

# COMPUTERS AND AUTOMATION

CYBERNETICS • ROBOTS • AUTOMATIC CONTROL

## THE COMPUTER DIRECTORY AND BUYERS' GUIDE, 1957

the June, 1957 issue of  
"Computers and Automation"

Part 1: Roster of Organizations in the Computer Field  
(cumulative)

Part 2: Buyers' Guide for the Computer Field: Products  
and Services for Sale or Rent  
(cumulative)

Part 3: A Pictorial Instruction to Computers

Vol. 6  
No. 6

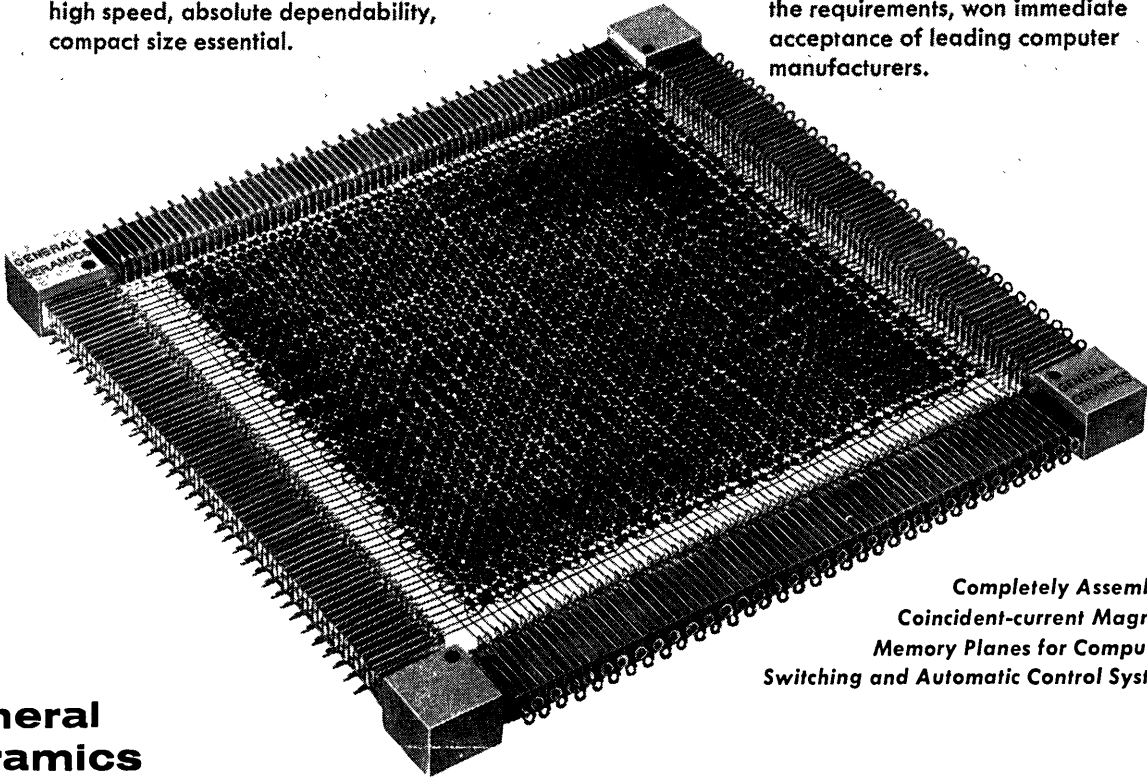
June  
1957

**PROBLEM:**

Provide a reliable memory storage facility for digital computers . . . high speed, absolute dependability, compact size essential.

**SOLUTION:**

Magnetic Core Memory Planes by General Ceramics . . . far exceeded the requirements, won immediate acceptance of leading computer manufacturers.



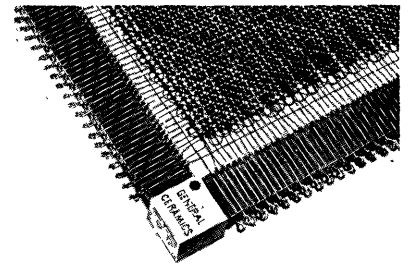
Completely Assembled  
Coincident-current Magnetic  
Memory Planes for Computers,  
Switching and Automatic Control Systems

**General  
Ceramics**

# FERRAMIC<sup>®</sup> MAGNETIC MEMORY PLANES

Utilizing Ferramic Magnetic Memories resulted in important increases in reliability, speed and accuracy in actual operation. In addition, designers found space requirements sharply reduced. Lower power consumption, lighter weight, elimination of heat dissipating devices and *greatly reduced* maintenance were other significant improvements.

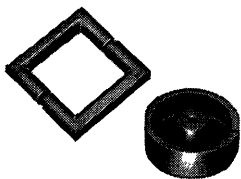
General Ceramics Magnetic Memories offer a solution to similar problems in automatic control systems for conveyors, elevators, telephony, production machines, processing equipment and signalling. For further details, write General Ceramics Corporation, Keasbey, New Jersey. Please address inquiries to Dept. E.



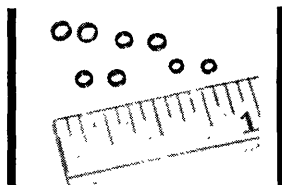
Completely assembled standard type memory frames available from stock. Memory Frames of special design can be produced to your specifications.

## **GENERAL CERAMICS**

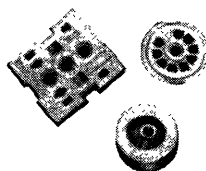
*Industrial Ceramics for Industrial Progress... Since 1906*



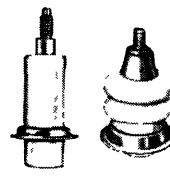
FERRAMIC CORES



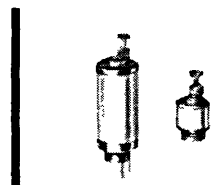
FERRAMIC  
MAGNETIC CORES



PRECISION STEATITES



"ADVAC" HIGH  
TEMPERATURE SEALS

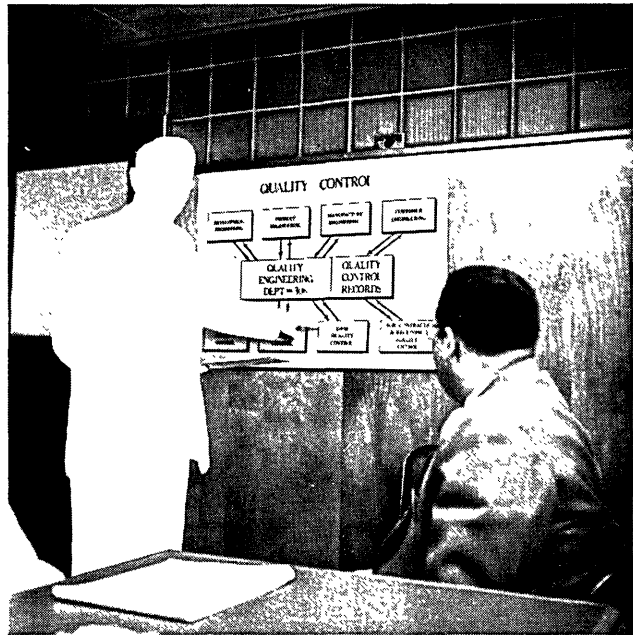


SOLDERSEAL TERMINALS

# IBM GROWTH promoted these men



**Computer Logical Design Engineer:** Before his recent promotion, this man was responsible for determining the broad systems outline of an electronic computer and its interconnection with external equipment. "In this job," he says, "you tailor such characteristics as computer speed, memory, size and arithmetic structure to the requirements of the computer system." He maintained close liaison with mathematical support, circuit designers, packaging and test engineers.



**Quality Control Engineer:** Also promoted recently, this man worked in Manufacturing Engineering. He was responsible for the performance of IBM electronic computers and other business machines. "The problems of Quality Control in this company are endless—and fascinating," he says. "You may be concerned with transistors and cores . . . gaseous electronics . . . diffraction of alloys . . . reliability studies. *There's always something new—in this new and progressive field!*"

## Could you handle their responsibilities?

Jobs like these continually open up at IBM—due to rapid expansion. If you are an engineer or scientist—or have equivalent experience—you may qualify for such a position. Innumerable opportunities exist in:

- Computer systems planning
- Computer systems testing
- Electronic circuit design and packaging
- Electrostatic phenomena
- Manufacturing process control
- Numerical analysis and programming
- Photo and magnetic device memory
- Real time systems engineering
- Semi-conductor research, development and manufacturing
- Test equipment design

The electronic computer field offers one of the best ground-floor opportunities today. Economic experts rank it with automation and nucleonics in growth potential. Sales at IBM, the recognized leader in this

fast-growing field, have doubled, on the average, every five years since 1930. Engineering laboratory personnel has quintupled in the past five years. IBM's excellent salaries and employee-benefit programs are instrumental in achieving an employee turnover rate far below the national average.

For the facts about an engineering career with IBM, just write, outlining background and interests, to:

Mr. R. A. Whitehome  
Mgr. of Engineering Recruitment, Department 7106  
International Business Machines Corporation  
590 Madison Avenue, New York 22, N. Y.



DATA PROCESSING  
ELECTRIC TYPEWRITERS  
MILITARY PRODUCTS  
SPECIAL ENGINEERING PRODUCTS  
TIME EQUIPMENT

**COMPUTERS AND AUTOMATION**  
**CYBERNETICS • ROBOTS • AUTOMATIC CONTROL**

Vol. 6, No. 6

June, 1957

ESTABLISHED SEPTEMBER, 1951

**THE COMPUTER DIRECTORY**

**AND**

**BUYERS' GUIDE,**

**1957**

Part 1: Roster of Organizations in the Computer Field (cumulative)	9
Part 2: The Buyers' Guide for the Computer Field: Products and Services for Sale or Rent	40
Part 3: A Pictorial Introduction to Computers	49

---

The Editor's Notes	6
Index of Notices	6
News Items	93
Advertising Index	102

---

Editor: Edmund C. Berkeley      Assistant Editors: Neil D. Macdonald, F.L. Walker

Contributing Editors: Andrew D. Booth, John W. Carr, III, Alston S. Householder

Advisory Committee: Samuel B. Williams, Herbert F. Mitchell Jr., Howard T. Engstrom,

Alston S. Householder, H. Jefferson Mills, Jr.

Sales and Service Manager:

Milton L. Kaye, 601 Madison Ave., New York 22, N.Y. - Plaza 5-4680

Advertising Representatives:

New York - Milton L. Kaye, 601 Madison Ave., New York 22, N.Y., Plaza 5-4680

San Francisco - W.A. Babcock, 605 Market St., San Francisco 5, Calif., Yukon 2-3954

Los Angeles - Wentworth F. Green, 439 So. Western Ave., Los Angeles 5, Calif., Dunkirk 7-8135

Elsewhere - the Publisher

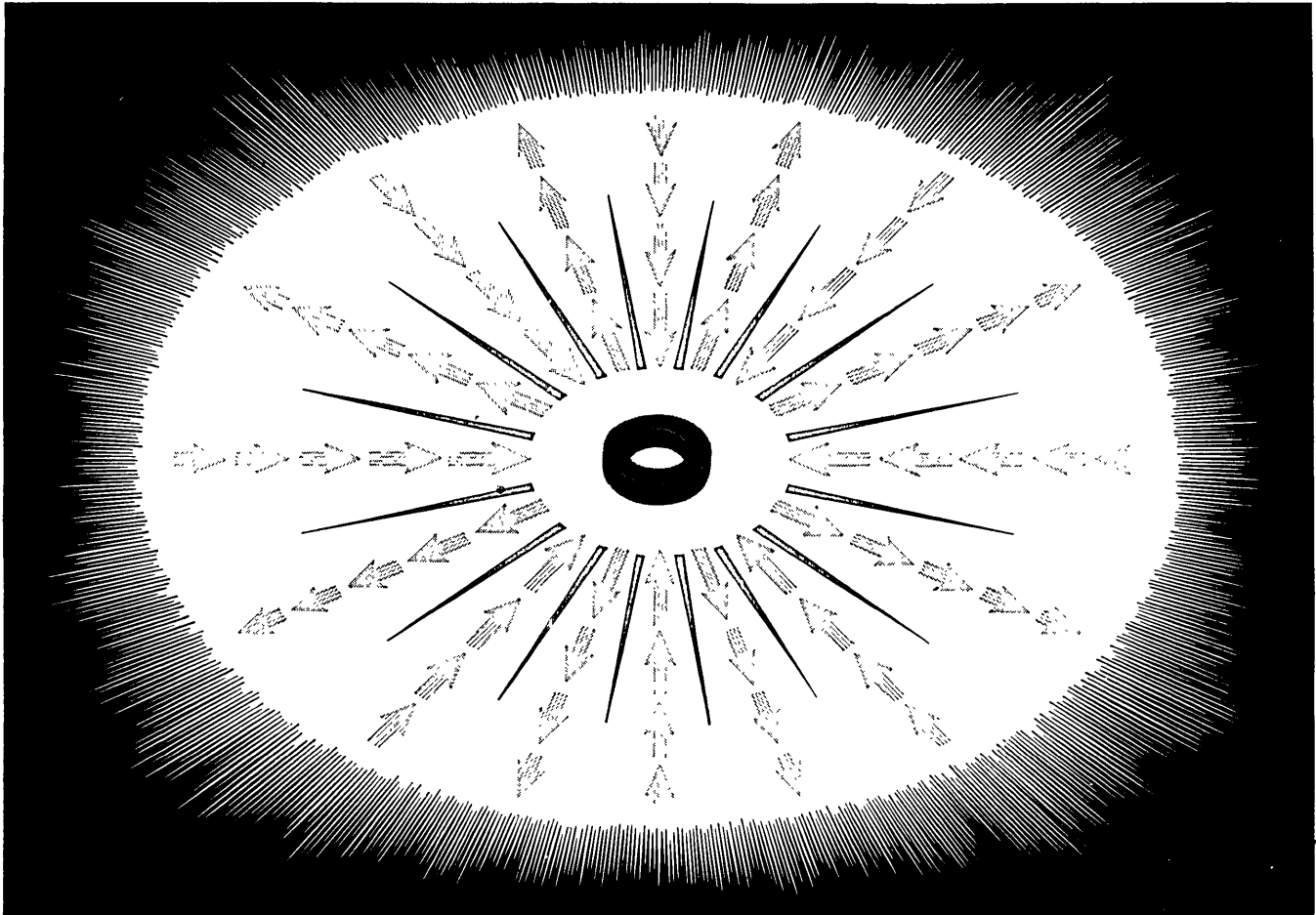
Publisher:

Berkeley Enterprises, Inc., 815 Washington St., Newtonville 60, Mass., Decatur 2-5453 or 2-3928

COMPUTERS AND AUTOMATION is published monthly. Copyright, 1957, by Berkeley Enterprises, Inc.

Subscription rates: in the United States - one year \$5.50, two years \$10.50; in Canada - one year \$6.00, two years \$11.50  
elsewhere - one year \$6.50, two years \$12.50

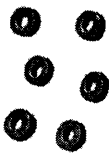
Entered as second class matter at the Post Office, New York, N.Y.



## RCA FERRITES

### STANDARD SETTERS FOR PRODUCTION CONFORMANCE... OPERATING PERFORMANCE

Reproducible uniformity, repeatability—call it what you will—this vital phase of ferrite production reaches its highest state at RCA. From initial "firing" to final testing, every process and measurement is controlled to the highest degree of accuracy... your assurance that every RCA production unit conforms and performs to the most precise tolerances mechanically and electrically.



**RCA MEMORY CORES**... 0.081-inch dia. high speed, high-drive toroidal ferrite cores, and 0.080-inch dia. medium speed low-drive toroidal ferrite cores. Both types are characterized by hysteresis loops which provide reversal of magnetic-flux polarity when the correct current combination from two associated magnetized windings are coincidentally energized. These ferrite cores are primarily designed for use in matrices of the coincident-current type for applications as storage devices in digital computers.



**RCA TRANSLUXORS**... this developmental memory device, *originated by RCA*, utilizes a ferrite core, has two apertures, and exhibits a nearly rectangular hysteresis loop. It can control the transmission of ac power according to a level established by a single setting pulse. It furnishes an output determined by the stored pulse for an *indefinite* length of time. Once set the TRANSLUXOR does not require an input command to furnish output intelligence.

**RCA DEFLECTION FERRITES**... for television, radar and industrial TV, "C" frames, yoke segments and toroids in standard or superefficient types.

**RCA MAGNETOSTRICTIVE FERRITES**... cores for use in electro-mechanical filters... especially suited to transistor circuitry... much improved efficiency over use of nickel.

*For further information on RCA Ferrites, and for assistance in determining the applications to which you can put these precision-engineered devices... your inquiries and specifications are cordially invited.*



**RADIO CORPORATION of AMERICA**

® COMPONENTS DIVISION

CAMDEN, N. J.

# THE EDITOR'S NOTES

## PRINTING BY LETTERPRESS AND OTHER CHANGES

Beginning with July, regular issues of "Computers and Automation" will be printed by letterpress and will no longer be printed by photooffset. We now have over 2600 subscribers all over the world, and have reached the place where letterpress printing of regular monthly issues makes sense. We think there will be a considerable improvement in appearance and legibility, which we hope our readers and our advertisers will both like. We expect that there will be an increase of the amount of information published in each issue, although because of the condensation possible with printing type there may be fewer pages. (Note: Unusually large issues may still be photooffset.)

We shall as always keep trying to improve "Computers and Automation" so that we may continue to serve loyally the best interests of computer people. All suggestions from our readers are always welcome.

In fact, another change we are considering is changing the name of the magazine. Perhaps the name "Computers and Data Processing" or "Computers and Data Automation" would be more suitable. If you have comments, please let us hear from you.

## THE COMPUTER DIRECTORY AND BUYERS' GUIDE, 1957

The third edition of "The Computer Directory", the June issue of "Computers and Automation", is here presented, 104 pages long, with the hope that it will prove essential to the work of people in the computer field.

"Part 1, Roster of Organizations in the Computer Field", contains about 795 entries on 30 pages. This is larger than last year's, which contained about 370 entries on 18 pages.

Many of these entries have been based on information provided by the organization itself, and have been improved from time to time as changes have been reported. Many other entries are new; and some perhaps are borderline entries, as for example organizations making magnetic recording tape, who may be much more in the acoustic field than in the computer field.

This Roster is, as we have mentioned before, the reason for our existence as a magazine, since our first issue, Vol. 1 No. 1 in September 1951, consisted only of a purple ditto list of organizations in the computer field.

"Part 2, Buyers' Guide for the Computer Field: Products and Services for Sale or Rent", contains about 1370 entries on 39 pages. This is larger than last year's, which contained slightly over 700 entries on 35 pages.

The main reason for the rather large increases in these figures is that this year we have made rather a careful search through many publications for new organizations, new products, and new services that might be listed in our rosters. The inclusions have been more on the wide and unselective side than on the narrow and selective side — because a user of information will always find it easier to exclude a suggested name from a list than to rack his brains to include additions missing from a list.

"Part 3, A Pictorial Introduction to Computers", included in the directory this year, is an effort to show a little more visually than by words alone what some of the kinds of products in the computer field look like.

A revised and up-to-date "Roster of Automatic Computers", which was included in the directory last year, is not included this year, but will be published in an early issue of "Computers and Automation".

As usual, we ask our readers to be kind enough to tell us of additions, corrections, and revisions, so that we can continue to make the reference information that we publish useful and reliable.

\* ————— \*

## INDEX OF NOTICES

<u>For Information on:</u>	<u>See Page:</u>
Advertising Index	102
Back Copies	39, 91
Bulk Subscription Rates	92
Manuscripts	96
Reader's Inquiry Form	100
Special Issues	72

Address Changes: If your address changes, please send us both your new and your old address (torn off from the wrapper if possible), and allow three weeks for the change.

## MISSILE SYSTEMS ELECTRONICS

Activities at Lockheed Missile Systems' Research Laboratory in Palo Alto cover virtually every field of electronics related to missile systems. Inquiries are invited from those who desire to perform research and development of a most advanced nature. Please address the Research and Development Staff, Sunnyvale 3, California.

*Here staff members discuss a laboratory model of an airborne component of a guidance system. Left to right: Dr. R. J. Burke, telemetering; E. A. Blasi, antennas; K. T. Larkin, radar and command guidance; Dr. S. B. Batdorf, electronic division head; Dr. H. H. Leifer, solid state; S. Janken, product engineering.*

*Lockheed*

### MISSILE SYSTEMS DIVISION

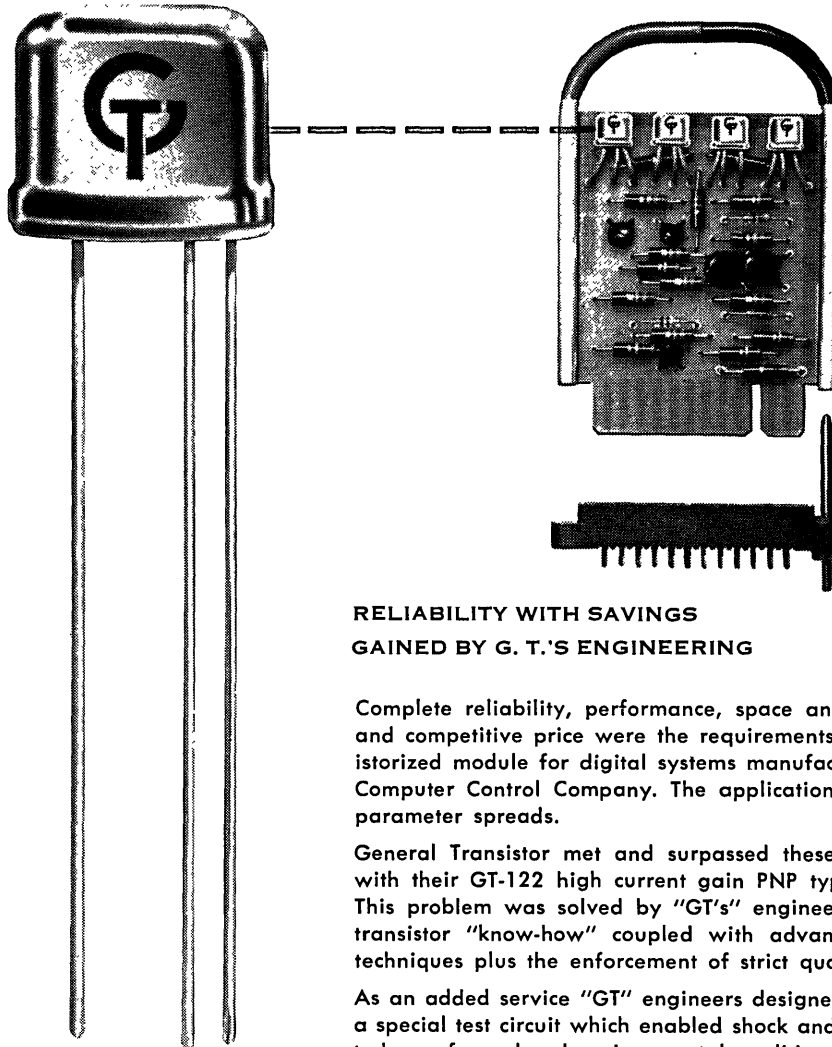
LOCKHEED AIRCRAFT CORPORATION

PALO ALTO • SUNNYVALE • VAN NUYS  
CALIFORNIA



# GENERAL TRANSISTOR

MEETS NARROW PARAMETER SPECS  
FOR COMPUTER CONTROL COMPANY'S  
ONE SHOT MULTIVIBRATOR



## RELIABILITY WITH SAVINGS GAINED BY G. T.'S ENGINEERING

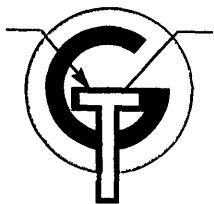
Complete reliability, performance, space and weight limits and competitive price were the requirements of this transistorized module for digital systems manufactured by the Computer Control Company. The application required narrow parameter spreads.

General Transistor met and surpassed these very tight specs with their GT-122 high current gain PNP type transistor. This problem was solved by "GT's" engineering skill and transistor "know-how" coupled with advanced production techniques plus the enforcement of strict quality controls.

As an added service "GT" engineers designed and constructed a special test circuit which enabled shock and vibration tests to be performed and environmental conditions created to assure the customer complete reliability under extreme conditions.

This is just one more example of why **General Transistor is the fastest growing name in transistors.**

Send today for complete technical data and specifications.



# GENERAL TRANSISTOR

C O R P O R A T I O N

91-27 138TH PLACE  
JAMAICA 35, NEW YORK



the June, 1957, issue of "Computers and Automation"

## ROSTER OF ORGANIZATIONS IN THE COMPUTER FIELD

(Cumulative, information as of May 15, 1957)

The purpose of this Roster is to report organizations (all that are known to us) in the computer field: organizations making or developing computing machinery or data-processing machinery; organizations supplying computing services or consulting services in the computer field; and organizations supplying components or services used in the computer field if significantly related to the field (for example, magnetic drums would be such a component, while octal sockets would not be).

**Entries.** Each Roster entry if complete contains: name of the organization, its address / telephone number / description of its main activities, main products in the field, any comments / size (expressed in number of employees), year established, nature of its interest in the computer field, types of activities it engages in. The last four items are reported in abbreviations, which are explained below. In cases where we did not have complete information, we have put down what we have. Entries in this Roster are free. If the name of the organization is to be printed ALL IN CAPITALS, there is a small nominal charge.

**Accuracy.** We have tried to make each entry accurate to the extent of information in our possession. We shall be grateful for any more information or additions or corrections that anyone is kind enough to send us. Although we have tried to be accurate and complete, we assume no liability for any statements expressed or implied.

### Abbreviations

The key to the abbreviations follows:

#### Size

Ls Large size, over 500 employees  
Ms Medium size, 50 to 500 employees  
Ss Small size, under 50 employees (no. in parentheses is approx. no. of employees)

#### When Established

Le Long established organization (1925 or earlier)  
Me Organization established a "medium" time ago (1926 to 1945)  
Se Organization established a short time ago (1946 or later) (no. in parentheses is year of establishment)

#### Interest in Computers and Automation

Dc Digital computing machinery  
Ac Analog computing machinery  
Ic Incidental interests in computing machinery  
Sc Servomechanisms  
Cc Automatic control machinery  
Mc Automatic materials handling machinery

#### Activities

Ma Manufacturing activity  
Sa Selling activity  
Ra Research and development  
Ca Consulting  
Ga Government activity  
Pa Problem-solving  
Ba Buying activity  
(Used also in combinations as in RMSa "research, manufacturing and selling activity")

\*C This organization has kindly furnished us with information expressly for the purposes of the Roster and therefore our report is likely to be more complete and accurate than otherwise might be the case. (C for Checking) / 56: information furnished in 1956 / 57: information furnished in 1957.

### Organization Entry Form

The form to be completed for an entry in the Roster of Organizations follows:

1. Your organization's name? \_\_\_\_\_
2. Address? \_\_\_\_\_
3. Telephone number? \_\_\_\_\_
4. Types of computing machinery or components, or computer-field products and services that you are interested in?  
\_\_\_\_\_  
\_\_\_\_\_
5. Types of activity that you engage in:  
( ) research ( ) other (please explain):  
( ) manufacturing  
( ) selling \_\_\_\_\_  
( ) consulting \_\_\_\_\_
6. Approximate number of your employees? \_\_\_\_\_
7. Year when you were established? \_\_\_\_\_
8. Any comments? \_\_\_\_\_  
\_\_\_\_\_

Filled in by \_\_\_\_\_

Title \_\_\_\_\_ Date \_\_\_\_\_

## ROSTER

A

- Ace Electronics Associates, Inc., 99 Dover St., Somerville 44, Mass. / Somerset 6-5130 / \*C 57  
Potentiometers, linear, non-linear. Ms(150)  
Se(1953) Ic RMSa
- Ace Relay Associates, Inc. -- same as Ace Electronics Associates, Inc., which see.
- ACF Electronics, Inc. -- name changed to Avion Div. of Alexandria, which see.
- Ackerlind Corp., Saratoga, Calif. -- "corp. now inactive" / \*C 57
- Actuarial Computing Service, Inc., 684 W. Peachtree St., N.W., Atlanta 8, Ga. / - / \*C 56-7  
Computing service. Ss Se Dc RCPa
- ADALIA, LTD., 1410 Stanley St., Montreal 2, P.Q., Canada (also Toronto) / Marquette 2281 / \*C 57  
Consulting services in digital and analog computer applications, data processing, automatic control, design and development of special input, output, storage and computing equipment; systems analysis and design; operations research. Ss(40) Se(1952)  
Dac RCPa
- ADALIA COMPUTATIONS, LTD., 1410 Stanley St., Montreal 2, Canada / Marquette 2281 / \*C 57  
Computing and data processing service. Mathematical analysis, programming, and computing for engineering, statistical and business problems (see Adalia Ltd.) Ss(15)  
Se(1956) Dac Pa
- ADDRESSOGRAPH-MULTIGRAPH CORP., 1200 Babbitt Rd., Cleveland 17, Ohio / Redwood 1-8000 / and elsewhere / \*C 57  
Electronic facsimile printers, magnetic tape electronic printers, transfer printers, card-to-magnetic tape converter, output data converter, addressograph sensing plates, etc. Ls(2500) Le(1903) Ic RMSa
- Advance Electronics Lab., Inc., 451 Highland Ave., Passaic, N.J.  
Computers, counters, delay lines. Ic RMSa
- AEC COMPUTING FACILITY, INSTITUTE OF MATHEMATICAL SCIENCES, 25 Waverly Place, New York 3, N.Y. ALgonquin 4-9920 / \*C 57  
Research and computer service for the Atomic Energy Commission. Univac I and IBM 704 with peripheral equipment. Ms(100)  
Se(1952) Dc RCPGa
- Aero Electronics Corp., 2311 W. Burbank Blvd., Burbank, Calif.  
Potentiometers. Ic RMSa
- Aeromotive Equipment Corp., 1632 Central St., Kansas City 8, Mo.  
Delay lines. Ic RMSa
- Aero Research Instrument Co., Inc., 1901 N. Hermitage Ave., Chicago 22, Ill. / Taylor 9-6400 / \*C  
Data reduction and data gathering systems. Ss(30) Se(1953) Dc RMSCa
- Aeronutronic Systems Inc., 1234 Air Way, Glendale, Calif. (subsidiary of Ford Motor Company) / CHapman 5-6651 / \*C 57  
Digital and analog computing machinery. Ms(200) Se(1956) DAic RSa
- Aerovox Corp., New Bedford, Mass. / - / \*C 57  
Cores, ferrites, toroids, capacitors. Ic RMSa
- Ahrendt Instrument Company, 4910 Calvert Rd., College Park, Md.  
Analog-to-digital converters. Analog computers. Electronic components. Aic RMSa
- AIRBORNE INSTRUMENT LABORATORIES, MODAC DIVISION, (formerly Mountain Systems, Inc.), 864 Franklin Avenue, Thornwood, N.Y. / Pioneer 2-0600 / \*C 57  
Electronic data processing systems (Modac); special purpose digital computing systems for business and scientific applications, magnetic drums. Magnetic tape input-output unit which prepares tape for other computers. Ss Se Dc RMSa
- Airborne Instruments Lab., Inc., 160 Old Country Road, Mineola, L.I., N.Y.  
Computers, analog-to-digital converters, data reduction equipment. Aic RMSa
- Aircraft Armaments, Inc., Industry Lane, Cockeysville, Md.  
Computers, analog, digital. Data reduction equipment. DAic RMSa
- AIRCRAFT MARINE PRODUCTS, INC. -- name changed to AMP, Inc., which see.
- Airdesign, Inc., 241 Fairfield Ave., Upper Darby, Pa.  
Delay lines. Ic RMSa
- Airflyte Electronics Co., 535 Avenue S., Bayonne, N.J.  
Computers. Analog-to-digital converters. Ic RMSa
- Airpax Products Co., P. O. Box 132 (Middle River), Baltimore 20, Md.  
Pulse transformers. Ic RMSa
- ALADDIN ELECTRONICS, Division of Aladdin Industries, Inc., (formerly Aladdin Radio Industries, Inc.), 703 Murfreesboro Rd., Nashville, Tenn. / CHapel 2-3411 / \*C 57  
Pulse transformers, magnetic shift registers, logical computer elements utilizing magnetic materials, other magnetic core computing machine components. Aladdin Pulse Transformer Encyclopedia, for circuit designers, discussing pulse transformer applications and listing over 1000 available combinations of circuit characteristics and pulse performance. Ms(100) Le(1925) Ic RMSa
- ALADDIN RADIO INDUSTRIES, INC. -- name changed to Aladdin Electronics, which see.
- Alden Electronic and Impulse Recording Equipment Co., Alden Research Center, Westboro, Mass. / Westboro 467 /  
Facsimile transmitting and receiving equipment, facsimile components, sensitized paper. Pulse recorders, automatic curve plotters. Recorder that monitors any machine or action and records automatically. Ms Se Ic RMSa
- Alden Products Co., 117 No. Main St., Brockton, Mass. / Brockton 160 / \*C  
Components for digital and analog computing machinery, magnetic delay line units, magnetic storage cores, etc. Ms(300) Me(1930)  
Ic RMSa
- Alfax Paper and Engineering Co., Alden Research Center, Westboro, Mass. / Westboro 467 / \*C  
Electrosensitive recording papers. Ms Me(1942) Ic RMSa
- ALLEGANY INSTRUMENT CO., INC., 1091 Wills Mountain, Cumberland, Maryland / PARKview 4-1200 / \*C 57  
Data recording and computing systems for ballistic measurements. Ss(40) Se(1952)  
ADc RMSa

## Organizations

- Allen-Bradley Co., 114 West Greenfield Ave., Milwaukee 4, Wisc.  
Potentiometers, resistors, cores, ferrites. Ic RMSa
- R. D. ALLEN BUSINESS MACHINES, INC., Front St. N.W., Grand Rapids, Mich. / Glendale 6-8541 / \*C 57  
Adding machines, bookkeeping machines, cash registers, gyro instruments, etc. Ls(1250) Me(1932) Dic RMSa
- Allgemeine Elektricitäts-Gesellschaft, Frankfurt on Main, Germany  
Semi-conductors, germanium diodes. Ic RMSa
- Allied Control Co., 2 East End Ave., New York 21, N.Y.  
Relays. Ic RMSa
- Allied Engineering Div., Conn. & Richards Ave., S. Norwalk, Conn.  
Computers, analog and digital. DAc RMSa
- ALLIES' PRODUCTS CORP., P. O. Box 188, Kendall Branch, Miami, Fla. / Perrine 7-4431 / \*C 57  
Carbon deposited resistors, general types and precision types. Ss(8) Se(1952) Ic RMSa
- Alpha Computing, Inc., Los Angeles, Calif. -- Gone out of business.
- ALWAC CORP., 13041 S. Cerise, Hawthorne, Calif. (formerly Logistics Research Corp.) / Os 5-0311 / \*C 57  
General purpose digital computers and computing systems (ALWAC), Punched card converters, magnetic tape auxiliary storage. Data-reduction and data-handling systems, input and output equipment; automatic graph-plotters; magnetic heads; automatic curve followers. Ms(112) Se(1952) Dic RMSa
- American Automatic Typewriter Co., 2323 No. Pulaski Rd., Chicago 39, Ill. / Everglade 4-5151 / \*C  
Pneumatically controlled programming and testing devices. Automatic selective typing equipment (Autotypist). Testing machines for typewriters, adding machines, calculating machines. Ms(100) Le(1869) Ic RMSa
- American Electro Metal Corp., 320 Yonkers Ave., Yonkers 2, N.Y.  
Magnetic cores. Ic RMSa
- American Electronic Labs., 641 Arch St., Philadelphia 6, Pa.  
Computers. Data reduction equipment. Dc RMSa
- American Electronic Mfg., Inc., Instruments Div. of American Electronics Inc., 9503 W. Jefferson Blvd., Culver City, Calif. / Texas 05581 / \*C  
Precision resolvers, servomotortachometers, resolver amplifiers, and systems. Ms(200) Se(1952) Ic RMSa
- American Electronics Co., 1203 Bryant Ave., New York 59, N.Y. / \*C  
Analog computers. Analog-to-digital converters. Aic RMSa
- AMERICAN ELECTRONICS, INC., 655 West Washington Blvd., Los Angeles, Calif. / Richmond 9-5361 / \*C 57  
Components for analog and digital computers; servomechanisms; resolvers, synchros, servo motors, etc. Ls(1200) Me(1945) Ic RMSa
- American Hydromath Corp., 25-20 43rd St., Long Island 1, N.Y.  
Analog computers. Ac RMSa
- American Lava Corp., Cherokee Blvd & Mfrs. Rd., Chattanooga 5, Tenn.  
Magnetic tape; cores, ceramic. Ic RMSa
- American Machine & Foundry, 1101 N. Royal St., Alexandria, Va.  
Computers. Data reduction equipment. DAic RMSa
- AMERICAN MACHINE & FOUNDRY CO., COMPUTING CENTER, Greenwich, Conn. / \*C 57  
Computing service; consulting, problem analysis, programming, coding and running of problems on Datatron digital computer or analog computer. DAc RCPa
- American Machine and Foundry, Electronics Division, 1085 Commonwealth Ave., Boston, Mass. / ALgonquin 4-4234 / \*C  
Magnetic shift register, digital data-handling equipment; data readout and display, servomechanisms. Digital servo. Ls(800) Se(1948) Dc RMSa
- American Measuring Instruments Corp., 21-25 44th Ave., Long Island City 1, N.Y.  
Recording equipment. Magnetic tape recorders. Ic RMSa
- AMP, Inc., (formerly AIRCRAFT MARINE PRODUCTS, INC.), 2100 Paxton St., Harrisburg, Pa. / Cedar 4-0101 / \*C  
Patchcord programming systems for critical low level circuits, as well as nonshielded systems for analog and digital computing systems, data processing, test equipment, other equipment and devices. Automatic wire terminators, taper pins (single and multiple), capacitors, terminals, connectors, etc. Ls(1600) Me(1941) Ic RMSa
- AMP, Inc., (formerly AIRCRAFT MARINE PRODUCTS, INC.), Chemical & Dielectric Div., 155 Park St., Elizabethtown, Pa.  
Capacitors. Ic RMSa
- Amperex Electronic Corp., Hicksville, L.I., N.Y. / Wells 1-6200 / \*C 57  
Computers using ferrites, electron tubes and semiconductors. Ms(500) Me(1927) Ic RMSa
- AMPERITE CO., INC., 561 Broadway, New York 12, N.Y. / Canal 6-1446 / \*C 57  
Delay relays and regulators for computers, etc. Ms(75) Le(1923) Ic RMSa
- AMPEX CORP., INSTRUMENTATION DIV., 934 Charter St., Redwood City, Calif. / Emerson 9-1481 / \*C 57  
Magnetic recording of data. Input-output equipment. Digital and analog magnetic storage devices. Ls(1700) Me(1944) Ic RMSa
- AMPHENOL ELECTRONICS CORP., 1830 S. 54th St., Chicago 50, Ill. / BIsHop 2-1000 / \*C 57  
Connectors for computer applications; all types. Ls(2000) Me(1932) Ic RMSa
- Amplifier Corp. of America, 398 Broadway, New York, N.Y.  
Recording equipment, magnetic tape recorders. Ic RMSa
- Ampro Corp., 2835 N. Western Ave., Chicago 18, Ill.  
Magnetic tape recorders and equipment. Ic RMSa
- Anelex Corp., 150 Causeway St., Boston 14, Mass. / Richmond 2-3400 / \*C  
High-speed printer, numerical and alpha-numeric up to 64 characters and line-lengths up to 120 characters. Ms Se(1952) Dic RMSa

## Computers and Automation

- Analogue Controls Inc., 39 Roselle St., Mineola, N.Y.  
Computers, analog and digital. Analog-to-digital converters. Data reduction equipment. Electronic calculators, punch card machines. Potentiometers. DAic RMSa
- ANDERSEN LABORATORIES, INC., 39 Talcott Rd., West Hartford 10, Conn. / Adams 3-4491 / \*C 57  
Solid ultrasonic delay lines, computer memories, etc., for computer applications. Radar. Very large delay lines. Ms(50) Se(1951) Ic RMSa
- Applied Electronics Corp., 1117 Commonwealth Ave., Boston 34, Mass.  
Direct reading, photo-electric, analog-digital converter. Ic RMSa
- Applied Science Corporation of Princeton, P. O. Box 44, Princeton, N.J. / Plainsboro 3-4141 / \*C 57  
Pulse width data systems for multi-channel data transmission and recording, for automatic data processing, and for use with electronic computers. Ms(85) Se(1946) DAic RCMSa
- Arenberg Ultrasonic Laboratory, Inc., 94 Green St., Jamaica Plain 30, Mass. / JAMAICA 2-8640 / \*C 57  
Ultrasonic delay lines, ultrasonic test equipment, storage kits. Ss(6) Se(1950) Ic RMCSa
- Argonne National Laboratory, Box 299, Lemont, Ill. / Lemont 800 / \*C  
Maker of Avidac and Oracle automatic digital computers and other computers, for own use and other government agencies. Ls(2500) Me(1942) DAic RGPa
- Arma Corp., Old Country Rd., Garden City, Long Island, N.Y. / Garden City 3-2000 / \*C  
Electronic fire-control apparatus. Analog computer components including resolvers, induction generators, etc. Basic weapon and control systems, navigational systems, precision remote control systems. Ls(6000) Le DAsc RMSPa
- Arma Div. of American Bosch Arma Corp., Roosevelt Field, Garden City, L.I., N.Y.  
Digital and analog computers. DAC RMSa
- Armour Research Foundation, Illinois Inst. of Technology, 10 West 35th St., Chicago 16, Ill. / CALumet 5-9600 / \*C 57  
Design and construction of developmental computers, both analog and digital, for special applications only. Digital-to-analog and analog-to-digital converters. Data reduction systems. Magnetic recording. Automatic control machinery. Servomechanisms. Instrumentation. Computing service: analog, digital; IBM 650 digital computer, Goodyear Electronic Digital Differential Analyzers. Ls(1250) Me(1937) DAISc RCPa
- THE ARNOLD ENGINEERING CO., Marengo, Ill. / Chicago, Andover 3-6300 / \*C 57  
Magnetic materials for computer components, tape-wound bobbin cores, etc. Ls(550) Me(1936) Ic RMSa
- Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill. / Whitehall 4-3700 / \*C  
Hydraulic and electronic automatic control equipment. Servomechanisms. Computing service: analog; Philbrick analog computer. Ms(400) Me(1930) SCc RMSPa
- Assembly Products, Inc., Wilson Mills Rd., Chesterland 33, Ohio  
Computers. Analog-to-digital converters. DAic RMSa
- Astron Corp., 255 Grant Ave., East Newark, N.J.  
Capacitors. Ic RMSa
- ATLAS PRECISION PRODUCTS CO., 3801 Castor Avenue, Philadelphia 24, Pa. / Jefferson 5-3700 / \*C 57  
Mechanical analog computers for fire control, radar, etc.; geared mechanisms, servos, etc. Ms(270) Me(1928) Aic MSa
- Atomic Instrument Co. -- merged into Baird-Atomic Instrument Co., which see.
- AUDIO DEVICES, INC., 444 Madison Avenue, New York 22, N.Y. / Plaza 3-0973 / \*C 57  
Extra precision magnetic audio tape; magnetic recording tape for telemetering, electronic computers, etc. Magnetic tape guaranteed defect-free. Also, magnetic recording discs on aluminum base up to 17" diameter. Ms(150) Me(1937) Ic RMSa
- Audio Instrument Co., Inc., 133 West 14th St., New York 11, N.Y. / Oregon 5-7820 / \*C  
Electronic analog time-delay units from 10 to 10,000 milliseconds; logarithmic amplifiers. Specialized passive computer which corrects for film nonlinearity in photometric work, etc. Ss(10) Se(1949) ASCc RMSCa
- Audio Products Corp., Los Angeles 64, Calif. --  
Out of business.
- THE AUSTIN CO., Special Devices Division, 76 9th Ave., New York 11, N.Y. / Watkins 4-3630 / \*C 57  
Special purpose automatic control systems for laboratory, industrial, and military purposes; analog, digital, data-handling, servo, electronic, electromechanical. Shaft position indicators and systems. Ms(division, 150, company 25,000) Me(division, 1943; company, 1878) DASCMS RMSa
- Automacite Applique, Paris 9e, France --  
Out of business.
- AUTOMATIC ELECTRIC CO., Northlake, Ill. / Fillmore 5-7111 / \*C 57  
Automatic electrical systems, telephone equipment, relays, stepping switches, etc., for computing machinery and communications companies. Automatic control components. Ls(6000) Le(1892) ICc RMSa
- Automatic Signal Division, Eastern Industries, Inc., Norwalk, Conn. / Temple 8-4791 / \*C  
Automatic volume-density traffic controllers; digital and analog computers; servomechanisms. Ms(300) Me(1928) Ic MSa
- Automation Consultants, Inc., 1450 Broadway, New York 18, N.Y. / Chickering 4-7800 / \*C  
Consultants in electronics systems and devices, including automatic information-handling. Ss Se(1953) Dc Ca
- Automation Engineering Laboratory, One E. Putnam Ave., Greenwich, Conn. / Greenwich 8-2300  
Designs, engineers, and builds complete automated units or systems. Ic RMCA
- AUTOMATION ENGINEERS CO., DIVISION OF ASSOCIATED INDUSTRIAL CONSULTANTS, 344 West State Street, Trenton, N.J. / Owen 5-8509 / \*C 57  
Consultants in automatic control machinery and automatic materials handling equipment. Ss (20) Me(1942) DACMc Ca
- AUTONETICS, DIVISION OF NORTH AMERICAN AVIATION, INC., 9150 East Imperial Hwy, Downey, Calif. / LUDlow 3-6111 / \*C 57

## Organizations

- General purpose computers, differential analyzers. Special purpose analog computers for algebraic and differential equations. Ls (1200 in computer work) Se(1946) ADc RMSa
- Autron Engineering, Inc.**, 1254 6th St., Los Angeles 17, Calif. / Mutual 2327, 3331 / \*C  
Engineering design, development, and manufacture of electronic and electromechanical controls and automatic control systems, devices, and instruments. Sé(1955) Cc RMSa
- A-V Mfg. Corp.**, 730 Fifth Ave., New York 19, N.Y.  
Magnetic tape recorders and other equipment. Ic RMSa
- Avion Division-Alexandria (formerly ACF Electronics) Div. of ACF Industries, Inc.**, 800 No. Pitt St., Alexandria, Va. / King 8-4900 / \*C  
Analog-to-digital encoders, and digital-to analog decoders. Ms(177) Se(1954) DAC RMSa
- Avion Division of ACF, Erco Div.**, P. O. Box 209, Hyattsville, Md.  
Analog computers. Ac RMSa
- Avion Division, American Car and Foundry Industries, Inc.**, 299 State Highway No. 17, Paramus, N.J. / Colfax 1-4100 / \*C 57  
Analog and digital computing machinery. Magnetic recorders, amplifiers, electronic choppers, test equipment, servomechanisms, automatic control machinery, etc. Ls(600) Se(1946) DASCMc RMSa
- Axel Bros., Inc.**, Electronics Div., 134-20 Jamaica Ave., Jamaica 18, N.Y.  
Delay lines, resistors, capacitors. Ic RMSa
- B
- Baird Associates** -- merged into Baird-Atomic Co., which see.
- Baird-Atomic Co.**, 33 University Road, Cambridge 38, Mass. / UNiversity 4-0101 / \*C  
Spectroscopic analysis equipment; scientific instruments; analog devices, servo-mechanisms; transistors. Analog-to-digital converters, printers, computer components, controls. Instrumentation for industrial control: direct reading spectrometer, infra-red spectrophotometer, densitometer comparator, plant stream analyzer, etc. Research in physical optics. Ms(250) Me(1936) AISc RMSCa
- BANK OF AMERICA NATIONAL TRUST AND SAVINGS ASSOCIATION**, Controllers Dept., Systems and Equipment Research Section, 500 Howard St., San Francisco, Calif. / \*C 57  
Digital computing service, with IBM 702 automatic digital. Ss Se Dc CPa
- Barber-Colman Co.**, 1548 Rock St., Rockford, Ill.  
Potentiometer-recorders. Ls Le Ic RMSa
- Barker & Williamson, Inc.**, 237 Fairfield Ave., Upper Darby, Pa.  
Facsimile equipment; transmitting equipment; delay lines. Ic RMSa
- Barnes Engineering Co.**, 30 Commerce Rd., Stamford, Conn.  
Automatic machine tool control equipment. Cc RMSa
- Basic and Experimental Physics**, Box 689, Falmouth, Mass. / Falmouth 2175
- Consulting services, in design, development, testing and applications of digital and analog computer systems. Ss Se DAIC RCPa
- Battelle Memorial Inst.**, 505 King Ave., Columbus 1, Ohio / Ax 9-3191 / \*C 57  
Computing service. Computer research and development. Many other activities. Ls (2600) Me(1929) Ic RCPa
- Beckman Helipot Corp.**, Newport Beach, Calif.  
Potentiometers. Ic RMSa
- BECKMAN INSTRUMENTS, INC.** -- SEE Systems Division and Berkeley Division of Beckman Instruments
- BECKMAN INSTRUMENTS, INC., SYSTEMS DIVISION**, 325 N. Muller Ave., Anaheim, Calif. / Prospect 44-5430 / \*C 57  
Multi-channel digital data handling systems; 200 channel strain gage recorder. Automatic process control, digital data handling and recording. Ls (under 2000) Me(1934) DAIC RMSa
- Bel Fuse, Inc.**, 311 Mountain Rd., Union City, N.J.  
Delay lines.
- Bell Punch Co., Ltd.**, 39 St. James's St., London, S.W. 1, England / Hyde Park 1532 / \*C 56  
Small digital computers. Ls(2000) Le(1878) Dc RMSa
- Bell Sound Systems, Inc.**, 555 Marion Rd., Columbus 7, Ohio  
Magnetic tape recorders. Ic RMSa
- Bell Telephone Laboratories**, Murray Hill, N.J. / Summit 6-6000 / and 463 West St., New York 14, N.Y. / Chelsea 3-1000 / \*C  
Automatic switching. Bell general purpose computers (relay and electronic, digital and analog) for government use and company's own use. Ls Le DAC RCPa
- Belock Instrument Corp.**, 111-01 14th Ave., College Point, N.Y. / Hickory 5-4200 / \*C 57  
Bombing and gun fire control computers. Electronic and electro-mechanical systems, navigation aids, missile components. Ls (1200) Se(1950) C1c RCMsa
- Bendix Aviation Corp.**, Pacific Division, 11600 Sherman Way, Hollywood, Calif. / - / \*C  
Telemetering systems. Digital systems, controls, and components. Analog-to-digital converters. Ls(2500) Le(1915, company; 1937, this division) Ic RMSa
- BENDIX AVIATION CORP., RESEARCH LABORATORIES DIVISION**, P. O. Box 5115, Detroit 35, Mich. / Kenwood 7-3300 / \*C 57  
Analog and digital computers; numerically controlled machine tools; dynamic data plotting systems; servomechanisms. "Data Logging Systems". Ls(550) Me(1942) DAISc RMa
- Bendix Aviation Corporation**, Eclipse-Pioneer Division, Teterboro, N.J. / Hasbrouck Heights 8-2000 / \*C  
Synchros, low inertia servo motors, pygmy servo motor generators, etc. Ls(7000) Le(1919) S1c MSa
- BENDIX AVIATION CORPORATION, BENDIX COMPUTER DIVISION**, 5630 Arbor Vitae St., Los Angeles 45, Calif. / Oregon 8-2128 / \*C 57  
Electronic information processing machines. Small-size low-cost digital differential analyzers and general purpose digital computers; automatic control systems; Decimal

Computers and Automation

- Digital Differential Analyzer Model D-12; general purpose digital computers Model G-15A and g-15D; analog to digital conversion equipment. Data processing systems requiring computers. Ms (300) Se (1952, division; 1929 corporation) DACc RMSPa  
 Benge Associates, McIntyre Bldg., Spruce and College Sts., Asheville, N.C. / Asheville 2-0852 / \*C  
 Management engineers; applications of electronic data processing to office procedures; costs; analysis of clerical routines leading to programming. Ss Me (1939) Cc RCPa  
 Benson-Lehner Corp., 11930 W. Olympic Blvd., Los Angeles 64, Calif. / Br 2-3484, Gr 9-3723 / \*C  
 Automatic and semi-automatic devices (both analog and digital) for computing, data analyzing, data reduction, optical measuring, guided missile analysis, etc.; geophysical seismic reader and profile plotter. Oscillogram trace readers, film readers, plotters, etc. Components: potentiometers, remote control key boards, etc. Ms (170) Se (1950) DAC RCMSa  
 Bergen Laboratories, 11 Godwin Ave., Fairlawn, N.J.  
 Automatic control equipment, magnetic tape recording equipment. Se ICc RMSa  
 EDMUND C. BERKELEY AND ASSOCIATES, 815 Washington St., Newtonville 60, Mass. / DEcatur 2-5453 or 2-3928 / \*C 57  
 Courses by mail in automatic computing machinery and other scientific subjects. Ss (3) Se (1948) Dc PCa (affiliated with Berkeley Enterprises, Inc.)  
 BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. / Landscape 6-7730 / \*C 57  
 EASE computer (Electronic Analog Simulating Equipment) for solving equations, simulating systems, etc. Network of computing facilities over the country. Ls (850) Se (1946) Ac RSCa  
 BERKELEY ENTERPRISES, INC., 815 Washington St., Newtonville 60, Mass. / DEcatur 2-5453 or 2-3928 / \*C 57  
 Small robots, robot show-stoppers, etc. Logical design, applications, marketing, etc., of automatic information-handling machinery. Publisher of "Computers and Automation" and other publications. Ss (6) Se (1954) Dc RCMSa (Affiliated with Edmund C. Berkeley & Associates)  
 Berkshire Laboratories, 732 Bank Village, Greenville, N.H. / Greenville 111 / \*C  
 Special computer components. Ss Se (1949) IAc RMCa  
 Berndt-Bach, Inc., Auricon Div., 971 N. Mansfield, Hollywood 38, Calif.  
 Recording equipment, magnetic tape recorders. Ic RMSa  
 Bill Jack Scientific Instrument Co. -- SEE under J  
 Birkbeck College, University of London, 21 Torrington Sq., London W.C. 1, England / Langham 1912 / \*C  
 Maker of ARC, APEXC, and SEC digital computers; electronic digital computers. Ss (10 to 20) Se (1946) Dc RCPa  
 Bliley Electric Co., Union Station Bldg., Erie, Pa.  
 Delay lines. Ic RMSa  
 Boeing Airplane Co., Industrial Products Division -- their Electronic Analog Computer has been transferred to Western Electronic Supply Co., which see.  
 Booz, Allen and Hamilton, 135 South LaSalle St., Chicago 3, Ill. and other cities / Financial 6-1900 (each city) / \*C 57  
 Management consultants; complete service in applications of integrated and electronic data processing to management control systems in business, industry, and government. Ms (450) Le (1914) DAICc RCPa  
 George W. Borg Corp., Borg Equipment Div., 120 S. Main St., Janesville, Wisc.  
 Potentiometers. Ic RMSa  
 BJ Electronics, Borg-Warner Corp., P. O. Box 1679, 3300 Newport, Santa Anna, Calif. / Ki 5-5581 / \*C 57  
 Digital data systems, "vibrotron" transducers, memory drums, shaft position digitizers. Ms (450) Me (this division, 1944; company, 1910) DIC RMSCa  
 Borg-Warner Corporation -- SEE BJ Electronics  
 Byron Jackson Division -- SEE BJ Electronics, Borg-Warner Corp.  
 Bourns Laboratories, 6135 Magnolia Ave., Riverside, Calif.  
 Potentiometers. Ic RMSa  
 Bowles, Andrews & Towne, 1389 Peachtree St., N.E., Atlanta 9, Georgia / Trinity 5-7421 / (also Richmond and New York) \*C 57  
 Actuaries, consultants, IBM 650 electronic data-processing and computing service. Ss (48) Se (1948) Ic RCPa  
 Bowmar Instrument Corp., 2415 Pennsylvania St., Fort Wayne 4, Ind. / Anthony 1463 / \*C  
 Mechanical computer components. Ms (55) Se (1951) Ic RMSa  
 Bowser, Inc., 33 No. LaSalle St., Chicago, Ill. / Andover 3-4322 / and subsidiaries / \*C  
 Electrofile: electro-mechanical file card selectors. Xacto: computing liquid flow meters, mechanical. Xactronic: computing liquid flow meters, with electronic sensing. Blenders and proportioners for automation of liquid process plants; liquid controls; money-meter machines; many other products. Ls (4000) Le (1885) Ic RCMSa  
 Bradley Laboratories, Inc., 168 Columbus Ave., New Haven, Conn. / Main 4-3123 / \*C  
 Selenium rectifier kits, high temperature rectifiers. Selenium diodes, copper oxide diodes, limiters, modulators. Ms (125) Me (1939) Ic RMSa  
 Richard D. Brew and Company, Inc., 90 Airport Rd., Concord, N.H. / Capitol 5-6606 / \*C  
 Distributed constant, lumped constant and ultrasonic delay lines. Ss (36) Me (1939) Ic RMSa  
 Brick Electronic Equipment Co., Norwood, N.J.  
 Facsimile equipment; receiving and transmitting; sensitized paper. Ss Se Ic RMSa  
 Harry P. Bridge Co., 1201 Chestnut St., Phila. 7, Pa. / Locust 8-0330 / \*C 57  
 Marketing, sales, sales promotion, advertising, merchandising, market research, etc., in the computer field. Consultants; advertising agency. Ss (12) Me (1930) Ic RCPSa

## Organizations

- THE BRISTOL CO., Waterbury 20, Conn. / Plaza  
6-4451 / \*C 57  
Automatic recording, indicating, controlling,  
and telemetering instruments, and components.  
Electronic recording potentiometers; instru-  
ments for automatic control and automation.  
Choppers. Socket screws for computers.  
?s Le(1889) CIc RMSa
- BRITISH TABULATING MACHINE CO., LTD., 17 Park  
Lane, London W. 1, England / Hyde Park 8155 /  
\*C 57  
Punched card machines. Ls (7000) Le(1907)  
Dc RMSCPa
- British Electronic Sales, New York -- moved leav-  
ing no address.
- Brown University Computing Laboratory, Division  
of Applied Mathematics, Providence 12, R.I. /  
\*C 57  
Computing service, instruction, research.  
Ss Se Ic RCMSa
- Brubaker Electronics, Inc., 3652 Eastham Dr.,  
Culver City, Calif.  
Delay lines. Ic RMSa
- Brush Electronics Co., 3405 Perkins Ave., Cleve-  
land 14, Ohio / \*C  
Recording analyzers. Magnetic heads and  
drums. Decades. Tape transports. "Tape  
Drum", memory storage device. Computer  
components. Ls (1300) Le(1921) Ic RMSa
- BRYANT GAGE & SPINDLE DIV., BOX 620P, Springfield,  
Vt., Division of Bryant Chucking Grinder  
Magnetic Drums with speeds up to 200,000 RPM,  
capacity up to 5 million bits, super-precision  
bearings. Magnetic Memory Drums, Precision El-  
ectro Mechanical Devices, High Speed Motors,  
Drums, Discs, Tape Transports, Machine Tool  
Spindles. Ms (200) Le Ic RMSa
- Bull S. A. Compagnie des Machines, 94 Avenue Gam-  
betta, Paris 20e, France / MEN 8158 / \*C  
Punch card machines. Commercial electronic  
computers and card-programmed scientific  
computers. Ls (2500) Me(1931) Dc RMSa
- J. H. Bunnell & Co., 81 Prospect St., Brooklyn  
2, N.Y.  
Facsimile equipment, recording equipment.  
Ic RMSa
- Bureau of the Census, Washington 25, D.C. / \*C  
Statistical data processing by electronic  
computing system (Univacs), by commercial  
punch-card equipment, and by special machines  
designed and built for own use. Ms (400 in  
electronic and mechanical processing primary  
organization units) Le(1890 in punch card  
field) Dc RCPGa
- BURLINGAME ASSOCIATES, LTD., 103 Lafayette St.,  
New York 13, N.Y. / DiGby 9-1240 / \*C 57  
Analog computers, computing accessories,  
X-Y plotters, multichannel recorders, digi-  
tal voltmeters, card-to-tape converters,  
magnetic shift registers, magnetic storage  
systems, high speed digital display. Ss (30)  
Me(1928) DAIC Sa
- Burndy Corp., Omaton Division, Norwalk, Conn. /  
TEmple 8-4711 / \*C 57  
Electrical connectors, and electronic com-  
ponents; related hand, hydraulic, pneumatic,  
and automatic tooling. Ls (2000) Le(1924)  
Ic RMSa
- Burnell & Co., Inc., 45 Warburton Ave., Yonkers  
2, N.Y.  
Delay Lines. Ic RMSa
- Burroughs Corporation, 6071 Second Ave., Detroit,  
Mich. / Triangle 5-2260 / and elsewhere / \*C  
Automatic electronic digital computers,  
UDEC, E101. Adding machines, bookkeeping  
machines, etc. Electronic digital test  
computers. Fast access magnetic core mem-  
ory. Pulse control components, servo-  
mechanisms, etc. This company owns Control  
Instrument Co., ElectroData Corp., and  
Adalia Ltd. Ls (19,000) Le(1896) DSc  
RMSPa
- Burroughs Corp., Electronic Instruments Div.,  
1209 Vine St., Philadelphia, Pa. / Locust  
7-1401  
Electronic computing equipment: large  
automatic digital computer, UDEC; small  
automatic digital computer, E101. ?s ?e  
Dc MSa
- Burroughs Corporation, Research Center, Paoli,  
Pa. / Paoli 3500 / \*C  
Computer research and development. Com-  
puting service; digital. Development of  
data handling equipment and systems for  
business, industry, government. Ls (1000)  
Se(1948) Dc RCPA
- BUSINESS ELECTRONICS, INC., 420 Market St., San  
Francisco 11, Calif. / Douglas 2-0894 / \*C 57  
Home study courses in programming for com-  
puters, and applications of business pro-  
blems to computers. Ss (8) Se(1955) DIC  
RCPa
- Bussey Research Laboratories, Inc., Bldg. 629,  
Greater Rockford Airport, Rockford, Ill. /  
5-6843 / \*C 57  
Industrial research and development service,  
applied magnetics research. Ss Me(1941)  
Ic RCa

## C

- California Computer Products, 3927 West Jefferson  
Blvd., Los Angeles 16, Calif.  
Digital point plotter (CCP 701) and other  
equipment. DAC RMSa
- Cambridge Thermionic Corporation, 445 Concord  
Ave., Cambridge 38, Mass. / TRowbridge 6-2800 /  
\*C  
Components for computers. Ms (150) Me (1940)  
Ic RMSCa
- Cambridge University, Mathematical Laboratory, --  
see University of Cambridge, University Mathe-  
matical Laboratory.
- Canadian Marconi Co., Ltd., Toronto 17, Ontario,  
Canada  
Potentiometers
- Canadian Westinghouse Co., Ltd., Electronics Div.,  
Hamilton, Ont., Canada  
Magnetic cores.
- CANNING, SISSON AND ASSOCIATES, 1140 South Robert-  
son Blvd., Los Angeles 35, Calif. / BRadshaw  
2-8425 / \*C 57  
Design and installation of business systems.  
Consultants. Application of electronic com-  
puters and other automatic data-processing  
equipment. Publisher of "Data Processing  
Digest". Ss (6) Se(1954) DACc RCPa
- Canoga Corp., 5955 Sepulveda Blvd., Van Nuys,  
Calif. / STate 6-9010 / \*C 57  
Computer components. Ms (150) Se(1948)  
DAISCMc RMa
- Capitol Radio Engineering Institute, Inc., 3224  
16th St., N.W., Washington 10, D.C.

