Shown on the cover are artistic concepts of the two major approaches to microelectronics. Above is a thin-film ceramic based microcircuit (CERACIRCUIT®) and below a semiconductor integrated microcircuit (UNICIRCUIT®). The accompanying outlines are actual size.
Dear Sprague Employee,

The year 1963 presented many difficulties for our segment of the electronics industry and for Sprague Electric. With increased pressure from foreign imports, numerous cutbacks and changes in military programs and unusually severe price competition, our sales were lower than in the previous year.

We also experienced a substantial decline in profits. The chart on the following page shows this drop very clearly.

The difficulties we encountered during 1963 made necessary a number of “belt-tightening” programs, all aimed at trimming costs to the maximum degree consistent with sound operations. The need for these cost reduction measures continues into 1964, and will require an extraordinary degree of cooperative hard work on the part of the entire Sprague Electric team.

Another important goal is to build for the future by making maximum use of our impressive resources — in plant, equipment and people.

We have, collectively, a very large reservoir of experience to draw on, and have demonstrated over the years considerable flexibility and imagination. We will need, in 1964, to use these qualities to the highest degree. Our potential for continued growth and leadership is, I believe, unmatched in our branch of the electronic industry.

I earnestly solicit your fullest cooperation, in keeping your Company strong, competitive and forward-looking.

Cordially,

[Signature]
# RESULTS AT A GLANCE

<table>
<thead>
<tr>
<th>Category</th>
<th>1963</th>
<th>1962</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTAL INCOME</strong></td>
<td>$83,902,982</td>
<td>$87,402,484</td>
</tr>
<tr>
<td>Employes - Wages and Salaries</td>
<td>$37,998,960</td>
<td>$38,137,984</td>
</tr>
<tr>
<td>Suppliers - Raw Materials and Services</td>
<td>$32,373,155</td>
<td>$31,908,772</td>
</tr>
<tr>
<td>Direct Taxes (Federal, State and Local)</td>
<td>$5,380,397</td>
<td>$7,808,196</td>
</tr>
<tr>
<td>Depreciation and Amortization</td>
<td>$2,882,035</td>
<td>$2,674,669</td>
</tr>
<tr>
<td>Interest on Borrowed Money</td>
<td>$623,430</td>
<td>$439,963</td>
</tr>
<tr>
<td>Special Item (tax claim 1941-46)</td>
<td>—</td>
<td>$363,758</td>
</tr>
<tr>
<td>NET PROFIT (After deducting minority interest in the income of a subsidiary in 1963 - $16,270, in 1962 - $2,823.)</td>
<td>$4,628,735</td>
<td>$6,066,319</td>
</tr>
<tr>
<td>Dividends to Stockholders</td>
<td>$1,817,394</td>
<td>$1,773,109</td>
</tr>
<tr>
<td>Reinvested in the Business</td>
<td>$2,811,341</td>
<td>$4,293,210</td>
</tr>
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</table>
SUPPLIERS
38.6c

WAGES & SALARIES
45.4c

REINVESTED IN THE BUSINESS

DEPRECIATION & AMORTIZATION

INTEREST ON BORROWED MONEY

DIVIDENDS TO STOCKHOLDERS

PROFIT
5.5c

DIRECT TAXES
6.4c

3.4c

.7c

1 9 6 3
DIRECTORS AND OFFICERS OF

SPRAGUE ELECTRIC COMPANY

DIRECTORS
Arthur G. Connolly
Joseph A. Erickson
Robert E. Kelley
Frederick R. Lack
Wilbur A. Lazier
William J. Nolan
Gordon W. Phelps
Preston Robinson
John L. Sprague
Robert C. Sprague
Robert C. Sprague, Jr.
Ernest L. Ward
Neal W. Welch
Jerrold R. Zacharias

OFFICERS
Robert C. Sprague
Chairman of the Board
and Treasurer
Ernest L. Ward
President
William J. Nolan
Senior Vice President
in Charge of Legal Affairs
Neal W. Welch
Senior Vice President,
Marketing and Sales
Wilbur A. Lazier
Senior Vice President
in Charge of Engineering

Robert C. Sprague, Jr.
Senior Vice President,
Industrial Relations
Frederick R. Lack
Senior Vice President,
Research
John L. Sprague
Senior Vice President,
Engineering
Robert E. Kelley
General Counsel

David B. Peck
Vice President,
Special Products
Hollis R. Wagstaff
Vice President,
Fiscal
Carroll G. Killen
Vice President,
Industrial and Military Sales
Bruce R. Carlson
Vice President,
Corporate Planning and Systems

3824 STOCKHOLDERS

*Retired December 31, 1963
Silicon-based and ceramic-based microcircuits, which represent two of Sprague Electric's approaches to the formation of "integral circuit packages" are destined to possibly exhibit the greatest growth of all our present new product developments. These approaches to microminiaturization will constitute a large part of our business in the years to come, with the peak volume being realized in the early 1970's.

