



Cover: "Electronic Flower," a painting by New York artist Werner Pfeiffer, symbolizes the growing application of semiconductor technology to the company's many divisions and activities. As Fairchild Camera and Instrument Corporation advances, it will be through the creative utilization—in new markets and products—of its leadership in the solid-state field, represented by the embossed integrated circuit on the cover.

## Contents

|    |   |
|----|---|
| 2  | Divisional Structure                                      |
| 4  | Three-Year Highlights                                     |
| 5  | President's Letter  |
| 7  | Comments on Operating Divisions                           |
|    | Semiconductor   |
|    | Systems Technology  |
|    | Microwave and Optoelectronics                             |
|    | Space and Defense Systems                                 |
|    | Defense Products  |
|    | Graphic Equipment   |
|    | Controls  |
|    | Industrial Products                                       |
|    | DuMont Electron Tubes                                     |
|    | Electro-Metrics   |
|    | Research and Development                                  |
| 22 | Consolidated Balance Sheet                                |
| 24 | Consolidated Statement of Income and Retained Earnings    |
| 25 | Consolidated Statement of Additional Paid-In Capital      |
|    | Consolidated Statement of Source and Application of Funds |
| 26 | Notes to Consolidated Financial Statements                |
| 27 | Opinion of Independent Accountants                        |
| 28 | Directors and Officers                                    |



## Divisional Structure of Fairchild Camera and Instrument Corporation

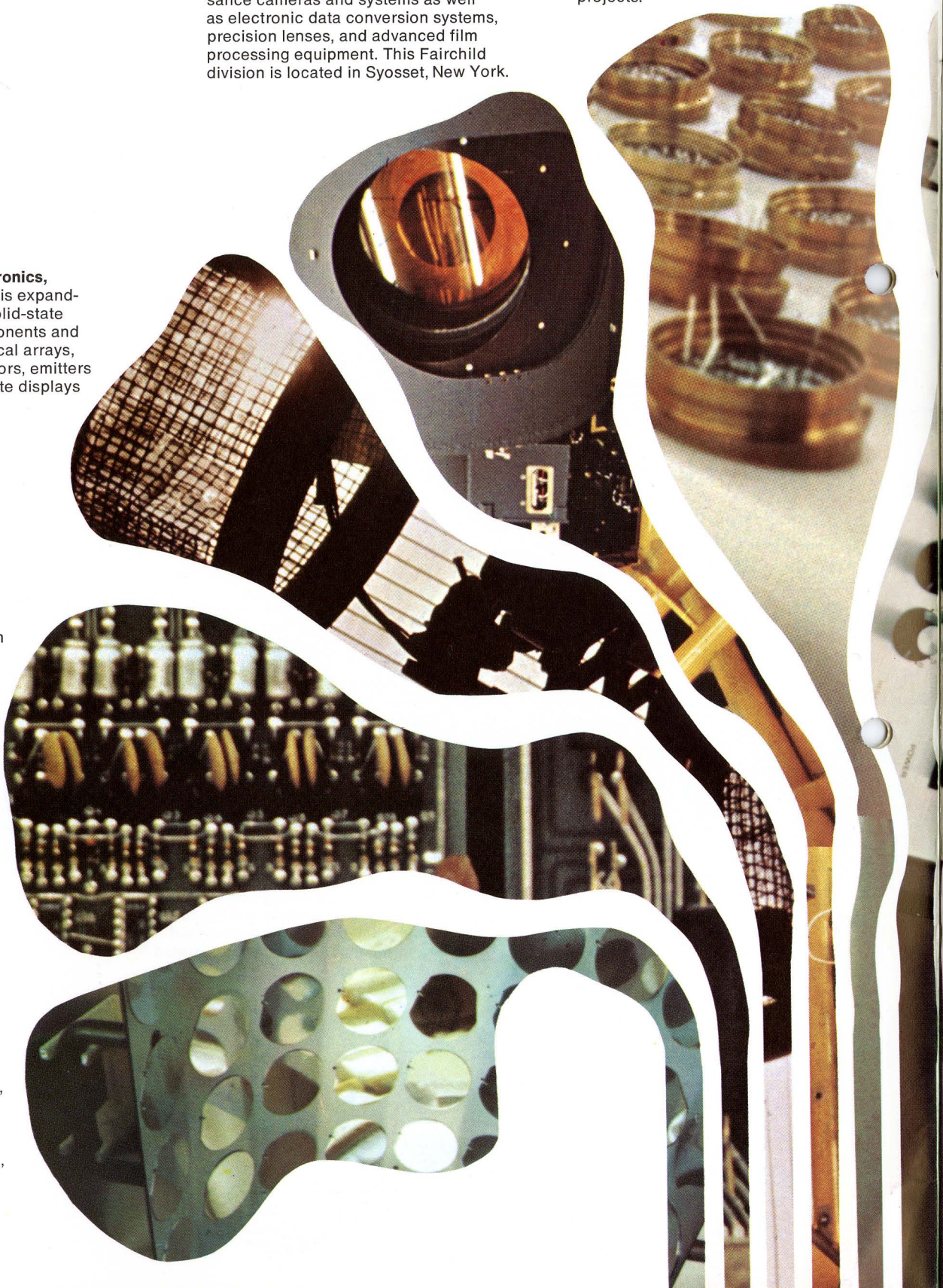
**Space and Defense Systems** manufactures precision aerial reconnaissance cameras and systems as well as electronic data conversion systems, precision lenses, and advanced film processing equipment. This Fairchild division is located in Syosset, New York.

