Magnuson

THE ALTERNATIVE

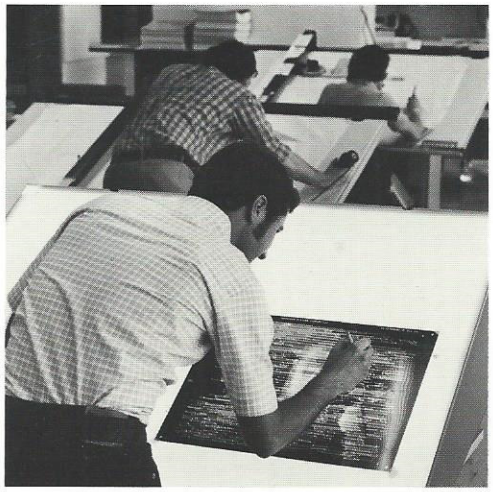
Today, competitive forces in the data processing industry are opening a new era of computer alternatives for growth-minded companies. Based on unique IBM-compatible architectures, these alternatives offer faster processing in smaller spaces and at lower costs than ever before possible. Even more important, they provide users, for the first time, with extended growth paths built on existing hardware and software investments.

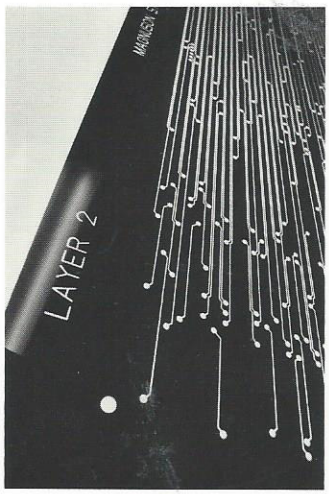
In mid-range computers, Magnuson's design achievements have led the push for more cost-effective solutions. Our M80 system family, with its remarkably flexible architecture, delivers powerfully on the promise of new alternatives. And we've backed the M80 family with a broadly integrated corporate organization ready to serve the full spectrum of customer needs.

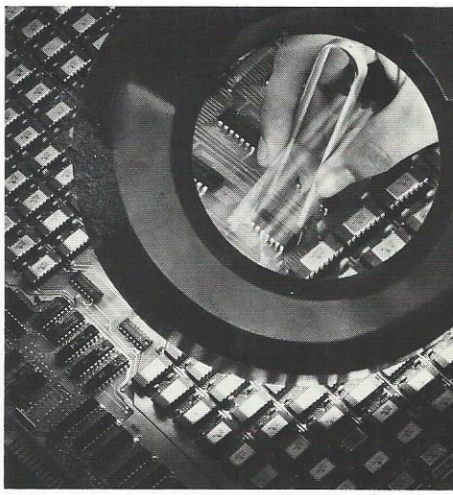
We think you'll find that the financial benefits of Magnuson's approach justify a reassessment of EDP investment priorities. The efficiency of your data processing today–and your edge on the future–may depend on just such an approach.

We at Magnuson welcome your scrutiny. And we look forward to discussing a long term business relationship with you.

Joseph Hitt
President and Chief Executive Officer
Magnuson Computer Systems







Both the urgency and variety of requirements of midrange computer users have dictated Magnuson's corporate structure. From the beginning, we knew our organization must have sufficient breadth to first anticipate the needs of customers, and once understanding, to respond on every level—from technology and manufacturing, to marketing and maintenance. In short, only a supplier with such broad capabilities could provide the products and support required in today's marketplace.