Currently the entire electronics industry is undergoing a tremendous rate of change and during 1963 this change was partially reflected in the emphasis placed on the so-called integral circuit packages.

This term refers broadly to the entire field of packaged circuits, both miniature and non-miniature, which fall into the following four major groups:

1. Passive complex components, such as filters and pulse networks;
2. Functional component assemblies, made up of separate components which are interconnected and packaged in any number of ways;
3. Printed circuit combinations of resistors and capacitors, etc.;
4. Integrated circuits, including thin-film microcircuits, semiconductor-based microcircuits, and combinations of these known as "hybrid" circuits.

Sprague Electric is active as a producer of all of these items and it is evident that all of them will be of increasing importance to us as time goes on. However, this article will describe our position in microelectronic circuits and our awareness of their importance to our future. Currently the two microelectronic circuit systems receiving major attention in the electronics industry are semi-
The top picture shows an image of the interconnection pattern of a semiconductor microcircuit before being reduced in size. The bottom view shows 36 semiconductor microcircuit patterns on a silicon chip resulting from photomasking and etching techniques. Note size comparison with the paper clip.

What is a semiconductor? Broadly speaking a semiconductor represents the logical development of the crystal which some people remember in the early days of radio broadcasting. The early crystal merely detected or rectified a signal but could not amplify or increase its strength. Following the war, it was discovered that if certain connections were made to critical points on a suitably small, pure element, a small current could be amplified. Thus, we had a device that could take the place of the vacuum tube in many applications.

In today's semiconductor integrated circuits, active elements and some types of passive elements, in particular resistors and capacitors, are created through sophisticated processing techniques within a single crystal slice of silicon, which in certain cases is no larger than the head of a pin. In addition, other passive elements may be formed by evaporation techniques on this same semiconductor substrate.

Circuits of this type have already progressed to the point where it seems probable that they will make the smallest possible circuits that are likely to be made by any method in the foreseeable future. At the present time, they find their greatest application in digital circuitry for computers. However, further development work is expanding their capabilities into linear circuitry.

Basically, in most applications of electronics, we and our customers are concerned with size, cost, performance, and reliability. Potentially, one of the chief advantages of the microelectronic circuits is improved reliability since they have a substantially reduced number of internal connections.

In many applications semiconductor integrated circuits will be at least competitive in terms of cost, when produced in large quantities, relative to circuits assembled by other means. Although we are most concerned with the expectation of greatly improved reliability and performance, and hopefully, lower costs, it is apparent that there are certain applications where reduced size is a definite asset, such as in space vehicle systems and computers.

The second major group of integrated circuits are known as thin-film microcircuits. This development at Sprague Electric is an evolution of work that has been done for a number of years in our printed circuit field, and such circuits are especially suitable for linear or analog circuitry. These circuits afford the circuit
designers greater freedom in balancing circuit values to produce more precise circuits, including more sophisticated non-digital circuits than are presently possible with the semiconductor integrated circuit. However, the thin film microcircuits are not now capable of the extremes of size reduction possible with the semiconductor types and it is questionable whether they will ever be entirely competitive in this regard. Nevertheless, they also promise improved reliability over conventional component assemblies, and potential cost savings.

There is also increasingly widespread recognition that “hybrid” circuits which combine both thin-film and semiconductor techniques have a great deal to offer in the proper place and that the advantages of both techniques may be realized by incorporating them in combination in a single system. For this reason, we are continuing to expand our work on ceramic-based thin-film microcircuits, which we have been developing for several years. Simultaneously, our efforts in silicon-based microcircuits is being stepped up.

