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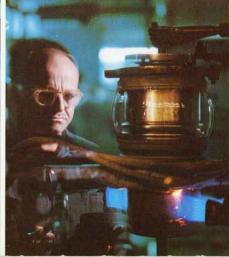






ANNUAL REPORT 1965







#### ON OUR FRONT COVER

The four-color illustrations on the front cover, are representative of some of the major 1965 product developments of a few Fairchild divisions. Color-corrected separations used in the reproduction of these photographs were produced on the new Fairchild Scan-A-Color II designed and built by the Graphic Equipment Division.

At the extreme right is shown final inspection of Space and Defense Systems' KA-56 Panoramic Aerial Cameras produced for the U. S. Armed Forces.

**Top Left** — Instrumentation Division's newest digital voltmeters, switching time testers, curve tracers and other small test equipment undergoing check-out at the West Coast facility.

**Top Right** — Scanning head and control panel of Graphic Equipment Division's Scan-A-Color II electronic color correction and separation device.

Lower Left — One of Precision Metal Product Division's three high-velocity forming machines (CEFF) now in operation at the El Cajon, California facility.

Lower Right — Typical of the highly specialized operations of the Du Mont Electron Tubes Division is the final evacuation of a new type of power tube.



# ANNUAL REPORT FOR THE YEAR ENDED DECEMBER 31, 1965

CONTENTS	Page
Five Year Highlights	4
Chairman's Letter	5
Reports on Operating Divisions	6
Cable	6
Controls	6
Davidson	6
Du Mont Electron Tubes	8
Electro-Metrics Corporation	14
Graphic Equipment	9
Industrial Products	10
Instrumentation	13
Precision Metal Products	14
Semiconductor	15
Space and Defense Systems	17
Winston Research Corporation	19
Glossary	20
Statement of Changes in Working Capital	21
Consolidated Balance Sheet	22-23
Statement of Consolidated Earnings	24
Statements of Consolidated Addition Paid-in Capital and Retained Earnings	71-70-7
Notes to Consolidated Financial Statements	26-27
Accountants' Report	28



# EXECUTIVE OFFICES: 300 ROBBINS LANE, SYOSSET, L.I., NEW YORK 11791

#### DIVISIONS

CABLE	Junge Blvd. and Maiden Lane, Joplin, Mo. 64801
CONTROLS	225 Park Ave., Hicksville, L. I., N. Y. 11802
DAVIDSON	
DU MONT ELECTRON TUBES	750 Bloomfield Ave., Clifton, N. J. 07015
GRAPHIC EQUIPMENT	221 Fairchild Ave., Plainview, L. I., N. Y. 11803
INDUSTRIAL PRODUCTS	221 Fairchild Ave., Plainview, L. I., N. Y. 11803
	750 Bloomfield Ave., Clifton, N. J. 07015
	1700 North Johnson Ave., El Cajon, Calif. 92022
	313 Fairchild Drive, Mountain View, Calif. 94042
SPACE AND DEFENSE SYSTEMS	300 Robbins Lane, Syosset, L. I., N. Y. 11791

#### SUBSIDIARIES

ELECTRO-METRICS CORPORATION	88 Church St., Amsterdam, N. Y. 12011
WINSTON RESEARCH CORPORATION	6711 S. Sepulveda Blvd., Los Angeles, Calif. 90045

#### BOARD OF DIRECTORS

#### OFFICERS

## John Carter

Chairman of the Board and Chief Executive Officer of Fairchild Camera and Instrument Corporation

#### Sherman M. Fairchild

Founder; Chairman of the Executive Committee of Fairchild Camera and Instrument Corporation

#### Richard Hodgson

President of Fairchild Camera and Instrument Corporation

#### E. S. Hill

Vice President and Comptroller, Fairchild Camera and Instrument Corporation

#### Walter Burke

President of the Fairchild Foundation, Inc.

#### Charles H. Colvin

**Engineering Consultant** 

#### William C. Franklin

President of Royal Crown Bottling Co.

Joseph B. Wharton, Jr.

President of the Wealden Company

JOHN CARTER Chairman of the Board and Chief Executive Officer

RICHARD HODGSON President

E. S. HILL Vice President and Comptroller

R. BRUCE Vice President

E. O. COLE Vice President

R. N. NOYCE Vice President

G. J. WADE Secretary and Treasurer

S. I. ROSS Assistant Comptroller

PHILIP HAAS, JR. Assistant Secretary

NELSON STONE Assistant Secretary

GENERAL COUNSEL Cravath, Swaine & Moore, New York

INDEPENDENT CERTIFIED

PUBLIC ACCOUNTANTS Peat, Marwick, Mitchell & Co.

