Programmers & Simulators

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S-40B EPROM Editing Programmer

- Stand alone microprocessor controlled system.
- Data input/output via master EPROM or RS232 interface, key selectable format or baud rate.
- Programs most common EPROMs (1 & 3 rail) to 8K and expandable.
- EPROM type selected by pushbutton (no personality cards).
- Unit self tests and tests bare boards for shorts on any set of 20 lines.
- Plain-English instructions and codes displayed with line data.
- Direct scroll display and entry of English ASCII characters.
- Combines or separates EPROM sizes and types.
- Full or selected data block area verification.
- Very powerful editing facilities allow for automatic data search, automatic block moves, patch insertion and automatic absolute address change, etc.
- Remote control operation (optional), up to 9600 baud selectable.
- Optional Tape Reader, Cassette storage, PAL/Single Chip Processor/Other PROM type modules.

The S40A Editing Programmer is a flexible, reliable, development programmer. For making program modifications and adding patches, the S40A can substitute for a development system. If you already use a development system the S40A can off-load those small debugging tasks which otherwise interrupt the development system's efficient use. An improvement in productivity is assured and other development projects are not disrupted. EP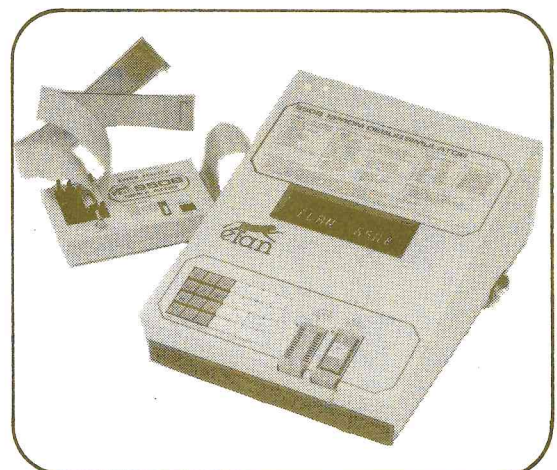ROM type selection for entering data into any area of the system's RAM, for verifying or for programming, is made via pushbuttons for all common types and not by personality cards. Instant partial programming of changed data only speeds task. Automatic verification is made at the end of each programming cycle. Any area of RAM may be verified against any selected EPROM starting location. If programming development requires the base addresses to be changed the S40A will accomplish this automatically. If engineering evaluation of hex codes is required in readable decimal values then the automatic conversion mode is used. If the insertion of new program data requires a block move, then all absolute addresses so affected can be changed automatically by the hex displacement of the block move subject to instruction set. Full serial bidirectional transfer of data may be achieved at key selectable baud rates, or parallel output to printer.

S-50B Emulation Development Station

- A sophisticated debugging development system compatible with all 8 bit microprocessor systems. Battery back-up.
- Simulation of up to 4K standard, programming up to 8K and expandable.
- Simulate programs in up to 4 independent PROM sockets.
- Break points, single steps, reads and alters target systems registers and RAM. Customer controllable measurements.
- Integral power supply to handle all simulation features.
- Bidirectional data transfer via EPROM or RS232 interface.
- Keyboard selection of baud rates and format.
- Programs most standard EPROMs, selected by keyboard, to 8K.
- Unit self tests for complete functional integrity including EPROM failures, and tests for shorts on bare boards.
- Powerful editing facilities for line program changes.
- Plain-English coded instructions with line data displayed.
- Remote control directly compatible with equivalent Data I/O commands.

The PROM SIMULATOR replaces non-volatile PROMs in the microprocessor based system, without the need to remove that control unit from its real environment. Like a small, portable development system, the S50A provides some powerful editing facilities to search for and change data, add or exchange blocks or small patches, insert and evaluate break point conditions, and convert data into decimal or complimentary form. Its back-up battery makes it fully portable without loss of information and the unit's interface allows bi-directional transfer of stored data, and the programming of EPROM devices. Complete programmes of up to 4K words in up to 4 memory sockets may be simulated concurrently.