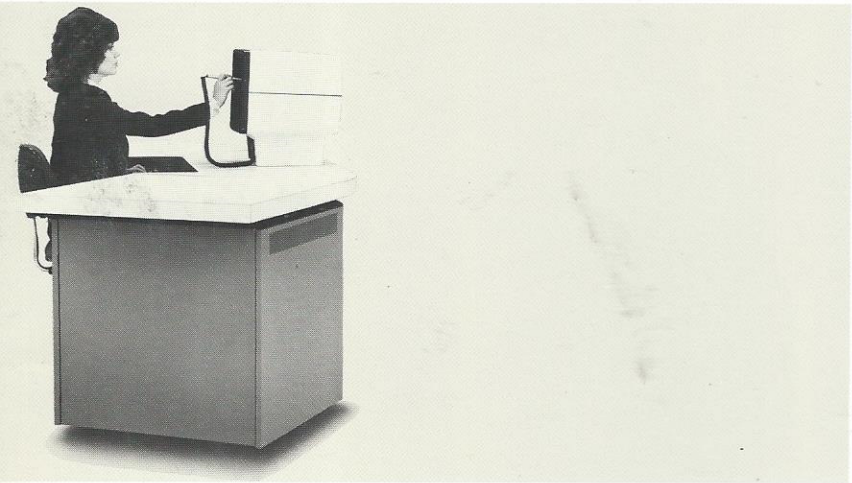
Designing against obsolescence

Our first computer family, the M80, reflects Magnuson's understanding of customer needs. First, we have presupposed your substantial investment in competitive software and hardware. We have also addressed the imminent obsolescence of many IBM 370 systems because of inherent growth limits.

Our innovations in computer architecture and our grasp of users' needs have yielded the M80 family and its flexible design. The immediate result will be increased throughput and reduced costs for Magnuson customers. Our dedication to research and development ensures that we'll be able to continue providing such advanced solutions.

Single-source responsibility

But Magnuson support goes deeper than technology. The same organization that designed and built the M80 family also sells, installs and services it. We are committed to this concept of full vertical integration of capabilities. No matter what your company's needs are or become, as part of the Magnuson user group you're assured of single-source service and responsibility. And you're assured of solutions on every level your needs occur.



Perhaps the most impressive technological feature of Magnuson's M80 family is the utter simplicity of its architecture. Unlike competitive computer architectures which are based on complicated cross-uses of common hardware, the M80 uses a functional building block approach. Each subsystem and each circuit board in the M80 is dedicated to a specific function. The result is a modularity far surpassing that of any other mainframe to date. This flexibility is the reason we call our architecture "strategic."

Beyond the 370

Strategic Architecture is a direct response to the needs of a broad segment of mid-range computer users. First among these needs is performance to the IBM 370 standard. Today, the smaller, less expensive M80 meets or surpasses every performance specification of the competitive mainframe. To optimize your current investment in 370 hardware, software and trained personnel, the M80 family is completely compatible with IBM architecture.