TRANSFER AGENT ..... The Bank of New York

REGISTRAR First National City Bank of New York

# FIVE YEAR HIGHLIGHTS (Comparative Figures for the Five Years Ending December 31, 1965)

FOR THE YEAR	1965	1964	1963	1962	1961
Net Sales	181,115,000	\$138,700,000	\$116,404,000	\$101,538,000	\$92,254,000
Net Earnings	8,456,000	1,927,000	1,931,000	4,335,000	3,819,000
Special Credits					
Prior years unamortized investment credits	-	253,000	_		
Net gain, after taxes, on disposition of plants		266,000	_	- /	_
Federal income tax benefits resulting from losses incurred by Allen B. Du Mont Laboratories, Inc. prior to merger		128,000	737,000	1,655,000	1,433,000
Net Earnings and Special Credits	8,456,000	2,574,000	2,668,000	5,990,000	5,252,000
Dividends paid	1,287,572	1,278,329	1,275,328	1,266,791	1,249,136
Payroll	70,000,000	58,520,000	52,500,000	45,441,000	36,806,000
		2212221222	2.54,732,276,235	1343334933	8 .00
AT DECEMBER 31					
Working Capital	49,356,000	45,209,000	26,693,000	20,704,000	17,754,000
Shareholders' Equity	48,811,000	40,788,000	39,484,000	38,081,000	32,877,000
Number of Employees	11,545	8,869	8,107	7,369	5,493
Number of Stockholders	9,650	11,968	10,857	11,606	10,997
Shares Outstanding (Two-for-one split in 1961)	2,576,372	2,556,657	2,550,657	2,535,083	2,498,272
Backlog	100,011,000	78,903,000	50,255,000	40,443,000	29,357,000
PER SHARE STATISTICS					
(Based on 2,576,372 shares outstanding at December 31, 1965):					
Net Earnings	3.28	.75	.75	1.68	1.48
Special Credits	的世。广 <b>皇</b> 帝	.25	.29	.64	.56
Net Earnings and Special Credits	3.28	1.00	1.04	2.32	2.05
Working Capital	19.16	17.55	10.36	8.04	6.89
Shareholders' Equity	18.95	15.83	15.33	14.78	12.76
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#### TO OUR SHAREOWNERS:

The year 1965 was one in which your Company achieved the highest sales and earnings in its history.

Company sponsored research and development continued at a high level, approximating \$11,500,000 for the 12-month period.

The increasing demand for the products of all Fairchild divisions and subsidiaries has necessitated an accelerated plant expansion program which is commented upon in further detail in the divisional reports.

On August 2, 1965 our Aerial Surveys Division was acquired by Aero Service, a wholly owned subsidiary of Litton Industries. Shareholders were informed at the Annual Meeting on May 7, 1965 that negotiations were underway for the sale of the division. While the Aerial Surveys Division played a prominent role in operations during the early days of Fairchild Camera and Instrument Corporation, in more recent years the aerial surveying business has become less compatible with the growth of the Corporation in the fields of advanced electronics, instrumentation, solid state devices and the graphic arts.

A new Instrumentation Division was formed in May, 1965, combining the electronic equipment capabilities of both the Semiconductor and Du Mont Laboratories Divisions and headquartered in Clifton, N. J. It is anticipated that the close liaison between solid state research, development and application engineering and the Instrumentation Division will result in new and proprietary products which will find ready acceptance in an expanding market.

The Du Mont Electron Tube Division is now a separate operation.

A 50-cent cash dividend was paid on the Corporation's outstanding shares, representing the 28th consecutive year in which cash dividends have been paid.

Your officers and directors noted with sadness the passing, on November 15, of our former associate Dr. Allen B. Du Mont. Dr. Du Mont was recognized as the father of modern television and in addition was a fine gentleman and a great American pioneer.

We entered 1966 with an all-time record backlog of \$100,011,000 as compared to \$78,903,000 at year-end, 1964. Our sales trend continues upward and we remain optimistic concerning the future.

Sincerely,

CHAIRMAN OF THE BOARD AND CHIEF EXECUTIVE OFFICER

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have been successfully completed and technical data obtained from such projects and Fairchild's own research has been systematically stored for immediate recall and use when needed.

