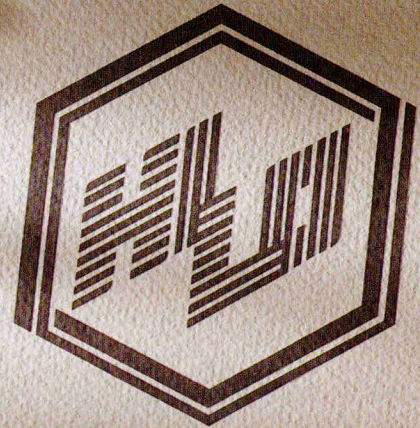


CATALOG

1992/93



HI-LO SYSTEMS



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H I S T O R Y

HI-LO creates a New Programming Era

In 1984, under Taiwan's sweltering heat, 4 young computer engineers started their studio, HI-LO, to design microcomputer software and hardware supporting major IC manufacturers such as OKI, HITACHI, and NEC....

They soon encountered the major problems faced by all engineers, that the programmer, the indispensable tool, is much more expensive than an individual can afford and can not keep up with the rapid pace of IC development. They initiated research to develop a high quality low cost programmer to overcome this obstacle, and fit to meet the requirements of all design engineers.

1986, the first generation EPROM programmer/01/04/08 was introduced, the result of HI-LO's persistence and dedication. From that time onward HI-LO has continually set new standards in programmer development.

1987, a series of programmers for BPPROM, PAL, 8748 series, 8751 series and IC tester were introduced which have been acclaimed by the international market.

1988, ALL-01, the first generation Universal Programmer & Tester, was launched winning a good reputation for its professional features.



& E V O L U T I O N

1989, ALL-02, the second generation Universal Programmer & Tester, was launched. This improved version, won wide approval from leading IC manufacturers. Engineers have also come to appreciate HI-LO Systems unique trade-in service.

1990, HI-LO expanded its organization by bringing new blood to its R&D Department, by establishing an Art & Design Department, and a Sales & Marketing Department to enhance its professional image.

ALL-03, the third generation Universal Programmer & Tester, and its 50 adaptors rocked the programming field. In the same year, a series of high speed EPROM programmers: EPP-01A/04A/08A, SEP-81/84/88 were developed.

1991, a complete R&D environment was formed to diversify HI-LO's development. New product lines such as the Handy IC Tester (PRÜFER-20), ROM Emulator (EML512), 8751 In Circuit Emulator (V'NICE-51, POD-8031, 8051S, ...) were introduced to the market.

1992, ALL-03A, the fourth generation Universal Programmer, was launched and the number of adaptors was increased to 125. More advantageous products such as QUICK-32, FLEX SYSTEMS, V'NICE-51, POD-8052H, POD-80C550 etc. were added to the market. Each step of HI-LO's development has been forethought and steady.

Today, in addition to its innovative products which meet professional requirements, a technical service department provides complete after-sales service to more than 50 agents worldwide. Moreover to assure the hardware accuracy of its products HI-LO updates its software every three months.

HI-LO's rational management closely links all Departments: the decision making core, manufacturing Dept., art & design Dept.... ensuring they develop the best high quality reasonably priced products. This has been proved by the trust HI-LO has earned from its users and by the praise received from manufacturers worldwide (AMD, ATMEL, WSI, SIGNETICS, LATTICE, ALTERA, INTEL, NS, TI...)

From its beginning as a 4 man studio, HI-LO has grown to the point where its products are sold worldwide, its determination in making Taiwan a foundation to serve the world has been successful. HI-LO will now carry forward its strict and thoughtful attitude in research, and its precision achievement and to satisfy the growing needs of its customers.



ALL-03A

Universal Programmer & Tester For XT/AT/386/486

INTRODUCTION:

The ALL-03A Universal Programmer and Tester is a PC-based development tool designed to program and test more than 2200 ICs. The ALL-03A is the product of over seven years of research and development. We developed and produced the first PC-based Universal Programmer in 1988. Since then we have continued to lead the way in innovation in programmer design. The ALL-03A is offered at a very competitive price and is of very high quality. The ALL-03A has undergone extensive testing and inspection by various international IC manufacturers and has won their professional approval and support.

The ALL-03A can program E/EPROM, Serial PROM, BPROM, MPU, DSP, PLD, EPLD, PEEL, GAL, FPL, MACH, MAX, etc. It comes with a 40 pin DIP socket capable of programming devices with 8 to 40 pins. Adding our special adapters, the ALL-03A can program devices up to 84 pins in DIP, PLCC, LCC, QFP, SOP, and PGA packages. The unit can also test digital ICs such as the TTL 74/54 series, CMOS 40/45 series, DRAM (even SIMM/SIP modules) and SRAM.

