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March 3, 1956

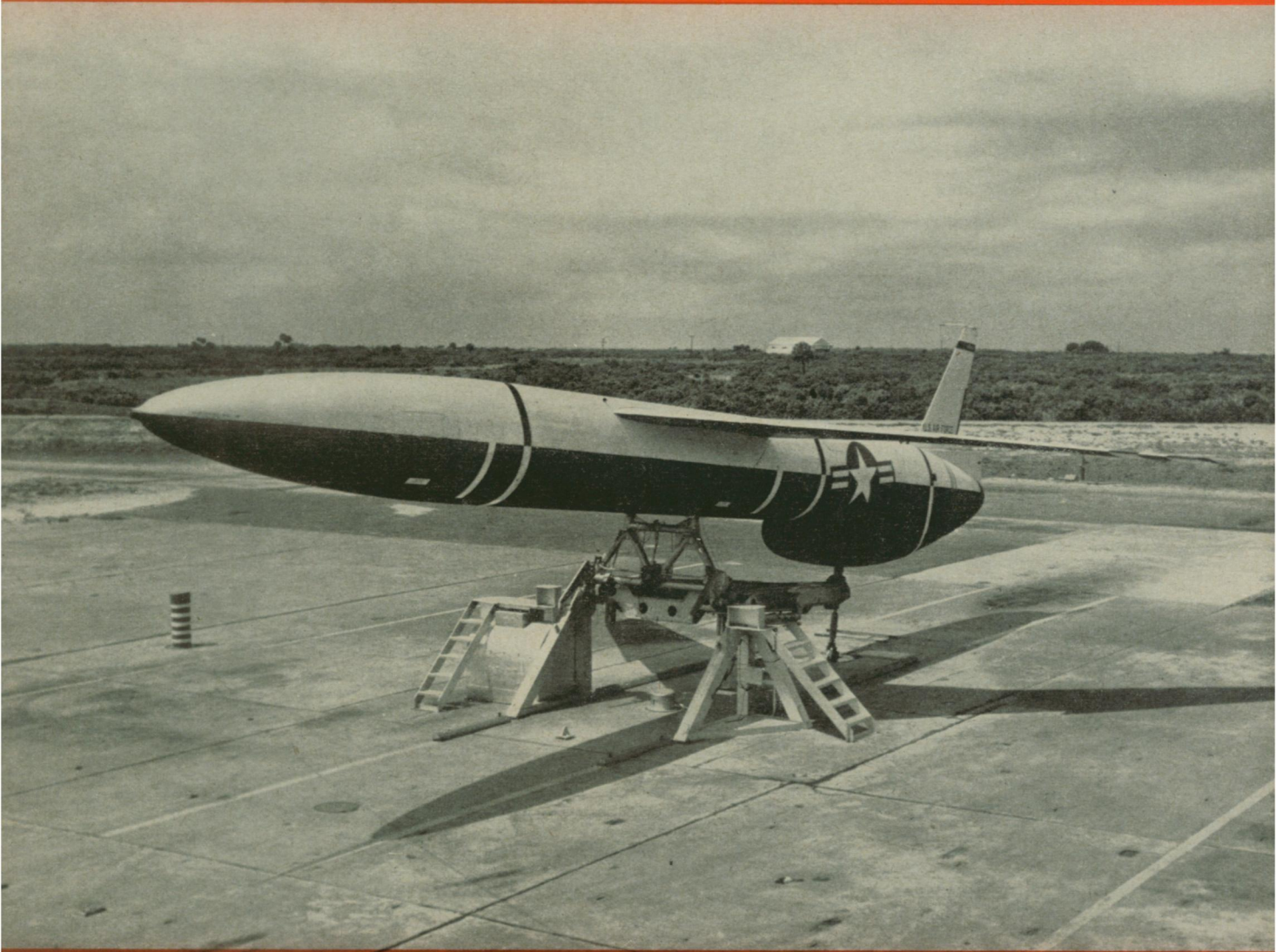
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PAGES 129-144