Computers and Automation

- Courses by mail; Servo, computer, introduction to navigational systems and principles of leadership assignments. Ic RPa  
 Capitol Records, Inc., 151 W. 46th St., New York 36, N.Y.
- Magnetic tape recorders. Ls Me Ic Ma  
 Carbide and Carbon Chemicals Company-AEC, Numerical Analysis Department, P. O. Box P, Oak Ridge, Tenn. / LD-220, X8671 / \*C  
 Numerical analysis using digital computers. Ss (35) Se (1948) Dc RGA  
 Carstedt Research, Inc., 2501 E. 68th St., Long Beach, Calif.  
 Magnetic cores. Ic Ra  
 CBS-HYTRON, Division of Columbia Broadcasting System, Inc., 100 Endicott St., Danvers, Mass. / Spring 4-2360 / \*C 57  
 Electron tubes and semiconductors for computer and other uses. Ls (6000) Le (1921) Ic Ma  
 C B S International, 485 Madison Ave., New York 22, N.Y.  
 Diodes; magnetic tape; transistors.  
 Cedar Engineering, Inc., 5806 W. 36th St., Minneapolis, Minn.  
 Analog Computers.  
 Celco, Constantine Engineering Laboratory Co., Island Ave. / Mahwah, N.J.  
 Delay lines.  
 Centralab, Div. of Globe-Union Inc., 960 E. Keefe Ave., Milwaukee 1, Wisc.  
 Capacitors. Resistors. Ic RMSa  
 Century Electronics & Instruments Inc., 133 N. Utica, Tulsa 10, Okla.  
 Magnetic tape recorders. See Century Geophysical Corp. Ic RMSa  
 Century Engineers, Inc., 2741 N. Naomi St., Burbank, Calif.  
 Analog-to-digital converters; analog & digital computers; data processing. DAic RMSa  
 Century Geophysical Corp., 1333 N. Utica, Tulsa, Okla.  
 Data processing. See Century Electronics and Instruments, Inc.  
 Chicago Telephone Supply Corp., Elkhart, Indiana  
 Resistors. Ic RMSa  
 Christie Electric Corp., 3410 W. 67th St., Los Angeles 43, Calif.  
 Rectifiers. Ic RMSa  
 Cinch Manufacturing Corp., 1026 S. Homan Avenue, Chicago 24, Ill. / - / \*C  
 Components for computers; tube sockets, connectors, printed wiring boards, terminal boards, etc. Ls (1400) Le (1924) Ic RMSa  
 Circuit Engineering, 66 Westland Rd., Weston 93, Mass. / Twinbrook 4-6071 / \*C 57  
 Consultants. Transistor, magnetic, electronic, conductive, and other information handling circuits. Ss Se (1954) Dc Ca  
 Circuit Instruments Inc., 2801 Anvil St. North, Saint Petersburg 1, Fla.  
 Potentiometers. Ic RMSa  
 C. P. CLARE & CO., 3101 Pratt Blvd., Chicago 45, Ill. / Ambassador 2-7700 / \*C 57  
 Relays for computer and other uses. Ls (510) Me (1937) Ic RMSa  
 Clarostat Mfg. Co., Inc., Dover, N.H.  
 Potentiometers. Ic RMSa  
 Clary Multiplier Corp., 408 Junipero St., San Gabriel, Calif. / Atlantic 7-6111 / \*C  
 Adding and calculating machines, cash registers, electronic computers, analog-digital converters, input and output equipment for computers, data-reduction systems. Ls (1500) Me (1939) DAc RMSa  
 Cleveite Brush Development Co., 540 East 105th St., Cleveland 8, Ohio  
 Magnetic tape recorders. Ic RMSa  
 Cleveite Transistor Products, 241 Crescent St., Waltham 54, Mass.  
 Transistors. Ic RMSa  
 Coilcraft Inc., Jandus Rd., Cary, Ill.  
 Delay lines. Ic RMSa  
 COLEMAN ENGINEERING CO., INC., 6040 West Jefferson Blvd., Los Angeles 16, Calif. / TE 0-5811 / \*C 57  
 Digital data handling systems and components; "Digitizer", device for converting rotational shaft position into electrical contact settings; etc. Operate project "SMART" at Hurricane Mesa, Utah, for USAF. Ms (300) Se (1951) DIC RMSa  
 Collins Radio Co., 315.2nd Ave. S. E., Cedar Rapids, Iowa  
 Digital computers; Kineplex high-speed digital transmission system. DIC RMSa  
 Columbia Broadcasting System, Inc. -- SEE CBS-Hytron Division.  
 Columbia Technical Corp., 61-02 31st Ave., Woodside 77, Queens, N.Y.  
 Delay lines. Ic RMSa  
 Columbian Carbon Co., Mopico Color Div., 601 Cass St., Trenton 10, N.J.  
 Magnetic cores. Ic RMSa  
 Comar Electric Co., 3349 W. Addison St., Chicago 18, Ill.  
 Relays. Ic RMSa  
 Commercial Controls Corp. -- merged with Friden Calculating Corp., which see.  
 Commonwealth Scientific and Industrial Organization, Radiophysics Division, Sydney, New South Wales, Australia  
 Maker of CSIRO Mark I electronic digital computer of Inst. for Advanced Study type. DAc RCGPa  
 Communication Accessories Co., 110 St. & 71 Highway, Hickman Mills, Mo.  
 Delay lines. Ic RMSa  
 Communication Products Co. Inc., Marlboro-Freehold Rd., Marlboro, N.J.  
 Delay lines. Ic RMSa  
 Components Corp., 106 Main St., Denville, N.J.  
 Magnetic tape recorders. Ic RMSa  
 Comptron Corp., 778 Pleasant St., Waverly 79, Mass. / IVanhow 4-8954 / \*C 57  
 Computing services. Data processing equipment, special purpose. Ss Se (1957) DIC RMSa  
 Computation Centre, University of Toronto -- see University of Toronto, Computation Centre.  
 Computer Company of America, Division of Bruno-New York Industries Corp., 140 Church St., New York 7, N.Y. / Cortlandt 7-1450 / \*C  
 Analog computers, differential analyzers, specialized computers and accessories. Ms (125) Me (1942) DAc RMSa  
 Computer Control Co., Inc., 92 Broad St., Wellesley 57, Mass. / Wellesley 5-6620 / and elsewhere / \*C 57  
 Special purpose data processing systems; packaged computing circuits; mathematical services. Ms (100) Se (1953) Dc RMSa



## Organizations

- Computer Instruments Corp., 92 Madison Ave.,  
Hempstead, L. I., N.Y.  
Precision potentiometers. Ic RMSa
- Computer Measurements Corp., 5528 Vineland Ave.,  
North Hollywood, Calif.  
Computers, test equipment; translating equip-  
ment; digital printer; time-function trans-  
lators. DIC RMSa
- Computers and Automation, 815 Washington St.,  
Newtonville 60, Mass.  
Monthly computer and data processing maga-  
zine. Ss Se(1951) Ic MSa
- Computing Consultants, Inc., 7 Austell Way,  
Atlanta 5, Ga. / Exchange 0134 / \*C 56  
Consultants in the utilization of computers  
for business. Solution of problems for  
business. Ss Se(1954) Ic CPa
- COMPUTING DEVICES OF CANADA LIMITED, P. O. Box  
508, Ottawa 4, Ontario, Canada / Parkway 8-1761 /  
\*C 57  
Digital and analog computer sales; large and  
small scale data processing systems; automa-  
tic navigation systems; simulators; computer  
components. Development of special purpose  
analog and digital computers and components.  
Research and development in instrumentation  
and automatic control. Digital and analog  
computing and data-processing service; NCR  
102D and Bendix G-15D digital computers,  
Reeves analog computer installed. Consult-  
ing services on business applications. Field  
maintenance service. Ls(500) Se(1948)  
DASCc RCPMSa
- Computyper Corp. -- SEE Friden Calculating Machine  
Co.
- Concord Control Inc., 1282 Soldiers Field Road,  
Boston 35, Mass.  
Numerical control: development and manu-  
facturing. DICc RMSa
- Condenser Products Co., Div. New Haven Clock &  
Watch, 140 Hamilton St., New Haven 4, Conn.  
Capacitors for computer applications. Ic  
RMSa
- Con-Elco, 1711 Mountain Ave., Monrovia, Calif.  
Potentiometers; resistors. Ic RMSa
- Connecticut Telephone & Electric Corp., 70 Bri-  
tannia St., Meriden, Conn.  
Magnetic tape recorders. Ic RMSa
- Consolidated Avionics Corp., Canal & Ludlow Sts.,  
Stamford, Conn.  
Analog-to-digital converters; data process-  
ing. Ic RMSa
- Consolidated Diesel Electric Corp., 880 Canal  
St., Stamford, Conn.  
Analog-to-digital converters; analog com-  
puters; digital computers; data processing;  
magnetic drums; punch card machines. DAIC  
RMSa
- Consolidated Electrodynamics Corp., (formerly  
Consolidated Engineering Corp.), 300 North  
Sierra Madre Villa, Pasadena 8, Calif. /  
Ryan 1-8421 or Sycamore 6-0173 / \*C  
Digital and analog data-handling and conver-  
sion systems (Sadic, Millisadic, etc.).  
Auto-matic translator magnetic tape to  
punched card. Transducers, recording os-  
cillographs magnetic tape equipment, data  
processing systems. Systems engineering.  
Ls(1550) Me(1937) DAIC RMSa
- L. L. Constantin & Co., 187 Sargeant Ave.,  
Clifton, N.J.
- Computer components. Ic RMSa
- Continental Carbon, Inc., 5221 Greene St., Phila-  
delphia 44, Pa.  
Potentiometers; resistors. Ic RMSa
- Continental Electric Co., 6 No. Michigan Ave.,  
Chicago, Ill.  
Rectifiers. Ic RMSa
- Control Electronics Co., Inc., 1927 New York Ave.,  
Huntington Station, N.Y.  
Delay lines. Ic RMSa
- CONTROL INSTRUMENT CO., 67 35th St., Brooklyn 32,  
New York / Sterling 8-0658 / \*C 57  
Fire-control equipment. 900 line-a-minute  
tabulator. Digital and analog machines and  
components. Character recognition equip-  
ment. Subsidiary of Burroughs Corp. Ls  
(1200) Me(1934) DAIC RMSa
- Convair, a Division of General Dynamics Corp.,  
General Offices, San Diego 12, Calif.  
The charactron shaped-beam output device.  
Ls Me Ic RMSa
- Cook Research Laboratories, Division of Cook  
Electronic Co., 2700 Southport Ave., Chicago  
14, Ill. (mail address), 8100 Monticello Ave.,  
Skokie, Ill. (location) / Keystone 9-2060 and  
Orchard 3-9200 / \*C  
Magnetic data-recording systems; digital,  
analog, and hybrid information-processing  
systems -- particularly for aircraft and  
airborne applications. Basic and industrial  
research in servomechanisms, air research,  
weather reconnaissance, guided missiles,  
etc. Ms(380) ?e DAIC RCa
- Corbin Corp., 5419 56 Place, Riverdale, Md.  
Analog to digital converters; analog and  
digital computers. DAIC RMSa
- Cornell-Dubilier Electric Corp., 333 Hamilton  
Blvd., S. Plainfield, N.J. / Plainfield 6-9000 /  
\*C  
Test equipment. Components, including capa-  
citors, converters, printed circuits, etc.  
Ls Le(1910) Ic RMSa
- Cornell University, Computing Center, Rand Hall,  
Ithaca, N.Y.  
Computing service: digital; card programmed  
calculator, punch card machines. Dc RCPa
- Corning Glass Works, 94 Crystal St., Corning, N.Y.  
Glass capacitors, delay lines, resistors.  
Ic RMSa
- Corona Engineering Service, Corona Ave., Elmhurst  
73, N.Y.  
Delay lines. Ic RMSa
- COUNCIL FOR ECONOMIC AND INDUSTRY RESEARCH, INC.,  
1200 Jefferson Davis Highway, Arlington 2, Va. /  
OT 4-6377 / \*C 57  
Computing services using IBM 704 data pro-  
cessing system, plus auxiliary equipment.  
Consulting services in design and adminis-  
tration of computer installations; pro-  
gramming services; economic research for  
government and industry. Ms(70) Se(1952)  
DAIC RCPa
- Coxhead Corp., Ralph C. / 720 Frelinghuysen Ave.,  
Newark 5, N.J.  
Type composing of display types by photo-  
graphy using a desk machine. Varitypers.  
Ls ?e Ic RMSa
- Creed & Co., Ltd., Telegraph House, Croydon,  
England / Croydon 2121  
Teleprinter equipment for telecommunication.  
Also input and output equipment specifically

Computers and Automation

- intended for association with electronic computers, machine tool, and process control systems. Dlc RMSa  
 Crowley & Co., Inc., Henry L., Subsidiary of Aerovox Corp., One Central Ave., West Orange, N. J.  
 Magnetic cores. Ic RMSa  
 CUBIC CORPORATION, 5575 Kearny Villa Rd., San Diego 11, Calif.  
 Transistorized digital readout systems. Various transistorized plug-in modules for digital logic cuilding. ?s Se Dc RMSa  
 CUDAHY PUBLISHING COMPANY, 6141 North Cicero Ave., Chicago 30, Ill. / Pensacola 6-8834 / \*C 57  
 Publication of automatic data processing service, weekly, for users of automatic data processing equipment. Ss Se(1956) Ic RMSa  
 Curtiss-Wright Corporation, Electronics Division, Carlstadt, N. J.  
 Electronic flight simulators used by commercial airlines for training flight crews. Other simulators; duplicators. Ls ?e A1c RMSa  
 Custom Components, Inc., P. O. Box 248, Caldwell, N. J.  
 Magnetic cores. Ic RMSa  
 Cutler-Hammer, Inc., 315 N. 12th St., Milwaukee 1, Wisc.  
 Relays. Ic RMSa  
 Computer Engineering Associates, Inc., 350 North Halstead St., Pasadena 8, Calif.  
 Computer components. Ic RMSa
- D
- Dale Products, Inc., P. O. Box 136, Columbus, Nebraska  
 Potentiometers, resistors. Ic RMSa  
 Darby Radio Corp., 19 S. 21st St., Phila. 3, Pa.  
 Magnetic tape recorders. Ic RMSa  
 Data Processing Associates Ltd., Ottawa, Canada  
 -- has become part of Electro Data Div., Burroughs Corp., which see.  
 Data Processing Counselors, 130 East 59th St., New York 22, N.Y. (affiliate of Canning, Sisson & Associates) / PLaza 9-1693  
 Design of business systems, application of computers, training of personnel. Ss Se Dc RCPa  
 DATA PROCESSING DIGEST, 1140 S. Robertson Blvd., Los Angeles 35, Calif. / - / \*C 57  
 Monthly digest service in field of data processing for business and industry. Ss Se DA1c RSCa  
 DATAMATIC CORPORATION, 151 Needham St., Newton Highlands 61, Mass. / DEatur 2-6960 / \*C 57  
 Large-scale, general purpose electronic data processing systems. Computing services (using digital computers) to analyze and process problems in general business accounting, operations research, applied mathematics, and engineering. Ms(250) Se(1955) Dc RMSCP  
 THE DATICS CORPORATION, 6000 Camp Bowie Blvd., P. O. Box 9128, Ft. Worth, Texas / PERshing 8-6505 / \*C 57  
 Consultants, computing services, research & development, data processing and data reduction services. Ss(25) Se(1956) DA1c RCPSa  
 The Daven Company, 530 W. Mt. Pleasant Ave., Rte. 10, Livingston, N. J. / Livingston 6-4300 / \*C 57  
 Precision resistors, rotary switches and attenuators. Ms(490) Me(1929) Ic RMSa  
 Daystrom Electric Corp., 753 Main St., Poughkeepsie, N.Y.  
 Magnetic tape recorders. Ic RMSa  
 Davies Laboratories, Inc., a division of Minneapolis-Honeywell Regulator Co., Beltsville, Md. / Appleton 7-1133 / \*C  
 Automatic data-reduction and conversion equipment. Magnetic tape data recorders. Magnetic recording and reproducing heads. Ms(110) Se(1946) Ac RMSCa  
 Daystrom Instrument Co., Archbald, Pa. / Jermyn 1100 / \*C  
 Digital and analog computers. Magnetic core and magnetic drum storage systems. Servomechanisms. Ls(1000) Se(1950) DAISc RMSCa  
 Daystrom Pacific Corp., 11150 La Grange Ave., West Los Angeles 25, Calif.  
 Potentiometers. Ic RMSa  
 DAYSTROM SYSTEMS, DIVISION OF DAYSTROM, INC., 5640 La Jolla Blvd., La Jolla, California / GLencourt 40421 / \*C 57  
 Complete systems for data handling, data logging, process control, special purpose digital computers, industrial control, and airborne systems. Ss(40) Se(1956) DSC RCa  
 The de Florez Co., 116 East 30 St., New York 16, N.Y. / Murray Hill 6-5730  
 Register controls, servomechanisms, control systems, mechanical design. Research and development. Synthetic training devices. Ss(25) Se(1948) DAC1c RCPa  
 DeJur-Amsco Corp., 45-01 Northern Blvd., Long Island City, N.Y.  
 Potentiometers, linear and non-linear; precision connectors (continental connectors). Ic RMSa  
 Delco Radio Division, General Motors Corp., 700 East Firmin St., Kokomo, Ind.  
 Transistors. Ic RMSa  
 Delttime, Inc., 608 Fayette Ave., Mamaroneck, N.Y. / Mamaroneck 9-5800 / \*C 57  
 Magnetostrictive delay lines and registers. Ms(75) Se(1953) Ic RMSa  
 Dennison Manufacturing Co., Framingham, Mass. / Tr 3-3511 / \*C 57  
 Development, production and sale of "Print Punch" marking machine for automatic data processing. Ls(2700) Le(1844) Ic RMSa  
 Denominator Co., Inc., 261 Broadway, New York 7, N.Y.  
 Computers. RMSa  
 Development Electronics Corp., 4213 S. Broadway, Los Angeles 37, Calif.  
 Delay lines. Ic RMSa  
 Devol Research Co., Brookside Dr., Greenwich, Conn.  
 Digital computers, punch card machines. D1c RMSa  
 Dialight Corp., 60 Stewart Ave., Brooklyn 37, N.Y.  
 Resistors. Ic RMSa

## Organizations

- Dian Laboratories, Inc., 611 Broadway, New York 12, N.Y. / ALgonquin 4-6555 / \*C 57  
Computing and consulting services. Analog computing center. Design of simulators, trainers and special-purpose computers. Ss Se(1955) Ac RCPa
- Dictaphone Corp., 375 Howard Ave., Bridgeport, Conn.  
Magnetic tape recorders. Ic RMSa
- JOHN DIEBOLD AND ASSOCIATES, INC., 40 Wall St., New York, N.Y. / Whitehall 3-9115 / \*C 57  
Consulting management engineers, specializing in automation and computers. Ss Se DAICc RMCPa
- Diehl Mfg. Co., 1157 Finderne Ave., Somerville, N.J.  
Resolvers. Ic RMSa
- Digital Control Systems, Inc. -- see Litton Industries
- Digitronics Corp., Albertson Ave., Albertson, L.I., N.Y. / Pioneer 7-5090  
Digital computing and data processing systems; components. (formerly Elecom Division of Underwood) Ms(75) Se(1957) Dc RMSCa
- Doelcam Corp., a division of Minneapolis-Honeywell Regulator Co., 1400 Soldiers Field Rd., Boston 35, Mass. / ALgonquin 4-5200 / \*C  
Rate, free and integrating gyroscopes, D-C amplifiers and null indicators, synchros and servo motors. Ls(700) Me SIc RMSa
- DONNER SCIENTIFIC CO., 888 Galindo St., Concord, Calif. / Mullberry 2-6161 / \*C 57  
Design and manufacture of complete analog computers, function multipliers, function generators, information delay generators, computing components, accessories, servo-mechanical transducers, electronic test equipment and control instrumentation. Design services in analog and digital computing instrumentation and applications. Ms(90) Se(1953) DASCc rMSCa
- Dukane Corp, St. Charles, Chicago, Ill.  
Magnetic tape recorders. Ic RMSa
- Dulrow Development Co., 235 Penn St., Burlington, N.J.  
Magnetic tape recorders. Ic RMSa
- E. I. DuPont de Nemours & Co. Inc., Polychemicals Dept., Rm. 1741, DuPont Bldg., Wilmington 98, Del.  
Magnetic tape recorders. Ic RMSa
- DX Radio Products Co., 2300 W. Armitage Ave., Chicago 47, Ill.  
Delay lines, magnetic cores. Ic RMSa
- Dynamic Electronics, Inc., 73-39 Woodhaven Blvd., Glendale, Queens, N.Y.  
Delay lines. Ic RMSa
- E
- Eagle Signal Corp., 202 20th St., Moline, Ill. / Moline 2-5571 / \*C  
Timers and counters for automatic control of machines and processes. Ls(510) Le (1920) Cc MSa
- Eastern Air Devices Inc., 375 Central Ave., Dover, N.H.  
Computers. RMSa
- Eastern Industries, Inc. -- SEE Automatic Signal Division
- Eastern Precision Resistor Corp., 675 Barbey St., Brooklyn 7, N.Y.  
Registers. Ic RMSa
- EBASCO SERVICES INCORPORATED, 2 Hector St., New York 6, N.Y. / Digby 4-4400 / and elsewhere / \*C 57  
Management advisory services. Applications of data processing equipment in business; etc. Ls(1600) Le(1905) Dic CPa
- Eckert-Mauchly Division -- part of Remington Rand Univac Division, Philadelphia, which see.
- Eclipse-Pioneer Division -- SEE Bendix Aviation Corporation
- Edgar, Wesley B., 206 Palmetto State Life Bldg., 1310 Lady St., Columbia 1, S.C. / Columbia 3-7563 / \*C  
Consulting service on application of automated procedures to small business operations. Ss(4) Me(1930) Ic Ca
- Edin Co., Inc., 207 Main St., Worcester 8, Mass. / PL 7-8394  
Direct writing oscillograph recorders; high gain D.C. amplifiers; frequency spectrum analyzer. AIC RMSa
- Thomas A. Edison, Inc., Instrument Division, 22 Lakeside Ave., West Orange, N.J. / Orange 3-6800 / \*C  
Automatic control components, time delay relays. Thermal devices. Ms(360 in division; 4000 in company) Me(1940 division; 1888 company) Ic RMSa
- Edo Corp., College Pt. 56, N.Y.  
Delay lines. Ic RMSa
- Educational Research Corp., 10 Craigie St., Cambridge 38, Mass.  
Digital computers; punch card machines. Ic RMSa
- Edwards Engineering Co., 21 Yennicoek Ave., Port Washington, N.Y.  
Magnetic tape recorders. Ic RMSa
- Electra Mfg. Co., 4051 Broadway, Kansas City, Mo.  
Resistors. Ic RMSa
- ELECTRALAB, INC., Industrial Center, Needham Hgts., Mass. / NEedham 3-5000 / \*C 57  
Printed circuits; printed assemblies; printed circuit boards with plated-through holes -- for computers and other applications. Ms(80) Se(1952) Ic RMSa
- Electrical and Physical Instrument Corp., 42-19 27th St., Long Island City, N.Y. / Stillwell 4-6389 / \*C  
Flip-flop and other counters in decade and binary; digitizers (high speed); automatic control machinery. Ss Se DCc RMCA
- ELECTRODATA DIVISION OF BURROUGHS CORP. (formerly Electro Data Corp., affiliate of Consolidated Electrodynamac Corp.), 460 Sierra Madre Villa, Pasadena, Calif. / RYan 1-0471 / \*C 57  
Datatron electronic data processing machines and digital computer components; E101 desk-size electronic digital computer; Cardatron alpha-numeric card input-output system; Datafile magnetic tape units; punched card conversion equipment. Digital computing service. Organization now includes Data Processing Associates, Ltd., Ottawa, Can. Ls(1680) Se(1950 this division; 1886 company) Dc rMSCPa
- Electro Instruments, Inc., 3794 Rosecrans St., San Diego 10, Calif. / Cypress 8-6144 / \*C

## Computers and Automation

- Digital voltmeters; digital ohmmeters, analog-to-digital converters; card converters, frequency counters, X-Y Recorders, go no-go systems, automation systems, digital testers, and other digital instruments. Ms(80) Se(1954) Ic RMSa
- Electro-Machine Corp., Box 565, Umatilla, Florida  
Magnetic drums; punch card machines. Ic RMSa
- Electro-Measurements, Inc., 7524 S. W. Macadam, Portland 1, Oregon / Cherry 6-3331 / \*C 57  
Computer test procedures and instruments, computer readout devices. Computer components. Ms(60) Se(1947) Ic RMSCa
- Electro-Mechanical Research, Inc., 64 Main St., P. O. Box N, Ridgefield, Conn.  
Analog-to-digital converters, data processing. Ic RMSa
- Electro-Mec Laboratory, Inc., 47-51 33rd St., Long Island City 1, N.Y. / Stillwell 6-3402 / \*C  
Analog-to-digital converters; low torque potentiometers; etc. Ms(175) Se(1950) Ic RMSa
- Electrometric, Inc., 106 Olson St., Woodstock, Ill.  
Delay lines. Ic RMSa
- Electro-Miniatures Corp., 1060 Elm Ave., Ridgefield, N.J.  
Analog-to-digital converters. Ic RMSa
- The Electro Motive Mfg. Co. Inc., Willimantic, Conn.  
Capacitors. Ic RMSa
- ELECTRONIC ASSOCIATES, INC., Long Branch, N.J. / Capital 9-1100 / and elsewhere / \*C 57  
General purpose precision analog computers, special purpose analog computers, analog computer components, digital-to-analog converter, digital plotting system (Dataplotter). Automatic control of all machine tools. Computation centers at Princeton, Los Angeles. Ls(900) Se(1945) DACc RMSCa
- ELECTRONIC ASSOCIATES INC. COMPUTATION CENTERS at Los Angeles, Princeton -- SEE Electronic Associates Inc.
- Electronic Computer Company, 6191 Ridge Ave., Philadelphia 28, Pa.  
Analog-to-digital converter for data reduction systems and general voltage measurement applications. Ic RMSa
- Electronic Computer Div. of Underwood Corp., 35-10 36th Ave., Long Island City 6, N.Y. / Exeter 2-3400 / \*C  
Construction: two types of electronic digital computers (Elecom 120-A, 125); an electronic sorter-collator; and an electronic accounting machine, Elecom 50. Delay lines, decade delay lines, pulse transformers, magnetic recording heads, magnetic drums, D.C. plug-in amplifiers. Ms(200) Se(1949) Dc RMSa
- Electronic Computer Programming Institute, 475 Fifth Ave., New York 17, N.Y. / Lexington 2-4991 / \*C 57  
Educational programs, teaching; courses designed to train personnel in electronic computer programming techniques. Dc CPA
- Electronic Control Systems, Inc., 2136 Westwood Blvd., Los Angeles 25, Calif. / Granite 8-4266 and Bradshaw 2-0845 / \*C  
Special purpose data-handling systems for military and industrial use; automatic continuity tester, statistical analyser, machine tool control systems. Ms(85) Se(1953) DACc RMSa
- ELECTRONIC ENGINEERING CO., 1601 East Chestnut St., Santa Ana, Calif. / Kimberly 7-5501 / \*C 57  
Design, development, and fabrication of specialized electronic equipment. Data handling systems, engineering design and fabrication. Timing systems. Computer input and output equipment. Ms(270) Se(1947) DAICc RMCSa
- Electronic Noise Generator Co., P. O. Box 45344, Airport Station, Los Angeles 45, Calif. / Frontier 5-4685 / \*C 56  
Low frequency Gaussian noise generator (distributed solely by Electronic Associates, Inc., N.J.) Ic RMa
- Electronics Corp. of America, 77 Broadway, Cambridge 42, Mass. / Trowbridge 6-9100 / \*C  
Electronic and photoelectronic controls, "Photoswitches", etc. Automatic control and data processing machinery. See next entry Business Machines Div. Ls(1500) Me(1937) DACc RMSa
- Electronics Corp. of America, Business Machines Div., 10 Potter St., Cambridge 42, Mass. / Trowbridge 6-8190 / \*C  
Automatic inventory machines and point of sale recorders. "Magnefiles". Data processing and digital computing machinery. Digital computers for business use. Analog-digital converters. Automatic control instrumentation and systems. SEE also preceding entry for Electronics Corp. of America. Ls(1500 company) Me(1954, this division: 1937, company) DACc RMSa
- Electronic Research Associates Inc., 67 East Centre St., Nutley 10, N.J.  
Transistors. Ic RMSa
- Electronic Teaching Labs, 1818 M St., N.W., Washington 6, D.C.  
Magnetic tape recorders. Ic RMSa
- Electron Products Inc., 430 N. Halstead Ave., Pasadena, Calif.  
Capacitors. Ic RMSa
- Electro-Pulse, Inc., 11861 Teale St., Culver City, Calif.  
Computer components. Ic RMSa
- Electro-Sonic Lab, 35-54 36 St., Long Island City, N.Y.  
Magnetic tape recorders. Ic RMSa
- Elgin National Watch Co., Elgin, Ill.  
Neomite relay; electronic switching device. Ls Le Ic RMSa
- ELLIOTT ADDRESSING MACHINE CO., 143 Albany St., Cambridge 39, Mass. / Trowbridge 6-2020 / \*C 57  
Addressing stencils, with selection controlled by punched holes in cardboard margin. Ls(1000) Se(1900) Ic RMSa
- Elliott Bros. (London) Ltd., Century-Works, Lewisham, London, S.E. 13, England and Computing Machine Division, Elstree Way, Borehamwood, Herts., England / Tideway 2323, Elstree 2040 / \*C  
Servomechanisms; Elliott 402, 403 electronic digital computers. GPAC (General purpose analog computer). Computing services; components, instrumentation and control for process industries. Ls(3500) Le(1800) DASCc RMSCPa

## Organizations

El-Rad Mfg. Co., 2800 W. Collom Ave., Chicago 18, Ill.

F

Delay lines. Ic RMSa

Emerson Radio & Phonograph Corp., 14th & Coles St., Jersey City 2, N.J.

Analog computers. Ac RMSa

EEOC Production Co., 506 E. First St., Santa Ana, Calif.

Electronic components for computers and other equipment. Squaring circuits. Subsidiary of Electronic Engineering Co. of Calif. Ic RMSa

Engineered Electronics Company (subsidiary of Electronic Engineering Co.), 506 E. First St., Santa Ana, Calif. / Kimberley 3-9384 / \*C 57

Plug-in computer circuitry (vacuum tube and transistorized types), diode logic, decade counters, hermetically sealed stepping switches, chopper-stabilized DC amplifiers, and compatible accessory items. Ms(100) Se(1954) DACc Ma

Engineering Research Associates -- SEE Remington Rand Univac

Engineers Northwest, 2835 Nicollet Ave., Minneapolis 8, Minn. / Re-5541 / \*C

Test-scoring machines and equipment. Ss(20) Se(1945) DAc RCMa

The English Electric Company Ltd., Queens House, Kingsway, London, WC2, England / Holborn 6966 / \*C 57

Deuce, universal digital computer; also special purpose electronic digital computers for use with kinetic heat simulators. Ls Dc RMSa

EPSCO, INC., 588 Commonwealth Ave., Boston 15, Mass. / Copley 7-8100 / \*C 57

Automatic data processing equipments and systems for computer and/or control applications. ADDAVERTER systems for combining large scale analog and digital computer installations. DATRAC voltage-to-digital conversion equipment. Electronic multiplexers as well as magnetic shift registers, delay lines, pulse transformers and other components for computers, automatic control, etc. Ms(325) Se(1954) DAICMc RMSa

Erie Electronics Distributor Div., Erie Resistor Corp., Erie, Pa.

Computers; assemblies; resistors. Ic RMSa

ESC CORP., 534 Bergen Blvd., Palisades Park, N.J. / Windsor 7-0400 / \*C 57

Computer components: delay lines, pulse forming networks, pulse transformers, filters. Me(125) Se(1953) Ic RMSa

Essex Electronics, 550 Springfield Ave., Berkeley Heights, N.J.

Delay lines. Ic RMSa

Essex Wire Corp., R.B.M. Division, Logansport, Ind.

Relays. Ic RMSa

E-Z Sort Systems, Ltd., 45 Second St., San Francisco 5, Calif. / Garfield 1-8005 / \*C

Edge-punched cards for filing and sorting data. Special cards for correlation of facts. Control systems for a number of electronic computers. Ms(260) Me(1935) Ic RMSa

Fabrics Addizionatrice Italiana S.S., Viale Umbria 36, Milan, Italy

Desk calculators to add, subtract, multiply, divide, print. Dc RMSa

Facit, Inc., 404 4th Ave., New York 36, N.Y. (subsidiary). Stockholm, Sweden (headquarters), and elsewhere / \*C

Touch calculators; adding machines; Odhner adding machine with multiplying features; typewriters, etc. (In 1390 A.D., copper mining). Ls(4000) Le(1390 A.D.) Dc RMSa

Fairbanks Associates, 248 Greenwich Ave., Greenwich, Conn. / Greenwich 8-8155 / \*C

Consultants in application and installation of electronic systems in clerical methods and procedures; evaluation of proposed savings; operations research. Ss(7) Se(1952) Dlc RCPa

Fairchild Controls Corp., Components Div., 225 Park Ave., Hicksville, L.I., N.Y. / Wells 8-5600 / and 6111 E. Washington Blvd., Los Angeles, Calif. / RAYmond 3-5191 / \*C 57

Precision potentiometers, linear, non-linear, single turn, multi-turn, wire wound and noble metal film; trimmer potentiometers; pressure transducers. Subsidiary of Fairchild Camera and Instrument Corp. Le(1920) Ls(2500, company; 500, this division) Ic RMSa

Fairchild Engine & Airplane Corp., 118 East 16th St., Costa Mesa, Calif.

Analog-to-digital converters; potentiometers. Ic RMSa

Fairchild Recording Equipment Co., 154 St. & Powells Cove Blvd., Whitestone 57, N.Y.

Magnetic tape recorders. Ic RMSa

Fansteel Metallurgical Corp., 2200 Sheridan Road, North Chicago, Ill.

Capacitors; rectifiers. Ic RMSa

Farnsworth Electronics Co., 3702 E. Pontiac St., Fort Wayne 1, Ind.

Delay lines. Ic RMSa

Farrand Controls, Inc., 4401 Bronx Blvd., New York 70, N.Y. / Fairbanks 4-2210

"Inductosyn" automatic control equipment. Subsidiary of Farrand Optical Co., which see.

Farrand Optical Co., Bronx Blvd. and 238 St., New York 70, N.Y. / Fairbanks 4-2200 / \*C

Gunfire control apparatus, rangefinders, optical and electronic sighting equipment, automatic trackers, infrared search and scanning systems, analog-digital converters, analog computers, etc. Ls(800) Le(1918) DASCc RMSa

Federal Telephone and Radio Co., Division of International Tel. and Tel., 100 Kingsland Rd., Clifton, N.J. / Nutley 2-3600 / \*C

Vacuum tubes, selenium rectifiers, germanium diodes, contact protectors, coaxial cables, magnetic amplifiers; radio and telephone systems, microwave systems, and associated components. Ls(6500) Me(1941) ISCC RMSa

Federal Television Corp., 19-10 23 Terrace, Long Island City 5, N.Y.

Delay lines. Ic RMSa

Computers and Automation

- Federated Semi-Conductor Co., 66 Day St., New York, N.Y.  
Semi-conductors. Ic RMSa
- Felt and Tarrant Mfg. Co., Comptometer Div., 1735 No. Paulina St., Chicago 22, Ill. / Brunswick 8-5000 / \*C  
Adding-calculating machines, key-driven, electric and non-electric. Comptometer. Electronic dictation-transcription machines. Ls(1700) Le(1886) Dc RMSa
- Fenton Co., 15 Moore St., New York 4, N.Y.  
Magnetic tape recorders. Ic RMSa
- Fenwal Incorporated, 362 Pleasant St., Ashland, Mass.  
Thermistor devices. Ic RMSa
- FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N.Y. / Circle 7-0911 / agent for Ferranti Electric Ltd., Moston, England, and Mount Dennis, Toronto, Canada / \*C 57  
General purpose electronic digital computers (Pegasus, Mercury). Special purpose data processing systems. High speed tape readers. Magnetic drums. Digital storage delay lines. Ls(12,000 including associated companies) Le(1896) DAic RMSa
- FERRANTI LIMITED, Computer Centre, 21 Portland Pl., London W1, England / Langham 9211  
Computer and information-handling centre. Ls(600) Se(1953) DAC RPCa
- FERRANTI ELECTRIC LTD., Mount Dennis, Toronto, Ont., Canada  
Digital computers; magnetic drums. DIC RMSa
- Ferricore, Inc., 303 Railroad Place, Orange, N.J.  
Magnetic cores. Ic RMSa
- Ferroxcube Corporation of America, East Bridge St., Saugerties, N.Y. (a joint subsidiary of Sprague Electric Co. and Philips Industries) / Saugerties 1000 / \*C  
Ferrite core materials, including pot cores, cup cores, recording heads, and microminature toroids with square hysteresis loop. Ms(150) Se(1950) Ic RMSa
- Film Capacitors Inc., 3400 Park Ave., New York 56, N.Y.  
Capacitors, computers. Ac RMSa
- Financial Publishing Co., Mathematical Tables Division, 82 Brookline Ave., Boston 15, Mass. / \*C  
Computing service: digital; card programmed calculators, punch card. Ms(100) ?e Dc RCPa
- FISCHER AND PORTER COMPANY, 330 Warminster Rd., Hatboro, Pa. / Osborne 5-6000 / \*C 57  
Automatic instrumentation, including: measurement of a variable at the point of process; transmission of data, central collection, and display; data reduction systems using a mechanical digital converter (Digi-Coder), tabulated digital data output, etc. Automatic multiple readout systems, converters, computers. Ls(1400) Me(1937) DACc RMSa
- Fischer Smith Inc., 164 State St. W., Englewood, N.J.  
Magnetic tape recorders. Ic RMSa
- The de Florez Co. -- SEE under letter D
- Fonda-Bensing Corp., P. O. Box 244, Narberth, Pa.  
Magnetic tape recorders. Ic RMSa
- Forbes & Wagner, Inc., 345 Central Ave., Silver Creek, N.Y.  
Delay lines. Ic RMSa
- FORD INSTRUMENT CO., DIV. OF SPERRY RAND CORPORATION, 31-10 Thomson Ave., Long Island City 1, N.Y. / Stillwell 4-9000 / \*C 57  
Gunfire control apparatus. Analog and digital computers; components; magnetic amplifiers; servos; differential and integrator elements; missile guidance systems. Automatic control systems involving computers. Instruments for shipborne and airborne armament and navigational control. Computers, systems, drives, and precision components for industry and government. Ls(3000) Le(1915) DASCc RMPcSa
- THE FOXBORO COMPANY, Foxboro, Mass. / Foxboro 312 / \*C 57  
Industrial instrumentation and analog computers for measuring and controlling process variables. Ls(2000) Le(1908) ACc RMSa
- Franklin Electronics, Inc., E. 4 St., Bridgeport, Pa. / Broadway 2-4800 / \*C 57  
Analog-to-digital converters. Other products. Ms(50) Se(1951) Ic RMSa
- THE FRANKLIN INSTITUTE, LABORATORIES FOR RESEARCH AND DEVELOPMENT, 20th St. and Benjamin Franklin Parkway, Philadelphia 3, Pa. / LOcust 4-3600 / \*C 57  
Digital computing machinery, analog computing machinery, servomechanisms; automatic control machinery, automatic materials handling machinery. Computing service: digital (Univac); analog (AC network analyzer); and Electronic Associates general purpose analog computer. Fire control equipment. Special purpose analog computers, large and small scale. Digital computer components. Prototype construction. Ms(325) Se(1946) DASCmc RPCa
- Freed Transformer Co., Ltd., 1727 Weirfield St., Ridgewood, Brooklyn 27, N.Y.  
Miniature components; transistors, transformers. Ic RMSa
- FRIDEN CALCULATING MACHINE CO., INC., San Leandro, Calif. / Sweetwood 8-0700 (and Commercial Controls Corp., One Leighton Ave., Rochester 2, N.Y. / Culver 5800) / \*C 57  
Desk calculating and adding machines. "Flexowriter" automatic writing machines. Complete line of equipment for reading, punching, verifying, converting, and transmitting common language tape or edge-punched cards. Complete line of integrated data processing equipment. Ls(3000) Me(1934) DIC RMSa
- Fugle-Miller Labs, Inc., Dept. R-6, 301 Central Ave., Clark, N.J.  
Delay lines. Ic RMSa

G

- Gamewell Co., Newton Upper Falls 64, Mass.  
Potentiometers. Ic RMSa
- H. S. GELLMAN & CO. LTD., 110 Bloor St. West, Toronto, Ont., Canada / Walnut 3-4484 / \*C 57  
Consultants on automatic data processing systems; application of systems and equipment to business data processing, system analysis, and design; training of clients'

## Organizations

- personnel; programming and computing service for business, scientific and engineering calculations. Ss(6) Se(1955) Dc RCPa  
 General Automatics, Inc., 1178 San Carlos Ave., San Carlos, Calif.  
 Analog and digital computers, DAc RMSa  
 GENERAL CERAMICS CORPORATION, Keasbey, N.J. (near Perth Amboy) / Valley 6-5100 / \*C 57  
 Magnetic cores and ferrites for computer components; toroidal ferrite cores as memory devices for computers; magnetic memory planes; technical ceramics, insulators, etc. Ls(500) Le(1906) Ic RMSa  
 General Controls, 801 Allen Ave., Glendale 1, Calif. / Victoria 9-2181 / \*C  
 Automatic controls (pressure, temperature, level, flow). Ls(2000) Me(1930) Cc RMSa  
 General Cybernetics Corp., affiliate of The Angle Computer Co., Inc., 1751 No. Coronado St., Los Angeles 26, Calif. / Normandy 3-1300 / \*C  
 Linear motion transducer reporting 1/10,000 of an inch position change; high-speed converter of punched cards to tape; industrial automation, electronic gages for automation processes, etc. Successor of General Cybernetics Associates. Ss(18) Se(1953) DAICc RCMSa  
 General Devices, Inc., P. O. Box 253, Princeton, N.J.  
 Analog-digital converters. Ic RMSc  
 General Electric Co., Schenectady, N.Y.  
 Computing service: analog; network analyzer AC and DC, differential analyzer; for anyone. AIC RCPa  
 General Electric Co., Aircraft Products Dept., 600 Main St., Johnson City, N.Y.  
 Digital computers. Dc RMSa  
 General Electric Co., Electronic Components Dept., 1811 Lemoyne Ave., Syracuse, N.Y.  
 Delay lines, magnetic cores. Ic RMSa  
 General Electric Co., Industry Control Dept., Roanoke, Va.  
 Resistors. Ic RMSa  
 General Electric Co., Semiconductor Products, Electronics Park, Syracuse, N.Y.  
 Rectifiers, transistors. Ic RMSa  
 General Electric Co., Tube Department, One River Road, Schenectady, N.Y., and elsewhere / Schenectady 4-2211 / \*C  
 Electronic tubes, including many specifically for computer purposes. Twin-triode, heptode, and thyratron types for counters, amplifiers, coincidence-gating, frequency-dividers, and core-drivers. Also, high reliability types for airborne computers. Ls(15,000) Le(1878) Ic RMSPCa  
 General Electric Co. Ltd. of England, c/o Imtra Corp., 58 Charles St., Cambridge 41, Mass.  
 Magnetic drums. Ic RMSa  
 General Findings and Supply Co., Industrial Div., Leach & Garner Bldg., Attleboro, Mass.  
 Potentiometers. Ic RMSa  
 General Industries Co., Olive and Taylor Sts., Elyria, Ohio  
 Magnetic tape recorders. Ic RMSa  
 General Instrument Corp., (Autom Mfg.), 65 Gouverneur St., Newark 4, N.J.  
 Capacitors; rectifiers. Ic RMSa  
 General Instrument Corp., F. W. Sickles of Canada Ltd., 151 Weber St., S. Waterloo, Ont., Canada  
 Delay lines. Ic RMSa  
 GENERAL KINETICS, INC., 555 23rd St. South, Arlington 2, Va. / Otis 4-7555 / \*C 57  
 Mathematical studies; numerical analysis; programming services for major general purpose computers; data reduction services; systems studies and evaluation including operations research; construction, modification, and repair of peripheral equipment and special components. Ss(12) Se(1954) DCc RCPa  
 General Precision Laboratory, 63 Bedford Road, Pleasantville, N.Y. / ROgers 9-5000 / \*C  
 Rapid electronic analysis of punch card data, etc. Ls(1200) Se(1945) DIC RMSa  
 General Research Co., 603 Jackson St., Falls Church, Va. / Je 4-7622  
 Consulting services: applications of data processing equipment; operation of computer installations. Ss Se Dc RCPa  
 GENERAL TRANSISTOR CORP., 91-27 138th Place, Jamaica 35, N.Y. / OL 7-9700 / \*C  
 Computers; transistors. Ms(250) Se(1954) Ic RMSa  
 Genisco, Inc., 2233 Federal Ave., W. Los Angeles, Calif. / Arizona 8-1276, Bradshaw 2-9749 / \*C  
 Computer components of electro-mechanical type, transducers, analog-to-digital converters, accelerometers, pressure transducers, x-y digital output film reader, components for automation and automatic control; etc. Ms(100) Se(1947) ICc RMSa  
 Georgia Institute of Technology, Rich Electronic Center, Engineering Experiment Station, Atlanta 13, Ga. / Trinity 4-6331 / \*C 57  
 Computing service: ERA 1101 and IBM 650 computers. Ss(16) Se(1955) DIc RCPa  
 THE GEOTECHNICAL CORPORATION, 3712 Haggard Drive, Dallas 9, Texas / Fleetwood 7-1721 / \*C 57  
 Special designs of digital and analog computers. Automatic chart readers. Other products. Ms(120) Me(1936) DAIC RMSa  
 The Gerber Scientific Instrument Co., 162 State St., Hartford, Conn. / Chapel 6-8539  
 Graphical-numerical computers. Relays, motors, plastisols, metals. Ss Se(1948) Ic RMSa  
 Germanium Products Corp., 26 Cornelison Ave., Jersey City, N.J.  
 Silicon and germanium transistors for computer and other uses. Ic RMSa  
 Giannini Dated Div., 1307 So. Myrtle Ave., Monrovia, Calif.  
 Data processing, scanners. Ic RMSa  
 G. M. Giannini & Co., Inc., 918 E. Green St., Pasadena, Calif.  
 Computers, potentiometers. Dc RMSa  
 Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio  
 Digital computers. Dc RMSa  
 Goldak Co., 1544 W. Glenoaks Blvd., Glendale, Calif.  
 Magnetic tape recorders. Ic RMSa  
 Good-All Electric Mfg. Co., Ogallala, Neb.  
 Capacitors. Ic RMSa  
 Goodyear Aircraft Corp., Akron 15, Ohio / Republic 3-6361 / \*C  
 Goodyear electronic differential analyzers. (GEDA line of analog computing equipment). Ls Me Ac RMSa

Computers and Automation

- Gotham Audio Development Corp., 2 West 46th St.,  
New York 36, N.Y.  
Magnetic tape recorders. Ic RMSa
- GPS Instrument Co., Inc., 811 Boylston St.,  
Boston 16, Mass.  
Analog computers. Ac RMSa
- Gramation Instrument Co., 59 Main St., White  
Plains, N.Y.  
Magnetic cores. Ic RMSa
- Gray Mfg Co., 16 Arbor St., Hartford, Conn.  
Magnetic tape recorders. Ic RMSa
- Guardian Electric Manufacturing Company, 1621 W.  
Walnut St., Chicago 12, Ill. / Chesapeake  
3-1100 / \*C  
Components for computers, relays, solenoids,  
switches, stepping relays, hermetically  
sealed controls, complete control assemblies.  
Ls(850) Me(1932) ICc RMSa
- Gudeman Co. of Calif., 9200 Exposition Blvd., Los  
Angeles 34, Calif. / Texas 0-7317  
Delay lines, pulse transformers, filter  
networks. Ic RMSa
- Gulton Mfg. Corp., 212 Durham Ave., Metuchen, N.J.  
Delay lines; magnetic tape recorders. Ic  
RMSa
- H
- Hall-Scott, Inc., 2950 Ontario St., Burbank,  
Calif. / VI 9-2341 / \*C 57  
Analog computers and components. Ms(250)  
Le Ac RMSa
- HALLER, RAYMOND, AND BROWN, INC., State College,  
Pa. / Ad 7-7611 / \*C 57  
Electronic digital computer for solution of  
up to 1200 simultaneous equations, using  
magnetic drum and tape. Research and de-  
velopment on computer components, analog  
computers, electronic and electromechanical  
systems. Engineering analysis, operations  
research, electronic development. Ms(200)  
Se(1947) DAC RMSa
- Haloid Co., 220 Haloid St., Rochester, N.Y.  
Sensitized paper. Ic RMSa
- Hamann Calculating Machine Co., 2118 Land Title  
Bldg., Philadelphia 10, Pa.  
Adding, subtracting, multiplying desk cal-  
culators. Dc MSA
- HAMMARLUND MFG. CO., INC., 460 West 34 St., New  
York 1, N.Y. / Longacre 5-1300 / \*C 57  
Systems of remote control employing audio  
tones for remote supervisory control and  
telemetering over telephone lines or other  
communication links. Ls(600) Le(1910)  
ICc RMSa
- Donald C. Harder Co., 3710 Midway Drive City,  
San Diego 10, Calif.  
Delay lines. Ic RMSa
- Hardwick Hindle, Inc., 40 Mermon St., Newark 5,  
N.J.  
Resistors. Ic RMSa
- Harnett Electric Corp., Riverhead, Long Island,  
N.Y.  
Delay lines. Ic RMSa
- Harvard University, Harvard Computation Labora-  
tory, Cambridge 38, Mass. / \*C 57  
Builder of Harvard Mark I, II, III, IV cal-  
culators for Navy, Air Force, and own use.  
Computing service: digital; Harvard Mark  
I and IV, and Univac I machines. Ms
- Me(1941) Dc RCPMa
- Cecil Hastings, Jr., 136 Kuuala St., Lanikai,  
Hawaii / Kai 250274 / \*C 57  
Approximations for digital computers. Ss(2)  
Se(1954) Dc RCPa
- Hathaway Instrument Co. (subsidiary of Hamilton  
Watch Co.), 1315 So. Clarkson St., Denver 10,  
Colo. / Spruce 7-2696 / \*C  
Transducers, analog and digital recorders,  
oscillographs, circuit analysis, etc.  
Ms(80) Me(1939) Ic RCMSa
- Heath Co., Benton Harbor, Mich.  
Computers; resistors. Assemblable electron-  
ic analog computer kit. DAIC RMSa
- Helipot Corporation, 916 Meridian Ave., So. Pasa-  
dena, Calif. / Py 1-2164 / \*C  
Precision potentiometers, single-and-multi-  
turn, linear and non-linear; turns-counting  
dials. Ls(600) Me(1943) Ic RMSa
- Hewlett-Packard Co., 4276A Page Mill Rd., Palo  
Alto, Calif.  
Digital computers. Dc RMSa
- Hillyer Instrument Co., 54 Lafayette St., New  
York 13, N.Y. / Digby 9-4485 / \*C  
Simulators, servomechanisms, sensing, com-  
puting, and actuating systems. Automatic  
machine controls. Ms(100) Se(1945)  
DAISCc RMSa
- Hoffman Electronics Corp., 930 Pitner Ave.,  
Evanston, Ill.  
Rectifiers. Ic RMSa
- Hogan Laboratories, 155 Perry St., New York 14,  
N.Y. / Chelsea 2-7855 / \*C  
Digital high-speed printers. Facsimile and  
graphic recording. Ms(60) Me(1929) Dc  
RMSCa
- N. V. HOLLANDSE SIGNAALAPPARATEN, Hengelo (O),  
Netherlands / \*C 57  
Radar fire control systems and their com-  
puters for different types of armament.  
Directors, computers, trackers and radar  
systems for finding targets, then automati-  
cally sighting the guns under their con-  
trol. Ls(1800) Le(1922) DAICc RMSa
- HOOVER ELECTRONICS CO., 3640 Woodland Ave.,  
Baltimore 15, Md. / MO 4-2350 / \*C  
Analog to digital converter. Digital com-  
puters. Sequential test sets and systems  
for computers, telemetering, and informa-  
tion processing. Ms(60) Se(1952) Dc RMSa
- Hopkins Engineering Co., 12900 Foothill Blvd.,  
San Fernando, Calif.  
Capacitors. DAC RMSa
- Houston Technical Labs., 3701 Buffalo Speedway,  
P. O. Box 6027, Houston, Texas  
Magnetic tape recorders. Ic RMSa
- Huck Co., 37 Wall St., New York 5, N.Y. / Digby  
4-4750 / \*C 56  
Card sensing & punching units for computer  
input-output. Ms(125) Me(1945) Dc RMSCa
- Hughes Products, International Airport Station,  
Los Angeles 45, Calif.  
Rectifiers, diodes. Ic RMSa
- HUGHES RESEARCH AND DEVELOPMENT LABORATORIES,  
HUGHES AIRCRAFT CO., Culver City, Calif. /  
Texas 0-7111 / \*C 57  
Automatic data-handling systems for commer-  
cial and military applications. Industrial  
control systems. Small, automatic electro-  
nic digital and analog computers for airborne  
use. Fire-control equipment. Aircraft con-



## Organizations

- trol. Guided missiles. Ls(15,000 company; 5,000 Res. and Devt. Labs.; 400 computers) Me(1937) DACc RMSa
- Humphrey, Inc., 2805 Canon St., San Diego 6, Calif.  
Potentiometers. Ic RMSa
- Hupp Electronics Co., 265 E. Pomfret St., Carlisle, Pa.  
Delay lines. Ic RMSa
- Hycon Eastern Inc., 75 Cambridge Parkway, Cambridge 42, Mass.  
Analog data reduction systems, magnetic tape handlers, etc. Ic RMSa
- I
- Imperial College, Mathematics Dept., Computer Section, Huxley Bldg., Exhibition Road, So. Kensington, London, England  
Automatic digital relay computer constructed and in operation; constructing a second computer with neon tube storage. Ss Le(1922) Dc RMa
- Intra Corp., 58 Charles St., Cambridge 41, Mass. / UN 4-4350 / -  
Magnetic storage drums, etc. Ic Ba
- Indiana Steel Products Co., Valparaiso, Ind.  
Magnetic cores. Ic RMSa
- Induction Motors Corp., 570 Main St., Westbury, L.I., N.Y.  
Magnetic tape recorders. Ic RMSa
- Industrial Control Co., 805 Albin Ave., Lindenhurst, L.I., N.Y. / Midland 3-7548  
Servo amplifiers, servo multipliers, dynamic analyzing tester, etc. Ic RMSa
- Industrial Electronics of Canada, Ltd., 83 Torbarrie Rd., Toronto 15, Canada  
Analog computers. Ac RMSa
- INDUSTRIAL NUCLEONICS CORP., 1205 Chesapeake Ave., Columbus, Ohio / HU 8-0671 / \*C 57  
"AccuRay" Process Control Systems, automated systems for the rubber, paper, steel, plastics, and tobacco industries. Choppers, operational amplifiers, analog to digital converters, etc. Ms(300) Se(1950) C1c RMSa
- Industrial Research Co., 133 Bradford St., Needham 92, Mass.  
Analog computers, data processing. Ac RMSa
- Industrial Research Lab., Div. of Aeronca, Hilltop & Frederick Rd., Baltimore, Md.  
Analog-to-digital converters. Ic RMSa
- Industrial Test Equipment Co., 55 East 11 St., New York 3, N.Y.  
Analog computers. Ac RMSa
- Institut Blaise Pascal, Laboratoire du Calcul Mécanique, 25, Avenue de la Division Le Clerc, Chatillon-sous-Bagneux (Seine), France / \*C 56  
Constructing a digital calculator. Ss(9) Me(1939) Dc RPa
- Institute for Advanced Study, Electronic Computer Project, Princeton, N.J. / PR 1-4400 / \*C  
High speed general purpose (scientific) digital computers for own use. Ss(35) Se(1946) Dc RPa
- Instron Engineering Corp., 440 Hancock St., Quincy 71, Mass.  
Analog Computers. Ac RMSa
- Instrument Components, Inc., 14-34 1124 St., College Point 56, N.Y.  
Analog computers. Ac RMSa
- Instrument Development Labs., Inc., 67 Mechanic St., Attleboro, Mass.  
Analog-to-digital converters, analog (color difference) computers. A1c RMSa
- Insulated Circuits, Inc., 620 Passaic Ave., West Caldwell, N.J.  
Delay lines. Ic RMSa
- Intelligent Machines Research Corp., 1101 Lee Highway, Arlington, Va. / Jackson 5-6400 / \*C  
Devices for reading characters on paper, etc. Pattern interpretation equipment. Sensing mechanisms. Digital computer elements. Ss (28) Se(1951) Dc RCMSa
- INTERNATIONAL BUSINESS MACHINES CORP., 590 Madison Ave., New York 22, N.Y. / Plaza 3-1900 / and elsewhere / \*C  
Punch card machines. IBM 650, Magnetic Drum Calculator. IBM Electronic Data Processing Machines; IBM 704 and 705 (magnetic tape, magnetic drum, magnetic core storage, etc.). Card Programmed Calculator. Electronic calculating punch IBM 604 and 607. Data processing equipment. Automatic Source Recording Equipment. Computing service: digital; IBM 701, 702, 605, 604, etc. Punch card machines. Ls(42,000) Le(1911) DCc RMSa
- International Electronics Corp., 81 Spring St., New York 12, N.Y.  
Magnetic cores. Ic RMSa
- International Rectifier Corp., 1521 East Grand Ave., El Segundo, Calif. / Oregon 8-6281 / \*C  
Manufacturer of germanium diodes, selenium diodes, selenium photocells, selenium rectifiers. Ms(390) Se(1947) Ic RMSa
- INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. / Walnut 2-2166 / \*C 57  
Resistors, selenium rectifiers, diodes, related electronic components for computer and other uses. Ls(2300) Me(1926) Ic RMSa
- International Telemeter Corp., 2000 Stoner Ave., Los Angeles 25, Calif. / Granite 8-7751 / \*C 57  
Systems and devices for clerical and control applications. Automatic document-handling machinery. High-density photographic information storage. Community TV system equipment; pay-as-you-see TV. SEE also Telemeter Magnetics and Electronics Corp. Ms(100) Se(1950) DCc RMSa
- International Telephone and Telegraph Corp., 67 Broad St., New York 4, N.Y. / Bowling Green 9-3800 / \*C  
Equipment for automatic control of repetitive processes, clerical or industrial work, such as inventories. Fully automatic pneumatic tube system, by dialing. Ls(96,000) Le DASCmc RMSa
- Isolantite Mfg. Corp., Warren Ave., Stirling, N.J.  
Magnetic cores. Ic RMSa
- ITE Circuit Breaker Co., 601 East Erie Ave., Philadelphia 34, Pa.  
Analog computers. Ac RMSa

Computers and Automation

J

Bill Jack Scientific Instrument Co., 143 Cedros Ave., Solana Beach, Calif. / Skyline 5-1551 / \*C  
 Airborne analog computers for "Recon" systems, aerial cameras; recording cameras; etc. Ms(450) Se(1949) Dlc RMSa

Byron Jackson Division -- SEE Borg-Warner Corporation

Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda 14, Md. / \*C  
 High-speed small, compact digital computers (Jaincomp A, B, B1, B2, C). Pulse transformers, delay lines, magnetic storage systems. Pulse generators, test equipment. Input and output devices. Complete instrument systems. Ss(30?) Se(1948) DASCc RMSa

Jarvis Electronics Corp., 1140 Cherry St., Winnetka, Ill. / HI 6-1255 / \*C 57  
 Systems and techniques. Ss(8) Se(1947) Ic RMSCa

Jet Propulsion Laboratory, California Institute of Technology, 4800 Oak Grove Drive, Pasadena 3, Calif. / \*C  
 Analog, digital, and data-handling systems. Research and development in jet propulsion and missile guidance. Ls(1,200; about 50 on computers) Me(1942) DAc RCPa

JFD Electronics Corp., 1462 62nd St., Brooklyn 19, N.Y.  
 Capacitors. Ic RMSa

K

KCS DATA CONTROL, LTD., Suite B62, Bay-Grosvenor Bldg., 880 Bay St., Toronto, Ont., Canada / \*C 57  
 Consulting and computing services and programming in the digital computer field. Ss(30) Se(1954) Dc RCPa

Kaiser Metal Products, Inc., Briston, Pa. / Stillwell 8-3361 / \*C  
 Digital delay generators for accurate measurement and generation of time intervals, etc. Automatic electronic controls for industrial applications. Ls(3,500) Le(1920) Ic RMSa

Kaye Development Co., Connecticut Ave., S. Norwalk, Conn.  
 Data processing; punch card machines. Ic RMSa

Kearfott Co., Inc., Clifton, N.J. / Gregory 2-1000 / \*C  
 Analog-digital converter; digital-analog converter; servo motors, synchros, resolvers, integrating tachometer generators; analog and digital computers. Ls(3000) Le(1916) DAISc RMSa

George F. Kelk, Ltd., 130 Willowdale Ave., Willowdale, Ont., Canada / BA 5-3391 / \*C  
 Digital plotting equipment. Specialized analog computers. Ss(12) Se(1953) DAc RMSCa

Kelvin Electric Co., 5907 Novel Ave., Van Nuys, Calif.  
 Resistors. Ic RMSa

Kepeco Laboratories, Inc., 131-38 Sanford Ave., Flushing 55, N.Y.  
 Relays, transistors. Ic RMSa

Ketay Manufacturing Co. -- SEE Norden-Ketay Corp. Kelt Corporation, 4526 Chickering Ave., Cincinnati 35, Ohio  
 Analog computers, data processing. DAIC RMSa

Key Electric Corp., 287 Post Ave., Westbury, N.Y.  
 Photoelectric tape readers, magnetic tape handlers, magnetic tape recorders. Ic RMSa

Walter Kidde & Co., 675 Main St., Belleville 9, N.J.  
 Analog computers. Ac RMSa

A. KIMBALL COMPANY, 444 4th Ave., New York 16, N.Y. / MURray Hill 5-4202 / \*C 57  
 Machine for printing and punching garment tags. Input mechanisms. (This company now owned by United Shoe Machinery Corp.) Ms(350) Le(1876) Ic RMSCP a

Kleinschmidt, Inc., Deerfield, Ill. / Deerfield 1000 / \*C  
 Page printing read-out devices, tape reading and tape punching equipment. Ls(650) Se(1946) Ic RMSCa

The James Knight Co., 101 E. Church St., Sandwich, Ill.  
 Transistors. Ic RMSa

THE KYBERNETES CORP., Division of Self-Winding Clock Co., 9 East 40 St., New York 16, N.Y. / MURray Hill 3-6030 / \*C 57  
 Automatic industrial data processing, digital printout and digital indicator systems. Temperature (thermocouple) indicator monitors with annunciation. Ms(200) Le(1885, parent company) ICc RMSa

L

LABORATORY FOR ELECTRONICS, 75 Pitts St., Boston 14, Mass. / RICHmond 2-3200 / \*C  
 General purpose digital computers (TIM and DIANA Data Processing Systems for Business); large-capacity magnetic drum storage. Special analog and digital military computers. Tape-controlled machines and processes. Radar systems, navigational devices, special and commercial test equipment, etc. Ls(800) Se(1946) DAc RMSa

LANSDALE TUBE CO., DIV. OF PHILCO CORP., Lansdale, Pa. / ULYsSES 5-4681 / \*C 57  
 Transistors, diodes, tubes for computers. Ls(3000) Me(1942) Ic RMSCa

Lanston Industries, Inc., Barrett Adding Machine Div., 24th & Locust Sts., Phila. 3, Pa. / Locust 7-4614 / \*C 57  
 Adding, subtracting, and printing desk calculators. Ms(350) Le(1892) Dc RMSa

Leeds & Northrup, 4970 Stenton Ave., Phila. 44, Pa. / Michigan 4-4900 / \*C 57  
 Null-balance electronic instruments for indicating, recording, controlling and telemetering. Automatic control systems. Analog computers for closed-loop control of power company networks (one such computer controls power flow over a four-state area). Ls(3200) Le(1899) ACc RMSa

Lewyt Mfg. Corp., Long Island City 1, N.Y. / EX 2-5050 / \*C  
 Data processing equipment. CDT (Coordinate Data Transmitter System) which screens,

## Organizations

- interprets, and codes radar information for transmission over telephone lines. Dc RMSa
- Librascope, Inc., 808 Western Ave., Glendale 1, Calif. / Chapman 5-2677 / \*C 57  
Mechanical, electrical and electronic computers. Computing and controlling equipment for industrial and military applications. Airborne digital computers. LGP-30: low-price, large capacity, general purpose digital computer. All phases of data-handling. Computer components, analog and digital. Ls(1500; approximately 350 on digital computers) Me(1937) DASC RMSa
- Librascope, Inc., Burbank Div., 133 E. Santa Anita Ave., Burbank, Calif. / Th 5-1785 or Vi 9-1351 / \*C  
Magnetic "decision" elements; general purpose computer; reading-recording magnetic heads; converters; magnetic tape demagnetizers, etc. Formerly Minnesota Electronics Corp. Ms(55) Se(1946) DIc RMSa
- LINK AVIATION, INC., Binghamton, N.Y. / Binghamton 3-6311 / \*C 57  
Flight simulators, analog computers, servo-mechanisms, gear boxes, test equipment. Ls(2500) Me(1929) ASC RMSa
- Lambda-Pacific Engrg, Inc., 14725 Arminia St., Van Nuys, Calif. / - / \*C  
Magnetic tape recorders. Ic RMSa
- Landis & Gyr, Inc., 45 West 45th St., New York 36, N.Y. / - / \*C  
Computers. Ac RMSa
- Lapp Insulator Co. Inc., Radio Specialties Div., 130 Sumner St., LeRoy, N.Y.  
Magnetic cores, resistors. Ic RMSa
- Lavoie Labs, Inc., Matawan-Freehold Rd., Morganville, N.J. / - / \*C  
Digital computers, punch card machines. DIc RMSa
- Leemath, Inc., Oak Drive, Syosset, Long Island, N.Y.  
Analog-to-digital converters. Analog and digital computers. DAIC RMSa
- Leonard Electric Products Co., Inc., 67-34 St., Brooklyn 32, N.Y.  
Delay lines, magnetic cores. Ic RMSa
- Arthur D. Little, Inc., 30 Memorial Drive, Cambridge 42, Mass. / UNIVERSITY 4-9370 / \*C  
Analog digital converter, "Automatic Digital Recorder of Analog Data" (ADRAD). Conversion and input devices. Consultation concerning electronic equipment requirements for handling data; mathematical analysis and programming for digital computers. Ls(800) Le(1886) Ic RCPa
- LITTLEFUSE, INC., 1865 Miner St., Des Plaines, Ill. / Vanderbilt 4-1188 / \*C 57  
Fuses and fuse holders for computer and other uses. Ms(450) Me(1927) Ic RMSa
- Litton Industries, Inc., 336 N. Foothill Dr., Beverly Hills, Calif., and elsewhere / CRestview 4-7411 / \*C  
Radar systems with monopulse techniques; countermeasures, inertial navigation, automatic flight control, telemetering devices, communications equipment, instrumentation and test equipment, servomechanisms. New digital differential analyzer. Portable, electronic scientific computers (digital differential analyzer) and such accessories as graph plotters, followers, tape input and output devices, digital-analog converters, and magnetic drums and heads. Advanced system design and development. Ls(1300) Se(1953) DAICc RMSCa
- Litton Industries of Maryland, Inc., 4910 Calvert Rd., College Park, Md. / - / \*C  
Digital computers, potentiometers. DIc RMSa
- Log Abax S.A., 146, Champs Elysees, Paris 8, France / Elysees 61-24 / \*C  
Collaborating with Institut Blaise Pascal on computing devices. 198-register automatic accounting machine. Connection with punch card or computing machines. Ms(700) Se(1949) Dc RMSa
- Loyola Laboratories, Box 45074, Airport Station, Los Angeles 45, Calif. / OREGON 8-1686 / \*C  
Computers, computing services. Ic RMSa
- LOGISTICS RESEARCH, INC. -- name changed to Alwac Corp., which see.

