

# Burroughs B1700 Systems



## Powerful, small-scale systems for better business management



**Burroughs B 1700 Systems—the small computers designed for the business manager**  
... who needs the management information and control capability now available to users of larger systems  
... who needs more data processing power today, and expandability for the future  
... who needs results without complexity, and at a lower true cost.

Whether you're planning for your first data processing system . . . replacing a current system . . . or building a distributed processing network . . . Burroughs B 1700 Systems offer you a direct route to better business management, with new levels of cost/effectiveness in data processing.

In developing the B1700 family of revolutionary small systems, Burroughs successfully integrated exciting new elements of EDP technology with a number of the important characteristics of its advanced, large-scale computers. And, to put this productive power right to work, Burroughs offers a comprehensive *Business Management System*<sup>™</sup> library of application programs. So, you can develop the specific decision-making and control information you need for more effective management . . . comparative operating reports, budgets and forecasts . . . day-to-day updates of business progress . . . analyses of profitability, cash requirements, liabilities . . . inventory and production control reports . . . current and projected financial statements . . . and many others.

For the first time, then, you have an opportunity to improve management effectiveness through the use of fully featured, small-scale data processing systems. Systems that provide:

**Management Information Throughput**—large systems management reporting abilities to help you get the right information to the right people at the right time.

**Immediate Productivity**—all the advantages of ready-to-use application programs from our *BMS*<sup>™</sup> library, at a fraction of what it would cost you to develop and maintain your own programs.

**Flexibility**—a broad choice of processors, disk file subsystems, and data input-output devices, including 96-column card handling capabilities, to match your cost/performance objectives . . . plus the ability to process a variety of computer languages at full efficiency so that the same system can serve management's control functions, perform administrative data processing, and solve engineering/scientific problems as well.

**Simplicity**—ease of system operation and management which, for many users, eliminates the need for a professional data processing staff.

**Responsiveness**—low-cost, modular expansion, without reprogramming, to meet growing workloads . . . the ability to accept new applications and recurring changes in management's information requirements.

**Fourth Generation Processing**—a Master Control Program for system self-regulation . . . automatic multiprogramming (an entirely new concept in systems of this size) . . . and variable micrologic processor design, an innovative use of advanced EDP technology.

*Business Management System* and *BMS* are trademarks of Burroughs Corporation.

Fourth-Generation Processing  
Responsiveness  
Simplicity  
Flexibility  
Immediate Productivity  
Management Information Throughput

**You'll get the right information  
to the right people  
at the right time**



**From data to  
decision-  
making  
information**

A continuous flow of accurate operating and management information is essential to the conduct of any business, regardless of its size. But until now, the expense of multi-purpose computers and the costs of program development and maintenance have tended to restrict the availability of comprehensive decision-making information to larger organizations.

**Designed for  
small-  
business  
management**

Now — with Burroughs powerful B 1700 Systems — comprehensive management information is available at a cost that thousands of smaller businesses can readily afford. In fact, the B1700's are the first fully featured, multi-purpose computers specifically designed to provide small-system users with the same valuable management information and control capabilities available to users of larger data processing systems.

**Systems that  
serve you  
in many ways**

B 1700 Systems offer exceptional versatility for structuring the management information flow. For example, the smaller business may use its B1700 as a complete, self-contained system. Another firm may