**Defense Products**, headquartered in Copiague, New York, produces rocket, missile and artillery fuzes; timing, fuzing, safety and arming devices for various government space and defense projects.

**Microwave and Optoelectronics**, located in Mountain View, is expanding Fairchild's efforts in solid-state microwave devices, components and subsystems, complex optical arrays, optoelectronic photo sensors, emitters and devices; and solid-state displays and detectors.

**Systems Technology**, formerly known as Instrumentation, is concentrating on the development of data systems equipment—computer peripherals and semiconductor test systems—in a total systems approach for its customers. The division is headquartered in Sunnyvale, California.

Fairchild **Semiconductor**, headquartered in Mountain View, California, manufactures a wide variety of silicon Planar transistors, diodes, integrated circuits and complex arrays, including power transistors, small signal devices, LSI, MSI, CCSI, MOS, TTL, hybrids and memories.





**Graphic Equipment**, located in Plainview, New York, manufactures typesetting systems for automatic linecasting. These include a typesetting computer called Comp/Set 330-1, the teletypesetter (TTS) and phototextsetter (PTS), Scan-A-Plate and Scan-A-Color, and electronic engravers.

The **Controls** division, located in Hicksville, New York, manufactures pressure sensors and transducers, potentiometers, industrial trimmers, operational amplifiers, aircraft weight and balance systems, and industrial control systems.

The **Industrial Products** division, Plainview, New York, has a range of products including cockpit voice recorders, flight data recorders, music and announcement systems for aircraft, and Mark IV rear-screen projectors.

**DuMont Electron Tubes**, Clifton, New Jersey, is an industry leader in the design and production of display devices which include cathode ray tubes, direct-view storage tubes, photomultiplier tubes and power tubes.

**Electro-Metrics**, located in Amsterdam, New York, manufactures a line of radio frequency interference analyzers and spectrum surveillance equipment, tunable rejection filters, RF and Microwave components, and other devices.

The Company's **Research and Development** lab, located in Palo Alto, California, is responsible for innovation—making possible the improvement of existing products and creation of new ones. R & D is playing a major part in the company's interchange of technologies among all divisions.