## M

- M & S Sound System Co., 373 Elm St., New Haven, Conn.  
Magnetic tape recorders. Ic RMSa
- W. S. Macdonald & Co. -- SEE Comptron, Inc.
- Machine Statistics Co., 27 Thames St., New York 6, N.Y. / Cortlandt 7-3165 / \*C  
Computing service: IBM 604, punch card machines, IBM 650 expected. Ss(35) Se(1951) Dc CPa
- Mack Electronics, a Division of Mack Trucks, Inc., 40 Leon St., Boston 15, Mass. / Highlands 5-5640  
Special purpose analog & digital computers, input-output equipment, voltage & data converters, machine tool control systems, magnetic core shift registers & logical elements, transistor circuit packages, special instrumentation equipment. Se(1956) DAIC RMSa
- MacLeod and Hanopol Inc., 10 Roland St., Charlestown 29, Mass.  
Delay lines, analog-to-digital converters. Ic RMSa
- Mag-Electric Products, Inc., 12822 S. Yukon Ave., Hawthorne, Calif.  
Delay lines. Ic RMSa
- The Magnavox Co., 2131 Bueter Rd., Fort Wayne 4, Indiana  
Analog-to-digital converters; analog and digital computers; data processing equipment; magnetic drums. Ls DAIC RMSa
- Magnecord, Inc., 1101 Kilbourn Ave., Chicago 24, Ill.  
Magnetic tape recorders. Ic RMSa
- Magne-Pulse Corp., 140 Nassau St., New York 38, N.Y.  
Delay lines; magnetic tape recorders; magnetic drums. Ic RMSa
- Magnetic Core Corp., 199 Main St., Ossining, N.Y.  
Magnetic cores. Ic RMSa
- Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N.J.  
Magnetic cores. Ic RMSa
- MAGNETIC RESEARCH CORP., 3160 W. El Segundo Blvd., Hawthorne, Calif. / Osborne 5-1171 / \*C 57

## Computers and Automation

- Power supplies, magnetic servo amplifiers for automatic control. Ms(110) Se(1952) IcC RMSa
- Magnetics, Inc., Box 230, Butler, Pa. / Butler 7-1745 / \*C  
Tape wound cores of ultra-thin high-permeability materials, for computers, etc. Ms (275) Se(1949) Ic RMSa
- Magnetics Research Co., 255 Grove St., White Plains, N.Y. (formerly at Chappaqua, N.Y.) / White Plains 9-9488 / \*C 57  
Magnetic components for analog and digital systems and computers; magnetic shift registers, toroidal windings, computer sub-assemblies & sub-systems; magnetically operated high speed scalars; magnetic amplifiers. Ss(25) Se(1952) Ic RMSCa
- P. R. Mallory & Co., Inc., 3029 E. Washington St., Indianapolis 6, Ind.  
Transistors, resistors, capacitors, and rectifiers for computer and other uses. Ic RMSa
- MARCHANT CALCULATORS, INC., 1475 Powell St., Oakland 8, Calif.  
Automatic electric calculators (desk type). Marchant Binary-Octal calculator. Ls (2500) Le(1910) Dc RMSa
- MARCHANT RESEARCH, INC., subsidiary of Marchant Calculators, Inc., 1475 Powell St., Oakland 8, Calif.  
Electronic digital computers and data processing systems. Ss(55) Se(1950) Dc RMSCa
- Markite Corp., 155 Waverly Place, New York 14, N.Y. / Oregon 5-1384 / \*C 57  
Precision potentiometers, for computer and other uses. Ms(85) Se(1949) Ic RMSa
- Maryland Lava Co., Box 205, Belair, Md.  
Magnetic cores. Ic RMSa
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Digital Computer Laboratory, 211 Mass. Ave., Cambridge 39, Mass. / UNiversity 4-6900 / \*C 57  
"Whirlwind" electronic digital computer. Ms(300+) Me(1945) DAc RCPa
- Massachusetts Institute of Technology, Office of Statistical Services, Cambridge 39, Mass. / UNiversity 4-6900  
Computing service: digital; IBM 604, card programmed calculator, punch card machines. Ss Se DIc RCPa
- Mathematisch Centrum, 2e Boerhaavesstraat 49, Amsterdam, Netherlands / \*C  
Relay computer; electronic computers; for own use. Ms(60) Se(1946) Dc RCPa
- Maurey Instrument Corp., 7924 So. Exchange Ave., Chicago 17, Ill.  
Potentiometers. Ic RMSa
- The W. L. Maxson Corp., 475 Tenth Ave., New York, N.Y. / Longacre 5-1900 / and elsewhere  
Servomechanisms, analog computers, and digital computers for fire control, navigation, etc. Automatic control machinery. Ls(3000) Me(1935) DASCc RMSa
- McBee Co., Athens, Ohio  
Punch card machines. Ic RMSa
- McGraw-Edison Co., T. A. Edison Instrument Div., 51 Lakeside Ave., West Orange, N.J.  
Magnetic heads. Ic RMSa
- MELLON INSTITUTE OF INDUSTRIAL RESEARCH, Multiple Fellowship on Computer Components, University of Pittsburgh, Pittsburgh 13, Pa. / Ma 1-1100 X378 / \*C 57  
High temperature modular printed circuitry. (Note: By "modular printed circuitry" the organization says it means the fabrication, on a single substrate, of film components, such as resistors, capacitors, inductors, and conductors connecting in lines. This is in contrast to an assembly of such components, and in contrast to printed conductor wiring.) Ss(5) Se(1950) Dc RCa
- Melpar, Inc., 3000 Arlington Blvd., Falls Church, Va.  
Delay lines; magnetic cores. Ic RMSa
- Meridian Inc., 880 Main St., Stamford, Conn. / Delay lines Ic RMSa
- Metro Electronics Corp., 172 Washington St., New York 7, N. Y.  
Rectifiers Ic RMSa
- METRON CORP., 8 Coryell St., Lambertville, N. J. / EXport 7-1570 / \*C 57  
Punched card sensing device used in analog and digital computers, other computer components. Ss(6) Se(1956) DAc RMSa
- Micamold Electronics Mfg. Corp., 1087 Flushing Ave., Brooklyn 37, N. Y.  
Delay lines Ic RMSa
- Mico Instrument Company, 80 Trowbridge St., Cambridge 38, Mass. / KIRkland 7-8660  
Toroid transformers, toroid inductors; ferrite core units for computers, etc. Ss(20) Me(1934) Ic RMSa
- Microtone Co., 5740 Wayzata Blvd., Minneapolis 16, Minn.  
Magnetic tape recorders. Ic RMSa
- Microtran Co., 145 E. Mineola Ave., Valley Stream, L. I., N. Y.  
Transistors. Ic RMSa
- Microwave Assoc., Inc., N. W. Industrial Park, Burlington, Mass.  
Magnetic cores. Ic RMSa
- Microwave Engineering Labs., Inc., 11155 El Monte, Los Altos, Calif.  
Magnetic cores. Ic RMSa
- Mid-Century Instrumental Corp., 611 Broadway, New York 12, N. Y. / Spring 7-4016 / \*C  
Analog computers; six-channel recorders; electronic function generators; diode function generators; electronic multipliers; electronic recorders. Ms(50) Se(1950) AIc RMSCa
- Miles Reproducer Co., 812 Broadway, New York 3, N. Y.  
Magnetic tape recorders; recording equipment. Ic RMSa
- James Millen Mfg. Co., Inc., 150 Exchange St., Malden 48, Mass.  
Delay lines. Ic RMSa
- William Miller Instruments, Inc., 325 No. Halstead Ave., Pasadena 8, Calif.  
Milac analog computer. Electronic instruments for precision testing and measurement. Ac RMSa
- H. Jefferson Mills, Jr., 2725 29 St. N.W., Washington 8, D. C. / North 7-0343 / \*C  
Management counsel in systems analysis and equipment evaluation for integrated and electronic data processing applications in business and government. Ss Se(1954) DIc RCPa

## Organizations

- Minneapolis-Honeywell Regulator Co. -- SEE also  
Davies Laboratories, Inc., Datamatic Corp.,  
and Doelcam
- Minneapolis-Honeywell Regulator Co., Industrial  
Division, 4580 Wayne Ave., Philadelphia 44, Pa./  
Michigan 4-8300 / \*C  
Automatic controllers. Brown Instruments.  
Servo components used in computers. Record-  
ing and indicating instruments and control  
equipment, etc. Amplifiers, converters, bal-  
ancing motors, potentiometers, recording pa-  
pers. Ls(3200) Le(1859) ACc RMSa
- Minnesota Electronics Corp. -- SEE Librascope,  
Inc., Burbank Div.
- Minnesota Mining and Manufacturing Co., 900 Faqu-  
ier St., St. Paul 6, Minn.  
Magnetic cores, magnetic tape. Ic RMSa
- Mohawk Business Machines Corp., Halsey St., Brook-  
lyn 33, N. Y.  
Magnetic tape recorders. Ic RMSa
- Moloney Electric Co., 5390 Bircher Blvd., St.  
Louis 20, Mo.  
Magnetic cores. Ic RMSa
- Monrobot Corp. -- SEE Monroe Calculating Machine  
Co., Electronics Div.
- MONROE CALCULATING MACHINE CO., Electronics Div.,  
Morris Plains, N. J. / Jefferson. 8-7200 / \*C 57  
Magnetic drums; read-record heads; selection  
systems; keyboards; memory systems; special  
purpose computers and data handling systems. /  
Formerly Monrobot Corp. / Ms(150) Se(1949)  
Ic RMSa
- Monroe Calculating Machine Company, Orange, N. J./  
Orange 3-6600 / and elsewhere / \*C  
Desk calculating machinery for adding, cal-  
culating, and bookkeeping. Ls(4550) Le(1911)  
Dc RMSa
- MOORE SCHOOL OF ELECTRICAL ENGINEERING, Univ. of  
Pennsylvania, 200 South 33 St., Phila. 4, Pa. /  
\*C 57  
Computing service: analog, digital; differ-  
ential analyzer, card programmed calculator,  
punch card machines. Ms(80) Le(1923) DAC  
RCPa
- Morand Electronics, 2538 S. Highland, Los Angeles  
16, Calif.  
Magnetic cores. Ic RMSa
- F. L. MOSELEY CO., 409 North Fair Oaks, Pasadena,  
Calif. / Ryan 1-0208 / \*C 57  
Two-coordinate X-Y recorder, point plotter,  
digital voltmeters, curve follower, etc.  
Ms(60) Se(1950) Ic RMSa
- Motorola Inc., 5005 E. McDowell Rd., Phoenix, Ariz.  
Transistors. Ic RMSa
- MOUNTAIN SYSTEMS, INC. has become Airborne Instru-  
ment Laboratories, Modac Division, which see.
- Mullard Overseas, Ltd., Century House, Shaftesbury  
Ave., London W. C. 2, England  
Magnetic cores. Ic RMSa
- N
- National Aircraft Corp., Marvelco Div., 3411 Ful-  
are Ave., Burbank, Calif.  
Delay lines; magnetic cores. Ic RMSa
- NATIONAL ANALYSTS, INC., 1015 Chestnut St., Phila-  
delphia 7, Pa. / Market 7-8109 / \*C 57  
Data processing and computing services, in-  
cluding consulting and programming; opera-  
tions research; marketing research. Facilities
- include full line of punch card equipment,  
large and medium sized electronic data pro-  
cessing machines (IBM 705 and 650). Ms(60)  
Se Dc RCPa
- National Bureau of Standards, Applied Mathematics  
Division, Washington 25, D. C. / Emerson 2-4040/  
Computing service; Seac, Dyseac, and punch  
card machines; for government and government  
contractors only. Ms(50) Se(1947) DIC  
RCPa
- National Bureau of Standards, Data Processing  
Systems Division, Washington 25, D. C. / Em-  
erson 2-4040 / \*C  
Digital and analog computers, data process-  
ing and control systems, input-output devices,  
storage elements, transistors, diodes, delay  
lines, etc. (for government only). Designed,  
assembled, and maintain Seac; designed and  
assembled Dyseac; designed several special  
purpose machines. Ms(80) Se(1946) DAC  
RMBGa
- THE NATIONAL CASH REGISTER CO., South Main and K  
Sts., Dayton 9, Ohio / EMerson 1411 / and Haw-  
thorne, Calif. / \*C57  
Digital computers, data processing machines,  
input-output devices, NCR 304 electronic  
data processing system and other computers.  
Ls(15,500 at Dayton) Le(1884) Dc RCMSa
- The National Cash Register Co., Electronics Div.,  
3348 West ElSegundo Blvd., Hawthorne, Calif.  
Computer components, input-output devices;  
computing service; digital computers and  
other computers; decimal digital differen-  
tial analyzers; transistors. DAic RMPa
- National Co., Inc., 61 Sherman St., Malden, Mass./  
Malden 2-7954  
Communications receivers; some computing  
equipment. Ls(700) ?e Ic RMSa
- National Fabricated Products, Inc., 2650 W. Bel-  
den Ave., Chicago 47, Ill.  
Diodes, silicon type. Ic RMSa
- National Moldite Co., 1410 Chestnut Ave., Hill-  
side, N. J.  
Magnetic cores. Ic RMSa
- National Physical Laboratory, Control Mechanisms  
and Electronics Division, Teddington, Middle-  
sex, England / \*C  
Digital computers, electronic simulators,  
data recording. Designer and builder of  
the Pilot Model of ACE (Automatic Computing  
Engine). Collaborates with English Electric  
Co. Ls(1000; this division, 40) Le(1900)  
DIC RCPMa
- National Physical Laboratory, Mathematics Div.,  
Teddington, Middlesex, England / Molesey 1380 /  
\*C57  
Computing service using DEUCE and differen-  
tial analyzer. Analog, digital, punch card.  
Unrestricted as to clients. Ms(60) Me(1945)  
DAC RCPa
- National Semiconductor Products, 930 Pitner Ave.,  
Evanston, Ill.  
Silicon junction diodes. Ic RMSa
- National Union Electric Corp., 350 Scotland Rd.,  
Orange, N. J. / Orange 2-6600 / \*C  
Electron tubes, semi-conductor diodes, and  
transistors for computers, etc. Ms(150)  
Me(1929) Ic RMSa
- Natvar Corp., 201 Randolph Ave., Woodbridge, N. J.  
Capacitors. Ic RMSa

- Navigation Computer Corp., 294 McKeon St., Philadelphia 45, Pa.  
Data processing. DIc
- New London Instrument Co. Inc., 82 Union St., New London, Conn.  
Digital computers. Dc RMSa
- The Newton Co., 55 Elm St., Manchester, Conn. / Mitchell 3-5104 / \*C  
Data processing equipment. Analog to digital converters; simulators; automatic typewriters. Ms(150) Se(1947) DIc RMSa
- Non-Linear Systems, Inc., Del Mar Airport, Box 728, Del Mar, Calif. / SKYline 5-1134 / \*C 57  
Digital computing and measuring machines and components. Ms(150) Se(1952) Dc RMSa
- Norden Laboratories, 121 Westmorland Ave., White Plains, N. Y. -- subsidiary of Norden Ketay Corp. which see
- Norden-Ketay Corporation, Commerce Rd., Stamford, Conn. / \*C  
Automatic control systems, analog computers, fire control systems, bomb sights, navigational systems, potentiometers, analog-digital converters, synchros, servo motors, resolvers, servo amplifiers, resolver amplifiers, airborne instruments. Ls(2400) Se(1955) DASCc RMSa
- NORTH AMERICAN AVIATION, INC., COMPUTER DIVISION  
-- name changed to Autonetics, a Div. of No. American Aviation, Inc., which see
- North American Research & Control Instruments Div. -- SEE Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.
- North Electric Manufacturing Co., 526 S. Market St., Galion, Ohio  
Data processing; relays, multi-contact type, telephone type; rotary stepping switches. Ic RMSa
- Northern Electric Co., Ltd., 1600 Notre Dame St. W., Montreal, Quebec, Canada  
Magnetic cores. Ic RMSa
- NORTHROP AIRCRAFT, INC., Dept. 3330, Hawthorne, Calif. / OR 8-9111, Ext. 424 / \*C 57  
Digital and analog computers, conversion equipment, data reading and reduction components and systems, reconnaissance data handling; develops, maintains, operates own computing and data handling equipment. Ms(95 this project) Se(1950 this project) DAC RMCPa
- Norton Associates, Inc., P. O. Box 96, Garden City, N. Y.  
Magnetic Drums. Ic RMSa
- Notifier Manufacturing Co., 239 South 11th St., Lincoln 8, Nebraska / Lincoln 5-2946 / \*C  
Automatic control machinery for fire alarms. Automatic control circuits, computer circuits, switching circuits. Automatic coding and decoding. Memory and pulse storing devices, transistor devices. Ss(30) Se(1949) CIc RMSCa
- NUCLEAR DEVELOPMENT CORPORATION OF AMERICA, 5 New St., White Plains, N. Y. / White Plains 8-5800 / \*C 57  
Selection, design, and building of special purpose data-handling systems. Programming. Operate own "Datatron" providing computing services. Also work with machine builders on automatic control machinery and automatic materials handling machinery. Ms(350) Se(1948) DCMc RMSCa
- Nuclear Science and Engineering Corp. -- Subsidiary of Norden-Ketay Corporation, which see.
- Numerical Analysis Research -- SEE University of California at Los Angeles
- 0 -
- Oakton Engineering Corp., 725 Oakton St., Evanston 14, Ill.  
Magnetic tape recorders. Ic RMSa
- Oerlikon Tool & Arms Corp. of America, P. O. Box 3049, Asheville, N. C.  
Analog-to-digital converters; digital computers; data processing. DIc RMSa
- Ohmite Manufacturing Co., 3692 Howard St., Skokie, Ill. / ORchard 5-2600  
Capacitors, computer types; miniature wire-wound resistors; etc. Ic RMSa
- OLIVETTI CORP. OF AMERICA, 580 Fifth Ave., New York 36, N. Y. / Judson 2-4600 / and Ing. C. Olivetti & Co., S.P.A., Ivrea, Italy / \*C 57  
Single and duplex register adding machines. Single and dual register printing calculators. Ls(18,000) Le(1908) Dc RMSCa
- Olympic Radio & Television Inc., 34-01 38th Ave., Long Island City 1, L. I., N. Y.  
Magnetic tape recorders. Ic RMSa
- ORRADIO INDUSTRIES, Shamrock Circle, Opelika, Alabama / Sherwood 5-4621 / \*C 57  
Instrumentation tape; computers; telemetering recorders. Ms(100) Se(1949) Ic RMSa
- Ortho Filter Corp., 196 Albion Ave., Paterson 2, N. J. / Mulberry 4-5858 / \*C  
Pluggable units for computers, cathode ray amplifiers, power supplies, wiring of complete racks, toroids, etc. Ms(43) Se(1946) Ic RMSa
- John Oster Mfg. Co., Avionic Div., Racine, Wis.  
Fast response magnetic resolvers, etc. Ac RMSa
- Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn 5, N. Y.  
Analog computers; data processing; punch card machines. AIc RMSa
- Lee H. Owens Co., 2331 W. Washington Blvd., Los Angeles 18, Calif.  
Magnetic tape recorders. Ic RMSa
- P -
- PACIFIC SEMICONDUCTORS, INC., 10451 West Jefferson Blvd., Culver City, Calif. / Vermont 9-2341 or Texas 0-4881 / \*C 57  
Germanium and silicon diodes. Ms(400) Se(1954) Ic RMSa
- PACKARD-BELL ELECTRONICS CORP., 12333 W. Olympic Blvd., Los Angeles 64, Calif. / BRadshaw 2-2171 and GRanite 7-6721 / \*C 57  
High speed (real time) incremental computers. Analog-digital, digital-analog converters. Hybrid digital-analog computing devices. Non-linear function generators for analog computers. Combinatorial techniques for digital computers. Ls(2000) Me(1927) DAC RMa
- PANELLIT, INC., 7401 N. Hamlin Ave., Skokie, Illinois / ORchard 5-2500 / \*C 57  
Information systems; coordinated control centers; alarm systems; scanning and monitoring systems. Ls(550) Me(1945) ISCMc RMSCPa
- PCA Electronics, Inc., 2180 Colorado Ave., Santa Monica, Calif.  
Delay lines.
- Pennsylvania State University, X-ray and Crystal Structure Lab., Dept. of Physics, University

## Organizations

- Park, Pa. / Adams 8-8441 X2125 / \*C  
X-RAC computer for crystal electron density functions. S-FAC for structure factor calculations. Ms(55) Se(1946) DAc RPa
- Pentron Corp., 777 S. Tripp Ave., Chicago 24, Ill.  
Magnetic tape recorders. Ic RMSa
- The Perkin-Elmer Corp., Engineering & Optical Division & Vernistat Div., Main Ave., Norwalk, Conn.  
Analog computers; potentiometers. Aic RMSa
- Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill.  
Magnetic cores. Ic RMSa
- Phaotron Instrument & Electronic Co., 151 Pasadena Ave., South Pasadena, Calif.  
Relays
- Phebeco, Inc. -- SEE Hoover Electronics Co.  
GEORGE A. PHILBRICK RESEARCHES, INC., 230 Congress St., Boston 10, Mass. / Hubbard 2-3225 / \*C 57  
Philbrick electronic analog computing equipment and components. Computing service: analog; Philbrick equipment. Ms(60) Se(1946) Ac RMSa
- Philco Corp., Government and Industrial Div., Wisahikkon and Abbotsford Rd., Phila. 44, Pa. / Tennessee 9-4000  
Transac (transistor automatic digital computing system). Transac "match control". Transistors. Other products. Ls(whole company, 23,000) Le(1892) Dic RMSa
- Philco Corp., Lansdale Tube Co. Div. -- SEE Lansdale Tube Co.
- Phillips Control Corp., Joliet, Ill. / Joliet 3-3431 / \*C  
Relays for computers, etc. Ms(350) Se(1946) Ic RMSa
- PHILIPS ELECTRONICS, INC., Instruments Div., 750 So. Fulton Ave., Mt. Vernon, N. Y. / Mount Vernon 4-4500 / \*C 57  
Analog computers. Ratemeters. Semi-automatic X-ray machine that determines percent of 24 different elements in a specimen, etc. X-ray process control instruments using element analysis for control information. Ms(250) Me(1942) Aic RMSa
- Photon, Inc., 58 Charles St., Cambridge 38, Mass. / Trowbridge 6-1177 / \*C  
Machinery for composing type by photographs. Ms(100) Me(1940) Dic RCMSa
- Pi-Square Engineering Co., Inc., 230 Congress St., Boston 10, Mass. / Hubbard 2-3225 / \*C  
Analysis and solution of engineering problems. Computing services. Analog computing equipment available. Ss Se(1954) ASCc RCPa
- Polarad Elect. Corp., Long Island City, N. Y.  
Resistors. Ic RMSa
- The Polymer Corp. of Pa., 2140 Fairmont Ave., Reading, Pa.  
Computer components; magnetic cores. Ic RMSa
- Polyphase Instrument Co., 701 Haverford Rd., Bryn Mawr, Pa.  
Delay lines. Ic RMSa
- The Potter Company, 1950 Sheridan Rd., No. Chicago, Illinois  
Capacitors. Ic RMSa
- POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. / Hunter 2-6430 / \*C 57  
Electronic counters. Magnetic and perforated paper tape handlers; digital printer. Shift registers. Magnetic core memory. Random access memory. High-speed printer "magnityper": 8 to 30 lines of characters printed per second. Analog-to-digital converter, photo electric screens. Ms(180) Me(1942) Dc RMSa
- Potter and Brumfield Mfg. Co., Inc., Princeton, Indiana / Princeton 1596 / \*C  
Electric relays and stepping switches for computers, etc. Ls(1000) Le(1932) Ic RMSa
- Powers-Samas Accounting Machines, Ltd., Powers-Samas House, Holborn Bars, London E.C. 1, England.  
Punch card tabulating equipment using small, medium, and standard cards. Agency is Underwood Corp., which see. Ls(6000) Le(1916) Dic RMSa
- Precision Capacitors, Inc., 150 W. Cypress Ave., Burbank, Calif.  
Capacitors. Ic RMSa
- Press Wireless Labs, Inc., 25 Prospect Place, West Newton 65, Mass.  
Magnetic tape recorders. Ic RMSa
- Presto Recording Corp., P. O. Box 500, Paramus, N. J.  
Magnetic tape recorders. Ic RMSa
- Pulse Engineering, 2431 Spring St., Redwood City, Calif.  
Delay lines. Ic RMSa
- Pulse Techniques, Inc., 1411 Palisade Ave., West Englewood, N. J.  
Delay lines. Ic RMSa
- Purdue University, Statistical Laboratory, West Lafayette, Indiana / Lafayette 92-2542 / \*C  
Computing service: digital; Datatron digital computer; punch card machines. Ss(15) Se(1951) Dic RCPa
- Pye Corp. of America, 270 Park Ave., Room 1001A, New York 17, N. Y.  
Magnetic tape recorders. Ic RMSa
- Pyramid Instrument Corp., 630 Merrick Rd., Lynbrook, N. Y.  
Capacitors; rectifiers. Ic RMSa
- Pyrofilm Resistor Co., 8 Whippany St., Morristown, N. J.  
Resistors. Ic RMSa
- Pyroferric Co., Inc., 621 East 216 St., New York 67, N. Y.  
Magnetic cores. Ic RMSa

## R

- RADIATION, INC., P. O. Box 37, Melbourne, Fla. / Melbourne 800 / \*C 57  
Data processing, data conversion, and data reduction equipment; 32 channel digital telemetering system, which includes data collection, processing, and translating equipment for computer. High speed output printer for electronic computers. Ms(750) Se(1950) Dic RMSa
- Radiation Counter Lab., Inc., 5121 West Grove St., Skokie, Ill.  
Digital computers. Ic RMSa
- Radiation Instrument Development Laboratory, 5737 South Halsted St., Chicago 21, Ill.  
Analog-to-digital converters. Ic RMSa
- Radio Condenser Co., Davis & Copewood Sts., Camden 3, N. J.  
Capacitors. Ic RMSa

## Computers and Automation

- Radio Cores, Inc., 9540 S. Tulley Ave., Oak Lawn, Ill.  
Magnetic cores. Ic RMSa
- Radio Corp. of America, Precision Electronic Instruments Div., Building 15-1, Camden, N. J.  
Magnetic tape recorders. Ic RMSa
- RADIO CORP. OF AMERICA, COMPONENTS DIV., 19th & Federal Sts., Camden, N. J. / Woodlawn 3-8000 / \*C 57  
Ferrite memory cores, custom built memory planes, apertured ferrite memory plates; relays. Ls Le Ic RMSa
- RADIO CORP. OF AMERICA, ELECTRON TUBE DIVISION, 415 South 5th St., Harrison, N. J. / Humboldt 5-3900 / \*C  
Electronic tubes for computers. Ls Le Ic RMSa
- RADIO CORP. OF AMERICA, SEMI-CONDUCTOR DIV., Somerville, N. J. / Randolph 5-4500 / \*C 57  
Transistors, semiconductors, diodes. Ic RMSa
- Radio Development & Research Corp. (Germanium Products, a subsidiary), 26 Cornelison Avenue, Jersey City, N. J. / Rector 2-2337 (New York City) / \*C  
Transistors, diodes, rectifiers, for computers. Ms(100) Me(1938) Ic RMSa
- Radio Industries Inc., 1307 Central Ave., Kansas City 2, Kan. / - / \*C  
Delay lines. Ic RMSa
- Radio Metals Corp., 3325 N. California Ave., Chicago 18, Ill.  
Capacitors. Ic RMSa
- RADIO RECEPTOR, INC. 240 Wythe Ave., Brooklyn 11, N. Y. / Evergreen 8-6000 / \*C 57  
Germanium diodes for computer and other uses. Ls(750) Le(1922) Ic RMSa
- Ram Meter, Inc., 1100 Hilton Rd., Ferndale 20, Mich.  
Digital computers. Dc RMSa
- The Ramo-Wooldridge Corp., Computer Systems Division, 5740 Arbor Vitae, Los Angeles 45, Calif. / Oregon 8-0311 / \*C  
Airborne digital computer systems and data processing systems. Ls(1000) Se(1953) DIc RMSa
- The Rand Corporation, 1700 Main St., Santa Monica, Calif. / Exbrook 4-0251 / \*C 57  
Large digital computers for scientific and business uses; analog computers for scientific computations. (For government use only). Ls(1000) Se(1946) DAic RPBa
- Rapid Electric Co., 2881 Middletown Rd., New York 61, N. Y.  
Rectifiers. Ic RMSa
- Raymond Rosen Engineering Products, Inc. -- name changed to Tele-Dynamics, Inc. which see
- RAYTHEON MANUFACTURING CO., Division: Receiving and Cathode Ray Tube Operations, 55 Chapel St., Newton 58, Mass. / Bigelow 4-7500 / \*C 57  
Semiconductor diodes, silicon rectifiers, transistors, and electron tubes for computers. Ls Le(1923) Ic RMSa
- Raytheon Manufacturing Co., 100 River St., Waltham, Mass. / Twinbrook 3-5860 / \*C  
Radar, sonar, communications, fire control, microwave and telemetering equipment, power tubes, electro-hydraulic servo controls, automatic machine-tool duplicators; Computer work transferred to Datamatic Corporation, which see. Ls(20,000) Le(1925) DAc RMSa
- Raytheon Mfg. Co., Computer Dept. now Datamatic Corp., which see
- J. B. Rea Co., 1723 Cloverfield Blvd., Santa Monica, Calif. / Exbrook 3-7201 / \*C  
Analog-to-digital converters, miniature motors and gyroscopes, automatic control systems, general and special purpose digital computers, automatic data handling systems, aerodynamic systems analysis, simulation, nonlinear servo systems. Magnetic drums, magnetic heads, etc. Computing service: analog, digital, simulation; Electronic Associates' analog computer, Rea-Converter, READIX, general purpose digital computer. Ms(80) Se(1951) DASCc RMSa
- RECORDING AND STATISTICAL CORPORATION, 100 Sixth Ave., New York 13, N. Y. / Worth 6-2700 / and elsewhere.  
Computing and data processing services using electronic digital computers and punched card equipment of latest types. DIc RCPa
- Reeves Instrument Corp., 215 East 91 St., New York 28, N. Y. / Trafalgar 6-6000  
Fire-control equipment. "REAC" electronic analog computers; servo mechanisms; 6 channel recorders; computers for simulation, automation and control. Computing service: analog; Reac. Ls Me Ac RMSa
- The Reflectone Corp., 639 W. Main St., Stamford, Conn. / Fieldstone 8-4201 / \*C 57  
Analog computing equipment for simulating radar, sonar, navigation, etc. Ms(200) Me(1940) Aic RMSa
- REMINGTON RAND UNIVAC DIVISION OF SPERRY RAND CORPORATION, 315 4th Ave., New York 10, N. Y. / Spring 7-8000 / and elsewhere / \*C 57  
Digital computers (Univac System, Univac Scientific, Univac File-Computer, Univac 120 and Univac 60 Punched-Card Electronic Computers). Analog computers; special purpose computers. Converters: card to tape tape to card, punched paper tape to magnetic tape, and magnetic tape to punched paper tape. High speed printers, servomechanisms, magnetic drum storage systems, input and output devices. Punched-card tabulating equipment. Business and scientific computing services. Ls(8000) Le DIc RCPa
- REMINGTON RAND UNIVAC DIVISION OF SPERRY RAND CORPORATION, Univac Computing Center, 315 4th Ave., New York 10, N. Y. / Spring 7-8000  
Computing service; digital; Univac, punched card equipment, etc. Ms Se(1954) Dc RCPa
- REMINGTON RAND UNIVAC DIVISION OF SPERRY RAND CORP., 452 Swann Ave., Alexandria, Va. / KING 9-6705  
Applications of computers for research and development. Special systems for data processing, instrumentation, communications, etc. DIc RCPa
- Remington Rand Univac Division of Sperry Rand Corporation, Engineering Research Associates Division, 1902 W. Minnehaha Ave., St. Paul, Minn. / Nestor 9601 / \*C  
Development of digital computers, automatic data-handling and control systems, mechanisms, and weapons. Pulse circuits, magnetic cores, magnetic drums, transistors, printed wiring, miniaturization, and precise mechanisms used in the design of these systems. Automatic digital computers ERA 1101, 1102, .



## Organizations

- 1103; Speed Tally; CAA Flight Plan Storage Systems; the Logistics Computers. Ls(1050) Se(1946) Dc RMCPa
- Remington Rand Univac Division of Sperry Rand Corporation (formerly Eckert-Mauchly Division). 2300 West Allegheny Ave., Philadelphia, Pa. / Baldwin 3-7300 / \*C  
All purpose digital computers. Univac Systems. Ls(600) Se(1946) Dc RCMa
- Rensselaer Polytechnic Institute, Computer Laboratory, 110 8th St., Troy, N. Y. / Ashley 2-3000, X240 / \*C  
Computing service: analog; Reac, precision magnetic tape recorders for analog computing applications. Ss(8) Se(1952) Ac RCPa
- Research Inc., 526 Sexton Bldg., Minneapolis 15, Minn.  
Analog Computers. Ac RMSa
- RESISTANCE PRODUCTS COMPANY, 914 S. 13th St., Harrisburg, Pa. / CE 6-9006 / \*c  
Resistors -- high voltage, high resistance, standard types, encapsulated, hermetically sealed, subminiature, etc., for computer and other uses. Ic RMSa
- RICHARDSON CAMERA COMPANY, INC., 171 W. Magnolia Blvd., Burbank, Calif. / Thornwall 2-0234 / \*C  
Theodolite cameras, pulse-data cameras, film readers, film assessors, electronic counters. Ss(18) Me(1934) Ic RMSCa
- Robotyper Corporation, 125 Allen St., Hendersonville, N. C. / Hendersonville 4246  
Automatic typing equipment that can be associated with any electric typewriter, using a record roll pneumatically operated. Ic RMSa
- Rutherford Electronics Company, 3707 S. Robertson Blvd., Culver City, Calif. / Texas 0-4362 / \*C  
Pulse instruments, time measuring systems, time delay generators. Ss(15) Se(1950) Ic RMSa
- S
- Sage Electric Corp., 302 N. Goodman St., Rochester 7, N.Y.  
Resistors. Ic RMSa
- Sanborn Co., Cambridge 39, Mass.  
Analog computer systems. Recording papers. Aic RMSa
- Sangamo Electric Co., Springfield, Ill.  
Capacitors. Ic RMSa
- Sarkes Tarzian, Inc., 415 N. College Ave., Bloomington, Ind.  
Rectifiers. Ic RMSa
- Saunders & Co., 66 Westland Rd., Weston 93, Mass. / Twinbrook 4-6071 / \*C 57  
Digital computing machinery; information handling devices; related devices. Ss Se Ic Sa
- SCHWEBER ELECTRONICS, 122 Herricks Road, Mineola, N.Y. / Pioneer 6-6520 / \*C 57  
Capacitors and other computer components. Ss(25) Se(1952) Ic Sa
- Scientific Computing Service, 23 Bedford Square, London W C 1, England / Museum 0808 / \*C  
Problem solving, consulting. Computing service: digital. Ss(15) Me(1937) DIc RCPa
- Seismograph Service Corp., P. O. Box 1590, Tulsa 1, Okla.  
Analog computers. Ac RMSa
- THE SERVICE BUREAU CORPORATION, 590 Madison Ave., New York 22, N.Y. / Plaza 1-5600 / \*C 57  
Computing and data processing service using all models and types of International Business Machines Corp. machines, including IBM Magnetic Drum Calculators 650 and IBM Electronic Data Processing Machines 704. Comprehensive facilities (including programming) for all applications, such as methods, engineering, control, plant operations, etc. Over 115 service bureaus all over country and at least 4 electronic data processing centers. Subsidiary of IBM. Le(500-) Se(1957, separate corp.; over 30 years, div. IBM) DAc RCPa
- Servo Corporation of America, 2020 Jericho Turnpike, New Hyde Park, N.Y. / Fieldstone 7-2180 / \*C  
Servomechanisms. Automatic controls. Analysis and synthesis for controls manufacturers. Temperature controls by infra-red radiation. Industrial controls. Servo components and test equipment. Analog and digital computers. Ms(350) Se(1946) DASCc RMSa
- Servomechanisms, Inc., Post & Stewart Ave., Westbury, L.I., N.Y. / Edgewood 4-2700 / also 12500  
Aviation Blvd., Hawthorne, Calif. / Osborne 5-7111 / \*C  
Automatic electronic and electro-mechanical control systems and components, analog computers, instrumentation. Airborne digital computers, digital transducers. Ls(800) Se(1946) ASICc RMSa
- Servonics, Inc., 834 N. Henry St., Alexandria, Va. / Temple 6-6800  
Precision potentiometers incorporating digital techniques, with high linearity, and extended frequency limits without phase shift, multi-turn but continuous rotation.
- Shallcross Mfg. Company, 522 Pusey Avenue, Colliugdale, Pa. / Farragut 9-5100 / \*C  
Wirewound resistors, switches, delay lines, for computer and other uses. Ms(300) Me(1929) Ic RMSa
- Shepard Laboratories, Summit, N.J.  
High-speed typer (up to 1800 characters per second). Ss Se(1950) DIc RMSa
- Short Brothers & Harland Ltd., 208A Regent St., London W. 1, England / Regent 8716 / \*C 57  
General purpose analog computer, multiplier units, function generators, time delay units, servo-controlled rocking tables, low frequency oscillators, vectorscopes, squarers, sine and cosine generators, etc. Ls(10,000) Le(1905) AICc RMSCa
- F. W. Sickles Division, General Instrument Corp., 165 Front St., Chicopee, Mass. / LYceum 4-4781 / \*C 57  
Computer components, magnetic amplifiers, etc. Ls(2520) Le(1921) Ic RMSa
- Société d'Electronique et d'Automatisme, 138 Blvd. de Verdun, Courbevoie, Seine, France / Defense 41-20 / \*C  
Analog and digital computers and components. Servomechanisms; electronic equipment for machine tools; electronic recorders. Analog computer OME-L2. General purpose digital computer CAB 2.022. Ms(320) Se(1948) DASC RSMa

Computers and Automation

- Société des Servomechanismes Electroniques, 1 rue Chanez, Paris 16e, France  
Sc RMSa
- SOLA ELECTRIC CO., 4633 W. 16th St., Chicago 50, Ill. / Bishop 2-1414 / \*C 57  
Constant voltage transformers, regulated DC power supplies, etc., for computer and other uses. Ms(250) Me(1930) Ic RMSa
- Solar Mfg. Co., 4000 W. North Ave., Chicago 39, Ill.  
Capacitors. Ic RMSa
- Sorensen & Co., Inc., 375 Fairfield Ave., Stamford, Conn. / Fireside 8-5311 / \*C  
Power supplies for computer and other uses. Ms(300) Me(1943) Ic RMSa
- SOROBAN ENGINEERING, INC., Box 338, Melbourne, Fla. / Melbourne 1143 / \*C 57  
Data input-output systems; data preparation devices; output tabulating devices; coding keyboards; paper tape readers and perforators; specialized data computing systems and consulting services on all of above. Ms Se(1953) DIc RMSCa
- Southern Electronics Corp., 239 W. Orange Grove Ave., Burbank, Calif. / Victoria 9-3193 / \*C  
Precision capacitors, adjustable capacitors. Ms(60) Se(1951) Ic RMSa
- Southwestern Computing Service, 910 South Boston, Tulsa 3, Oklahoma / Gibson 7-8146 / \*C  
Computing service, solving data reduction and engineering and business problems. Ss(9) Se(1953) Ic RCPa
- Southwestern Industrial Electronics Co., P. O. Box 13058, Houston 19, Texas  
Analog computers and simulators. Capacitors, resistors. Ac RMSa
- Specialties, Inc., Syosset, N.Y., and Charlottesville, Va. / Syosset, Walnut 1-2345; Charlottesville, 3-5131 / \*C  
Precision potentiometers, servos, magnetic amplifiers, transformers, sensing elements, etc., for computer and other uses. Ms(300) Se(1941) Ic
- Spectrol Electronics, Division of Carrier Corp., 1704 South Del Mar Ave., San Gabriel, Calif. / Atlantic 9-4178 / \*C 57  
Precision wire-wound potentiometers, single-turn and multi-turn, linear and non-linear. Ms(300) Se(1953) Ic RMSa
- Sperry Rand Corporation, Sperry Gyroscope Division, Great Neck, N.Y. / Fieldstone 7-3600 / \*C  
Ordnance; fire-control equipment. Automatic controls. Navigation equipment, sea and air. Radar, Loran, gyrocompasses, precision instruments. Ls (18,000) Le(1910) Ac RMSa
- Sperry Rand Corporation -- Also SEE Remington Rand Divisions
- Sprague Electric Co., 377 Marshall Street, North Adams, Mass. / Mohawk 3-5311 / \*C 57  
Capacitors: miniature, and low dielectric hysteresis loss, for computer applications. Standard capacitors; precision and power type resistors; pulse transformers; radio interference filters; shift registers; printed circuits. Ls(6000) Le(1926) Ic RMSa
- Stackpole Carbon Co., 26 Rittenhouse Place, Ardmore, Pa.  
Resistors. Ic RMSa
- Stancil-Hoffman Corp., 921 N. Highland Ave., Hollywood 38, Calif.  
Magnetic tape recorders. Ic RMSa
- Standard Coil Products Co., Inc., 2085 N. Hawthorne Ave., Melrose Park, Ill.  
Delay lines. Ic RMSa
- Standard Electric Time Co., 73 Hogan St., Springfield 2, Mass.  
Analog computers. Ac RMSa
- Standard Instrument Corp., Div. of Heat-Timer Corp., 657 Broadway, New York 12, N.Y.  
Combined recorder and totalizer, for accurately accumulating data on the operation of a machine, process, or system in plant or office. Ic RMSa
- THE STANDARD REGISTER CO., Dayton 1, Ohio / Adams 6181  
Electronic equipment (called "Stanomatic"), capable of sensing or reading printed codes on business documents and translating them into digital pulses which will actuate office machinery such as card punches, tape perforators, computers, etc. Ls Le DIc RMSa
- Stanford Computation Center, Stanford University, Stanford, Calif. / DA 3-4123 / \*C 57  
Computing service. Education involving uses of computers. IBM 650. Ss(5) Se(1953) Dc RCPa
- Stereotronics, 66 Westland Rd., Weston 93, Mass. / Twinbrook 4-6071 / \*C 57  
Solid-state information-handling devices: transistor, magnetic, diode, ferro-electric, gas tubes, etc. Ss Se DIc RMSa
- Sterling Precision Corp., Instrument Division, 34-17 Lawrence St., Flushing 54, N.Y.  
Analog computers. Computers components. Data processing. AIC RMSa
- Steward Mfg. Co., P. O. Box 510, Chattanooga, Tenn.  
Magnetic cores. Ic RMSa
- Strand Engineering Co., 1354 N. Main St., Ann Arbor, Mich. / Normandy 2-3127  
Research, design, development of equipment and systems; production engineering; building of pilot models. Se(1955) ICc RCPa
- Streeter-Amet Co., Grayslake, Ill. / Baldwin 3-4801 / \*C  
Analog-to-digital converters. Ic RMSa
- Stromberg-Carlson, Division of General Dynamics Corp., 110 Carlson Rd., Rochester 3, N.Y.  
Computers. Data systems. Relays for computer and other uses. DIc RMSa
- Stromberg-Carlson (West Coast), Charactron & Special Products Laboratories, 3225 Hancock Street, San Diego 10, Calif. / Cypress 8-7701 / \*C  
The Charactron, a computer output device for "debugging", graphical display, etc., converting coded information into tabular or graphic alphanumeric information on a cathode-ray-tube screen; analog-to-digital conversion units. Ms(115) Se(1950) Ic RMSa
- Stupakoff Div. of the Carborundum Co., Latrobe, Pa.  
Magnetic cores. Ic RMSa
- STURRUP, INC., 50 Silver St., Middleton, Conn. / Diamond 6-9681 / \*C 57  
Ultrasonic delay lines, transducers, etc., for computer and other uses. Ms(60) Se(1951) Ic RMSa
- Sunshine Scientific Instrument Co., 1810 Grant Ave., Philadelphia 15, Pa. / OR 3-5600 / \*C 57  
Analog field plotting equipment. Ms(65) Se(1947) Ic RMSa

## Organizations

- Sunvic Controls, Ltd., Eastern Industrial Estate,  
Harlow, Essex, England  
Data processing machinery; analog computer;  
analog-to-digital converters. DAIC RMSa
- Superex Electronics Corp., 4 Radford Place, Yonkers, N.Y.  
Magnetic cores. Ic RMSa
- Superior Carbon Products, Inc., 9115 George Ave.,  
Cleveland 5, Ohio  
Magnetic cores. Ic RMSa
- Superior Steatite & Ceramic Corp., 83-91 W. Forest  
Ave., Englewood, N.J.  
Magnetic cores. Ic RMSa
- Swedish Board for Computing Machinery, Drottning-  
gatan 95A, (P. O. Box 6131), Stockholm 6,  
Sweden / Stockholm 23 55 90 / \*C  
State central institution for research, de-  
velopment, and computation service on large-  
scale machines. Operates two automatic dig-  
ital computers, BARK and BESK, designed and  
built by the Board. Research on numerical  
analysis; development of new computers.  
Computing service (digital) using BARK and  
BESK. Ss (30) Se (1949) Dc RMCPa
- SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,  
New York 19, N.Y. / - / \*C 57  
Computers. Computer products: transistors,  
diodes, electronic tubes. Ls (27,000) Le  
(1901) DAIC RMSa
- SYLVANIA ELECTRIC PRODUCTS INC., ELECTRONIC SYS-  
TEMS DIV., 100 First Avenue, Waltham 54, Mass. /  
Twinbrook 3-9200 / \*C 57  
Ground based and airborne electronic digital  
computers; special purpose digital data  
transmission systems. High-speed, high tem-  
perature transistor switching circuits,  
etched circuits; other computer components.  
Radar, countermeasures, communications, and  
navigation systems. Ls (27,000 company;  
3000 this division) Le (1901) DAC RMSCa
- Sylvania Electric Products, Inc., Radio and Tele-  
vision Div. -- division changed to Electronic  
Systems Div., which see.
- Sylvania Electric Products, Inc., Woburn Division,  
100 Sylvan Rd., Woburn, Mass. / Woburn 2-3500  
Semiconductor components, crystal diodes,  
transistors, and tubes for computer and other  
uses. Ls Le Ic RMSa
- I
- Taller and Cooper, 75 Front St., Brooklyn, N.Y. /  
Ulster 8-0500 / \*C 56  
Data recording and conversion systems, print-  
ers, perforators, analog-to-digital convert-  
ers. Function generators, special purpose  
computers. Supervisory and control systems;  
remote control telemetering systems; card-  
to-tape converters; special punching and  
sensing equipment. Mechanical function gen-  
erator control of machine tools and allied  
mechanisms. Toll equipment for bridges,  
highways, turnpikes. Ms (250) Me (1930)  
DIc RMSa
- Tally Register Corp., 5300 14th Ave., N.W.,  
Seattle 7, Wash. / Dexter 5500 / \*C 57  
Special purpose business machines; electro-  
magnetic pulse counters and pu sed relays;  
high-speed data reduction systems for tele-  
metering applications; digital-input,
- multiple-symbol X-Y plotter with continuous  
grid printing and numerical abscissa. Ss (25)  
Se (1948) DICMc RMSCa
- Tarc Electronics, Inc., 48 Waban Ave., Westbury,  
L.I., N.Y.  
Magnetic tape recorders. Ic RMSa
- Taylor Instrument Co., Rochester, N.Y.  
Automatic controllers. Ls Le Cc RMSa
- Technitrol Engineering Co., 2751 North 4 Street,  
Philadelphia 33, Pa. / Garfield 6-9105 / \*C 56  
Computing and control equipment. Complete  
digital systems. Components, pulse trans-  
formers. Electrical and acoustic delay lines.  
High-speed memories. Digital computer  
"blocks". Ms (105) Se (1947) DAC RMSa
- Technology Instrument Corporation, 531 Main St.,  
Acton, Mass. / Colonial 3-7711 / \*C 57  
Precision potentiometers, linear and non-  
linear, single and multiturn; potentiometers  
for special applications. Ms (under 500)  
Se (1946) Ic RMSa
- TELECOMPUTING CORP., 12838 Saticoy St., No. Holly-  
wood, Calif. / Po 5-8160 and St 7-8181 / \*C 57  
Automatic data reading, recording, and plot-  
ting equipment. Automatic business data ac-  
cumulation and analysis equipment. High-  
resolution shaft digitizing and recording  
equipment; automatic graph readers; digital  
plotters; data reduction services. Ms (250)  
Se (1947) DCMc RMSPa
- Telectro Industries Corp., 35-16 37th St., Long  
Island City 1, N.Y.  
Magnetic cores, magnetic tape recorders,  
magnetic drums. Ic RMSa
- Tele-Dynamics, Inc., 32 Walnut St., Philadelphia  
4, Pa. / Evergreen 2-5015 / \*C 56  
Computers used as end item in information  
transmittal systems, telemetering systems.  
Ms (365) Me (1943) Ic RMa
- TELEMETER MAGNETICS, INC. 2245 Pontius Ave., Los  
Angeles 64, Calif. / Granite 7-4211 / \*C 57  
Special purpose data processing machines.  
Magnetic storage systems. Computer memory  
components; magnetic cores, drivers, reading  
amplifiers; automatic core testing equipment.  
High-capacity rapid-access ferrite core mem-  
ories. Systems design and development.  
Ms (140) Se (1956) DCIC RMSa (Formerly  
division, now subsidiary, of International  
Telemeter Corp., which see.)
- Telequipment Corp. -- moved, left no address.
- TELEREGISTER CORPORATION, 445 Fairfield Avenue,  
Stamford, Conn. / Fireside 8-4291 (New York  
City, Ludlow 5-8900) / \*C 57  
Digital special purpose computers. Data  
processing systems for special applications:  
inventory control, invoicing, travel reser-  
vations, flight data, stock market quota-  
tions, maintaining and servicing equipment,  
etc. Electro-mechanical digital display  
systems. Magnetronic Reservoir, in use  
at American Airlines reservations center.  
Magnetronic stock quotation system in use  
in Toronto Stock Exchange. Ls (600) Me  
(1928) DIc RMSCa
- Teletypesetter Corporation, 2752 Clybourn Avenue,  
Chicago 14, Ill. / Graceland 7-5250 / and else-  
where / \*C  
Tape perforators and operating units for  
local or distant automatic control of Lino-  
types and Intertypes. Ms (60) Me (1929) Ic  
RMSa

Computers and Automation

- The Teller Company, 357 No. Main St., Butler, Pa. / Butler 75-739  
Automatic controls. Ms (65) Se (1951) Cc RMSa
- TEXAS INSTRUMENTS INCORPORATED., 6000 Lemmon Ave., Dallas 9, Texas / Fleetwood 21781 / and elsewhere / \*C 57  
Germanium and silicon transistors; silicon diodes and rectifiers; precision resistors -- for computer and other uses. Ls (4500) Me (1931) Ic RMSa
- Thermosen, Inc., 361 West Main St., Stamford, Conn.  
Diodes. Ic RMSa
- Thomas & Skinner, Inc., 1120 East 23rd St., Indianapolis 7, Ind.  
Magnetic tape, magnetic cores. Ic RMSa
- Thor Ceramics, Inc., 225 Belleville Ave., Bloomfield, N.J.  
Magnetic cores. Ic RMSa
- Times Facsimile Corp., 540 W. 58th St., New York 19, N.Y.  
Facsimile transmitting and receiving equipment; sensitized paper. Ic RMSa
- Tobe Deutschmann Corp., Norwood, Mass. / NORwood 7-2620  
Capacitors, delay lines. Ic RMSa
- Transistor Products, Inc., 241 Crescent St., Waltham 54, Mass. / Waltham 5-9330 / \*C  
Transistors, diodes. Ms (150) Se (1952) Ic RMSa
- Transitron Electronic Corp., 403 Main St., Melrose 76, Mass.  
Diodes, rectifiers. Ic RMSa
- Triad Transformer Corp., 4055 Redwood Ave., Venice, Calif.  
Pulse transformers. Ic RMSa
- TRIO LABORATORIES, INC., 4025 Merrick Rd., Seaford, L.I., N.Y.  
Analog computers, test equipment. A Ic RMSa
- Tru Ohm Products, 2800 N. Milwaukee Ave., Chicago 18, Ill.  
Resistors. Ic RMSa
- TUNG-SOL ELECTRIC INC., 95 8th Ave., Newark 4, N.J. / Humboldt 2-4200 / \*C 57  
Electron tubes, transistors, for computer and other uses. Ls (6500) Le (1904) Ic RMSa
- TYPATAPE INC., 60 East 42nd St., New York 17, N.Y. / Oxford 7-1964 / \*C 57  
Recording equipment which produces a printed tape that can be read photoelectrically by other machines. The Typatape Recorder can be attached to most existing accounting machines, billing machines, adding machines, cash registers, etc., to provide a numeric common language record as a by-product of regular key input. The Typatape can be converted by means of a tape-to-card converter. Ss (10) Se (1956) Ic RMSa
- U
- Ultrasonic Corp. -- believed to have gone out of business.
- Underwood Corp., One Park Ave., New York 16, N.Y. / Lexington 2-7000 / and elsewhere / \*C 56  
Accounting machines, adding machines, typewriters. Elliott-Fisher and Sundstrand Machines. Underwood Samas punched card accounting machines and systems. Underwood electric typewriters, used in Harvard Mark II calculator. ELECROM electronic computers have been transferred to Digitronics, which see. Ls (company 13,000; laboratory, 100) Le (1894) Dlc RMSa
- Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.  
Delay lines. Ic RMSa
- Union Switch and Signal Co., Division of Westinghouse Airbrake, Pittsburgh 18, and Swissvale, Pa.  
Railroad signaling and control systems. Aircraft flight simulators; mobile test rack for testing analog computers including simulators. Ls (4000) Le Ic RMSa
- United Mineral & Chemical Corp., 16 Hudson St., New York 13, N.Y.  
Magnetic cores. Ic RMSa
- U. S. Air Force, Cambridge Research Center, 230 Albany St., Cambridge 39, Mass. / UNIVERSITY 4-4720  
Developed the ABC (Automatic Binary Computer). Has a Computer Research Corp-102. Ms Me IDc Ga
- U. S. Air Force, Aeronautical Research Laboratory, Directorate of Research, Wright Air Development Center, Wright-Patterson Air Force Base, Ohio / Ke 7111, X28235 / \*C 57  
Computing service (for Air Force use) has General Electric Oarac; Univac 1103; Bendix DDA; Reacs, Gedas. Ms (62) Se (1948) DAC RGPpa
- U. S. Air Force, Commander, Rome Air Development Center, Statistical Services Division, Rees Griffiss Air Force Base, Rome, N.Y. / Rome 3200, ext. 7-1219  
Computing service: analog, digital; for government only. Has Elecom 120, Bendix Digital Differential Analyzer D 12, Reeves Electronic Analog Computer, Benson-Lehner data reduction equipment, considerable IBM data processing equipment. Ms (50) Se (1954) Dlc RCPa
- U. S. Air Force, Computation Research Sec., Wright Air Development Center, Wright-Patterson Air Force Base, Dayton, Ohio  
Computing service, analog and digital: Card programmed calculators, Reacs, punch card; for government only. Se DA Ic RCPa
- U. S. Air Force, Inst. of Technology, Wright-Patterson Air Force Base, Dayton, Ohio / \*C  
Electronic strategy machine, conceived by L. I. Davis. Philbrick Reac and GEDA equipment on hand. Ms (300) Se (1946) DA Ic Ga
- U. S. Army, Ballistic Research Laboratories, Aberdeen Proving Ground, Aberdeen, Md. / \*C  
Computing service (digital); for government and government contractors only. Has Bell, Eniac, Ordvac computers and others. Developing supplementary and modernizing components. Ms Le DAC Ga
- U. S. Ceramic Tile Co., Diamonite Div., 217 Fourth St. N.E., Canton 2, Ohio  
Magnetic cores. Ic RMSa
- U. S. Components, Inc., 454 East 148th St., New York 55, N.Y.  
Connectors. Ic RMSa
- United States Dynamics Corp., 1250 Columbus Ave., Boston 20, Mass. / Highland 5-3850 / \*C 57

## Organizations

- Silicon diodes and power rectifiers, transistors, germanium diodes, and rectifiers, for computer and other uses. Ms (100)  
Se (1955) Ic RMSa
- U. S. Electronics Development Corp., 1323 Airway, Glendale 1, Calif.  
Capacitors. Ic RMSa
- U. S. Navy, Naval Proving Ground, Computation and Exterior Ballistics Laboratory, Dahlgren, Va. / X627 / \*C 57  
Computing, programming, and analysis services; for government and government contractors only. Has digital computers: Aiken Dahlgren Electronic (Mark IID), and Naval Ordnance Research Calculator (NORC). Ms (145) Me (1942) Dc RCPGa
- U. S. Navy, Aviation Supply Office, Data Processing Division, Philadelphia, Pa. / \*C 57  
Operates IBM 650 and IBM 702 for inventory control. Government use only. Ls Me Dc Ga
- U. S. Navy, Office of Naval Research, Special Devices Center, Port Washington, New York / Port Washington 7-3800 / \*C 56  
Training devices using analog and digital computers. Ls (500) Me (1943) DASMc RMOGBa
- U. S. Navy, Naval Research Laboratory, Washington 25, D. C. / JO 3-6600 / \*C 57  
NAREC digital computer. Analog computers, servo mechanisms and data reduction. Ls (3400) Le (1923) DAsc RGPa
- United Transformer Co., 150 Varick St., New York 13, N.Y.  
Delay lines. Ic RMSa
- Univ. of California, Berkeley, Calif. / \*C 56  
Computing service. Has CALDIC, California Digital Computer; also IBM 701. Ss (10)  
Se (1947) DAc RPCa
- University of California, Department of Mathematics, Numerical Analysis Research, Los Angeles 24, Calif. / Granite 3-0971 and Bradshaw 2-6161 / \*C 57  
Research and teaching in use of digital computers for scientific computation. Operates SWAC on loan from the Office of Naval Research. Maintains for the Office of Naval Research a definitive research book collection in numerical analysis and related areas, especially mathematics. Teaches eight courses in numerical analysis. Successor to National Bureau of Standards Institute for Numerical Analysis. Ss (25)  
Se (1954) Dc RPCa
- University of Cambridge, University Mathematical Laboratory, Corn Exchange St., Cambridge, England / \*C  
Built Edsac. Computing service (digital) for University. Ss (30) Me (1939) Dc RCPa
- University of Illinois, Urbana, Ill.  
Built electronic digital computer Ordvac for Ballistic Research Laboratory, Aberdeen. Also Illiac on same design, but with faster input-output. Dc RCPa
- University of Manchester, Mathematical Laboratory, Manchester, England / \*C  
Has automatic electronic digital computer built by Ferranti Electric Ltd. This laboratory developed much of the design. Ss (8)  
Se (1947) Dc RPa
- UNIVERSITY OF MICHIGAN, Willow Run Laboratories, Willow Run Airport, Ypsilanti, Mich. / Ypsilanti 5110 / \*C 57  
Digital and analog computers, including electronic and electromagnetic computers and simulators; both special and general purpose. Including MIDAC, IBM equipment, desk calculators, data processing systems. Computing services, including analysis and computation using all types of computers. Instruction in components of and the use of electronic computers of all types, including programming, coding, numerical methods, etc. Ls (600)  
Se (1946) DAc RCPa
- University of Pittsburgh -- SEE Mellon Institute.
- University of Rochester, Computing Center, Rochester 20, N.Y. / Gr 3000  
Computing services; Burroughs E101 computer, IBM 650, available. Se (1956) Dc RMSCP
- University of Sydney, Dept. of Electrical Engrg., and C.S.I.R.P. Section of Mathematical Instruments, Sydney, New South Wales, Australia / \*C 57  
Research and design of analog computers, digital differential analysers, servo-mechanisms, automatic control machinery. AICc RCa
- University of Toronto, Computation Centre, Toronto, Ontario, Canada / Walnut 3-1327 / \*C 57  
Computing services. Programming and consulting services. Time available on University of Toronto automatic computer Ferut. Ss Me Dlc RCPa
- University of Wisconsin, Numerical Analysis Laboratory -- computing service apparently discontinued.