The pop-down menus of the software makes the ALL-03A one of the easiest and most user-friendly programmers available. The frequent software updates provided by HI-LO enables the customer to immediately program newly released ICs.

FEATURES

- The powerful and menu-driven software provides programming and testing for the following device groups:
 - E/EPROMS (Up to 16M bits)
 - Serial PROM
 - BIPOLAR PROM
 - MPU (8748, 8751, Z8, 68HC705/711, PIC16C5X, PSD301, TMS320, AND MORE...)
 - PLD, GAL, PEEL, EPLD, FPL, MACH, MAX, MAPL,...
 - IC TESTING (TTL 74/54, CMOS 40/45, DRAM, AND SRAM)
 - PLD VECTOR TESTER
- Menu-driven functions include:
 - DOS shell
 - BIN/JEDEC file loading and saving
 - Manufacturer and type selection
 - Blank check, Read, Program, Security, Auto, Verify

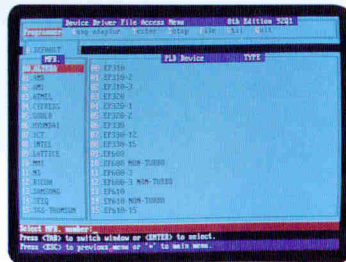
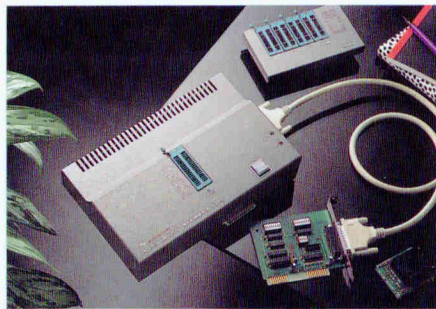
- Hex to binary converter for Intel 80/86 HEX, Motorola S1/S2/S3, Tektronix HEX, Digital research HEX
- 2-way or 4-way binary file splitter and shuffler
- Full screen editor allows direct editing of any address on the screen in Binary, ASCII, or Logic Fuse Map format

- Hardware is expandable for complex device programming by adding expansion adapters or PLCC socket converters
- 'YES' key and 'GOOD' LED permit stand-alone machine operation.
- Please refer to Device List for more details.

ORDERING INFORMATION:

ALL-03A: includes System adapter card (NEW) (SAC-201) and D-25 cable, Universal Programmer & Tester Module, Software for all devices supported and User's Manual

ALL-03: Ditto



ADAPTORS

Adaptors For ALL-03/ALL-03A

INTRODUCTION:

With the rapid development of ICs, many special packaging and different programming requirements have arisen. The special requirements vary from one IC to another, and are sometimes beyond the capabilities of a normal Universal Programmer pin driver circuit. For example:

- SIGNETICS 87C751/752 require a high speed serial data transmission;
- MOTOROLA 68705 series uses an inside program file for programming;
- NS D-PAL uses current source in programming;
- INTEL 8796 is produced in a 68 pin PGA packaging;
-

We have developed 100 adaptors and 20 PLCC converters to enhance the functions of the Universal Programmer. The adapter designed for each specific requirement is the most convenient and cost-effective solution to making the Universal Programmer more truly universal.

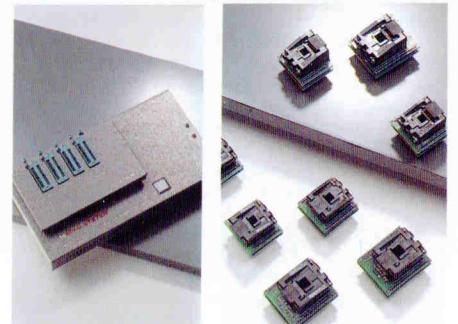
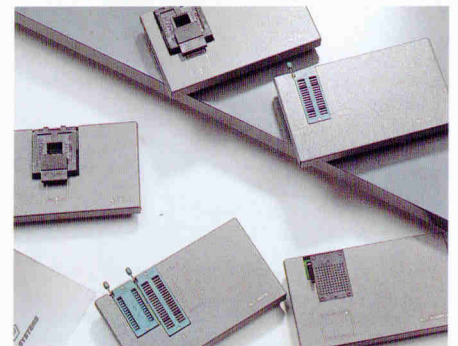
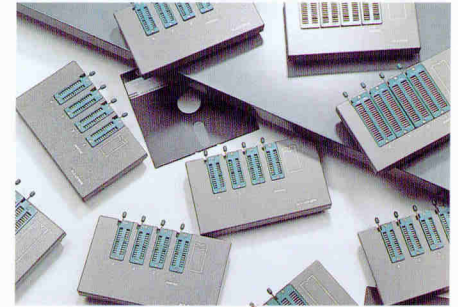
FEATURES:

All available adaptors and PLCC converters, according to their different functions, are categorised into the following 5 groups.

