

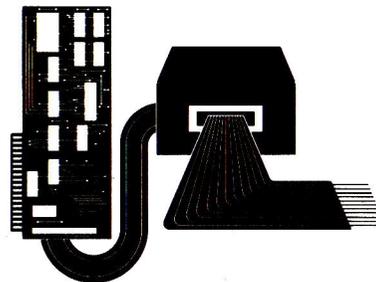
## The Laboratory Measurement and Control Computer of the '80's.

Interactive Structures Inc. has created a unique and powerful family of peripherals for the Apple II microcomputer. They transform the economical Apple into your personal electronic Lab Assistant ...

... a Lab Assistant that can read instruments and sensors, control temperature or pressure, and draft a classy-looking graph of the results.

## Analog Input (A/D)

... a Complete Selection



### AI13 Analog Input System

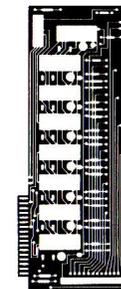
Take advantage of the full precision of your sensors and instruments with this complete Data Acquisition System.

Select from 16 input channels and 8 different Voltage ranges using simple program statements. A 12-bit (0.024% precision) reading is completed in 20 microseconds.

The introductory diskette and manual contain enough information to make you an expert on the AI13, and the demonstration programs supplied may even do the job you have in mind without any other programming.

## Analog Output (D/A)

... and Signal Conditioning.



### AO03 Analog Output System

Produce experiment stimuli, equipment control voltages, or signal waveforms with this 8-bit Analog Output System.

The AO03 lets your program generate precise voltage levels. It is available in 2, 4, or 8-channel versions so you only install the hardware you need. Each channel features range and offset selection, and its own memory to hold a stable output even without any attention from your program.

### AI02 Analog Input System

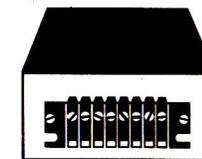


Make readings with 0.4% precision using this 8-bit Data Acquisition System.

The 0 to 5 Volt range is a standard which matches many sensors, but it can be easily modified for other applications. A reading may be made from any of 16 input channels in 70 microseconds.

The AI02 has been at work in labs since 1977 and is the standard for low cost data acquisition.

### SC14 Signal Conditioner



Focus the measuring capability of the AI02 and AI13 on precisely the voltage and frequency range of interest with this multi-channel analog Signal Conditioning system.

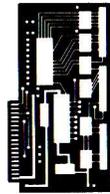
Program each channel's input characteristics by choosing a plug-in Function Module from our extensive catalog. "Fine-tune" the range and offset of each channel independently. The result is a strong 0-to-5 Volt full-scale signal directly readable by the AI02 or AI13.

The SC14 is available in 1, 4, or 16-channel configurations.

 Interactive Structures, Inc.  
P.O. Box 404  
Bala Cynwyd, PA 19004  
215-667-1713

## The Digital Interface

... From Communications to AC Power Control.



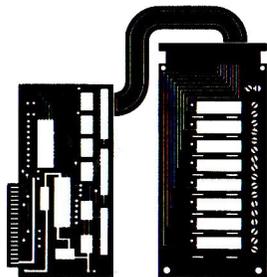
### DI09 Digital Interface

When we say 32 Input/Output data lines, we really DO mean that it's your program which chooses whether to read or to write, and to which lines. No restrictions. No soldering iron necessary.

Implement bus structures directly. Enjoy the unmatched speed of parallel data transmission with the fewest possible wires.

32 lines means Eight BCD digits. It means direct data transfers from 16- and 32-bit computers. It means Byte-wide paths from Four other processors. The DI09 has full "handshaking" to synchronize with these external devices.

Plug in a Current Driver Module and the DI09 will directly operate relays or lights. Use the built-in timer system to count events per minute or to time the interval between readings. Send and receive bytes in serial form using the built-in 8-bit shift registers.



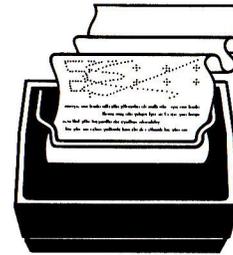
### UI16 Universal Isolated Interface

A natural extension to the powerful DI09, the UI16 provides both control and monitoring of circuits which are difficult to connect to a computer system.

Pick the modules which do the right job for you: Control a 110 Volt AC circuit with a DI09 output line. Monitor an incoming logic signal in spite of noise and grounding problems. Each circuit is connected by an optical link and is truly isolated from the processor electronics.

## Series PR Intelligent Printer Interfaces

... the first printer interfaces specifically designed to make a System out of your components.  
... a System which makes it easy for you, your computer, and your printer to work together.  
... for example:



### EP12 Intelligent Printer Interface for Epson MX-80

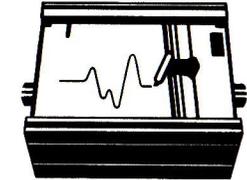
It's easy to buy a printer and an interface card. What's not easy is determining if all the options on the printer match those of the card; if the computer can access all the features of the printer; and if all the switches are set correctly.

The EP12 is a Printer Interface designed especially for the Apple computer and Epson MX-80 printer. When you hook it up, everything fits together and all the features work. You can quickly begin to use all the capability of these two fine machines.

- All operations are simple commands you use from keyboard or program. The commands can easily be inserted to add printing capability to existing programs.
- All features are permanently built in on the interface card. You don't need a disk to operate your printer.
- Easily change character size, column spacing, line spacing, and tab settings.
- With one command, you can print anything you see on the screen:
  - HiRes Graphics in 24 different styles.
  - Text Snapshot can add instant report capability to existing programs.
  - LoRes Graphics printed in 16-level gray scale.
- But don't let the screen be a limitation:
  - SuperRes™ Graphics plotting with 960 x 792 points on a page, approaching the resolution of a digital plotter.
  - HalfTone™ Graphics, 192 x 192 pixels with 16 levels of gray, for plotting molecular densities or computer photography.
- If you need a Greek letter or mathematical symbol, the Special Character feature lets you create it yourself and use it anywhere within your text.
- The EP12 Demo Disk will print some surprising samples, and includes a complete Special Character editor.

## The PL12 Plotting System

... bringing high-performance plotting to the Apple



### PL12 Plotting System

A "bare bones" digital plotter appears to be a simple and inexpensive device. However, your programming staff may spend as much as 6 man-months before you have a usable plotting system — 12 months before it's high performance.

The PL12 is a complete plug-in Plotting System for the Apple computer, for a price only slightly higher than a bare bones plotter.

The hardware mechanism provides 2.4 inches per second drawing speed, .005" resolution, and an 8" x 10" plotting surface. An advanced firmware system harnesses this capability and provides it as an extension to the Basic language.

Plots are produced directly from data residing in Basic arrays, without the need for loops and Print statements. In fact, a single array can hold the description of an entire PL12 plot, in convenient form for storage, retrieval, and updating.

Characters and vectors are produced at the full plotting speed, and both absolute and relative coordinate systems are provided. An extensive manual is designed to accompany the programmer from his first introduction, all the way to advanced techniques.

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