## Three - Year Highlights

| <b>For the Year:</b>                        | <b>1969</b>          | <b>1968</b>   | <b>1967</b>   |
|---|----------------------|---------------|---------------|
| Net sales                                   | <b>\$250,659,000</b> | \$198,470,000 | \$196,952,000 |
| Income (loss) from continuing operations    | <b>985,000</b>       | (3,493,000)   | 4,622,000     |
| (Losses) from activities being discontinued | <b>—</b>             | (832,000)     | (5,091,000)   |
| Income (loss) before extraordinary items    | <b>985,000</b>       | (4,325,000)   | (469,000)     |
| Extraordinary items                         | <b>1,711,000</b>     | 4,898,000     | (7,078,000)   |
| Net income (loss)                           | <b>2,696,000</b>     | 573,000       | (7,547,000)   |
| Dividends paid                              | <b>2,188,000</b>     | 2,169,000     | 2,152,000     |
| Average number of shares outstanding        | <b>4,363,192</b>     | 4,327,578     | 4,303,147     |
| <b>At December 31:</b>                      |                      |               |               |
| Working capital                             | <b>\$ 75,545,000</b> | \$ 57,257,000 | \$ 52,359,000 |
| Shareholders' equity                        | <b>84,794,000</b>    | 83,496,000    | 84,301,000    |
| Number of employees                         | <b>23,125</b>        | 20,867        | 19,385        |
| Number of shareholders                      | <b>11,381</b>        | 13,736        | 12,985        |
| Shares outstanding                          | <b>4,376,373</b>     | 4,348,221     | 4,304,490     |
| <b>Per Share Statistics:</b>                |                      |               |               |
| Income (loss) from continuing operations    | <b>\$ .23</b>        | \$ (.81)      | \$ 1.07       |
| (Losses) from activities being discontinued | <b>—</b>             | (.19)         | (1.18)        |
| Income (loss) before extraordinary items    | <b>.23</b>           | (1.00)        | (.11)         |
| Extraordinary items                         | <b>.39</b>           | 1.13          | (1.64)        |
| Net income (loss)                           | <b>.62</b>           | .13           | (1.75)        |
| Shareholders' equity                        | <b>19.38</b>         | 19.20         | 19.58         |



1969 was a year of substantial progress and new beginnings for the Company. In every high technology firm, change is a basic fact of corporate life. At Fairchild Camera and Instrument Corporation, now entering its second half-century, the dynamics and scale of change in 1969 created a new shape which will define the Company's role in the decade of the 70's.

The year saw a decisive reversal of the lagging trend in sales and profits which had checked our growth since 1966. It also saw continued implementation of the rebuilding program launched in 1968 to vitalize the Corporation at all levels—people, products and plant—and to assure profitable future expansion.

Finally, it saw Fairchild move aggressively in the direction of a worldwide, multi-product electronics firm, geared to capitalize fully on its long-standing leadership in semiconductor technology.

Sales for the year reached the all-time high of \$250,659,000, an increase of 26 percent over the \$198,470,000 sales in 1968. A large part of the improvement was due to the performance of the Semiconductor division, whose sales rose 32 percent above the previous year, twice the growth of the U.S. semiconductor industry overall. The Defense divisions of the

Company also showed significant increases during the year.

Net income for 1969 rose to \$2,696,000, equal to 62¢ per share, compared with \$573,000 or 13¢ per share in 1968. Income before extraordinary items amounted to \$985,000, equal to 23¢ per share, compared with a loss of \$4,325,000 or \$1.00 per share in the previous year.

Extraordinary income of \$1,711,000 in 1969 was realized principally on the sale of the bench instrument and printing press product lines, exchange gain on the revaluation of the German mark, and the recovery of excess reserves established in prior years. Extraordinary income in the previous year amounted to \$4,898,000, resulting primarily from the sale of the Corporation's equity in Societa Generale Semiconduttori, S.p.A. in Italy.

The Company entered the 70's in a sound position to move forward on a vigorous program of growth. Our corporate plan is oriented toward solid-state technology—the axis of today's electronics revolution and foundation of one of the fastest-growing markets in modern business history. Carried to new levels of complexity, this technology will alter not only the character of the industry but of the society it serves.

Fairchild has been a prime innovator in this field for over a decade. The reservoir of talent from which innumerable advances have flowed—beginning with the basic Planar\* process of semiconductor manufacture—is our strongest resource today.