1. **PROM/MPU GROUP:** for EPROM, EEPROM, BPROM, MPU and the like;
2. **PLD Group:** EPLD, GAL, PEEL, MAX, MACH and others;
3. **Gang Socket Group:** for EPROM, MPU, GAL and PEEL, etc., in volume production;
4. **Special Group:** Adaptors with additional special functions, e.g. testing SIMM RAM, emulating EPROM ...;
5. **PLCC/QFP/SOP Converter Group:** whose sockets are suitable for all brands of programmers.

ORDERING INFORMATION:

Please refer to Adaptors list for more details.



QUICK-32

Quick Eprom Programmer For XT/AT/386/486

INTRODUCTION:

QUICK-32, a new-generation PC-based programmer, has been developed during our years of experience. Using the newest high-speed interface card (SAC-201), it connects directly with PCs so it can share all of the PC's resources (CPU, Memory, I/O, Keyboard, Display, Disk, Power supply). It is characterized by its high efficiency, high speed, high capacity, high quality and ease in operating. QUICK-32 programs up to 8 Mbit EPROMs, and meets the needs of advanced users. It has an independent external control key and a separate master socket. In volume production its external key conveniently allows the result to be displayed by LED.

FEATURES:

- Window-driven menu. All functions are clearly in sight for simple operations.
- Supports the following ICs:
 - Byte Wide NMOS/CMOS EPROM: 2716 to 27512, 1 Mbit, 2 Mbit, 4 Mbit and 8 Mbit
 - EEPROM: 2816, 2816A, 2817A, 2864A, 28256A, 28F256, 28F512, 28F010
 - Page Mode EPROM: 27513, 27011
- Quick program time: 7 seconds for eight 27256
- Functions: DOS Shell, File loading and saving, Full screen editing for Binary and ASCII data, Blank check, Read, Program, Verify, Auto
- Utility:
 - HEXBIN, HEXBIN2: HEX TO BINARY code converter for Intel 80/86 HEX, Motorola S1/S2/S3 Hex, Tektronix HEX, Digital research HEX
 - SPLIT2, SPLIT4: 2-way and 4-way Binary file splitter
 - SHUFF2, SHUFF4: 2-way and 4-way Binary file shuffler
 - DUMP: Dump file to console in Binary format
- Protection facilities like the noise filter, current limiter and short-circuit protect circuits ensure the programmer a very low defect rate.
- QUICK-32 has an independent "YES" key, a master socket, and LED showing program results, to permit convenient operations in volume production.

- QUICK-32 can be connected with CON-100A to become a stand-alone programmer.

ORDERING INFORMATION:

- QUICK-32 includes a QUICK-32 programmer module (eight 8-Mbit sockets, one master socket), a SAC-201 interface card, a D-25 cable, software and a user's manual.
- CON-100A: Contains CON-100A unit for QUICK-32, D-25 Cable, Power supply adapter and user's manual.



SEP-81/84/88 EPP-01A/04A/08A

High-Speed Eprom Programmer For XT/AT/386/486

INTRODUCTION:

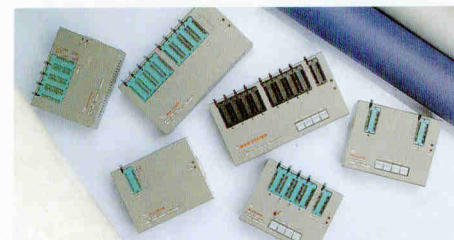
SEP-8x series and EPP-0xA series, the new-generation PC-based programmers, are developed from our years of experience. It applies the newest high-speed interface card (SAC-201) to connect with PC and directly shares all its resources (CPU, Memory, I/O, Keyboard, Display, Disk, Power supply). Thus it achieves high efficiency, high speed, high capacity, high quality and is easy to operate.

SEP-8x series program EPROMs up to 8 Mbit, whose capability suits most advanced users. It has independent external control keys and a separate master socket. In volume production it is very convenient to operate the external keys and have the result displayed by LED.