SCIENCE NEWS LETTER

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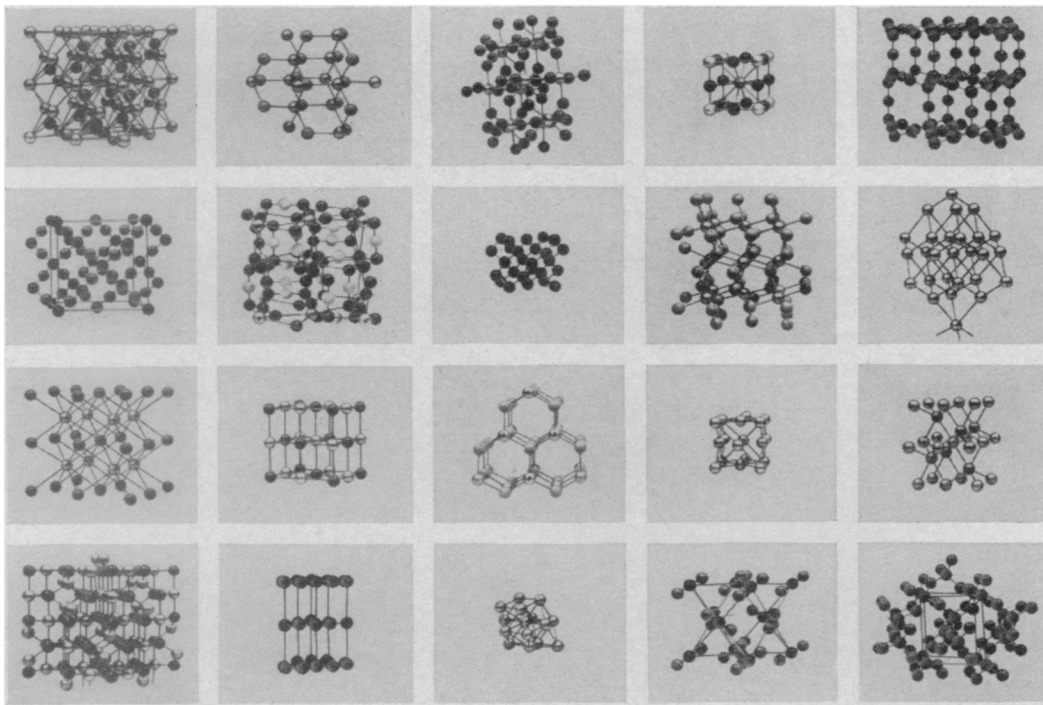
THE WEEKLY SUMMARY OF CURRENT SCIENCE



Intercontinental Missile

See Page 137

A SCIENCE SERVICE PUBLICATION



Crystal structure models. Top row, left to right: cuprite, zincblende, rutile, perovskite, tridymite. Second row: cristobalite, potassium dihydrogen phosphate, diamond, pyrites, arsenic. Third row: caesium chloride, sodium chloride, wurtzite, copper, niccolite. Fourth row: spinel, graphite, beryllium, carbon dioxide, alpha-quartz.

FROM ATOMS TO STARS

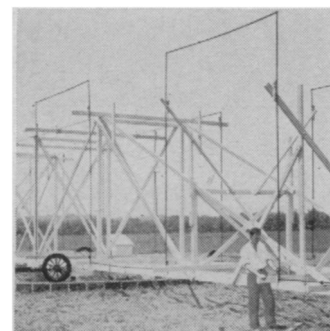
Research at Bell Telephone Laboratories ranges from the ultimate structure of solids to the radio signals from outer space. Radio interference research created the new science of radio astronomy; research in solids produced the transistor and the Bell Solar Battery.

Between atoms and stars lie great areas of effort and achievement in physics, electronics, metallurgy, chemistry and biology. Mechanical engineers visualize and design new devices. Mathematicians fore-

shadow new communications techniques.

Despite the diversity of their talents, Bell Laboratories scientists and engineers have much in common. A habit of teamwork channels these talents into great advances.

These men have developed the world's finest telephone system. In doing so, many have become leaders in their fields. Opportunities for achievement await qualified scientists and engineers at Bell Telephone Laboratories.



Directional antenna used by Karl G. Jansky in discovery of stellar radio signals at Bell Telephone Laboratories in 1932.

BELL TELEPHONE LABORATORIES

World center of communications research. Largest industrial laboratory in the United States.



For Problem-Solving... Experimentation... Teaching... or Just Fun

BUILD YOUR OWN ELECTRIC BRAIN MACHINE

IN JUST A FEW HOURS!

Remarkable 400-Component Construction Kit Enables You To Create Any of 33 Brain Machines! Build **LOGIC MACHINES** That Compare, Reason, Test Intelligence; **ARITHMETICAL MACHINES** (Binary & Decimal); **GAME-PLAYING MACHINES** (Tic-Tac-Toe, Nim, etc.)

Teachers and Scientists: *Design Your Own Machines!*

GENIAC is the only kit and text combination that presents the basic ideas of cybernetics, boolean algebra, symbolic logic and computer circuitry for all levels of knowledge and intelligence. Sold to all customers on a one-week return guarantee; actually use it during that time, return it if you decide not to keep it.