## V

- Valor Electronic Components Co., 5808 Marilyn Ave., Culver City, Calif.  
Data processing, digital computers. DIc RMSa
- Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.  
Delay lines. Ic RMSa
- Vari-Ohm Corp., Sunrise Highway, Amityville, N.Y.  
Potentiometers. Ic RMSa
- Vaucanson, 11 Rue du Surmelin, Paris 20e, France / MENilmontant 83-40 / \*C 57  
Calculating machines. Ms (400) Le (1896)  
Dc RMSa
- Vectron, Inc., 1605 Trapelo Rd., Waltham 54, Mass. / TWinbrook 3-8700 / \*C 57  
Special computers, precision gear assemblies, etc. Ms (225) Se (1949) DIc RMSa
- Veeder-Root, Inc., Hartford 2, Conn.  
Analog-to-digital converters; counters, mechanical & electrical. Ic RMSa
- VICTOR ADDING MACHINE CO., 3900 No. Rockwell St., Chicago 18, Ill. / KEystone 9-8210 / \*C 57  
Digital computers and related integrated data processing systems. Digit-matic plain or calculating printers. Adding machines, etc. Ls (2200) Le (1918) Dc RMSa
- Victory Engineering Corp., Springfield Rd. & Torio Ct., Union, N.J.  
Transistors. Ic RMSa
- VISirecord, Inc., 54 Railroad Ave., Copiague, L.I., N.Y. / Amityville 4-4900 / \*C

Computers and Automation

Filing systems for all types of common language tapes in computers. Business control on edge-punched cards in conjunction with mechanical and electronic business machines. Ms(300) Ic RMSa

Vitramon, Inc., Box 544, Bridgeport 1, Conn. Capacitors. Ic RMSa

V-M Corporation, Park & Fourth, Benton Harbor, Mich.

Magnetic tape recorders. Ic RMSa  
Volkers & Schaffer Mfg. Corp., Box 996, Schenectady, N.Y.

Transistors. Ic RMSa

W

Waldorf Instrument Corp., Park Ave., Huntington, N.Y.

Analog computers, digital computers. DAc RMSa

THE WALKIRT CO., 141 West Hazel St., Inglewood 3, Calif. / Oregon 8-4814, Oregon 1-0212 / \*C 57

Unitized circuit packages, plug-in units, including binary scalars, linear, ternary scalars; other digital computing activities. Ss(30) Se(1948) DIc RMSa

Wallind-Pierce Corp., 1928 Pacific Coast Highway, Lomita, Calif.

Analog and digital computers, analog-to-digital converters, digital-to-analog converters. DAic RMSa

Wang Laboratories, 37 Hurley St., Cambridge 39, Mass. / Trowbridge 6-1925

Magnetic delay-line memory units. Digital signal generators. Multiple Scalars. Static magnetic memory systems and other devices. Wedilog computers, shaft digitizing coders. Ss(8) Se(1951) DIc RCMSa

Ward Leonard Electric Co., 115 MacQuesten Pkwy. So., Mt. Vernon, N.Y.

Relays, resistors. Ic RMSa

J. C. Warren Corp., 21 Hanse Ave., Freeport, N.Y. Magnetic tape recorders. Ic RMSa

The George Washington Univ., Logistics Research Project, 707 22nd St., Washington 7, D.C. / Sterling 3-4539

ONR relay computer with magnetic drum memory. Data-handling machines. ONR electronic digital computer with magnetic drum memory. Computing service (digital) using these machines. Ms(50) Se(1950) Dc RCPa

Waters Manufacturing, Inc., Boston Post Rd., Wayland, Mass. / Elmwood 8-2777 / \*C 57

Potentiometers for servomechanisms, computers, and other uses. Ms(125) Se(1951) Ic RMa

Watson Scientific Computing Laboratory, 612 West 116 St., New York, N.Y. / Monument 6-9600 / \*C

The pure science department of International Business Machines Corp. Simultaneous linear equation solver. Astronomical plate measuring machine. IBM punch card machines. Research and instruction. Maker of Naval Ordnance Research Calculator (NORC). Ms(100) Me(1945) DAc RCPa

WAYNE STATE UNIVERSITY, COMPUTATION LABORATORY, Cass Ave., Detroit 2, Mich. / Temple 1-1450 / \*C 57

Computing service: digital. Instruction and training. Have computer with 5300-word magnetic drum memory plus 100-word magnetic core memory built of Burroughs pulse control equipment. Also IBM 650. Ss(40) Se(1950) DAc RCPa

Jervis B. Webb Co., 8951 Alpine Avenue, Detroit 4, Mich. / Webster 3-8010 / \*C

Conveyor engineering and manufacturing. Servomechanisms, automatic control machinery, automatic materials handling machinery. Ls(60) Le(1919) SCMS RMSa

Weber Electronics, 315 W. 9th St., Los Angeles 15, Calif. / Tucker 9168 / \*C 57

Weber Analog Computers. Ac RMSa

Webster-Chicago Corp., 5610 W. Bloomingdale, Chicago 39, Ill.

Magnetic tape recorders. Ic RMSa

Webster Electric Co., 1900 Clark St., Racine, Wisc.

Magnetic tape recorders, etc. Ic RMSa

Weems System of Navigation, 227 Prince George St., Annapolis, Md.

Automatic navigation systems. Me Ic RCPMSa

Welwyn International, Inc., 3355 Edgecliff Terrace, Cleveland, Ohio

Resistors. Ic RMSa

West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

Analog computers, data processing machinery. Aic RMSa

Western Coil Products Co., 2989 Middlefield Rd., Palo Alto, Calif.

Delay lines. Ic RMSa

Western Gear Corp., Electro Products Div., 132 W. Colorado St., Pasadena, Calif.

Magnetic cores. Ic RMSa

Western Gold & Platinum Co., 589 Bryant St., San Francisco 7, Calif.

Magnetic cores. Ic RMSa

Western Union Telegraph Co., 60 Hudson St., New York 13, N.Y.

Sensitized paper. Ic RMSa

Westinghouse Air Brake Co., Div. of Union Switch & Signal, Pittsburgh 18, Pa.

Analog computers. Ac RMSa

Westinghouse Electric Corp., Analytical Department, East Pittsburgh, Pa. / Express 1-2800 / \*C 57

Computing service: digital and analog. Electronic and passive element analog computers; analog-to-digital conversion equipment; automatic control devices. DC and AC calculating boards (network analyzers); ANACOM computer. IBM Type 704. Dynamic analyses of physical systems, including transient phenomena in mechanical and electrical systems; servomechanisms, and regulating systems; nuclear reactor calculations; field mapping; operations research. Ls(corporation, 100,000; dept., 50) Se(dept., 1952) DAsc RMSCPa

Westinghouse Electric Corp., Semi-Conductor Div., Youngwood, Pa.

Rectifiers. Ic RMSa

Weston Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark 5, N.J.

Relays, resistors. Weston Inductronic Product Resolver, new analog multiplying element. Ic RMSa

Organizations

Westronics, Inc., 3605 McCart St., Fort Worth 8, Tex.  
 Analog computers, digital computers, analog-to-digital converters; potentiometers. DAic RMSa

Westrex Corp., 111 8th Ave., New York 11, N.Y.  
 Magnetic tape recorders; facsimile receiving equipment, sensitized paper. Ic RMSa

Wharf Engineering Labs., Fenny Compton, Warwickshire, England / Fenny Compton 30 / \*C  
 Magnetic drums, recording heads, transformers. Ss(15) Se(1949) Ic RMSa

John F. White head Co., P. O. Box 267, No. Haven, Conn.  
 Magnetic cores. Ic RMSa

Wiancko Engineering Co., 255 North Halstead Ave., Pasadena, Calif.  
 Digital ballistics analyzer computer, computer components, etc. DAic RMSa

Wright Aeronautical, Wood Ridge, N.J. / PRescott 7-2900 / \*C 56  
 Data processing machines, components. Dic RMSa

Wright Engineering Co., 180 E. California St., Pasadena, Calif.  
 Analog-to-digital converters, magnetic drums. Ic RMSa

Y

Yale & Towne Manufacturing Co., Powdered Metal Products Div., 9335 Belmont Ave., Franklin Park, Ill.  
 Magnetic cores. Ic RMSa

Z

Zator Co., 79 Milk St., Boston 9, Mass. / Liberty 2-4624 / \*C  
 Digital equipment and systems for coding, filing, and finding information (Zato coding systems). High-speed selectors for notched cards. Methods for use of digital computing machines to recover information. Ss Se(1947) Ic RCSa

Zeuthen & Aagaard Ltd., 6 Esplanaden, Copenhagen, Denmark / Central 3795 / \*C  
 Portable adding machine (Contex); dictating machine (Rex-Recorder) with magnetic recording on plastic disc using impregnated particles and permitting more than 10,000 reuses; duplicating machines, etc. Ls Le Ic RMSa

ZUSE KOMMANDIT-GESELLSCHAFT, Kreis Hünfeld, Neukirchen, West Germany / - / \*C 57  
 Relay and electronic computers. Ms(180) Se(1949) Dc RMSa

Are you Looking for

REFERENCE INFORMATION

in the Computer Field?

COMPUTERS AND AUTOMATION

publishes 16 kinds of reference information that computer people can hardly afford to be without. Latest issues containing each are indicated.

Organizations:

- Roster of Organizations in the Computer Field (June 1957)
- Roster of Computing Services (June 1957)
- Roster of Consulting Services (June 1957)

Computing Machinery and Automation:

- Types of Automatic Computing Machinery (March 1957)
- Roster of Automatic Computers (June 1956)
- Outstanding Examples of Automation (July 1954)
- Commercial Automatic Computers (Dec. 1956)
- Types of Components of Automatic Computing Machinery (March 1957)

Products and Services in the Computer Field:

- Products and Services for Sale or Rent (June 1957)
- Classes of Products and Services (June 1957)

Words and Terms: Glossary of Terms and Expressions in the Computer Field (Oct. 1956) (reprinted, \$1.00)

Information and Publications:

- Books and Other Publications (many issues)
- New Patents (nearly every issue)
- Roster of Magazines (Dec. 1955)
- Titles and Abstracts of Papers Given at Meetings (many issues)

People: Who's Who in the Computer Field

Cumulative (1957, Extra No. E1, 212 pp.)

BACK COPY PRICE: If available, \$1.25 each, except: June 1955 and 1956, \$4.00, and June 1957, \$6.00 (the June issue is the Computer Directory issue); 1957, No. E1, Who's Who in the Computer Field, \$17.50.

--- Mail this coupon (or a copy of it) ---

To: Berkeley Enterprises, Inc.  
 815 Washington St., R104  
 Newtonville 60, Mass.

Please send me the following:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

I enclose \$\_\_\_\_\_ in full payment. If not satisfactory, returnable within week for full refund (if in good condition).

My name and address are attached.

**BUYERS' GUIDE**  
**FOR**  
**THE COMPUTER FIELD:**  
**PRODUCTS AND SERVICES FOR SALE OR RENT**

(Cumulative, information as of May 22, 1957)

The purpose of this list, "The Buyers' Guide", is to give at least some information about every product or service in the computer field that is offered for sale or rent and that we have been able to learn something about. This is the third edition of this list; it covers about 39 pages and contains over 1300 entries.

There are two classes of entries in this list.

Class One entries are those for which THE NAME OF THE SUPPLIER IS ALL IN CAPITALS. Class One entries are likely to be complete and reliable; the supplier has either sent us his entry in response to our questionnaire or approved the proposed entry which we sent to him; he has thought enough of the value of the entry to pay the requested nominal charge of \$10 per entry, to help defray the cost of preparing and printing this part of the directory; and we have edited the entry, though usually in a minor way. An index to Class One entries by name of supplier has been provided.

Class Two entries are those for which the name of the supplier is not all in capitals. Such entries are derived from other information reaching us. In some cases answers to questionnaires have been received where the supplier has not believed it desirable to make any payment; many of these entries have been condensed. In many cases, we have had no information at all from the supplier enabling us to verify what we have said about his product or service. In general, Class Two entries are less likely to be complete and reliable.

Questionnaire. Many of the entries in this list have been derived from answers to questionnaires which we sent out in February, March, and April to over 300 suppliers in the computer field. The form of this questionnaire, called the "Product Entry Form", is shown on page 43.

For a new or changed entry, the information we want is asked for on this form; the answers may be written on the form or on any piece of paper. Customary sales literature is difficult for us to use, and need not be sent.

Style of Entry. The full entry for a product or service in the list consists of: name of supplier, address / name or identification of product or service / DESCR: a brief description of the product, in about 20 to 50 words -- see examples in the list / USE: how it is used / price range, and whether for sale or rent. Every entry is subject to editing.

Abbreviations. The abbreviations used include: DESCR -- description; \*a -- address above (where several products made by one supplier are listed in succession).

Corrections. We have tried to make each entry correct to the extent of information in our possession. But it is inevitable that at least some errors have occurred, and we shall be glad to publish corrections. There will be no charge of course where the incorrectness of information is attributable to our error; in other cases there will be a requested nominal charge of \$10 an entry to be paid at the time when the new entry is sent in to us.



Buyers' Guide for the Computer Field:

Products and Services for Sale or Rent

LIST OF HEADINGS

In order to find information on products and services, it will be convenient to refer to the following list of 69 headings.

- A: 1. Adding Machines  
2. Addressing Machines  
3. Analog Computers  
4. Analog-to-Digital Converters  
5. Arithmetical Circuits (for Digital Computers)  
6. Automatic Control Equipment
- C: 7. Capacitors (computer types)  
8. Card-to-Tape Converters  
9. Computer Components (see also specific types)  
10. Computers (see also: Analog Computers, Digital Computers)  
11. Computers, Test Equipment  
12. Computing Services  
13. Connectors (computer types)  
14. Consulting Services  
15. Courses by Mail (computer field)
- D: 16. Data Processing Machinery (see also Digital Computers)  
17. Delay Lines (computer types)  
18. Desk Calculators  
19. Differential Analyzers (see also Analog Computers)  
20. Digital Computers  
21. Digital-to-Analog Converters  
22. Diodes (computer types)
- E: 23. Electric Typewriters, controlled  
24. Electronic Tubes (computer types)
- F: 24.5. Facsimile Equipment  
25. Fire Control Equipment
- I: 26. Information Retrieval
- K: 27. Keyboards
- L: 28. Line-a-Time Printers  
29. Logical Circuits (for Digital Computers)
- M: 30. Magnetic Cores (computer types)  
31. Magnetic Drums  
32. Magnetic Heads  
33. Magnetic Storage Systems  
34. Magnetic Tape  
35. Magnetic Tape Handlers (see also Magnetic Tape Recorders)  
36. Magnetic Tape Recorders (see also Magnetic Tape Handlers)
- O: 37. Office Machines (computer types) (see also specific types)
- P: 38. Paper Tape Filing Systems  
39. Paper Tape Punches  
40. Paper Tape Readers  
41. Patchcords  
42. Photoelectric Card Readers  
43. Photoelectric Decoding Readers  
44. Photoelectric Tape Readers  
45. Photographic Recorders (computer types)  
46. Plotters  
47. Potentiometers  
48. Printers (see also Line-a-Time Printers, Electric Typewriters, controlled)  
49. Publications  
50. Pulse Transformers  
51. Punch Card Machines
- R: 52. Recording Papers  
53. Rectifiers  
54. Relays (computer types)  
55. Resistors  
56. Resolvers  
57. Robots, Small
- S: 58. Scanners  
58.5. Semiconductors  
59. Signaling Controls  
60. Simulators  
61. Stepping Switches  
62. Storage Systems (see Delay Lines, Magnetic Storage Systems)  
63. Synchros
- T: 64. Tape-to-Card Converters  
65. Transistors  
66. Translating Equipment
- V: 67. Visual Displays

Buyers' Guide for the Computer Field;

Products and Services for Sale or Rent

INDEX BY SUPPLIER TO CLASS ONE ENTRIES

Class One entries are those for which THE NAME OF THE SUPPLIER IS ALL IN CAPITALS. Class One entries are likely to be more complete and reliable; the supplier has either sent us his entry or approved the proposed entry, and has considered his entry important enough to pay the requested nominal charge of \$10 per entry. The number refers to the number in the list of headings, which also appears on the upper corners of the pages of "Products and Services."

- Adalia Computations, Ltd. 12  
Adalia, Ltd. 14  
Addressograph-Multigraph Corp. 2, 8, 16, 24.5, 48  
AEC Computing Facility 12  
Airborne Instrument Laboratories, Modac Division, 16, 35  
Aladdin Electronics 9, 50  
Allegany Instrument Co., Inc. 3, 10, 20, 60  
R.C. Allen Business Machines, Inc. 1  
Allies' Products Corp. 55  
ALWAC Corp. 16, 20, 31, 32, 33, 46  
American Electronics, Inc. 9, 56, 63  
American Machine & Foundry Co. 12  
Amperite Co., Inc. 54  
Ampex Corp. 16, 24.5, 34, 36  
Amphenol Electronics Corp. 13  
Andersen Laboratories 17  
The Arnold Engineering Co. 30  
Atlas Precision Products Co. 3  
Audio Devices, Inc. 34  
The Austin Co. 3, 4, 6, 14, 16, 20, 64  
Automatic Electric Co. 54, 61  
Automation Engineers Co. 14  
Autonetics, A Div. of No. American Aviation, Inc. 10, 19, 20  
Bank of America National Trust and Savings Association 12  
Beckman Instruments Inc., Systems Division 4, 16, 21, 30  
Bendix Aviation Corp. 3  
Bendix Aviation Corp., Research Laboratories Division 6, 16, 20, 21, 60  
Bendix Computer Div., Bendix Aviation Corp. 4, 6, 12, 16, 19, 20  
Berkeley Division, Beckman Instruments, Inc. 3  
The Bristol Co. 6, 9, 47  
British Tabulating Machine Co., Ltd. 51  
Bryant Gage & Spindle Division 17, 31  
Burlingame Associates, Ltd. 3, 4, 16, 33, 46  
Business Electronics, Inc. 15  
Canning, Sisson & Associates 14  
CBS-Hytron 22, 24, 58.5  
C.P. Clare & Co. 54, 61  
Coleman Engineering Co. 16  
  
Computing Devices of Canada, Ltd. 12, 14, 20  
Control Instrument Co., Inc. 28, 43  
Council for Economic & Industry Research, Inc. 12, 14  
Cubic Corp. 16  
Cudahy Publishing Co. 49  
Datamatic Corp. 6, 12, 16, 20  
Data Processing Digest 49  
The Datics Corp. 12, 14  
Daystrom Systems 14  
  
John Diebold & Associates, Inc. 14  
Donner Scientific Co. 3  
Ebasco Services, Inc. 14  
Electralab, Inc. 9  
Electrodata Div. of Burroughs Corp. 12, 14, 20, 23, 35, 39, 40, 44  
Electronic Associates, Inc. 3, 6, 12, 16, 46  
Electronic Engineering Co. 16  
Elliott Addressing Machine Co. 2  
Epsco, Inc. 4, 6, 11, 17, 21, 30, 62, 64, 66, 67  
ESC Corp. 9  
Ferranti Electric, Inc. 17, 20, 31, 40, 44  
Ferranti Ltd. 12  
Fischer & Porter Co. 4, 16, 48  
Ford Instrument Co., Div. of Sperry Rand Corp. 25  
The Foxboro Corp. 3  
The Franklin Institute Laboratories for Research and Development 12  
Friden Calculating Machine Co., Inc. 16, 18, 23, 39  
H.S. Gellman & Co. Ltd. 14  
General Ceramics Corp. 30  
General Kinetics Inc. 12  
The Geotechnical Corp. 9  
Haller, Raymond & Brown, Inc. 9  
Hammerlund Mfg. Co., Inc. 6  
N.V. Hollandse Signaalapparaten 25  
Hoover Electronics Co. 16  
Hughes Research & Development Laboratories, Hughes Aircraft Co. 3, 16, 20  
Industrial Nucleonics Corp. 4, 6  
International Business Machines Corp. 8, 20, 23, 45, 51, 64  
International Resistance Co. 22, 53, 55  
J.V. Kane & Co. 11, 51  
KCS Data Control, Ltd. 12, 14  
A. Kimball Co. 16, 51  
The Kybernetes Corp. 16  
Laboratory for Electronics, Inc. 20  
Lansdale Tube Co., Div. of Philco Corp. 65  
Link Aviation, Inc. 3  
Littelfuse, Inc. 9  
Magnetic Research Corp. 6, 9  
Marchant Calculators, Inc. 18  
Marchant Research, Inc. 16  
Massachusetts Institute of Technology 20  
Mellon Institute of Industrial Research 9  
Metron Corp. 9, 51  
Monroe Calculating Machine Co. 5, 6, 9, 10, 16, 20, 25, 26, 27, 29, 30, 31, 32, 33, 59, 62  
Moore School of Electrical Engineering 12  
F.L. Moseley Co. 46  
National Analysts, Inc. 12, 14, 16, 51  
Northrop Aircraft, Inc. 12

Buyers' Guide

- Nuclear Development Corp. of America 14, 16, 20 \*
- Olivetti Corp. of America 1, 18
- ORRadio Industries 34
- Packard-Bell Electronics Corp. 4, 10, 21
- Panellit Inc. 6, 14
- George A. Philbrick Researches, Inc. 3, 10
- Philips Electronics, Inc. 3
- Potter Instrument Co., Inc. 4, 28, 30, 33, 35, 40, 44, 48
- Radiation, Inc. 4, 16, 21, 48
- Radio Corp. of America 9
- Radio Corp. of America, Components Div. 30, 54
- Radio Corp. of America, Electron Tube Div. 9, 22, 65
- Radio Corp. of America, Semiconductor Div. 9, 22, 65
- Radio Receptor Co., Inc. 22, 53
- Raytheon Manufacturing Co. 9, 22, 24, 53
- Recording & Statistical Corp. 12
- Remington Rand Univac Div., Sperry Rand Corp. 1, 3, 8, 12, 16, 18, 20, 31, 51, 64
- Resistance Products Co. 55
- Richardson Camera Co. 16
- Schweber Electronics 7, 9, 10, 13, 22, 47, 54, 55
- The Service Bureau Corp. 12
- Sola Electric Co. 9, 53
- Soroban Engineering, Inc. 9, 14, 20, 23, 27, 39, 40
- The Standard Register Co. 43
- Sturup, Inc. 9, 17
- Sylvania Electric Products, Inc. 9, 16, 20, 22, 24, 65
- Telecomputing Corp. 12, 16
- Telemeter Magnetics, Inc. 6, 30, 33, 34, 35
- Teleregister Corp. 16, 20, 31, 67
- Texas Instruments Incorporated 53, 55, 65
- Trio Laboratories, Inc. 11
- Tung-Sol Electric, Inc. 9
- Typatape, Inc. 52, 64
- University of Michigan, 12
- Victor Adding Machine Co. 5, 16
- The Walkirt Co. 5
- Wayne State University 12
- Zuse Kommandit-Gesellschaft 11, 20

Product Entry Form for

The Computer Directory and Buyers' Guide, 1957

THIS IS THE INFORMATION WE WANT FROM YOU:

1. Name or identification of product (or service)?

2. Brief description (20 to 50 words):

3. How is it used?

4. What is the price range?

5. Under what headings should it be listed?

HERE IS THE INFORMATION WE PUBLISHED LAST YEAR:

Under the heading:

Entry:

Additions, changes, remarks?

Organization

Address

Filled in by Title Date

When filled in, please send this form to COMPUTERS AND AUTOMATION (address above), with \$10.00 requested nominal charge per entry, on or before April 30, 1957.

( ) \$10.00 enclosed.

Above is the form which was used for the questionnaires to suppliers.

## ROSTER

A

## 1. ADDING MACHINES

- R. C. ALLEN BUSINESS MACHINES, INC., Front St., N. W., Grand Rapids 4, Mich. / adding machines, bookkeeping machines, cash registers / 1
- Bell Punch Co., Ltd., England / adding machines / 1
- Burroughs Corp., Detroit, Mich. / adding machines, accounting machines, and bookkeeping machines / 1
- Clary Multiplier Corp. / multiplying machines / 1
- Facit, Inc. / adding machines, Odhner adding machine with multiplying features / 1
- Felt & Tarrant Mfg. Co. / adding and calculating machines, key driven, electric, and non-electric / 1
- Lanston Industries, Inc., Barrett Adding Machines Div. / adding, subtracting, and printing desk calculators / 1
- Monroe Calculating Machine Co. / adding machines, desk calculators / 1
- OLIVETTI CORP. OF AMERICA, 580 Fifth Ave., New York 36, N. Y. / Single and duplex register desk adding machine / DESCR: single register machine (Electrosumma 14) features 10-11 capacity, single, double and triple cipher keys, direct subtraction and credit balance. Two register adding machine (Duplex 21) features 12-13 capacity, high speed, simultaneous inter-register operation, direct subtraction and credit balance / USE: used when high speed, high capacity simplified keyboard is required / single register \$345 + F. E. T.; two register \$460 + F. E. T. / 1
- Reliable Typewriter & Adding Machine Co. / Adding Machines / 1
- REMINGTON RAND, DIV. OF SPERRY RAND CORP., 315 4th Ave., New York 10, N. Y. / Electric Adding Machine / DESCR: 10-key keyboard operated by touch method / USE: business figurework / \$301 to \$625 / 1
- Underwood Corp. / Accounting machines, adding machine, Underwood, Elliott Fisher and Sundstrand machines / 1
- Zeuthen & Aagaard, Ltd., Denmark / adding machines / 1

## 2. ADDRESSING MACHINES

- ADDRESSOGRAPH-MULTIGRAPH CORP., 1200 Babbitt Rd., Cleveland 17, Ohio / Magnetic Tape Electronic Printer / DESCR: reads data contained on magnetic tape and prints at 1, 500 to 3, 000 lines per minute onto ordinary continuous paper; parallel-serial machine / 2
- ELLIOTT ADDRESSING MACHINE CO., 143 Albany St., Cambridge, Mass. / Elliott Addressing Machines / DESCR: high speed addressing equipment with tabulating and statistical analysis functions; typewriteable address stencils-manual or automatic preparation operated in conjunction with other

types of tabulating equipment / USE: wherever repetitive writing of information is required / \$65 to \$18, 000 / 2

## 3. ANALOG COMPUTERS (see also DIFFERENTIAL ANALYZERS)

- Aeronutronic Systems Inc. / Analog computing machinery / 3
- Ahrendt Instrument Co. / Analog computers / 3
- Aircraft Armaments, Inc. / Analog computers / 3
- ALLEGANY INSTRUMENT CO., INC., 1091 Wills Mountain, Cumberland, Md. / Type K-7 Error Computer / DESCR: simulates error-producing factors involved in wire strain transducer systems commonly employed in measuring force, strain, pressure, torque, etc.; computes by analog the effect of the various factors and presents the error directly in percent of correct magnitude / USE: values for system parameters are set on appropriate dials. The Error decade and Vernier are then adjusted to obtain a "null" reading and the Error Decade and Vernier will then read percent error / \$3565 / 3
- American Electronics Co., / Analog computers / 3
- American Hydromath Corp. / Analog computers / 3
- American Machine and Foundry, Electronics Div. / Analog computers / 3
- Analog Controls Inc. / Analog computers / 3
- Arma Corp. / Analog computers, basic weapon and control systems / 3
- ATLAS PRECISION PRODUCTS CO., 3801 Castor Ave., Philadelphia 24, Pa. / Electro Mechanical Analog Computers / design and manufacture of mechanical computers as used on fire control, radar, and aircraft / - / 3
- Audio Instrument Co., Inc. / electronic, mechanical, and optical analog computers / 3
- THE AUSTIN CO., 76 9th Ave., New York 11, N. Y. / "Computrols" / DESCR: computers for control; engineered for special purposes; built from standard component sub-assemblies / USE: for industrial control applications, machine tools, etc. / 3
- Avion Div. of American Car & Foundry Industries, Inc. / Analog computing machinery / 3
- Avion Div. of ACF, Erco Div. / Analog computers / 3
- Avion Instrument Co. / analog computing machinery / 3
- Baird Atomic Co. / analog devices / 3
- BENDIX AVIATION CORP., Research Laboratories Div., P. O. Box 5115, Detroit 35, Mich. / Analog computers / DESCR: develop and manufacture special purpose standard and miniature analog and digital computing systems and related equipment for both industrial and military use: navigation, guidance and control, data reduction, dynamic data plotting, flight simulation, nuclear reactor simulation, numerically controlled machine tools, meteorological, process control, data logging / USE: control, measurement, data handling, inventory, analysis / \$20, 000 to \$1, 000, 000 / 3
- Benson-Lehner Corp. / automatic and semi-automatic

- devices for computing, data analyzing, data reduction, optical measuring, guided missile analysis, etc. / 3
- BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC.**, 2200 Wright Ave., Richmond, Calif. / EASE Electronic Analog Simulating Equipment / DESCR: analog computers ranging from standard units to completely automatic punched tape or punched card set-up systems with automatic scanning and printed read-out / USE: simulation of actual physical systems — provide solutions for mathematical expressions or representation / - / 3
- Boeing Airplane Co.**, Industrial Products Div. — Electronic Analog Computer transferred to Western Electronic Supply Co., which see / 3
- BURLINGAME ASSOCIATES, LTD.**, 103 Lafayette St., New York 13, N. Y. / Analog computers and computer accessories / \$500 to \$10,000 / 3
- Cedar Engineering, Inc.** / Analog computers / 3
- Century Engineers, Inc.** / Analog computers / 3
- Computing Company of America** / Analog computers, specialized computers and accessories / 3
- Daystrom Instrument Co.** / Analog computers / 3
- DONNER SCIENTIFIC CO.**, 888 Galindo St., Concord, Calif. / Analog computers, information delay generators, function generators, function multipliers, etc. / DESCR: simple desk-top (Model 3000) all the way up to facilities (60 or more operational amplifiers) with all necessary auxiliaries / USE: by engineers, mathematicians, educators, etc. / \$1,245 to \$100,000 / 3
- Edin Co., Inc.** / Frequency Spectrum Analyzer Model 8135 / DESCR: performs complete continuous component frequency analysis of any complex wave form, reading out all the frequencies and their energy contents in the form of a bar graph / USE: to analyze electronic computer data for complex component frequency and energy contents / \$5,000 / 3
- EECO Production Co.** / Analog computer / DESCR: desk type analog computer / USE: data handling, etc / \$7500 / 3
- ELECTRONIC ASSOCIATES, INC.**; Long Branch, N. J. / Analog Computer Group 16-31R / DESCR: a 20 amplifier, self-contained unit; to accomplish enlargement of the system, standard component groups including operational amplifiers, resolvers, servo multipliers, diode function generators, electronic multipliers, and other associated input and output equipment / USE: in computation, simulation, testing / \$15,000 / 3
- ELECTRONIC ASSOCIATES, INC.**, \*a / Analog Computer Group 16-131R / DESCR: A self-contained, general purpose analog computer containing 80 attenuators, 20 operational amplifiers (8 combination integrator-summing, 12 summing) all-metal color-coded patch panel, VTVM, provision for 3 servo multipliers and digital voltmeter, thermostatically controlled oven for computing networks and passive elements, control overload alarm, terminal trunks for slaving of remote equipment, and assorted patch cords and bottle plugs, push button system monitor, problem check, automatic hold, and an auxiliary bay for customized equipment additions. Contains facility for Automatic Extended Readout / USE: computation, simulation, systems analysis, testing / 3
- Electronic Control Systems, Inc.** / special purpose computers for military and industrial use, meeting customer's exact requirements / 3
- Electronic Control Systems, Inc.** / statistical analyzer / DESCR: special purpose computer / USE: quality control, product certification, component evaluation, inspection / \$9,000 to \$11,000 / 3
- Emerson Radio & Phonograph Corp.** / Analog computers / 3
- Farrand Optical Co.** / Analog computers / 3
- Feedback Controls, Inc.** / Analog computers / 3
- THE FOXBORO CO.**, Foxboro, Mass. / Analog computers / 3
- General Automatics, Inc.** / Analog computers / 3
- Goodyear Aircraft Corp.** / GEDA Analog Computing Equipment / 3
- GPS Instrument Co., Inc.** / Analog computers / 3
- Hall-Scott, Inc.** / Analog computers / 3
- HUGHES RESEARCH AND DEVELOPMENT LABS.**, Culver City, Calif. / small, automatic electronic analog computers for airborne use / 3
- Industrial Electronics of Canada, Ltd.** / Analog computers / 3
- Industrial Research Co.** / Analog computers / 3
- Industrial Test Equipment Co.** / Analog computers / 3
- Instron Engineering Corp.** / Analog computers / 3
- Instrument Components, Inc.** / Analog computers / 3
- Instrument Development Labs., Inc.** / Analog (color difference) computers / 3
- ITE Circuit Breaker Co.** / Analog computers / 3
- Bill Jack Scientific Instrument Co.** / airborne analog computers for "Recon" systems, aerial cameras / 3
- Kearfott Co., Inc.** / Analog computers / 3
- George F. Kelk, Ltd.**, Ontario / specialized analog computers / 3
- Kelt Corp.** / Analog computers / 3
- Walter Kidde & Co.** / Analog computers / 3
- Leemath, Inc.** / Analog computers / 3
- Librascope, Inc.** / mechanical and electrical computers computing and controlling equipment for military and industrial applications / 3
- LINK AVIATION, INC.**, Binghamton, N. Y. / Link Aero-log Performance Computer / DESCR: a specialized computer for solving the classical steady-state equations of flight; accurately calculates rates of climb, maximum speeds, lift coefficients, and climb angles based on input variables / USE: by aircraft design groups, does not require specialists to operate / \$17,500 / 3
- The W. L. Maxson Corp.** / analog computers for fire control, navigation, etc. / 3
- Mid-Century Instrumatic Corp.** / Analog computers / 3
- William Miller Instruments, Inc.** / Milac analog computer / 3
- Norden-Ketay Corp.** / analog computers for fire control systems, aviation ordnance, etc. / 3
- Otis Elevator Co.** / Analog computers / 3
- The Perkin-Elmer Corp.** / Analog computers / 3
- GEORGE A. PHILBRICK RESEARCHES, INC.**,

- 230 Congress St., Boston 10, Mass. / Electronic analog computers / DESCR: research, design, and manufacture of analog computers, ranging from operational amplifiers and power supplies to complete computing facilities, modular construction / USE: measurement and synthesis through voltages / components from \$24 to \$1750; complete installations \$1015 to \$60,000 / 3
- PHILIPS ELECTRONICS, INC., Instruments Div., 750 So. Fulton Ave., Mount Vernon, N. Y. / Analog computers / - / USE: with X-ray Diffractometer and X-ray Spectrograph / - / 3
- The Rand Corp. / Analog computers / 3
- Reeves Instrument Corp. / "REAC" electronic analog computers / 3
- The Reflectone Corp. / Analog computers / 3
- REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., 315 4th Ave., New York 10, N. Y. / Analog computers; special purpose computers / 3
- Republic Aviation / Analog technique / 3
- Research Inc. / Analog computers / 3
- Sanborn Co. / Analog computer systems / 3
- Seismograph Service Corp. / Analog computers / 3
- Servo Corp. of America / Servomation Building Blocks / DESCR: Electro-mechanical general purpose analog computer; extremely accurate; results stated in mechanical output for application in control systems; various component combinations apply to a wide range of industrial, design, educational, and telemetering requirements / USE: computer components, servomechanisms, control equipment / - / 3
- Servomechanisms, Inc. / CA 500 Mach Computer / 3
- Servomechanisms, Inc. / see also "Data Processing Machines" / 3
- Short Bros. & Harland Ltd. / The Short General Purpose Analogue Computer / DESCR: a flexible general purpose instrument incorporating switched components and a set-up panel which obviates the need for the normal loose wiring; repetitive and continuous solution; high-gain, high band width amplifiers of unique design; automatic drift correction / USE: solution of simultaneous differential equations both linear and non-linear. Simulation of control systems with discontinuities and dead zone conditions. As a real time simulator with external equipment / price available on application / 3
- Société d'Electronique et d'Automatisme, France / analog computers and components; analog computer OME-12 / 3
- Southwestern Industrial Electronics Co., Inc. / SIE Analog Computer / DESCR: performs multiplication, division, addition, subtraction, logarithms, and roots / USE: especially, the solving of simultaneous non-linear algebraic equations; also particularly fixed-program unattended real-time operation / \$1000 and up / 3
- Standard Electric Time Co. / Analog computers / 3
- Sterling Precision Corp. / Analog computers / 3
- Sunvic Controls, Ltd., England / Analog computers / 3
- Ultrasonic Corp. / Analog computers / 3
- U. S. Naval Research Laboratory, Washington 25, D. C. / Analog computers / 3.
- Waldorf Instrument Corp. / Analog computers / 3
- Wallind-Pierce Corp. / Analog computers / 3
- Weber Electronics / Weber Analog Computer / DESCR: compact, desk-like console, requiring no auxiliary units / USE: in business and industry as departmental equipment. Capable of solving highly complex problems. Operates on both real and repetitive time. / \$6000-\$8000 / 3
- Weems System of Navigation / Automatic navigation systems / 3
- West Coast Electronics Co. / Analog computers / 3
- Westinghouse Electric Corp., Analytical Dept. / Analog computers / 3
- Westinghouse Air Brake Co., Div of Union Switch & Signal / Analog computers / 3
- Westronics, Inc. / Analog computers / 3

#### 4. ANALOG-TO-DIGITAL CONVERTERS

- Ahrendt Instrument Co. / Analog-to-digital converters / 4
- Airborne Instruments Lab., Inc. / Analog-to-digital converters / 4
- Airflyte Electronics Co. / Analog-to-digital converters / 4
- American Electronics Co. / Analog-to-digital converters / 4
- American Machine & Foundry, Electronics Div. / Analog-to-digital converter; digital servo / 4
- Analogue Controls Inc. / Analog-to-digital converters / 4
- Applied Electronics Corp. / Analog-to-digital converter / 4
- Assembly Products, Inc., / LIAD, analog-to-digital converter and multi-contact meter-relay / 4
- Atomic Instrument Co. / Model 975 Analog-to-Digital Converter, "Atomicon" / 4
- THE AUSTIN CO., 76 9th Ave., New York, N. Y. / Analog-to-digital converter / DESCR: quantizer of shaft position provides instantaneous analog-to-digital conversion; direct coupling eliminates servo; accuracy is independent of shaft acceleration; resolution to 1 part in 5000 / USE: in data handling systems / \$990 with control unit / 4
- Avion-Division-Alexandria (formerly ACF Electronics) Div. of ACF Industries, Inc. / ACF Model 1051 Voltage Encoder / 4
- BECKMAN INSTRUMENTS, INC., SYSTEMS DIVISION, 325 N. Muller Ave., Anaheim, Calif. Analog-to-digital converters -- see "Data Processing Machinery" / 4
- Bendix Aviation Corp., Pacific Division / Analog-to-digital converters / 4
- BENDIX COMPUTER DIV., BENDIX AVIATION CORP., 5730 Arbor Vitae St., Los Angeles 45, Calif. / Analog-to-digital converters / DESCR: electronic converting equipment for control, data reduction, and digital computer techniques; designs originated to meet special requirements / - / 4

- BURLINGAME ASSOCIATES, LTD., 103 Lafayette St., New York 13, N. Y. / Analog-to-digital converters / 4
- Century Engineers, Inc. / Analog-to-digital converters / 4
- COLEMAN ENGINEERING CO., 6040 W. Jefferson Blvd., Los Angeles 16, Calif. / Digitizers / DESCR: Coleman Digitizers convert shaft rotations into discrete settings of electrical contacts for operation of electric printers, electric typewriters, preparation of IBM punched cards, Flexowriter Tape, etc. / USE: convert rotating shaft positions into digits / about \$500 and up / 4
- Consolidated Avionics Corp. / Analog-to-digital converters / 4
- Corbin Corp. / Analog-to-digital converters / 4
- Electro Instruments, Inc. / analog-to-digital converters / 4
- Electro-Mechanical Research, Inc. / Analog-to-digital converters / 4
- Electro-Mec Laboratory, Inc. / Analog-to-digital converters / 4
- Electro-Miniatures Corp. / Analog-to-digital converters / 4
- Electronic Computer Company / Analog-to-digital converter for data reduction systems and general voltage measurement applications. / 4
- Engineered Electronics Company / Decimal Counter, Plug-in / DESCR: decimal counter, with indicators, operating to 1 Mc. Plate output leads available for external use. Special scaler available for counting N/16, N/10, or N/8 with plate outputs only / USE: for use in computer and control systems / 100 Kc unit \$66 -- 1 Mc Unit & Special Scaler about \$200 / 4
- EPSCO, INC., 588 Commonwealth Ave., Boston, Mass. / DATRAC Model B / DESCR: High speed reversible voltage-to-digital converter. Straight binary or binary coded decimal output in both serial pulse and semi-static parallel form. No operator adjustments. / USE: Automatic control; data reduction for visual or computer processing / - / 4
- Fairchild Engine & Airplane Corp. / Analog-to-digital converters / 4
- FISCHER & PORTER CO., 330 Warminster Rd., Hatboro, Pa. / "Digi-Coder" / DESCR: electro-mechanical high-speed analog-to-digital converter / USE: takes in shaft position representing flow-temperature, pressure, level, voltage, angular or linear position, and other variables, and puts out digital value / 4
- Franklin Electronics, Inc. / Analog-to-digital converters / 4
- General Devices, Inc. / Analog-to-digital converters / 4
- Genisco, Inc. / Analog-digital converter / 4
- G. M. Giannini & Co., Inc. / Digital Data Recording Systems, Analog-to-digital converters / Servomechanisms to convert physical phenomena to shaft rotation; shaft position digitizer with sliding contacts; storage and sequencing controls / USE: to record data from wind tunnels, engine tests, radar, industrial processes, on punched cards, punched tape, or printed record / \$800 to \$50,000 / 4
- INDUSTRIAL NUCLEONICS CORP., 1205 Chesapeake Ave., Columbus, Ohio / Analog-to-digital converters / 4
- Industrial Research Lab., Div. of Aeronca / Analog-to-digital converters / 4
- Industrial Development Labs., Inc. / Analog-to-digital converters / 4
- Kearfott Co., Inc. / Analog-to-digital converter / 4
- Leemath, Inc. / Analog-to-digital converters / 4
- MacLeod & Hanopol, Inc. / Analog-to-digital converters / 4
- The Magnavox Co. / Analog-to-digital converters / 4
- The Newton Co. / Shaft-to-digital converters / 4
- Non-Linear Systems, Inc. / Digital Voltmeters and Ohmmeters / high accuracy digital measuring and conversion equipment / USE: precision measurement and display in laboratory, inspection and reading analog computer inputs and outputs / \$44 to \$8500 / 4
- Norden-Ketay Corp. / Analog-to-digital converter / 4
- Oerlikon Tool & Arms Corp. of America / Analog-to-digital converters / 4
- PACKARD-BELL ELECTRONICS CORP., 12333 W. Olympic Blvd., Los Angeles 64, Calif. / Analog-to-digital converters / 4
- POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. / Analog-to-digital converter / 4
- RADIATION, INC., P. O. Box 37, Melbourne, Fla. / Analog-to-digital converters / 4
- Radiation Instrument Devel. Lab. / Analog-to-digital converters / 4
- Streeter-Amet Co. / Analog-to-digital converters / 4
- Stromberg-Carlson-San Diego / Analog-to-digital converter / 4
- Sunvic Controls, Ltd., England / Analog-to-digital converters / 4
- Taller & Cooper, Inc., / Analog-to-digital converter / DESCR: translates output or test data into digital form; receives data in the form of shaft rotations; the converter can control a card punch system or typewriter / USE: may be hooked up to potentiometers / \$450 / 4
- Veeder-Root, Inc. / Analog-to-digital converters -- counters, mechanical and electrical / 4
- Wallind-Pierce Corp. / Analog-to-digital converters / 4
- Westronics, Inc. / Analog-to-digital converters / 4
- Wright Engineering Co. / Analog-to-digital converters / 4

##### 5. ARITHMETICAL CIRCUITS (FOR DIGITAL COMPUTERS)

- Brush Electronics Co. / Digital decade counter / 5
- Computer Control Co., Inc. / 3C-PAC Series V Universal Logical Gating Package / DESCR: a package operating at a 1 megacycle rate / USE: PACs can be used as flip-flops, serial or parallel adders, subtractors, shift registers, comparators, code converters, logical switching networks, etc. / - / 5
- Engineered Electronics Company / Computer Plug-in circuitry / DESCR: electronic DC-coupled plug-in circuits including flip-flops, shift register elements, pulse mixers and amplifiers, neon drivers, dbde logic, one-digit adder, one-digit subtractor, etc. Standard signal

level is 20 volts. Conservatively rated, etched circuit construction, compact design, compatible accessory items. Transistorized plug-ins under development / USE: for design and assembly of computer-type systems / about \$30 -- \$150 per plug-in / 5

MONROE CALCULATING MACHINE CO. -- see Computer Components. / 5

Philco Corp., Government & Industrial Div. -- see "Digital Computers" / 5

VICTOR ADDING MACHINE CO., 3900 N. Rockwell St., Chicago 18, Illinois / Add-Tractor / DESCR: a nine's complementing 100 KC electronic decimal counter providing a fast means of addition or subtraction / USE: Unitary or decimal input. Complements in 10 microseconds / \$95. / 5

THE WALKIRT CO., 141 West Hazel St., Inglewood 3, Calif. / Plug-in pulse circuit packages / DESCR: generally single-tube and/or transistor circuit stages, encapsulated in resin, plug-in form; complete counters, multivibrators, amplifiers, gates, triggers, pulse generators, etc. / USE: as a complete circuit stage in digital computing equipment / \$8 to \$20 per stage / 5

## 6. AUTOMATIC CONTROL EQUIPMENT

Askania Regulator Co. / Hydraulic and electronic automatic control equipment / 6

THE AUSTIN CO., Special Devices Division, 76 9th Ave., New York 11, N. Y. / Automatic Controls / systems and devices for automatic control in commerce and industry; analog, digital, data-handling, servo, electronic, electromechanical; shaft position indicators and systems / 6

Automatic Signal Div., Eastern Industries, Inc. / Automatic volume density traffic controllers / 6

Automation Engineering Laboratory / Automated units or systems / 6

Autron Engineering, Inc. / Automatic control equipment / DESCR: high-speed electro-mechanical digital counter / 6

Avion Division of American Car and Foundry Industries, Inc. / Automatic control machinery / 6

Avion Instrument Co. / Automatic control machinery / 6

Barnes Engineering Co. / Automatic control equipment / 6

Bell Punch Co., Ltd., England / Automatic control equipment / 6

BENDIX AVIATION CORP., RESEARCH LABORATORIES DIVISION, P. O. Box 5115, Detroit 35, Mich. / Automatic control equipment -- see "Analog Computers" / 6

BENDIX COMPUTER DIV., BENDIX AVIATION CORP., 5630 Arbor Vitae St., Los Angeles 45, Calif. / Electronic systems for control functions as related to digital computer techniques; computer controlled devices / - / 6

Bergen Laboratories / automatic control equipment / 6

Bowser, Inc. / Electrofile, Xacto, Xactonic, liquid controls, etc. / 6

THE BRISTOL CO., Waterbury, Conn. / Instruments for automatic control and automation / DESCR: auto-

matic recording, indicating, controlling, and telemetering instruments and components. Electronic recording potentiometers; Instruments for automatic control and automation; Choppers and socket screws for computers / - / 6

Concord Control Inc. / numerically controlled milling machine; industrial prototype numerical control system; numerical control systems for fully automatic machining of aircraft parts / 6

DATAMATIC CORP., 151 Needham St., Newton Highlands 61, Mass. / Machine control / 6

Eagle Signal Corp. / Automatic control equipment / 6

Thomas A. Edison, Inc., Instrument Div. / Automatic control components / 6

ELECTRONIC ASSOCIATES, INC., Long Branch, N. J. / Automatic process control / 6

Electronic Control Systems, Inc. / Industrial process and machine control systems; automatic test equipment / 6

Engineered Electronics Company / Hermetically sealed stepping switches / DESCR: stepping switches packaged in oil-bath, hermetically sealed enclosure. Special assembly techniques available for reliable switching at low signal levels. Connectors available: Solder terminals plug-in connectors / USE: for long-life applications of stepping switches / depends upon switch specified, plating desired, etc. Example: \$265 / 6

EPSCO, INC., 588 Commonwealth Ave., Boston 15, Mass. / Automatic control systems / DESCR: Equipment and systems for dynamic weighing (as conveyor belts, etc.); Process mix control; production count control. Systems employing operational digital techniques. / USE: throughout heavy and light industry / Rental available / 6

Farrand Controls, Inc. / Automatic control equipment / 6

General Controls, 802 Allen Ave., Glendale 1, Calif. / Automatic controls (pressure, temperature, level, flow) / 6

HAMMARLUND MFG. COMPANY, INC., 460 West 34 St., New York 1, N. Y. / Centralized Operations Control (C. O. C.) / DESCR: C. O. C. is a system of remote control employing audio tones for purpose of remote supervisory control and telemetering over speech grade telephone lines or communication links. The equipment is compatible with most systems of instrumentation. / USE: for remote supervisory control and telemetering / Basic units approx. \$250 -- others, under \$1000 to upper 5 figures / 6

Hillyer Instrument Co. / Automatic machine controls / 6

INDUSTRIAL NUCLEONICS CORP., 1205 Chesapeake Ave., Columbus, Ohio / "AccuRay" process control systems / 6

International Telephone and Telegraph Corp. / Equipment for automatic control of repetitive processes, clerical or industrial work / 6.

Bill Jack Scientific Instrument Co. / Control systems / DESCR: control systems for aerial reconnaissance cameras employing special purpose analog computers, positional and velocity servo mechanisms, and intervalometers / USE: in military aircraft / \$5,000 to \$30,000, depending upon complexity / 6

(cont'd on page 57)



THE COMPUTER DIRECTORY AND BUYERS' GUIDE, 1957

the June, 1957 issue of Computers and Automation

## A PICTORIAL INTRODUCTION TO COMPUTERS

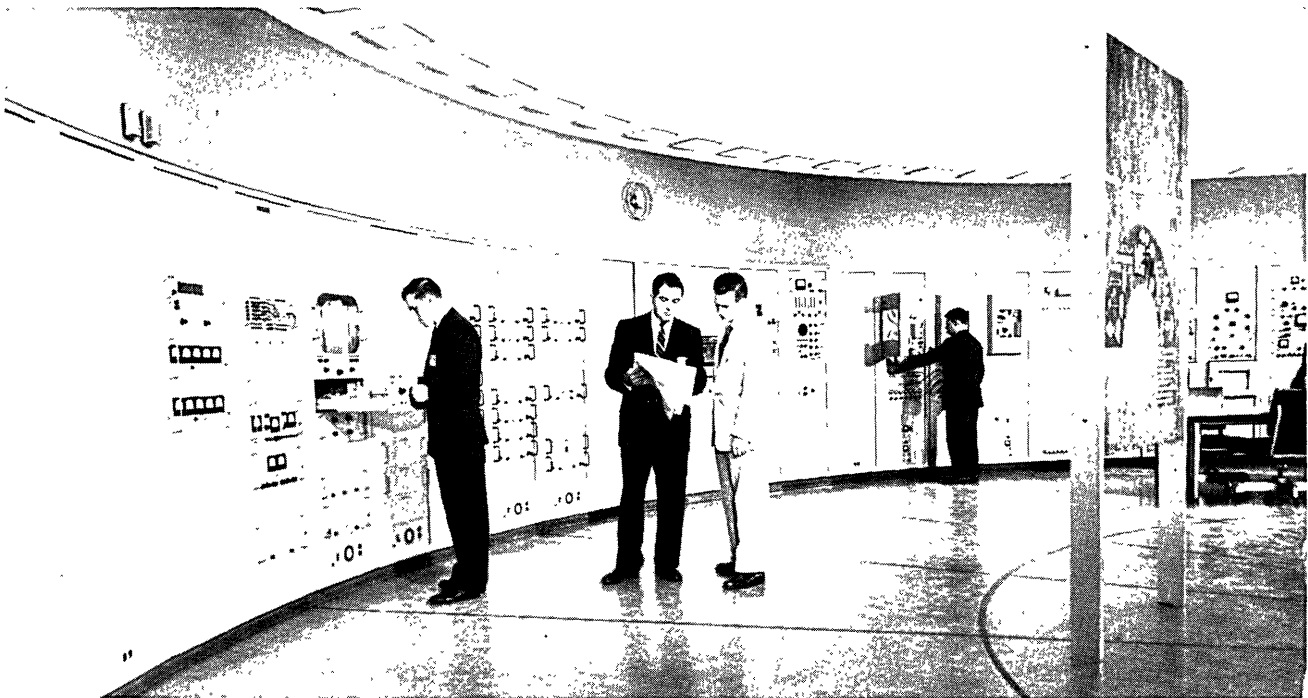
Most of the time computers are not photogenic — not "suitable for being photographed for artistic purposes", as the dictionary defines "photogenic". Why not?

Because taking a picture of a computer to show how it is processing information is like taking a picture of a man's forehead to show how he is thinking: it shows almost nothing. In other words, if you would like to "see how a computer works", you need to look at circuit diagrams and trace pulses of information through them. And since a computer's speed is fantastic, you also need to use instruments (an oscilloscope for example) which will picture the pulses slowed down to human speeds.

But we have now collected some computer pictures which can answer some questions, such as: What does a computer look like? What does a magnetic drum look like? and more besides. Some of these pictures we have included here in "A Pictorial Introduction to Computers". We plan to publish more in subsequent issues of "Computers and Automation". If any of our readers have good pictures answering questions of the type "What does a . . . . . look like?", we shall be very glad to consider them for publication.

### WHAT DOES A COMPUTING CENTER LOOK LIKE?

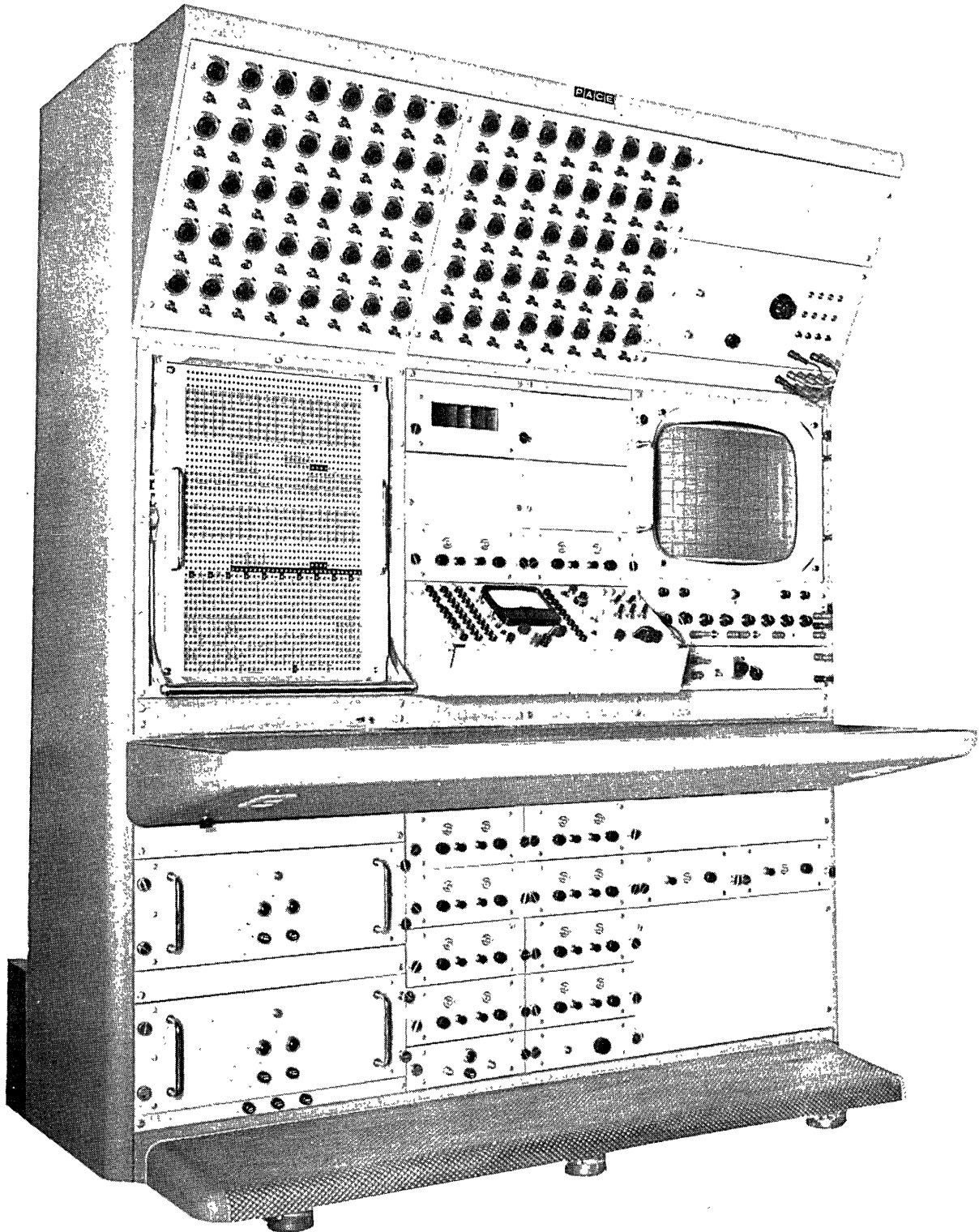
Here is a picture of a computing center at the Ramo-Wooldridge Corporation in Los Angeles. Its main purpose is the reduction of data received by telemetering from experiments with flying aircraft, rockets, missiles, etc.