EPP-0xA series have similar programming speed and quality as SEP-8x series, except it programs only EPROMs no higher than 1 Mbit and does not have the external keys and master socket. However, it has been widely used due to its popular price.

FEATURES:

- Window-driven menu. All functions are clearly in sight for a simple operation.
- Support following ICs:
 - Byte Wide NMOS/CMOS EPROM:
 - from 2716 to 27512 and 1 Mbit.
 - 2 Mbit, 4 Mbit, 8 Mbit (SEP-8X only)
 - EEPROM : 2816, 2816A, 2817A, 2864A, 28256A
 - Page Mode EPROM : 27513, 27011
- Quick program time : 20 seconds for eight 27256
- Functions: DOS Shell, File loading and saving, Full screen editing for Binary and ASCII data, Blank check, Read, Program, Verify, Auto.
- Utility:
 - HEXBIN, HEXBIN2 : HEX to BINARY code converter for Intel 80/86 HEX, Motorola S1/S2/S3 HEX, Tektronix HEX, Digital research HEX
 - SPLIT2, SPLIT4 : 2-way and 4-way Binary file splitter



- SHUFF2, SHUFF4 : 2-way and 4-way Binary file shuffler
- DUMP : Dump file to console in Binary format
- The protection facilities like noise filter, current limiter and short-circuit protect circuits keep the programmer to a very low defect rate.
- SEP-8x series have independent 'COPY', 'VERIFY', 'BLANK', and 'YES' keys, plus an independent master socket, and LED showing program result, so that user can operate conveniently in volume production.
- SEP-88 can be connected with CON-100 to become a stand-alone programmer.

ORDERING INFORMATION:

- # SEP-88 : contains SEP-88 programmer (eight 8 Mbit sockets, one master socket), SAC-201 interface card, D-25 cable, software and user's manual.
- # SEP-84 : contains SEP-84 programmer (four 8 Mbit sockets, one master socket), SAC-



- 201 interface card, D-25 cable, software and user's manual.
- # SEP-81 : contains SEP-81 programmer (one 8 Mbit socket, one master socket), SAC-201 interface card, D-25 cable, software and user's manual.
 - # EPP-08A : contains EPP-08A programmer (eight 1 Mbit sockets), SAC-201 interface card, D-25 cable, software and user's manual.
 - # EPP-04A : contains EPP-04A programmer (four 1 Mbit sockets), SAC-201 interface card, D-25 cable, software and user's manual.
 - # EPP-01A : contains EPP-01A programmer (one 1 Mbit socket), SAC-201 interface card, D-25 cable, software and user's manual.
 - # CON-100 : contains CON-100 control unit for SEP-88, D-25 cable, power supply adapter, user's manual.

AT-201/A AT-601/A

Eprom Eraser AT-201/A, AT-601/A

FEATURES:

EPROM ERASER AT-201/A

- LINE VOLTAGE: 110VAC, 220VAC OR 240VAC (HAS TO BE SPECIFIED WHEN ORDERING).
- FUSE CAPACITY: 250V, 1A SLOW BLOW.
- DRAWER CAPACITY: 10 PCS OF 27256
- UV TUBE: 6 INCH 4 WATTS
- TIMER: 60 MINUTES, MAX. ALWAYS POWER ON AT "ON" POSITION.
- POWER SWITCH: 250V, 3A.
- MODULE SIZE:
120mm(L)×300mm(W)×90mm(H)/1.8Kg

EPROM ERASER AT-601/A

- LINE VOLTAGE: 110VAC, 220VAC OR 240VAC (HAS TO BE SPECIFIED WHEN ORDERING).
- FUSE CAPACITY: 250V, 1A SLOW BLOW.
- DRAWER CAPACITY: 60 PCS OF 27256
- UV TUBE: 12 INCH 10 WATTS
- TIMER: 60 MINUTES, MAX. WITH TIME UP RING.
- POWER SWITCH: 250V, 3A.
- MODULE SIZE:
400mm(L)×150mm(W)×125mm(H)/1.55Kg

ORDERING INFORMATION:

- AT-201/A-110: 110VAC line voltage
- AT-201/A-220: 220VAC line voltage
- AT-201/A-240: 240VAC line voltage
- AT-601/A-110: 110VAC line voltage
- AT-601/A-220: 220VAC line voltage
- AT-601/A-240: 240VAC line voltage



CON-100

Control Unit For SEP-88/QUICK-32

INTRODUCTION:

CON-100 is a microcomputer control unit for SEP-88/QUICK-32. The provided interface circuit functions as the SAC-201 adapter and enables you to operate the SEP-88/QUICK-32 unit just as a stand-alone programmer.

