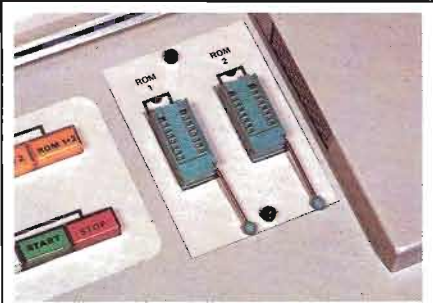


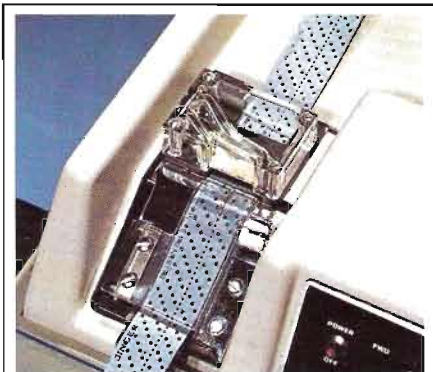
**Programmer I with Mark-Sense Card Reader (optional)**



**Programmer II**



**Socket Area** Modular design allows complete flexibility. Socket module is dedicated to specific program card positions by simple plug configuration. Any commercially available socket type(s) may be provided. Capability to program multiple devices is available. High air volume fan, cools devices to allow faster program speeds.



**Paper Tape Perforator** Integral heavy duty tape punch allows complete flexibility for inexpensive documentation of programs. Need for expensive master device stocking is eliminated. Modification and documentation of modified programs is readily accomplished.

**DATA I/O CORPORATION**

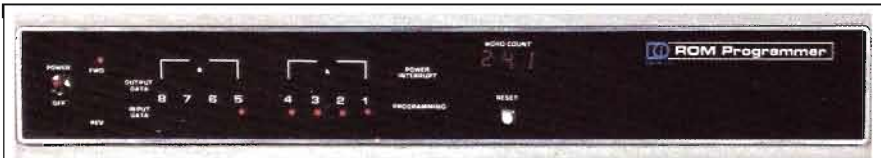
**PROM Programmer I and II**



**Keyboard/Mode Select Panel** Keyboard entry allow production or modification of bit programs based on engineering notes, or truth table. Fast cycle forward and reverse function keys allow synchronous access to any word line in tape, buffer, or device. Mode select section allows push-button access to a variety of input data sources, which may be programmed into or compared with any selected output; automatically or manually.



**Tape Reader** High speed tape reader, reads, programs, verifies in either forward or reverse directions. Automatically reverses direction at end of word count for performing auto-program or auto-verify operations without re-indexing. Synchronizes and reads in step with any output selected.



**Display Panel** The display panel allows visual observation of bit patterns from any data source and/or any output. Program pulse and position, power interrupt and forward/reverse indicators are logically arranged. Word count is displayed on easy to read, 5 x 7 dot matrix LED display.

Word count is displayed on easy to read, 5 x 7 dot matrix LED display.

# Specifications

## Data I/O ROM Programmer I

Complete programmer, consists of integral 8 key keyboard; tape perforator (8 level, for one inch mylar or oil base tape); 8 level bi-directional tape reader; bit data display of tape, ROM, and buffer information; 0-999 digital word counter; auto-program and auto-verify modes, using ROM, tape, or buffer as data source; power interrupt indicator; device zero (or one) verify mode; interlocking controls. Ready for operation with device personality card(s), and socket module(s) specified.

105-125 VAC, 3A., 60 Hertz

Size: 24" L x 19" W x 8" H

Shipping weight / size: 65 pounds, 37" x 23" x 14".

Specifications for European model available on request.

## Data I/O ROM Programmer II

Same as above, except without tape perforator and associated perforator electronics.

## MSCR-1 Mark-Sense Card Reader Module

Complete with optical scanner reader module, line cord, instrument cables, interface electronics (as required depending on model and age of instrument) and 50 each I.B.M. type Mark-Sense cards. Ready for operation of automatically transferring pencil marked truth table cards to RAM memory for subsequent PROM programming.

## Program Card (device personality)

Program cards available for most device types, including the manufacturing technologies of Avalanche Induced Migration (AIM), Fusible Link (FL), Metal Oxide Semiconductor (MOS) and MNOS.

Device organizations which may be accommodated by the standard instruments, range from 32 x 8 to 512 x 8 and include all x4 configurations. Expanded memory and expanded address versions are available for new high density devices.

## Options and Accessories

Plug in translator cards are offered for converting different tape codes to binary. These include ASCII/P-N, ASCII/H-L, ASCII/Hex and BCD—others on request.

Any commercially available socket types can be provided in single or dual configurations on the socket module.

## Data Handling

Standard instrument provides

Data input source selection:

- ROM or RAM master devices(s)
- Integral 512 x 8 Bit buffer memory; expanded RAMS available
- Tape reader
- Keyboard entered data

Data output selection:

- PROM 1
- PROM 2
- PROM 1 + 2
- Integral buffer memory
- Tape perforator (Programmer I only)

## General Construction

Unitized design allows all modes, options and accessories to incorporate in one attractive cabinet. Recessed cord wind completes the clean, compact appearance. All components are accessible for easy maintenance.

