

Assemble the finest instrument  
your money can buy  
**NEW ALL-TRANSISTOR**



**Schober**  
**ELECTRONIC**  
**ORGAN**

meets AGO  
specifications

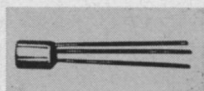
**New Recital Model**  
compares musically to instruments  
costing 4 times the price!



**PIPE ORGAN VOICING**—  
separate, distinct—32 in  
Recital Model. **LIBRARY OF**  
**STOPS™** Kit feature adds  
extra plug-in voices



**PIPE ORGAN TONE**—all four  
families of pipe tone in all  
models



**ALL TRANSISTOR** Models  
give instant response,  
easier assembly, full 5 year  
guarantee



**REVERBATAPE®** Unit—adds  
"auditorium" depth and  
power

plus **FULL THEATRE AND CHURCH VOICING,**  
**PERCUSSION,** many other quality features!

How is it possible to acquire the skill  
needed to build a splendid organ—without  
any previous knowledge of electronics or  
music?

While the complete organ is a complex  
instrument, Schober Organ kits are spe-  
cially designed for do-it-yourselfers. Printed  
circuitry eliminates a lot of the work and  
makes errors almost impossible. Many parts  
come preassembled. You simply follow  
detailed illustrated instructions for easy  
assembly, then place in assembled and  
pre-finished cabinet.

You save costly factory assembly, retail  
store markup—put every penny into fine  
musical parts. You enjoy the finest instru-  
ment your money can buy.

Schober Organ kits cost as little as \$550  
in kit form, and you may spread this cost  
by ordering in sections.

THE **Schober Organ** CORPORATION  
NEW YORK, N. Y. 10023

SEND FOR FREE CATALOG  
WITH FREE "SAMPLER" RECORD

The Schober Organ Corp., Dept. SN-5  
43 West 61st Street, New York, N. Y. 10023

Please send me without cost or obligation  
FREE SCHOBER ORGAN Booklet describing  
models, easy-play Pointer System, FREE  
7-inch "sampler" record included.

Enclosed find \$2 for high-quality LP 10"  
SCHOBER RECORD DEMONSTRATING all three  
models with different music (\$2 refunded  
with purchase of first kit).

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP NO. \_\_\_\_\_

## GENERAL SCIENCE

### Testing Begun in Top U.S. Science Competition

► THE NATION'S TOP TEST for find-  
ing potential creative scientists of the future  
is being given this month. Thousands of  
high school seniors throughout the United  
States are competing voluntarily in the 24th  
Westinghouse Science Scholarships, con-  
ducted by SCIENCE SERVICE.

The test, designed to measure ability to  
think and reason along scientific lines, is  
given in public, private and parochial  
schools during a two-hour session. In addi-  
tion to the test, the applicant must write  
a report of a scientific project on which he  
has been working, and a personal data  
blank must be filled in by the student and  
the school officials. All materials must reach  
SCIENCE SERVICE headquarters in Washing-  
ton, D.C., by midnight, Dec. 27.

Approximately ten percent of the students  
who fulfill all the entry requirements will  
be named to an honors group and recom-  
mended to colleges and universities for ad-  
mission and scholarship grants. From the  
honors group, 40 top winners will be  
selected to come to Washington for the  
Science Talent Institute, Feb. 24 through  
March 1.

During the Institute the 40 winners will  
be interviewed and their potential ability  
further evaluated by a board of judges to  
determine the distribution of \$34,250 in  
science scholarships and awards provided  
by the Westinghouse Educational Founda-  
tion.

Entry in the national competition pro-  
vides automatic entry in the State Science  
Talent Searches which are based on the  
national search. Thus a double chance is  
given to students in most of the states.

• Science News Letter, 86:372 December 12, 1964

## MEDICINE

### Simple Dye Test Spots Newborns With Defect

► A NEW INEXPENSIVE TEST to find  
out if newborn babies have the hereditary  
fatal disease, galactosemia, uses a mixture  
containing blue dye.

Dr. Ernest Beutler of the City of Hope  
Medical Center, Duarte, Calif., added a small  
blood sample to the mixture, which can be  
used to identify adult carriers as well as  
babies with the disease. In normal persons  
the mixture turns red, but if galactosemia  
is present the blue color is unchanged.

Children with this disease are born with  
a defect in cell chemistry that makes them  
unable to utilize galactose, a milk sugar,  
normally. Unless the condition is detected  
and treated, it causes eye and liver damage,  
mental retardation and, eventually, death.

