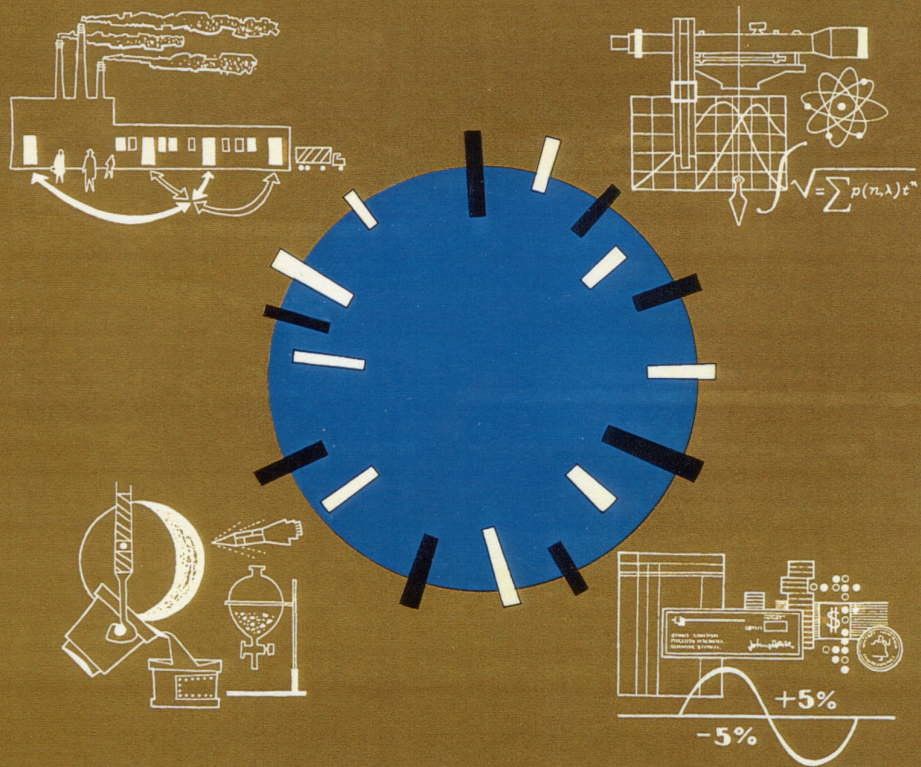


EQUIPMENT DESCRIPTION AND APPLICATION

LGP-21

GENERAL PURPOSE COMPUTER



COMMERCIAL COMPUTER DIVISION / INFORMATION SYSTEMS GROUP / GENERAL PRECISION, INC.

GENERAL PRECISION BREAKS THE COST BARRIER!

Whether you're a department head in a large corporation or comptroller of a 50-man plant; partner in a 4-man consulting firm, or research director for a group with desk-side computing requirements . . .

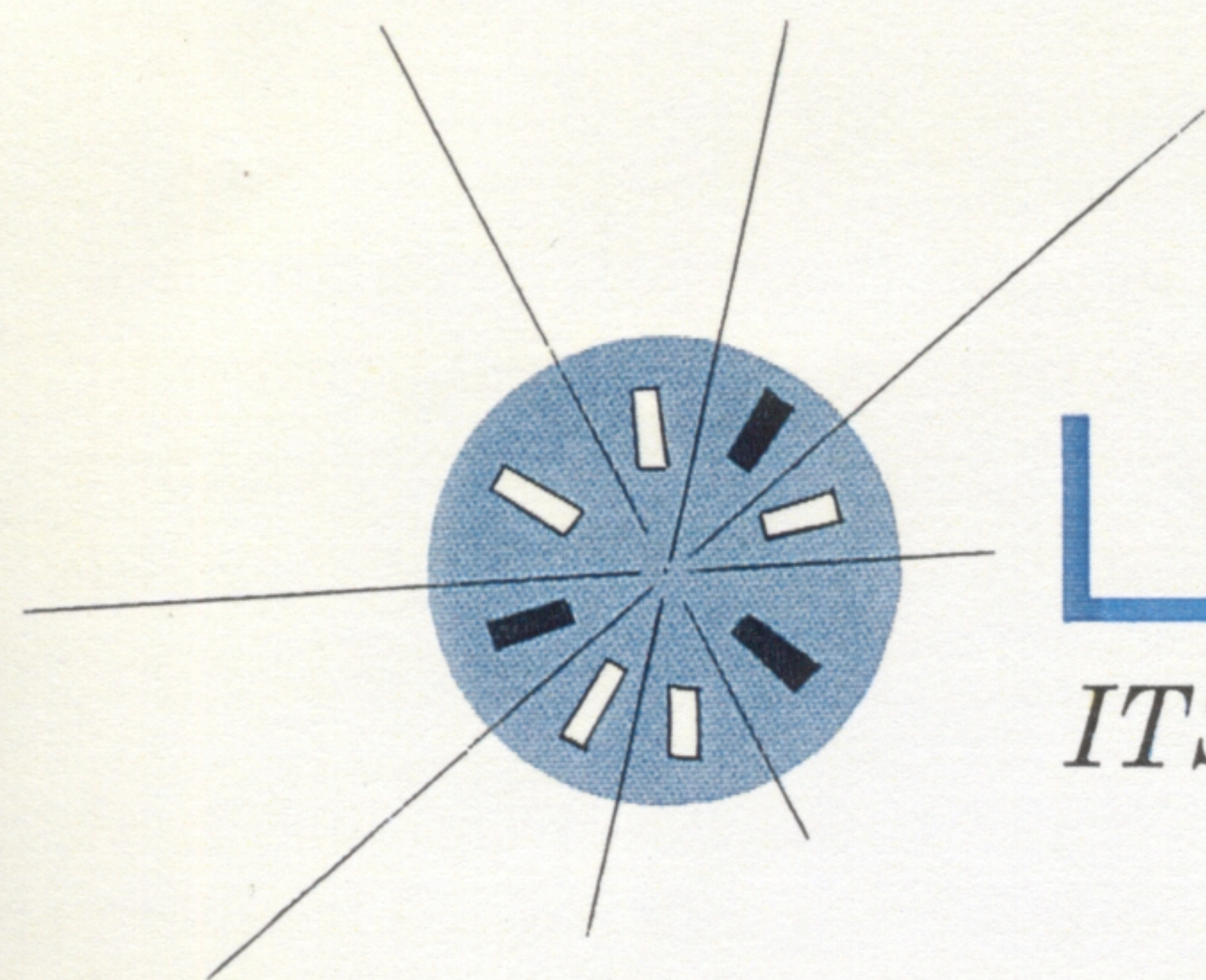
If you need fast answers to tough problems, but haven't found electronic computing practical in the past — General Precision brings computer ownership within your reach with the