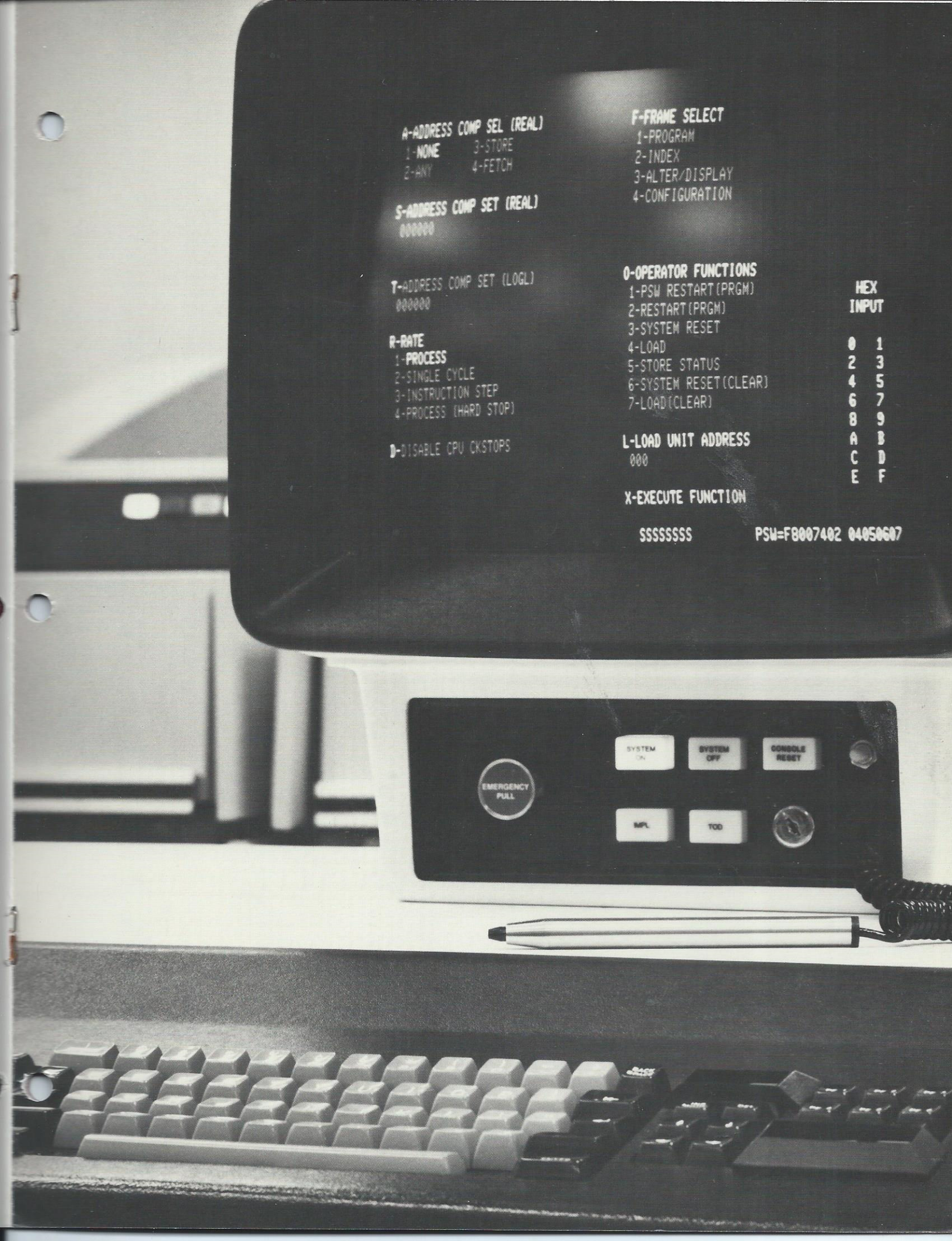
An important economic requirement of many mid-range computer users is the ability to expand beyond IBM 370 capacity limits. Magnuson's Strategic Architecture makes this expansion possible for the first time. By simply "adding in" M80 components, users can literally double the power of an existing system, even if that system has reached its "normal" expansion limit. This dramatic extension of your system's lifetime has obvious and far reaching financial ramifications.

A smooth path to the future

Expansion of the M80 family itself is equally simple. In most cases, upgrades can be accomplished within hours. The addition or replacement of circuit board modules is usually all that is required and can be done on-site by Magnuson field engineers.

This same modularity allows M80 users to upgrade technologically, too. As advanced components are proven reliable, they can be easily integrated into the M80 by the same modular hardware replacement. And since the M80 is microcode programmable, it has the inherent flexibility necessary for efficient, economical hardware and software enhancement.