Steps as follows:

1. Press Function key to select copy, verify, blank check sum, MFR select or TYPE select.
2. Press Enter to execute above selected function.
3. Use up, down keys to select IC type and manufacturer name. (Left and Right keys are not used for the time being.)
4. The LEDs on programmer light up if COPY, VERIFY, BLANK, function is correctly executed.

FEATURES:

- Functions: IC Type and Manufacturer selection
Master EPROM check sum
Copy master data to other 8 EPROMs Verify data in EPROMs with master Blank check
- 4 lines (16 characters/line) display, indicate EPROM type, current applying function and command status.
- Automatically save current IC type in EEPROM before system turns off. It is very convenient for next start up.
- This control unit includes: 8088-10MHz CPU
64 K Bytes ROM, 32 K Bytes RAM
64 word (16 Bits wide) Serial EEPROM
An I/O interface circuit (with same function as adapter SAC-201)
6 keys and 4 lines
LCD display 16 characters/line
- Universal power supply input ranging from 90V to 260V.

ORDERING INFORMATION:

CON-100 : Microcomputer control unit includes:
Control unit, power supply, built-in SEP-88 control software (27512 ROM type), user manual (for SEP-88)

CON-100A : Ditto (for QUICK-32)



PRÜFER-20

Handy IC Tester

INTRODUCTION:

PRÜFER-20 is an easy-to-operate and cost-effective IC tester with excellent functions. Its test range covers TTL 74 series, CMOS 40/50 series, DRAM 4164-411000, 4416-44256. It is specially designed for maintenance technicians and design engineers.

PRÜFER-20 has compact functions. It is controlled by an eight-bit microprocessor with data of ICs to be tested. Because of its smart circuit, the user need only replace the built-in program (EPROM type) when updating.

FEATURES:

- Test key : for testing digital ICs TTL 74 series, CMOS 40, 45 series and DRAM 4164-411000, 4416-44256
- Search key : for searching unknown logical IC number
- Type key : for selecting different types of TTL, CMOS, and DRAM series
- Reset key : to reset the tester
- LCD display of 16 characters in one line
- 9V battery and 9V AC-DC adaptor
- Auto power down reduces power consumption

ORDERING INFORMATION:

PRÜFER-20: includes a PRÜFER-20 IC tester, 9V battery and user's manual.



EPP-01C

Low Cost Eprom Programmer For XT/AT/386/486

INTRODUCTION

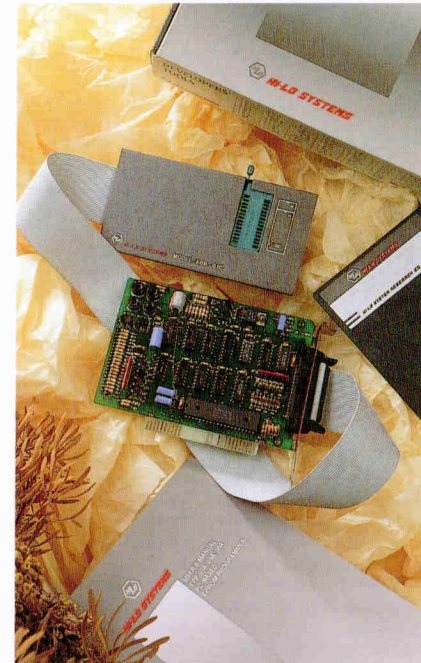
EPP-01C, the new-generation PC-based programmers, are developed from our years of experience. It applies the newest high-speed interface card to connect with PC and directly shares all its resources (CPU, Memory, I/O, Keyboard, Display, Disk, Power supply). Thus it achieves high efficiency, high speed, high capacity, high quality and is easy to operate. EPP-01C program EPROMs up to 512 Kbit, whose capability suits most popular users. However, it has been widely used due to its popular price.

FEATURES

- Window driven menu. All functions are clearly in sight for a simple operation.
- Support following ICs:
 - Byte Wide NMOS/CMOS EPROM:
 - from 2716 to 27512
 - EEPROM : 2816, 2816A.
 - Page Mode EPROM : 27513.
- Quick program time : 20 seconds for 27256.
- Functions: DOS Shell, File loading and saving, Full screen editing for Binary and ASCII data, Blank check, Read, Program, Verify, Auto.
- Utility:
 - HEXBIN, HEXBIN2 : HEX to BINARY code converter for Intel 80/86 HEX, Motorola S1/S2/S3 HEX, Tektronics HEX, Digital research HEX.
 - SPLIT2, SPLIT4 : 2-way and 4-way Binary file splitter
 - SHUFF2, SHUFF4 : 2-way and 4-way Binary file shuffler
 - DUMP : Dump file to console in Binary format
- The protection facilities like noise filter, current limiter and short-circuit protect circuits keep the programmer to a very low defect rate.

