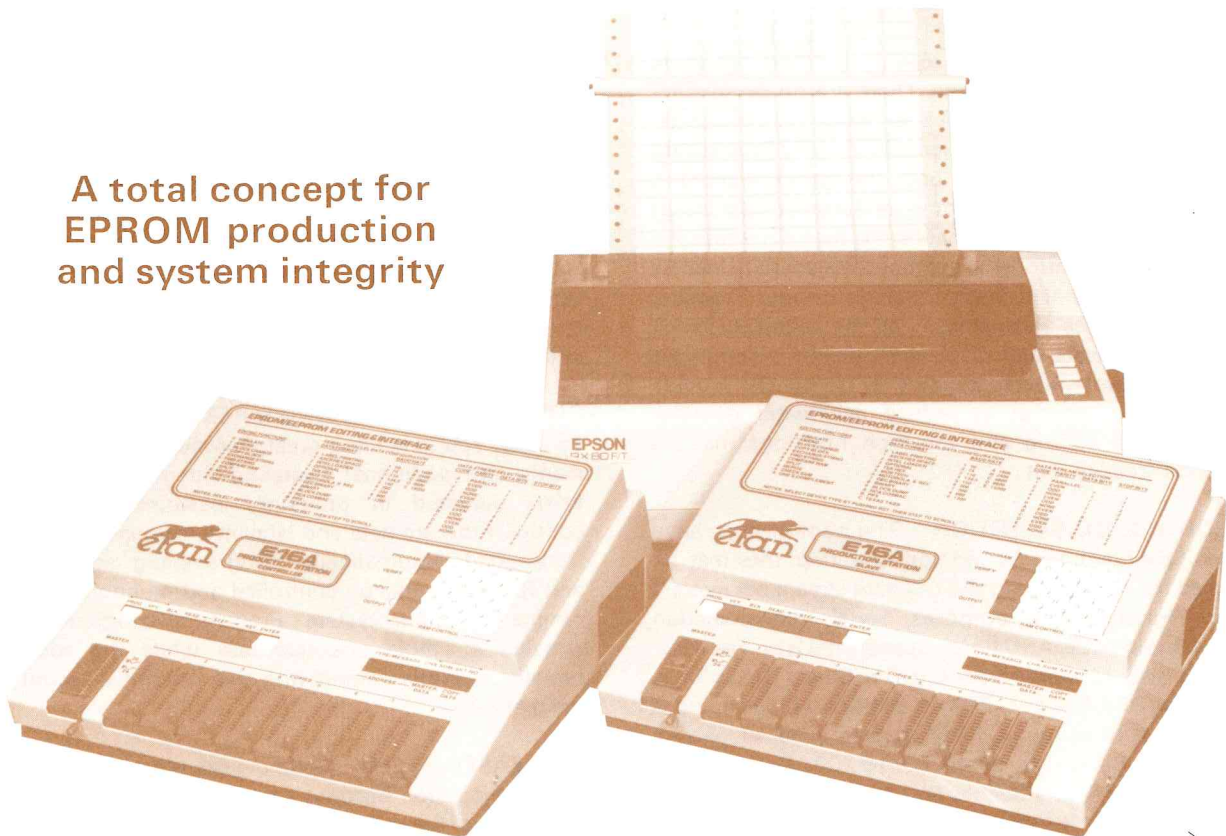




# E16A EPROM/EEPROM Production Station

A total concept for  
EPROM production  
and system integrity



- PROTECTED MASTER  
(No programming voltages)
- RS232 INTERFACE TO 19200 BAUD  
(Key selection)
- DYNAMIC ACCESS-TIME TESTS  
AUTOMATIC (With sort modes)
- FAST PROGRAMMING
- REMOTE CONTROL FOR  
COMPUTER MONITORING
- OPTIONAL AUTOMATIC LABEL PRINTING
- STEEL CASE FOR RUGGEDNESS  
AND RFI PROTECTION

A new concept in AUTOMATIC PRODUCTION COPYING. Through the use of standard hardware (Elan E9A Copiers) single station copying may be expanded from 8 through 16 and 24 to 32 copies, with automatic label printing, intelligent device verification, fast programming, access time testing or sorting, and serial communication.

**IMPROVED PRODUCTION THROUGHPUT** – Gang copying efficiency depends on: integrity; reliability; flexibility; handling and labelling; simplicity of operation; and increased speed. Elan gives you the best of all worlds.