LGP-21 ELECTRONIC COMPUTER



A true solid-state, stored program digital computer capable of solving any problems expressible in numbers or symbols, the LGP-21 is suitable for use on all but the largest computing or book-keeping problems.

From the time of its introduction, the LGP-21 has been supported by a program library of a size and diversity unparalleled in the small computer field. This library continues to grow daily, assuring maximum results at minimum overall cost.



LGP-21

ITS SIGNIFICANCE TO YOU

*SMALL, INEXPENSIVE, YET FULLY CAPABLE,
THE LGP-21 WAS DEVELOPED FOR USER PROFIT*

- in the hands of an expert or novice computer user
- on business or scientific applications or both
- for occasional or 24-hours-a-day computer use

*THE LGP-21 IS DESIGNED AROUND THESE
KEY FEATURES:*

- **large memory** — 4096 words of 9 decimal digits each (36,000-plus decimal digits)
- **compact vocabulary** — 23 powerful commands, including all arithmetic functions
- **adaptability** — 32 addresses for program control of input and output equipment
- **low price** — economical monthly cost in the salary range of a clerical employee
- **compatibility** — minimum retraining if future growth warrants change to a larger General Precision computer

*FROM THESE FEATURES AND MANY OTHERS COMES
THIS WIDE RANGE OF USER-BENEFITS:*

- complete mobility for decentralized applications
- economic payoff on short run or keyboard operation
- easy operation and programming by present personnel
- reliable results in any desired output format
- profitable application to almost any job
- low start-up cost, low programming cost
- little or no peripheral equipment necessary

The first truly general-purpose, internally programmed computer available in its price range; designed with a large memory capacity and the input/output flexibility to meet most business, engineering or scientific requirements.