Presently there are three CEFF machines in operation in the Division at El Cajon, California. One is the HE-10, with a maximum capacity of 72,500 foot pounds, and the other two are HE-55's, with a capacity of 400,000 foot pounds each.

CEFF machines will be marketed in the United States directly to customers by Fairchild on an outright sale or by lease arrangement. Foreign marketing will be handled through a licensing agreement similar to one already in effect in Europe with Weingarten, A.G.

The Division's participation in Space Age industry consists of the design, development and manufacture of custom precision units, components and systems of flight "hardware" and ground support equipment.

Precision Metal Products is currently producing or has recently manufactured components for the T-38, T-39, B-70 and DC-8 aircraft; the Atlas, Titan, Centaur, Agena, Shillelagh, Minuteman, Mercury, Saturn 1A, Saturn IV, Nerva, Apollo and Terrier programs; the MA-3 and F-1 engines as well as other related items for subcontractors which are not directly identified with these projects.

Forthcoming funded programs indicate an additional amount of work to be made available in the near future. The Division is already directly involved in the preliminary planning for the Manned Orbital Laboratory (MOL), the C-5 transport (C-5T) and the Supersonic Transport (SST).

#### SEMICONDUCTOR

Manufacturing facilities, product lines, management strength and net sales all grew during 1965 and the Semiconductor Division practice of creating new markets as well as new products again proved timely and profitable.

Product development is well illustrated by the following example of microcircuit activity during the year. Electrical performance of integrated circuits designed

for computer manufacturers was materially improved by the complementary-transistor logic configuration, called "CT<sub>\(\mu\L\)</sub>." This design allows much faster operating speeds in computer circuits without raising the cost of device fabrication significantly. Orders for these new products. placed in unit quantities of half a million and more devices at a time, were a major factor in growth of sales last year. The CT<sub>\(\mu\)</sub>L product line will continue to grow in 1966 and has a potential far beyond that period.

Package development, another example of the year's progress, was paced by the new ceramic dual in-line def per sign, which gave industrial users for the first time a product that could be handled by automatic assembly machinery and which was compatible with the lowestcost finishing methods such as dip and flow soldering. With this new package, users could revert back to low-cost printed circuit boards and machine-drilled layout techniques. The package has been adopted as an all-industry standard and the company is striving to meet exceedingly heavy shipping demands created by strong, high-quantity sales activity.

Development of new facilities and expansion of existing plants is a constant subject of attention by Division management. Experience has demonstrated that each major product development creates new demands on production facilities. Meeting these requirements in 1965 resulted in the following major steps:

- 1. The assembly plant in South Portland, Maine was re-classified as a full fabrication operation, and ground was broken for an addition which will triple the available space by the time this/ report is published.
- 2. An entirely new assembly operation was initiated in Shiprock, New Mexico, and Fairchild Semiconductor became the largest non-governmental employer of American Indians in the United States. More than 300 people of the Navajo Tribe are presently employed in the transistor assembly facility at Shiprock and by year end the employment potential will be 800 persons.
- 3. Hong Kong operations were dramatically in-

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Join

creased as the company moved into a new multistory building, to be staffed by more than 3,000 employees. This assembly facility turns out epoxy-packaged transistors and integrated circuits, and does assembly work on memory products such as core planes.

4. Facilities in Australia were expanded by 20,000 square feet in South Yarra, Victoria, as Fairchild became the only Australian semiconductor concern selling products both for domestic use and

for the world export market.

5. Expansions of existing facilities at Mountain View and San Rafael, California, utilized the last remaining portions of building space at those fully-developed locations.

6. Research and Development laboratories announced a near-doubling of space in Palo Alto, California, and initiated an aggressive search for qualified technical personnel.

7. The Division's European affiliate, SGS-Fairchild, announced plans for new buildings in a number of countries as their share of the European semiconductor market continued to rise.

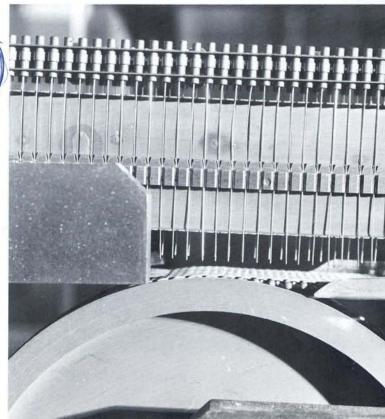
Extensive studies carried out during the year indicated that the industry has matured to the point where an accelerated effort in the direction of factory mechanization is now economically feasible. With this in mind, the Division is taking steps to organize many aspects of material flow and general plant layout so that new mechanized equipment can be efficiently employed as it becomes available. This implementation of mechanized and automated techniques will be greatly extended in the coming year.