We are now diffusing this seed technology throughout the Company. By applying a core of semiconductor expertise to our other product lines, particularly systems and equipment hardware, we expect in the future to penetrate new markets and to gain significant competitive advantage in the industry.

In meeting these objectives, we have marshalled the total competence of all our 10 divisions. One division,

Fairchild Semiconductor—which represents over 60 percent of company sales and almost four-fifths of worldwide employment—has the critical responsibility.

Over a year ago Semiconductor faced an array of operating problems—related to inventory, productivity, yield and cost—which demanded positive action for recovery. The steps taken since then have produced impressive results. By year's end, the division found itself in the strongest position that it has been in for several years.

Fundamental to our strategy has been a coupling of our technology lead with the most efficient and productive factory in existence—a goal on which viable leadership of the industry absolutely depends.

In the fall of 1968, we initiated a massive capital improvement program to update and enlarge our domestic semiconductor factories for high-volume, low-cost production. Our new multi-million-dollar wafer fabrication facility typifies the result. It will significantly increase integrated circuit yields in 1970. Newly-completed mechanized transistor lines, soon to be extended to ICs, utilize equipment and production philosophies which are the most advanced in our industry.

During 1969, a new semiconductor assembly plant was dedicated on the Navajo Indian Reservation in Shiprock, New Mexico. We recently announced plans for the development of Sherman Fairchild Park in San Diego, Calif., a multi-plant complex to be built on 68 acres, which will serve the Semiconductor and other divisions of the Company.

On a global scale, the Semiconductor division greatly strengthened its management control system and increased inventories substantially, both to meet customer commitments and to achieve more sensibly scheduled production lines around the world.

Operations in the Far East were expanded during the year, highlighted by the completion of a new plant in Singapore for integrated circuit assembly, and enlargement of our

\*Planar is a patented process of Fairchild Camera and Instrument Corporation



facilities in Hong Kong and Seoul, South Korea.

In addition, the government of the Ryukyu Islands in late 1969 granted Fairchild a license to manufacture in Okinawa. This operation, underway for several months, will produce and ship semiconductor and possible other products directly to the Far East, as well as to Europe.

To exploit the semiconductor market in Europe—currently growing at more than twice the U.S. rate—we established a full-scale marketing staff abroad with offices in London, Paris, Stockholm, Milan and Wiesbaden, West Germany. Headquarters for the European activity will be the new Fairchild Semiconductor plant in Wiesbaden, now under construction. In November, we signed a technical exchange agreement with N. V. Philips Gloeilampenfabrieken of Holland covering semiconductor technology.

Fairchild continued to demonstrate technical leadership in the industry's prime growth segments—integrated circuits, medium scale integration (MSI) and large scale integration (LSI). We have also become a major producer of IC devices for the computer memory market, which has high potential for the 70's, and have a large effort underway in the metal oxide silicon (MOS) field. Recently we began volume production of transistor-transistor logic (TTL) devices, largest and fastest-growing of the major bi-polar integrated circuit families.

To build a dynamic organization entails the commitment of large sums of money, far beyond the normal requirements of our industry. In 1970 we are continuing to invest heavily in new plant and equipment, vigorous product development and the expansion of our sales base worldwide—because this holds the key to profitable dominance in our industry.

To secure funds for this program, we placed \$30,000,000 in convertible subordinated notes in late 1969, bearing an interest rate of 5¾ percent. These notes, which mature in 1989, are convertible into common

stock of the Corporation at \$84 per share.

We recognize also the need to enter product areas other than semiconductor devices, and will continue to supply vital capital resources to our operating divisions to support their growth. Heavy expenditures will be made in 1970, for example, in the Microwave and Optoelectronics and Systems Technology divisions, both of which are carrying forward advanced programs of solid-state product development. In 1969, we began construction of an 80,000 square foot plant in Palo Alto, Calif., to house the expanding Microwave and Optoelectronics activity.

Management took steps in 1969 to improve the profitability of our other divisions through reorganization, tighter cost control and new performance measurement procedures.