Circuitry is all solid state, plug-in PC board construction. Basic electronics are contained on 5 plug-in PC boards, plus 4 board power supply. All PC boards are of flow soldered construction.

Data I/O warrants the instrument to be free of defects in parts and workmanship for a period of one year.

## Device Universality

The following technologies can be programmed:

- Avalanche Induced Migration (AIM) p/ROM's
- Fusible Link (FL) p/ROMs
- Metal Oxide Semiconductor (MOS) p/ROMs
- MNOS P-Channel technology

## Simplicity:

The machine is similar in operation to secretarial equipment such as adding machines, typewriters, etc., and requires minimal operator training.

## Reliability:

Serviceability and rugged modular design concepts have been strictly followed.

## Production Sequencer:

As an aid to reliable, high-volume, production through-put, a plug-in module is available which causes the following automatic sequences:

- Continuity Test — to ensure proper device orientation and pin contacts
- Blank Test — which guarantees the device to be data-free
- Program — from selected data source
- Verify — compares programmed PROM with source data (and tests VOH and VOL levels where specified)

Each sequence is separately indicated.

"SEQUENCER" represents the world's first one button, *full* programming system.

THE FUTURE of programmable devices is highly dependent on The Programmer. Each IC manufacturer's product potential is enhanced by the advent of a truly *universal* programmer. The Data I/O ROM PROGRAMMERS promotes the future.



**DATA I/O**  
P.O. Box 1603  
Bellevue, Washington 98009  
(206) 455-3990



**Programmer I with Mark-Sense  
Card Reader (optional)**



**Programmer III R**



**Programmer IV**



**Programmer VB**

(See Specs Back Page)

## **DATA I/O Programmer I**

Complete Programmer, consisting of integral 8 key keyboard; tape perforator (8 level, for one inch mylar or oil base tape); 8 level tape reader; bit data display of tape, ROM, RAM and buffer information; 0-999 digital word counter; auto program and auto verify modes using ROM, paper tape, card reader or buffer memory data sources; power interrupt indicator; device zero (or one) verify mode; interlocking controls; card access cover, one standard socket module (specify). Ready for operation with optional device personality card(s) and read-only card(s) and other options selected.

105-125 VAC, 3A., 60 Hertz

(240 VAC, 50 Hertz version Available on request)

Size: 24L x 19W x 8H

Shipping Weight/Size: 65 pounds, 37 inches x 23 inches x 14 inches

## **DATA I/O Programmer III C (Computer)**

Basic universal instrument consists of Main Electronic Unit (MEU); Programmable Power Supply providing voltages in the range of 1 to 50 volts at current limits from 0.05 to 5.0 amperes; socket module mount; panel for I/O bit position display; word count display; reverse/forward address direction control and indicators; forward/reverse address slew control; power on/off switch; provision for remote input device interface; I/O select switches; standard 16/24 pin socket module. Ready for operation with optional device personality card (s), read-only card(s), and other options selected.

105-125 VAC, 3A., 60 Hertz

Size: 22L x 13W x 8H inches

Shipping Weight/Size: 55 pounds, 38L x 23W x 14H inches

### **Programmer III R (Reader)**

Same as above except with integral paper tape reader (5-8 level I-R) and data clear control.

## **DATA I/O Programmer IV**

Complete Programmer, consisting of programmable micro-computer controller, power supply, control panel, socket panel comprised of 16 each, 24 pin positive locking programming sockets and one master ROM socket, display, mode select panel for selection and LED display of test and programming modes, LED indicators for display of specific ROM status, provisions for paper tape reader mounting. Entire system attractively packaged in low silhouette housing and ready for "gang" programming of up to 16 MOS p/ROMs of any manufacturer specified at time of order.

105-125 VAC, 3A., 60 Hertz

(240 VAC, 50 Hertz version Available on request)

Size: 24L x 19W x 8H

Shipping Weight/Size: 65 pounds, 37 inches x 23 inches x 14 inches

PAPER TAPE READER (accessory)

5 to 8 level, optical (I-R), complete with associated plug-in electronics, cables and mounting hardware.

## **DATA I/O Programmer VB (Binary)**

Basic universal instrument consists of Main Electronics Unit (MEU); Programmable Power Supply providing voltages in the range of 1 to 50 volts at current limits from 0.05 to 5.0 amperes; socket module mount; panel for I/O bit position display; word count display; reverse/forward address direction control and indicators; forward/reverse address slew control; power on/off switch; provision for Mark-Sense Card Reader interface and other remote input or output devices; I/O select switches; standard 16/24 pin socket module; 512 x 8 bit RAM; integral paper tape reader (5 to 8 level, I-R); binary keyboard, including fast forward/reverse and data clear controls. Ready for operation with optional device personality card (s), read-only card (s), and other options selected.

105-125 VAC, 3A., 60 Hertz

Size: 22L x 13W x 8H inches

Shipping Weight/size: 55 pounds, 38L x 23W x 14H inches

### **DATA I/O Programmer V O (Octal)**

Same as above except with octal keyboard, including data clear control: octal data read-out and digital address display.

### **DATA I/O Programmer V H (Hexadecimal)**

Same as above except hexadecimal keyboard, including data clear control: hex data read-out and decimal address display.