This view shows a part of a circular array of electronic equipment, which has been assembled into a system for converting telemetered data rapidly into forms suitable for further analysis and study in detail.

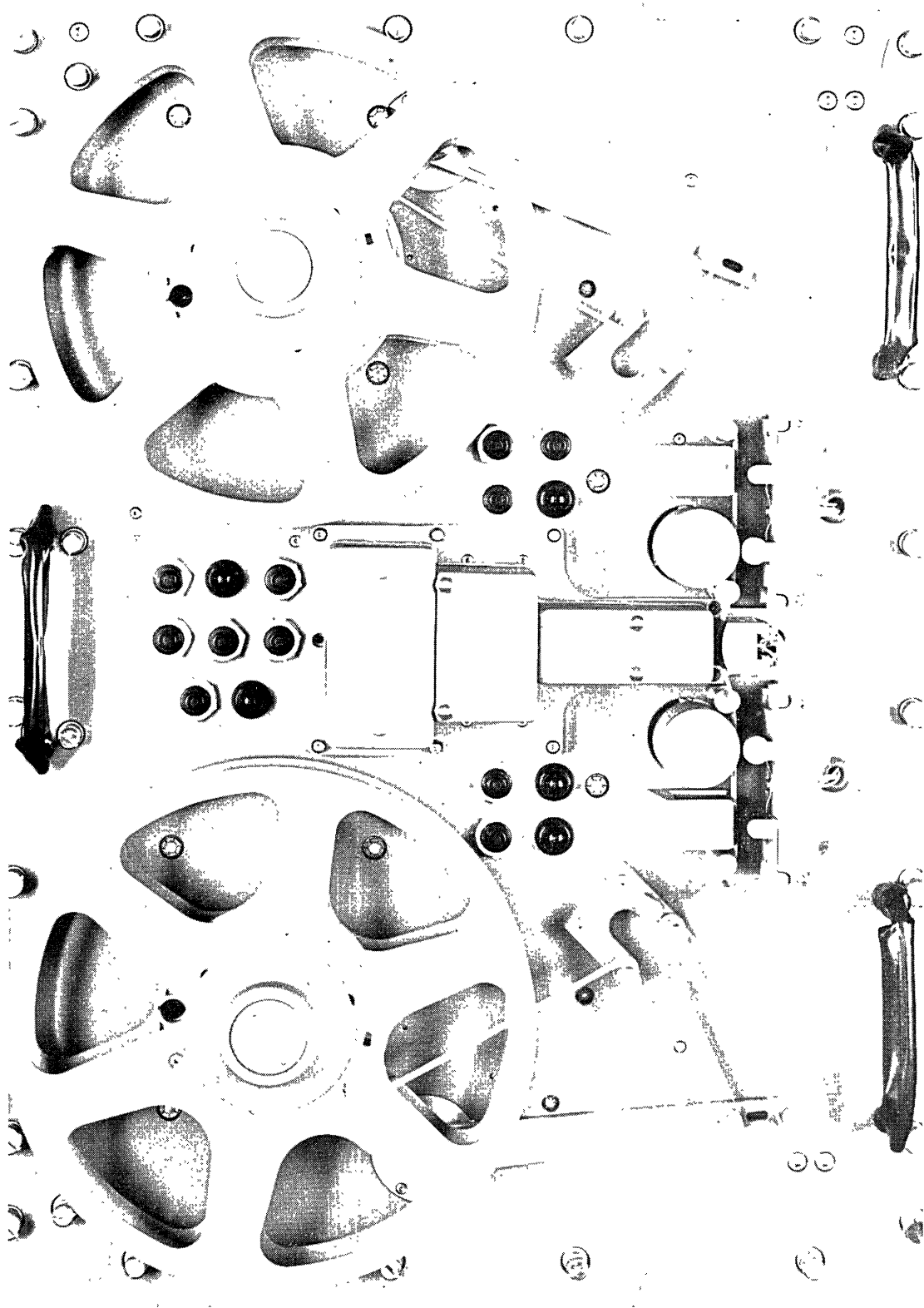
## WHAT DOES A COMPUTER LOOK LIKE?

Here is a picture of a computer — an electronic analog computer known as "Computer Group 16-131R", made by Electronic Associates, Long Branch, N. J. This is a general purpose computer for mathematical and engineering problems to be solved by analog methods and using electronic signals. The capacity of the machine may be increased by cables connecting it to more equipment. Also, the machine may receive input translated automatically from digital into analog form, so that numerical coefficients may be given easily to the machine and mathematical functions may be easily generated.



## WHAT DOES AN INPUT DEVICE LOOK LIKE?

Here is a picture of an example of an input device — a fast photoelectric reader of punched paper tape, made by Potter Instrument Co., Great Neck, N. Y. It is modeled on the fast magnetic tape reader made by the same company. Note the small arm-like mechanisms for taking up slack in the tape, which provide for very much faster starting and stopping than if the tape reels alone had to be accelerated or decelerated.

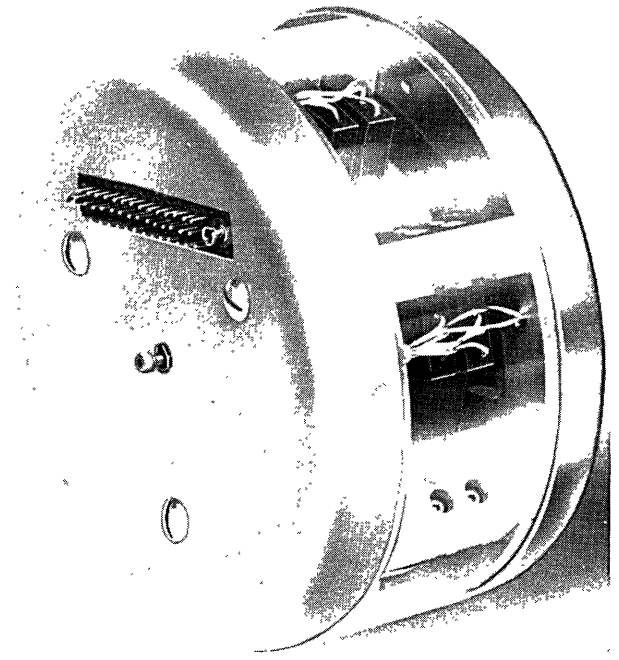


## WHAT DOES A LITTLE MAGNETIC DRUM LOOK LIKE?

A magnetic drum stores information, in the form of yeses and noes (binary digits) represented by magnetically polarized spots. Here is a picture of a miniature magnetic drum, which can store over 12,000 binary digits of information. It was developed by BJ Electronics, Borg-Warner Corp., 3300 Newport Blvd., Santa Ana, Calif.

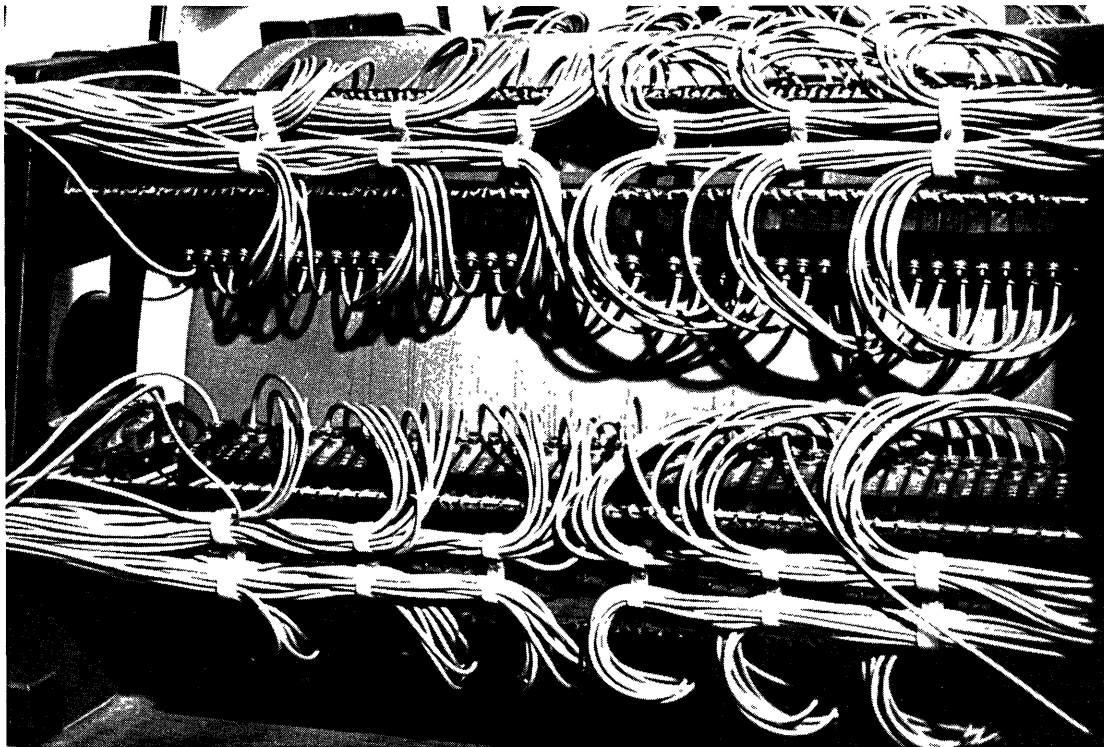
The aluminum drum with magnetic surface measures 3-1/2 inches diameter and contains 12 information channels plus clock and checking channels. Each channel is seven hundredths of an inch in width, and can store 1024 bits.

The drum is driven by a belt at speeds varying up to 15,000 rpm. Access time is approximately 1.25 milliseconds. The outside case is 6 inches diameter.



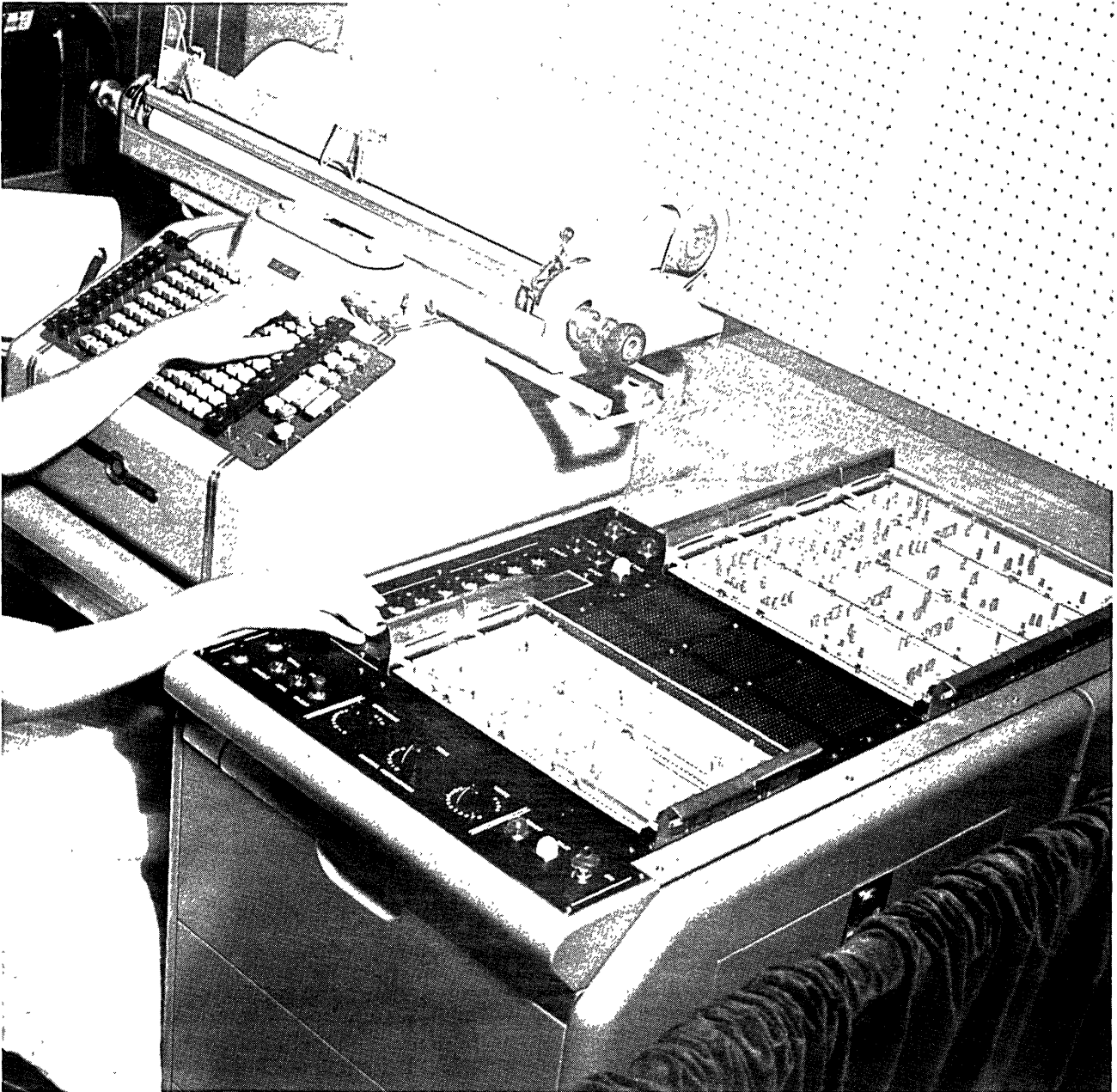
## WHAT DOES A BIG MAGNETIC DRUM LOOK LIKE?

Here is a picture of a magnetic drum which will store millions of binary digits of information. This drum is part of a system of reporting inventory quantity (on hand and on order) of boots and shoes — for 3000 styles and colors, with an average of 10 sizes per style, and up to 4 decimal digits of inventory information for each combination of style and size. The drum is 20 inches in diameter, 30 inches long, and spins at 1300 revolutions per minute. It is partially hidden beneath wires which lead to the magnetic heads that "read" and "write" information on the drum. It is the heart of an inventory control system manufactured by the Teleregister Co. for the B. F. Goodrich and Hood Rubber Company in Watertown, Mass.



## WHAT DOES PROGRAMMING LOOK LIKE?

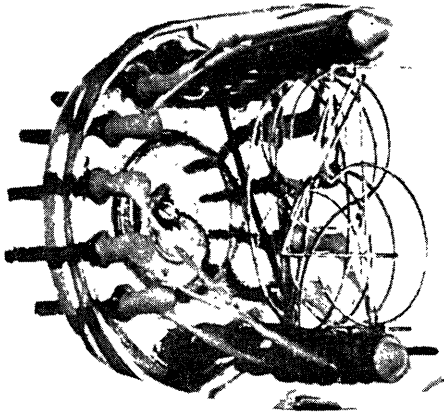
Most of the time it is not possible to see programming, since it consists of a long series of instructions stored inside the machine, quite often in the form of invisible polarized spots on a magnetic surface. But in the case of the E101 "desk size" automatic computer (made by ElectroData Division of Burroughs Corporation, Pasadena, Calif.), the programming is given to the machine in the form of arrays of pins in a plugboard. The pattern of pins in the plugboard is a good picture of the selection among many possibilities which a program conveys to a computer.



## WHAT DOES A VISUAL OUTPUT LOOK LIKE ?

A "visual output" is a device which displays answers or results visually before human eyes.

One kind which is new, important, interesting, and inexpensive is a glow tube called Nixie, made by Burroughs Electronic Tube Division, Plainfield, N. J. It converts any one of ten electric signals directly into any one of ten digits 0 to 9. As the first picture shows, a wire frame inside the tube outlines the possible digits; then when an electric potential is put on any one of the wires a glow (like a neon tube glow) results, brightly illuminating the space around the wire. In the second picture, a 5 is glowing. The top of the tube is about the size of a quarter.



View from the side, not glowing



View from the top, glowing



Another kind of visual output is called an X-Y plotter. Above is a machine which automatically plots a curve on graph paper with two rectangular coordinate axes, the X-axis and the Y-axis. Pictured above is an example of such a machine, a Type "A" X-Y Plotter, made by Librascope, Glendale, Calif. It can graph a curve swiftly and automatically, taking in information in decimal or binary notation through a converter from punched cards or punched tape.

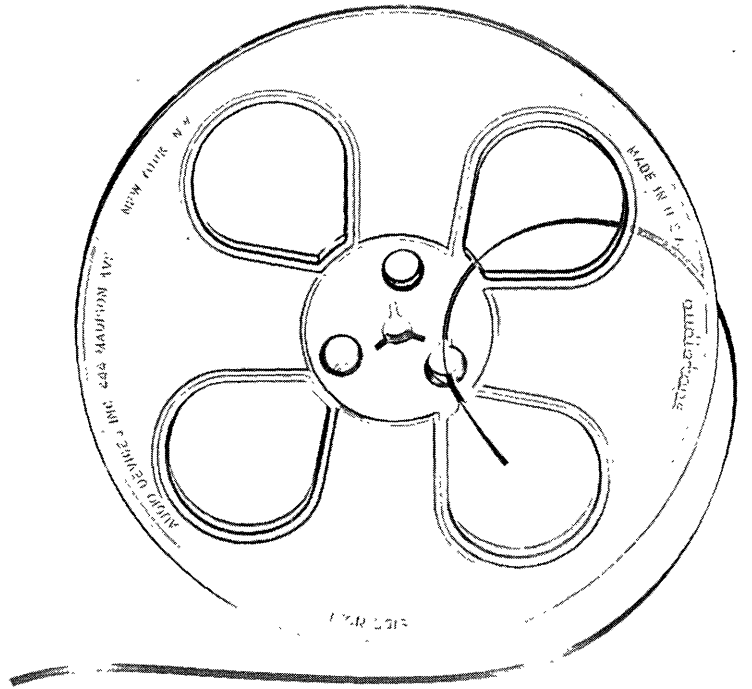
## WHAT DOES A SEMICONDUCTOR LOOK LIKE?

Here is a picture of a great number of semiconductors, mounted together one after another in a long strip, like bullets in a belt for a machine gun. The special "machine gun" shown here "staples" the semiconductors into printed circuit assemblies, thus eliminating the hand assembly formerly required, and greatly speeding the process. The semiconductors are made by Hughes Aircraft, Culver City, Calif., and the machine for inserting them was adapted by engineers of Hughes Aircraft.

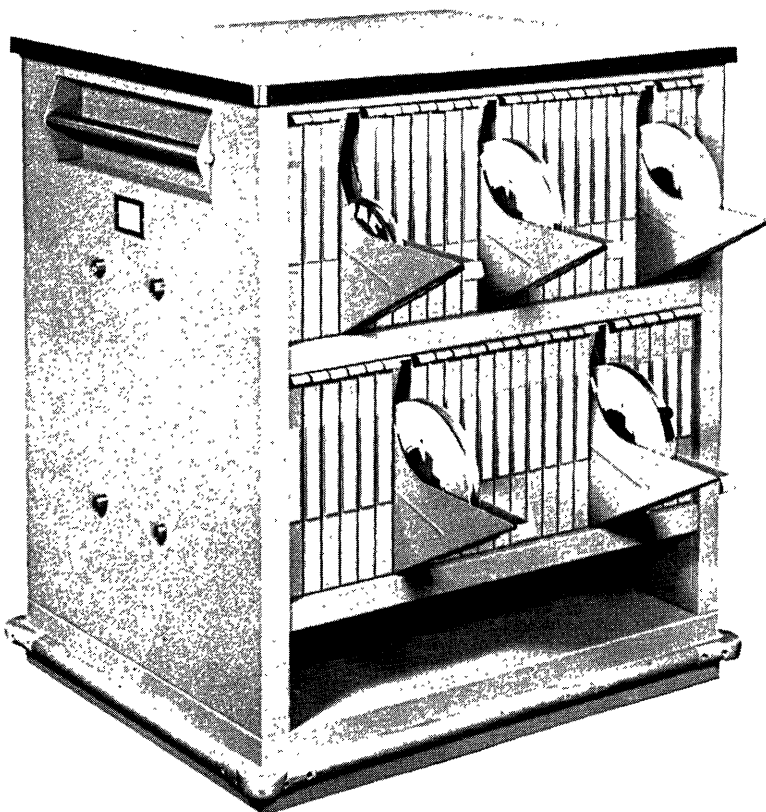


WHAT DOES A MAGNETIC TAPE REEL LOOK LIKE?

Here is a picture of a reel for holding magnetic tape, with a curved groove or "C" slot in the hub for easy threading of tape and self locking. It is made by Audio Devices, Inc., New York, N. Y.



WHAT DOES A MAGNETIC TAPE FILE LOOK LIKE?



Here is a picture of a small mobile cabinet made by Remington Rand, New York, which will store many reels of magnetic tape and move them from place to place easily.



Kaiser Metal Products, Inc. / Automatic electronic controls for industrial applications / 6  
A. KIMBALL CO., 444 4th Ave., New York 13, N. Y. see Punch Card Machines / 6  
Leeds & Northrup / Automatic control equipment / DESCR: Null balance electronic instruments (indicating, recording, signalling, controlling) their primary elements and final control devices / USE: measurement and control of industrial and laboratory processes / \$600 and up / 6  
Librascope, Inc. / Research, development, and manufacturing of analog and digital control equipment and systems for industry and government / 6  
Litton Industries / Automatic flight controls / 6  
MAGNETIC RESEARCH CORP., Hawthorne, Calif. / Magnetic Servo Amplifier / DESCR: completely magnetic servo amplifier in ratings up to 5000 watts offering performances including one cycle response (16 milliseconds) / \$50 to \$3000 / 6  
The W. L. Maxson Corp. / Automatic control machinery / 6  
Minneapolis-Honeywell Regulator Co. / Automatic controllers. Brown Instruments. Recording and indicating instruments and control equipment / 6  
MONROE CALCULATING MACHINE CO. — see "Computer Components" / 6  
Norden-Ketay Corp. / Varieties of control devices; resistance to humidity, corrosion, high temperature, etc; many kinds of airborne instruments / 6  
Notifier Manufacturing Co. / Alarm and Signal Equipment / 6  
PANELLIT, INC., 7401 N. Hamlin Ave., Skokie, Ill. / Equipment for automatic control, coordinated and graphic control panels for process variables / 6  
J. B. Rea Co., Inc. / Automatic control systems / 6  
Servo Corp. of America / Servotherm Infrared Radiation Pyrometer / DESCR: designed for the remote measurement of temperatures where the target cannot be physically contacted and for temperature measurement and control of processes or parts in motion / USE: measurement and control of continuous process products, assembly line products, rotating members, hot spots / \$3850 to \$4875 / 6  
Servo Corp. of America / Servomechanisms. Automatic Controls. Analysis and synthesis for controls manufacturers. Temperature controls by infra-red radiation. Industrial controls. Servo components and test equipment / 6  
Servomechanisms, Inc. / Automatic electronic and electromechanical control systems and components / 6  
Sperry Rand Corp., Sperry Gyroscope Div. / Ordinance: fire-control equipment / 6  
Strand Engineering Co. / Automatic control equipment / Design and development services. Special equipment and systems / 6  
Taylor Instrument Co. / Automatic controllers / 6  
Technitrol Engineering Co. / Control equipment / 6  
TELEMETER MAGNETICS, INC., 2245 Pontius Ave. Los Angeles 64, Calif. — see "Magnetic Storage Systems" / 6  
The Teller Co. / Automatic control equipment / 6

Jervis B. Webb Co. / Conveyer engineering and manufacturing. Automatic control machinery, automatic materials handling machinery / 6

C

7. CAPACITORS (COMPUTER TYPES)

Aerovox Corp. / Capacitors / 7  
AMP, Inc., Chemical & Dielectric Div. / Capacitors / 7  
Astron Corp. / Capacitors / 7  
Axel Bros., Inc., Electronics Div. / Capacitors / 7  
Centralab, Div. of Globe-Union, Inc. / Capacitors / 7  
Condenser Products Co. / Capacitors for computer applications / 7  
Cornell-Dubilier Electric Corp. / Test equipment capacitors / 7  
Corning Glass Works / Glass capacitors, delay lines / 7  
The Electro Motive Mfg. Co., Inc. / Capacitors / 7  
Electron Products Inc. / Capacitors / 7  
Fansteel Metallurgical Corp. / Capacitors / 7  
Film Capacitors Inc. / Capacitors / 7  
General Electric Co., Schenectady, N. Y. / Capacitors / 7  
General Instrument Corp., Newark, N. J. / Capacitors / 7  
Good-All Electric Mfg. Co. / Capacitors / 7  
Hopkins Engineering Co. / Capacitors / 7  
JFD Electronics Corp. / Capacitors / 7  
P. R. Mallory & Co., Inc. / Capacitors, computer grades / 7  
Natvar Corp. / Capacitors / 7  
Ohmite Manufacturing Co. / Capacitors (computer types — Subminiature Tantalum type / 7  
The Potter Co. / Capacitors / 7  
Precision Capacitors, Inc. / Capacitors / 7  
Pyramid Instrument Corp. / Capacitors / 7  
Radio Condenser Co. / Capacitors / 7  
Radio Metals Corp. / Capacitors / 7  
Sangamo Electric Co. / Capacitors / 7  
SCHWEBER ELECTRONICS, 122 Herricks Road, Mineola, N. Y. / Capacitors / 7  
Solar Mfg. Co. / Capacitors / 7  
Southern Electronics Corp. / Precision polystyrene capacitors / 7  
Southwestern Industrial Electronics Co., Inc. / Capacitors / 7  
Sprague Electric Co. / Capacitors / 7  
Tobe Deutschmann Corp. / Capacitors / 7  
U. S. Electronics Development Corp. / Capacitors / 7  
Vitramon, Inc. / Capacitors / 7

8. CARD-TO-TAPE CONVERTERS

ADDRESSOGRAPH-MULTIGRAPH CORP., 1200 Babbitt Rd., Cleveland 17, Ohio / Card-to-Magnetic

Tape Converter / DESCR: reads IBM or Remington Rand punched cards at 600 cards per minute, adds group data not contained in punched cards, records selected messages on from 2 to 12 tape records, and outfiles preselected cards / 8

General Cybernetics Corp. / Card-to-tape converter (Model 155 Cybertac System) / 8

INTERNATIONAL BUSINESS MACHINES CORP., 590 Madison Ave., New York 22, N. Y. / IBM 63 Card-Controlled Tape Punch / DESCR: performs the function of reading alphabetical and numerical information in IBM punched cards and of perforating 5-channel telegraphic tape with that data. The machine consists of a card reading unit and a tape punching unit / USE: the 5-channel tape may be used to transmit data automatically by commercial wire service / monthly rental \$75; selling price \$3700 / 8

REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., 315 4th Ave., New York 10, N. Y. / 90-column tabulating card-to-tape converter Type 318 DESCR: converts information from 90-column punched cards to 5 channel paper tapes, tapes perforated at 900 cards per minute / USE: card to tape conversion / rental, \$110 per month; sale, \$8500; prices subject to tax / 8

Technitrol Engineering Co. / Card-to-Tape Converters / \$45,000 up / 8

#### 9. COMPUTER COMPONENTS (See Also SPECIFIC TYPES)

ALADDIN ELECTRONICS, 703 Murfreesboro Rd., Nashville, Tenn. / Packaged Blocking Oscillator / DESCR: A miniaturized unit consisting of an encapsulated blocking oscillator circuit, ready to plug in / USE: as a plug-in or soldered-in component which can be either "free run" or externally pulsed / price depends upon performance specifications required / 9

Alden Products Co. / Components / 9

Allgemeine Elektricitaets-Gesellschaft, Germany / Semi-conductors / 9

American Electronic Mfg., Inc., Instruments Div. of American Electronics Inc. / Resolvers, servomotortachometers, resolver amplifiers / 9

AMERICAN ELECTRONICS, INC., 655 West Washington Blvd., Los Angeles, Calif. / Components for analog and digital computers / 9

AMERICAN ELECTRONICS, INC., \*a / Servomechanisms / 9

AMP, Inc. / Capacitors, taper pins, etc. / 9

Amperex Electronic Corp. / Computer components: electron tubes, transistors, and crystal diodes. Ferrites ("Ferroxcube"). Semiconductors. Also application engineering service for these products / 9

Arma Corp. / Analog computer components including resolvers, induction generators, etc. / 9

Avion Div. of American Car & Foundry Industries, Inc. / Amplifiers, electronic choppers, test equip-

ment, servomechanisms / 9

Avion Instrument Co. / Amplifiers, electronic choppers, test equipment, servomechanisms, etc. / 9

Bendix Aviation Corp., Pacific Div. / Computer components / 9

Berkshire Laboratories / Computer components / 9

Bowmar Instrument Corp. / mechanical computer components / 9

THE BRISTOL CO., Waterbury 20, Conn. / Choppers and socket screws for computers — see "Automatic Control Equipment" / 9

Brush Electronics Co. / Computer components, recording analyzers, decodes, tape transports / 9

Burndy Corp., Omaton Div. / Electronic components and related hand, hydraulic, pneumatic, and automatic tooling / 9

Cambridge Thermionic Corp. / Components for computers / 9

Canoga Corp. / Computer components / 9

Cinch Manufacturing Corp. / Electronic components / 9

Computer Engineering Associates, Inc. / Computer components / 9

Consolidated Diesel Electric Corp. / Computer components / 9

L. L. Constantin & Co. / Computer components / 9

Doelcam Corp. / Servomechanisms, amplifiers, etc. / 9

EECO Production Co. / Package Circuits / DESCR: plug-in packed circuits, flip-flops, squaring circuits, cathode followers, gates, oscillators, etc.; custom packaging of special circuits; stepping switches; diode logic; as used in Eeco desk type analog computer, Eeco wide band DC amplifiers, and other equipment / USE: in data handling, timing, and computing systems / plug-in's, \$8 to \$20, etc. / 9

ELECTRALAB, INC., Industrial Center, Needham Heights 94, Mass. / Printed Circuits / DESCR: high quality printed circuits. Reliable through-hole plating incorporating the use of proven copper deposition processes, close tolerance fabrication and closely controlled processing applies to all production / USE: in computers: business machines, navigation and fire control systems. In missiles: control and guidance systems. In computer components: plug-in packages / - / 9

Electro-Measurements, Inc. / Computer components / 9

Electronic Computer Div. of Underwood Corp. / pulse transformers, DC plug-in amplifiers, etc. / 9

Electro-Pulse, Inc. / Computer components / 9

ESC CORPORATION, 534 Bergen Blvd., Palisades Park, N. J. / Custom components only / DESCR: delay lines, pulse forming networks, pulse transformers, filters, etc., according to customer specifications; some types available from stock / USES: broad / price determined by specifications; \$7 and up / 9

Fairchild Controls Corp., Components Div., Computer components / DESCR: precision potentiometers, linear and non-linear, single-turn, multi-turn and linear motion, wire wound and metal film; pressure transducers, accelerometers / USE: component parts in analog computers / price varies by type

- and specifications / 9
- Freed Transformer Co., Ltd. / Components, miniature / 9
- General Cybernetics Corp. / Model 154 Linear Motion Transducer / 9
- Genisco, Inc. / Computer components of electro-mechanical type / 9
- THE GEOTECHNICAL CORP., 3712 Haggard Drive, Dallas 9, Tex. / Special designs of digital and analog computer; automatic chart readers / 9
- G. M. Giannini & Co., Laboratory Apparatus Div. / Computer components / 9
- Guardian Electric Mfg. Co. / Computer components / 9
- HALLER, RAYMOND & BROWN, INC., State College, Pa. / Computer components / DESCR: high quality logical elements / USE: in digital computing and logic applications / 9
- Industrial Control Co. / Servo Multiplier, Model SL-1053 / 9
- Jacobs Instrument Co. / Pulse transformers, input and output devices, pulse burst generators / 9
- LITTELFUSE, INC., 1865 Miner St., Des Plaines, Ill. / Fuses and fuse holders / DESCR: small glass enclosed cartridge type fuses and related fuse holders / USE: circuit overload protection in computing and other equipment / \$.02 to \$1.50 each / 9
- The Magnavox Co. / Computer components / 9
- MAGNETIC RESEARCH CORP., Hawthorne, Calif. / Computer Power Supplies / DESCR: Stablvolt dual magnetically regulated DC power supplies, low regulation, fast response / 9
- Magnetics Research, Inc. / magnetic components for analog and digital systems and computers / 9
- MELLON INSTITUTE OF INDUSTRIAL RESEARCH, Multiple Fellowship on Computer Components, University of Pittsburgh, Pittsburgh 13, Pa. / High temperature modular printed circuit components / DESCR: The fabrication, on a single substrate, of film components, such as resistors, capacitors, inductors, and conducting lines. This is in opposition to an assembly of such components, and to the use of the term "printed circuit" to signify printed conductor of wiring / 9
- METRON CORP., 8 Coryell St., Lambertville, N. J. / Computer components / 9
- Mico Instrument Co. / toroid transformers, toroid inductors; ferrite core units for computers, etc. / 9
- Mid-Century Instrumatic Corp. / electronic function generators, electronic multipliers, etc. / 9
- MONROE CALCULATING MACHINE CO., Electronics Div., Morris Plains, N. J. / Monrobot Systems and Components / DESCR: general and special purpose digital systems and components ranging from magnetic read-record heads to complete industrial and military data processing systems / USE: systems which are used for data processing. Components are used in similar systems designed by others / from \$15 / 9
- The National Cash Register Co., Electronics Div., Calif. / Computer components, input-output devices / 9
- Notifier Manufacturing Co. / Computer circuits, switching circuits, memory and pulse storing devices, transistor devices / 9
- Ortho Filer Corp. / Computer components / 9
- Philco Corp. Government & Industrial Div. — see "Digital Computers" / 9
- The Polymer Corp. of Pa. / Computer components / 9
- RADIO CORP. OF AMERICA, Components Div., Camden, N. J. / Computer components / ferrite memory cores, transfluxors, custom-built memory planes, apertured ferrite memory plates, relays / 9
- RADIO CORP. OF AMERICA, ELECTRON TUBE DIVISION, 415 S. 5th St., Harrison, N. J. / Electron Tubes and Photosensitive Devices / DESCR: receiving-type tubes, thyratrons, storage tubes, cathode ray tubes, camera tubes, photocells / USE: as components within equipment / 9
- RADIO CORP. OF AMERICA, SEMICONDUCTOR DIVISION, Somerville, N. J. / Transistors and Semiconductor Diodes / USE: as components within equipment / 9
- RAYTHEON MANUFACTURING CO., Receiving and Cathode Ray Tubes Operations Div., 55 Chapel St., Newton 58, Mass. / Transistors, Semiconductor Diodes, Electron Tubes / DESCR: silicon and germanium transistors, silicon power diodes, miniature and subminiature tubes, low drain filament, subminiature and other special tube types / USE: computer and related uses / - / 9
- SCHWEBER ELECTRONICS, 122 Herricks Road, Mineola, N. Y. / Distributor of computer components / DESCR: Connectors: miniaturized plug-in, coaxial and printed circuit types; tantalum capacitors, micro-miniature relays, Bourns trim pots, Allen-Bradley resistors and potentiometers, diodes / USE: components for computer circuitry / \$1 to \$35 / 9
- Short Bros. & Harland Ltd. — see "Analog Computers" F. W. Sickles Div., General Instrument Corp. / Computer components / 9
- SOLA ELECTRIC CO., 4633 West 16 St., Chicago 50, Ill. / Power supplies, regulated; high-transient capacity / DESCR: direct current power supplies for exacting demands in computer loads, etc.; regulated output voltage; high short-time overload capacity for positive reliable operation / 9
- Sorensen & Co., Inc. / Computer power supplies / 9
- SOBOBAN ENGINEERING, INC., Box 117, Melbourne, Fla. / Computer auxiliaries such as high speed tape perforators (240 characters per second), coded automatic keyboards, automatic format tabulators, etc. / 9
- Sprague Electric Co. / Computer components / 9
- Sterling Precision Corp. / Computer components / 9
- Stromberg-Carlson-San Diego / Computer Read-Out / 9
- STURRUP, INC., 50 Silver St., Middletown, Conn. / Circuitry of various types / USE: computers and other equipment / 9
- STURRUP, INC., \*a / Coils / DESCR: special small-lot transducers; relay coil winding; coil forms; other servo-component windings / - / 9
- SYLVANIA ELECTRIC PRODUCTS, INC., Electronic Systems Div., 100 First Ave., Waltham, Mass. / Computer components / 9
- Sylvania Electric Products, Inc., Radio & Television Div. / Computer components / 9
- Technitrol Engineering Co. / Digital Computer "Blocks" / 9
- TUNG-SOL ELECTRIC, INC., 95 Eighth Ave., Newark, 4, N. J. / Diodes, Electron Tubes, Transistors / 9

Vectron, Inc. / Miniaturized sphere resolver / 9  
 Wang Laboratories / digital signal generators, multiple scalars, static magnetic memory systems and other devices / 9  
 Weston Electrical Instrument Corp. / analog multiplying element / 9  
 Wiancko Engineering Co. / Computer components / 9  
 Wright Aeronautical / Computer components / 9

#### 10. COMPUTERS (See Also: ANALOG COMPUTERS, DIGITAL COMPUTERS)

Advance Electronics Lab., Inc. / computers / 10  
 Airborne Instruments Lab., Inc. / computers / 10  
 Airflyte Electronics Co. / computers / 10  
 ALLEGANY INSTRUMENT CO., INC., 1091 Wills Mountain, Cumberland, Md. / Type K-1 Ballistic Computer / DESCR: Computes data from any phenomenon that can be converted to an electrical signal. Presents such data visually, on paper tape, on IBM cards, etc. Includes: action time, force, ignition delay, peak values of force, total impulse (area beneath force-time curve), etc. / USE: When connected to the pick-up devices and when the phenomenon is initiated, the K-1 computer automatically presents 12 channels of information / \$16,810 / 10  
 ALLEGANY INSTRUMENT CO., INC., \*a / Ballistic parameter computing and recording / DESCR: Peaks, action time, delay time, integrals / USES: In studies of transient phenomena / \$3500 to \$75,000 / 10  
 ALLEGANY INSTRUMENT CO., INC., \*a / Transducer parameter computing and recording / DESCR: linearity, drift, creep, hysteresis, factor, range. Digital display and printout / USE: in routine checking of transducers / \$3500 to \$75,000 / 10  
 Allied Engineering Div. / Analog and digital computers / 10  
 American Electronic Labs. / computers / 10  
 American Machine & Foundry, Alexandria, Va. / computers / 10  
 AUTONETICS, a Div. of No. American Aviation, Inc., 9150 E. Imperial Hwy., Downey, Calif. / General purpose computers; fire control systems / 10  
 Bull S. A. Compagnie des Machines, France / commercial electronic computers and card programmed scientific computers / 10  
 Corbin Corp. / analog computers / 10  
 Denominator Co. / computers / 10  
 Eastern Air Devices, Inc. / computers / 10  
 Erie Electronics Distributor Div., Erie Resistor Corp. / computers, assemblies / 10  
 Film Capacitors Inc. / computers / 10  
 General Transistor Corp. / computers / 10  
 Hathaway Instrument Co. / transducers, analog and digital recorders, etc. / 10  
 Heath Co. / computers / 10  
 Jarvis Electronics Corp. / Systems and techniques / 10  
 Jet Propulsion Laboratory, California Inst. of Technology / computers / 10  
 Landis & Gyr, Inc. / computers / 10

Loyola Laboratories / computers/10  
 Mack Electronics / special purpose analog and digital computers / 10  
 The Magnavox Co. / analog and digital computers / 10  
 MONROE CALCULATING MACHINE CO. — see "Computer Components" / 10  
 National Bureau of Standards, Data Processing Systems Div. / computers / 10  
 PACKARD-BELL ELECTRONICS CORP., 12333 W. Olympic Blvd., Los Angeles 64, Calif. / computers / 10  
 Pennsylvania State University, Dept. of Physics / X-RAC computer / 10  
 GEORGE A. PHILBRICK RESEARCHES, INC., 230 Congress St., Boston 10, Mass. / Philbrick electronic analog computing equipment and components/10  
 Royal McBee Corp., Port Chester, N. Y. / computers/10  
 SCHWEBER ELECTRONICS, 122 Herricks Road, Mineola, N. Y. / computer for inventory control / 10  
 Stromberg-Carlson, Rochester, N. Y. / computers / 10  
 Tele-Dynamics, Inc. / computers / 10  
 U. S. Air Force, Cambridge Research Ctr. / computers / 10  
 U. S. Navy, Office of Naval Research, Special Devices Center, Port Washington, N. Y. / training devices using analog and digital computers / 10  
 The George Washington Univ., Logistics Research Project / ONR relay computer, ONR electronic digital computer, data handling machines / 10  
 Ateliers Vaucanson, Paris 20e, France, calculating machines / 10  
 Vectron, Inc. / special computers for military applications, etc./10

#### 11. COMPUTER TEST EQUIPMENT

American Automatic Typewriter Co. / testing devices / 11  
 Arenberg Ultrasonic Laboratory, Inc. / electronic test equipment / 11  
 Computer Measurements Corp. / computers, test equipment / 11  
 Electronic Control Systems, Inc. / Continuity Tester / DESCR: automatic rapid test of cable harnesses resulting in positive identification if incorrect lead connections / USE: production harness assembly testing / 11  
 EPSCO, INC., 588 Commonwealth Ave., Boston 15, Mass. / Model VR-607 Secondary Standard Voltage Reference Source / Variable voltage reference source providing from +212 to -212 volts in 1 mV steps with an accuracy of better than .02%. May also be used to determine unknown voltages to the same degree of accuracy. Binary and decade models available / USE: for static testing of analog and digital systems and computers / - / 11  
 J. V. KANE & CO., 1004 Cloverhill Rd., Wynnewood, Pa. / NEUBERGER type RMP 400, Laboratory type vacuum tube analyzer / DESCR: 16 different types of tube bases are acceptable through as many socket

adaptors. A patented adaptor to cross rail busbar construction insures that any future type of tube can be tested. 14 meters with an accuracy of  $\pm 15\%$  provide full scale deflection. Meter protection is provided by relay devices. The unit uses rotary stacked selector switches / USE: besides testing tubes at rated characteristics, complete families of curves can be plotted. Dynamic mutual conductance can be evaluated / \$495 to \$2785 / 11

MONROE CALCULATING MACHINE CO. — See "Computer Components" / 11

Servo Corp. of America / Servoboard / DESCR: a set of standard precision mechanical parts including gears, shafts, bearings, hangers, mounting plates, etc. / USE: testing equipment / \$365 to \$920 for complete kits / 11

Servo Corp. of America / Servoscope / DESCR: a multiple signal generator with means for comparing the signal output with the response of a servo system, component, or low frequency network / USE: in testing equipment / \$1390 for Model A; \$1950 for Model D / 11

TRIO LABORATORIES, INC., 4025 Merrick Rd., Seaford, L. I., N. Y. / Vacuum tube voltmeters / DESCR: Miniature electronic instruments especially designed for panel mounting. Full line of precision measuring or monitoring instruments designed for console or rack equipment / USE: Build-in instruments for testing or monitoring / \$85 to \$500 / 11

ZUSE KOMMANDIT-GESELLSCHAFT, Neukirchen, Kreis Huenfeld, German Federal Republic / Z11 Relay Computer / DESCR: mobile, desk-size automatic digital computer, electric typewriter; input, output and control also by perforated tape / USE: scientific, engineering, and business applications, particularly in surveying and optics / \$25,000 / 11

## 12. COMPUTING SERVICES

Actuarial Computing Service, Inc. / computing service / 12

ADALIA COMPUTATIONS, LTD., 1410 Stanley St., Montreal 2, Canada / Computing and data processing service / DESCR: Mathematical analysis, programming and computing for engineering, statistical and business problems on ALWAC III-E computer (rental \$40 per hour) / Fixed-price estimates for complete jobs / 12

AEC COMPUTING FACILITY, 25 Waverly Pl., New York 3, N. Y. / computing service / 12

AMERICAN MACHINE & FOUNDRY CO., (Computing Center), Greenwich, Conn. / computing services / DESCR: consulting, problem analysis, programming, coding and running of problems on Datatron digital computer or analog computer / USE: customer's own programming or problems solved by company / Digital machine, \$40 to \$80 per hour; analog machine, \$25 per hour. Personnel at fixed rates / 12

Armour Research Foundation of Ill. Inst of Tech. / Operations Research, Computing Service / analog and

digital; Goodyear Electronic Differential Analyzers, IBM 650 Digital Computer / 12

Askania Regulator Co. / computing service / 12

BANK OF AMERICA NATIONAL TRUST AND SAVINGS ASSOCIATION, Controllers Dept., Systems and Equipment Research Section, 500 Howard St., San Francisco, Calif. / DESCR: digital computing service, with IBM 702 automatic digital computer / unrestricted as to clients / 12

Battelle Memorial Institute / computing service / 12

BENDIX AVIATION CORP., BENDIX COMPUTER DIV., 5630 Arbor Vitae St., Los Angeles 45, Calif. / Computation Laboratory / has installation of All-Purpose Digital Computer (G-15 System), Digital Differential Analyzer (DA-1), and other data processing equipment / rates by hour, for analysts, programmers, and/or machine time / 12

Brown University Computing Laboratory / computing service / 12

Bureau of Census / tabulation of statistical data by special machines, by commercial punch-card equipment, and by electronic computing system (the Uni-fac) / 12

Burroughs Corp., Electronic Instrument Div. / computing services / analysis, programming and computation on digital computer UDEC II / 12

Comptronics Corp. / computing services / 12

Computation Centre, University of Toronto / computing services / programming and consulting services; machine time on Ferut (Ferranti University of Toronto computer) / Ferut time, \$80 to \$100 per hour / 12

Computer Control Company, Inc., 92 Broad St., Wellesley, Mass. / Mathematical Services / DESCR: problem analysis, coding, program checking, and production on machine best suited to the problem; staff with wide experience / - / 12

Computer Engineering Associates, Inc. / engineering analyses / 12

COMPUTING DEVICES OF CANADA, LTD., P.O. Box 508, Ottawa 4, Ontario, Canada / computing service / DESCR AND USE: analysis, programming and computation on NCR 102D and REAC; available on self-service basis or all services provided — see also "Consulting Services" / 12

Cornell Computing Center / digital computing service / card programmed calculator, punch card / 12

COUNCIL FOR ECONOMIC AND INDUSTRY RESEARCH, INC., 1200 Jefferson Davis Highway, Arlington 2, Va. — see "Consulting Services" / 12

DATAMATIC CORP., 151 Needham St., Newton Highlands 61, Mass. / Computing Services / DESCR: digital computing service / USE: to analyze, process, and solve problems in operations research, applied mathematics, engineering, general business accounting, etc./- / 12

THE DATICS CORPORATION, 6000 Camp Bowie Blvd., P.O. Box 9128, Ft. Worth, Tex. / Computing services / 12

Dian Laboratories, Inc. / Analog consulting and computing service / 12

ELECTRODATA DIV. OF BURROUGHS CORP., 460 Sierra Madre Villa, Pasadena, Calif. / Computing service,

- Contract computing / DESCR: problem analysis, programming, coding and running of problems on DATATRON electronic data processing machines / USE: customer may do own programming, coding, or turn over problem and data to company for solution / machines, \$90 per hour; service and time of personnel priced at fixed rates / 12
- ELECTRONIC ASSOCIATES, INC., EAI Computation Center at Los Angeles, Inc., El Segundo, Calif. / analog computing facility / serves industry, government, business / 12
- Electronic Computer Programming Institute / computing services / 12
- FERRANTI, LTD., Computer Centre, 21 Portland Pl., London W1, England / computing and information handling centre / 12
- Financial Publishing Co. / computing service; digital; card programmed calculators, punch card / 12
- THE FRANKLIN INSTITUTE LABORATORIES FOR RESEARCH AND DEVELOPMENT, 20th St. and Benjamin Franklin Pkwy., Philadelphia 3, Pa. / computing service; analog; large network analyzer, AC; UNIVAC / 12
- General Electric Co., Schenectady, N. Y. / computing service; analog; network analyzer AC and DC, differential analyzer / 12
- GENERAL KINETICS INC., 555 23rd St. South, Arlington 2, Va. / Services to Digital Computer Users and Manufacturers / DESCR: mathematical studies; numerical analysis; programming services for major general purpose computers; data reduction services; system studies and evaluation including operations research; construction, modification, and repair of peripheral equipment and special components / - / estimates prepared for each job / 12
- Georgia Inst. of Technology, Rich Electronic Computer Center / Computer Center / DESCR: feasibility studies, systems analysis, problem analysis, programming, coding, machine computation, etc. / 12
- Harvard University, Harvard Computation Laboratory / computing service; digital; Harvard Mark I and IV machines and UNIVAC I / 12
- KCS DATA CONTROL, LTD., Suite B62, Bay Grosvenor Bldg., 880 Bay St., Toronto 5, Ontario, Canada — see "Consulting Services" / 12
- Arthur D. Little, Inc. / consulting and computing services / DESCR: engineering and scientific computations, including formulations of problems; data handling studies and design of systems; feasibility studies and evaluations / USE: in management control, operations research or applied mathematics / monthly billing, based on personnel charges and computer time / 12
- Loyola Laboratories / computing services / 12
- Machine Statistics Co. / Punch Card Data Processing Service / 12
- Mass. Inst. of Technology, Office of Statistical Services / statistical and scientific computing, using punch card machines and Whirlwind I / 12
- MOORE SCHOOL OF ELECTRICAL ENGINEERING, University of Pennsylvania, 200 S. 33 St., Philadelphia, Pa. / computing service: analog and digital; differential analyzer, punch card machines, also University Computing Center based on a Univac / 12
- NATIONAL ANALYSTS, INC., 1015 Chestnut St., Philadelphia 7, Pa. / computing services / 12
- National Bureau of Standards, Applied Mathematics Div., Washington 25, D. C. / numerical analysis and computing service: digital; using Seac and punched card machines; for government and government contractors only / 12
- The National Cash Register Co., Electronics Div., Calif. / computing service: digital; Cadac 102A, etc. / 12
- National Physical Laboratory, Mathematics Div., England / computing service / 12
- NORTHROP AIRCRAFT, INC. / computing and data handling services / DESCR: computing and data handling services in EAI precision analog and IBM 797 digital equipment (to be augmented in Sept. 1957 by larger digital computer of IBM 704-709 type); reconnaissance data handling methods and equipment developed and built; data handling and reduction; develops and builds computing and data handling components and systems to order; operates own equipment / USE: for R & D development and fabrication; service bureau work / rates on request / 12
- Purdue University, Dept. of Math. / computing service: digital; card programmed calculator, punch card machines / 12
- J. B. Rea Co., Inc. / computing service / digital computer: IBM Model 2 card-programmed calculator; analog computer: Electronic Associates computer; problem solving staff available / - / \$20 to \$50 per hour; also fixed-price / 12
- RECORDING AND STATISTICAL CORP., 100 Sixth Ave., New York 13, N. Y., and also Regional Service Bureaus in Boston, Chicago, Montreal, and Toronto / Computing and data processing services; electronic digital computers and punched card equipment of latest types available in all regional offices / - / - / 12
- Reeves Instrument Corp. / computing services / computing service: analog; Reac / 12
- REMINGTON RAND UNIVAC DIVISION, SPERRY RAND CORP., 1902 West Minnehaha Ave., St. Paul, Minn. / Electronic Computer Service Center / DESCR: programming and computing service on Univac Scientific system, and other equipment / USE: special problems, routine services / - / 12
- REMINGTON RAND UNIVAC DIVISION, SPERRY RAND CORP., Frankfurt, Germany / Electronic Computer Service Center / DESCR: programming and computing services on Univac systems and other equipment / USE: special problems, routine services / 12
- REMINGTON RAND UNIVAC DIVISION, SPERRY RAND CORP., 2601 Wilshire Blvd., Los Angeles, Calif. / Electronic Computer Service Center / DESCR: programming and computing services on Univac systems and other equipment / USE: special problems; routine services / - / 12
- Rensselaer Polytechnic Institute, Computing Laboratory / computing service / 12
- REMINGTON RAND UNIVAC DIVISION, SPERRY RAND CORP., 315 4th Ave., New York 10, N. Y. / Electronic computer service center / DESCR: programming

- and computer services on Univac and Univac Scientific Computer Systems and other equipment / USE: special problems and routine services / - / 12
- Rotron Mfg. Co., Inc., Woodstock, N. Y. / computing services and equipment / 12
- THE SERVICE BUREAU CORPORATION, 425 Park Ave., New York 22, N. Y., a subsidiary of International Business Machines Corp. / DESCR: Data Processing Centers with 650's in Atlanta, Ga., Boston, Mass., Chicago, Ill., Cleveland, Ohio, Detroit, Mich., Houston, Texas, Los Angeles, Calif., Minneapolis, Minn., New York, N. Y. (704 and 650), Philadelphia, Pa., Portland, Ore., St. Louis, Mo., Seattle, Wash., San Francisco, Calif., and Washington, D. C. / USE: Service Bureaus with punched-card machines and experienced operators to solve technical computing problems or process business data located throughout the country. Locations of Service Bureaus furnished on request / - / 12
- THE SERVICE BUREAU CORPORATION, 590 Madison Ave., New York, N. Y., a subsidiary of International Business Machines Corp. / Service bureau facilities / DESCR: all models, types of IBM machines, including 650, 704. Facilities for all applications: methods, computing, programming, operations / by hourly rate or job / 12
- Scientific Computing Service, Ltd. / computing service / 12
- Southwestern Computing Service / computing service / 12
- Stanford Computation Center, Stanford University / computing services / 12
- Swedish Board for Computing Machinery, Sweden / computing service using two computers, BARK and BESK, designed and built by the board; BARK is a binary, automatic relay computer; BESK is a binary electronic sequence computer, storing orders and data in a parallel Williams memory or in a magnetic drum memory; research on numerical analysis / 12
- TELECOMPUTING CORP., 12838 Saticoy St., No. Hollywood, Calif. / Data Reduction Services / film and oscillograph measuring and recording services, using Telecomputing personnel and equipment for work on customer records / - / from \$6 to \$10 an hour, depending upon machine used / 12
- U. S. Air Force, Aeronautical Research Laboratory, Directorate of Research, Wright Air Development Center, Wright-Patterson Air Force Base, Ohio / computing service / DESCR: digital and analog; card programmed calculator, General Electric OARAC, Univac 1103, Bendix DDA, Reacs, Gedas / USE: for government only / 12
- U. S. Air Force, Rome Air Development Center, Statistical Services Div., Griffiss Air Force Base, N. Y. / computer service / DESCR: analog, digital; Elecom 120, Bendix Digital Differential Analyzer D12, Reeves Electronic Analog Computer, Benson-Lehner data reduction equipment, etc.; compiling statistical reports; EAM tab equipment; 407 tabulator, 552 interpreter, 514 summary punch, 089 collator, 082 sorter, 056 verifier, 031 keypunch, 024 key punch / USE: for government only / 12
- U. S. Air Force, Computation Research Sec., Wright Air Development Center, Wright-Patterson Air Force Base, Dayton, Ohio / computing service / DESCR: analog and digital, card programmed calculators, Reacs, punch card / for government only / 12
- U. S. Army, Ballistic Research Laboratories, Aberdeen Proving Ground, Md. / computing service for government use only / 12
- U. S. Naval Proving Ground, (Naval Ordnance Computation Center), Dahlgren, Va. / computing service, for government and government contractors only / 12
- U. S. Navy Aviation Supply Office, Data Processing Div., Philadelphia, Pa. / operates IBM 650 and IBM 702 for inventory control. Government use only / 12
- University of California, Berkeley, Calif. / IBM 701 for research, etc. / 12
- University of California, Dept. of Mathematics, Numerical Analysis Research, Los Angeles, Calif. / research in numerical analysis / maintains a facility where university personnel solve scientific problems / 12
- University of Cambridge, University Mathematical Laboratory, Corn Exchange St., Cambridge, England / computing service / uses Edsac / 12
- UNIVERSITY OF MICHIGAN, Willow Run Laboratories, Willow Run Airport, Ypsilanti, Mich. / Computing Services / DESCR: consultation, problem formulation, analysis, programming, coding; data reduction, including processing, graphing, and drafting; instruction in programming and numerical methods; employing digital computers, MIDAC, IBM 604, and desk calculators; analog computer containing 172 drift-stabilized amplifiers, 15 resolvers, 12 servo multipliers, 13 plotting tables, and 10 function generators / USE: both government and industrial contracts / 12
- University of Rochester, Computing Center / computing services / 12
- University of Toronto, Computation Center, Toronto, Canada / computing service (digital) using a Ferranti Electric automatic computer; punch card machines / 12
- University of Wisconsin / computing service / both analog and digital / 12
- George Washington Univ., Logistics Research Project / computing service using ONR relay computer and ONR electronic digital computer, with magnetic drum memory / 12
- Watson Scientific Computing Laboratory / computing service / 12
- WAYNE STATE UNIVERSITY, Detroit 2, Mich. / Computation Laboratory / DESCR: 5300-word magnetic drum plus 100-word magnetic core computer, UDEC, built of Burroughs pulse control equipment; IBM 650 electronic data processing machine; undergraduate and graduate education in computers and applications; informal training programs; research in business systems / USE: instruction, solution of problems, etc. / - / 12
- Westinghouse Electric Corp., Analytical Dept. / computing service; analog and digital; using Anacom, AC and DC network analyzers, and IBM 704 EDPM / 12

## 13. CONNECTORS (COMPUTER TYPES)

AMP, Inc. / Terminals and connectors / 13  
 AMP, Inc. / Taper Terminations / 13  
 AMP, Inc. / "Taper Blocks" / 13  
 AMPHENOL ELECTRONICS CORP., 1830 S. 54th St.,  
 Chicago 50, Ill. / Connectors / DESCR: all types of  
 connectors for computer applications, including AN,  
 RF and Rack & Panel connectors in standard, minia-  
 ture and sub-miniature sizes / USE: sub-unit plug ins;  
 radio frequency and electrical power / - / 13  
 Burndy Corp., Omaton Div. / electrical connectors / 13  
 Cambridge Thermionic Corp. / connectors / 13  
 Cinch Manufacturing Corp. / connectors / 13  
 DeJUR Amsco Corp. / Precision connectors (continental  
 connectors) / 13  
 SCHWEBER ELECTRONICS, 122 Herricks Rd., Mineola,  
 N. Y. / connectors / 13  
 U. S. Components, Inc. / connectors / 13

## 14. CONSULTING SERVICES (Computer Field)

ADALIA LTD. (see Adalia Computations, Ltd.), 1410  
 Stanley St., Montreal 2, Canada / Consulting services  
 in digital and analog computer applications, data pro-  
 cessing, automatic control, design and development  
 of special input, output, storage and computing equip-  
 ment; systems analysis and design; operations research.  
 Also problem analysis, programming, coding and com-  
 puting service / Have ALWAC III-E Computer System  
 / - / 14  
 THE AUSTIN CO., 76 Ninth Ave., New York 11, N. Y. /  
 engineering, design, development of electronic and  
 electro-mechanic systems for control systems for in-  
 dustry and government; plant studies, determining  
 economic feasibility of automation equipment for labor  
 saving, process control, product improvement / 14  
 Automation Consultants, Inc. / Consultants in electronic  
 systems and devices; publishers of "Office Automa-  
 tion" / 14  
 AUTOMATION ENGINEERS CO. 246 W. State St.,  
 Trenton, N. J. / Management consultants / Analysis  
 of automation opportunities and the economics of ap-  
 plication; supervision in design and installation of  
 automation improvements: Registered Professional  
 Engineers / 14  
 Basic and Experimental Physics / consulting services /  
 14  
 Bengé Associates / Management engineers / 14  
 BERKELEY ENTERPRISES, INC., 815 Washington St.,  
 Newtonville 60, Mass. / Consulting Service / consult-  
 ation in logical design, applications, and marketing  
 of automatic data-processing machinery / 14  
 Booz, Allen & Hamilton / Management consultants / 14  
 Bowles, Andrews & Towne / consulting services / 14  
 Harry P. Bridge Co. / advertising, marketing / 14  
 CANNING, SISSON & ASSOCIATES, 1140 S. Robertson  
 Blvd., Los Angeles 35, Calif. / Consultants in utiliza-  
 tion of electronic computers and other automatic data  
 handling equipment; publisher of "Data Processing Dig-  
 est" / 14  
 Circuit Engineering / consulting service / 14  
 Computer Control Company, Inc., 92 Broad St., Well-  
 esley 57, Mass. / consulting service; by engineers,  
 mathematicians, physicists in design, construction  
 and programming of large scale digital systems / - /  
 14  
 Computing Consultants, Inc. / consulting services / 14  
 COMPUTING DEVICES OF CANADA, LTD., P. O. Box  
 508, Ottawa 4, Ontario, Canada / Consulting Services  
 / DESCR and USE: consulting on applications of com-  
 puters and data processing machines to technical  
 computing and business data processing; exclusive  
 Canadian agents for Elliott Bros., (London) Ltd.,  
 Electronic Data Processing Systems / - / 14  
 COUNCIL FOR ECONOMIC AND INDUSTRY RESEARCH,  
 INC., 1200 Jefferson Davis Highway, Arlington 2, Va.  
 / Economic research; Electronic computing services  
 / specialists in the application of modern analytical  
 techniques to government, business and financial  
 problems; full range of services in programming, com-  
 puting and data processing; sample design; market  
 research; the Mathematical and Statistical Services  
 Division formulates, analyzes, and specifies proced-  
 ures for solving a wide range of scientific and com-  
 mercial problems / 14  
 Data Processing Counselors / design of business sys-  
 tems, application of computers, training of personnel  
 / 14  
 THE DATICS CORP., 6000 Camp Bowie Blvd., P. O.  
 Box 9128, Ft. Worth, Tex. / consulting services, re-  
 search and development, data processing and data re-  
 duction services / 14  
 DAYSTROM SYSTEMS, Div. of Daystrom, Inc., 5640  
 La Jolla Blvd., La Jolla, Calif. / Complete systems  
 for data handling, data logging, process control,  
 special purpose digital computers, industrial con-  
 trol, and airborne systems / 14  
 The de Florez Co. / consulting services, such as de-  
 velopment of new processes and machinery / 14  
 Dian Laboratories, Inc. / Computing and consulting  
 services; analog computing center / 14  
 JOHN DIEBOLD & ASSOCIATES, INC., 40 Wall St.,  
 New York, N. Y. / Management Consultants /  
 Specializing in management science. Provides  
 counsel on the management of problems of organiza-  
 tion, communications, policy formulation, production,  
 distribution. Staff includes specialists in automation,  
 computers, automatic control equipment, operations  
 research, linear programming. Specifically engaged  
 in helping clients put management science to work in  
 the solution of their problems / 14  
 Digitronics Corp. / consultants and manufacturers / 14  
 EBASCO SERVICES INCORPORATED, 2 Rector St.,  
 New York 6, N. Y. (also Chicago; Dallas; Portland,  
 Oreg.; Washington, D. C.) / Consulting Services /  
 management consultants including the application of  
 electronic systems to data processing and engineer-  
 ing / - / 14  
 Wesley B. Edgar, Columbia 1, S. C. / consulting ser-  
 vices / 14  
 ELECTRODATA DIV. OF BURROUGHS CORP. — see  
 "Computing Services" / 14



Fairbanks Associates / Consultants in application and installation of electronic systems in clerical methods and procedures; evaluation of proposed savings; operations research / 14

H. S. GELLMAN & CO. LTD., 110 Bloor St. West, Toronto, Ont. / Consulting Services / Consultants on automatic data processing systems; application of systems and equipment to business data processing; system analysis and design; training of clients' personnel; programming and computing service for business, scientific and engineering calculations/14

General Electric Co., Tube Dept., Schenectady, N. Y. / Tube Application Assistance / 14

General Research Co. / Consulting and procurement services / 14

Georgia Inst. of Technology, Rich Electronic Computer Center, Atlanta 13, Ga. / Computer Center / Feasibility studies, systems analysis, problem analysis, programming and coding, and machine computation, etc. / 14

Hastings, Jr., Cecil / Approximations for digital computers / 14

KCS DATA CONTROL, LTD., Suite B62, Bay-Grosvenor Bldg., 880 Bay St., Toronto 5, Ont., Can. / Consulting, programming and computing services / consultation on selection, installation and application of electronic computing and data processing systems for business, scientific and engineering problems and processes; analysis of problems and routines; planning of projects; training of clients' staff; programming and computing service for business, scientific engineering, design and statistical calculations / - / 14

Arthur D. Little, Inc. / Consulting Services / DESCR: engineering and scientific computations including formulation of problems; data handling studies and design of systems; feasibility studies and evaluations / USE: in management control, operations research or applied mathematics / monthly billing, based on personnel charges and computer time / 14

Machine Statistics Co. / Punch Card Data Processing Service / 14

Mills, H. Jefferson, Jr., Mgnt. Consultnt / Management counsel in systems analysis and equipment evaluation / 14

NATIONAL ANALYSTS, INC. / Consulting services/14

NUCLEAR DEVELOPMENT CORP. OF AMERICA, 5 New St., White Plains, N. Y. / Consulting and System Design / design of computing and data handling systems; and determination of requirements/14

PANELIT SERVICE CORPORATION, subsidiary of Panellit, Inc., 7401 N. Hamlin Ave., Skokie, Ill. / Instrumentation engineering, design, installation, start-up, and contract maintenance / 14

Pi-Square Engineering Co., Inc. / Analysis and solution of engineering problems; analog computing equipment available / 14

The Ramo-Wooldridge Corp., Computer Systems Div. / Consulting Services / DESCR: systems analyses leading to an optimum application of modern automation techniques and equipment; specification and installation of procedures and equipment to accomplish recommendations of systems studies / - / 14

Scientific Computing Service, Ltd., London, Eng. / Consulting Service / 14

SOROBAN ENGINEERING, INC., Box 338, Melbourne, Fla. / Consulting Services / DESCR: consulting on data preparation and output tabulating components and systems in addition to specialized electronic digital computing devices and systems / - / approximately \$100 per day / 14

University of Sydney, Dept. of Electrical Engrg., and C. S. I. R. O. Section of Mathematical Instruments, N. S. W., Australia / Research, development, and consulting / 14

#### 15. COURSES BY MAIL (Computer Field)

EDMUND C. BERKELEY & ASSOCIATES, 815 Washington St., Newtonville 60, Mass. / Courses by Mail / DESCR: over 30 courses by mail in automatic computers, construction of small electric brain machines, construction of small robots, symbolic logic, other scientific subjects / USE: instruction / \$9 to \$35 / 15

BUSINESS ELECTRONICS, INC., 420 Market St., San Francisco 11, Calif. / A Correspondence Course - "Programming for Business Computers" / DESCR: Instruction includes: principles of electronic data processing, programming business problems for electronic computers, evaluation of computer hardware, etc. / USE: to train men and women in the application of business problems to electronic computers / \$135 cash, \$150 terms / 15

Capitol Radio Engineering Institute, Inc. / Courses by mail / 15

#### D

#### 16. DATA PROCESSING MACHINERY (see also DIGITAL COMPUTERS)

ADDRESSOGRAPH-MULTIGRAPH CORP., 1200 Babbitt Rd., Cleveland 17, Ohio / Card-to-Magnetic Tape Converter / DESCR: reads IBM or Rem Rand punched cards at 600 cards per minute, adds group data not contained in punched cards, records selected messages on from 2 to 12 tape recorders, and outfiles preselected cards / - / 16

ADDRESSOGRAPH-MULTIGRAPH CORP., \*a / Magnetic Tape Electronic Printer / DESCR: parallel-serial, reads data contained on magnetic tape and prints at 1500 to 3000 lines per minute onto ordinary continuous paper / 16

ADDRESSOGRAPH-MULTIGRAPH CORP., \*a / Output Data Converter / DESCR: reads, edits, and extracts unit messages from computer prepared group or block magnetic tape, adds common data from auxiliary storage, and records programmed unit messages onto 2 to 12 tape recorders / - / 16

Aero Research Instrument Co., Inc. / data reduction and data gathering systems / 16

AIRBORNE INSTRUMENT LABORATORIES, MODAC DIVISION, (formerly Mountain Systems, Inc.)