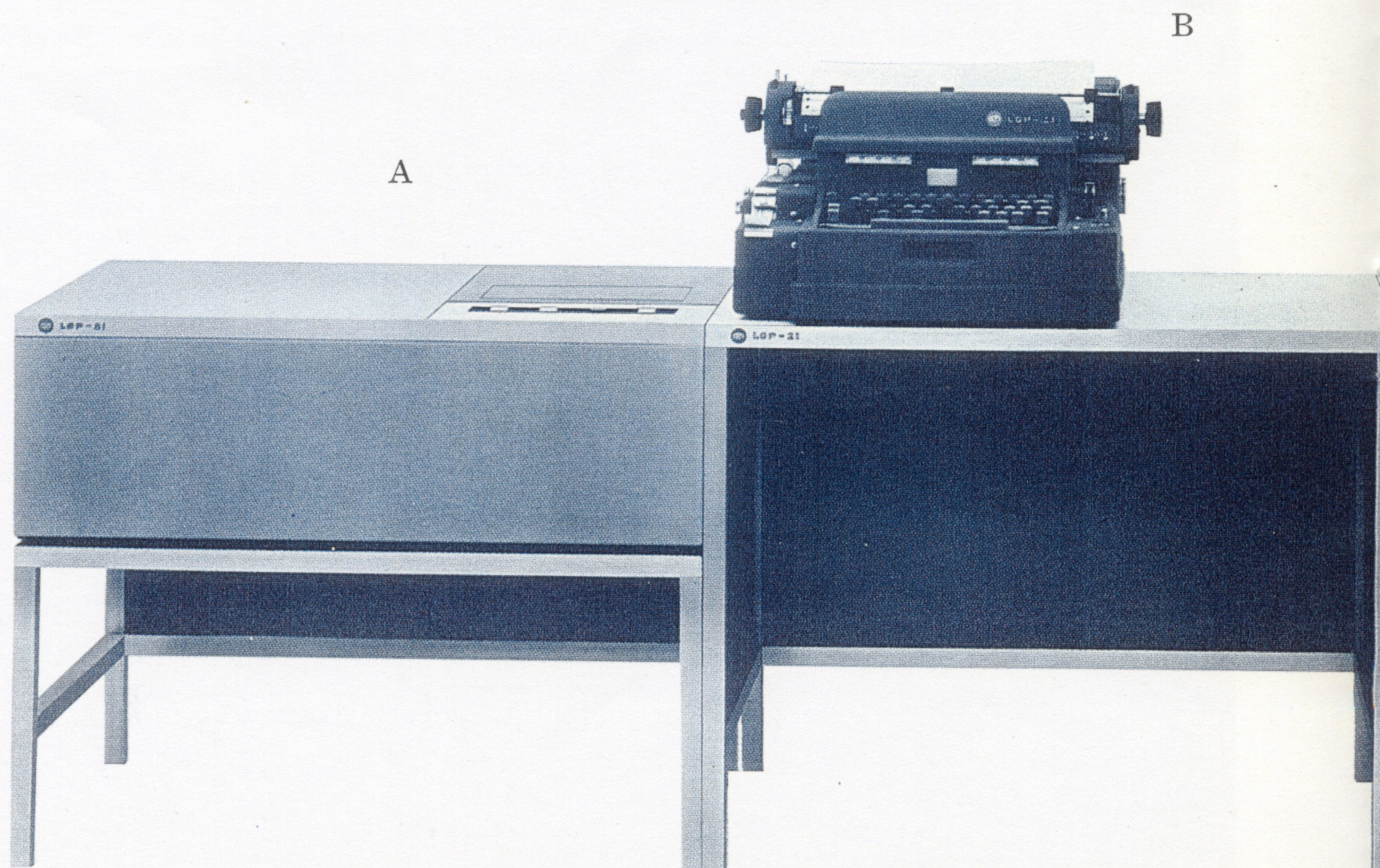
The LGP-21 (unit A, below) basically consists of arithmetic and control units and a 4096-word memory disc (32 bits per word). The computer's command structure of 23 single-address instructions includes all basic arithmetic functions.

The fully transistorized, 90-lb. computer plugs into any convenient standard outlet. It adapts easily to new input/output equipment developments, as needed. In its basic configuration it can program-address up to 32 input/output devices.

Unit B shows the complete tape preparation center which is the standard input/output equipment for the LGP-21. It consists of an electric typewriter with paper-tape punch and reader. These devices may be operated simultaneously or successively, and may be under program control or manually activated.

THE BASIC LGP-21 SYSTEM

... for economy and simplicity



A variety of other input/output devices is made available either as standard units or through custom engineering, and may be added to the basic system as needed. Illustrated are (C) a register display scope for monitoring and visual program checkout by the operator; (D) a 60 character-per-second paper tape punch; and (E) a 60 character-per-second paper tape reader.

All these auxiliary units are designed to match the functionally-attractive styling of the computer unit.

In addition to these peripheral devices, the LGP-21 can be equipped with a further optional computer feature, a "priority interrupt." This feature permits interruption of a program during operation without destroying it, so that a different program may be processed before operation of the previous program is resumed. This feature is an example of the custom modifications which are possible in order to make the LGP-21 responsive to highly specialized user requirements.

OPTIONAL EQUIPMENT

... for expanded flexibility and power

C



E

D

The LGP-21's capabilities are significantly augmented by the availability of a 400-program library which has been developed by General Precision over a period of years. Thanks to the close design relationship between General Precision's other computers and the LGP-21, this extensive, well-proven library of business, engineering and scientific programs and sub-routines makes all applications more practical and profitable.