Space and Defense, a leader in the aerial reconnaissance field, was restructured internally and its ordnance devices section established as the Defense Products division. Graphic Equipment enlarged facilities and introduced a new line of computerized composition systems. The DuMont Electron Tubes, Industrial Products and Controls divisions all maintained satisfactory profit levels and a broadening of markets during the year.

One of our top 1969 priorities was the infusion of fresh professional management throughout the organization. We have succeeded in putting together a strong team, headed by seasoned and goal-disciplined executives at the corporate level.

Elected Group Vice President and Director of the Corporation was Alan J. Grant, former president of Lockheed Electronics Company. Other officers elected by the board were Dr. James M. Early, world-recognized semiconductor technologist from Bell Telephone Laboratories, as Vice President and Director of Research; Dr. M. M. Atalla, responsible for the basic patent on the MOS transistor, as Vice President and General Manager, Microwave and Optoelectronics division; Warren J. Bowles, Vice

President—Industrial Relations; Thomas D. Hinkelman, Vice President—Planning; Frederick M. Hoar, Vice President—Communications, and Robert L. Keith, Treasurer.

F. Joseph Van Poppelen, formerly President of ITT Semiconductor and Vice President—Marketing for Fairchild, became head of our Semiconductor division in July. Additional general manager appointments were Louis Pighi, Space and Defense Systems; Richard Robinson, Graphic Equipment; Robert Draghi, Defense Products; and Robert Schreiner, Systems Technology.

As we move into the new decade, I am convinced the cumulative talents and resources of Fairchild are poised to make a profound impact on our industry's future. The growth momentum we have attained, coupled with the enthusiasm and energy of our people around the world, give me full confidence that 1970 will be a year of meaningful improvement in both sales and earnings for the Corporation.



C. Lester Hogan  
President and  
Chief Executive Officer





Massive capital expenditures to maximize **Semiconductor's**

potential. Result: An expanded line of products—discretes and ICs, memories, MOS, LSI, MSI, TTL—with production capacity to turn them into building blocks of the corporation.

The Semiconductor division, key-stone of Fairchild's plans for the future, ended 1969 in its strongest operating and technological posture in several years.

In the fall of 1968 this division lagged seriously in volume production capability, market coverage and service to its customers.

Today, the changes made in the Semiconductor division have transformed its operation significantly. The division has enlarged and updated its facilities worldwide, introduced mechanized, high-yield production techniques, and raised inventories to a level commensurate with market demand. It has translated its long-standing technological leadership into reliable products, deliverable to the customer in high volume.

The marketing organization was completely restructured during the year to encompass worldwide operations and expand the division's customer base. The domestic sales force was increased by 25 percent, and a complete European marketing and sales organization was established.

Shipment rates of integrated circuits and discrete devices increased significantly during 1969. This progress was due in part to a capital improvement and expansion program initiated in late 1968 and continued throughout 1969. It involved the building of new facilities and equipment for automated, high volume/low cost production, as well as aggressive penetration of new markets. Investment to date in this program has been over \$20 million.

The plant building and expansion program in 1969 included plans for a new 120,000 square foot facility in Wiesbaden, West Germany, whose initial section will be operative in late 1970; a new 40,000 square foot facility in Singapore, which opened in November; a 30,000 square foot increase in the Hong Kong facility; and a doubling of the size of the division's installation in Seoul, Korea.

Domestically, Semiconductor moved into a custom-designed 33,000 square foot building leased from the Navajo Tribal Council in Shiprock, New Mexico. The facility employs over 1000 Navajos, making Fairchild the country's largest private employer of American Indians.

At Mountain View major construction of a new, advanced wafer fabrication area was completed, which will greatly increase integrated circuit yields during 1970. Production capability has also been enhanced by completion of fully mechanized lines. Like the division's computer-aided design capability, these lines should have a far-reaching impact on the character of semiconductor fabrication and assembly.

