The OSI Challenger 1P MF

Just starting microcomputing? You might try this minifloppy system from Ohio Scientific.

Charles Curley
6061 Lime Ave.
Long Beach CA 90805

The OSI Challenger 1P MF (minifloppy) is an excellent starter system for the beginner home computerist who wishes to get into computing with a maximum of ease but a minimum of expense. If the beginner wishes to expand, he can do so with no problems, but the unit is almost stand-alone as it comes. With one exception, the documentation is excellent, and OSI promises to provide user support for years to come.

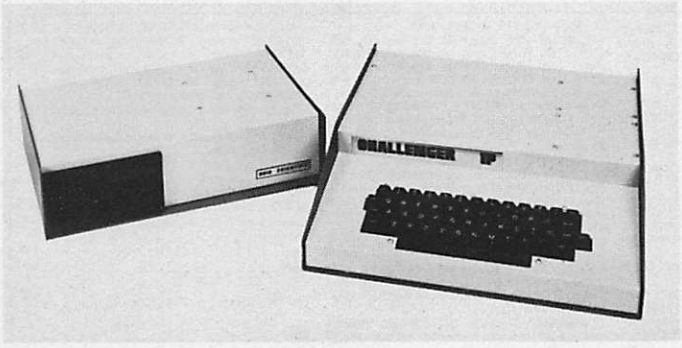
Ohio Scientific has been advertising their new C1P MF as the first minifloppy system available for under $1K. Strictly speaking, it is. However, a user will need one or two more items in order to use the system: a TV or monitor and perhaps a TV signal generator.

Due to FCC regulations, a computer manufacturer cannot sell a computer that you can just hook up to your TV, so you have three options: (1) buy a monitor and take the intermediate frequency signal the computer produces and feed it to the monitor; (2) modify your present TV for direct video signal injection (i.e., allow it to also function as a monitor); or (3) buy a TV signal generator to feed the computer's signal into your TV.

In any case, the additional expense will run $20 to $130, depending on which way you go and how much quality you insist on. Still, $1100 is impressive for a minifloppy system.

This is definitely a bare-bones system. Peripherals such as an extensive monitor or color graphics are available as extras only. Considering that the proper customer for the Challenger 1P MF is the newcomer to personal computing, this is not a serious objection. Indeed, you can say that it gives the customer something to look forward to.

This machine is clearly aimed at the beginner who wishes to enter personal computing as painlessly as possible. One could spend much less and buy, say, a KIM. Then you could program in assembly language and hand assemble. Or you could spend an amount comparable to the cost of the C1P MF and buy, say, a PET or a TRS-80. In either case, you would still have to use a cassette for bulk storage, with all the hassles that cassettes imply. A minifloppy drive for the PET or TRS-80 would cost $400 or so, an amount the C1P MF owner could put to other uses.



The C1P MF disk-based computer.

Software

In the bare-bones configuration of the C1P MF, the speed and convenience of the minifloppy disk is the main selling point of the system. The user is provided with a small DOS (disk operating system), the Pico DOS. With no memory expansion beyond the initial 12K RAM, the DOS supports two commands: LOAD X and SAVE X, where X is a digit from one to eight. X defines the storage area on the disk from which data is to be loaded or to which it is to be saved.

The addition of 8K more RAM (OSI list, $138) will allow the use of a much more extensive DOS, Ohio Scientific's OS-65D ($50). This DOS supports a much more extensive set of commands. It allows a file structure for programs. This means that a program can input from or write to a file on disk (e.g., a word processor that would rapidly fill up the available RAM can put its output directly onto disk, where it has a lot more room). The enlarged DOS supports six character names for files, rename capabilities and other features.

The BASIC provided in the bare-bones machine is a Microsoft BASIC occupying 8K of ROM. It is 6½ digits in precision, has string functions, trig functions and full scientific notation, among other features. A number of these features are not found on other beginner's BASICs.

The OS-65D DOS supports a 9½ digit BASIC, which is slower than the ROM BASIC but more precise. This precision is suitable for scientific or business applications. This BASIC occupies 12K of RAM, and the user can software-select which BASIC he wishes to use.

As I mentioned, OSI does not have color graphics for the Challenger series. They expect to provide it as an option in the future. The screen resolution is 256 by 256, which divides into 32 lines of 32 characters each. However, the mechanics of televisions may restrict you to 24 lines by 24 characters.