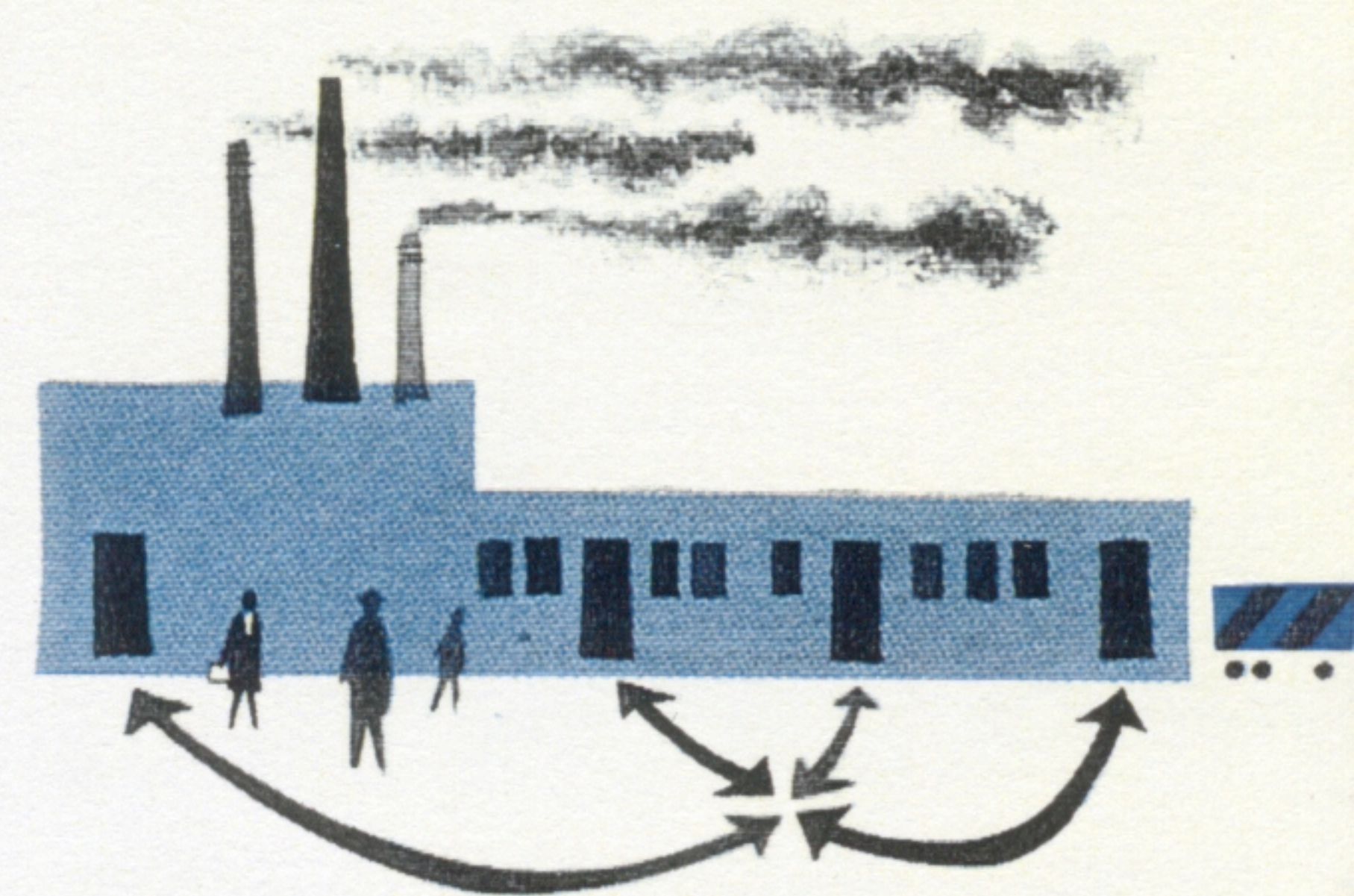
In addition to the free use of application-and-function-oriented routines, LGP-21 programming is made even more flexible and economical through the availability of automatic programming systems, including an ALGOL-type compiler and single-and-double-precision floating-point interpreters.

These invaluable programming aids contribute to effective user/computer communication, without the need for a staff of programming experts.

AND SOFTWARE TOO!

