

Scientific Model 320 .. \$2095.

## time machine

### This new scientific electronic calculator manufactures time.

Engineers and researchers who are using it tell us that this remarkable new electronic calculator actually seems to generate extra hours of productive time

during the course of a day.

Designed to handle a broad range of normally tedious, time-consuming scientific computations, the WANG Model 320 is an extremely flexible, relatively low-cost desk-top instrument. It can execute all normal arithmetic operations  $(+, -, \times, \div)$  within a fraction of a second. In addition, it has the unique capability of providing, with a single keystroke, the square (x2), square root  $(\sqrt{x})$ , natural logarithm (ln x), exponential  $(e^x)$  (or antilogarithm) of any number (x) previously entered or calculated.

The unusual computational power of the Model 320 results uniquely from the fact that, like the slide rule, it operates logarithmically (for functions of

 $\times$ ,  $\div$ , sq., sq. rt., ln (x),  $e^x$ ) — that is, all data entered are automatically converted to natural logarithms, are operated on in this form, and then are reconverted to decimal form for readout. This process greatly simplifies and speeds the internal arithmetic of the instrument, and significantly extends its capabilities beyond any other calcu-

lator currently available!

The Model 320 performs many complex operations, such as duplex product and entry accumulation. Two addition/ subtraction registers and a multiplication/division register are available for storing and operating on data. Entry and random recall from either of the accumulators is performed with a single keystroke. The floating decimal point is located automatically, and proper algebraic sign is indicated at all times as part of the lighted display.

There is a great deal more to tell about the Model 320. If you are interested, please write to us today for

complete descriptive data.

LABORATORIES INC

in the capital. He will survey relevant legislation in Congress and the activities of federal agencies, and he will attend meetings at AIP headquarters and prepare reports for various institute journals. The AIP's Washington office will be at Optical Society of America headquarters in the American Chemical Society building, 1155 Sixteenth St., N.W.

Gray brings to his new post long and successful experience as a physics professor and as supervisor of technical information for many agencies and laboratories. After receiving his Ph.D. at Ohio State University in 1932, he



taught for eleven years at Akron University. During World War II he directed editorial activities for Harvard's underwater sound laboratory and for the Johns Hopkins applied physics laboratory. Joining the Library of Congress staff in 1950, he supervised for five years the abstracting and cataloging of literature in biological and physical sciences as well as the preparation of bibliographic and reference aids for the Defense Department. Gray left the library in 1955 for the National Science Foundation's office of scientific information, and eight years later he returned as chief of the science and technology division. A former director of the AIP physics abstracting study, Gray has also served on editorial boards of the institute's journals and has acted as coordinating editor for both editions of the American Institute of Physics Handbook.

### Two more journals added

Continuing to expand its publishing activities, the institute recently assumed responsibility for two journals of the Optical Society of America, Applied Optics and the Russian Optics and Spectroscopy. John M. Howard will continue as editor of Applied Optics, and Patricia Wakeling, formerly managing editor, will serve as editorial consultant. The editor and his referees will judge acceptance of manuscripts, and all other functions connected with publication will be entrusted to AIP.

Under a contract with OSA the institute will also translate and publish Optics and Spectroscopy. OSA, however, will exercise financial control of the journal, which will continue to be regarded as published by the Optical Society. (The society has received a new grant from the National Science Foundation to publish the journal in 1966.) Most of the administrative work will still be done by Patricia Wakeling, formerly administrative editor for the publication.

With the addition of these journals to its list, AIP now publishes ten journals for its member societies, distributes three others and publishes seven journals in its own name and ten more translated from Russian.

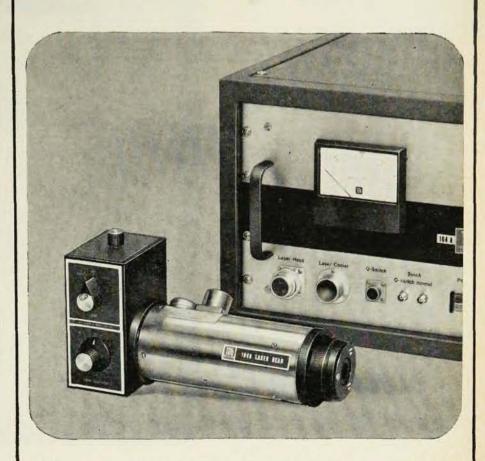
### Education and manpower

AIP director Van Zandt Williams has announced the formation of an ad hoc committee to fill administrative positions in the institute's education and manpower division. Because of this division's importance to the American Association of Physics Teachers, the Commission on College Physics, and AIP, the committee consists of representatives from these groups as follows: Vincent J. Parker (AAPT) chairman; Malcolm Correll (AAPT); R. N. Little (CCP); Walter D. Knight (CCP); Wallace Waterfall (AIP); Van Zandt Williams (AIP); and Ralph A. Sawyer, member at large.

#### Bachelor survey

A report entitled Results of the 1964-65 Survey of Physics Bachelor's Degree Recipients has been prepared by Clarebeth Maguire of the AIP education and manpower data analysis project. The report gives information on 3624 of an estimated 5300 students who won physics bachelor's degrees in 1964-65. Data show that 51% of those included in the survey were planning graduate study in physics, 16% graduate study in other fields and 28% immediate employment. The remaining 5% were entering military service. Copies of the complete report can be obtained from Miss Maguire at the institute.

# TRG's new 104A laser system



### Rugged · Reliable · Versatile · Economical

TRG's new 104A laser system has been designed specifically to meet the needs of the scientific researcher and the industrial laser technologist. A medium-power, economical laser system that is capable of operation under a wide range of conditions - including those outside a laboratory environment - the TRG 104A can be used for many applications, such as: Atmospheric Studies; Ballistic Research; Chemical Research; High-speed Photography; Medical and Biological Research; Optical Ranging; Vacuum Evaporation of Thin Films; Microwelding.

### **Special Features**

- Maintenance-free operation in excess of 25,000 cycles
- Flashlamp replacement does not require realignment of optics
- Simple function switch permits rapid selection of either normal pulse or Q-switched operation
- Optical alignment is maintained under normal operating conditions of shock and vibration

### Accessories

104A-4 - Second Harmonic Generator

104A-5 - Liquid Q-switch

- Daly-Sims Single-Pulse Accessory 109-4A - Baseplate for mounting laser,

Q-switch, and 109A accessory.

### **Specifications**

Output

Normal mode ...... 3 to 5 joules 

For more complete information write: TRG Inc., Section E, Route 110, Melville (Long Island), New York 11749, Tel (516) 531-6343.



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