With respect to present and future markets for microelectronics, it should be recognized that much of the recent impetus to expand their production has come from increasingly sophisticated requirements in airborne electronic systems for military applications. In these, provision must be made for greatly increased functional complexity and reliability, while at the same time physical size and cost must be reduced. From airborne and space systems, it is probable that the use of microelectronic circuitry will spread to military ground and shipboard electronics, then to commercial computers, then to control computers and other industrial control systems, and ultimately to consumer products. Microelectronic circuits are already being designed into commercial data-processing computers on a limited scale, and some believe that the first consumer applications, such as hearing aids and low-noise television tuners, may follow within two to four years. The rate at which these applications expand will depend not only on finding solutions to the remaining technical problems, but in the long run on the relative cost of microelectronic circuits compared with more conventional circuitry.

At present, the development of integrated circuits is being carried on by both components makers and systems producers, a fact that has led to some speculation about where the bulk of future production will be concentrated.
With their eyes on the future and their minds on their studies, an increasing number of employes are taking to the campus of the institutions of higher learning. During last year, for example, approximately 300 employee-students took advantage of Company educational sponsorship in academic pursuits ranging from a college preparatory program to studies for the doctorate.

Under the administration of the Corporate Industrial Relations Department, over $47,000 was paid by the Company during 1963 to assist employes to improve their educational status and thereby their potential for higher levels of responsibility through the facilities of outside educational institutions.

Galeb Maher, an M. S. student at Williams College, enters the Thompson Physics Laboratory for his course in Atomic and Nuclear Physics.

Nancy Briggs (center), in Introductory Physics class at State College, listens attentively to Sprague Electric instructor Michael Gerould, Senior Product Specialist in the Special Products Division.

Philbrook Worcester (left), is helped with a difficult problem in Mechanics at State College by instructor Richard Reid, Section Head at Special Products Division.

Walter Cwalinski concentrates on his correspondence texts in his current course entitled Electronic Drafting, one of several courses he has found to be helpful.
The rapid rate of change occurring in the complexity of scientific technology mentioned elsewhere in this issue is also reflected in the fact that over 47% of the total dollars spent by the Company in tuition aid was directed last year to the benefit of employees undertaking technical and professional graduate school programs such as physics, chemistry, and electrical engineering, for example.

However, the undergraduate programs are receiving their share of attention since about 30% of the total amount of the dollar benefit was spent as aid for those employees studying for the undergraduate degree, and possibly higher degrees subsequently.

The balance of the benefits for the above educational objectives were divided among college preparatory programs, correspondence school studies and special courses. Although the subjects studied have varied widely, all are related to the employee's current or immediately prospective job.

Thirty-five different schools and colleges were attended at various Sprague Electric Plant locations during 1963, and this year 31 are being attended.

Illustrative of those who are studying under our educational sponsorship program are the students pictured. Nancy Briggs has been with Sprague Electric since 1951 when she started in production at Beaver Street. She started taking Company sponsored courses in 1952 and in 1955 she transferred to Research and Engineering as a Technician. She is presently employed as a Senior Technician in Engineering at Brown Street. Nancy is still continuing her studies in the State College program.

Walter Cwalinski has found Correspondence School courses to be helpful in his work. Walt was originally hired as a Technician but through his studies has advanced to Draftsman Layout B in the Factory Engineering Department at Marshall Street.

Galeb Maher has also been a persevering student. He came to this country in 1957 and worked in the Sprague Electric Cafeteria for a year. In 1958 he joined Research and Engineering as a Technician and after a year of night school attended State College on a fulltime basis in addition to his other work. He received his B.S. degree in June 1962 and is now studying for his M.S. degree at Williams College. Since obtaining his degree Galeb has been promoted to Junior Engineer in the Ceramic Laboratory.

Philbrook Worcester originally joined the Company in the Special Products Division at Union Street as a Technician. He attended Sprague-Franklin Institute and when that program was discontinued, transferred to State College. Through his studies he advanced to Junior Engineer and is presently a Foreman.

In general the requirements for participation in Company sponsorship for academic aid are the approvals of necessary department heads and the Manager of Corporate Training. Generally speaking the applicant must have at least twelve months seniority and is required to make an initial deposit which is refundable upon successful completion of the course. Further details of the approved Company plan are obtainable from the Local Industrial Relations Departments and from the Corporate Training Department in North Adams.
Electronic technology is rapidly changing to place increased emphasis on materials rather than devices. It is interesting and important to consider how this change affects the producer of components. It is, in fact, the components maker who takes the basic materials of electronics and adds substantial value to them in the form of labor and makes them operative in electronic circuitry. At Sprague Electric we use a wide variety of highly sophisticated processes, such as controlled etching and plating, film deposition, diffusion, pressing and sintering and many others, most of which require very heavy capital investments.