Finally, our Strategic Architecture contributes important savings to system maintenance. The M80's logical layout by function significantly simplifies troubleshooting, isolation of failure and replacement of faulty elements.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1-NONE
2-ANY
3-STORE
4-FETCH
S-ADDRESS COMP SET (REAL)
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T-ADDRESS COMP SET (LOGL)
000000
R-RATE
1-PROCESS
2-SINGLE CYCLE
3-INSTRUCTION STEP
4-PROCESS (HARD STOP)
D-DISABLE CPU CKSTOPS
F-FRAME SELECT
1-PROGRAM
2-INDEX
3-ALTER/DISPLAY
4-CONFIGURATION
O-OPERATOR FUNCTIONS
1-PSW RESTART(PRGM)
2-RESTART(PRGM)
3-SYSTEM RESET
4-LOAD
5-STORE STATUS
6-SYSTEM RESET(CLEAR)
7-LOAD(CLEAR)
L-LOAD UNIT ADDRESS
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X-EXECUTE FUNCTION
HEX INPUT
0 1
2 3
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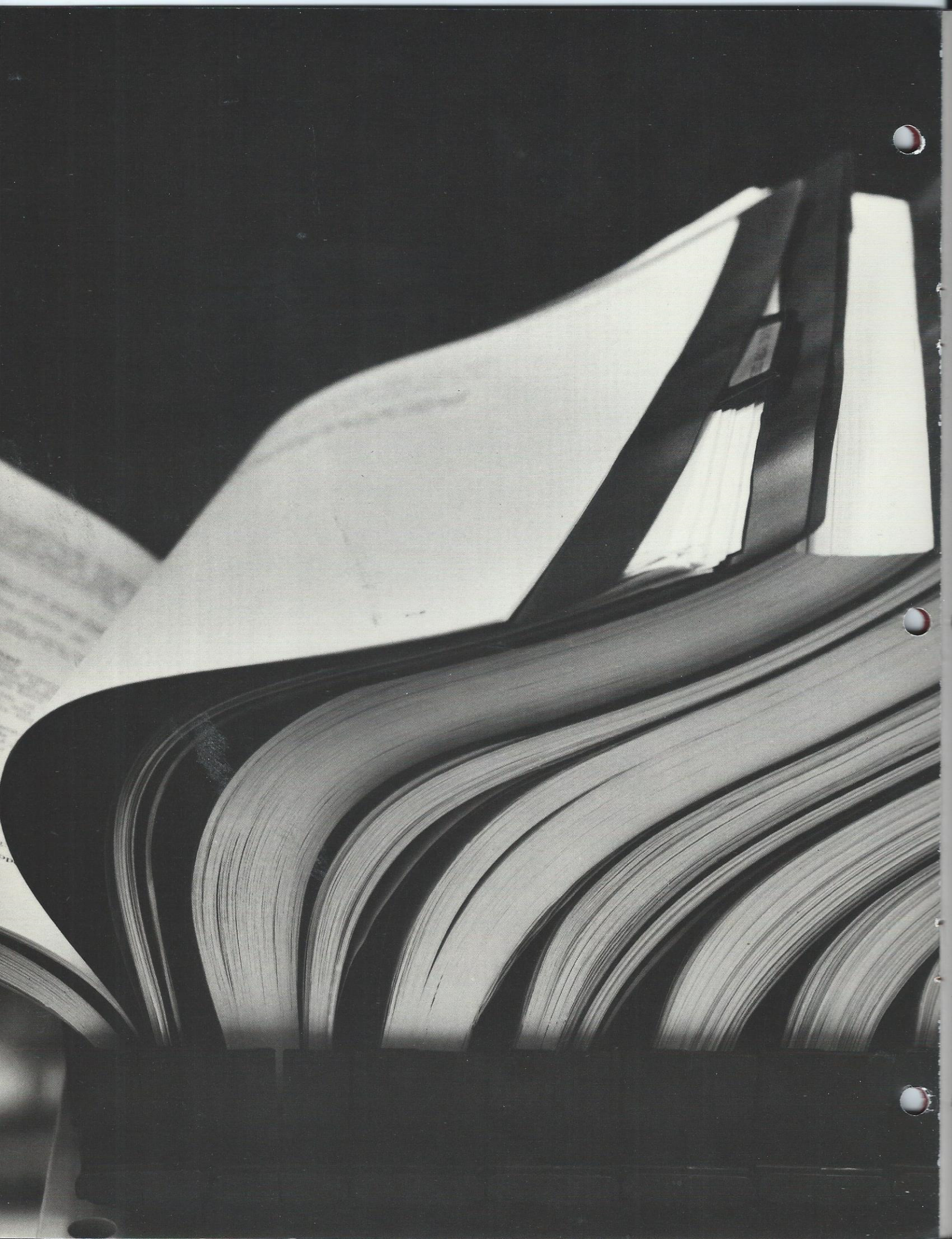
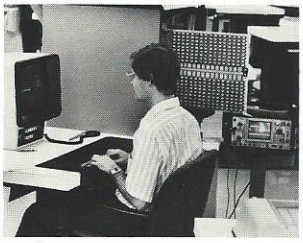
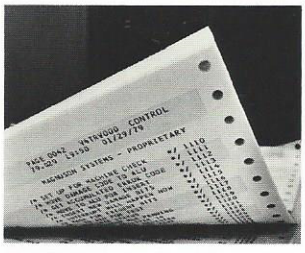