ORDERING INFORMATION

#EPP-01C : contains EPP-01C programmer (one socket), interface card, flat cable, software and user's manual.



EML-ROM512

ROM/RAM Emulator For PC XT/AT/386/486

INTRODUCTION:

EM-L-ROM512 is a simple, easy and affordable developing tool. It meets design engineers' requirements in general firmware houses, saves EPROM material consumption and reduces repeated time in erasing the EPROMs. Our software enables you to load the file directly from disk to emulator and to use the full screen editor to efficiently modify the file either in HEX format or ASCII format.

The hardware circuit includes 2 independent emulators controlled by software. This flexibility allows 2 different ROMs or RAMs, which acts as two 8-bit emulators with 64 K Byte capacity as well as one 16-bit (Even/Odd) emulator with 64 K word capacity.

A disassemble environment is provided to allow other relevant software to disassemble the machine code. This enhances the readability of machine code.

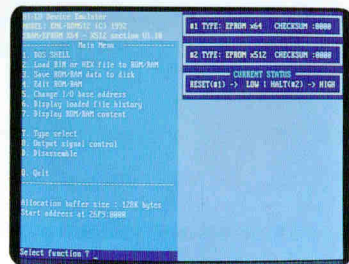
FEATURES:

- Two independent 8-Bit emulators can be combined by software control as one 16-Bit (Even/Odd) emulator.
- Direct down-load or up-Load filing to PC can be done through PC bus for immediate operation.
- The emulators can be assigned to ROM or RAM separately by software control. The ROM: 2764/C64, 27128/C128, 27256/C256, 27512/C512, 27C010, 27C1024 RAM: 6264, 62256
- 2 signal outputs for Reset and Halt control.
- DOS Shell function: shares the DOS resources and keeps the control software in PC memory.
- Load and Save function: performs 8-Bit file or 16-Bit file down-load or up-Load.
- Full screen editor: modifies HEX or ASCII area by moving cursor up, down, left, right and paging.
- Display function: touch a single key to display ROM/RAM contents under main menu.
- Binary Code Disassemble: relevant options are available to disassemble Binary code.
- Utility:
 - HEXBIN, HEXBIN2: HEX TO BINARY code converter for Intel 80/86 HEX. Motorola S1/S2/S3 Hex. Tektronix HEX Digital research HEX
 - SPLIT2, SPLIT4: 2-way and 4-way Binary file splitter

- SHUFF2, SHUFF4: 2-way and 4-way Binary file shuffler
- DUMP: Dump file to console in Binary format
- DISASSEMBLER: Support Z80, 8048, 8051, 8085, 6809, 68HC11 (optional)

ORDERING INFORMATION:

- EML-ROM512 includes: Emulator module, system adaptor (SAC-201), 25 D-type cable, 2 PODS for 1M-BIT EPROM, 2 flat cables with 28 pin DIP connectors, user manual and control software.
- DASMZ80.EXE : Z80 disassembler
- DASM51.EXE : 8051 disassembler
- DASM48.EXE : 8048 disassembler
- DASM85.EXE : 8085 disassembler
- DASM09.EXE : 6809 disassembler
- DASM11.EXE : 68HC11 disassembler



FUNCTION SELECTION MAIN MENU

V'NICE-51

POD-8031, POD-8052H, POD-80C550, POD-80C552
POD-80C528,
POD-80C652/654, TRACER For XT/AT/386/486

8051 Series In-Circuit Emulator

INTRODUCTION

The V'NICE-51 offers real emulation of the 8051 series. The emulator occupies no space in interrupt, serial channel, code space, I/O port, etc. of the microcontroller. Also, the V'NICE-51 system comes standard with 128k emulation memory with no need for expensive memory upgrades in the future.

The architecture of the V'NICE-51 uses the microcontroller itself in the special "Hooks" mode for true hardware and software emulation.

The V'NICE-51 uses a small, parallel system interface card which is plugged directly into the PC-bus. The emulator unit is then connected to the system interface card via a standard D-25 type cable. The unit is connected to a POD which plugs directly into your target board.