Nowhere is this change in technology better illustrated than in the programs of the Sprague Research Center and Engineering Laboratories. Nor is this materials emphasis a recent thing at Sprague. Ten years ago, before anyone had heard of the term “integrated circuit”, we stated in our Annual Report for 1953:

“The manufacture of capacitors and other basic electronic components is not so much a business of putting things together as it is a business of developing new materials, including dielectrics, impregnants and coatings, and many others which will improve the performance characteristics and range of application of these components.”

The current programs of the Sprague Research Center illustrate the continuing emphasis on materials year by year. All of these programs represent the application of a wide variety of scientific knowledge and experimental skills. The important research work carried on in this Center may be grouped under three broad headings, each of which receives approximately equal emphasis.

1. Programs in support of microelectronics. These include basic studies of diffusion processes and epitaxial growth; studies of the properties of thin ceramic or metallic films; studies in the preparation and properties
of semiconductor materials, especially silicon; photoresist and interconnection studies; and a small but concentrated effort directed toward realizing circuit functions by completely new materials utilization techniques.

2. Programs on passive materials and processes. These include studies of phenomena underlying the operation of capacitors, resistors and inductors, such as oxide and other thin-film dielectrics, and their behavior; studies of anodic films and reactions; high-purity materials processing studies; studies of organic reaction mechanisms; and studies of encapsulating materials.

3. Programs on active (semiconductor) materials and processes. These include, in addition to those in support of microelectronics, theoretical and experimental studies of silicon dioxide systems and semiconductor junctions of various types; surface passivation studies; and studies of epitaxial growth as applied to new semiconductor circuit elements.

Our Engineering programs are, of course, more closely related to the various types of components and circuits that comprise our major product lines. Nevertheless, they too display a strong materials orientation. For example, in our central Engineering Laboratories we have continuing programs on aluminum and tantalum electrolytic capacitors, solid dielectric capacitors, semiconductor microelectronics, ceramic capacitors, printed circuits and ceramic-based microcircuits, paper and film capacitors, as well as supporting work on mechanical and packaging techniques and in chemical and instrumental analysis. In addition, the Transistor, Resistor and Filter Divisions maintain device and process engineering activities related to their product lines, while the Special Products Division supports activities in magnetic materials development, processing engineering, packaging engineering and control components and instrument engineering.

The above listing is intended to be illustrative only, for the size and scope of our research and engineering activities will continue to change and expand as new technologies give rise to broadened applications of electronics. We believe, however, that our present research and development programs, taken together, constitute one of the most comprehensive scientific and technical efforts in the electronics industry.

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Measurements of the properties of tantalum oxide films at -70°F are being recorded since capacitors using such films may be used at very low temperatures.

Experimental work in the physics laboratories includes studies of tunneling effects in semiconductor materials. Here a physicist makes measurements on a diode.
Our Corporate Legal Department has the primary responsibility of assuring that the operations of the Company, both within the United States and abroad, are conducted in accordance with the many varied and complex laws that govern all of us.

Most people are more familiar with those lawyers in private practice who handle routine matters for an individual as there are many lawyers who practice in this well publicized field.

Our legal staff works in much the same way as Corporate attorneys in many other companies, and although their work may seem less glamorous, it is nevertheless just as interesting and very important to all of us.

The basic laws that apply to companies are not greatly different from those which govern the conduct and affairs of individuals. A corporation is considered to be a legal body, and its operations are vastly more complicated and complex than those of an individual. Thus, corporate laws are accordingly more numerous, varied, and intricate.

Nevertheless, there are many parallels between the laws that apply to individuals and to corporations. For example, almost everyone, at one time or another, has been represented by a lawyer during the purchase of land, or a home. Similarly, our Company owns many parcels of land and buildings in the United States and several foreign countries. It is apparent that there would be many more legal involvements in the acquisition and operation of such real estate, than in the purchase of a home. In this area of our business operations, our legal staff plays a significant role.

