

15¢

\$5.50 A YEAR

December 12, 1959

VOL. 76, NO. 24 PAGES 393-408

# SCIENCE NEWS LETTER

®

THE WEEKLY SUMMARY OF CURRENT SCIENCE



High-Flying Bridge

See Page 394

A SCIENCE SERVICE PUBLICATION

Make over 200 Small  
Computing and Reasoning  
Machines with . . .

# BRAINIAC®

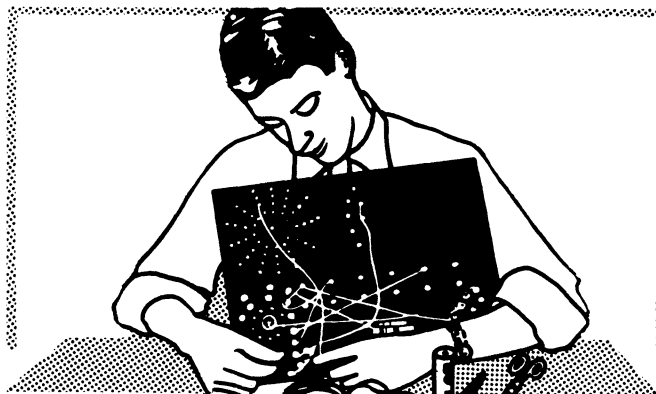
## NEW 1959-60 ELECTRIC BRAIN CONSTRUCTION KIT

EQUALS THE ORIGINAL GENIAC® electric brain construction kit (1955) PLUS many improvements and additions: over 600 parts—including 116 improved patented wipers so that all switches work well. Instead of covering only 33 machines, the BRAINIAC K18 Kit gives full specifications for 201 computing, reasoning, arithmetical, logical, puzzle-solving and game-playing machines . . . all 33 GENIACS (1955), 13 TYNIACS (1956), and 155 BRAINIACS (1957-58-59), etc.

**THIS IS BRAINIAC!** With our Brainiac Kit K18, you can build over 200 small electric brain machines and toys which "think," compute, reason, and display intelligent behavior. Each one works on a single flashlight battery . . . is FUN to make, FUN to use and play with, and TEACHES you something new about electrical computing and reasoning circuits. All connections with nuts and bolts—no soldering required. Originated by Berkeley Enterprises, the Brainiac K18 kit is the result of 10 years' design and development work with miniature mechanical brains including: Geniac (see "Geniacs: Small Electric Brain Machines and How to Make Them" by Edmund C. Berkeley, 64 pp., published by Geniac Project, a partnership with Oliver Garfield discontinued September 1955), Tyniac (1956), Relay Moe (automatic relay machine playing tit-tat-toe—pictured in Life Magazine, March 19, 1956), Simon (miniature automatic digital computer with 129 relays—see "Simple Simon" by E. C. Berkeley in Scientific American, November 1, 1950), Squee (electronic robot squirrel—see "Light Sensitive Electronic Beast" by E. C. Berkeley in Radio Electronics, December 1951), etc.

### PROGRAMMING YOUR OWN PROBLEMS FOR THE BRAINIAC

The Brainiac is the smallest and lowest-cost semi-automatic, general-purpose digital computer existing. Many problems in ALL fields of knowledge and business can be programmed for the Brainiac—to the extent that a number of versatile multiple switches can express the problem. We shall be glad to program YOUR OWN problems. Write us—no charge for simple problems, modest charge for complicated ones.



**WHAT CAN YOU MAKE WITH BRAINIAC KIT K18?** Over 200 machines including—**LOGIC MACHINES:** Syllogism Prover, Intelligence Test, Boolean Algebra Circuits, Douglas MacDonald's Will Analyzer, A Simple Kalin-Burkhart Logical Truth Calculator, Diagnosing Motor Car Trouble, etc. **GAME-PLAYING MACHINES:** Tit-Tat-Toe, Nim, Wheeled

Bandit, Black Match, Sundorra 21, etc. **COMPUTERS:** To add, subtract, multiply or divide using decimal or binary numbers, Forty-Year Calendar, Prime Number Indicator, Money-Changing Machine, etc. **CRYPTOGRAPHIC MACHINES:** Coders, Decoders, Lock with 15,000,000 Combinations

and the Cannibals, Age-Guessing Machine, Submarine Rescue Chamber, Daisy Petal Machine, Fox-Hen-Corn & Hired Man, Uranium Space Ship and the Space Pirates, The Three Monkeys Who Spurned Evil, General Alarm at the Fortress of Dreaderie, etc. **QUIZ MACHINE:** How to Tell an Aardvark from an Armadillo, The Waxing and the Waning Moon, Polar Air Routes, history, geography, trigonometry, grammar, statistics, calculus, etc.

**WHO IS EDMUND C. BERKELEY?** Author of *Giant Brains or Machines That Think*, Wiley, 1949, 270 pp. (15,000 copies sold); Author of *Computers: Their Operation and Applications*, Reinhold, 1956, 366 pp.; Author of *Symbolic Logic and Intelligent Machines*, Reinhold, 1959, 203 pp.; Editor & Publisher of the magazine, *Computers and Automation*; Maker and Developer of small robots; Fellow of the Society of Actuaries; Secretary (1947-53) of the Association for Computing Machinery; Designer of all the Tyniacs and Brainiacs, more than half of the 33 Geniacs (1955); Designer of the patented Multiple Switch Disc and other features in the 1955 Geniac kit.

**BRAINIAC KIT (1959-60 MODEL) K18 . . .** the kit with limitless possibilities—backed by an organization of 12 years standing in the computer field—\$18.95. (For shipment west of Mississippi, add 80¢; outside U.S., add \$1.80.)

**7-Day Full Refund Guarantee If Not Satisfactory**

MAIL THIS COUPON OR A COPY OF IT

BERKELEY ENTERPRISES, Inc.

815 Washington St., R211, Newtonville 60, Mass.

Please send me Brainiac Kit K18. (Returnable in 7 days for full refund if not satisfactory—if in good condition.) I enclose \$\_\_\_\_\_ in full payment.

My name and address are attached

### WHAT COMES WITH YOUR BRAINIAC K18 KIT—

#### Complete Plans, Instructions, Explanations & Hardware:

- Every part needed to build Geniacs, Tyniacs, Brainiacs—over 600 pieces including control panel, multiple switch discs, jumpers, improved wipers, bulbs, sockets, washers, wire, battery and special tools.
- Complete descriptions of 201 experiments and machines.
- Over 170 circuit diagrams including 46 exact wiring templates.
- Manual "Brainiacs—Small Electric Brain Machines—Introduction and Explanation" by Edmund C. Berkeley, 1959.
- "Introduction to Boolean Algebra for Circuits and Switching" by Edmund C. Berkeley.
- "How to Go from Brainiacs and Geniacs to Automatic Computers" by Edmund C. Berkeley.
- List of references to computer literature including "Minds and Machines" by W. Sluckin, published by Penguin Books (Baltimore), 1954, 233 pages, and other references.

only **\$18.95** . . . MORE VALUE • MORE FEATURES