WITH GENIAC you build any of 33 electric brain machines in a few hours by following the clear-cut, step-by-step directions in the basic text provided. Advanced students and scientists can design machines for special problems. No soldering required, and little wiring. Change design of your machines in minutes! Build Binary Adding Machine • Secret Coder & Decoder • Machine for Arithmetical Carrying • Comparing Machine • Reasoning Machine • General Combination Locks • Games Requiring Logic • Machine for a Space Ship's Airlock • Intelligence Tester • Burglar Alarm • Puzzle Solvers and many others.

OVER 400 COMPONENTS AND PARTS

Circuits operate on one flashlight battery, and use ingeniously designed parts. 1956 GENIAC Kit has been constructed by the original inventor to provide all the advantages of previous electrical brain construction kits plus what we have learned in answering the questions and examining the new designs created by hundreds of users.

SELF-CONTAINED COURSE IN COMPUTER DESIGN

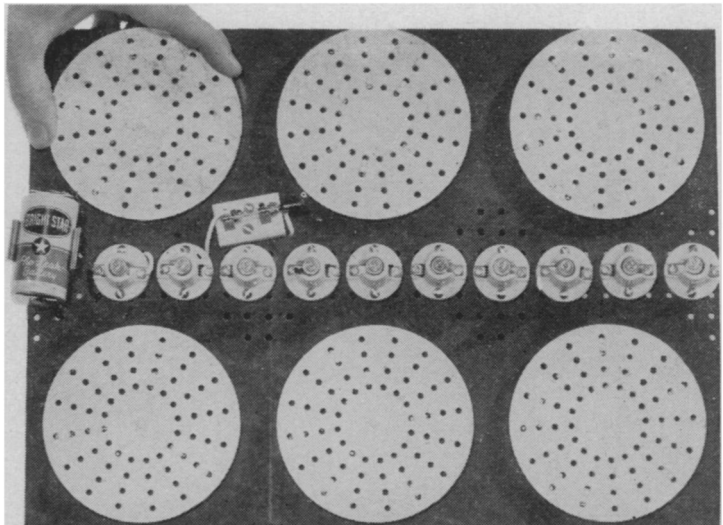
Each GENIAC comes as a self-contained course in computer design. All instructions are so simple that we have records of intelligent twelve-year-olds designing factoring machines and puzzle-solving circuits—while hundreds of schools and industrial training programs have incorporated our kits in their curricula.

YOUR COST FOR GENIAC KIT: ONLY \$19.95 POSTPAID

The coupon will bring your GENIAC Electric Brain Construction Kit and Manuals for only \$19.95 postpaid. You may return the Kit within 7 days if you are not completely satisfied. For schools we offer bulk rates on extra texts and parts; for teachers, we offer 10% deduction on GENIAC if ordered for use in institutions. Send for your Kit today!

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1956 GENIAC KIT CONTAINS (1) a complete 200-page text, "Minds and Machines"—a basic introduction to computers. (2) "How to Construct Electrical Brains at Home"—a fully illustrated text book on basic computer design theory and circuits with specific instructions for building 33 circuits. (3) Wiring Diagram Manual. A special booklet with full scale diagrams. (4) Beginners' Manual—fifteen extra experiments to teach the basic symbols of electric circuits. (5) Over 400 components and parts.

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| Machines | State College | School |
| Wheeldex Mfg. Co. | Albert Einstein | Oklahoma A & M |
| Manuel Missionary | Medical College | Kansas State University |
| College | Naval Research | Duke University |
| Walter V. Clarke | Laboratories | Coral Gables Senior |
| Associates | Board of Education, | High School |
| Barnard College | Tecumseh, Nebraska | Courtland Jr. High |
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Guarantee!**

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1 GENIAC Electric Brain Construction Kit and Manuals.

\$19.95 (East of Mississippi)

\$20.95 (Elsewhere in United States)

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Returnable in seven days for full refund if not satisfied. I enclose \$..... in full payment.

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CAMELS HAIR BRUSHES! 20 for \$1.00



Imagine! Never used Camels Hair Brushes that cost many, many times this low price. You actually buy these brushes at less than the cost to manufacture. For use in the home, office, shop or store. For touch-up pasting, drawing, lens cleaner, typewriter, cleaning precision instruments, guns, tools, sporting equipment and hundreds of other uses. Assorted sizes. Money back if not satisfied. 20 brushes, \$1.00. 42 brushes \$2.00. Supply limited. Order NOW! Imported.

No. 817 Pure Red Sable Brush guaranteed to point. For Water Color, Script, touch up, ceramics, tray painting, and many, many other uses. Made to sell for up to \$1.75 each. This is a surplus buy and brand new. Made in U. S. Our prices are as follows:

No.	Reg. Price	Our Price
No. 000	\$.50	\$.25 ea.
No. 00	.50	.25 ea.
No. 0	.60	.30 ea.
No. 1	.65	.35 ea.
No. 2	.75	.45 ea.
No. 3	1.10	.50 ea.
No. 4	1.45	.55 ea.
No. 5	1.75	.60 ea.
No. 6	2.25	.80 ea.