Diet substitutes for cow's or mother's  
milk allow such children to develop nor-  
mally. Therefore, early diagnosis is vital.

While previous tests have been complex,  
costly and time-consuming, this new method  
is easily adaptable for routine testing of new-  
borns in any well-equipped laboratory.

Dr. Beutler reported his findings in the  
Journal of Laboratory and Clinical Medicine.

• Science News Letter, 86:372 December 12, 1964

# Questions

**AGRICULTURE**—How is atomic energy applied  
to kill insects? p. 379.

**BIOCHEMISTRY**—How does the acid-alkaline  
balance affect health? p. 378.

**BIOLOGY**—How do some doctors believe  
genes are regulated? p. 377.

**ICHTHYOLOGY**—What ability gives the mud-  
skipper a greater opportunity than most other  
fish to survive? p. 377.

**MEDICINE**—What are some of the symptoms  
of diabetes? p. 376.

**SPACE**—How did the photocell in the Mariner  
IV spacecraft enable it to lock onto the second  
brightest star in the sky, Canopus? p. 375.

## SCIENCE NEWS LETTER

VOL. 86 DECEMBER 12, 1964 NO. 24

Edited by WATSON DAVIS

The Weekly Summary of Current Science, pub-  
lished every Saturday by SCIENCE SERVICE, Inc.,  
1719 N St., N.W., Washington, D. C. 20036. North  
7-2255. Cable Address: SCIENSERVIC.

Subscription rates: 1 yr. \$5.50; 2 yrs., \$10.00;  
3 yrs., \$14.50; ten or more copies in one package  
to one address, 7½ cents per copy per week; single  
copy, 15 cents, more than six months old, 25 cents.  
No charge for foreign postage. Change of address:  
Three weeks notice is required. Please state exactly  
how magazine is addressed. Include zip code.

Copyright © 1964 by Science Service, Inc. Repu-  
blication of any portion of SCIENCE NEWS LETTER  
is strictly prohibited. Newspapers, magazines and other  
publications are invited to avail themselves of the  
numerous syndicated services issued by Science Service.  
Science Service also produces and distributes THINGS  
of science (monthly), produces and publishes books,  
and conducts the National Science Youth Program.

Printed in U.S.A. Second class postage paid at  
Washington, D. C. Established in mimeograph form  
March 13, 1922. Title registered as trademark, U.S.  
and Canadian Patent Offices. Indexed in Reader's  
Guide to Periodical Literature. Abridged Guide, and  
the Engineering Index. Member of Audit Bureau of  
Circulation.



## SCIENCE SERVICE

The Institution for the Popularization of Science  
organized 1921 as a non-profit corporation.

Board of Trustees—Nominated by the American  
Association for the Advancement of Science: Athel-  
stan F. Spilhaus, University of Minnesota; Wallace  
R. Brode,\*\*\* Washington, D. C.; Bowen C. Dees,  
National Science Foundation. Nominated by the  
National Academy of Sciences: Henry Allen Moe,  
The Clark Foundation; Harlow Shapley, Harvard  
College Observatory; Detlev W. Bronk, Rockefeller  
Institute. Nominated by National Research Council:  
Leonard Carmichael,\* National Geographic Society;  
Benjamin H. Willier, Johns Hopkins University; Eric  
A. Walker, Pennsylvania State University. Nomi-  
nated by Journalistic Profession: O. W. Riegel,  
Washington and Lee University; Gordon B. Fister,  
Allentown (Pa.) Call-Chronicle; Ralph B. Curry,  
Flint Journal. Nominated by the Scripps Estate:  
Edward J. Meeman, Memphis Press-Scimitar; Lud-  
well Denny, Scripps-Howard Newspapers; Edward  
W. Scripps II,\*\* Edward W. Scripps Trust \*Presi-  
dent; \*\*Vice-President; \*\*\*Treasurer.

Staff—Director: Watson Davis. Assistant Director:  
Dorothy Schriver. Writers: Jonathan Eberhart, Ann  
Ewing, Edith Lederer, William MacLaurin, Faye  
Marley, William McCann, Barbara Tufty, Judith  
Viorst, Ruby Yoshioka. Science Youth Division:  
Joseph H. Kraus, Lloyd Ulmer. Photography: Fre-  
mont Davis. Production: Marcia Nelson. Syndicate  
Sales: Forrest L. Snakenberg. Librarian: Margit  
Friedrich. Interlingua Division in New York: Alex-  
ander Gode, 80 E. 11th St., GRamercy 3-5410.  
Advertising Manager: Fred A. Moulton, METropol-  
itan 8-2562, Washington, D. C.