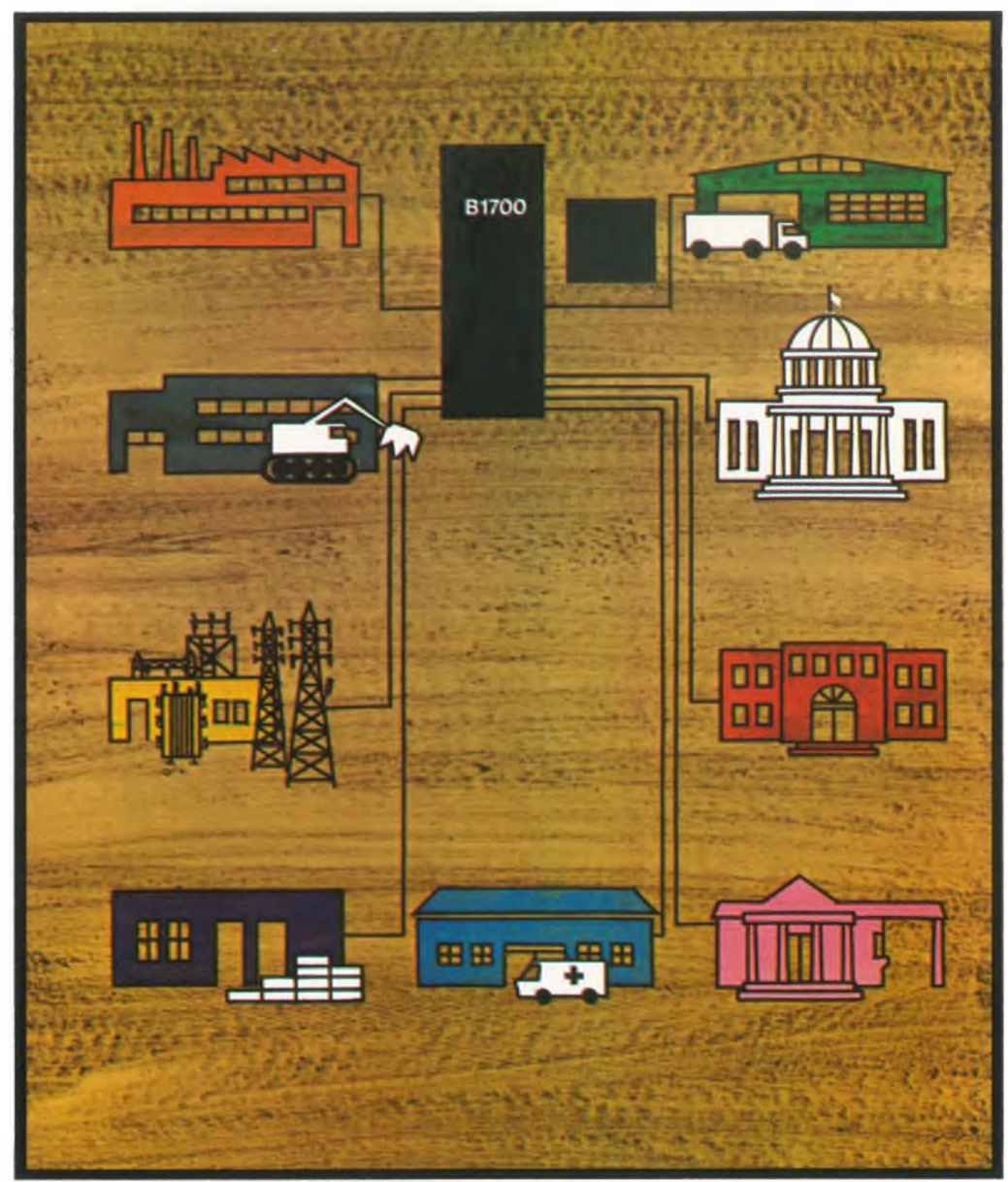
link its main office B 1700 to a network of Burroughs communications terminals in sales, manufacturing and warehouse facilities. Still another organization can use multiple B1700 Systems for data processing at remote sites, and for transmitting information to and from a larger central computer.

In all configurations, B1700 Systems provide high throughput for systems in their size and price range. Throughput—the amount of productive work accomplished in a given time period—is the truest cost/performance measurement for most computer users. B1700 throughput is the result of highly advanced circuitry using an innovative processor design concept called 'variable micrologic' . . . combined with important characteristics adapted from Burroughs powerful, large-scale computers, such as a Master Control Program, automatic multiprogramming, and virtual memory. Together, these equip the B1700 Systems with exceptional productive power . . . productive power that you can put to work as soon as your B1700 System is installed.

**Advanced  
design  
for high  
throughput**

**Fourth-Generation Processing**  
**Responsiveness**  
**Simplicity**  
**Flexibility**  
**Immediate Productivity**  
**Management Information Throughput**

## You can obtain immediate results with B 1700 Systems



Burroughs Business Management System library offers comprehensive application programs for many lines of business.

Ready-to-install application programs are available at low cost from Burroughs Business Management System library. These comprehensive application programs take full advantage of the B 1700's efficient processing capabilities, so that your system can begin producing promptly.

Burroughs Business Management System library offers cost-saving opportunities to a broad cross-section of small-computer users. Included are program systems for:

Wholesalers . . . Distributors . . . Manufacturers . . . Banks . . . Hospitals . . . Accountants . . . Government . . . General Contractors . . . Credit Unions . . . Savings and Loans . . . Auto Dealers . . . Utilities . . . Schools and Universities . . . with others being developed in an on-going program library expansion.

This means that with a B 1700 System, you can start into data processing without a professional programming staff. You can continue to use Burroughs application program systems, or develop programming skills within your organization on an orderly, planned basis. In either case, you can benefit from immediate system productivity at a fraction of what you might otherwise have to invest in initial program development and in program maintenance.