- 864 Franklin Ave., Thornwood, N. Y. / MODAC Data Processing Machines / DESCR: digital electronic computers for statistics, accounts receivable, filing, etc.; drums, tape or punch cards in and out / USE: bookkeeping, mailing list maintenance, etc. / \$100,000 to \$500,000 / 16
- Airborne Instruments Lab., Inc. / Data reduction equipment / 16
- Aircraft Armaments, Inc. / Data reduction eqpmt / 16
- ALWAC CORP., 13041 S. Cerise, Hawthorne, Calif. - see "Digital Computers" / 16
- American Electronic Labs. / Data reduction eqpmt / 16
- American Machine & Foundry, Electronics Div. / Digital data-handling equipment / 16
- American Machine & Foundry / Data reduction eqpmt / 16
- AMPEX CORP., 934 Charter St., Redwood City, Calif. / Magnetic Tape Recorders, Programmers, Memory Units, Input-Output-Storage Tape Units / \$2,750 up / 16
- Analogue Controls Inc. / Data reduction eqpmt / 16
- Applied Science Corporation of Princeton / data processing machinery / 16
- Armour Research Foundation, Illinois Inst. of Technology / Digital, analog, and data handling equipment / 16
- Atomic Instrument Co. / Model 577, Multi-channel Strain Gauge Analyzer & Recorder / 16
- THE AUSTIN CO., 76 Ninth Ave., New York 11, N. Y. / Austin Automatic Data Recording System / DESCR: flexible high-speed electronic equipment to measure, record, store, and program data at rates which can utilize the speeds of electronic computers; sampling up to 20 times per second / USE: automatic logging of variables in production or laboratory testing; evaluation of performance / \$40,000 to \$80,000 / 16
- BECKMAN INSTRUMENTS, INC., SYSTEMS DIVISION, 325 N. Muller Ave., Anaheim, Calif. / Data processing systems for process industries and test facilities / DESCR: multi-channel digital data handling systems; 200 channel strain gage recorder, automatic process control, digital data handling and recording / 16
- BENDIX AVIATION CORP., RESEARCH LABORATORIES DIVISION, P. O. Box 5115, Detroit 35, Mich. / Data processing machinery - see "Analog Computers" / 16
- BENDIX COMPUTER DIV., BENDIX AVIATION CORP., 5630 Arbor Vitae St., Los Angeles 45, Calif. / Electronic data processing machines / 16
- Benson-Lehner Corp. / Ballistic Film Analyzer and Recorder (Boscar) / 16
- Benson-Lehner Corp. / Oscillograph Trace Reader (OSCAR) / 16
- BURLINGAME ASSOCIATES, LTD., 103 Lafayette St., New York 13, N. Y. / Digital voltmeters, high speed digital display (Typoscope) / 16
- Century Engineers, Inc. / data processing / 16
- Century Geophysical Corp. / data processing / 16
- COLEMAN ENGINEERING CO., 6040 W. Jefferson Blvd., Los Angeles 16, Calif. / Data Reduction Equipment / DESCR: powered comparator, measures data on film accurately semi-automatically and digitalizes output into variety of data tabulating equipment; also oscillogram readers, data acquisition and recording systems / USE: to reduce data into digitalized form / \$500 and up / 16
- Consolidated Avionics Corp. / data processing / 16
- Consolidated Engineering Corp. / Digital and analog data handling and conversion systems (Sadie, Milisadic, etc.) / 16
- Cook Research Laboratories, Div. of Cook Electric Co. / Magnetic data recording systems, digital, analog, and hybrid information processing systems, particularly for aircraft and airborne applications. Special purpose Input-Output equipments for use as adjuncts to commercial computers. Computing, programming, and equipment maintenance services / - / 16
- CUBIC CORPORATION, 5575 Kearny Villa Rd., San Diego 11, Calif. / Completely transistorized digital readout systems. Range of transistorized plug-in modules for digital logic building. / DESCR: Provides conversion from analog (sense shaft position) to digital recorded on magnetic tape or decimal on paper tape. Equipment features built-in test equipment and marginal checking facilities. / USE: data reduction and conversion. / 16
- DATAMATIC CORP., 151 Needham St., Newton Highlands 61, Mass. / Electronic computer systems for general accounting and data-processing operations / 16
- The Davies Laboratories, Inc. (Div. of Minneapolis-Honeywell Regulator Co.) / Automatic data reduction equipment / 16
- Dennison Manufacturing Co. -- see "Punch Card Machines" / 16
- Electro-Mechanical Research, Inc. / data processing / 16
- ELECTRONIC ASSOCIATES, INC., Long Branch, N. J. / Dataplotter, Models 3033 and 1133 / DESCR: complete data reduction systems; except for the digital reading device, each model is a self-contained system capable of independent operation, and includes all necessary system functions such as scaling, parallaxing, and coding; a full four-decimal-digit system, or equivalent, is used; reliability is assured through the use of chopper stabilized d-c amplifiers and fully sealed relay matrices / USE: designed to accept digital data from keyboard, punched cards or punched paper tape, and present the analog equivalent of this data in graphical form on an X-Y recorder / - / 16
- Electronic Computer Programming Institute / data processing / 16
- Electronic Control Systems, Inc. / Automatic test equipment / DESCR: special purpose automatic electronic test equipment / USE: determined by specific application / - / 16
- ELECTRONIC ENGINEERING CO., 1601 East Chestnut St., Santa Ana, Calif. / Format Control Buffer / DESCR: makes digital magnetic tapes in proper computer format. Accepts random rate digital information from multiple sources. Meets all requirements of computer format. Provides for constant recording density with maximum tape economy. / USE: in making computer input tapes without tying up the computer / \$50,000 - \$55,000 / 16

- Electronics Corp. of America, Business Machines Div., / MAGNEFILE / DESCR: special purpose business machine for inventory and similar uses / USE: in the office to maintain running records of Inventory Control, Production Planning, Scheduling, and Control, Sales Analysis, etc. / Rental, \$1,200 per month / 16
- Feedback Controls, Inc. / data processing / 16
- FISCHER & PORTER CO., 330 Warminster Rd., Hatboro, Pa. / Automatic Logger / DESCR: automatically measures and assembles information from plant, process, or research operation; computes operating guides using analog computer. Presents data as typewritten log, punched paper tape or other digital output / USE: for automation purposes on continuous processes / - / 16
- FISCHER & PORTER CO., 330 Warminster Rd., Hatboro, Pa. / Multiple Pressure Readout System / DESCR: utilizes single high accuracy Press-I-Cell pressure measuring device to sample and record simultaneously up to 200 pressures with accuracy of 1 part in 2000 / USE: for fast digital readout of pressures in wind tunnels, chemical plants, test facilities, etc. / - / 16
- FRIDEN CALCULATING MACHINE CO., INC., San Leandro, Calif. / Friden Add-Punch Machine / DESCR: ten-key electrically operated adding and listing machine that produces a standard adding machine tape as an original source document and, as a by-product, punches selected data on a "common language" tape for subsequent data processing / USE: adding-listing machine which may be used to record data for integrated data processing by card-punch or other common language machine / \$1500 (taxes not included) / 16
- Giannini Datex Div. / data processing / 16
- Honeywell, Doelcam Division / data processing / 16
- HOOVER ELECTRONICS CO., 3640 Woodland Ave., Baltimore 15, Md. / Data Processing Systems / DESCR: Complete test data processing systems, including specialized digital computers for on-line computation / USE: to suit customer's requirements / variable / 16
- HUGHES RESEARCH AND DEVELOPMENT LABORATORIES, HUGHES AIRCRAFT CO., Culver City, Calif. / Automatic data handling systems for commercial and military applications / 16
- Hycon Eastern Inc. / Analog data reduction systems/16
- Industrial Research Co. / data processing / 16
- Jet Propulsion Laboratory, California Institute of Technology / data-handling systems / 16
- Kaye Development Co. / data processing / 16
- Kelt Corp. / data processing / 16
- A. KIMBALL CO., 444 4th Ave., New York 13, N. Y. / See Punch Card Machines / 16
- THE KYBERNETES CORP., Division of Self-Winding Clock Co., 9 East 40th St., New York 16, N. Y. / automatic industrial data processing, digital print-out and digital indicator systems / 16
- Lewyt Mfg. Corp. / CDT; Coordinate Data Transmitter System / DESCR: Unattended digital transmitter / USE: screens, interprets, codes radar information for transmission over telephone lines / 16
- Librascope, Inc. / data handling, equipment and components / 16
- MARCHANT RESEARCH, INC., subsidiary, Marchant Calculators, Inc., 1475 Powell St., Oakland 8, Cal. / electronic digital computers and data processing systems / 16
- Monrobot Corp. / data processing machines / 16
- MONROE CALCULATING MACHINE CO. -- See Computer Components / 16
- NATIONAL ANALYSTS, INC. / data processing machinery / 16
- Navigation Computer Corp. / data processing / 16
- North Electric Manufacturing Co. / data processing/ 16
- Northrop Aircraft, Inc. -- See Data Processing Machinery / 16
- NUCLEAR DEVELOPMENT CORP. OF AMERICA, 5 New St., White Plains, N. Y. / Special purpose data handling systems, and system design / 16
- NUCLEAR DEVELOPMENT CORP. OF AMERICA, \*a / -- see "Digital Computers" / 16
- Oerlikon Tool & Arms Corp. of America / data processing / 16
- Otis Elevator Co. / data processing / 16
- RADIATION INC., P. O. Box 37, Melbourne, Fla. / data processing machinery / 16
- Ramo-Wooldridge Corp. / data processing / 16
- REMINGTON RAND UNIVAC DIVISION, SPERRY RAND CORP., 315 4th Ave., New York 10, N. Y. / Specially equipped electric typewriter with separate electronic reading and punching units (available with either or both). System automatically produces punched paper tape as original documents are typed, and automatically types from punched tape at approximately 120 words per minute. Can be designed for 5, 6, 7, or 8 hole tape codes / 16
- REMINGTON RAND UNIVAC DIVISION, SPERRY RAND CORP. -- see "Digital Computers" / 16
- Republic Aviation / Automatic data processing / 16
- RICHARDSON CAMERA CO., 171 W. Magnolia Blvd., Burbank, Calif. / Data Film Reader / DESCR: assesses data recorded on film from 8mm. to 70 mm.; interchangeable film transports and lenses; cinemotion variable to 24 F. P. S.; stop, motion forward, and reverse / USE: can be used with analog-to-digital converter in assessing data on films of missile test, aircraft test, rocket test, instrumentation recordings, oscillograph recordings, etc. / \$3650 to \$20,000, depending on accessories / 16
- Servomechanisms, Inc. / Mechanical Development Apparatus / 16
- Servomechanisms, Inc. / Master Air Data Computer/16
- Servomechanisms, Inc. / Angle of Attack Computer / 16
- Servomechanisms, Inc. / Automatic Industrial Process Controller / 16
- Servomechanisms, Inc. / Heading synchronizer / 16
- Sterling Precision Corp. / data processing machinery / 16
- Stromberg-Carlson, Rochester, N. Y. / data systems/16
- Sunvic Controls, Ltd., England / data processing machinery / 16
- SYLVANIA ELECTRIC PRODUCTS, INC., ELECTRONIC SYSTEMS DIVISION, 100 First Ave., Waltham 54, Mass. / large electronic digital computers on contract / 16

Taller & Cooper, Inc. / Telemetering Remote Control System / DESCR: controls an unlimited number of plant functions automatically or manually by means of a single pair of wires / USE: for water works, sewage works, other industrial processes, etc. / \$3000 up / 16

Taller & Cooper, Inc. / data recording and conversion system / 16

Tally Register Corp. / High-speed data reduction systems for telemetering applications. Special purpose business machines / 16

TELECOMPUTING CORP., 12838 Saticoy St., No. Hollywood, Calif. / Data processing machinery / DESCR: automatic data reading, recording, and plotting equipment; automatic business data accumulation and analysis equipment / USE: by scientific computing and data reduction installations / from \$3000 to \$20,000 / 16

TELEMETER MAGNETICS, INC., 2245 Pontius Ave., Los Angeles 64, Calif. / -- see "Magnetic Cores" / 16

TELEREGISTER CORP., 445 Fairfield Ave., Stamford, Conn. / Magnetronic Reservoir Reservation System / DESCR: inventory of accommodations such as airline seats or railroad reserved space is maintained on a magnetic drum / USE: ticket agents at multiple remote locations check availability by use of key sets, reduce stored inventory when a sale is made, and store information on specific assignment of accommodations / rented on service contract, price varies / 16

TELEREGISTER CORP., \*a / Telefile / DESCR: Inventory of products maintained on a magnetic drum and/or magnetic tapes. Also maintained; commitments, prices, discounts, etc. / USE: Operators change stored data in accordance with production, orders received and shipments; when invoice is typed, Telefile makes extensions, applies discounts, updates inventory. Availability checks can be made by instantaneous visual display or by printed tabulation / rented on service contract; price varies / 16

TELEREGISTER CORP., \*a / Bid-Asked Quotation System / DESCR: prices of stocks are maintained on a magnetic drum; electronic equipment decodes requests, locates desired stock, reads and converts information, and transmits it / USE: customer dials three-digit number assigned to specific stock; quotation appears on ticker tape / rented on service contract; price varies / 16

Union Switch and Signal Co., Div. of Westinghouse Airbrake / data processing / 16

Valor Electronic Components Co. / data processing / 16

VICTOR ADDING MACHINE CO., 3900 N. Rockwell St., Chicago 18, Illinois / Victor Digit-Matics / DESCR: Solenoid actuated adding machines for digital data printing and general calculating purposes / \$425 - \$895 / 16

Wang Laboratories / data handling equipment / 16

West Coast Electronics Co. / data processing machinery / 16

Wright Aeronautical / data processing machines / 16

## 17. DELAY LINES (Computer Types)

Advance Electronics Lab., Inc. / delay lines / 17

Aeromotive Equipment Corp. / delay lines / 17

Airdesign, Inc., / delay lines / 17

Alden Products Co. / magnetic delay line units / 17

American Machine & Foundry Co., Electronics Div. / delay lines / 17

ANDERSEN LABORATORIES, 39 Talcott Rd., West Hartford, Conn. / Solid Ultrasonic Delay Lines / DESCR: Fused quartz electronic delay devices; suitable for use in storing modulated r-f signals 6 to 4500 microseconds / USE: in digital computers as a data storage device; a recirculation system / \$200 to \$1000 for most computer applications / 17

Arenberg Ultrasonic Laboratory, Inc. / Ultrasonic solid delay lines / 17

Audio Instrument Co., Inc. / -- see "Magnetic Tape Recorder"

Axel Bros., Inc., Electronics Div. / delay lines / 17

Barker & Williamson, Inc. / delay lines / 17

Bel Fuse, Inc. / delay lines / 17

Bliley Electric Co. / delay lines / 17

Richard D. Brew & Co. / ultrasonic delay lines / 17

Brubaker Electronics, Inc. / delay lines / 17

BRYANT GAGE AND SPINDLE DIVISION — see "Magnetic Drums" / 17

Burnell & Co., Inc. / delay lines / 17

Celco, Constantine Engineering Laboratory Co. / delay lines / 17

Coilcraft Inc. / delay lines / 17

Columbia Technical Corp. / delay lines / 17

Communication Accessories Co. / delay lines / 17

Communication Products Co., Inc. / delay lines / 17

Computer Control Co., Inc. / Solid Acoustic Memory / 17

Computer Control Co., Inc. / 15 and 30 Unit Delay Panels / 17

Control Electronics Co., Inc. / delay lines / 17

Corona Engineering Service / delay lines / 17

Delttime Inc. / magnetostrictive delay lines / 17

Development Electronics Corp. / delay lines / 17

DX Radio Prod. Co. / delay lines / 17

Dynamic Electronics - N. Y., Inc. / delay lines / 17

Thomas A. Edison, Inc., Instrument Div. / delay lines / 17

Edo Corp. / delay lines / 17

Electrometric, Inc. / delay lines / 17

Electronic Computer Div. of Underwood Corp. / delay lines, decade delay lines / 17

EI-Rad Mfg. Co. / delay lines / 17

EPSCO, INC., 588 Commonwealth Ave., Boston 15, Mass. / Delay lines / DESCR: precision delay lines capsulated in plastic lumped constant and electronic types / USE: computer / - / 17

Essex Electronics / delay lines / 17

Farnsworth Electronics Co. / delay lines / 17

Federal Television Corp. / delay lines / 17

FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. / Digital Storage Delay Lines / DESCR: hermetically sealed lattice networks for storage of up to 30 bits at rates up to 5 mc/s.

Acoustic delay lines for storage up to 5000 bits at rates up to 1 mc/s / USE: for economical rapid access. Stores in small packets / \$150 - \$320 / 17

Forbes & Wagner, Inc. / delay lines / 17

Fugle-Miller Labs, Inc. / delay lines / 17

General Electric Co., Syracuse, N. Y. / delay lines/17

General Instrument Corp., Ontario, Can. / delay lines / 17

The Gudeman Co. of Calif. / delay lines / 17

Gulton Mfg. Corp. / delay lines / 17

Harder Co., Donald C. / delay lines / 17

Harnett Electric Corp. / delay lines / 17

Hupp Electronics Co. / delay lines / 17

Insulated Circuits, Inc. / delay lines / 17

Jacobs Instrument Co. / delay lines / 17

Leónard Electric Products Co., Inc. / delay lines /17

MacLeod & Hanopol, Inc. / delay lines / 17

Mag-Electric Products, Inc. / delay lines / 17

Magne-Pulse Corp. / delay lines / 17

Melpar, Inc. / delay lines / 17

Meridian Inc. / delay lines / 17

Micamold Electronics Mfg. Corp. / delay lines / 17

James Millen Mfg. Co., Inc. / delay lines / 17

National Aircraft Corp. / delay lines / 17

National Bureau of Standards, Data Processing Systems Division / delay lines / 17

PCA Electronics, Inc. / delay lines / 17

Polyphase Instrument Co. / delay lines / 17

Pulse Engineering / delay lines / 17

Pulse Techniques, Inc. / delay lines / 17

Radio Industries Inc. / delay lines / 17

Shallcross Mfg. Company / delay lines / 17

Short Bros. & Harland Ltd. -- see "Analog Computers"

Standard Coil Products Co., Inc. / delay lines / 17

STURRUP, INC., 50 Silver St., Middletown, Conn. / Solid-Ultra Sonic Delay Lines - 2 to 6600 or more microseconds - and Component Post Delay Channels / wide band widths; frequency; handling ability; better than 0.05 microseconds rise / 17

Technitrol Engineering Co. / delay lines / 17

Tobe Deutschmann Corp. / delay lines / 17

Union Electric & Mfg. Co. / delay lines / 17

United Transformer Co. / delay lines / 17

Vanguard Electronics Co. / delay lines / 17

Wang Laboratories / magnetic delay-line memory units / 17

Western Coil Products Co. / delay lines / 17

## 18. DESK CALCULATORS

Clary Multiplier Corp. / desk calculators / 18

Fabrica Addizionatrice Italiana SS, Italy / desk calculators to add, subtract, multiply, divide, print / 18

Facit, Inc. / Facit Calculator, ESA-O / DESCR: size, 7-7/8" x 10-5/8" x 7"; wt., 26-1/2 lbs.; fully automatic; adds, divides, subtracts, multiplies; capacities, 9 x 8 x 13; electric clearing; 10-key system; portable; made of fine Swedish steel / USE: for all office calculations, one hand operation / \$495 plus tax / 18

FRIDEN CALCULATING MACHINE CO., INC., San Leandro, Calif. / Automatic Desk Calculator / DESCR: add, subtract, multiply, divide automatically; wide variety of styles including Model SRW for automatic extraction of square root / USE: desk calculation / \$440 to \$1300 (taxes not included) / 18

Hamann Calculating Machine Co. / Adding, subtracting, multiplying desk calculators / 18

MARCHANT CALCULATORS, INC., 1475 Powell St., Oakland 8, Calif. / Automatic electric calculators (desk type) / DESCR: fully automatic models, with multiplication, division, decimals, carriage control, dial clearance, accumulation, round-off, squaring / USE: adjunct to binary electronic digital computers / \$440 to \$985 / 18

MARCHANT CALCULATORS, INC., \*a / Marchant Binary-Octal Calculator / DESCR: fully automatic multiplication and division directly performed in both binary and octal number systems; conversions between decimal number system and octal or binary number systems readily made with complete display of result / USE: adjunct to binary electronic digital computers / \$2950 / 18

Monroe Calculating Machine Co. / Desk calculating machinery for adding, calculating, and bookkeeping / 18

OLIVETTI CORP. OF AMERICA, 580 Fifth Ave., New York 36, N. Y. / Desk-type Printing Calculators, single and duplex registers / DESCR: Olivetti Printing Calculator automatically adds, subtracts, multiplies, divides, discounts and prints answers as well as components of problems on tape. Tetractys, dual register printing calculator with memory-unit, high speed 12-13 capacity, inter-operation transfer of calculations / USE: used in all figure-work where accuracy of a printed proof is required / Olivetti Printing Calculator \$600 + F. E. T.; Tetractys \$925 + F. E. T. / 18

REMINGTON RAND UNIVAC DIVISION, SPERRY RAND CORP., 315 4th Ave., New York 10, N. Y. / Model 99 Calculator that prints / DESCR: automatic multiplication and division; 10-key touch addition and subtraction; automatic credit balance / USE: for figure-work where printed proof of computations is desired / \$685 to \$785 / 18

## 19. DIFFERENTIAL ANALYZERS

AUTONETICS, a Div. of North American Aviation, Inc., 9150 E. Imperial Highway, Downey, Calif. / NATDAN Digital Differential Analyzer / DESCR: serial, rectangular integration, 93 integrator computer. 34.4 separate complete solutions per second. Memory-rotating magnetic disc, 32 bits/ integrator; 28 bits number length / - / 19

BENDIX COMPUTER DIV., BENDIX AVIATION CORP., 5630 Arbor Vitae St., Los Angeles 45, Calif. / Digital Differential Analyzer (DA-1) / DESCR: 108 integrator digital differential analyzer operations in conjunction with the G-15D General Purpose Digital Computer, with input from G-15 output equipment

output to graph plotter, or G-15 output equipment / USE: provides programming of the solution of problems which can be written in form of ordinary differential equations / \$13,700 / 19  
 Computer Co. of America / differential analyzers / 19  
 Goodyear Aircraft Corp. / Goodyear electronic differential analyzers / 19  
 Litton Industries / "Litton 20" Digital Differential Analyzer / DESCR: 20 Integrator Digital Differential Analyzer; speed, 60 iterations per sec; accuracy one part in 250,000; graph plotter and curve followers available; small size / USE: easily solve linear and non-linear differential equations, general functions, etc. / approx. \$10,000 / 19  
 The National Cash Register Co., Electronics Div., Calif. / decimal digital differential analyzers / 19

## 20. DIGITAL COMPUTERS

Aeronutronic Systems Inc. / Digital computing machinery / 20  
 Aircraft Armaments, Inc. / Digital computers / 20  
 ALLEGANY INSTRUMENT CO., INC., 1091 Wills Mountain, Cumberland, Md. / Type K-1 Ballistic Computer (Analog and digital) / DESCR: The K-1 computes data of any phenomenon that can be converted to an electrical signal. It presents this data both on the front panel and on paper tape or IBM cards, and includes: action time, force, ignition delay, peak values of force, total impulse (area beneath force-time curve), etc. / USE: The K-1 is connected to the pick-up devices and when the phenomenon is initiated it automatically presents 12 channels of information / \$16,810 / 20  
 ALWAC CORP., 13041 S. Cerise, Hawthorne, Calif. / Electronic, General Purpose, Digital Computer: ALWAC III-E / DESCR: drum computer, decimal alphabetic, hexadecimal; adds, subtracts, multiplies, divides; calculates, organizes, makes logical decisions; 8192 word storage; problems of any complexity, in any sequence; flexowriter, high speed reader, card converter, magnetic tape, motorized punch, teletype punch; very reliable / USE: business, industrial, financial, governmental problems / \$48,000, plus auxiliary units / 20  
 American Machine & Foundry Company, Electronics Div. / Digital computers / 20  
 Analogue Controls, Inc. / digital computers / 20  
 Argonne National Laboratory / Avidac and Oracle Digital Computers / 20  
 Arma, Div. of American Bosch Arma Corp. / Digital computers / 20  
 Atomic Instrument Co. / Model 580, High Speed Data Analyzer / 20  
 THE AUSTIN CO., 76 Ninth Ave., New York 11, N. Y. / Digital Computers, special purpose / special purpose computers for applications where general purpose computers are too costly or do not meet requirements / USE: by business and industry for high speed computations / - / 20  
 AUTONETICS, a Div. of North American Aviation, Inc., 9150 E. Imperial Hwy, Downey, Calif. / RECOMP general purpose transistor digital computer / DESCR: internally programmed, transistor general purpose digital computer with large capacity but very small size. Portable, 4096 random access memory (magnetic disk), paper tape input and output / USE: general computational work for industry or the military either in the field or laboratory. Can handle business type problems. / In the vicinity of \$100,000 / 20  
 Avion Instrument Co., / Digital computing machinery / 20  
 Bekey Electric Co., Inc. / watt servomotor / 20  
 Bell Punch Co., Ltd., England / digital computers / 20  
 Bell Telephone Laboratories, / Bell general purpose computers / 20  
 BENDIX AVIATION CORP., RESEARCH LABORATORIES DIVISION, P. O. Box 5115, Detroit 35, Mich. / Digital computers -- see "Analog Computers" / 20  
 Bendix Aviation Corp., Pacific Division / Digital computers / 20  
 BENDIX COMPUTER DIV., BENDIX AVIATION CORP., 5630 Arbor Vitae St., Los Angeles 45, Calif. / DA-1 Digital Differential Analyzer Attachment to G-15 Computer -- see "Differential Analyzers" / 20  
 BENDIX COMPUTER DIV., BENDIX AVIATION CORP., \*a / General Purpose Computer G-15 / DESCR: stored program, general-purpose computer with input and output of punched paper tape, typewriter, magnetic tape and punched cards. Also, may be combined with Digital Differential Analyzer Accessory and graph plotter. / USE: provides solutions for mathematical problems; also can perform control functions. / \$44,800 without DDA Accessory; DDA Accessory, \$13,700 / 20  
 Birkbeck College, University of London / ARC, APEXC, and SEC digital computers; electronic digital computers / 20  
 BJ Electronics, Borg-Warner Corp. / Digital data systems / 20  
 Burroughs Corp., Computer Section / Burroughs E101 Electronic Computer / 20  
 Burroughs Corp., Electronic Instruments Div., / Electronic computing equipment; large automatic digital computer UDEC; and built to order, small automatic digital computer, E101 / 20  
 Carbide and Carbon Chemicals Company / Numerical analysis using digital computers / 20  
 Century Engineers, Inc. / Digital computers / 20  
 Collins Radio Co. / Digital computers / 20  
 Commonwealth Scientific and Industrial Organization, Australia / Maker of CSIRO Mark I electronic digital computer / 20  
 Computer Control Co., Inc. / Special Purpose Digital Computers / 20  
 COMPUTING DEVICES OF CANADA, LTD., P. O. Box 508, Ottawa 4, Ont., Canada / Custom built digital computers / 20  
 Corbin Corp. / Digital computers / 20  
 DATAMATIC CORP., 151 Needham St., Newton Highlands 61, Mass. / Electronic computer systems for general accounting and data processing operations, and for general scientific applications / 20

Daystrom Instrument Co. / Digital computers / 20  
 Devol Research Co., / Digital computers / 20  
 Digitronics Corp. / Digital systems and components / 20  
 Educational Research Corp. / Digital computers / 20  
**ELECTRODATA DIVISION OF BURROUGHS CORP.**,  
 460 Sierra Madre Villa, Pasadena, Calif. / DATA-  
 TRON automatic digital computer and auxiliary e-  
 lectronic data processing machines / DESCR: 4, 000  
 words magnetic drum storage, 80 additional words  
 quick-access drum storage; 10 decimal digits and  
 sign; paper tape, CARDATRON complete alpha-numer-  
 ic punch card operation, DATAFILE single or mul-  
 tiple magnetic tape units; range 400, 000 to 2, 000, 000  
 words auxiliary storage per unit / USE: business app-  
 lications, mathematical, scientific, engineering com-  
 putation / \$140, 000 to \$250, 000 approx. or lease with  
 option to buy / 20  
 Electronic Computer Div. of Underwood Corp. / six  
 types of electronic digital computers (ELECOM "50",  
 100, 120A, 125, 200 and a data handling computer) / 20  
 Electronic Control Systems, Inc. / "Digimatic" High  
 Speed Digital Computer / DESCR: can interpolate blue  
 print data, put this data on magnetic tape, instruct  
 the machine tool to automatically mill the designated  
 piece. Makes use of playback commands through a  
 servomechanism / USE: automation of machine tools  
 / - / 20  
 Elliott Bros. (London) Ltd. / Elliott 402, 403, elect-  
 ronic digital computers / 20  
 The English Electric Company Ltd. / Deuce / DESCR:  
 a universal electronic digital computer using pun-  
 ched card input and output. Quick access storage  
 by mercury delay lines and auxiliary storage by mag-  
 netic drum. Total storage 402 and 8192 words res-  
 pectively, of 32 bits, Binary scale / USE: serially  
 / \$150, 000 / 20  
 Feedback Controls, Inc. / Digital computers / 20  
**FERRANTI ELECTRIC, INC.**, 30 Rockefeller Plaza,  
 New York 20, N. Y. / PEGASUS / DESCR: medium-  
 sized general purpose machine; magnetic drum main  
 store, capacity of 4096 words of 39 bits each; bit  
 rate, 300 KC; multiplication, 2 milliseconds; divi-  
 sion, 5 milliseconds; machine constructed of stan-  
 dard plug-in packages which may be readily replaced  
 for maintenance; modified single address code with  
 comprehensive range of orders; punched tape input  
 and output; extensive range of programs and sub-  
 routines are available / USE: scientific, engineering,  
 and business applications / \$200, 000 / 20  
**FERRANTI ELECTRIC, INC.**, \*a / MERCURY / DESCR:  
 high speed general purpose machine with automatic  
 floating point operation; magnetic core computing  
 store (rapid memory), capacity 40, 960 bits; mag-  
 netic drum main store (intermediate memory), ca-  
 pacity 750, 000 bits; additional delay line B registers  
 for modification of instructions; add time, 180 micro-  
 seconds; multiply time, 300 microseconds; compre-  
 hensive library of routines available / USE: scien-  
 tific engineering, business computing / \$400, 000 / 20  
 Ferranti Electric Ltd., Mount Dennis, Toronto, Ont.,  
 Canada / Digital computers / 20  
 General Automatics, Inc. / Digital computers / 20

General Electric Co., Johnson City, N. Y. / Digital  
 computers / 20  
 Gilmore Industries / Digital computers / 20  
 Hewlett-Packard Co. / Digital computers / 20  
**HUGHES RESEARCH AND DEVELOPMENT LABORA-**  
**TORIES**, Culver City, Calif. / small powerful auto-  
 matic electronic digital computers for airborne  
 use / 20  
 Imperial College, Mathematics Dept. / Digital compu-  
 ter / 20  
**INTERNATIONAL BUSINESS MACHINES CORP.**, 590  
 Madison Avenue, New York 22, N. Y. and elsewhere /  
 IBM 650 Magnetic Drum Data Processing Machine /  
 DESCR: the units of the basic 650 are: a Console  
 Unit which contains the magnetic drum, calculating  
 unit, and control console; a Card Read Punch with  
 which information is entered or extracted in punched-  
 card form, and a Power Unit. Up to 20, 000 alpha-  
 numeric characters of storage for data and opera-  
 ting instructions are available with the basic 650.  
 Additional units can be incorporated into a 650 system  
 to provide magnetic tape input and output, printer  
 output, magnetic core storage, and disk storage  
 with random access and direct interrogation (IBM  
 650 RAMAC) / USE: the 650 is a general-purpose  
 data processing machine which is used for commer-  
 cial and scientific computing problems / Monthly  
 rental \$3, 750 and up. Selling price \$205, 900 and  
 up / 20  
**INTERNATIONAL BUSINESS MACHINES CORP.**, \*a /  
 IBM 604 Electronic Calculating Punch / DESCR:  
 a 1400 tube general-purpose computer that reads  
 problem data from IBM punched cards at a constant  
 speed of 6, 000 cards per hour and can go through as  
 many as 60 separate steps to obtain the solution to  
 a single problem / USE: the 604 is widely used in  
 science, engineering, and business / Monthly ren-  
 tal is \$550 and up. Selling price is \$33, 850.00 and  
 up / 20  
**INTERNATIONAL BUSINESS MACHINES CORP.** \*a /  
 IBM 607 Electronic Calculator / DESCR: a larger  
 version of the IBM 604 which is able to perform and  
 check 14, 000 computing operations a minute. The  
 607's memory capacity makes it possible to use in-  
 termediate calculated results as well as original  
 data in solving a problem / USE: the 607 is used to  
 handle in one operation the majority of commercial  
 or scientific calculations ordinarily requiring mul-  
 tiple machine operations / Monthly rental is \$800-  
 950. Selling price is \$47, 000 - 55, 300 / 20  
**INTERNATIONAL BUSINESS MACHINES CORP.**, \*a /  
 IBM 608 Transistor Calculator / DESCR: uses tran-  
 sistors in place of vacuum tubes which makes possi-  
 ble a 50% reduction in computer-unit size and a 90%  
 reduction in power requirements over a comparable  
 IBM vacuum-tube model calculator. The 608 can  
 perform 4, 500 additions a second. Its internal stor-  
 age is made up of magnetic cores / USE: for comm-  
 ercial and scientific problems / Monthly rental  
 \$2, 250.00. Selling price \$120, 800.00 / 20  
**INTERNATIONAL BUSINESS MACHINES CORP.**, \*a /  
 IBM 305 Random Access Memory Accounting

Machine (RAMAC) / DESCR: principal components are: disk memory unit, printer, card punch, power unit, processing unit, and console. Heart of the machine is the disk memory unit which consists of 50 magnetic metal disks. Data is entered onto or extracted from the disks by a rapidly-moving arm. The disk memory unit has a storage capacity of 5,000,000 digits. The 305 has arithmetical and logical processing ability, punched-card input, and both punched-card and printed output / USE: utilizing continuous, or "in-line" accounting, the 305 RAMAC is ideal for all types of business accounting / Monthly rental \$3,200. Selling price \$224,000. / 20

INTERNATIONAL BUSINESS MACHINES CORP., \*a / The IBM 704 Electronic Data Processing Machine / DESCR: large-scale electronic data processing system made up of inter-connected units. The heart of the 704 system is its high-speed magnetic core storage. Any word in core storage can be located and put into use in a few millionths of a second. Core storage is supplemented by magnetic drums and magnetic tapes. The 704 can perform 40,000 additions or subtractions or 5,000 multiplications or divisions of ten-digit numbers in one second / USE: primarily for solving complex scientific and engineering problems / Monthly rental \$25,900 and up. Selling price \$1,417,500 and up / 20

INTERNATIONAL BUSINESS MACHINES CORP., \*a / IBM 705 Electronic Data Processing Machine / DESCR: large-scale electronic data processing system made up of inter-connected units. It features 20,000 positions of magnetic core "memory" and utilizes magnetic drums and magnetic tapes for additional storage. The 705 can make 8,400 additions or 1,250 multiplications per second. A 705 Model II with 40,000 positions of magnetic core storage also is available / USE: the 705 is used primarily for handling business problems / Monthly rental \$24,550 and up. Selling price \$1,334,650 and up / 20

INTERNATIONAL BUSINESS MACHINES CORP., \*a / IBM 709 Electronic Data Processing Machine / DESCR: the latest addition to IBM's 700-series of electronic data processing machines. It can perform up to 42,000 additions or subtractions, or 5,000 multiplications or divisions, each second. The 709's magnetic core storage has a capacity of over 327,000 decimal digits. A Data Synchronizer which permits the system to read, write, and calculate simultaneously also is incorporated. The 709's tape units permit information being written on magnetic tape to be automatically checked for accuracy during the writing process / USE: the new 709 is the first equipment of its capacity that can work with equal facility on both commercial and scientific or engineering problems / Monthly rental \$47,500 and up. Selling price \$2,653,150 and up / 20

Jacobs Instrument Co. / JAINCOMP Digital Computers / DESCR: compact, high-speed digital computers for both general purpose business use and for real time (control) applications / USE: in business and in real-time (control) / varies, depending on requirements / 20

LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. / DIANA magnetic drum data processing machine / DESCR: General purpose, stored-program computer; variable word, block and record lengths. Magnetic cores and high speed drum for immediate access memory and programs. Magnetic drums (any number) for bulk storage; each drum stores approximately 2,000,000 alphanumeric characters; 1/6 second random access to entire file. Paper and magnetic tape, punched card, and typewriter inputs; same outputs plus line printer. Scalable capacity. / USE: general purpose, with special emphasis on applications requiring extensive quick random access / price varies with capacity; \$500,000 range / 20

LABORATORY FOR ELECTRONICS, INC., \*a / TIM magnetic drum data processing machine / DESCR: medium priced general purpose stored-program computer utilizing random access magnetic drums exclusively for bulk storage; numeric information only; 750,000 decimal digits per drum; up to 10 drums; variable word length, adjustable record length; input from punched cards, tags, tape, or directly from keyboard; output via typewriter, paper tape, punched card / USE: account posting, particularly in inventory control and deposit accounting / \$60,000 to \$200,000 / 20

Lavoie Labs, Inc. / Digital computers / 20

Leemath, Inc. / Digital computers / 20

Librascope, Inc. / LGP-30 General Purpose Computer / 20

Litton Industries of Maryland, Inc. / Digital computers / 20  
Litton Industries, -- see "Digital Differential Analyzers" / 20

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Digital Computer Laboratory, 211 Mass. Ave., Cambridge 39, Mass. / "Whirlwind" electronic digital computer / 20

The W. L. Maxson Corp. / digital computers for fire control, navigation, etc. / 20

Monrobot Corp. / automatic electronic digital computers / 20

(cont'd on page 73)

\*-----\*

## SPECIAL ISSUES OF "COMPUTERS AND AUTOMATION"

The June issue of "Computers and Automation" in each year is a special issue, "The Computer Directory", containing a "Roster of Organizations in the Computer Field" and a "Buyers' Guide for the Computer Field: Products and Services for Rent or Sale". ...Included in the subscription; ...but if bought separately, price \$6.00.

From time to time we publish an extra issue, entitled "Who's Who in the Computer Field"; the last one was in March 1957, 212 pages long, with names and addresses and some information about over 12,000 computer people. ...Not included in the subscription; price \$17.50.



MONROE CALCULATING MACHINE CO. (Monrobot Laboratory), Orange, N. J. / Electronic Calculator (Monrobot VI) digital electronic calculator; double arithmetic processing units; equipped with Monroe "Automatic Internal Diagnosis" of errors, magnetic drum, capacity 100 numbers of 20 decimal digits with algebraic sign, and 200 orders, data and programs entered by manual keyboard or perforated tape; result printed on electric typewriter or produced on perforated tape, contents of magnetic drum may be transferred to perforated tape or vice versa / USE: engineering and commercial calculation / - / 20

MONROE CALCULATING MACHINE CO. -- See Computer Components

Nader Mfg. Co. / digital counters / 20

The National Cash Register Co., Electronics Div. / Digital Computers / CRC 102-A and 102-D general purpose computers and other computers / 20

National Physical Laboratory, Control Mechanisms and Electronics Division, England / digital computers / 20

New London Instrument Co., Inc. / digital computers / 20

Norden Laboratories / digital computers / 20

NUCLEAR DEVELOPMENT CORP. OF AMERICA, 5 New St., White Plains, N. Y. / Special Purpose Computers / design and construction of computers to meet specific scientific, industrial, commercial, computing, and data handling problems / special purpose / varies / 20

NUCLEAR DEVELOPMENT CORP. OF AMERICA, \*a / Circle Computer designs and sales / 20

Oerlikon Tool & Arms Corp. of America / digital computers / 20

Philco Corp., Government & Industrial Div. / TRANSAC Electronic (Digital) Computers / DESCR: employs Philco direct-coupled transistors and techniques throughout, thus eliminating numerous components familiar in vacuum tube techniques / USE: TRANSAC arithmetic units are for use as the core of any modern computer design / \$25,000 to \$500,000 / 20

Radiation Counter Lab., Inc. / digital computers/20

Ram Meter, Inc. / digital computers / 20

Ramo-Wooldridge Corp. / digital computers and components / 20

The Rand Corp. / digital computers / 20

J. B. Rea Co., Inc. / READIX Digital Computer / \$79,000 / 20

REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., 315 4th Ave., New York 10, N. Y. / The Univac System and Univac II / DESCR: large scale general purpose digital electronic computing system; built-in self-checking features; employs a single address system and 1000 words of mercury delay line storage in Univac I; 2,000 up to 10,000 words of magnetic-core storage in Univac II; magnetic tape units provide supplementary storage and fast input-output facilities; operate on stored programs employing 63 instructions and 45 different arithmetic and logical operations; auxiliary equipment for data conversion; processed data put out in

printed form, punched cards, or punched tape / USE: scientific, commercial, business, industrial, government, etc. / - / 20

REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Univac File Computer Systems / DESCR: capacity of 1,800,000 digits or characters of internal storage file information; up to 31 input-output devices may be connected to the system for simultaneous "on-line" service; programming may be done externally by a changeable control panel; internally by stored program or a combination; external program is non-sequential; magnetic drum general storage unit for data, program step instructions, or both; random access type, 2 size drums available / USE: commercial accounting purposes with large amounts of data but relatively short computations / \$2085 to \$17,000 monthly rental; \$125,000 to \$1,020,000 sale; prices subject to tax/20

REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., 1902 Minnehaha Ave., St. Paul W4, Minn. / Univac Scientific Computer Model 1103A / general purpose digital computer, two address logic, large storage capacity, high operating speed, versatile programming; 16,384 magnetic-drum registers, 4096 magnetic-core registers; all registers individually addressed, directly accessible; internally stored programs capable of self-modification; 41 different arithmetic and logical operations; parallel computation on words of 36 binary digits; optional features and equipment are; floating-point, additional magnetic-core storage for 12,288 words, ten magnetic-tape units with variable format feature for supplementary storage and input-output, 600 line a minute printer, off-line and on-line operation / USE: scientific, engineering, computing / \$895,000; available on rental basis approximately \$21,000 a month / 20

REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP. -- see "Data Processing Machines" / 20 Saunders & Co. / digital computing machinery / 20 Servo Corp. or America / digital computers / 20 Société d'Electronique et d'Automatisme, France / digital computers and components. General purpose digital computer CAB 2,022 / 20

SOROBAN ENGINEERING, INC., Box 117, Melbourne, Fla. / Electronic digital computers of the FLAC and SEAC type / 20

Stromberg-Carlson-San Diego / Computer Read-Out / 20

Sylvania Electric Products, Inc., Radio and Television Div. / digital computers, using printed circuit techniques / 20

SYLVANIA ELECTRIC PRODUCTS, INC., ELECTRONIC SYSTEMS DIVISION, 100 First Ave., Waltham 54, Mass. / large electronic digital computers on contract / 20

Technitrol Engineering Co. / digital computers and data processing machines / 20

THE TELEREGISTER CORP., 445 Fairfield Ave., Stamford, Conn. / Digital special purpose computers as a component of complete data processing systems / 20

Union Switch and Signal Co., Div. of Westinghouse  
Airbrake / digital computers / 20

U. S. Naval Research Laboratory, Washington 25, D. C. / NAREC digital computer / 20

University of Illinois / digital computer / 20

University of Manchester, Mathematical Laboratory, Manchester, England / digital computer / 20

Valor Electronic Components Co. / digital computers/20

Vectron, Inc. / special computers for military applications, etc. / 20

Waldorf Instrument Corp. / digital computers / 20

Wallind-Pierce Corp. / digital computers / 20

Wang Laboratories / Electronic Digital-Analog Differential Computer (Wedilog) / - / USE: as a digital computer / \$19,500 and up / 20

The George Washington Univ., Logistics Research Project / ONR electronic digital computer with magnetic drum memory / 20

Westronics, Inc. / digital computers / 20

Wiancko Engineering Co. / digital ballistics analyzer computer / 20

ZUSE KOMMANDIT-GESELLSCHAFT, Neukirchen, Kreis Heunfeld, German Federal Republic / 222 Automatic electronic digital computer / DESCR: medium-sized, magnetic drum, magnetic core store, serial with both fixed point and floating point operation, teletyper for input and output / USE: in scientific engineering or commercial problems / \$45,000 / 20

## 21. DIGITAL-TO-ANALOG CONVERTERS

Avion Division-Alexandria, (formerly ACF Electronics, Inc.) Div., of ACF Industries, Inc. / ACF Model 1002 Decoder / 21

BECKMAN INSTRUMENTS, INC., SYSTEMS DIVISION, 325 N. Muller Ave., Anaheim, Calif. / Digital-to-Analog Converters - see "Data Processing Machinery" / 21

BENDIX AVIATION CORP., RESEARCH LABORATORIES DIVISION, P. O. Box 5115, Detroit 35, Mich. / Digital-to-Analog Converters -- see "Analog Computers" / 21

EPSCO, INC., 588 Commonwealth Ave., Boston 15, Mass. / DATRAC Model B / DESCR: High speed reversible digital-to-voltage converter. Straight binary or binary coded decimal output in both serial pulse and semi-static parallel form. No operator adjustments required. / USE: Automatic control; data reduction for visual or computer processing. Quick look systems / - / 21

Kearfott Co., Inc. / digital-to-analog converters / 21

PACKARD-BELL ELECTRONICS CORP., 12333 W. Olympic Blvd., Los Angeles 64, Calif. / digital-to-analog converters / 21

RADIATION, INC., P. O. Box 37, Melbourne, Fla. / digital-to-analog converters / 21

Wallind-Pierce Corp. / digital-to-analog converters/21

## 22. DIODES (Computer Types)

Allgemeine Elektricitaets-Gesellschaft, Germany / Germanium diodes / 22

Amperex Electronic Corp. / crystal diodes / 22

CBS-HYTRON, Lowell, Mass. / diodes / 22

C B S International / diodes / 22

Hughes Products / diodes / 22

International Rectifier Corp. / Germanium diodes, selenium diodes, silicon diodes, selenium photocells, selenium sun batteries / 22

INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. / diodes / 22

National Bureau of Standards, Data Processing Systems Division / diodes / 22

National Fabricated Products, Inc. / diodes: silicon type / 22

National Semiconductor Products / Silicon Junction Diodes / very rugged, hermetically sealed, silicon alloy junction diodes / \$2 to \$13 / 22

Pacific Semiconductors, Inc. / diodes / 22

Philco Corp. / X-Band Mixer Diode / Hermetically sealed point contact germanium type / USE: wide band mixer applications / - / 22

RADIO CORP. OF AMERICA, TUBE DIV., 415 S. 5th St., Harrison, N. J. / diodes / 22

RADIO CORP. OF AMERICA, SEMICONDUCTOR DIV., Somerville, N. J. / Germanium diodes for computers / 22

RADIO RECEPTOR CO., INC., 240 Wythe Ave., Brooklyn 11, N. Y. / Germanium Diodes / DESCR: high conductance, gold bonded, hermetically sealed glass diodes / USE: transistor biasing, receiving equipment, computers, magnetic amplifiers, and other applications / - / 22

RAYTHEON MANUFACTURING CO., Receiving and Cathode Ray Tube Operations, 55 Chapel St., Newton 58, Mass. / Transistors, Semiconductor Diodes / DESCR: silicon and germanium transistors, silicon rectifiers / USE: computer and related uses / - / 22

SCHWEBER ELECTRONICS, 122 Herricks Road, Mineola, N. Y. / diodes / 22

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. / Electronic Tubes, Diodes, Transistors / DESCR: Semiconductor diodes and transistors, vacuum tube type diodes, amplifying electronic tubes / USE: in clipping, clamping, gating, and pulse amplifier circuits / \$1 to \$5 / 22

Sylvania Electric Products, Inc., Radio and Television Div. / subassemblies of diodes and triodes / 22

Sylvania Electric Products, Woburn Div. / diodes / 22

Thermosen, Inc. / diodes / 22

Transistor Products, Inc. / diodes / 22

Transitron Electronic Corp. / diodes / 22

United States Dynamics Corp. / silicon and germanium diodes / 22

E

## 23. ELECTRIC TYPEWRITERS, CONTROLLED

- American Automatic Typewriter Co. / Autotypist / 23  
 Benson-Lehner Corp. / Electrotyper (Model B) / 23  
 Coxhead Corp. / varitypers / 23  
 ELECTRODATA DIVISION OF BURROUGHS CORP.-  
 see "Digital Computers" / 23  
 FRIDEN CALCULATING MACHINE CO., INC., San  
 Leandro, Calif. / Flexowriters / DESCR: electric  
 typewriting machine, standard electric keyboard,  
 code selector, code translator, tape punch, and  
 tape reader, all integrated in one machine; will  
 punch, read, duplicate, correct paper tape; 5, 6,  
 7, 8 channels optional / USE: to prepare documents  
 at the source, and produce as a by-product punched  
 tapes with complete selected information; the tapes  
 in turn are used to actuate other tape operated mach-  
 ines, such as communications equipment, address  
 plate embossing machines, tape-to-card punches,  
 computers, etc. / \$1850 to \$3820 (taxes not in-  
 cluded) / 23  
 INTERNATIONAL BUSINESS MACHINES CORP., 590  
 Madison Ave., New York 22, N. Y. / IBM 884  
 Typewriter Tape Punch / DESCR: creates a perfor-  
 ated tape simultaneously with the typing operation /  
 USE: these perforated tapes control the IBM Tape-  
 to-Card Punch for automatic conversion to punched  
 cards / Monthly rental \$75. Selling price \$3,750 / 23  
 INTERNATIONAL BUSINESS MACHINES CORP., \*a /  
 IBM Typewriter Card Punch (types 824 and 826) /  
 DESCR: both the 824 and the 826 prepare punched  
 cards for accounting use as an automatic by-product  
 of typewriting operations. Each machine consists  
 of two units, an IBM electric typewriter and a  
 printing (826) or non-printing (824) card punch /  
 Monthly rental \$95 - \$115 / Selling price \$4,700 -  
 \$5,900 / 23  
 Robotyper Corporation / automatic typing equipment  
 that can be associated with any electric typewriter,  
 using a record roll pneumatically operated / 23  
 SOROBAN ENGINEERING, INC., Box 338, Melbourne,  
 Fla. / Automatic Tabulators / DESCR: specialized  
 coding and de-coding devices / USE: in control of  
 electronic tabulators and similar printing devices /  
 \$1600 to \$4900 / 23  
 Underwood Corp. / Underwood Servotyper / DESCR:  
 controlled electric typewriter; keys are operated  
 by solenoids triggered by electrical signals / USE:  
 automatic recording of digitized and alphabetic  
 data / - / 23  
 Underwood Corp. / Electric typewriters, used with  
 computers / 23

## 24. ELECTRONIC TUBES (Computer Types)

- Amperex Electronic Corp. / Electron tubes / 24  
 CBS-HYTRON, Div. of Columbia Broadcasting Sys-  
 tem, Inc., 100 Endicott St., Danvers, Mass. /  
 Electron tubes and semiconductors for computer  
 and other uses / 24

- General Electric Co., Tube Dept., Schenectady, N. Y.  
 / G. E. Computer Tubes / 24  
 General Electric Co., Tube Dept., \*a / G. E. Five-  
 Star Computer Tube / 24  
 National Union Electric Corp. / electron tubes / 24  
 RAYTHEON MANUFACTURING CO., Receiving and  
 Cathode Ray Tube Operations, 55 Chapel St., New-  
 ton 58, Mass. / Electron Tubes / DESCR: reliable  
 miniature and subminiature tubes, low drain fila-  
 mentary subminiature tubes, other special tube  
 types / USE: computer and related uses / - / 24  
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broad-  
 way, New York 19, N. Y. / Computer products:  
 Twin-Triode tubes, Multigrad tubes, Decade Counter  
 tubes / \$1 to \$14 / 24

F

## 24.5. FACSIMILE EQUIPMENT

- ADDRESSOGRAPH-MULTIGRAPH CORP., 1200 Bab-  
 bitt Rd., Cleveland 17, Ohio / Electronic Facsimile  
 Printer / DESCR: scans typed data contained on unit  
 punched card records and prints onto ordinary con-  
 tinuous paper / 24.5  
 Alden Electronic and Impulse Recording Equipment Co.  
 / Facsimile recording equipment / 24.5  
 AMPEX CORP., 934 Charter St., Redwood City, Calif.  
 / TV recording tape, recording equipment / 24.5  
 Barker & Williamson, Inc. / facsimile equipment,  
 trans. equipment / 24.5  
 Brick Electronic Equipment Co. / facsimile equipment  
 / 24.5  
 J. H. Bunnell & Co. / facsimile, recording equipment  
 / 24.5  
 Haloid Co. / Sensitized paper / 24.5  
 Hogan Laboratories / facsimile and graphic recording  
 / 24.5  
 Times Facsimile Corp. / Receiving equipment, sen-  
 sitized paper, transmitting equipment / 24.5  
 Western Union Telegraph Co. / sensitized paper / 24.5  
 Westrex Corp. / sensitized paper, receiving equip-  
 ment / 24.5

## 25. FIRE CONTROL EQUIPMENT

- Belock Instrument Corp. / bombing and gun fire con-  
 trol computers / 25  
 Farrand Optical Co. / gunfire control apparatus, range-  
 finders, optical and electronic sighting equipment,  
 automatic trackers, infrared search and scanning  
 systems / 25  
 FORD INSTRUMENT CO., DIV. OF SPERRY RAND  
 CORP., 31-10 Thomson Ave., Long Island City 1,  
 N. Y. / Gunfire control apparatus; analog and digital  
 computers and components, missile guidance sys-  
 tems, magnetic amplifiers, servo motors, differ-  
 ential and integrator elements, instruments for  
 shipborne and airborne armament and navigational

control; nuclear reactors, computers, systems, drives, and precision components / 25  
 N. V. HOLLANDSE SIGNAALAPPARATEN, Hengelo (0), Netherlands / Radar Fire Controls Systems and their computers / 25  
 MONROE CALCULATING MACHINE CO. — see "Computer Components" / 25  
 Reeves Instrument Corp. / fire control equipment / 25

I

## 26. INFORMATION RETRIEVAL

MONROE CALCULATING MACHINE CO. — see "Computer Components" / 26  
 Zator Co. / Zatocoding System / DESCR: a digital technique for indexing scientific information and retrieving it by use of a card sorting machine / USE: for retrieval of scientific reports and literature in collections of 1,000 items and up / monthly rental \$45 plus initial \$500 professional installation charge / 26

K

## 27. KEYBOARDS

Benson-Lehner Corp. / Serial Input Keyboard (Key-pak) / 27  
 MONROE CALCULATING MACHINE CO. — see "Computer Components" / 27  
 SOROBAN ENGINEERING, INC., Box 338, Melbourne, Fla. / Coding Keyboards / DESCR: specialized and custom-made keyboard units for use in automatic control applications / - / \$390 to \$850 / 27

L

## 28. LINE-A-TIME PRINTERS

Anelex Corp. / ANelex Synchroprinter / 28  
 CONTROL INSTRUMENT CO., INC., 67 35th St., Brooklyn, N. Y. / 900-line per minute tabulator / 28  
 POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. / Magnityper / DESCR: High-speed line-at-a-time printers using magnetic core of Magnistor storage; available in 20, 40, 60, 80, 100 or 120 column sizes. Printing rates: alphanumeric, 10 lines per second; numeric, 15 lines per second / USE: digital computer output data processing systems / \$40,000 to \$50,000 / 28  
 Shepard Laboratories / High Speed "TYPER" / 28

## 29. LOGICAL CIRCUITS (For Digital Computers)

American Machine & Foundry Co., Electronics Div. / logical circuits / 29  
 Burroughs Corp., Electronic Instruments Div. / pulse control equipment / 29  
 Computer Control Co., Inc. — see "Arithmetical Circuits" / 29  
 Librascope, Inc. (formerly The Minnesota Electronics Corp), Burbank Div. / Magnetic DECISION Elements / DESCR: magnetic digital computing components expressing logical properties / USE: arithmetical or control circuits / sole as components or with custom-designed equipment / 29  
 MONROE CALCULATING MACHINE CO. — see "Computer Components" / 29