OSI software is geared to this limitation. The characters themselves are eight dots by eight and include all standard ASCII characters. In addition, there are 160 special characters in ROM: gaming elements, graphic elements and others. Any character can be invoked simply by

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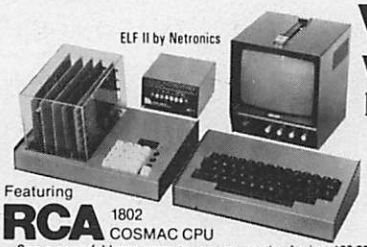

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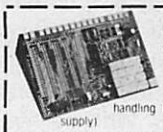

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The keyboard is totally software controlled. This gives the ambitious programmer much greater flexibility than with a hardware-controlled keyboard. For one thing, it allows the detection of up to eight simultaneous key depressions. One application of this facility might be to program eight keys into two pseudo-joystick arrangements. The auto-repeat feature of the keyboard software is also useful.

This flexibility also allows multiple applications of the keys, which are not immediately apparent. For example, in BASIC mode, a /SHIFT/ o deletes the last character, and a /SHIFT/ p deletes the current line. These two functions greatly facilitate program and text editing.

One function bodes well for the use of the C1P MF as a terminal. The /SHIFT/ o function appears on the display by inserting a / (ASCII 2F), rather than removing the offending character. With the cost of modems coming down, private phone systems and micro-oriented data networks in the offing, many home computers will be used as terminals as well as stand-alone systems. OSI designed the C1P MF to be used as a terminal as well as a stand-alone, so adding this function will be easy.

Documentation

Contrary to OSI's reputation for bad or nonexistent documentation, I found the C1P MF documentation to be quite good. I quickly found whatever information I needed to use the machine. The beginning BASIC programmer will need a good book on the system, but this is true of any starter system. Anyone who wishes to program in assembly language or machine language is similarly encouraged to have a good book on 6502 programming handy. The manual does have a number of BASIC demonstrator programs that the user can enter and modify for the learning experience he will gain.

A source listing of the BASIC was noticeably missing from the documentation. This is a result of having Microsoft write the BASIC; a standard part of their contract is that no source listing can be released by the manufacturer. Fortunately for the typical user of the C1P MF, this is not a serious objection.

Options

A fully expanded system could include: 32K RAM, dual minifloppies, a cassette recorder, a printer, a modem and a number of other peripheral boards. The user can buy ready-made peripherals or build his own.

The C1P, the cassette version of the C1P MF.

The user who has little or no interest in programming for himself can purchase ready-to-run software from OSI. Several game disks, personal or business disks and education disks are already available from OSI, with each disk containing up to eight programs. As far as I know, there are no other sources for software, but this should change as more units are sold.

The user who wants to buy a cassette machine now and expand up to a disk system later should consider the C1P, the cassette version of the C1P MF. With only 4K of RAM and *sans* cassette recorder, the unit is otherwise identical to the C1P MF and lists for $349. A minifloppy ($450), 8K of RAM ($138) and some diskettes ($8 each) complete the conversion.

About the only problem I had reviewing the Challenger was finding one! I called various dealers in my area (southern California) as well as Ohio Scientific. I finally found one at Anaheim Computer and Video, who were most cooperative. If you are in southern California and wish to see a machine, give them a call (714/995-0224). Otherwise, call or write Ohio Scientific (1333 S. Chillicothe Rd, Aurora OH 44202; 216/562-3101) or OSI West (15461 Chemical Lane, Huntington Beach CA 92649; 714/891-2457). ■

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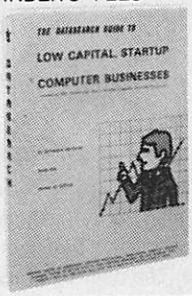

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  - 24 - 8" floppy drives
  - 91 - mini floppy drives
* Hardware/Software compatible
* Disk Diagnostics included
* Dealer inquiries invited

* Fully hardware/software compatible. Our D.O.S. uses all of apples D.O.S. commands in the same manner as apples, so a disk program that uses apples disk commands will work on this hard disk.
* Winchester technology—IMI-7710 disk drive
* Lobo disk controller—Z-80 based.
* Disk diagnostics include:
  - Reading & writing track & sensor
  - Wild card search on catalogs which allows you to locate program titles by using key characters of your choice.
* Up to 16 disk drivers per controller - others only allow 4
* System price $4990, includes disk drive, controller, power supply cables & disk operating system - others cost $5350.
* Add-on disk $3390 includes additional power supply - others do not include the power supply, they use one power supply for all drives, requiring shut down of one drive, before power up of another.
* D.O.S. with choices, allows you to format the disk into 91 diskette sized volumes, or 24 8" floppy sized volumes or 1 big 10 megabyte volume - others allow you to format to 88 diskette sized volumes only.
* Manufactured by Lobo, a progressive disk drive company that is always looking for ways to make disk drive use easier & more versatile.

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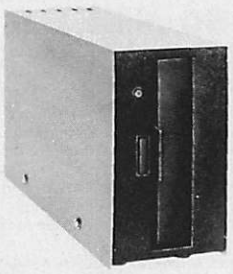

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