For those who are replacing a currently installed computer, the B 1700's language processing versatility offers important savings, too. In many cases, your present COBOL, FORTRAN or RPG programs can be recompiled for your B 1700 System and will operate with measurably improved efficiency. And you may find that Burroughs ready-to-use program systems, written in higher level languages, provide cost/effective replacements for archaic language programs now in use.

The *BMS* library of programs

A broad range of cost-saving application programs

Without a professional programming staff

Move up to high level language programming

Start with the system you need now...  
expand it whenever you need to



The B1700 is flexible throughout. This design concept in itself identifies the B1700 as a highly advanced system, and its practical effect is to provide you with substantial savings in equipment costs and programing time.

#### **Processor and control system flexibility**

B1700 processors offer memory capacities ranging from 16,000 to 98,000 bytes. You can start with the memory level that efficiently meets your present requirements. As your workload grows, you can add remaining memory increments as needed.

The Master Control Program (MCP) is flexible, too. MCP I provides single job processing capability. MCP II provides automatic multiprograming and data communications capability. Each makes efficient use of system resources. You can expand your B1700 System without altering either your existing application programs or your operating procedures. The Master Control Program makes

the necessary adjustments. In this way, the system, rather than the user, accepts the burden of change.

#### **Low-cost data file subsystems**

Burroughs new Disk Cartridge Drives, Disk Pack Drives and high-speed, head-per-track Disk File Subsystems reduce the cost of on-line random access to information. At the same time, they offer you outstanding flexibility in application.

Additional data file subsystems available include compact magnetic tape drives and magnetic tape clusters.

#### **Input/Output devices for every application**

Burroughs new 96-column card equipment provides efficiency and ease in data preparation, input and output. Some models can be instantly switched between peripheral and off-line operation.

Standard 80-column card equipment is also available.

Line printers with speeds from 90 to 1040 lpm provide output flexibility.

For bank applications, a variety of MICR reader sorters are available. Speeds range from 600 to 1,625 documents per minute. Distribution capacity ranges from 4 to 16 pockets.

#### **Terminals and terminal systems**

Burroughs full line of terminals and terminal systems are available for such activities as data collection and input, remote site report writing, management information inquiry-and-response. In financial systems they can be used for window transactions, account status inquiry and display, and other functions.

#### **Language processing flexibility**

Like Burroughs larger data processing systems, the B1700's operate with application programs written in high level languages, each of which allows problem-solving and

data processing procedures to be expressed in the most appropriate terms. COBOL, for example, uses common English-like statements for business applications. FORTRAN uses algebraic expressions for technical problem-solving. RPG is a convenient business program language. And BASIC is a special, simplified language for beginning program writers.

All application programs from Burroughs *Business Management System* library are written in high level languages. Because the B1700 Systems employ Burroughs unique variable micrologic processor design in conjunction with a Master Control Program, each language is processed without compromise in efficiency.

The use of high level languages provides upward compatibility of application programs, offering B1700 users long range protection for their programing investments.

## A powerful system that your people can learn to use quickly



Burroughs systems are known for their unusual ease of operation and management. The B 1700 is no exception. The B 1700's internal design sophistication is reflected in the system's self-managing ability and the degree to which it simplifies the responsibilities of the operator and programmers. Your B 1700 System minimizes the need for a professional EDP staff. For some users, it eliminates professional staff costs entirely.

Simplified operation and management

For example, the B 1700's Master Control Program manages the system's resources. It analyzes the workload continuously and applies those resources, from processor assignments to input/output functions, dynamically. This relieves the operator and the program writers alike from making many kinds of decisions affecting resource utilization, and results in superior system efficiency, particularly in a multiprogramming environment.

Continuous efficiency

The MCP further simplifies B 1700 operation with easy-to-understand man/machine communications. The system presents instructions to the operator and responds to inquiries in English statements through a console printer. The MCP informs the operator whenever some specific action must be taken by the operator, such as providing a master file. The operator, in turn, may ask the MCP about the status of any job in process. These straightforward communications save time, avoid confusion, and add to your system's total productivity.

It's easy to "talk to"

The careful consideration given to "human factor" engineering in B 1700 design means that your people can achieve operating proficiency after a short period of training. <https://classic.technology>

## A continuing high return on your investment for years to come



**Your needs for management information will change** One thing is certain. Your needs for management information will change. So, in planning for any new system, a prime consideration is that system's ability to respond to change, at whatever rate is necessary, and at the least real cost in money, time and effort.

**The B 1700's are designed for change** Burroughs B 1700 Systems provide this responsiveness through advanced computer design techniques, powerful logic circuitry, and system modularity. The B 1700's responsiveness will prove itself in savings to you for years to come.