M

## 30. MAGNETIC CORES (Computer Types)

Aerovox Corp. / magnetic cores, ferrites, toroids / 30  
 Alden Products Co. / magnetic storage cores, toroidal core winding / 30  
 Allen-Bradley Co. / cores, ferrites / 30  
 American Electro Metal Corp. / magnetic cores / 30  
 American Lava Corp. / cores, ceramic / 30  
 Amperex Electronic Corp. / magnetic cores / 30  
 THE ARNOLD ENGINEERING CO., Marengo, Ill. / magnetic cores and other magnetic material for computer components, etc. / 30  
 BECKMAN INSTRUMENTS, INC., SYSTEMS DIV., 325 N. Muller Ave., Anaheim, Calif. — see "Data Processing Machinery" / 30  
 Burroughs Corp., Electronics Instruments Div. / magnetic cores / 30  
 Canadian Westinghouse Co., Ltd. / magnetic cores / 30  
 Carstedt Research, Inc. / magnetic cores / 30  
 Columbia Carbon Co. / magnetic cores / 30  
 Henry L. Crowley & Co., Inc. / magnetic cores / 30  
 Custom Components, Inc. / magnetic cores / 30  
 Daystrom Instrument Co., Archbald, Pa. / magnetic cores / 30  
 DX Radio Products Co. / magnetic cores / 30  
 EPSCO, INC., 588 Commonwealth Ave., Boston 15, Mass. / Magnetic core storage elements / USE: frequency or pulse rate transformations; as shift registers in magnetic core buffer storage units / - / 30  
 Ferricore, Inc. / magnetic cores / 30  
 Ferroxcube Corp. of America / Ferrite core materials, including pot cores, cup cores, recording heads, and microminiature toroids with square hysteresis loop; Magnadur permanent magnet materials / 30  
 GENERAL CERAMICS CORP., Keasbey, N. J. / Ferrites and Technical Ceramics / Ferrites for magnetic cores, memories, toroids, transformers, antennas, etc.; Technical Ceramics for insulation and seals; Magnetic Memory Cores, Magnetic Memory Planes,

standard and custom wired; Ferrites for pulse transformer and recording heads for computer components; Ferrite Cores; Technical Ceramics, Insulators, etc. / - / price variable / 30

General Electric Co., Syracuse, N. Y. / magnetic cores / 30

Gramation Instrument Co. / magnetic cores / 30

Indiana Steel Products Co. / magnetic cores / 30

International Electronics Corp. / magnetic cores / 30

International Telemeter Corp. / ferrite storage and recording head cores. Research and manufacturing in high capacity photoscopic storage devices / USE: in computer memories / cores from 2¢ to \$1.00 / 30

Isolantite Mfg. Corp. / magnetic cores / 30

Lapp Insulator Co., Inc. / magnetic cores, resistors / 30

Leonard Electric Products Co., Inc. / magnetic cores / 30

Magnetic Core Corp. / magnetic cores / 30

Magnetic Metals Co. / magnetic cores / 30

Magnetic Research Corp. / magnetic cores / 30

Magnetics, Inc. / metallic cores of high magnetic permeability / 30

Maryland Lava Co. / magnetic cores / 30

Melpar, Inc. / magnetic cores / 30

Microwave Assoc., Inc. / magnetic cores / 30

Microwave Engineering Labs., Inc. / magnetic cores / 30

Minnesota Mining & Mfg. Co. / magnetic cores / 30

Moloney Electric Co. / magnetic cores / 30

MONROE CALCULATING MACHINE CO. — see "Computer Components" / 30

Morand Electronics / magnetic cores / 30

Mullard Overseas, Ltd., England / magnetic cores / 30

National Aircraft Corp. / magnetic cores / 30

National Moldite Co. / magnetic cores / 30

Northern Electric Co., Ltd., Canada / magnetic cores / 30

Permoflux Corp. / magnetic cores / 30

The Polymer Corp. of Pa. / magnetic cores / 30

POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. / Magnetic core memory, random access memory / 30

Pyroferic Co., Inc. / magnetic cores / 30

Radio Cores, Inc. / magnetic cores / 30

RADIO CORP. OF AMERICA, COMPONENTS DIV., Camden, N. J. / magnetic cores / Ferrite memory cores, transfluxors, custom-built memory planes, sintered ferrite memory plates, relays / 30

Sprague Electric Co. / magnetic shift registers / 30

Steward Mfg. Co. / magnetic cores / 30

Stupakoff Div. of the Carborundum Co. / magnetic cores / 30

Superex Electronics Corp. / magnetic cores / 30

Superior Carbon products, Inc. / magnetic cores / 30

Superior Steatite & Ceramic Corp. / magnetic cores / 30

Telectro Industries Corp. / magnetic cores / 30

TELEMETER MAGNETICS, INC., 2245 Pontius Ave., Los Angeles 64, Calif. / Magnetic Core Memories / DESCR: Small and large scale random access coincident-current core memories. Capacity 1,000 to 1 million bits. Speed 30 to 8 microseconds /

USE: for rapid access random storage in digital computing, automatic control and data processing systems / \$50,000 to \$500,000 / 30

TELEMETER MAGNETICS, INC., \*a / Magnetic Cores / DESCR: a line of ferrite cores with square hysteresis loop; recording heads, memory or switching cores, core matrices, shift registers, magnetic amplifiers / USE: for coincident-current memory, switching, logic, shift register counters and other digital sub-systems / - / 30

Thomas & Skinner, Inc. / magnetic cores / 30

Thor Ceramics, Inc. / magnetic cores / 30

United Mineral & Chemical Corp. / magnetic cores / 30

U. S. Ceramic Tile Co., Diamonite Div. magnetic cores / 30

Western Gear Corp., Electro Products Div. / magnetic cores / 30

Western Gold & Platinum Co. / magnetic cores / 30

John F. Whitehead Co. / magnetic cores / 30

Yale & Towne Manufacturing Co. / magnetic cores / 30

### 31. MAGNETIC DRUMS

ALWAC CORP., 13041 S. Cerise, Hawthorne, Calif. / Magnetic Drums / DESCR: 8192 or 4096 word capacity; also special drums from 1" to 4" dia., and 1/2" to 40" length. The 8192 word drum: 9-3/4" dia., 27-3/4" lgth., 44 lbs., 3480 rpm, 314 channels (28 recirc), 740,000 bits (100 per in.). The 4096 word drum: 9-5/8" dia., 16-13/16" lgth., 35 lbs., 3450 rpm, 170 channels (25 recirc.), 390,000 bits (100 per in.) / USE: magnetic storage for ALWAC, or other computers / 8192 words, \$8000; 4096 words, \$5000; quotations or bids for design and production of special drums on request; tax, shipping, extra / 31

Brush Electronics Co. / Tape Drum / 31

BRYANT GAGE & SPINDLE DIVISION, Box 620, Springfield, Vt. / Magnetic Memory Drums, Precision Electro Mechanical Devices, High Speed Motors, Drums, Discs, Tape Transports, Machine Tool Spindles / DESCR: Magnetic drums designed to purchasers' requirements. Air bearings or super-precision ball bearings; belt drive or integral motor drive; speeds up to 200,000 RPM; capacity up to 5,000,000 bits. Drum runout .0010" T.I.R. or less. Vertical or horizontal housing. Head mounting surfaces to suit. High density magnetic oxide coating / USE: for semi-permanent storage of data in digital computers or as a delay line / prices depend on quantity, design and product / 31

Electro-Machine Corp. / magnetic drums / 31

Electronic Computer Div. of Underwood Corp. / magnetic drums / 31

FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. / Rapid Access Magnetic Storage Drum (Type 200-B) / DESCR: drum rotates at 23,000 RPM giving a maximum access time of 2-1/2 milliseconds; 20 heads provide 20 tracks, each with capacity of 1000 bits at a density of 160 bits per inch / USE: as buffer store, signal delay system,

or storage for small computer / \$1425 / 31  
 Ferranti Electric Ltds., Mt. Dennis, Toronto, Ont.,  
 Canada / magnetic drums / 31  
 General Electric Co. Ltd. of England / magnetic  
 drums / 31  
 Intra Corp. / magnetic storage drums / DESCR: for  
 use with digital computers and data-processing sys-  
 tems / USE: computers / Mark II, \$500; Mark III,  
 \$2,000 / 31  
 Librascope, Inc., Glendale, Calif. / magnetic drums  
 / DESCR: stock laboratory drums and stock and  
 custom computer drums or special purpose drums  
 / 31  
 The Magnavox Co. / magnetic drums / 31  
 Magne-Pulse Corp. / magnetic drums / 31  
 MONROE CALCULATING MACHINE CO. — see "Com-  
 puter Components" / 31  
 Norton Associates, Inc. / magnetic drums / 31  
 REMINGTON RAND UNIVAC DIV. OF SPERRY RAND  
 CORP., 1902 W. Minnehaha Ave., St. Paul W4,  
 Minn. / Magnetic Storage Drums / DESCR: Digital  
 drums: motor-driven, rapid-access, high-speed  
 storage, record information in binary form. Ana-  
 log drums: utilize boundary-displacement record-  
 ing techniques / USE: the digital drums are used  
 as memory units for electronic computers and  
 data reduction systems. The analog drums have  
 been used for recording of power-line transients,  
 phase-shifting of signals, signal-to-noise enhance-  
 ment, and voice recording / \$3780 to \$21,700 (prices  
 without heads) / 31  
 Telectro Industries Corp. / magnetic drums / 31  
 TELEREGISTER CORP., 445 Fairfield Ave., Stam-  
 ford, Conn. / magnetic drums / 31  
 Wharf Engineering Labs., England / magnetic drums  
 / 31  
 Wright Engineering Co. / magnetic drums / 31

### 32. MAGNETIC HEADS

ALWAC CORP., 13041 S. Cerise, Hawthorne, Calif.  
 / Read-Record Heads / DESCR: Available for re-  
 cording and reading both 8 and 16 channels per  
 inch. 1-1/2" by 1/2" diameter; track width .050"  
 and .100"; .003" gap width; gap material, brass;  
 winding, 500 turns, center-tapped, or to specifica-  
 tions; wire size, #38 copper-formvar insulated;  
 inductance, 20 mh.; D.C. resistance, 17.5 ohms;  
 resonant frequency, 400 KC / USE: with magnetic  
 drums of digital computing systems / 1 to 9, \$20  
 each; 10 to 99, \$15 each; 100 or more, \$10 each;  
 tax, shipping, extra / 32  
 Brush Electronics Co. / magnetic heads / 32  
 The Davies Laboratories, Inc. (a division of Minnea-  
 polis-Honeywell Regulator Co. / Multi-Track Mag-  
 netic Heads / 32  
 Electronic Computer Div. of Underwood Corp. / mag-  
 netic recording heads / 32  
 International Telemeter Corp. / Ferrite storage and  
 recording head cores. Research and manufactur-  
 ing in high capacity photoscopic storage devices /

USE: in computer memories / cores from 2¢ to  
 \$1.00 / 32  
 Librascope, Inc., Glendale, Calif. / Magnetic Head  
 MH 10A / \$15 to \$36 / 32  
 McGraw-Edison Co., T. A. Edison Instrument Div.  
 / magnetic heads / 32  
 MONROE CALCULATING MACHINE CO. — see "Com-  
 puter Components" / 32  
 J. B. Rea Co., Inc. / magnetic recording heads / \$25  
 / 32  
 Wharf Engineering Labs., England / magnetic heads / 32

### 33. MAGNETIC STORAGE SYSTEMS (see specifically MAGNETIC CORES, MAGNETIC DRUMS, MAGNETIC TAPE)

ALWAC CORP., 13041 S. Cerise, Hawthorne, Calif.  
 / Magnetic Tape Auxiliary Storage; 2400 ft. of 1/2  
 inch tape, 7 tracks; 5th track for parity checks /  
 DESCR: 10,000 characters per second; search,  
 read or write; 500" per second rewind; 2,000,000  
 decimal digits per reel; start, stop, 20 ms; buffer  
 has 32 word capacity, each 32 bits plus sign; sys-  
 tem is able to control 16 individual handling units  
 / USE: data storage in conjunction with computer  
 / tape unit, \$10,000; buffer, \$13,000; tax, shipping,  
 extra / 33  
 BURLINGAME ASSOCIATES, LTD., 103 Lafayette  
 St., New York 13, N. Y. / magnetic storage sys-  
 tems / 33  
 Bussey Research Laboratories, Inc. / applied mag-  
 netics research / 33  
 Daystrom Instrument Co., Archbald, Pa. / magnetic  
 drum storage systems / 33  
 Deltime Inc. / registers / 33  
 Jacobs Instrument Co. / magnetic storage systems / 33  
 Librascope, Inc., Glendale, Calif. / Magnetic Storage  
 Systems / DESCR: designed around Librascope  
 standard magnetic drums and read record heads;  
 development of special logic circuitry / 33  
 Mack Electronics / magnetic core storage; magnetic  
 tape storage / 33  
 Monrobot Corp. / magnetic drum storage systems / 33  
 MONROE CALCULATING MACHINE CO. — see "Com-  
 puter Components" / 33  
 POTTER INSTRUMENT CO., INC., 115 Cutter Mill  
 Rd., Great Neck, N. Y. / Random Access Memory  
 (RAM) / DESCR: three-dimensional data storage  
 device; 0.5 second access to digital data stored in  
 any of 100,000 or 400,000 locations (200 alphanu-  
 meric characters per location) / USES: computer  
 file storage, list processing, business applications  
 / \$50,000 / 33  
 TELEMETER MAGNETICS, INC., 2245 Pontius Ave.,  
 Los Angeles 64, Calif. / Magnetic Core Buffer  
 Stores / DESCR: Magnetic core storage units for  
 applications in computing, automation control and  
 automation systems. Sequential and random access.  
 Information transfer rates up to 100 kc. Fully solid  
 state units. / USE: for use in systems requiring  
 temporary storage, delay or time synchronization.

Bit capacity up to several thousands with parallel handling up to 36 bits / \$5,000 to \$25,000 / 33  
**TELEMETER MAGNETICS, INC.**, \*a / Magnetic Storage Systems / DESCR: Magnetic core memories from 1000 bits to 1 million bits. Data, tape and code converters. Magnetic components including cores, shift registers, switches, decade scalars and core matrices / - / - / 33

#### 34. MAGNETIC TAPE

American Lava Corp. / magnetic tape / 34  
**AMPEX CORP.**, 934 Charter St., Redwood City, Calif. / magnetic tape / 34  
**AUDIO DEVICES, INC.**, 444 Madison Ave., New York 22, N. Y. / magnetic tape, guaranteed free of defects / USE: computers, telemetry, instrumentation, sound recording / 34  
 CBS International / magnetic tape / 34  
**ORRADIO INDUSTRIES**, Shamrock Circle, Opelika, Ala. / IRISH Brand Ferro-Sheen Magnetic Tape for Computers and Telemetry Recorders / DESCR: ORRadio Industries manufacture a complete line of Instrumentation Tape on 1-mil mylar; 1-1/2-mil mylar; 1-1/2-mil cellulose acetate. Standard widths 1/4", 1/2", 5/8", 3/4", 1" and 2" — in lengths from 1200' to 5000'. Inquiries invited on special types of magnetic tape / - / from \$6.70 to \$303.60 / 34  
**TELEMETER MAGNETICS, INC.**, 2245 Pontius Ave., Los Angeles 64, Calif. / Data converters / DESCR: Paper tape to magnetic tape converters. Magnetic tape to magnetic tape. Tape to high speed printer. Special purpose data converters to meet customer needs / USE: Systems designed to convert digital data from one format or code to another or to operate functional equipment from tape input / - / 34  
 Thomas & Skinner, Inc. / Magnetic tape / 34

#### 35. MAGNETIC TAPE HANDLERS (see also MAGNETIC TAPE RECORDERS)

**AIRBORNE INSTRUMENT LABORATORIES, MODAC DIVISION**, (formerly Mountain Systems, Inc.), 864 Franklin Ave., Thornwood, N. Y. / MODAC 632 / DESCR: Magnetic tape input-output unit; 7-channel, parity bit check after recording. / USE: to prepare tape for other computers / \$12,000 to 17,000 / 35  
 Armour Research Foundation, Illinois Inst. of Technology / magnetic recording / 35  
 Brush Electronics Co. / datacord / 35  
**ELECTRODATA DIVISION OF BURROUGHS CORP.**, 460 Sierra Madre Villa, Pasadena, Calif. / digital magnetic tape transport units / DESCR: 1/2" or 3/4" tape on 10 1/2" reels, 3 or 6 millisecond start-stop, fast rewind, single speeds up to 75 inches per second, multiple speeds / USE: digital computer systems, data processing and telemetering systems,

automatic controls / around \$8,000 / 35  
 Hycon Eastern Inc. / magnetic tape handlers / 35  
 Key Electric Corp. / magnetic tape handlers / 35  
 Librascope, Inc., Burbank Div., (formerly The Minnesota Electronics Corp) / NOISERASER / DESCR: magnetic tape demagnetizer / USE: bulk-demagnetizes tapes and film used in telemetering recording, data processing and machine tool control / 35  
**POTTER INSTRUMENT CO., INC.**, 115 Cutter Mill Rd., Great Neck, N. Y. / Magnetic tape handler / DESCR: digital magnetic tape handler for multiple-channel record and playback applications; choice of speeds of 15, 30, 60, 75, and 100 inches per second / USE: storage device for digital computers and other data-handling equipment / from \$3,000 up / 35  
**TELEMETER MAGNETICS, INC.**, 2245 Pontius Ave., Los Angeles 64, Calif. / — see "Magnetic Tape" / 35

#### 36. MAGNETIC TAPE RECORDERS (see also MAGNETIC TAPE HANDLERS)

American Measuring Instruments Corp. / magnetic tape recorders / 36  
**AMPEX CORP.**, 934 Charter St., Redwood City, Calif. / magnetic tape recorders / DESCR: recording and reading equipment / USE: for computer input, output, and storage for automatic data-reduction systems for machine-tool-control systems / \$2,750 up / 36  
 Amplifier Corp. of America / recording equipment, magnetic tape recorders / 36  
 Ampro Corp. / recording equipment, magnetic tape recorders / 36  
 Analex Corp. / Micro-Tapestepper / 36  
 Audio Instrument Co., Inc. / Model 301 Magnetic Tape Delay Unit / 36  
 A-V Mfg. Corp. / magnetic tape recorders / 36  
 Avion Division of American Car and Foundry Industries, Inc. / magnetic recorders / 36  
 Avion Instrument Co. / magnetic recorders / 36  
 Bell Sound Systems, Inc. / recording equipment; magnetic tape recorders / 36  
 Bergen Laboratories / recording equipment, magnetic tape recorders / 36  
 Berndt-Bach, Inc., Auricon Div. / recording equipment, magnetic tape recorders / 36  
 Capital Records, Inc. / magnetic tape recorders / 36  
 Century Electronics & Instruments Inc. / magnetic tape recorders / 36  
 Clevite Brush Development Co. / magnetic tape recorders / 36  
 Components Corp. / magnetic tape recorders / 36  
 Connecticut Telephone & Electric Corp. / magnetic tape recorders / 36  
 Darby Radio Corp. / magnetic tape recorders / 36  
 The Davies Laboratories, Inc., / magnetic tape data recorders / 36

Daystrom Electric Corp. / magnetic tape recorders / 36

Dictaphone Corp. / magnetic tape recorders / 36

Dukane Corp. / magnetic tape recorders / 36

Dulrow Development Co. / magnetic tape recorders / 36

E. I. DuPont de Nemours & Co., Inc. / magnetic tape recorders / 36

Edwards Engineering Co. / magnetic tape recorders / 36

Electronic Teaching Labs / magnetic tape recorders / 36

Electro-Sonic Lab. / magnetic tape recorders / 36

Fairchild Recording Equipment Co. / magnetic tape recorders / 36

Fenton Co. / magnetic tape recorders / 36

Fischer Smith Inc. / magnetic tape recorders / 36

Fonda-Bensing Corp. / magnetic tape recorders / 36

General Industries Co. / magnetic tape recorders / 36

Goldak Co. / magnetic tape recorders / 36

Gotham Audio Development Corp. / magnetic tape recorders / 36

Gray Mfg. Co. / magnetic tape recorders / 36

Houston Technical Labs. / magnetic tape recorders / 36

Induction Motors Corp. / magnetic tape recorders / 36

Key Electric Corp. / magnetic tape recorders / 36

Gulton Mfg. Corp. magnetic tape recorders / 36

Lambda-Pacific Engineering, Inc. / magnetic tape recorders / 36

M & S Sound System Co. / magnetic tape recorders / 36

Magnecord, Inc. / magnetic tape recorders / 36

Magne-Pulse Corp. / magnetic tape recorders / 36

Microtone Co. / magnetic tape recorders / 36

Miles Reproducer Co. / magnetic tape recorders / 36

Mohawk Business Machines Corp. / magnetic tape recorders / 36

Oakton Engineering Corp. / magnetic tape recorders / 36

Olympic Radio & Television Inc. / magnetic tape recorders / 36

Lee H. Owens Co. / magnetic tape recorders / 36

Pentron Corp. / magnetic tape recorders / 36

Press Wireless Labs., Inc. / magnetic tape recorders / 36

Presto Recording Corp. / magnetic tape recorders / 36

Pye Corp. of America / magnetic tape recorders / 36

Radio Corp. of America, Precision Electronic Inst. / magnetic tape recorders / 36

RCA Victor Co., Montreal / magnetic tape recorders / 36

Radio Kits, Inc. / magnetic tape recorders / 36

Rek-O-Kut Co. / magnetic tape recorders / 36

Stancil-Hoffman Corp. / magnetic tape recorders / 36

Tarc Electronics, Inc. / magnetic tape recorders / 36

Telectro Industries Corp. / magnetic tape recorders / 36

V - M Corp. / magnetic tape recorders / 36

J. C. Warren Corp. / magnetic tape recorders / 36

Webster-Chicago Corp. / magnetic tape recorders / 36

Webster Electric Co. / magnetic tape recorders / 36

Westrex Corp. / magnetic tape recorders / 36

O

## 37. OFFICE MACHINES (Computer types) (see also specific types)

Rixon Electronics, Inc. / office machines / 37

Standard Instrument Corp., Div. of Heat-Timer Corp. / Model SR- Recorder & Totalizer / DESCR: continuous sprocket driven strip chart; continuous recording; elapsed time meter; lift-up autograph access window; uses no ink / \$65.00 / 37

Standard Register Company / Typewriter Encoder / DESCR: enables single operator to type numerical information and its dot-code counterpart on same form at same time / USE: with Stanomatic / - / 37

P

## 38. PAPER TAPE FILING SYSTEMS

Visirecord, Inc. / filing systems for punched paper tape, etc. / 38

## 39. PAPER TAPE PUNCHES

Creed & Co., Ltd., England / teleprinters & punched tape equipment / 39

ELECTRODATA DIVISION OF BURROUGHS CORP. — see "Digital Computers" / 39

FRIDEN CALCULATING MACHINE CO., INC., San Leandro, Calif. / Add-Punch and Compu-Punch, automatic equipment for punching codes in tape; Computyper (a typewriter-billing machine, with many automatic functions. Model C. equipped with automatic tape punch, input and output); motorized tape punches and readers / 39

Kleinschmidt, Inc. / tape punching equipment / 39

SOROBAN ENGINEERING, INC., Box 338, Melbourne, Fla. / Paper Tape Perforators / DESCR: high speed paper tape perforators capable of 8 level perforations at speeds up to 240 characters per second / - / \$8750 / 39

Tally Register Corp. / numeric printing tape punch; printing transfer key punch / 39

Teletypesetter Corp. / tape perforators and operating units for local or distant automatic control of Linotypes and Intertypes / 39

## 40. PAPER TAPE READERS

ELECTRODATA DIVISION OF BURROUGHS CORP. — see "Digital Computers" / 40

FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. / High Speed Photoelectric



Tape Reader / DESCR: can read either 5 hole or 7 hole punched paper tape at speeds up to 400 characters per second; tape is stopped from full speed within a specified character; from rest position, within 6 milliseconds after an instruction, the next character can be read / USE: input from punched paper tape to high speed computer / \$1700 / 40  
**FERRANTI ELECTRIC, INC.**, \*a / Tape Spooler / DESCR: feed or take up of punched paper tape; width, between 11/16" and 1"; maximum reel diameter, 8"; maximum speed of tape with the Ferranti High Speed Tape Reader / \$245 / 40

**Kleinschmidt, Inc.** / tape reading equipment / 40  
**Monroe Calculating Machine Co.**, Orange, N.J. / paper tape readers / 40

**POTTER INSTRUMENT CO., INC.**, 115 Cutter Mill Rd., Great Neck, N. Y. / Perforated Tape Reader / DESCR: provides character reading speeds of 600, 300, or 150 characters per second; full speed is achieved in 3 milliseconds, and tape stops on or before character following stop code (before next character at 300 characters per second); models available for handling 5, 6, 7, and 8 level perforated tape / USE: digital computing and data-handling field / prices start at \$3,000 / 40

**SOROBAN ENGINEERING, INC.**, Box 338, Melbourne, Fla. / Paper Tape Readers / DESCR: single and dual mechanical sensing paper tape reading devices capable of eight level reading up to speeds of 60 characters per second / - / \$650 to \$1150 / 40

#### 41. PATCHCORDS

**AMP, Inc.** / Patchcord Programming Systems and Boards / 41

#### 42. PHOTOELECTRIC CARD READERS

**General Cybernetics Corp.** / Punched Card Feeder and Reader (Model 155 "Cybertac" System) / 42

**General Cybernetics Corp.** / Punch Card Reader Head / 42

**General Precision Laboratory** / Rapid electronic analysis of punch card data / 42

#### 43. PHOTOELECTRIC DECODING READERS

**CONTROL INSTRUMENT CO., INC.**, 67 35th St., Brooklyn, N. Y. / character recognition equipment / DESCR: equipment reads numbers printed in non-special type and ordinary ink, using photoelectric scanner, on travellers checks or similar documents; automatically feeds and reads at rate of 120 documents per minute; simultaneously transcribes information read into tabulating card at the rate of one card per document / USE: transcribing ordinary

printed data to some other medium such as tabulating card / 43

**Intelligent Machines Research Corp.**, / Devices for reading characters on paper, etc; pattern interpretation equipment / 43

**THE STANDARD REGISTER CO.**, Dayton 1, Ohio / electronic equipment (called "Stanomatic") capable of sensing or reading printed codes on business documents and translating them into digital pulses which will actuate office machines such as card punches, tape perforators, computers, etc. / 43

#### 44. PHOTOELECTRIC TAPE READERS

**ELECTRODATA DIVISION OF BURROUGHS CORP.**

— see "Digital Computers" / 44

**FERRANTI ELECTRIC, INC.**, 30 Rockefeller Plaza, New York 20, N. Y. — see "Paper Tape Readers"/44  
**Key Electric Corp.** / photoelectric tape readers / 44

**POTTER INSTRUMENT CO., INC.** — see "Paper Tape Readers" / 44

#### 45. PHOTOGRAPHIC RECORDERS (Computer Types)

**INTERNATIONAL BUSINESS MACHINES CORP.**, 590 Madison Avenue, New York 22, N. Y. and elsewhere / The 740 Cathode Ray Tube Output Recorder / DESCR: an electronic output device designed for use with the IBM 701, 704, or 709. It provides an output which records data points on the faces of a pair of television-like tubes at the rate of 8,000 per second; the larger tube is used for visual display; the smaller tube is used in conjunction with a camera under control of the 701, 704, or 709. The camera automatically photographs information as directed by the program / USE: for scientific, engineering, and design problems / Monthly rental \$2,850. Selling price \$170,700. / 45

**International Telemeter Corp.** / Ferrite storage and recording head cores. Research and manufacturing in high capacity photoscopic storage devices / USE: In computer memories / cores from 2¢ to \$1.00 / 45

#### 46. PLOTTERS

**Alden Electronic and Impulse Recording Equipment Co.** / automatic curve plotters / 46

**ALWAC CORP.**, 13041 S. Cerise, Hawthorne, Calif. / General Purpose, Analog Table-Type, Plotter-Follower, as plotter, input can be punched paper tape, edge-punched cards, IBM punched cards, keyboard / DESCR: plotter gives analog representation on 24" x 36" table chart; data presentation includes straight point-to-point line drawing, or printed symbols for parameter studies; follower punches IBM cards,

paper tape or edge-punched cards; can be used with digital differential analyzer; follows change in line slope up to and including infinity / USE: plotter, point and chart plotting; follower, function generator / plotter, \$5500; follower, \$4400; tax, shipping, extra / 46

American Machine & Foundry Co., Electronics Div. / plotters / 46

Anelex Corp. Anelex Synchroplotter / 46

Benson-Lehner Corp. / Electroplotters, plotters / 46

BURLINGAME ASSOCIATES, LTD., 103 Lafayette St., New York 13, N. Y. / X-Y plotters / 46

California Computer Products / Digital Incremental Plotter / DESCR: Plots X-Y graphs in increments or steps of 1/100 inch upon receiving pulses from a digital differential analyzer / - / approximately \$1,000 to \$1,500 / 46

Edin Co., Inc. / Direct Writing Oscillograph Recorders and Hi-Gain D. C. Amplifiers / DESCR: one to ten channels featuring combination ink and/or electric display; readily changeable chart speeds; folded chart paper, requires no rewind mechanism and is numbered by fold for indexing and filing; frequency response D. C. to 350 c. p. s. / USE: excellent for computer read-out or related circuit / \$445 for single channel, \$2500 for 10 channels / 46

ELECTRONIC ASSOCIATES, INC., Long Branch, N. J. / Variplotter, Model 205N / DESCR: self-balancing potentiometer type recorder; a 4-pen (2 writing-pens, 2 timing pens), 2-arm board enabling recording of 2 independent inputs of X versus Y with identified timing signals, simultaneously / USE: to record one variable d-c voltage as a function of a second variable d-c voltage / - / 46

ELECTRONIC ASSOCIATES, INC., \*a / Variplotter, Models 205K and L / DESCR: 205K is a single pen and arm board that will present a single plot of X vs Y; supplied with continuously variable uncalibrated scale factor and parallax controls for each axis; 205L is a 2-arm, 2-pen plotting board equipped with the same features as 205K and with separate scale factor and parallax panels for the pens; an automatic pen interchange system; an automatic pen lift circuit / USE: to record one variable d-c voltage as a function of a second variable d-c voltage, applied to servo amplifiers controlling the motion of the arm along the ordinate and the pen along the abscissa / 205K, \$6,500; 205L, \$10,000 / 46

ELECTRONIC ASSOCIATES, INC., \*a / Variplotter, Model 1100D / DESCR: table top X-Y recorder in portable package; data plotted on 11" x 17" graph paper / USE: X-Y analog recorder; function generator of a single variable; with modification will plot digital information from punched cards or tape / \$2,00 / 46

ELECTRONIC ASSOCIATES, INC., \*a / Six Channel Recorder, Model 1902C / DESCR: a push-button speed selector provides essentially instantaneous control of paper speed over the entire recording range; push-button controls are provided for individual selection of the recording scale factor of each channel; all models may be remotely controlled from the

associated computer system, or may control the computer itself from the recorder location; chopper stabilization for all d-c amplifiers is supplied as a standard facility; all pens are protected against accidental overload by limiting circuits designed to prevent plot inaccuracies / USE: produced specifically for use with analog computing installations for recording or output voltages against time / - / 46

Librascope, Inc. / XY Plotters / DESCR: two axis plotters for point or curve plotting, models for DC voltage or resistance input, converters for binary, punched card or punched tape input keyboards / 46

F. L. MOSELEY CO., 409 N. Fair Oaks Ave., Pasadena, Calif. / Moseley AUTOGRAF X-Y Recorder / DESCR: two-coordinate X-Y recorder, curve follower, point plotter; card and tape translators; also large scale servo voltmeter with ranges from 3 millivolts to 300 volts / USE: data plotting and curve read-out / recorder, \$975 to \$1775; voltmeter, \$575 / 46

Servo Corp. of America, / Dead Reckoning Tracker (DRT) / DESCR: automatically plots course and position of aircraft / USE: for detection and plotting / - / 46

Tally Register Corp. / High Speed Digital Plotter / DESCR: digital input, multiple symbol X-Y plotter with continuous grid printing on continuous form vellum or paper stock / USE: operates directly from digital computers, card readers, keyboard, etc. / \$20,000 / 46

#### 47. POTENTIOMETERS

Ace Electronics Associates, Inc. / precision potentiometers, linear and non-linear / 47

Ace Electronics Associates, Inc. / potentiometer trimmers / 47

Aero Electronics Corp. / potentiometers / 47

Allen-Bradley Co. / potentiometers / 47

Analogue Controls Inc. / potentiometers / 47

Barber-Colman Co. / potentiometers - recorders / 47

Beckman Helipot Corp. / potentiometers / 47

George W. Borg Corp., Borg Equipment Div. / potentiometers / 47

Bourns Laboratories / potentiometers / 47

THE BRISTOL CO., Waterbury 20, Conn. / electronic recording potentiometers -- see "Automatic Control Equipment" / 47

Canadian Marconi Co., Ltd. / potentiometers / 47

Circuit Instruments, Inc. / potentiometers / 47

Clarostat Mfg. Co., Inc. / potentiometers / 47

Computer Instruments Corp. / precision potentiometers / 47

Con-Elco / potentiometers / 47

Continental Carbon, Inc. / potentiometers / 47

Dale Products, Inc. / potentiometers / 47

Daystrom Pacific Corp. / potentiometers / 47

DeJUR-Amsco Corp. / precision potentiometers, linear and non-linear / 47

Electro-Measurements, Inc. / potentiometers / 47

Electro-Mec Laboratory, Inc. / potentiometers / 47  
 The Eppley Laboratory, Inc. / EPLAB standard CELLS for potentiometric instruments / 47  
 Fairchild Controls Corp., Components Div. / precision potentiometers, linear and non-linear, single and multi-turn, linear motion, trimmers wire wound and metal film types / 47  
 Fairchild Engine and Airplane Corp. / potentiometers / 47  
 Gamewell Co. / potentiometers / 47  
 General Controls, Potentiometer Div. / potentiometers / 47  
 General Findings & Supply Co. / potentiometers / 47  
 Helipot Corp. / precision potentiometers; single and multi-turn, linear and non-linear, turns counting dials / 47  
 Humphrey, Inc. / potentiometers / 47  
 Leeds & Northrup / Potentiometers / DESCR: Laboratory types for precision measurements, portable types for testing, automatically balanced types for industrial processes / \$270 up / 47  
 Litton Industries of Maryland, Inc. / potentiometers / 47  
 Markite Corp. / Markite conductive plastic potentiometers / 47  
 Maurey Instrument Corp. / potentiometers / 47  
 The Perkin-Elmer Corp. / potentiometers / 47  
 SCHWEBER ELECTRONICS, 122 Herricks Road, Mineola, N. Y. / potentiometers / 47  
 Servomechanisms, Inc. / film potentiometers  
 Servonics, Inc. / potentiometers / 47  
 Specialties, Inc. / precision potentiometers / 47  
 Spectrol Electronics Division of Carrier Corp. / precision potentiometers; complete line of potentiometers / 47  
 Technology Instrument Corp. / precision potentiometers / 47  
 Vari-Ohm Corp. / potentiometers / 47  
 Waters Manufacturing, Inc. / precision potentiometers, miniature / 47  
 Westronics, Inc. / potentiometers / 47

#### 48. PRINTERS (see also LINE-A-TIME PRINTERS, ELECTRIC TYPEWRITERS, CONTROLLED)

ADDRESSOGRAPH-MULTIGRAPH CORP., 1200 Babbitt Rd., Cleveland 17, Ohio / Magnetic Tape Electronic Printer / DESCR: parallel-serial, reads data contained on magnetic tape and prints at 1500 to 3000 lines per minute onto ordinary continuous paper / 48  
 ADDRESSOGRAPH-MULTIGRAPH CORP., \*a / Transfer Printer / Makes use of continuous form master prepared on Addressograph-Multigraph printers, typewriters, or line printers to transfer printing data onto automatically-fed unit documents / 48  
 Anelex Corp. / high-speed printer / 48  
 Bell Punch Co., Ltd., England / printers / 48  
 Computer Measurements Corp. / digital printer / 48  
 Copy-Craft Inc. / printers, data / 48

Coxhead Corp. / type composing of display types by photography using a desk machine / 48  
 FISCHER & PORTER CO., 330 Warminster Rd., Hatboro, Pa. / Automatic Typewriter / DESCR: Standard electric typewriter actuated by solenoid base automatically logs data originating from programmed source. Abnormal readings are recorded automatically in a color other than that of normal readings. Typewriter compatible with most data reduction systems. Available accessories include auxiliary tape punch / USE: in conjunction with data processing systems / - / 48  
 New England Adding Machine Co. / printers / 48  
 POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. / Digital high-speed printers, Magnityper / 48  
 RADIATION, INC., P. O. Box 37, Melbourne, Fla. / printers / 48  
 Taller & Cooper, Inc. / printers / 48

#### 49. PUBLICATIONS

COMPUTERS AND AUTOMATION, 815 Washington St., Newtonville 60, Mass. / Computers and Automation / DESCR: Monthly magazine, about 50 pages per issue. Articles, reference information (14 kinds), papers, forum, etc., dealing with automatic computing machinery and its applications and implications / USE: For keeping up to date with the computer field; finding out reference information quickly / U. S., \$5.50 a year; foreign, \$6.50 a year / 49  
 CUDAHY PUBLISHING COMPANY, 6141 North Cicero Ave., Chicago 30, Ill. / Publishing automatic data processing service, weekly service for users of automatic data processing equipment / 49  
 DATA PROCESSING DIGEST, 1140 S. Robertson Blvd., Los Angeles 35, Calif. / Data Processing Digest / DESCR: Monthly bibliographic service in field of data processing for business and industry; contains listings and abstracts of current articles, conference proceedings, papers; reviews of new books, films, meetings, and training courses. Complete references to original sources / - / \$24 per year (12 issues); group rates on request / 49

#### 50. PULSE TRANSFORMERS

Airpax Products Co. / pulse transformers / 50  
 ALADDIN ELECTRONICS, A Division of Aladdin Industries, Inc., 703 Murfreesboro Rd., Nashville, Tenn. / Aladdin Pulse Transformer Encyclopedia / DESCR: comprehensive engineering bulletin for circuit designers, discussing pulse transformer applications and listing over 1000 available combinations of circuit characteristics and pulse performance / 50  
 ALADDIN ELECTRONICS, A Division of Aladdin Industries, Inc., \*a / Pulse transformers / DESCR: wide variety of standard types / USE: Blocking oscillators, coupling, pulse inversion, impedance

matching / \$1.53 to \$12.00 / 50  
 Gudeman Co. of Calif. / pulse transformers / 50  
 Gudeman Co. of Calif. / miniature pulse transformers / 50  
 Raytheon Manufacturing Co. / computer pulse transformers / 50  
 Sprague Electric Co. / miniature pulse transformers / 50  
 Technitrol Engineering Co. / pulse transformers / 50  
 Triad Transformer Corp. / pulse transformers / 50

## 51. PUNCH CARD MACHINES

Analogue Controls Inc. / punch card machines / 51  
 BRITISH TABULATING MACHINE CO., LTD., 17 Park Lane, London W 1, England / Punched card machines / 51  
 Bull S. A. Compagnie des Machines, Paris, France / punch card machines / 51  
 Dennison Manufacturing Co. / Dennison Print-Punch Marking Machine / 51  
 Devol Research Co. / punch card machines / 51  
 Educational Research Corp. / punch card machines / 51  
 Electro-Machine Corp. / punch card machines / 51  
 Huck Co. / card sensing and punching units / 51  
 INTERNATIONAL BUSINESS MACHINES CORP., 590 Madison Avenue, New York 22, N. Y. / A complete line of punched card machines. These include card punches, collators, sorters, accounting machines, proof machines, interpreters, Data Transceivers, the Cardatype Accounting Machine, the Ticket Converter, etc. Details available on request / - / 51  
 J. V. KANE & CO., 1004 Cloverhill Rd., Wynnewood, Pa. / punch card machines / 51  
 Kaye Development Co. / punch card machines / 51  
 A. KIMBALL CO., 444 4th Ave., New York 13, N. Y. / Print-Punch Machines and reading devices in the periphery of the computing field. Kimball "75" Punch Marking System / DESCR: Machines for printing and punching garment tags, inventory tags, production control tickets, etc. Machines for centrally reading tickets and tags into punched cards, punched tape, and direct to memories; "Machine-language" processing equipment / USE: unit control and inventory control in department and chain stores; models of printing and punching equipment for creating of production control and piece-work ticket media for automatic processing to payroll and cost distributions; models of machines for creation of printed and punched identification media for inventory by reading the identification at specific control points / \$3,000 to \$10,000 / 51  
 Lavoie Labs, Inc. / Punch card machines / 51  
 Log Abax S. A. / punch card machines / 51  
 McBee Co. / punch card machines / 51  
 METRON CORP., 8 Coryell St., Lambertville, N. J. / K1 Static Punched Card Sensor / DESCR: accepts a standard punched card and when the handle is closed, the circuit corresponding to an unpunched hole position is opened / USE: multiple switching using a punched card / from \$1,000 to \$10,000 / 51

NATIONAL ANALYSTS, INC., 1015 Chestnut St., Philadelphia 7, Pa. / punch card machines / 51  
 Otis Elevator Co. / punch card machines / 51  
 Powers-Samas Accounting Machines, Ltd., England / Punch card tabulating equipment using small, medium and standard cards / 51  
 REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., 315 4th Ave., New York 10, N. Y. / Calculating Punch: 90-Column Tabulating Card Calculating Punch, Type 330-4 / DESCR: adds, subtracts, multiplies and divides values punched into cards; punches results into same card or any or all following cards; various computations can be performed simultaneously / USE: in accounting machine procedures / \$275 monthly rental; \$18,425 sale; prices subject to tax / 51  
 REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Card Punch: Card-O-Matic 90 Column Tabulating Card Punch, Type 308-6 / Alphabetic key punch from which keyboard has been removed and installed in a remote control unit connected to the punch by electric cable; additional keys installed with regular punch keyboard for "field selection" / USE: card punch, remote control / rental \$95 per month; sale, \$5220; prices subject to tax / 51  
 REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Card Punch: 90-Column Tabulating Card Numeric Key Punch, Type 204-2 / DESCR: records information by punched holes; equipped to serve as verifier; information may be stored for repeat punching; electrified 10-key touch method keyboard / USE: punched card accounting machines operation, input-output in Univac File Computer System / \$30 monthly rental; \$1737 sales; prices subject to tax / 51  
 REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Computer: 90-Column, Punched Card Electronic Computers, Types Univac 120, Univac 60 / DESCR: adding, subtracting, multiplying, dividing and comparing functions provided by built-in circuits; comprised of 2 units, a card sensing punching unit and an electronic computing unit / USE: accounting or statistical routine, engineering problems, etc. / rental \$740 to \$1350 per month; sale \$75,000 to \$97,000; prices subject to tax / 51  
 REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Collator: 90-Column Tabulating Card Numerical Collator Type 319 / DESCR: collates punched cards numerically at a speed of 240 cards per minute from each feeding magazine; 2 feeding magazines, 4 receiving magazines; sequence checking of cards fed by both magazines; will collate numerical information and compare alphabetical information simultaneously / USE: for numerous card processing operations / rental, \$125 per month; sale, \$10,000; prices subject to tax / 51  
 REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Interpreter: 90-Column Tabulating Card Automatic Line Finding Posting Interpreter Type 312-4 / DESCR: automatic posting of ledger cards of tabulating card size at 45 postings per minute; requires 315-1 collator as a companion

- unit; posted data may be alphabetical or numerical / USE: for posting accounting or statistical ledgers / rental \$155 per month; sale \$10,420; prices subject to tax / 51
- REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Interpreter: 90-Column Tabulating Card Interpreter Type 312 / DESCR: reads information from punched cards and prints the alphanumeric interpretation on the same card; 90 cards per minute / USE: easy means of verifying punching; provides easily read document for use outside machine accounting department / rental, \$90 per month; sale, \$5904; prices subject to tax / 51
- REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Interpreter: 90-Column Tabulating Card Check-Writing Interpreter, Type 312-2 / DESCR: automatically interprets punched holes in tabulating card or card check; visibly registers the interpretation on the face of the card or check / USE: for writing tabulating card checks / rental, \$100 per month; sale, \$6600; subject to taxes / 51
- REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Reproducer: 90-Column Tabulating Card Interfiling Reproducing Punch, Type 310-1 / DESCR: reproducing punch; interfiles cards fed from 2 feeding magazines / USE: punched card accounting procedures / rental, \$125 to \$150 per month; sale, \$9376; prices subject to tax / 51
- REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Reproducer: 90-Column Tabulating Card Multi-Control Reproducing Punch Type 310 / DESCR: will reproduce card-for-card or many cards from one; feed two files of cards comparing values of one with the other and punch those that match or those that do not match or all cards; segregate cards that do not match; 8 out of 10 card feeding functions available may be incorporated on one machine / USE: payroll accounting, etc. / rental, \$100 to \$125 per month; sale, \$7640; prices subject to tax / 51
- REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Reproducer: 90-Column Tabulating Card Reproducing Punch, Type 314 / DESCR: reproduces tabulating cards; reproduction may be exact or modified; may also be used as a duplicating punch / USE: in inventory control, billing, etc. / rental, \$45 to \$60 per month; sale, \$3473 to \$3820; prices subject to tax / 51
- REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Reproducer: 90-Column Tabulating Card Collating Reproducing Punch Type 315-1 / DESCR: 100 cards per minute from each of 2 feeding magazines; standard reproducing punch functions; will inter-file, segregate or select with sequence control / USE: elimination of separate sorting, punching collating operations / rental \$165 to \$170 per month; sale, \$12,155; prices subject to tax / 51
- REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Reproducers: 90-Column Tabulating Card Reproducers for short cards, Types 314-3, 4, 5, & 6 / DESCR: punch into 90-column card information recorded in short cards of 16, 20, 27, or 33 columns; same features as Type 314; 125 cards per minute; will store information / USE: accounting or billing procedures / rental, \$125 per month; sale, \$8750; prices subject to tax / 51
- REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Sorter: 90-Column Tabulating Card Electronic Sorter, Type 420 / DESCR: sorts cards at a speed of 800 cards per minute; numerical or alphabetical sorting; may be wired for combined, position or selective sorting; additional features for card pairing, selective sorting and card counting available / USE: punched card sorting / rental, \$85. to \$100 per month; sale, \$5600 to \$6650, special features extra; prices subject to tax / 51
- REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Summary Card Punch: 90-Column Tabulating Card Summary Punch, Type 311 / DESCR: automatically punches summary total, grand total, or both summary total and grand total information, with suitable identification, printed on reports or forms prepared on the Model 3 Tabulators to which it is permanently connected; also summary cards are optionally punched without delaying the tabulator / USE: punched-card procedures for accounting and statistical purposes / rental, \$80 per month; sale, \$5557; devices and attachments extra; prices subject to tax / 51
- REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Synchro-Matic Punched Card Accounting Machine; Punch Types 207-1, 308-1 and 308-4; Accounting Machines, Types 80, 81, 83 and 85 / DESCR: numerical or alphabetic punches electrically connected and synchronized with various models of Remington Accounting Machines to create punched cards containing information from entries and computations made on the accounting machines / USE: various accounting purposes / accounting machine rental, \$100 to \$250 monthly; sale \$3000 to \$5000; punches, \$40 to \$55 monthly rental; \$2430 to \$3474 sale; prices are approximate and subject to tax / 51
- REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Sorter: 90-Column Tabulating Card Standard Sorter, Type 320 / DESCR: sorts cards either alphabetically or numerically at a speed of 420 cards per minute (also available at 250 cards per minute); may be equipped with counting attachment, pairing and selective sorting attachments / USE: sorting operations / rental, \$33 to \$53 per month; sale \$2778 to \$3473; prices subject to tax/51
- REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Tabulator: 90-Column Tabulating Card Alphabetical Tabulator Model 3 / DESCR: translates and prints, in any statement form desires, the numerical and alphabetical information punched in tabulating cards; adds, subtracts, prints, totals / USE: tabulating, accounting, analysis reports / rental, \$285 to \$495 per month; sale, \$20,159 to \$29,189; devices and attachments extra; prices subject to tax / 51
- REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Tag-to-Card Reproducers for Perforated Merchandise Tags, Types 317-1 and 2 / DESCR: will read Kimball or Dennison price tickets; and punch into 90-column tabulating cards the price

ticket information / USE: inventory control, sales and accounting analysis / rental, \$185 per month; sale, \$12,600; prices subject to tax / 51  
 REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., \*a / Verifier: 90-Column Tabulating Card Automatic Verifier, Type 313 / DESCR: checks cards to determine whether they are correctly punched; 200 cards per minute; errors are flagged for easy identification / USE: to verify data entered by punching / \$60 per month rental; \$4168 sale; prices subject to tax / 51  
 Underwood Corp. / Underwood-Samas punched card accounting machines and systems / 51

R

## 52. RECORDING PAPERS

Alfax Paper & Engineering Co. / electrosensitive recording paper in rolls / 52  
 Miles Reproducer Co. / recording equipment / 52  
 Minneapolis-Honeywell Regulator Co. / recording papers / 52  
 Sanborn Co. / recording papers / 52  
 Technical Charts, Inc. / recording papers / 52  
 TYPATAPE, INC., 60 E. 42nd St., New York 17, N. Y. / Typatape / DESCR: The Typatape Recorder can be attached to most existing accounting machines, billing machines, adding machines, cash registers, etc. / USE: to provide a numeric common language record as a by-product / \$900 / 52

## 53. RECTIFIERS

Bradley Laboratories, Inc. / Selenium rectifier kits, high temperature rectifiers / 53  
 Christie Electric Corp. / rectifiers / 53  
 Continental Electric Co. / rectifiers / 53  
 Fansteel Metallurgical Corp. / rectifiers / 53  
 Federal Telephone & Radio Co., Div. of International Telephone & Telegraph Corp. / Power rectifiers - Selenium, Silicon and Germanium stacks / 53  
 General Electric Co., Schenectady, N. Y. / rectifiers / 53  
 General Electric Co., Syracuse, N. Y. / rectifiers / 53  
 General Instrument Corp., Newark, N. J. / rectifiers / 53  
 Hoffman Electronics Corp. / rectifiers / 53  
 Hughes Products / rectifiers / 53  
 International Rectifier Corp. / selenium rectifiers, germanium rectifiers, silicon rectifiers / 53  
 INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. / selenium rectifiers / 53  
 P. h. Mallory & Co., Inc. / rectifiers / 53  
 Metro Electronics Corp. / rectifiers / 53  
 Pacific Semiconductors, Inc. / rectifiers / 53  
 Pyramid Instrument Corp. / rectifiers / 53  
 RADIO RECEPTOR CO., INC., 240 Wythe Ave., Brooklyn 11, N. Y. / rectifiers / 53

Rapid Electric Co., New York, N. Y. / rectifiers / 53  
 RAYTHEON MANUFACTURING CO., Receiving and Cathode Ray Tube Operations, 55 Chapel St., Newton 58, Mass. / Silicon diffused junction wired-in and 7/16" stud rectifiers. Silicon power rectifiers / 53  
 SOLA ELECTRIC CO., 4633 W. 16 St., Chicago 50, Ill. / rectifiers / 53  
 Sarkes Tarzian, Inc. / rectifiers / 53  
 TEXAS INSTRUMENTS INCORPORATED, 6000 Lemmon Ave., Dallas 9, Tex. / rectifiers / 53  
 Transitron Electronic Corp. / rectifiers / 53  
 United States Dynamics Corp. / rectifiers / 53  
 Westinghouse Electric Corp., Semi-Conductor Div. / rectifiers / 53

## 54. RELAYS (COMPUTER TYPES)

Ace Relay Associates, Inc. / Acerelay / DESCR: hermetically sealed sub-miniature relays / USE: aircraft electronics equipment, computers, guided missile, and communications / \$20 / 54  
 Allied Control Co. / relays / 54  
 AMPERITE CO., INC., 561 Broadway, New York 12, N. Y. / delay relays and regulators / DESCR: Thermostatic hermetically sealed. Delays available 2 to 180 seconds. Normally open or normally closed types, SPST / - / 54  
 AUTOMATIC ELECTRIC COMPANY, Northlake, Ill. / relays (telephone-type) / DESCR: small size, light weight, twin contact springs, very resistant to vibration, humidity, and extremes of temperature / USE: standard screw mounting; some are available with special mounting for tin-dipped printed circuit cards, or mounted on regular octal-type or industrial plugs. Wired or unwired / \$3 to \$8; hermetically sealed at approximately twice as much / 54  
 C. P. CLARE & CO., 3101 Pratt Blvd., Chicago 45, Ill. / High Frequency Impulse Relay / DESCR: Type T Relay; highly sensitive relay; free from contact bounce; capable of following 2500 cycles per second with life measured in billions of operations / USE: in an analog computer / 54  
 C. P. CLARE & CO., \*a / Mercury-wetted Contact Relays / DESCR: Type HG and HGP Relays; hermetically sealed, magnetically operated mercury-wetted contacts; Form D contact arrangement; completely chatter-free; operate up to 100 cps; 5 amp. or 500 volts max. load; life over one billion operations; enclosed with coil in steel, vacuum-tube -type cover; octal plug base; biased or polarized versions also available / USE: in high-speed switching equipment requiring high performance / 54  
 C. P. CLARE & CO., \*a / Multicontact Mercury-wetted Contact Relays / DESCR: Types HG2A, HG3A, and HG4A; 2, 3, or 4 "Form D" contact arrangements; operate up to 100 cps; no contact bounce; 5 amp. or 500 volts max. load; life over one billion operations; hermetically sealed, magnetically operated mercury-wetted contacts enclosed with coils in steel cover; plug-in mounting standard / USE: in high-speed

switching equipment requiring high performance / 54  
 C. P. CLARE & CO., \*a / Power Relay / DESCR: Type J 18 Power Relay; provides increased current-carrying capacity by use of Code 18 (silver) heavy duty contacts riveted to the springs; long life; increased adjustment stability provided by new hinge-type armature; rating of 10 amps, 27-1/2 volts d-c / USE: to handle inrush current of 50 amperes for 50,000 operations / 54  
 Comar Electric Co. / relays / 54  
 Cutler-Hammer, Inc. / relays / 54  
 Elgin National Watch Co. / Neomite relay, electronic switching device / 54  
 Essex Wire Corp., R. B. M. Div. / relays / 54  
 General Electric Co., Schenectady, N. Y. / 54  
 The Gerber Scientific Instrument Co. / relays / 54  
 Kepco Laboratories, Inc. / relays / 54  
 Mathematisch Centrum, Netherlands / relay computer; electronic computer / 54  
 North Electric Manufacturing Co. / relays, multi-contact type / 54  
 North Electric Manufacturing Co. / telephone relays / 54  
 Phillips Control Corp. relays for computers, etc. / 54  
 Potter & Brumfield Mfg. Co., Inc. / relays / 54  
 RADIO CORP. OF AMERICA, Components Div., Camden, N. J. / relays / 54  
 Relay Sales Inc. / relays / 54  
 SCHWEBER ELECTRONICS, 122 Herricks Road, Mineola, N. Y. / micro-miniature relays / 54  
 Stromberg-Carlson, Rochester, N. Y. / relays, computer / 54  
 Tally Register Corp. / Electromagnetic pulse counters and pulsed relays / 54  
 Union Switch & Signal Co., Div. of Westinghouse Air-brake / relays / 54  
 Ward Leonard Electric Co. / relays / 54  
 Weston Electrical Instrument Corp. / relays / 54

## 55. RESISTORS

Allen-Bradley Co. / resistors / 55  
 ALLIES' PRODUCTS CORP., P. O. Box 188, Kendall Branch, Miami, Fla. / all-using carbon deposited resistors and precision carbon deposited resistors / - / 55  
 Axel Bros., Inc., Electronics Div. / resistors / 55  
 Centralab, Div. of Globe-Union Inc. / resistors / 55  
 Chicago Telephone Supply Corp. / resistors / 55  
 Con-Elco / resistors / 55  
 Continental Carbon, Inc. / resistors / 55  
 Corning Glass Works / resistors / 55  
 Dale Products, Inc. / resistors / 55  
 The Daven Co. / precision metal film type resistors (Davohm Series 850) / USE: to fill in gap between wire-wound and composition type resistors / 36¢ to \$1.44 / 55  
 The Daven Co. / R C Networks / \$10 to \$150 / 55  
 The Daven Co. / precision wire wound resistors / 45¢ to \$10 / 55

Dialight Corp. / resistors / 55  
 Eastern Precision Resistor Corp. / resistors / 55  
 Electra Mfg. Co. / resistors / 55  
 Erie Electronics Distributor Div., Erie Resistor Corp. / resistors / 55  
 General Electric Co., Roanoke, Va. / resistors / 55  
 Hardwick Hindle, Inc. / resistors / 55  
 Heath Co. / resistors / 55  
 INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia, Pa. / resistors / 55  
 Kelvin Electric Co. / resistors / 55  
 Lapp Insulator Co., Inc. / resistors / 55  
 P. R. Mallory & Co., Inc. / resistors, type AL / 55  
 Ohmite Manufacturing Co. / Miniature Wire-Wound Resistors / 55  
 Polarad Electric Corp. / resistors / 55  
 Pyrofilm Resistor Co. / resistors / 55  
 RESISTANCE PRODUCTS CO., 914 S. 13th St., Harrisburg, Pa. / precision wound wire resistors / bobbin type, high accuracy wire wound resistors made to meet MIL specification MILR-93A; standard resistance tolerance of 1% can be furnished with tolerance of .02% / USE: in computers and instrumentation, as resistance standards and in military equipment / 55  
 RESISTANCE PRODUCTS CO., \*a / high megohm resistors / carbon type resistor having high stability; furnished in resistance values up to 100 million megohms; also furnished in hermetically sealed type; standard tolerance of 10%, 5%, and 3% also available / USE: in electrometer circuits, photocell circuits, radiation equipment, and as resistance standards / 55  
 RESISTANCE PRODUCTS CO., \*a / high voltage resistors / Carbon film on steatite rod; available in various sizes for voltages from 3500 V up to 125,000 V; power ratings from 1 watt to 100 watts; resistances available up to 1 million megohms; standard tolerance of 15%, tolerances of 10%, 5%, 3% also available; matched pairs can be furnished with tolerance of 2% / USE: high resistance voltage dividers, bleeders, and high voltage power circuits, corona resistors, X-Ray equipment, etc. / 55  
 Sage Electric Corp., Dept. ED / resistors / 55  
 SCHWEBER ELECTRONICS, 122 Herricks Road, Mineola, N. Y. / resistors / 55  
 Shallcross Mfg. Co. / resistors / 55  
 Southwestern Industrial Electronics Co., Inc. / resistors / 55  
 Sprague Electric Co. / precision and power-type resistors / 55  
 Stackpole Carbon Co. / resistors / 55  
 TEXAS INSTRUMENTS INCORPORATED, 6000 Lemon Ave., Dallas 9, Tex. / precision resistors / 55  
 Tru Ohm Products / resistors / 55  
 Ward Leonard Electric Co. / resistors / 55  
 Welwyn International, Inc. / resistors / 55  
 Weston Electrical Instrument Corp. / resistors / 55

## 56. RESOLVERS

AMERICAN ELECTRONICS, INC., 655 W. Washington

Blvd., Los Angeles, Calif. / resolvers / 56  
 American Machine & Foundry Co., Electronics Div.,  
 Boston, Mass. / resolvers / 56  
 Bendix Aviation Corp., Eclipse-Pioneer Div., Teter-  
 boro, N. J. / resolvers / 56  
 Diehl Mfg. Co. / resolvers / 56  
 Norden-Ketay Corp. / resolvers / 56  
 John Oster Mfg. Co. / fast response resolvers; servo  
 torque units / 56  
 Weston Electrical Instrument Corp. / resolvers / 56

## 57. ROBOTS, SMALL

BERKELEY ENTERPRISES, INC., 815 Washington  
 St., Newtonville 60, Mass. / Small Robots /  
 DESCR: small robots such as Simon, a miniature  
 mechanical brain; Squee, an electronic robot squir-  
 rel; Tit-Tat-Toe game-playing machine; Nim mach-  
 ine; Geniac electric brain construction kit, etc. /  
 USE: in shows, lecturing, teaching, exhibits, dis-  
 plays, explaining / \$10 to \$4000, or rental / 57

## S

## 58. SCANNERS

American Machine & Foundry Co., Electronics Div.,  
 Boston, Mass. / scanners / 58  
 Giannini Datex Div. / scanners / 58

### 58.5. SEMICONDUCTORS

Amperex Electronic Corp. / semiconductors / 58.5  
 CBS-HYTRON, Div. of Columbia Broadcasting System,  
 Inc., 100 Endicott St., Danvers, Mass. / electron  
 tubes and semiconductors for computer and other  
 uses / 58.5  
 Federated Semi-Conductor Co. / semiconductors / 58.5

## 59. SIGNALING CONTROLS

MONROE CALCULATING MACHINE CO. — see "Com-  
 puter Components" / 59  
 Union Switch & Signal Co., Div. of Westinghouse Air-  
 brake / railroad signaling and control systems / 59

## 60. SIMULATORS

ALLEGANY INSTRUMENT CO., INC., 1091 Wills  
 Mountain, Cumberland, Md. / Type K-7 Error  
 Computer / Simulates error-producing factors  
 involved in wire strain transducer systems com-

monly employed in measuring force strain, pres-  
 sure, torque, etc. Computes by analog the effect  
 of the various factors and presents the error direct-  
 ly in percent of correct magnitude / \$3565 / 60  
 BENDIX AVIATION CORP., Research Laboratories  
 Div., P.O. Box 5115, Detroit 35, Mich. — see  
 "Analog Computers" / 60  
 Curtiss-Wright Corp. / simulators, duplicators / 60  
 National Physical Laboratory, Control Mechanisms  
 and Electronics Div., England / simulators / 60  
 The Newton Co. / training devices and simulators / 60  
 Servo Corp. of America / Servomation Building Blocks,  
 Servoboard and Servoscope / DESCR: components  
 enable simulation of actual laboratory and produc-  
 tion conditions / USE: to develop prototypes and  
 experimental models / - / 60  
 Southwestern Industrial Electronics Co., Inc. — see  
 "Analog Computers" / 60  
 Sunshine Scientific Instrument Co. / Analog Field Plot-  
 ter / DESCR: solves problems by means of electric  
 flow patterns set up in a semiconductor / USE: to  
 solve flow problems and mathematical functions,  
 analogous to flow / \$295 / 60  
 Union Switch & Signal Co., Div. of Westinghouse Air-  
 brake / aircraft flight simulators / 60

## 61. STEPPING SWITCHES

AUTOMATIC ELECTRIC COMPANY, Northlake, Ill.  
 / Stepping Switches (types 44 and 45) / USE: for  
 selecting a particular circuit from a group; an idle  
 circuit from a group; consecutively performing op-  
 erations in separate individual circuits; providing  
 timed pulses at accurately spaced equal or unequal  
 time intervals / \$12 to \$45; banks with taper-tab  
 terminals at no extra charge / 61  
 C. P. CLARE & CO., 3101 Pratt Blvd., Chicago 45,  
 Ill. / Stepping Switches / DESCR: Spring-driven  
 switches Types 11, 20, 26, 40 and 52 and Direct-  
 Drive Stepping Switches / USE: as uniselectors,  
 or rotary switches, for completing, interrupting,  
 or changing the connections in a succession of el-  
 ectric circuits in response to momentary impulses  
 of current / 61  
 The Daven Co. / precision switches / \$6.50 to several  
 hundred dollars / 61  
 Intra Corp. / Bothway Unselector / USE: selection,  
 sequence control, counting (especially when sub-  
 tracting is desirable), totalizing, pulsing, step-by-  
 step drive / \$27.70 to \$32.10 / 61  
 North Electric Mfg. Co. / rotary stepping switches / 61

## 62. STORAGE SYSTEMS — see DELAY LINES, MAGNETIC STORAGE SYSTEMS

Arenberg Ultrasonic Laboratory, Inc. / Ultrasonic  
 solid delay lines / 62  
 EPSCO, INC., 588 Commonwealth Ave., Boston 15,

(cont'd on page 98)



# FAIRCHILD ENGINE DIVISION AND GAS TURBINE LABORATORY

The Fairchild Engine Division is expanding its digital and analog computer facilities. This expansion offers genuine opportunities for engineering individuality.