**INTEGRITY, RELIABILITY, FLEXIBILITY** – With both the increasing size of memory devices and cost per part, it makes economic sense to use equipment which has given proven reliable results over many years. By accurately monitoring power rails, shorts, dynamic access time, memory and programming validity, Elan products give the highest degree of confidence in the integrity of each programmed device. Exact error conditions are clearly displayed. Valid copying ends with the display of the checksum, which is the absolute assurance of a correct result. With the high device costs and scarcity of parts you now cannot afford to

compromise on the quality of your copier. Our typical system up-time rates exceed 8000 hrs, MTBF. But when an 8-Gang Controller unit is used with up to 3, 8-gang Slaves (total 32 copy sockets), the system operability approaches infinity. Any of the Slaves may be reconfigured to become the master temporarily, if ever the master unit should fail. The flexibility of this approach allows, either each 8-gang unit to be run independently with different masters, or growth from a single 8-gang machine up to a full 32-gang workstation as demand increases. Each unit is also designed to accommodate the rapid technological improvements and device type alternatives, such as varying fast-programming algorithms, voltage levels or intelligent identifiers from the different manufacturers. Your investment in Elan products may be enhanced with time rather than made obsolete.

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





**SIMPLICITY OF OPERATION** – Unskilled operators may work with confidence. There are no personality modules nor coded switches for device type selection. The device type may be selected manually by scrolling through the list of types until the device wanted is shown in the display window, or automatically via an RS232 connection. The machine is then automatically configured. Controlled insertion of master data may be done manually or remotely. Pushing a single 'Program' button initiates automatically all the necessary blank checks and tests, then displays the results. All errors are visually displayed and alarmed by beeper. To provide supervisory control or reduce accidental operator keying, all editing and selection functions may be 'Code-Locked' out.

**EDITING, I/O SELECTION** – The control keys have multiple functions. In addition to editing, they may be used for key-selecting the I/O data stream parameters and for diagnostic purposes. Serial communication formats include: ASC II Hex Space, Intel Hex, Tek-Hex, Mos Tech, Motorola S Record, Dec Binary, Texas Tags, Binary, RCA Cosmac, PPX. In addition a block dump is provided to output a RAM map to serial or parallel printers. Baud rate range 50–19,200. Default conditions are field alterable and are then held, with or without power mains connected, until changed. Memory size and critical functions may be tested. Editing includes data amendments, split and shuffle, block moves, search for and automatically changing byte strings, one's complement, and checksum calculations. RAM is expandable to 128K bytes.

**HANDLING & LABELLING** – With the fast programming algorithms now available, the speed of throughput is inhibited as much by physical handling and labelling of the devices as by the programming times themselves. The Elan units are ergonomically designed to minimise the operator's movements and simplify the controls. More importantly, automatic matrix printer control is provided to allow the operator to be fed the correctly coded labels for immediate placement on

each device during the programming cycle, or should a failure occur then a 'failed' label with instructions is printed. Elan supplies specially designed continuous self-adhesive label stationery. The department which holds the responsibility for the master device data may provide a master EPROM with labelling information, or alternatively the labelling details may be assigned to a predetermined address in each device for accessing, verifying and printing. This approach, when used with the Intel equivalent 'intelligent identifier' will provide error free results using little operator skills.

**COMPUTER MONITORING & REMOTE CONTROL** – To allow you to achieve greater productivity improvements and additional operating integrity the E16A offers standard or optionally customised remote control. Program data and labelling messages may be transmitted automatically. Programming selections and functions may be controlled and monitored by a remote computer system. Production programming remains a simple unskilled task while the added benefits of system monitoring and functional security are realized.

**INCREASED SPEED** – Optimum use is made of Elan's software control. Because each 8-gang unit, whether Controller or Slave, functions independently during the program cycles, up to a 20% improvement in throughput may be achieved over single-entity 16, 20 or 32 gang copying machines. This results from techniques required by the device manufacturer's approved fast-programming algorithms. Add to this the reduction in time achieved by skipping non-programmed and valid pre-programmed bytes, and by working independently on different units when different masters are used with smaller runs, and you have an improvement in throughput which further enhances the cost-effectiveness of the Elan E16A Production Workstation.

You can stay more than one jump ahead with the Elan technique.

**Specifications:**

*Dimensions:* 280 x 270 x 110 mm x No. of Units  
*Power:* 110, 120/220, 230, 240 AC, 50–60 Hz  
*EPROM Types:* 2508, 2716, 27C16, 2532, 2732 & A, 27C32, MK2764, 68764, 68L764, 2564, 2764 & A, 27C64, 27128 & A, 27256, 27512 (1 Copy Socket) per unit or similar. Intelligent Identifiers.  
*EEPROM Types:* 2815, 2816, 48016

*Weight:* Approx 5 Kg per unit  
*Temperatures:* 15–35°C ambient  
*Relative Humidity:* 0 to 90% non-condensing  
*Sockets:* 28 pin zero insertion force  
*Interface:* Serial I/O, RS232  
*RAM:* 64K bytes standard or optionally 128K bytes

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