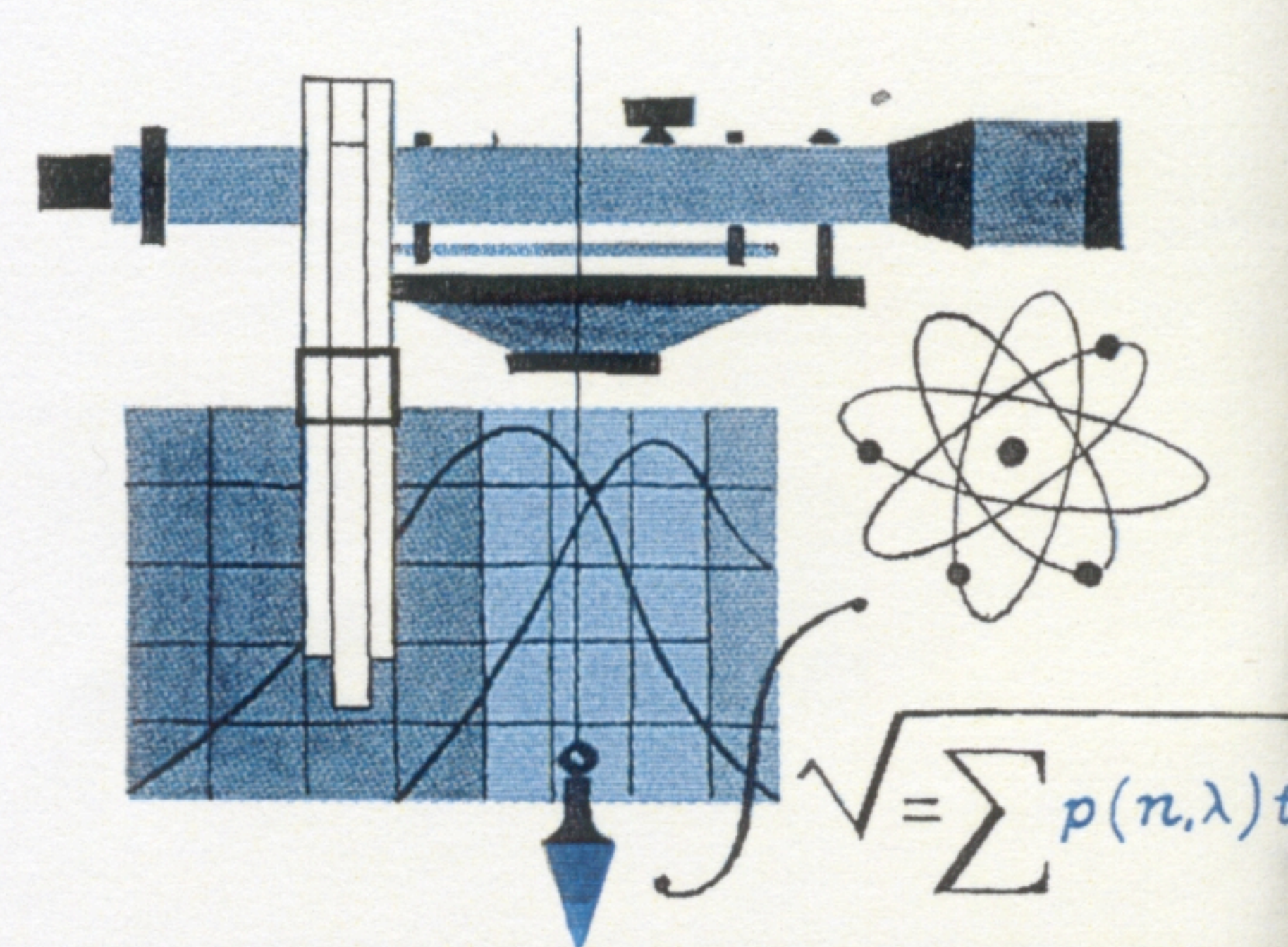
... a five million dollar feature at no extra charge