MENU-DRIVEN

The software uses pull-down menu-driven functions.

The main screen will show the following four individual information windows.

1. The Special Function Registers (SFR) Window displays contents of commonly used registers.
2. The Code Window displays the user's source code in both HEX and assembly mnemonic formats including symbolic information.
3. The Data Memory Window display on-chip RAM values.
4. The External Data Memory Window displays the 64K external data RAM values.

FLEXIBLE EDITING

The V'NICE-51's full screen editor allows you to directly modify or edit Code Memory, External Data Memory, Special Function Registers, On-chip RAM and Bit Addresses. You can edit in HEX or ASCII format. A line assembler is provided to edit small parts of your program in RAM without having to reassemble, link, and load your entire program over and over again.

DEBUGGER

The V'NICE-51 comes with a symbolic debugger. You can combine BIN or HEX code with SYM for emulation in your code's original format.

SINGLE STEP

The single step feature can be used to step through every instruction. It can also be used to step through every instruction but execute subroutines in real time.

BREAK POINT

The V'NICE-51 has extremely efficient 64K hardware breakpoints. It breaks on timing of fetch, read, and write instructions, on an external signal, and on 10 sets of conditional addresses, and on combinations of all of these conditions.

These features make it very easy to follow the program execution on the screen and to figure out where the problems lie.

TRACER

The optional real time tracer can record every synchronous state with a trace record of 16 K words (48-bit wide). The tracer can record the actual program execution and instructions in real time without stopping the processor. The tracer software allows you to set complex 48 bit trigger, pretrigger, and record conditions. These conditions allow you to only monitor the portions of program execution where you are having your problems. This option can be an indispensable aid to discovering those hard to see bugs.

FEATURES

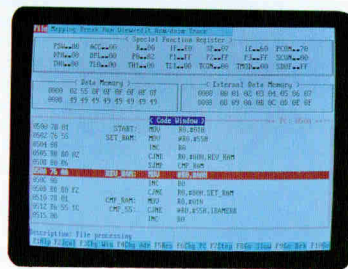
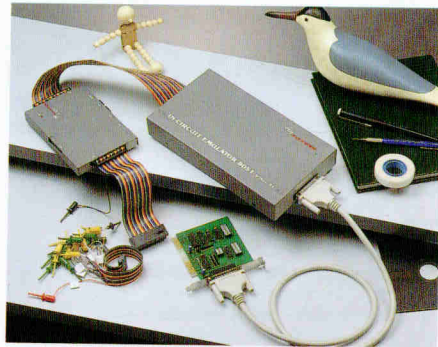
- The complete memory consist of a 64K-byte code memory and a 64K-byte external data memory: It takes no space in user memory, I/O, interrupt, register, or stack.
- Code memory and external data memory can be mapped to the emulator or the target in 4K byte blocks.
- A 1-bit external signal input is provided for conditional break. 18-bit external signal inputs are available for conditional trace.
- Downloads BIN, HEX, and SYM files to the code memory, and downloads data to the external data memory.
- In-line assembler and in-line disassembler; the disassembled file can be saved on diskette. The full screen editor can edit and modify the following data:
 1. Code memory.
 2. External data memory.
 3. All internal SFR of the CPU.
 4. All RAM and bit data inside the CPU.
- Sets conditions for 10 breakpoint sets and operates efficiently with external signals.
- Performs Real Time Go, Single Step Go and Slow Go. The operational processing of Code, SFR, External Data, On-chip RAM can be clearly observed from the information windows.

• POD descriptions

- POD-8031: - emulates 8031, 80C31
 - also emulates 8344, 8051FA/FB, 8032/C32 by replacing the on board CPU;
- POD-8052H: applies the "HOOK" technique to directly emulate the following CPUs.
 - mode 0: emulates the external ROM and RAM of 8031, 80C31, 8032, 80C32, 80C51FA, 80C51FB and 8344.
 - mode 1: emulates the internal ROM of the 8051, 80C51, 8052, 80C52, 80C51FA and 80C51FB.
 - mode 2: emulates the internal ROM and external ROM of the 8051, 80C51, 8052, 80C52, 80C51FA, and the 80C51FB.
- POD-80C550: applies the "HOOK" technique to directly emulate all internal and external modes of the Signetics 80C550.
- POD-80C552: applies the "HOOK" technique to directly emulate all internal and external modes of the Signetics 80C552.
- POD-80C652: applies the "HOOK" technique to directly emulate all internal and external modes of the Signetics 80C652 and the 80C654.
- POD-80C528: applies the "HOOK" technique to directly emulate all internal and external modes of the Signetics 80C528.