Management installed new procedures in cost control, overhauled its reporting methods and initiated a system of self-measurement against written, time-planned goals and objectives. It is expected that these changes will provide the division with timely visibility into its rapidly expanding operations during the 70's.

In the last half of 1969, the rate of new product introduction—which had been necessarily slowed during the period of major divisional reorganization—began to accelerate. In



Silicon wafers emerge from a diffusion furnace ready for additional processing on their way to becoming solid-state semiconductor devices.





addition, the division's expanded production capacity and cost-saving modernization enabled it to aggressively enter the second source marketplace and compete effectively in high-volume price and delivery situations.

Fairchild products moved into new sectors of the market in 1969, especially in the computer/instrumentation field. Manufacturers of both large and small systems continued to design Fairchild logic into their machines. The division's position in this field also rose with further penetration of Semiconductor devices into the explosively growing market for computer peripheral equipment.

One of the most significant achievements in 1969 was Fairchild's development of the first all semiconductor memory system for a major computer. The system, based on a Fairchild-developed 256-bit bi-polar memory element, was produced for the ILLIAC IV Computer being built by Burroughs Corporation for the University of Illinois. The success of this development places Fairchild in a strong position for entry into the semiconductor memory market, predicted to be the fastest-growing segment of the industry in the 70's.

Medium scale integration (MSI), an advanced Fairchild technique, made new inroads in mini-computers, desk-top calculators, and digital instrumentation systems. Many of these complex devices, as well as large scale integration (LSI) and memory units, were designed in Fairchild's multi-million dollar Computer Aided Design (CAD) facility. In a procedure that is believed ahead of all competitors, Fairchild engineers are able to design a new product completely, test it for electrical soundness, and make pre-production masks in a fraction of the time once required for this intricate process.

Fairchild also developed a wide range of "space-age" devices for the Apollo program. Discrete devices and ICs were designed into the guidance equipment of the lunar module, the main capsule computer, the instrumentation unit that regulated the rocket system, and various support systems.

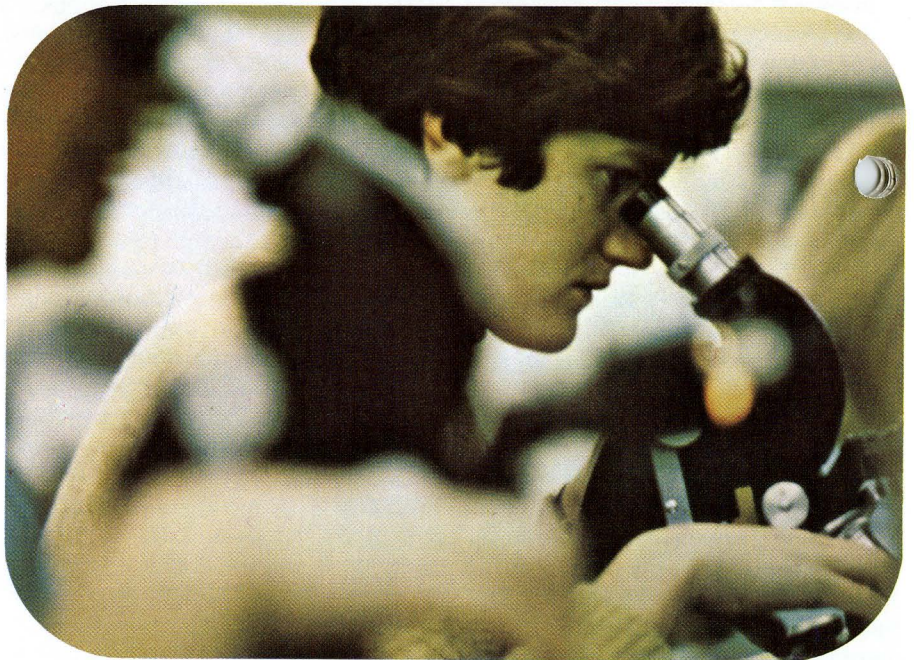
Semiconductor products also met major human needs during the year, through incorporation into heart pacers and other medical instruments. Entertainment manufacturers utilized Fairchild devices both for current and newly-designed products. In radios, high-fidelity systems, televisions, and tape recorders, all kinds of Fairchild linear devices were used. In the new Boeing 747 miles of cable and many pounds of valuable weight were saved by using a Fairchild-designed multiplexing system for its in-flight entertainment network.