MANAGEMENT CONTROL



THE LGP-21 HAS PROFIT-MAKING

ENGINEERING

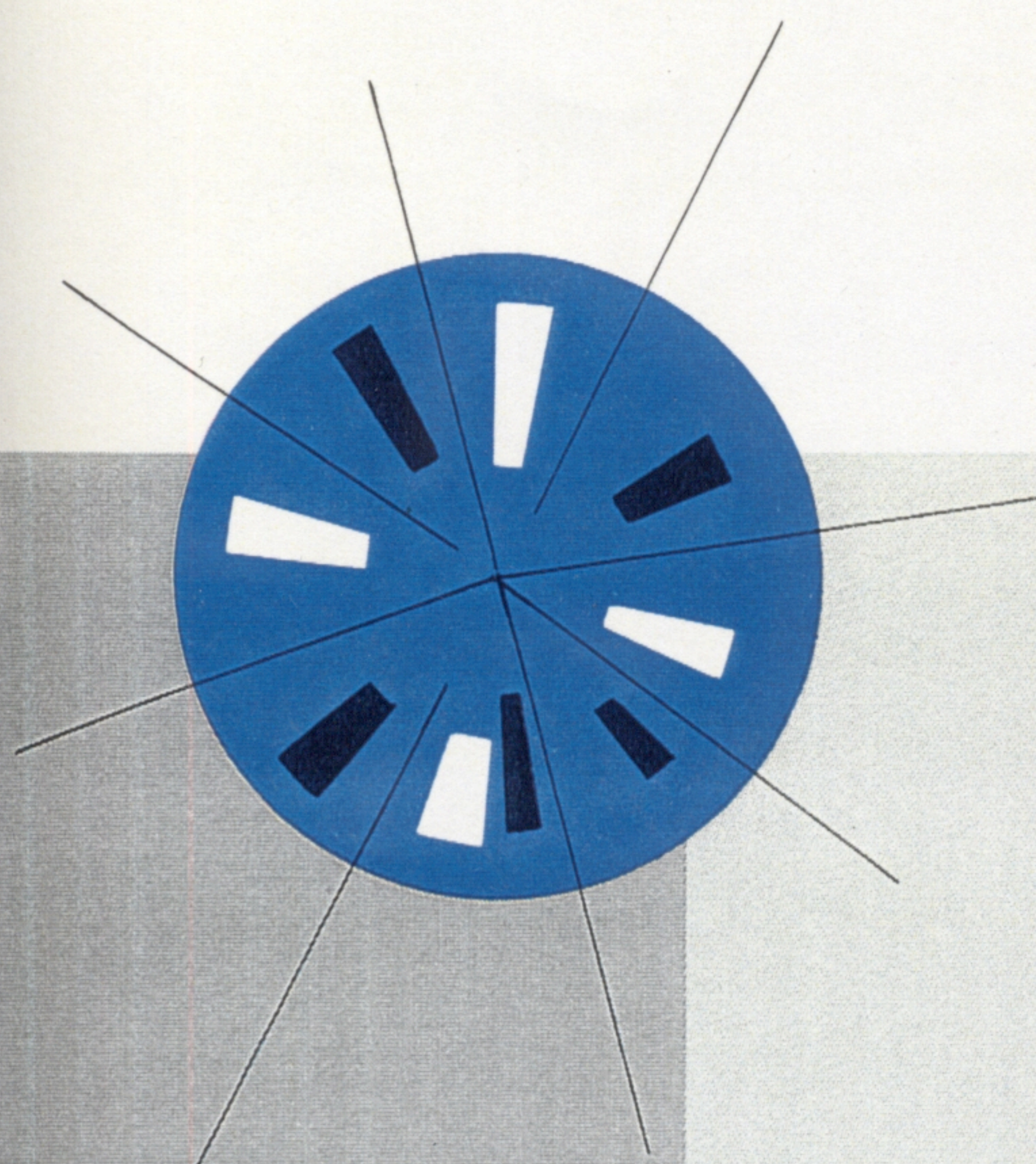


TECHNICAL SPECIFICATIONS

GENERAL PRECISION

LGP-21

GENERAL PURPOSE COMPUTER



COMPUTER TYPE	Digital, general purpose, internally stored program
NUMBER SYSTEM	Binary; fixed-point arithmetic
INSTRUCTION TYPE	Single address
OPERATION	Serial
MEMORY TYPE	Disc
MEMORY CAPACITY	4096 Words
WORD SIZE	32 bits including sign
NUMBER OF BRANCH SWITCHES	4
CLOCK FREQUENCY	80 KC
INPUT/OUTPUT FORMAT	Decimal, alphanumeric, and hexadecimal
INPUT/OUTPUT CAPACITY	Up to 32 devices
CENTRAL COMPUTER	PHYSICAL DIMENSIONS Height: 11½ Inches Width: 31 Inches Depth: 20 Inches Weight (uncrated) approximately: 90 Lbs.
BASIC SYSTEM (Including Printer & Stands)	PHYSICAL DIMENSIONS Height: 36 Inches Width: 62¼ Inches Depth: 21 Inches Weight (uncrated) approximately: 155 Lbs.
CIRCUIT ELEMENTS	Transistors, printed circuits
POWER REQUIREMENTS	Approximately 300 watts maximum, excluding input/output devices; 110 volts AC, 60 CPS, single phase
OPERATING ENVIRONMENT	Normal room temperature
NUMBER OF INSTRUCTIONS	23

TECHNICAL SPECIFICATIONS

LGP-21

INSTRUCTION

EFFECT

Am	Add
Bm	Bring
Cm	Clear
Dm	Divide
Em	Extract
Hm	Hold
I6200	Shift Left 6 Bits
It	Input in 6-Bit Mode
-I6200	Shift Left 4 Bits
-It	Input in 4-Bit Mode
Mm	Fractional Multiply, or Right Shift
Nm	Integer Multiply, or Left Shift
Pt	Print, 6-Bit Mode
-Pt	Print, 4-Bit Mode
Rm	Set Return Address
Sm	Subtract
Tm	Transfer on Negative
-Tm	Transfer on Negative or TC Switch
Um	Unconditional Transfer
Ym	Store Address
Z0000	Stop
Zt	Skip according to setting of designated Branch Switch
-Zt	Skip according to setting of Overflow Indicator and designated Branch Switches

NOTE: m = Track and Sector
t = Track Portion Only

MINIMUM ACCESS TIME

0.78 ms

COMMAND EXECUTION TIMES (Excluding Access)