**Expand your system without reprogramming** It will prove itself as you expand your system . . . with memory modules, peripherals and data file subsystems that can be added at any time . . . without reprogramming. When you make a change, the Master Control Program instantly reorganizes the work schedule to take full advantage of the increased system capabilities. When you add new capabilities, you may even create an even more efficient processing environment for existing application programs. This often means a lower cost per application.

**Add new applications** B 1700 responsiveness will prove itself as you add new applications. Application programs from our *BMS* library can save you time and money. Or, if you decide to do your own programming, the B 1700 enables you to prepare programs in the high level language most appropriate for each job, and with the knowledge



that your programs can be used with any larger Burroughs system you may want to install in the future.

Language compatibility puts an end to the high reprogramming costs usually associated with system upgrading or conversion. It lengthens the lifetime of many programs, and means that you can plan long range projects with greater confidence.

B 1700 responsive design also proves itself by allowing you to progress from job-at-a-time processing to multiprogramming, in which several jobs move forward at the same time. In this way, more work is done in less time. Your system's productivity goes up while costs stay down.

The B 1700 has the power to do more work for more people in your organization. You can extend B 1700 power via data communications to your people in research, engineering and production . . . in warehouses, branch offices and other locations.

The high level of responsiveness offered by Burroughs B 1700 Systems is the key to continued productivity and more effective computer usage . . . to give you the management information and control capability you want and need in a constantly changing business environment.

**High level languages protect your investment**

**Multi-programming for greater productivity**

**Extend computer benefits to more people**

**Responsive design pays off for you**

## B 1700 Systems . . . a significant advance in computer design technology

### Benefits of fourth-generation design

Burroughs B 1700 Systems offer the users of small-scale computers their first opportunity to benefit from the advanced characteristics and processing techniques used in larger-scale systems—such as self-regulation by means of an MCP, automatic multiprogramming, and virtual memory . . . plus precedent-setting applications of fourth-generation EDP technology—including integrated circuit processors and main memories functioning within a variable micrologic processing structure.

### MCP for self-regulation, multi-programming, virtual memory

The MCP is a comprehensive executive system which supervises B 1700 System operation. This powerful tool, which has proven its superiority on larger Burroughs systems, manages B 1700 System resources so that manpower resources can be devoted to constructive problem-solving. The MCP assigns memory, handles input/output functions, communicates with the operator, logs system use, loads programs, maintains a library of all files, and supervises other functions, all of which contribute to simpler programming, ease of system operation, and high throughput.

MCP II provides the coordination required for automatic multiprogramming. And it supervises virtual memory operation, in which excess program segments are stored in disk memory and are called into main memory when needed.

### Variable micrologic processor

In contrast to conventional, fixed-logic or "hard" machines, the B1700 processor makes extensive use of variable micrologic or "soft" instructions which, in turn, are executed by "interpreters." Variable micrologic alters the processor's logical operation dynamically to optimize performance with a variety of program languages.

### Multi-language processing

This means that whether your programs are written in COBOL, FORTRAN, RPG or BASIC (or any computer language for which an interpreter is available), the B 1700's variable micrologic processor creates the ideal execution mode for each. In effect, the same processor becomes a variety of optimized processors, operating with individual interpreters that fit the specific needs of each program language.

At user-program run time, the MCP loads the needed interpreter into a portion of memory. The entire "logic-altering" process is automatic.

### Plus multi-programming

In a multiprogramming environment, your B 1700 can accept jobs in any sequence you choose. Processor micrologic varies itself to fit whatever program languages are encountered. The same is true for data communications work in which a variety of program languages are employed.

### Bit-level addressing

Another significant advance in B 1700 System design is memory addressability to the bit-level, resulting in highly efficient utilization of memory. A bit is the smallest unit of data representation in a computer. Bit addressability eliminates the need for pre-defined data structures such as words or bytes. This permits every unit of memory in the B 1700 System to be defined and utilized.



B 1700 System users have a choice of three central processors. Operating speeds are 2 million, 4 million or 6 million cycles per second. Memory sizes range from 16,000 to 98,000 bytes. Each processor can accommodate up to 8 individual controls for input/output devices. All controls are fully buffered so that the processor and the peripheral units can operate independently at their full-rated speeds.

These powerful new B 1700 Systems provide small-scale computer users with the same opportunities for improved management efficiency available to users of larger systems. The B 1700's demonstrate Burroughs continued success in developing advanced electronic systems that serve management more effectively and at a lower true cost.

A choice of high performance processors



**Burroughs B 1700 Systems . . . for the management information and control capability  
you need now . . . and in the future!**