M80 MAINTENANCE: NEW STANDARDS FOR IN-FIELD AND IN-MACHINE SUPPORT.





Reliability of your processor is as critical as performance. That's why we embodied in the M80 some of the most thorough monitoring and diagnostic capabilities ever used in a computer mainframe. And it's why we've established a national network of field support representatives dedicated exclusively to local hardware and software support of Magnuson systems.

Triumph of simplicity

The M80 family's inherent reliability starts with Magnuson's Strategic Architecture. Because this architecture uses a central universal bus to interface system elements, the jungle of cables and connectors found in other mainframes is eliminated. And because the M80 also contains fewer electronic components, power consumption, hence heat, is drastically reduced compared with competitive systems. Here, as with most technological advances, simplicity is the key to reliability.

Backing the M80's straightforward design is a dependable internal security system. Temperature, voltages and critical environmental parameters are constantly monitored and recorded. Early warning displays alert operators well in advance if intervention is necessary.

Troubleshooting in the M80 family is performed on-site with the same comprehensive diagnostics we use to certify reliability in our own quality control facilities. Using this powerful diagnostic software, Magnuson System Support Representatives can locate problems rapidly. And they can replace faulty circuits easily by plugging in new boards as necessary.

National support network

Our System Support Representatives are part of a national team, each member locally based, committed to immediate response to customer needs. Hardware and software experts in their own right, Magnuson representatives are in turn supported by a remote phone maintenance procedure pioneered by Magnuson for intermediate scale computers.

Each M80 System has a built-in telephone modem to connect your computer, in case of special problems, with our 24-hour Technical Support Center at Magnuson headquarters in Santa Clara, California. Technical specialists in our Support Center can operate your computer remotely and apply the special resources required to solve problems immediately.

At a time when "down" equipment accounts for an alarming share of data processing expense, Magnuson offers unparalleled protection against failure. Our dedication to support customers, both in-machine and on-site, is setting a new standard for the industry.

Magnuson's M80 family is changing computer economics for fast-growing companies. Financial advantages of the system are so strong, they offer an important opportunity to revaluate current approaches to computer acquisition.

Perhaps the most important factor in this changing economic picture is the extended life of the M80 family. Now, for the first time, mid-range computer users have an alternative to frequent and costly forced migration from IBM mainframes. Because M80 permits field upgrading over a far wider range of computer power, you're assured of capital equipment that stays with you as you grow. M80 brings with it additional financial advantages as well: lower initial investment, higher residual value, simpler maintenance and more efficient processing.

An important consequence of these economic efficiencies is the option of owning, instead of leasing, computer equipment. Now, intermediate range users can take advantage both of M80 performance and the traditional benefits of equity, such as depreciation and other tax credits.

But whatever your company's position on capital investment, Magnuson has an acquisition plan to fit. A variety of lease and purchase options are available for tailoring to your requirements.

In sum, Magnuson offers vast new potential to organizations whose profitability depends on cost-effective computing. The power of the M80 is here today to help you realize that potential.

For most companies, it will represent the most efficient alternative to their data processing needs. For those with a keen eye to the future, it may well be the only alternative.

Magnuson

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Computer
Systems

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