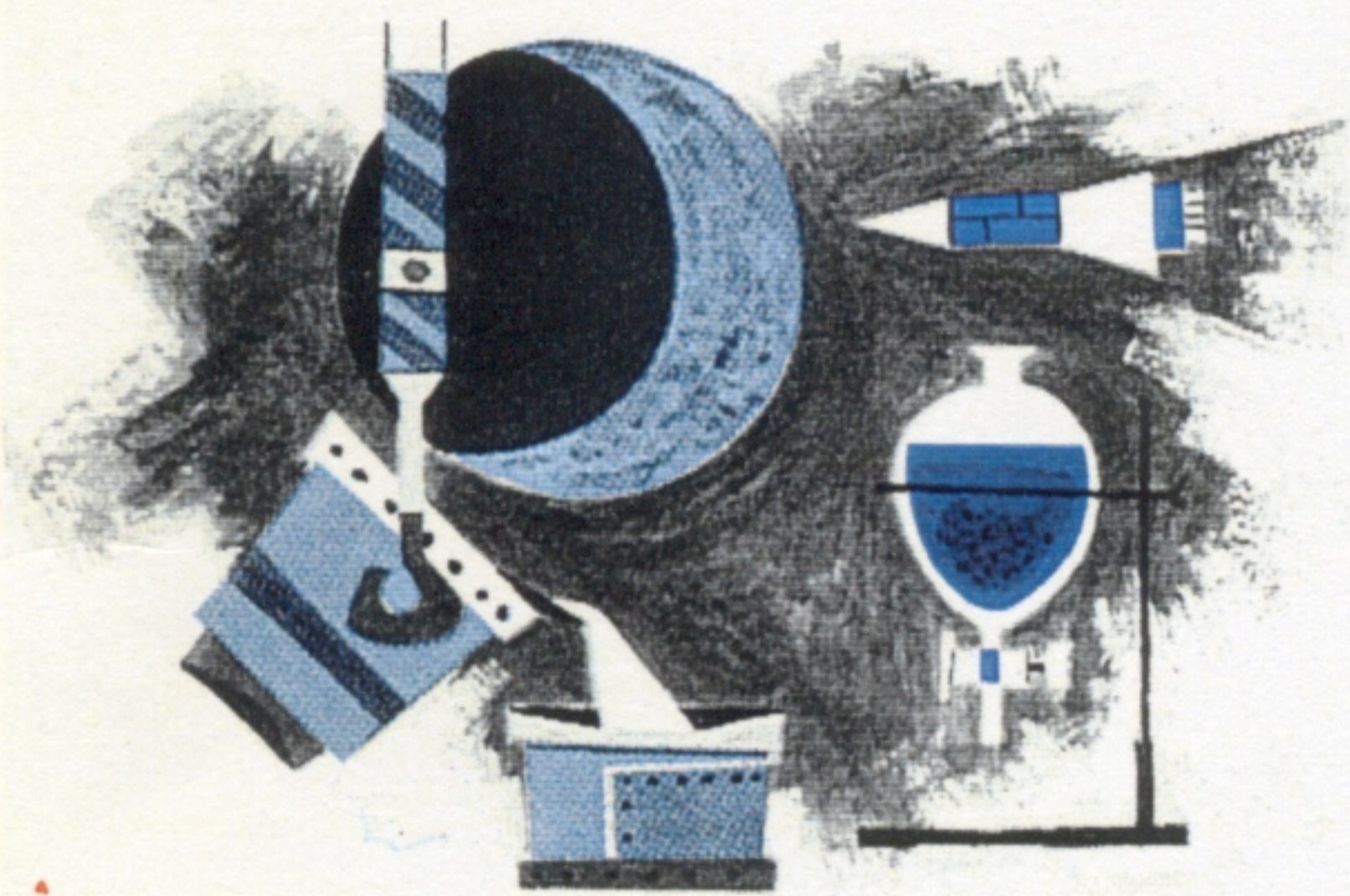
0.39 ms (Except Multiply & Divide)
25.74 ms (M Multiply)
24.96 ms (N Multiply)
26.13 ms (Divide)

Applied to management problems, the LGP-21 is a versatile tool for planning ahead. It can be programmed to make sophisticated management decisions, and it has the computation power necessary for identifying and reporting deviations from standard performance levels.

Some typical management control applications:

- Forecasting
- Budgeting
- Inventory Planning
- Production Planning
- PERT and CPM
- Exception Identification
- Performance Evaluation
- Management Gaming

RESEARCH



The LGP-21 is particularly valuable as a researcher's constantly-available, desk-side computation aid. Though it is capable of handling extremely complex problems, it can also be economically operated under constant keyboard intervention as the researcher changes his approach to a given problem. Typical research applications:

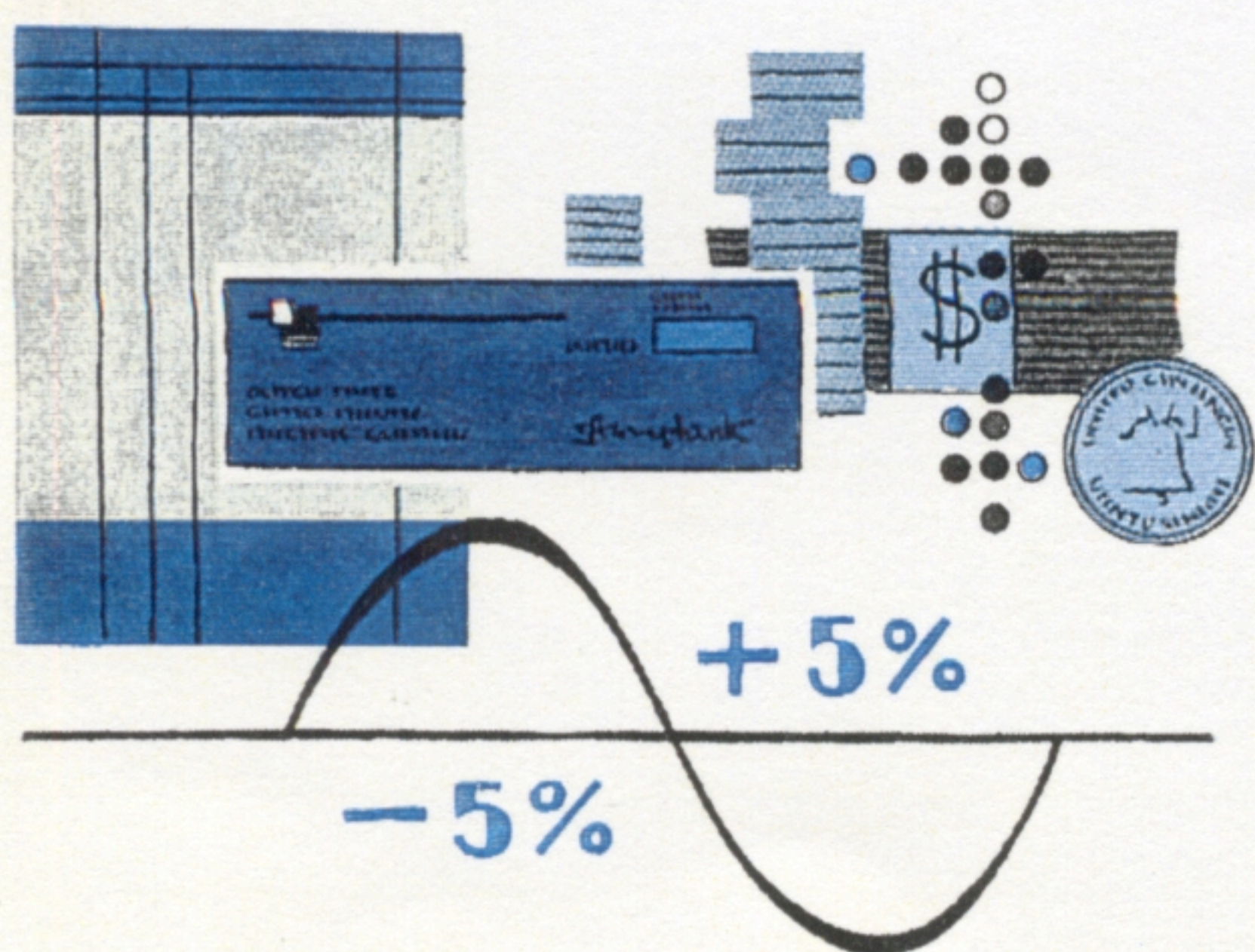
- Astronomy
- Metallurgy
- Semantics
- Aerodynamics
- Sociology
- Meteorology
- Petro-Chemistry
- Biology

POTENTIAL IN EVERY PHASE OF YOUR BUSINESS

The LGP-21 is a versatile engineering problem-solver with particular affinity for analytical and design problems. Ease of programming and low cost of operation make it an ideal computer for step-by-step problem development which permits the user to modify his program by manual intervention. Some of the many engineering applications:

- Hydraulics
- Electronics
- Civil Engineering
- Structural Design
- Mechanical Design
- Optical Design
- Environmental Testing
- Quality Control

ACCOUNTING



The LGP-21 can economically provide records and services far beyond the capabilities of the typical non-computerized accounting department. It can provide accurate daily records for many activities, from customer billing to payroll status determination and inventory accounting. Some of the many productive applications:

- Billing
- Route Accounting
- Standard Costing
- Inventory Control
- Payroll
- Sales Analysis
- Variance Accounting
- Estimating/Cost Quotation

ABOUT QUALITY AND SERVICE

The reliability and overall value represented by the LGP-21 is the result of General Precision's long-standing experience in the design and manufacture of operational computing systems of every size and type. Stringent quality control and manufacturing standards have made General Precision a prime supplier to the Armed Forces. These same high standards govern the production of the LGP-21.

General Precision's reputation — self-evident in over half-a-thousand successful small computer installations — further assures initial success and continued satisfaction with your LGP-21 installation. You can bank on this reputation. Its perpetuation is the top mission of Commercial Computer Division application analysts, sales representatives, and computer service engineers headquartered in major cities throughout the United States.

COMMERCIAL COMPUTER DIVISION



INFORMATION SYSTEMS GROUP

THE INFORMATION SYSTEMS GROUP
OF GENERAL PRECISION, INC.
IS COMPOSED OF ITS
LIBRASCOPE DIVISION AND
COMMERCIAL COMPUTER DIVISION

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