Complete Set of 9 Brushes \$3.75

No. 996 Master Red Sable Show Card

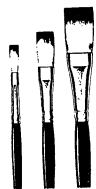
A brush that's a pleasure to use. Steady flow of colors always. Balanced Handles, Finest Selected Red Sable. Seamless Polished ferrules. Especially adapted for Show Card Writing.

Size	Reg. Price	Our Price
2	\$.75	\$.50
4	1.00	.70
6	1.55	.95
8	2.35	1.65
10	2.95	1.95
12	3.95	2.80



Complete Set of 6 Brushes \$7.95

No. 818 Flat Camels Hair Brushes; Finest quality imported Camels Hair Flat Brush, the perfect brush for lettering, Touch Up, Ceramics, Model Painting, Figurine Painting, and many other uses. An ideal all-around brush.



SIZE	Reg. Price	Our Price
1/8"	8	FOR \$.75
1/4"	8	FOR 1.00
1/2"	8	FOR 1.50
3/4"	8	FOR 2.00

No. 699 Red Sable Lettering (Extra Long)

Select Red Sable Hair. Seamless polished ferrule, hardwood handles, extra long stock, a clean square edge brush. For use in Oils, Japans, or Show Card. The finest brush of its kind.

Size	Reg. Price	Our Price
2	\$.85	\$.60
4	1.25	.80
6	1.85	1.50
8	2.55	2.15
10	3.85	3.00
12	4.85	4.00



Complete Set of 6 Brushes \$11.50

DARK OX HAIR ONE STROKE

No. 155-X Finest quality dark ox hair, seamless polished metal ferrules, lacquered hardwood stroke handles. For making various width letters, touch up, striping, wash, ceramics, and hundreds of other uses. Made in U. S.

Size	Reg. Price	Our Price
1/8"	\$.55	\$.40
1/4"	.70	.55
3/8"	.85	.65
1/2"	.95	.75
5/8"	1.15	.90
3/4"	1.45	1.15
7/8"	1.75	1.40
1"	2.10	1.75



No. 923 Super Sabeline One Stroke

Finest quality sabeline better than many so-called "Pure Red Sables." Sharp clean edges, easy handling. Seamless metal ferrules for use in every color: Oils, Japans, Water, etc. One of our best ONE STROKES.

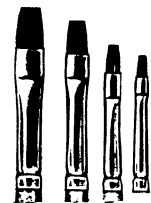
Size	Reg. Price	Our Price
1/8"	\$.70	\$.50
1/4"	.80	.60
3/8"	1.25	1.05
1/2"	1.55	1.30
5/8"	1.95	1.60
3/4"	2.45	2.00
7/8"	3.00	2.50
1"	3.75	3.15



Complete Set of 8 Brushes \$11.95

OIL COLOR SABLE BRUSHES

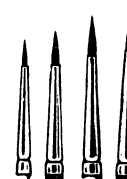
No. 180-B Finest Quality Red Sable Oil "Brights." Finest quality red sable hair. Heavy body with thin tapered edge. Seamless nickel ferrules. Cherry stained lacquered hardwood handles. Made with care as the finest quality brush. Used for painting on smooth surfaces, detail work, miniature work, ceramics and hundreds of other uses. Made in U. S.



Size	Reg. Price	Our Price
0	\$.50	\$.35
1	.55	.40
2	.60	.45
3	.70	.50
4	.80	.60
5	.95	.70
6	1.05	.80
7	1.15	.95
8	1.30	1.05

No. 180-R Finest Quality Red Sable Oil "Rounds." Hand cupped, natural pointed. Seamless nickel ferrules, cherry stained lacquered hardwood handles. Made in U. S.

Size	Reg. Price	Our Price
0	\$.50	\$.35
1	.50	.35
2	.55	.40
3	.55	.40
4	.60	.45
5	.60	.45
6	.70	.50
7	.80	.60
8	.90	.70



OIL COLOR BRISTLE BRUSHES 110-F "FLATS"

Good quality white imported bristle with natural tapered ends. Extra long seamless nickel ferrules, clear hardwood handles. American sizes. An artist's oil brush of good quality.



Size	Reg. Price	Our Price
2	\$.30	\$.20
4	.35	.25
6	.40	.30
8	.45	.35
10	.70	.55
12	.90	.70

Matthew Day Co., Inc.

Dept. B-698, 12 East Madison Ave., Dumont, New Jersey

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