Although new IC product introductions highlighted the year, the dis-

crete market was firmly re-established during 1969 and a general upgrading of discrete production facilities took place. The average shipping rate of silicon metal can units doubled during the year, and Fairchild became a leader in the production of silicon diode assemblies. Diode production averaged over one million per day.

By December, the capital expansion program had begun to pay off. Inventories had reached satisfactory levels, and a management control system was taking effect to give Semiconductor managers clear worldwide visibility for planning and product scheduling.

Lastly, the division had dramatically increased its market penetration—particularly in Europe and the Far East—to take advantage of a broad range of growing markets. At year-end, Fairchild Semiconductor looked ahead to sustained and vigorous growth in 1970 and the new decade.

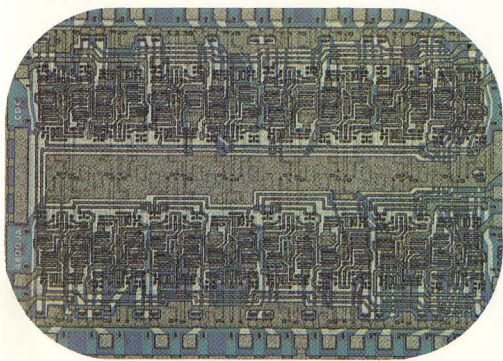
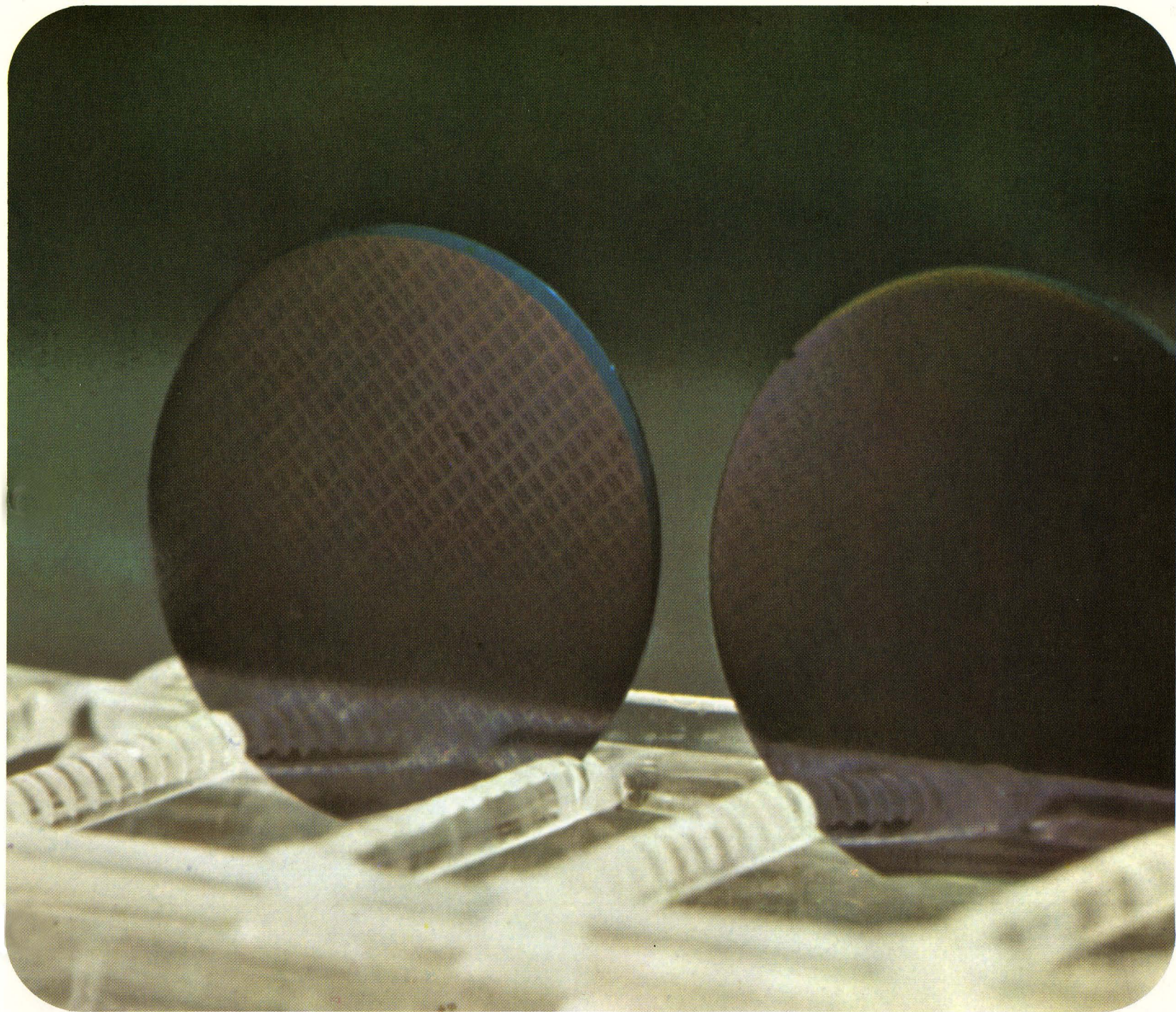