While drawing upon the huge market potential of the semiconductor industry, the Division has also begun to explore other component fields. Chief among these steps was the establishment of a memory products department with its own development, manufacturing and sales force. This department will enable the company to service a greater share of the electronic computer

Semiconductor's transistor assembly operation at Division's facility on the Navajo Indian Reservation at Shiprock, New Mexico. Employees are members of the Navajo Tribe.

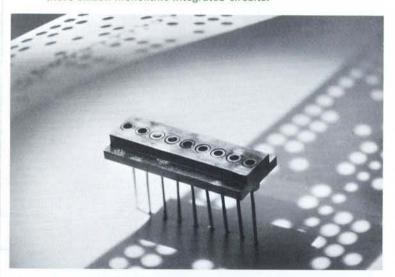
Lower photo shows automatic final-sealing machinery at the Semiconductor Division's Diode facility. This is illustrative of continued efforts to achieve a high degree of mechanization in factory processes resulting in significant process cost reductions.





Photodiode Array of Fairchild Semiconductor FPM-200 planar passivated photodiodes illustrates polished flat windows which can be placed in physical contact with a moving paper tape. This unique design feature completely eliminates cross-talk in high speed transport systems.

Final pre-seal inspection of metal-encased integrated circuit products at Semiconductor Division's new facility in South Portland, Maine (lower photo). This facility was recently tripled in size to accommodate rising sales volume of these silicon monolithic integrated circuits.





market through the sale of ferrite memory cores and associated electronic subsystems.

The microwave products department, by combining high performance silicon microwave transistors with proprietary techniques for generating signals, is exploiting a swiftly-growing market in point-to-point communications, telecommunications and defense electronics.

The planar licensing program for the manufacture of silicon semiconductor devices was continued during 1965 with the execution of a non-exclusive patent crosslicensing agreement with International Business Machines. This arrangement gives each company the right to use each others patented processes and designs and gives IBM the right to utilize the planar process. In addition to cross-licensing, the agreement provides for a fixed annual payment to Fairchild by IBM for use of the planar patents. Six licensing agreements have now been made by Fairchild with other major producers of silicon devices and several others are in the process of negotiation. As pointed out last year, this program is providing an increasingly important area of license income to the Corporation.

Through the steps outlined, plus a concentrated program of process cost reduction and expansion of overall market efforts, the Division maintained its leadership position in 1965.

## SPACE AND DEFENSE SYSTEMS

The accelerated research, development and production activities of the Space and Defense Systems Division, evident in 1964, further increased in scope and volume during the past year.

Major production awards for a variety of panoramic cameras of Division design were received for Air Force, Army and Navy applications indicating broad acceptance of these ultra wide-angle reconnaissance and surveillance systems. The need for rapid access to intelligence data under tactical conditions was manifested by growing demand for airborne and ground-based film handling equipment using the Division's "PoroMat" presaturated processing web. To meet these requirements, manufac-