A typical procedure would be to: load the S50A memory with the program data via Master EPROM or serial input; disconnect it and walk over to the microprocessor based system; remove its PROMs and replace them with the appropriate cable adaptor from the S50A, run your system as if it were using its own memory; change bits of data or patches to suit different trials, or introduce break points to help locate programming anomalies, read and update the target system's registers, ports etc; or check on data by converting to decimal for ease of evaluating engineering conditions; automatically change byte strings, move blocks of data and correct absolute addresses; and then create new Master EPROMs with the revised programme, or download the data to another external device.

All the principle functions can be remotely controlled.

Specification

Dimensions:	310 x 235 x 125mm	*Humidity:*	0-90% non condensing
Weight:	Approximately 5Kg	*Sockets:*	24/28 Pin zero insertion force
Power:	110, 120/220, 240V AC, 50-60Hz	*Interface:*	(See model) Serial via RS232, 25 Pin D-type plug
Temperature:	0-40°C	*Access Time:*	(See model) 200ns to 250ns typical

Functions Summary

E8 EPROM/EEPROM COPIER

Key selection of all types and functions
Program up to 16K in up to 8 copies
Verify (display errors), master to copies
Automatic short circuit and power supply tests
Search and display data, instructions, checksums
Measure/display access time (variable set)
Skip FF to shorten programming time
Rugged, portable metal case
Optional, selectable RS232 and up to 16K RAM

E9 EPROM/EEPROM EDITING COPIER

Key selection of all types and functions
Program (from master or RAM) up to 16K in 8 copies
Verify (display errors), master/Ram/Copies
Search and display data, instructions, checksums
Measure/display access time (variable set)
Automatic short circuit and power supply tests
Combine and separate EPROM sizes
Instant programming of single byte changes
Editing with auto-blank, byte search, split, shuffle
Standard RS232 with 8K RAM (16K optional)
Key selection all data stream formats

S-40 B EDITING PROGRAMMER

Program (automatic) from any address to 8K (expandable)
Verify any area (view error data) master/RAM, copy/RAM
Read RAM contents (scroll either way)
Fail conditions (and protection)
Serial I/O (bidirectional) selectable baud to 1200 (9600 opt.)
Automatic checksum display
Amend unlimited data
Data block move (automatic)
Data block change (automatic to selected value)
Entry and display English ASCII set (scroll)

Byte string search (automatic)
Byte string change (automatic replacement)
Ones complement (automatic)
Hex Address Displacement (automatic)
Convert to Decimal (data at any address)
Bare board short test and display

S-50 B EMULATION DEVELOPMENT STATION

Simulate up to 4K, most types of PROMS (see PROM adaptors)
Program (automatic) from any address to 8K (expandable)
Verify any area (view error data) master/RAM, copy/RAM
Read RAM contents (scroll either way)
Fail conditions (and protection)
Serial I/O (bidirectional) selectable baud, to 1200 (9600 opt.)
Checksum displayed for any area (selectable)
Amend unlimited data
Data block move (automatic)
Data block change (automatic to selected value)
Byte string search (automatic)
Byte string change (automatic replacement)
Ones complement (automatic)
Absolute address displacement (automatic)
Convert to decimal (data at any address)
Break point insertion
Read target system registers, ports, etc.
Change target system registers, ports etc.
Continue from one break point to another (single step)
Instruction code selection for Z80, 6502, 8080 series (others optional)

E3 AUDIO CASSETTE INTERFACE

RS232 compatible specs with standard connectors
Up to 2400 baud data transfer (with clock sync)
Data integrity assured with phase lock loop tracking
Battery supply (allows up to 30% voltage drops) or optional mains adapter
Control sequence allows audible instructions

We reserve the right to change the specifications, functions and circuitry without notice at any time.

Complementary Products

PROM Simulator (16 bit)
E4 Adaptor for 8748/8749/8755
Modules for CMOS EPROMs, Single Chip Microprocessors, PALs, FPLAs etc.
Cassette Storage

PROM Adaptors and cables
EPROM Erasers
Tape Reader (photoelectric)
Test Equipment
Development Systems

Your Distributor:

Elan Digital Systems Ltd.
16-20 Kelvin Way, Crawley,
West Sussex, RH10 2TS.
Telephone: Crawley 510448/9