During 1963, our Company purchased many dollars worth of materials and supplies on a routine basis, but some of these purchases were complicated legally, and required the services of our lawyers in negotiating and drafting agreements or contracts containing the detailed provisions.

In the same way that most people have the occasion to borrow money, either through our employe Credit
Unions or other lending agencies, our Company also borrows money for business purposes.

Another significant function performed by our Corporate Legal Department is illustrated in regard to those statutes governing the operation and existence of our Company. Sprague Electric has more than 3,800 stockholders, who elect our Board of Directors, and the stockholders of our Company are the individuals who provide the investment for carrying on our business. The rights and privileges of the Company’s stockholders and its directors are set forth in the by-laws of the Company, and the legal advice on the administration of these by-laws and the application of such pertinent federal and state laws is an important responsibility of this department.

In order to do business in the various geographic locations where our Company has plants and sales offices, it is necessary that the Company be registered. Each state has its own and different laws that refer to what the Company must do in conducting business within the state, or even how it may enter the state. Our legal department must be prepared to advise and counsel the officers of the Company on the legal aspects of state and local laws concerned with taxation, employment and many others.

Superimposed on top of all these state and local laws are those laws and regulations of our Federal Government. There is hardly any phase of our Company’s business activity which is not governed, in some manner, by local, state and federal laws. The law itself is dynamic and ever changing and our attorneys must be familiar with all proposed new laws, or changes in existing laws, and their application to the operations of the Company that may affect our business currently or in the future.

A good example of changing law is the Tax Bill now pending in Congress. One of the main features of this Bill is a reduction in individual tax rate. However, the Bill also contains a great many provisions that apply to corporations. Some of these provisions may appear to liberalize, and others to restrict, taxation provisions that will apply to Sprague Electric and other companies. This will also create a whole new body of tax regulations that our legal staff must understand and apply.

In the conduct of their duties, our legal department personnel are often called upon to appear before a diverse number of boards or committees, such as zoning and tax appeal boards. They also appear before congressional committees and subcommittees and work with such groups as the Electronic Industries Association Law Committee and many others.

Our Corporate Legal Department is under the direction of Robert E. Kelley, General Counsel. He is also Clerk of the Corporation and Secretary of the Board of Directors. Mr. Kelley was named Assistant General Counsel in 1959 and served in that capacity until 1962. He has been active in Company legal affairs since 1946. A native of Boston, he is a graduate of Harvard College and the Boston College Law School. He served from 1943 to 1946 as a captain in the U. S. Army on the staff and faculty of the Engineers School, Fort Belvoir, Virginia.

He has been active in legal and industrial relations affairs with the Electronic Industries Association and the Chamber of Commerce of the United States, and has played a prominent role in industry activity concerning the Walsh-Healey and Bacon-Davis public contracts acts. Mr. Kelley and his family reside in Williamstown.

John S. Lowry is Assistant General Counsel. Mr. Lowry is a graduate of Harvard College and the University of Michigan Law School and joined Sprague Electric in August, 1963. Prior to joining Sprague Electric Mr. Lowry had over 10 years experience in practicing law in Detroit, Michigan. He specialized in handling legal affairs for several large corporations in the area of corporate law. He is a member of a number of bar associations, and presently resides with his family in Williamstown.
The present Southern Ohio Sales Office was established in January 1962, and represents a consolidation of the Cincinnati and Dayton District offices into a single operation. The attractive offices are located at 224 Leo Street in Dayton.

The accounts handled include several large manufacturers of household appliances, data processing equipment, and home entertainment products such as radio and television receivers. There are also a few customers engaged in military electronics in the ordnance and communications field.

The potential sales volume of the office is destined to grow during the next several years, due partially to the continual growth of the consumer market for household appliances, color television, and what promises to be a rapidly growing automotive electronics market. Capacitors, filters, resistors and other assemblies will be used in automotive ignition, voltage control, noise suppression and in other applications still on the drawing boards.

Sales Office Manager, Harvie W. Whitby, Jr., has been associated with Sprague Electric since 1947; first as a partner in the H. W. Whitby Company, and in 1960 as Manager of the Dayton District Office. Alan Weinberger, Associate Manager, has been with the Company since 1952. He was named District Manager of the Cincinnati Sales District in 1959 and assumed his present position when the Southern Ohio District was organized in 1962.

Gerald Lundt, Sales Engineer, and Charles Donelson, Government Liaison Engineer, complete the sales staff. Secretarial duties are capably handled by Grace DeAloia and Mary McVay.