Positions available cover applied mathe-

matics . . . programming . . . and administration in a computer and mathematics group. These positions are specifically reserved for those interested in diversified mathematical problems and computer application.

Please contact **FELIX GARDNER**



## FAIRCHILD ENGINE DIVISION

COMMACK ROAD, DEER PARK, L. I., N. Y.

A DIVISION OF FAIRCHILD ENGINE AND AIRPLANE CORPORATION

The Ramo-Wooldridge Corporation

D A T A  
P R O C E S S I N G

Ramo-Wooldridge has several opportunities available for persons experienced in the application of electronic data processing equipment to complex business systems. Applicants should have a college degree in engineering or physical science, and a knowledge of scientific management techniques as applied to business and industrial operations. They should be analytically inclined and have the ability to work effectively with Managements of client organizations.

*Those interested are invited to explore the range of openings at The Ramo-Wooldridge Corporation by submitting a resume of education and experience to: Mr. R. Richerson*

**The Ramo-Wooldridge Corporation**

5730 ARBOR VITAE STREET • LOS ANGELES 45, CALIFORNIA

# NATIONAL ANALYSTS, INC.

Data Processing Services, Marketing Research, Operations Research

ANNOUNCES —

The availability of computing equipment on a rental arrangement:

**IBM 705 with 40,000 digit memory, 2 TRC'S, 16 Tape units on line.**

**UNIVAC**

**IBM 650 card operated, with 2000 word memory and auxiliary alphabetic equipment.**

**Full line of punch card equipment.**

Systems studios, programming services and computer application services.

Advice on selection of data processing equipment to meet your automation needs.

---

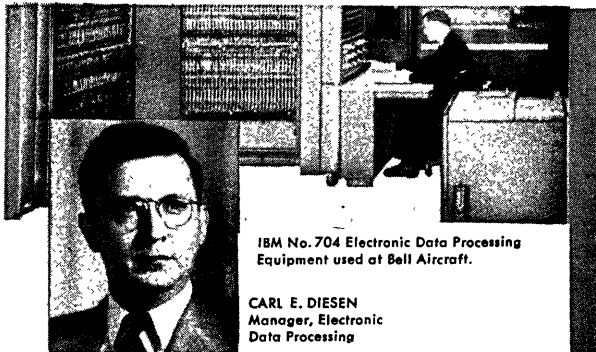
Send for our brochure on DATA PROCESSING SERVICES

**NATIONAL ANALYSTS, INC.**

**ARNOLD J. KING, President**

**1015 Chestnut Street**

**Philadelphia 7, Penna.**



IBM No. 704 Electronic Data Processing  
Equipment used at Bell Aircraft.

CARL E. DIESEN  
Manager, Electronic  
Data Processing

**PROGRAMMERS**—Bell Aircraft's expanding facilities and new building for Electronic Data Processing provide rewarding opportunities for numerical analysts in analyzing and programming problems for an IBM No. 704. This group will deal with mathematical computations arising in research and engineering in advanced airplane design, guided missiles, rockets and nuclear development. Bachelor's degree or higher in mathematics or physics required with experience in programming for a stored program computer desirable.

**DATA PROCESSING ANALYSTS**—Equally advantageous opportunities for those with heavy experience in accounting and punched card techniques and procedure writing. This group will plan procedures and techniques and do computer programming in preparing reports for improved managerial control of accounting and manufacturing processes.

Salaries commensurate with training and experience, liberal benefits and excellent working conditions. Send resume to: Carl E. Diesen, Manager, Electronic Data Processing, Dept. 7E, BELL AIRCRAFT CORPORATION, P. O. Box One, Buffalo 5, New York.



---

## THE COMPUTATION CENTRE UNIVERSITY OF TORONTO

*invites*

applications for the position of  
**MATHEMATICIAN (Ph.D.)** on its  
staff.

Initial salary up to \$7,500 according to qualifications. Specialisation in numerical analysis and experience in using a high speed machine essential.

Applications should be addressed to the Director, Computation Centre, McLennan Laboratory, University of Toronto, Toronto 5.

Are you looking for

## IDEAS AND KNOWLEDGE

about the Computer field?

Here are some of the articles and papers which we have published in recent issues of "Computers and Automation":

**January, 1957** (vol. 6, no. 1): Modern Large-Scale Computer System Design — Walter F. Bauer  
Logical and Combinatorial Problems in Computer Design — Robert McNaughton  
Transistorized Magnetic Core Memory — Bell Telephone Laboratories  
Education for Automation — Alston S. Householder

Social and Public Relations' Responsibilities of the Computer Industry — Jay W. Forrester  
High School Science Education — R.W. Melville

**February:** Computation for an Earth Satellite — Neil D. MacDonald

New Computer Developments Around the World — Everett S. Calhoun

Industry and the Automated Future: Problems Along the Way — John Diebold

Electronic Digital Data-Handling — Howard T. Engstrom

The Solution of Boundary Value Problems on a REAC Analog Computer — M. Yanowitch

**March:** Office Equipment Outlook — Oliver J. Gingold

Group Behavior of Robots — Manfred Kochen  
Robots and Automata: A Short History — James T. Culbertson

Automatic Computing Machinery — List of Types  
Components of Automatic Computing Machinery — List of Types

**April:** Division of Labor in Scientific Digital Computer Service Facilities — L.N. Caplan  
Cam Profile Design With the Univac 120 — Louis D. Grey

Supplementing Electronic Equipment With a Modern Communications System — M.M. Koontz

Use of a Computer for Certain Operations of Classification — Andrew D. Booth

**May:** Computer Market Survey — Report No. 1 — E.C. Berkeley

Reliability in Business Automatic Data Processing — Herbert T. Glantz

Automatic Search of Library Documents — S. Richard Moyer

**BACK COPY PRICE:** If available, \$1.25 each, except June 1955 and 1956, \$6.00 (the June issue is the Computer Directory issue).

--- Mail this coupon (or a copy of it) ---

To: Berkeley Enterprises, Inc.  
815 Washington St., R104  
Newtonville 60, Mass.

Please send me the following back copies:

I enclose \$\_\_\_\_\_ in full payment. If not satisfactory, returnable within week for full refund (if in good condition).

My name and address are attached.

# If it's new Schweber has it!



**AMPHENOL**

Connectors—AN-UG-RF-  
Blue Ribbon-AN Miniatures-  
Coaxial Teflon Cables.



**GENERAL ELECTRIC CO.**

Tantalytic Capacitors  
"JAN" CP-Oils



**ALLEN BRADLEY**

Resistors & Potentiometers



**CANNON ELECTRIC CO.**

AN-E-Environmental  
Miniature KO-U-D Series  
GS Hermetically Sealed



**BOURNS LABORATORIES**

Carbon &  
Wirewound TRIMpots



**INDUSTRIAL PRODUCTS CO.**

RF Coaxial Connectors  
MB Connectors

**OHMITE®**

**OHMITE MFG. CORP.**

Resistors & Rheostats



**FEDERAL TELEPHONE  
& RADIO**

RG Coaxial Cables

**Vitramon®**

**VITRAMON, INC.**

Porcelain Dielectric  
Capacitors



**GENERAL ELECTRIC CO.**

Micro-Miniature Relays

Normal factory delivery time averages 45 days. We use our knowledge and imagination to anticipate your requirements; and have the necessary components you need, on hand in our regular stock, ready for immediate delivery.

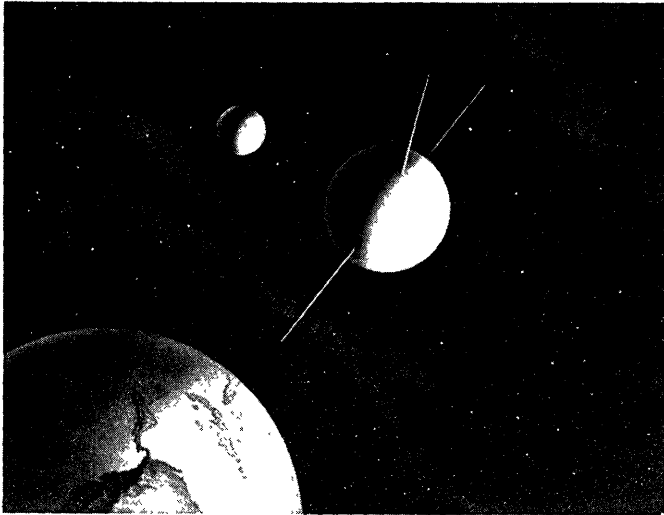
**YOU CAN ALWAYS DEPEND UPON SCHWEBER!**



## Schweber ELECTRONICS

122 Herricks Road, Mineola, L. I., New York  
PIONEER 6-6520

# Extra Precision Audiotape to track the Earth Satellite



The man-made "moon" which is to be launched during the International Geophysical Year will whirl through space at 18,000 miles per hour, actually circling the earth once every 96 minutes.

To help scientists track the speeding sphere, a small radio receiver-transmitter—activated by impulses from earth—will periodically send out radio signals to ground receiving stations. These signals will be recorded on magnetic tape for immediate and subsequent analysis.

The tape chosen for this unusual and significant recording assignment was Type EP Audiotope.

The "extra-precision" which qualifies EP Audiotope, for important jobs like this one is achieved through a rigid program of quality control. Every facet of the manufacturing process, from the selection of raw materials to the final packaging operations, is scientifically supervised. The result is an instrumentation tape which will meet the most exacting standards of uniformity and freedom from microscopic imperfections.

In telemetry, electronic computers, or any other magnetic data recording work, Type EP Audiotope consistently delivers top performance.

For more detailed information, write for Bulletin T112A.

*it speaks for itself*

**audiotape**  
TRADE MARK

**AUDIO DEVICES, INC.**  
444 Madison Ave., New York 22, N. Y.

## BULK SUBSCRIPTION RATES

These rates apply to prepaid subscriptions coming in together direct to the publisher. For example, if 7 subscriptions come in together, the saving on each one-year subscription will be 24 percent, and on each two-year subscription will be 31 percent. The bulk subscription rates, depending on the number of simultaneous subscriptions received, follow:

### Bulk Subscription Rates (United States)

Number of Simultaneous Subscriptions	Rate for Each Subscription, and Resulting Saving to Subscriber	
	One Year	Two Years
7 or more	\$4.20, 24%	\$7.25, 31%
4 to 6	4.60, 16	8.00, 24
3	5.00, 9	8.80, 16
2	5.25, 5	9.55, 9

For Canada, add 50 cents for each year; outside of the United States and Canada, add \$1.00 for each year.

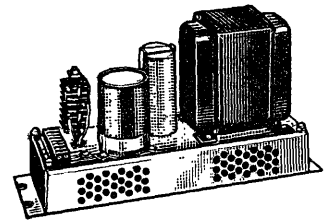
## HIGH-CURRENT, REGULATED DC POWER SUPPLY

### FOR COMPUTER "PULSE" LOADS

Many of the country's leading computer manufacturers incorporate the Sola Constant Voltage DC Power Supply as a component in their equipment. It provides exceptional performance under intermittent, variable, or pulse loads of computer service. This moderately-priced static-magnetic assembly provides regulation within  $\pm 1\%$  for line voltage variations up to  $\pm 10\%$ . Ripple voltage is approximately 1% (rms) or less.

### available stock ratings

Stock Sola Constant Voltage DC Power Supplies are offered in six stock ratings ranging from 24 volts at six amperes to 250 volts at one ampere. Each is mounted on a standard 19" relay rack frame only 5 $\frac{1}{4}$ " high. Depth, front-to-rear, is 9 $\frac{3}{4}$ ".



### special design and assembly service

In addition to the six stock sizes already discussed, Sola has designed numerous special ratings to meet the specific requirements of equipment manufacturers. A listing of 30 of the most useful ratings is available on request. Use of one of these available ratings may yield appreciable savings in delivery time; but inquiries are also invited on other electrical characteristics and other mechanical arrangements.

For further information, request Bulletin 51F-CV-235 from:

**SOLA ELECTRIC CO.** • 4633 W. 16th St., Chicago 50, Ill.

**ELECTRONIC COMPUTER CHARTS  
GAME — TEACHES BUSINESS  
EXECUTIVES HOW TO MAKE  
DECISIONS**

A new "game" simulating the world of business has been introduced by the American Management Association ... which uses an electronic computer to keep score. Five teams of business executives, given an equal start in a multi-million dollar "Monopoly-like" market for Widgets, compete to amass the most assets. The decisions of each team on what to do with available cash, plant capacity, pricing, are fed each 20 minutes into the computer ... which then calculates what share of the market each team has captured. The game, utilizing an IBM computer, is to be the core of a course in "how to make decisions". By next year some 4000 game-playing top-executives will have been exposed in this way to one small facet of the fantastic capacity of computers.

\* \* \* \* \*

**SUMMER COMPUTER COURSES**

Ann Arbor. — A group of six courses in Digital Computers will be given at the University of Michigan College of Engineering from August 19 to August 30 of this year. The emphasis in these courses is on modern computational techniques. They are designed primarily for persons already experienced in some aspects of computer technology. For information, write to Engineering Summer Conference, 2038 East Engineering Building, Ann Arbor, Michigan.

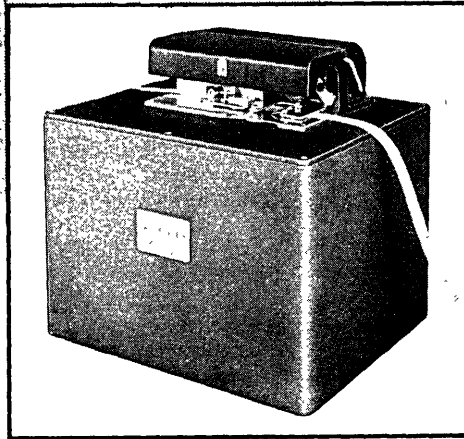
Detroit. — The Fifth Summer Computer Program of Wayne State University (Detroit) is being given at the Computation Laboratory in two parts this year. The first half, "Introduction to Computers and Their Application, and Data Processing in Business and Industry" was offered early in June. The second half of the program, "Industrial, Management, and Scientific Applications of Computers" will be offered September 9 to 14. This course is planned to follow directly a three-day Conference on Matrix Computations also at the Computation Laboratory. For information, write to A. W. Jacobson, Special Summer Program, Wayne State University Computation Laboratory, Detroit 2, Michigan.

(cont'd on page 94)

# FERRANTI

## HIGH SPEED TAPE READER

... handles punched tape data  
at electronic speeds



The Ferranti High Speed Tape Reader accelerates to full speed within 5 milliseconds and stops within 3 milliseconds. It has been in use at leading computer installations for over two years and has achieved a sound reputation for simplicity and reliability in regular operation.

**FAST** (1) Mark II model reads at speeds up to 200 characters per second, and stops the tape from full speed within a character position — within .03 inch. The tape is accelerated to full speed again in 5 milliseconds and the following character is ready for reading within 6 milliseconds of rest position.

(2) Mark IIA model reads at speeds up to 400 characters per second, and stops within .1 inch.

**VERSATILE** Both models read either 5 level, 6 level or 7 level tape by simple adjustment of an external lever.

**SIMPLE** The tape is easily inserted without complicated threading. Lap or butt splices are taken without any difficulty. The same tape may be passed thousands of times without appreciable tape wear. The optical system has no lenses or mirrors to get out of alignment. Friction drive is independent of sprocket hole spacing.

**LARGE OUTPUT** Amplifiers are included for each channel, including a special squaring circuit for the sprocket hole signal. Output swing between hole and blank is greater than 20 volts.



Dimensions: 9" x 11½" x 11¼"      Weight: 37 lbs.

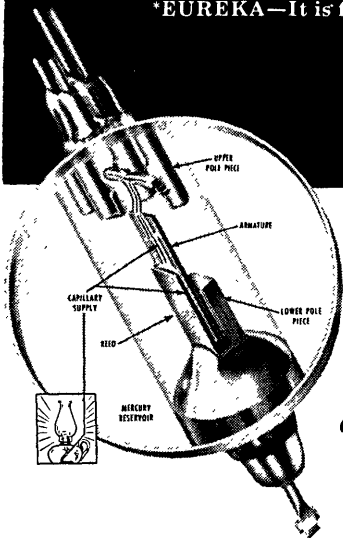
For use with long lengths of tape up to 1000 feet, spooling equipment operating up to 40 inches per second for take-up or supply is available separately.

**FERRANTI ELECTRIC, INC.**

30 Rockefeller Plaza    New York 20, N. Y.

# XEMPIKA\*

\*EUREKA—It is found (Greek)



## Industry finds a "FOUNTAIN OF YOUTH" in this SELF-REJUVENATING CLARE RELAY

Ponce de Leon failed in his quest for a "fountain of youth," but modern design engineers find rejuvenation an accomplished fact in CLARE Mercury-wetted Contact Relays... capable of billions of operations.

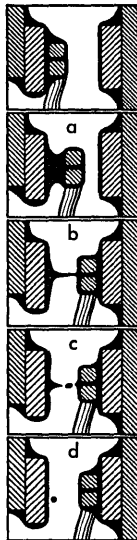
Contacts of these relays are constantly renewed. By capillary action, like that of a lamp wick, a new film of mercury coats the contacts with every make and break.

The magnetic switch is sealed in a high-pressure hydrogen atmosphere in a glass capsule. Surrounded by the operating coil, the capsule is enclosed in a vacuum-tube-type steel envelope.

Unlike ordinary relay contacts, these contacts never wear out; never get dirty; never lock or weld; never get out of adjustment; never bounce.

Drawings (left) from stroboscopic photographs show the cycle. (a) Filament of mercury forms between the contacts as they separate. (b) This becomes narrower in cross section and (c) finally parts at two points, allowing a globule of mercury to fall out. Mercury flows up the capillary path to replace the amount lost and restore the equilibrium. (d) The momentary bridging of the parting contacts—and the extremely fast break that ends it—minimizes the arc and adds greatly to contact load capacity. Contact closure between the two liquid surfaces bridges mechanical bounce and prevents any chatter from appearing in the electrical circuit.

Send for CLARE Engineering Bulletins No. 120 and 122. Address C. P. Clare & Co., 3101 Pratt Blvd., Chicago 45, Illinois. In Canada: C. P. Clare & Co., 659 Bayview Avenue, Toronto 17. Cable Address: CLARELAY.



**CLARE RELAYS**  
FIRST in the industrial field

NEWS ITEMS  
(cont'd from page 93)

## News Items

### ROBOT MACHINIST

The Air Force has just accepted delivery on the first electronically controlled device to turn out titanium blades for jet engines. This special-purpose machine tool, made by the Douglas Tool Company of Detroit, cuts out the intricate twisted airfoil section of a blade, ready for final polishing, at the rate of one every 11 minutes — some 4 to 5 times as fast as the machines it is designed to replace.

\* \* \* \* \*

### 50 TON MILLING MACHINE CONTROLLED BY CODING TAPE

To increase speed of production of precision parts by a 50 ton milling machine, the Glenn L. Martin Company has purchased a Bendix built automatic tape-fed control system. The controller senses the program punched into the tape, and actuates the massive machine tool which turns out parts automatically for Matador missiles and SeaMaster airplanes.

\* \* \* \* \*

### ANALOG TO DIGITAL CONVERTER FLASHES ACTUAL THICKNESS OF STEEL STRIP

Faster, more accurate reading of finished strip steel thickness is reported by the 80-inch strip mill of U. S. Steel Fairless Works, Fairless Hills, Bucks Co., Pa. The method uses a device which converts passage of X-rays through the moving strip into an actual thickness readout. The varying intensities of the X-rays are recorded by a scintillation detector; the meter readings are then converted into electrical voltages by a computer device; the electrical voltages are then summed, and applied to an analog-to-digital converter, which displays the actual thickness in thousandths of an inch in a row of 3 illuminated figures. "Read-outs" at several points are also printed through a printing cycle controller.

\* \* \* \* \*

# GENIACS AND TYNIACS

Scientific — Entertaining — Instructive — Safe with our improved construction kits including all parts, and wipers making all switches work well — the improved kits made by the originator of all Tyniacs, most Geniacs, Simon (miniature mechanical brain), Squee (electronic robot squirrel), etc.

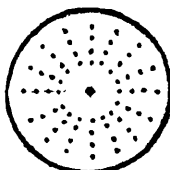


Diagram of the versatile multiple switch, which can be assembled to make any switch combination from 16 decks of 2 positions, to 2 decks of 16 positions.

**K 9: GENIAC AND TYNIAC ELECTRIC BRAIN KIT:** Contains 64-page Geniac manual, 48-page Tyniac manual with introduction to Boolean Algebra for switching, templates, and over 400 parts (including 6 multiple switches) for making over 45 arithmetical, logical, reasoning, computing, puzzle-solving and game-playing machines (see partial list below). Each Geniac and Tyniac displays intelligent behavior, runs on one flashlight battery, requires no soldering (all connections with nuts and bolts). This kit is the outcome of 7 years of our design and development of small robots, and demonstrates in instructive and easily-put-together models the fascinating variety and power of computing and reasoning circuits .....\$17.95

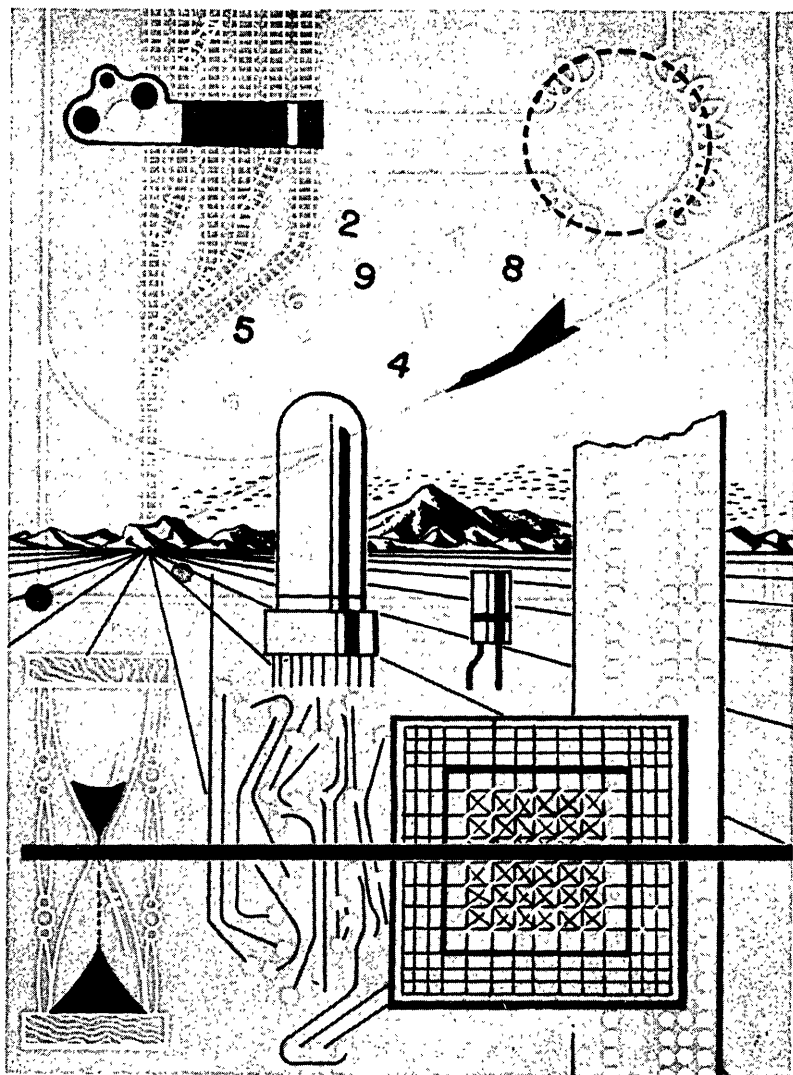
A few of the 46 GENIACS and TYNIACS — Logic Machines: Joe McCarty's Logic, Syllogism Machine, Intelligence Test. Game Playing Machines: Tit-Tat-Toe, Nim, Black Match, Sundorra 21. Computers: Adder, Subtractor, Multiplier, Divider. Cryptographic Machines: Secret Coder, Secret Decoder, Lock with 65,000 Combinations. Puzzle-Solving Machines: Fox, Hen, Corn and Hired Man, Space Ship Airlock, Bruce Campbell's Will, Submarine Rescue Chamber, The Uranium Shipment and the Space Pirates.

----- Mail this Request (or a copy of it) -----

Berkeley Enterprises, Inc.  
815 Washington St., R 104  
Newtonville 60, Mass.

Please send me K 9.

I enclose \_\_\_\_\_ in full payment. (If in good condition, returnable in seven days for full refund.) My name and address are attached.



## COMPUTER RESEARCH PLANNER

NCR Research offers an exceptional opportunity to a man who has three or more years experience in the electronic computer industry.

This important opening is with a small staff group that reports to top Research management in one of the world's most successful corporations. This special team establishes research objectives and evaluates research ideas in terms of company requirements, both present and future — provides information that aids the direction and timing of research activities.

Administrative ability is important since liaison assignments require close personal contact with many different NCR divisions. From them, and from sources outside the Company, he will obtain clear-cut indications from a scientific point of view, of future system and component demands of the business machines market.

This man should have one or more degrees in the fields of electrical or electronic engineering, physics, chemistry, or mathematics.

**INVESTIGATE** NCR's research program! We have other interesting openings.

Write or wire: Director of Scientific Personnel, Section MC, The National Cash Register Company, Dayton 9, Ohio.

# NCR

THE NATIONAL CASH REGISTER COMPANY

## PHYSICISTS & MATHEMATICIANS

**CONTRIBUTE  
TO THE  
FLIGHT  
OF THE  
FIRST  
NUCLEAR  
POWERED  
PLANE**

Possibilities of almost unlimited range and speed for aircraft give top priority to the work now underway at the Aircraft Nuclear Propulsion Department of General Electric.

The product stage has been reached, and physicists and mathematicians—with or without previous nuclear experience—are needed immediately for assignments in:

**Thermodynamics and Cycle Analysis  
Reactor Analysis • Shield Physics  
Nuclear Instrumentation  
Digital and Analog Computers  
Theoretical Physics  
Numerical and Programming Analysis**

Your nuclear knowledge will be supplemented through a special series of in-plant courses that will give you a sound basis for work in this field.

The emphasis here is on research. Technical assistance is liberal, facilities modern and extensive. Responsibility is fully delegated.

Your professional development is encouraged in every way by on-the-spot management. There are opportunities for graduate study on a Full Tuition Refund Plan. And frequent merit reviews keep advancement based on ability and performance, not number of years on the job.

*Comprehensive Benefits  
Relocation Expenses Paid*

**Choice of Two Locations:  
Cincinnati, Ohio and Idaho Falls, Idaho**

*Please write in confidence, stating salary requirements to:*

J. R. Rosselot      L. A. Munther  
P. O. Box 132      P. O. Box 535  
Cincinnati, Ohio      Idaho Falls, Idaho

**GENERAL  ELECTRIC**

## MANUSCRIPTS

We are interested in articles, papers, reference information, and discussion relating to computers and automation. To be considered for any particular issue, the manuscript should be in our hands by the fifth of the preceding month. Ordinarily, the length should be 1000 to 4000 words.

**Articles.** We desire to publish articles that are factual, useful, understandable, and interesting to many kinds of people engaged in one part or another of the field of computers and automation. In this audience are many people who have expert knowledge of some part of the field, but who are laymen in other parts of it. Consequently a writer should seek to explain his subject, and show its context and significance. He should define unfamiliar terms, or use them in a way that makes their meaning unmistakable. He should identify unfamiliar persons with a few words. He should use examples, details, comparisons, analogies, etc., whenever they may help readers to understand a difficult point. He should give data supporting his argument and evidence for his assertions. We look particularly for articles that explore ideas in the field of computers and automation, and their applications and implications. An article may certainly be controversial if the subject is discussed reasonably. A suggestion for an article should be submitted to us before too much work is done.

**Technical Papers.** Many of the foregoing requirements for articles do not necessarily apply to technical papers. Undefined technical terms, unfamiliar assumptions, mathematics, circuit diagrams, etc., may be entirely appropriate. Topics interesting probably to only a few people are acceptable.

**Reference Information.** We desire to print or reprint reference information: lists, rosters, abstracts, bibliographies, etc., of use to computer people.

**Discussion.** We desire to print in "Forum" brief discussions, arguments, announcements, news, letters, descriptions of remarkable new developments, etc., anything likely to be of substantial interest to computer people.

Occasionally, we print or reprint science fiction which explores scientific ideas and possibilities about computers, robots, cybernetics, automation, etc., and their implications, and which is at the same time a good story.

**Payments.** In many cases, we make small token payments for articles and papers, if the author wishes to be paid. The rate is ordinarily  $\frac{1}{2}$ ¢ a word, with a maximum of \$20, and half that if it has been printed before.



# GLOSSARY OF TERMS

in the field of  
COMPUTERS AND AUTOMATION

- Over 480 terms defined
- Careful definitions; most of them expressed in plain words understandable to persons who have newly come into the computer field
- Many examples of meaning
- 4th cumulative edition, as of Sept. 19, 1956
- Reprinted from the October 1956 issue of "Computers and Automation"
- If not satisfactory, returnable within week for full refund (if in good condition)

\$1.00 postpaid; 10% discount on orders for 20 or more copies

--Mail this coupon (or a copy of it)--

To: Berkeley Enterprises, Inc.  
815 Washington St., R 104  
Newtonville 60, Mass.

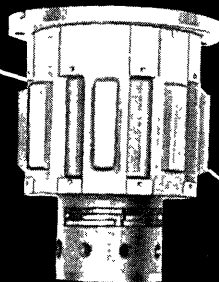
Please send me \_\_\_\_\_ copy (ies)  
of the GLOSSARY, 4th edition, I  
enclose \$ \_\_\_\_\_ in full payment.

Returnable if not satisfactory.

Name \_\_\_\_\_

Address \_\_\_\_\_

Experts agree...  
You Can't Beat  
a Bryant  
Drum!



GENERAL  
ELECTRIC

*Remington Rand*

## Bryant magnetic Drums

for semi-permanent storage of data in  
digital computers or for use as delay lines.

The outstanding performance of Bryant magnetic memory drums is attested to by their purchase by such outstanding companies as General Electric, Radio Corporation of America and Remington Rand.

Designed to your specific requirements, Bryant drums have a guaranteed accuracy of drum runout of .00010" T.I.R. or less. Belt drive or integral motor drive with speeds up to 100,000 R.P.M. or more. Capacities to 5,000,000 or more binary digits.

## High Speed Motors, Spindles and Drums

Bryant designs and manufactures electro-mechanical components for precision operation to your requirements, up to 200,000 R.P.M. If you have a problem in applying high speed rotating equipment to your product, write Bryant today.

**BRYANT GAGE and SPINDLE DIVISION**  
P. O. Box 620-K, Springfield, Vermont, U.S.A.  
DIVISION OF BRYANT CHUCKING GRINDER CO.

Mass. / Model CB-601, CB-602 Magnetic Core Buffer Storage / DESCR: a number of encapsulated magnetic storage elements and associated drive circuitry / USE: digital data source to printers, tape recorders, computers or card punches / - / 62  
MONROE CALCULATING MACHINE CO. — see "Computer Components" / 62

### 63. SYNCHROS

AMERICAN ELECTRONICS, INC., 655 W. Washington Blvd., Los Angeles, Calif. / synchros / 63  
Bendix Aviation Corp., Eclipse-Pioneer Div., Teterboro, N.J. / synchros / 63  
Kearfott Co., Inc. / synchros / 63  
Norden-Ketay Corp. / synchros and servo motors / 63  
John Oster Mfg. Co. / synchros; servomechanism assemblies / 63

## T

### 64. TAPE-TO-CARD CONVERTERS

AUSTIN CO., 76 Ninth Ave., New York 11, N.Y. / tape to card converters / DESCR: converts tape to cards, producing 80 summary cards per minute / USE: for reading out digital data from magnetic tape, and feeding the data to an IBM Summary Punch / 64  
EPSCO, INC., 588 Commonwealth Ave., Boston 15, Mass. / Model C-771 Tape-to-Card Converter / DESCR: converts magnetic tape to punched cards through use of magnetic shift registers. Features thyatron solenoid drive providing higher reliability than conventional delay driven punches / USE: In data reduction and processing systems / rental available / 64  
INTERNATIONAL BUSINESS MACHINES CORP., 590 Madison Ave., New York 22, N.Y. and elsewhere / The IBM 46 Tape-to-Card Punch / DESCR: reads alphabetic or numerical information from a punched paper tape and converts it to IBM punched cards / USE: Model 1 is for use with 5-channel telegraphic tape produced by the IBM Card-Controlled Tape Punch or by telegraphic equipment. Model 2 is for use with 8-channel tape produced by the IBM Typewriter Tape Punch. 5-channel tapes can be transmitted by commercial wire services / Monthly rental \$135-140. Selling price \$8,100 - 8,400 / 64  
REMINGTON RAND UNIVAC DIV., SPERRY RAND CORP., 315 4th Ave., New York 10, N.Y. / Tape-to-Card Converter, Type 308-5 / DESCR: key punch electrically connected to 5 channel code paper tape reader so information is read, decoded and punched into 90-column tabulating card; 420 characters per minute; may be used as standard punched card accounting machine key punch / USE: convert paper tape information to punched cards / rental, \$75 per month; sale, \$5065; prices subject to tax / 64

TYPATAPE, INC., 60 E. 42nd St., New York 17, N.Y. / Typatape / DESCR: basically different form of recording which produces a printed tape which can be read by other machines / USE: the Typatape can be converted by means of a tape-to-card converter / \$5,000 / 64

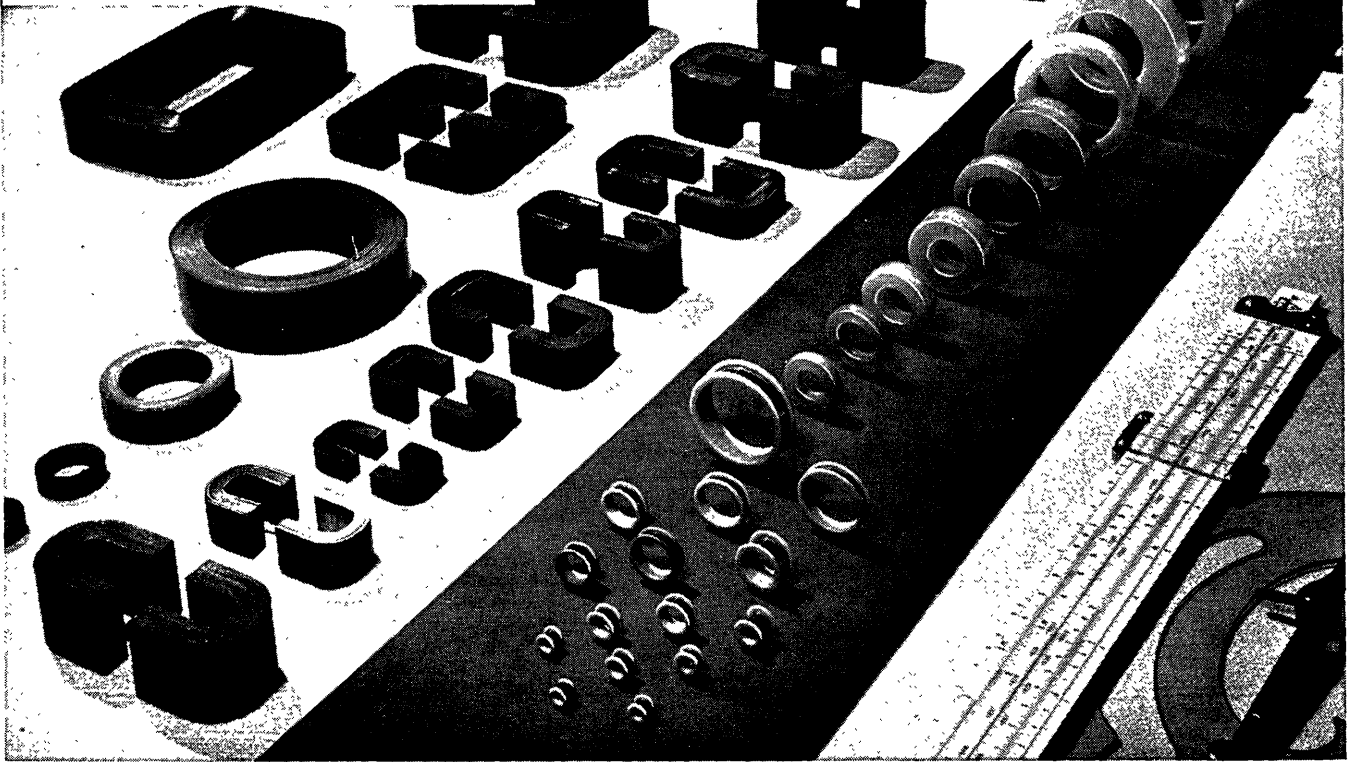
### 65. TRANSISTORS

Amperex Electronic Corp. / transistors / 65  
Baird Atomic Co. / transistors / 65  
Clevite Transistor Products / transistors / 65  
C B S International / transistors / 65  
Delco Radio Division of General Motors Corp. / transistors / 65  
Electronic Research Associates, Inc. / transistors / 65  
Freed Transformer Co., Ltd. / transistor reformers / 65  
General Electric Co., Syracuse, N.Y. / transistors / 65  
General Transistor Corp. / transistors / 65  
Germanium Products Corp. / transistors / 65  
Kepco Laboratories, Inc. / transistors / 65  
The James Knights Co. / transistors / 65  
LANSDALE TUBE CO., DIV. OF PHILCO CORP., Lansdale, Pa. / Philco Surface Barrier Transistor / DESCR: high speed switching transistor / USE: computer applications, etc. / \$3.50 to \$6.50 / 65  
LANSDALE TUBE CO., DIV. OF PHILCO CORP., \*a / Philco Power Transistor / DESCR: power converter / USE: computer applications, etc. / \$2.50 to \$12.75 / 65  
P.R. Mallory & Co., Inc. / transistors / 65  
Microtran Co. / transistors / 65  
Model Rectifier Corp. / transistor power supplies / 65  
Motorola Inc. / transistors / 65  
National Bureau of Standards, Data Processing Systems Division / transistors / 65  
The National Cash Register Co., Electronics Div., Calif. / transistors / 65  
National Union Electric Corp. / transistors / 65  
John Oster Mfg. Co. / transistorized amplifier and servo motor / 65  
Philco Corp., Government & Industrial Div., Philadelphia, Pa. — see "Digital Computers" / 65  
RADIO CORP. OF AMERICA, SEMI-CONDUCTOR DIV., Somerville, N.J. / transistors for computers / 65  
RADIO CORPORATION OF AMERICA, TUBE DIVISION, 415 South 5th St., Harrison, N.J. / computer tubes / transistors / 65  
Radio Development & Research Corp., 26 Cornelison Ave., Jersey City, N.J. / transistors / DESCR: silicon and germanium transistors / USE: computers; D.C. and audio amplifiers; fast and slow switching for military and commercial applications etc. / \$2 to \$30 / 65  
RAYTHEON MANUFACTURING CO., Receiving and Cathode Ray Tube Operations, 55 Chapel St., Newton 58, Mass. / transistors / DESCR: silicon and germanium transistors / USE: computers and

(cont'd on page 100)

## Component Specification: ARNOLD

- ✓ SILECTRON CORES  
Types C, E and O
- ✓ TOROIDAL CORES  
Nylon and Aluminum cased
- ✓ BOBBIN CORES



## The ARNOLD LINE-UP includes the TAPE CORES you need

### APPLICATIONS

We'll welcome your inquiries on your Tape Wound Core requirements for Pulse and Power Transformers, 3-Phase Transformers, Magnetic Amplifiers, Current Transformers, Wide-Band Transformers, Non-Linear Retard Coils, Reactors, Coincident Current Matrix Systems, Static Magnetic Memory Elements, Harmonic Generators, etc.

### ENGINEERING DATA

For data on the various types of Arnold Tape Cores, write for these Bulletins:

- SC-107—Silectron Cores, Types C, E and O
- TC-101A—Toroidal Cores, nylon and aluminum cased
- TC-108—Bobbin Cores

ADDRESS DEPT. CA-76

How to be *sure* of tape core performance and uniformity? Just specify and use *Arnold Cores* in your transformer, magnetic amplifier, reactor and computer assemblies, etc.

*Here's why!*

To begin with, Arnold is a fully integrated company, controlling every manufacturing step from the raw material to the finished core. Then, modern testing equipment permits 100% inspection of cores before shipment. Finally, you're matching your requirements against the most experienced and complete line of tape cores in the industry. Arnold produces Types C, E and O Silectron cores,

nylon and aluminum cased toroidal cores, and bobbin cores to meet whatever your designs may require in tape thickness, material, core size or weight. Wide selections of cores are carried in stock as standard items for quick delivery: both for engineering prototypes to reduce the need for special designs, and for production-quantity shipments to meet your immediate requirements.

*Let us help you solve your tape core problems.* Check Arnold, too, for your needs in Mo-Permalloy or iron powder cores, and for cast or sintered permanent magnets made from Alnico or other materials.

WSW6447

## THE ARNOLD ENGINEERING COMPANY



Main Office & Plant: Marengo, Illinois

Republic Pacific Division Plant: 641 East 61st Street, Los Angeles, Calif.

District Sales Offices:

Boston: 200 Berkeley St.

Los Angeles: 3450 Wilshire Blvd.

New York: 350 Fifth Ave. Washington, D.C.: 1001-15th St., N.W.

65

related uses / - / 65  
 Sprague Electric Co. / transistors / 65  
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. / Crystal diodes, Silicon Point contact diodes, transistors, photodiodes / \$1 to \$14 / 65  
 TEXAS INSTRUMENTS INCORPORATED, 6000 Lemmon Ave., Dallas 9, Tex. / germanium and silicon transistors / 65  
 Transistor Products, Inc. / transistors / 65  
 United States Dynamics Corp. / transistors / 65  
 Victory Engineering Corp. / transistors / 65  
 Volkens & Schaffer Mfg. Corp. / transistors / 65

BURLINGAME ASSOCIATES, 103 Lafayette St., New York 13, N. Y. / High speed digital display (Typoscope) / 67  
 Convair, a Division of General Dynamics Corp. / The Charactron / 67  
 Electro Instruments, Inc. / X-Y recorders / 67  
 Electronic Control Systems, Inc. — see "Computer Test Equipment" / 67  
 Electronic Control Systems, Inc. — see "Digital Computers" / 67  
 EPSCO, INC., 588 Commonwealth Ave., Boston 15, Mass. / visual displays / DESCR: electromagnetically controlled drum affords excellent vision of stable numeric display. Extremely low power drives unit. Simplicity assures highest reliability / USE: in line' readout / - / 67  
 Technitrol Engineering Co. / visual displays / 67  
 TELEREGISTER CORP., 445 Fairfield Ave., Stamford, Conn. / Indicator Units (Type K, Type 68B) / DESCR: rotatable eleven position drum with digits 0 to 9 and blank is stepped by an electromagnet to the blank position; a counted series of pulses then steps it to the required digit; in some types the indication can be read out / USE: visual display for electronic computers and for stock quotation boards / \$10 to \$35 / 67

66. TRANSLATING EQUIPMENT

Computer Measurements Corp. / translating equipment; time function translators / 66  
 EPSCO, INC., 588 Commonwealth Ave., Boston 15, Mass. / translating equipment / DESCR: DATRAC: A-D, D-A converter; FM-108: FM-to-voltage converter; PV-604: PDM-to-voltage converter; PD-601: PDM-to-digital converter / USE: data processing; data reduction; telemetering / - / 66

V

67. VISUAL DISPLAYS

- END -

American Machine & Foundry Co., Electronics Div. / visual displays / 67

\*-----\*

READER'S INQUIRY FORM

Paste label on envelope:↓

Enclose form in envelope:↓

**4¢ Postage Will Be Paid By**

**BERKELEY ENTERPRISES, INC.**

130 West 17th Street  
New York 11, N. Y.

**BUSINESS REPLY LABEL**

NO POSTAGE STAMP NECESSARY IF MAILED IN U. S. A.

FIRST CLASS  
PERMIT NO 1680  
Sec. 34.9, P. L. & R.  
NEW YORK, N. Y.

**READER'S INQUIRY FORM**

Name (please print).....

Your Address?.....

Your Organization?.....


Its Address?.....

Your Title?.....

Please send me additional information on the following subjects for which I have circled the CA number:

1	2	3	4	5	26	27	28	29	30	51	52	53	54	55	76	77	78	79	80	101	102	103	104	105	126	127	128	129	130
6	7	8	9	10	31	32	33	34	35	56	57	58	59	60	81	82	83	84	85	106	107	108	109	110	131	132	133	134	135
11	12	13	14	15	36	37	38	39	40	61	62	63	64	65	86	87	88	89	90	111	112	113	114	115	136	137	138	139	140
16	17	18	19	20	41	42	43	44	45	66	67	68	69	70	91	92	93	94	95	116	117	118	119	120	141	142	143	144	145
21	22	23	24	25	46	47	48	49	50	71	72	73	74	75	96	97	98	99	100	121	122	123	124	125	146	147	148	149	150

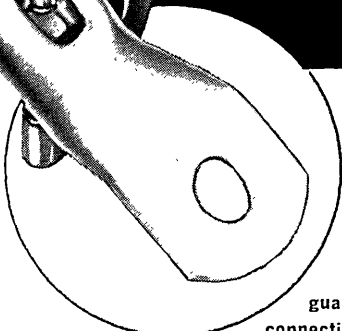
REMARKS:



why beware  
of soldering...  
when you can  
be sure of...  
**CRIMPING!**

*a quick check of indent-depth tells you  
this electrical connection is safe!*

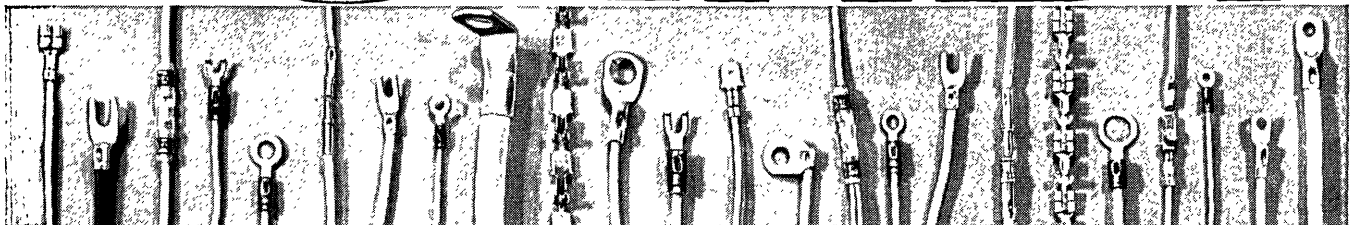
There's no way to check a soldered connection—without destroying that connection! The modern Burndy crimping method affords a quick check for electrical and mechanical safety—simply by measurement of this depth of indent. The cross-section view (right) shows how this indent is designed to coin conductor and connector into intimate contact...for a strong connection, as electrically sound as the conductor itself. And the depth of indent is controlled by the installation tool! Unlike solder which can weaken at high temperatures frequently encountered by modern equipment, the Burndy crimped connection with its wide tolerance endures in all environments. Too—Burndy electrical connections get rid of human error—no skill or training is required. The control is engineered into the connector and the tool! Put a crimp on rising production costs!—send for the full story on Burndy crimp-type connections, today!



first piece check  
guarantees electrical  
connections for the entire  
production run

# BURNDY

57-13



Norwalk, Connect.

Export: Philips Export Corp.

Toronto, Canada

## ADVERTISING INDEX

The purpose of COMPUTERS AND AUTOMATION is to be factual, useful, and understandable. For this purpose, the kind of advertising we desire to publish is the kind that answers questions, such as: What are your products? What are your services? And for each product, what is it called? What does it do? How well does it work? What are its main specifications?

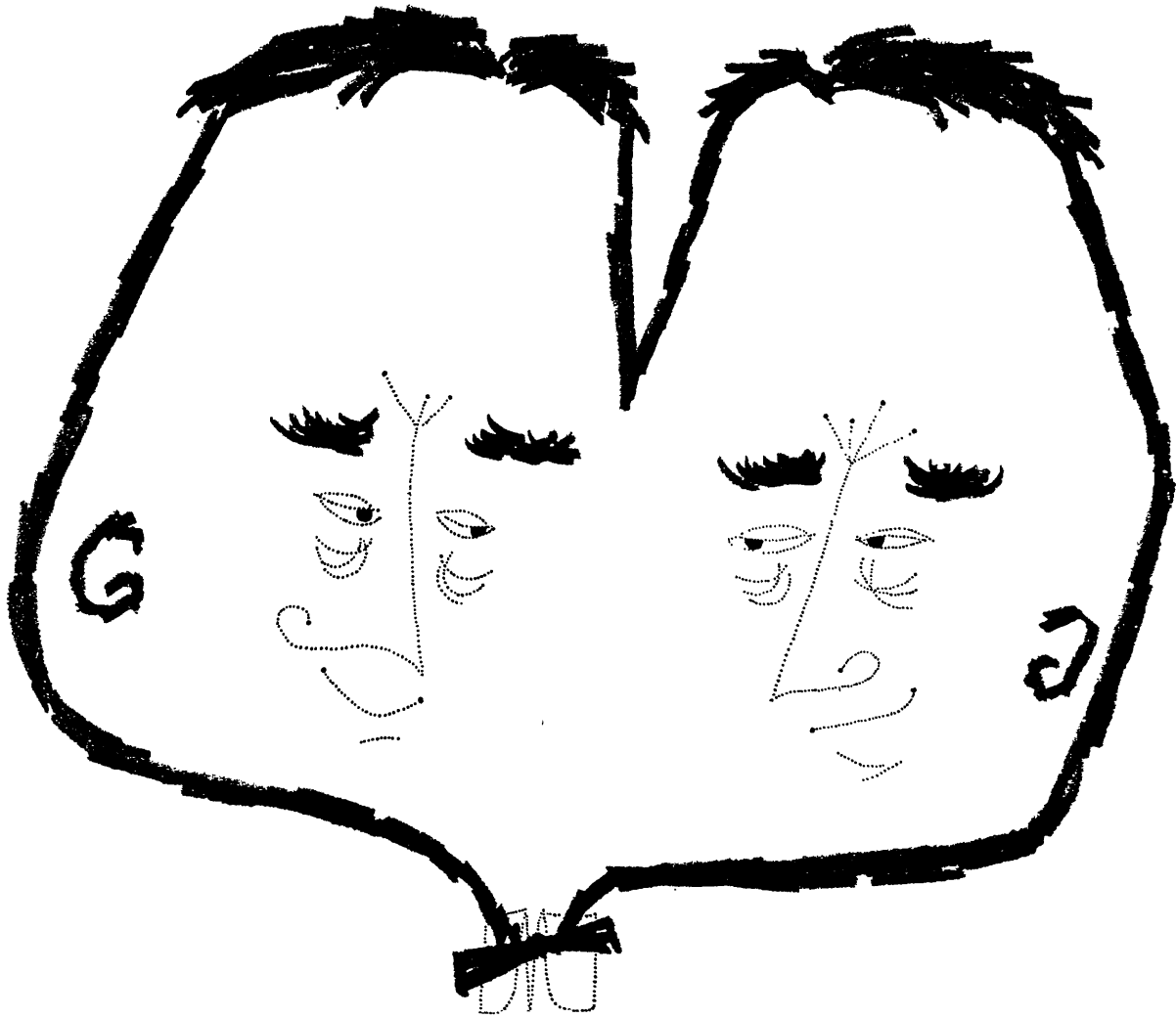
Following is the index and a summary of advertisements. Each item contains: Name and address of the advertiser / subject of the advertisement / page number where it appears / CA number in case of inquiry (see note below).

The Arnold Engineering Co., Marengo, Ill. / Tape Wound Cores / Page 99 / CA No. 19  
Audio Devices, Inc., 444 Madison Ave., New York 22, N.Y. / Audiotape / Page 92 / CA No. 20  
Bell Aircraft Corp., / Employment Opportunities / Page 90 / CA No. 21  
Bryant Chucking Grinder Co., Springfield, Vermont / Magnetic Drums / Page 97/CA No. 22  
Burndy Corp., Norwalk, Conn. / Burndy Crimp-type Connections / Page 101 / CA No. 23  
C.P. Clare & Co., 4719 West Sunnyside Ave., Chicago 30, Ill. / Relays / Page 94 / CA No. 24  
Electronic Associates, Inc., Long Branch, N.J. / Electronic Digital Voltmeter / Page 104 / CA No. 25  
Fairchild Engine & Airplane Corp., Deerpark, L.I., N.Y. / Employment Opportunities / Page 89 / CA No. 26  
Ferranti Electric, 30 Rockefeller Plaza, New York 20, N.Y. / Ferranti High Speed Tape Reader / Page 93 / CA No. 27  
General Ceramics Corp., Keasbey, N.J. / Magnetic Memory Planes / Page 2 / CA No. 28  
General Electric Co., Aircraft Nuclear Propulsion Dept. / - / Page 96 / CA No. 29  
General Transistor Corp., 1030-11 90th Ave., Richmond Hill, N.Y. / Transistors / Page 8 / CA No. 30  
International Business Machines, R-E Division, 590 Madison Ave., New York 22, N.Y. / Employment Opportunities / Page 3 / CA No. 31  
Lockheed Missile Systems Division, Box 504,

Sunnyvale, Calif. / Employment Opportunities / Page 7 / CA No. 32  
National Analysts, Inc., 1015 Chestnut St., Philadelphia 7, Pa. / Data Processing Services, Computing Equipment Rental / Page 90 / CA No. 33  
National Cash Register Co., Dayton 9, Ohio / Employment Opportunities / Page 95 / CA No. 34.  
National Cash Register Co., Electronics Div., 1401 East El Segundo Blvd., Hawthorne, Calif. / Employment Opportunities / Page 103 / CA No. 35  
RCA Components Div., Camden, N.J. / RCA Ferrites / Page 5 / CA No. 36  
The Ramo-Wooldridge Corp., 5730 Arbor Vitae St., Los Angeles, Calif. / Employment Opportunities / Page 89 / CA No. 37  
Schweber Electronics, 122 Herricks Rd., Mineola, L.I., N.Y. / Components / Page 91 / CA No. 38  
Sola Electric Co., 4633 W. 16th St., Chicago 50, Ill. / Components / Page 92 / CA No. 39  
University of Toronto, Computation Centre, Toronto, Ontario, Canada / - / Page 90 / CA No. 40

---

If you wish more information about any products or services mentioned in one or more of these advertisements, you may circle the appropriate CA Nos. on the Reader's Inquiry Form on p. 100 and send that form to us (we pay postage; see the instructions). We shall then forward your inquiries, and you will hear from the advertisers direct. If you do not wish to tear the magazine, just drop us a line on a postcard.



## southern california opportunity for an exceptionally creative senior systems engineer

### high-paying work in research for advanced digital computer systems

If you have several years of broad digital computer experience, you may fill an important job here in analysis of major research problems for advanced business data-processing systems. You will have considerable freedom to originate projects (the more original the better) dealing with advanced techniques in design and application of computers. A background in abstract mathematics, operations research or information theory would be helpful, but a steady flow of ideas (mostly good) is more important.

Genuine creativity will be well rewarded both in salary and professional opportunity. Because we're a small, select research-design group, you can't get "lost in the crowd." And because our major activity is the continuing development of business computer systems for worldwide commercial markets, your career development is steady and certain.

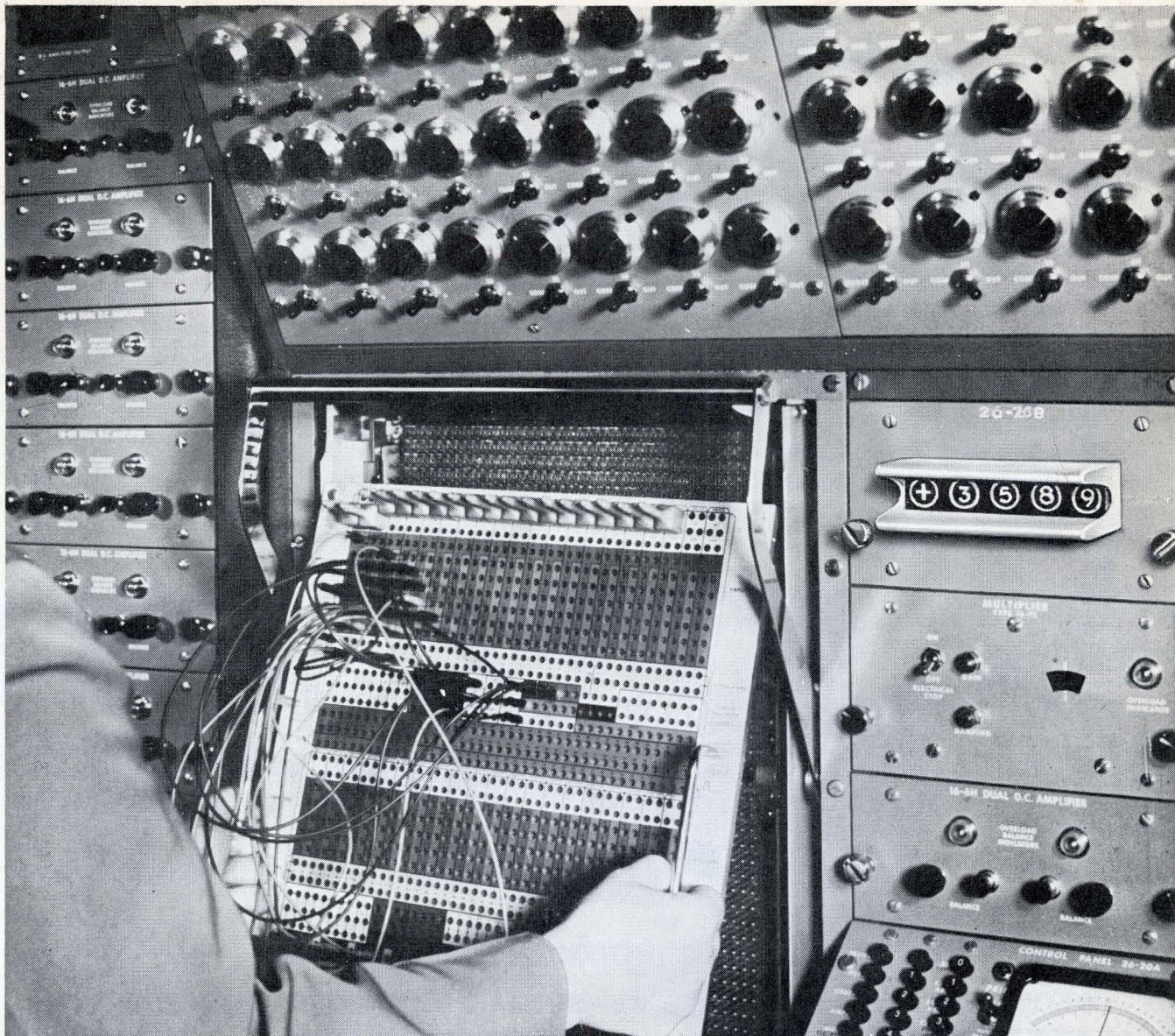
Ultra-modern laboratories in a pleasant, ideally located Los Angeles suburb. Progressive management, full benefits. We believe this is the job you'll want for good.

send resume or contact D. P. Gillespie, Director of Industrial Relations, PLymouth 7-1811



\*TRADEMARK REG. U.S. PAT. OFF.

**THE NATIONAL CASH REGISTER CO.  
ELECTRONICS DIVISION**  
1401 East El Segundo Boulevard  
Hawthorne, California



## ANOTHER FIRST FOR EAI AN ELECTRONIC DIGITAL VOLTMETER

The new electronic Digital Voltmeter, Model 26-26B from Electronic Associates, Inc., enables readouts at speeds formerly thought impossible.

A unique transistorized digital comparator converts analog inputs to the binary coded decimal system in an average time of 0.05 seconds. Delays in readout time are reduced by a factor of 100. Readout accuracy is maintained at 0.01 Volts.

These advances are made possible because of this Digital Voltmeter's completely electronic and transistorized design. The progressive measuring and digitizing circuitry requires no moving parts at all. This results in extreme speeds, noiseless operation, and the greatest reliability.

The Digital Voltmeter is another first in EAI's Program of PACE. For complete details on this, and on any of the Computation Centers maintained by Electronic Associates, Inc. in Princeton, N. J., Los Angeles, California, or Brussels, Belgium, write to: Electronic Associates, Inc., Long Branch, New Jersey, Dept. CA-6



· E A I S E T S T H E

**P A C E**  
PRECISION ANALOG COMPUTING EQUIPMENT

LONG BRANCH • NEW JERSEY