above: Fairchild Semiconductor's manufacturing capability in the Far East enables the division to meet the fast-growing demands of these electronic markets.

right: Optical inspection, performed many times during the production of semiconductor devices, assures built-in quality and reliability.

far right: A single completed silicon wafer contains hundreds of tiny semiconductor chips no larger than the head of a pin. Under microscope, this 4800 chip, a two-layer metal LSI custom-array, reveals the remarkable complexity of its design.







## Board of Directors

**Sherman M. Fairchild** Founder; Chairman of the Board of the Corporation and Chairman of the Board of Fairchild Hiller Corporation

**C. Lester Hogan** President and Chief Executive Officer

**Walter Burke** Financial Advisor to Sherman M. Fairchild

**William C. Franklin** Consultant

**Roswell L. Gilpatric** Lawyer; Member of the firm of Cravath, Swaine & Moore

**Alan J. Grant** Group Vice President

**Louis F. Polk, Jr.** Chairman, Executive Committee, Leisure Dynamics Inc.

**William A. Stenson** Executive Vice President, the Bank of New York

**J. Bradford Wharton, Jr.** Management Consultant; President of the Wealdon Company, Investments and Farming

## Officers

**C. Lester Hogan** President and Chief Executive Officer

**Alan J. Grant** Group Vice President—Equipment Divisions

**George T. Piifer** Vice President—Finance

**Nelson Stone** Vice President, General Counsel and Secretary

**Warren J. Bowles** Vice President—Industrial Relations

**Frederick M. Hoar** Vice President—Communications

**Thomas D. Hinkelman** Vice President—Planning

**James M. Early** Vice President and Director of Research

**Leo E. Dwork** Vice President and Chief Technology Officer

**F. Joseph Van Poppelen Jr.** Vice President and General Manager, Semiconductor

**M. M. Atalla** Vice President and General Manager, Microwave & Optoelectronics

**Raymond G. Hennessey** Vice President and General Manager, Industrial Products

**Frederick Walzer** Vice President and General Manager, DuMont Electron Tubes

**Robert L. Keith** Treasurer

**John J. Giblin** Assistant Controller

**Philip Haas Jr.** Assistant Secretary & Tax Director

**Richard Franklin** Assistant Secretary (Attesting)

**Stuart Josefsberg** Assistant Secretary (Attesting)

**General Counsel** Cravath, Swaine & Moore, New York

**Independent Certified Public Accountants** Price Waterhouse & Co.

**Transfer Agent** The Bank of New York

**Registrar** First National City Bank of New York