Mr. Whitby is a graduate of the University of Pennsylvania and the Electronics School of the Naval Research Laboratory, Anacostia, D. C. Recalled to active duty in 1951, he served as Communications Officer of the 6555th Guided Missile Squadron at Patrick Air Force Base, Florida, and returned to civilian life in 1953.

He is married to the former Esther Campbell of Medford, Massachusetts and they have four children.
Mr. Weinberger is a graduate of Purdue University with a B.S. degree in electrical engineering and has considerable credit toward a masters degree. Since joining Sprague Electric he has taken several courses under Company sponsorship and is presently enrolled in the Alexander Hamilton Business Course.

Prior to joining Sprague Electric, Mr. Weinberger held technical and supervisory positions at Radio Corporation of America, Electronic Labs, Inc., and the U. S. Naval Avionics Facility, Indianapolis. Earlier experience included teaching at the Indianapolis Electronics School and working part time at Station WISH, Indianapolis to gain broadcasting experience and to validate his First Class Radiotelephone License.

He and his wife, Marie, have two children and make their home in Shiloh, a suburb of Dayton.

Mr. Lundt is a native of Chicago and Oak Park, Illinois and attended Culver-Stackton College in Canton, Missouri and Illinois Institute of Technology in Chicago. He served four years in the Marine Corps and was discharged with the rank of sergeant. Prior to joining Sprague Electric he was employed as a product specialist with Imphenol-Borg in Chicago.

Mr. Lundt is married to the former Barbara Stanners and they have two sons.

Mr. Donelson is a graduate of Juniata College, Hunting- ton, Pennsylvania with a B.S. degree in science. He did graduate work at Pennsylvania State University in electrical and electronic engineering.

Prior to joining Sprague Electric he worked for P. R. Mallory as a salesman in their Philadelphia office and as manager of their Washington, D. C. office. For five years he was an electronic component engineer at Westinghouse Electric Corporation, Baltimore, Maryland in their Air Arm Division (now Aerospace Division).

Mr. Donelson is married to the former Frances Leaman of Pennsylvania and they have three children.
Although we recognize that certain large systems producers may have, or be able to develop, the capability of producing integrated circuits themselves, we believe that in the long run the traditional relationship between the supplier of components, whether discrete or integrated, and the systems manufacturer will, in large part, be maintained. For, we believe the systems producer will wish to maintain control of systems design, in which he has the greater competence, and that he will look to the components maker to supply the optimum combination of discrete components and integrated circuits, the fabrication of which presents new and extremely difficult problems in which the components maker has the greater competence. Indeed, it is the broadly based components maker who has the most extensive experience in materials processing, and who has demonstrated an ability to combine such processing with a variety of complex assembly techniques to produce a consistently high quality product at low cost.

Our Company has had long experience in development and fabrication of semiconductor materials and devices, in thin-film techniques, and in microcomponents and assemblies. During 1963, both development and production capabilities in these areas were substantially expanded.

Our pilot facilities for the production of Semiconductor Integrated UNICIRCUITS® were completed at the Research Center in North Adams, and fabrication of sample quantities of such circuits was begun by our Microelectronics Engineering Department in the fall of the year. At the same time, we began installing equipment for production of semiconductor integrated circuits in our Transistor Division at Concord, New Hampshire. Production responsibility will be transferred gradually to Concord in 1964, permitting the Microelectronics Engineering Department to utilize its pilot plant for the broadening of our line of semiconductor integrated circuits.

Clean room facilities for the fabrication of Ceramic-based Thin-film Integrated Circuits were expanded during the year at North Adams, and pilot production is increasing on circuits of a type utilizing cased transistors. Development work was accelerated on thin-film circuits using uncased transistors, and increased sampling of this type will begin in 1964.

As a company, therefore, we plan to make available to our customers our extensive competence as a broadly-based components maker to assist them in selecting the optimum combinations of integrated circuitry and discrete components. Sprague Electric is in an almost unique position of being able to supply the broadest line of components and circuits essential to the production of electronic equipment of any type, in any area of application, and we look forward to the challenging opportunities presented to us in the new technologies of microelectronics.
AMERICA
FOR
INDIVIDUAL AND NATIONAL
ECONOMIC GROWTH
BUY
U. S. SAVINGS
BONDS