility, the PCS-IIA allows customers to optimize their computing investment. With disk multiplexing, a single disk unit is shared by up to four separate users, thereby dramatically reducing the cost per user of on-line disk storage. Also, with access by multiple systems, disk platter storage is more fully utilized, minimizing wasted space and maximizing cost effectiveness. Thus, the PCS-IIA offers customers two ways to stretch their computing dollar.

**Cabling for Multiplexed Disk Operation**

Extension cables are available in lengths of 50, 100, and 200 feet (15.3, 30.5, and 61 meters). The extension cable is coupled with a standard connector cable to permit an increased distance between successive systems in the chain. Extension cables may be coupled together; thus, the maximum distance between a pair of systems in the multiplexer chain is 512 feet (two 200-foot extension cables, a 100-foot extension cable plus a standard 12-foot connector cable). The maximum distance between CPU #1 and CPU #4 in a four-station configuration is 536 feet (two 200-foot extension cables and one 100-foot extension cable plus a standard 12-foot cable and two 12-foot T-connector cables). The disk I/O cable connecting the disk to CPU #1 (the CPU containing the 2230MXA-1 master board) cannot be extended; the maximum distance between CPU #1 and the disk is 12 feet (3.7 meters).



## SPECIFICATIONS

**Unit Size**
Height . . . . . 13.5 in. (34.3 cm)
Depth . . . . . 20.5 in. (52 cm)
Width . . . . . 19.75 in. (50.2 cm)

**Weight**
57 lb (25.8 kg)

**Memory**
8K bytes (standard)
16K, 24K, or 32K bytes (optional)

**Display Size**
9 in. diagonal (22.9 cm)

**Display Capacity**
16 lines, 64 characters/line (standard)
24 lines, 80 characters/line (optional)

**Character Size**
Height . . . . . 0.125 in. (0.32 cm)
Width . . . . . 0.125 in. (0.32 cm)

**Minidiskette Drive**
Tracks . . . . . 35
Sectors/Track . . . . . 10
Total Sectors . . . . . 350
Bytes/Sector . . . . . 256
Total Bytes . . . . . 89,600
Average Access Time . . . . . 533 ms
Average Latency Time . . . . . 100 rpm
Speed . . . . . 125 kilobits/sec
Transfer Rate . . . . . 125 kilobits/sec (15,625 bytes/sec)

**Minidiskette**
5.25 in. (13.3 cm) diameter with write protect notch

**Power Requirements**
115 or 230 VAC ± 10%
50 or 60 Hz ± 0.5 Hz
260 Watts

**Fuses**
3.0 AMP 115V/60Hz
1.5 AMP 230V/50HZ

**System Compatibility**
The PCS-IIA can use disks from any 2200 System (except 2200VS), excluding 2260C and 2280 series disks.

**Operating Environment**
50° F to 90° F (10° C to 32° C).
30% to 80% relative humidity, noncondensing.

## ORDERING SPECIFICATIONS

In one self-contained unit, the PCS-IIA must include the following components: (1) a dual-mode, zone-arranged, standard/BASIC keyboard providing Special Function Keys to access user-defined functions and system-defined EDIT mode operations, standard typewriter keys with alternative single-keystroke BASIC words and commands, numeric keys, keys with arithmetic operations and system-defined mathematical functions, mode and off/on switches and a reset key; (2) a 9-inch diagonal CRT screen supporting displays with 16 lines and 64 characters per line, or 24 lines and 80 characters per line; (3) a minidiskette for high-speed, random-access data storage operation; (4) a central processor with Wang's interactive BASIC language interpreter in read-only-memory, and at least 8,192 bytes of random-access-memory, expandable in 8,192 modules to 32,768 bytes; (5) a disk multiplexer controller compatible with the Wang Model 2230MXA-1 disk multiplexer master controller; (6) a printer/plotter connector with plug-in compatibility for one of the Wang hardcopy output devices; and (7) provision for internal installation of an optional microprocessor-based communications controller or instrument interface controller.

*Standard Warranty Applies*

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

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