ORDERING INFORMATION

- to start up you need the V'Nice-51 unit and a POD of your choice.
- V'Nice-51 includes: Emulator unit, system adapter card (SAC-201), 25 pin D connector and cable, 50 pin flat cable, 40 pin flat cable with DIP IC connector, software, and user's manual.
 - Available PODs are: POD-8031, POD-8052H, POD-80C550, POD-80C552, POD-80C528, POD-80C652.
 - V'Nice-51 Tracer includes: Real time trace board.



PLD/MPU TRAINING KIT

Key For Beginners To The PLD/MPU Field

INTRODUCTION:

With years of experience in programmer designing, manufacturing and marketing, we are following the trend by providing effective tools to meet engineers' demands. We conceived the "Design and Experiments (D&E) Manuals" to help beginners master the fundamental concept and practical application skill of Programmable Devices. Each clear-to-understand experiment starts with simplifying the program, editing and assembling the file, then programming it into the device. Every practical experiment leads the beginner easily through the application.

EDU-PLD: FEATURES:

- How to edit the program, how to assemble it with PLAN-II and how to operate the programmer. This compact kit helps you master PLD efficiently.
- Experiments include:
- 16L8 basic logic gate
 - 16R8 basic register
 - 16L8 7 segment display
 - 16R4 4 Bit synchronous counter
 - 16R8 Neon

ORDERING INFORMATION:

- EDU-PLD: PLD D&E user manual, PLD experiment kit and circuit

EDU-PEEL: FEATURES:

- How to edit the program, how to use PDK-1 to assemble it, how to operate the programmer. This compact kit helps you master PEEL efficiently.
- Experiments include:
- Logic prob
 - PEEL18CV8 emulates TTL74LS138
 - 4 Bit 3 to 1 multiplexer
 - Clock divider and decoder design
 - Dice design

ORDERING INFORMATION:

- EDU-PEEL: PDK-1 PEEL assembler user manual
 PEEL D&E user manual, PEEL experiment kit and circuit.

EDU-GAL: FEATURES:

- How to edit the program, how to use PALASM2 to assemble it and how to operate the programmer. This experiment kit helps you master GAL efficiently.
- Experiments include:
- 4 Bits Adder
 - 3 Bits Comparator
 - 8 Bits Johnson counter
 - 3 Bits Neon
 - Dice design

ORDERING INFORMATION:

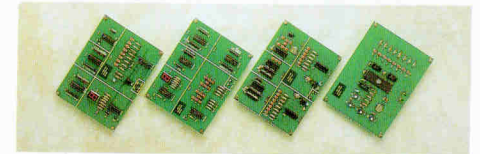
- EDU-GAL: GAL D&E user manual, GAL experiment kit and circuit

EDU-87C51: FEATURES:

- How to edit a 87C51 program, how to use 2500 A.D. to assemble it and how to operate the programmer. This easy experiment kit helps you master 87C51 quickly.
- Experiments include:
- Easy LED control
 - How to use interrupt
 - How to use the timer and counter

ORDERING INFORMATION:

- EDU-87C51: 87C51 D&E user manual, experiment kit and circuit



PLD COMPLIER SOFTWARE

Tango-PLD.™ The Price/Performance leader

INTRODUCTION:

Tango-PLD is an affordable universal tool for designing and simulating programmable logic devices (PLDs). From its innovative approach to PLD design to its blazing compilation speed, Tango-PLD has been engineered to help you produce high-quality designs in less time. Unlike other programs, Tango-PLD allows you to define and test your logic without first having to specify a device. When you are pleased with the design, select a target device and Tango-PLD will produce an industry-standard JEDEC file for programming the PLD. Tango-PLD supports many of today's popular devices, including PALs, PLAs, GALs and PEELs.

Tango-PLD combines a design compiler, the ESPRESSO logic minimizer, a functional simulator and a fusemap generator all into one, easy-to-use program. There is no need to learn or run multiple programs. The Tango-PLD program produces comprehensive design documentation files, formatted source listing files and unique cross-reference files used for source-level debugging. Tango-PLD features the powerful Tango Design Language—a "C-like" hardware description language which supports design, test, device selection and device modeling. Adding the optional BRIEF text editor provides Tango-PLD with a friendly and powerful debugging interface.

In the Tango tradition, Tango-PLD is clearly an exceptional value and a smart investment.

ORDERING INFORMATION:

Tango-PLD: Includes PLD compiler software and user's manual.



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