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#### 22

	1965	1964
CURRENT ASSETS:		
Cash	\$ 5,229,403	\$ 4,609,600
Accounts and notes receivable, including \$2,705,125 in 1965 and \$3,793,730 in 1964 of instalment payment contracts due after one year, less provision for allowances and doubtful accounts — 1965, \$2,969,725; 1964, \$1,603,174	42,162,718	31,525,562
Inventories, at the lower of cost (principally first-in, first-out) or estimated realizable market:		
U. S. Government contracts and other work in process, less progress payments — 1965, \$3,732,599; 1964, \$3,660,580	15,737,714	15,819,984
Raw materials and parts	9,307,499	9,419,789
Finished goods	8,812,036	8,592,669
	33,857,249	33,832,442
Prepaid expenses	995,569	699,99
Total current assets	82,244,939	70,667,605
INVESTMENTS IN AND ADVANCES TO NON-CONSOLIDATED FOREIGN SUBSIDIARIES AND AN AFFILIATED COMPANY, AT COST (note 1)	3,788,253	2,507,009
AN AFFILIATED COMPANY, AT COST (note 1)  PROPERTY, PLANT AND EQUIPMENT, AT COST:	· ·	
AN AFFILIATED COMPANY, AT COST (note 1)  PROPERTY, PLANT AND EQUIPMENT, AT COST:  Land	614,788	332,855
AN AFFILIATED COMPANY, AT COST (note 1)  PROPERTY, PLANT AND EQUIPMENT, AT COST:  Land  Buildings	614,788 9,025,478	332,855 8,504,972
AN AFFILIATED COMPANY, AT COST (note 1)  PROPERTY, PLANT AND EQUIPMENT, AT COST:  Land  Buildings  Rental equipment	614,788 9,025,478 2,655,119	332,855 8,504,972 3,135,790
AN AFFILIATED COMPANY, AT COST (note 1)  PROPERTY, PLANT AND EQUIPMENT, AT COST:  Land  Buildings	614,788 9,025,478 2,655,119 32,118,499	332,855 8,504,972 3,135,790 30,292,992
AN AFFILIATED COMPANY, AT COST (note 1)  PROPERTY, PLANT AND EQUIPMENT, AT COST:  Land  Buildings  Rental equipment  Machinery, furniture and fixtures and leasehold improvements	614,788 9,025,478 2,655,119	332,855 8,504,972 3,135,790 30,292,992 42,266,609
AN AFFILIATED COMPANY, AT COST (note 1)  PROPERTY, PLANT AND EQUIPMENT, AT COST:  Land  Buildings  Rental equipment	614,788 9,025,478 2,655,119 32,118,499 44,413,884	332,855 8,504,972 3,135,790 30,292,992 42,266,609 19,110,643
AN AFFILIATED COMPANY, AT COST (note 1)  PROPERTY, PLANT AND EQUIPMENT, AT COST:  Land  Buildings  Rental equipment  Machinery, furniture and fixtures and leasehold improvements	614,788 9,025,478 2,655,119 32,118,499 44,413,884 19,619,507	332,855 8,504,972 3,135,790 30,292,992 42,266,609 19,110,643
AN AFFILIATED COMPANY, AT COST (note 1)  PROPERTY, PLANT AND EQUIPMENT, AT COST:  Land  Buildings  Rental equipment  Machinery, furniture and fixtures and leasehold improvements  Less accumulated depreciation and amortization	614,788 9,025,478 2,655,119 32,118,499 44,413,884 19,619,507	332,855 8,504,972 3,135,790
AN AFFILIATED COMPANY, AT COST (note 1)  PROPERTY, PLANT AND EQUIPMENT, AT COST:  Land  Buildings  Rental equipment  Machinery, furniture and fixtures and leasehold improvements	614,788 9,025,478 2,655,119 32,118,499 44,413,884 19,619,507 24,794,377	332,855 8,504,972 3,135,790 30,292,992 42,266,609 19,110,643 23,155,966

See accompanying notes to consolidated financial statements.

23

# LIABILITIES AND STOCKHOLDERS' EQUITY

	1965	1964
CURRENT LIABILITIES:		
Notes payable to banks — unsecured (note 2)	\$ 4,000,000	\$ 6,000,000
Current instalment of unsecured term loan payable (note 2)	1,250,000	1,250,000
Current instalments of mortgages payable	107,506	116,464
Accounts payable and accrued liabilities	19,017,301	14,935,776
Provision for Federal and other taxes on income (note 3)	8,513,978	3,156,531
Total current liabilities	32,888,785	25,458,771
	11 77 7 74	
LONG-TERM DEBT:		
Note payable to insurance company (note 2)	23,750,000	23,750,000
Unsecured term loan, less current instalment (note 2)	3,750,000	5,000,000
43/4% and 5% mortgages payable, less current instalments	788,077	968,709
	28,288,077	29,718,709
		Taxable (A
DEFERRED FEDERAL TAXES ON INCOME (note 3)	897,000	467,000
STOCKHOLDERS' EQUITY:		
Common Stock, \$1 par value (note 4):		
Authorized, 4,000,000 shares.		
Issued, 2,576,372 shares in 1965 and 2,556,657 shares in 1964	2,576,372	2,556,657
Additional paid-in capital	18,165,870	17,330,492
Retained earnings (note 2)	28,068,818	20,900,554
Total stockholders' equity	48,811,060	40,787,703
CONTINGENCIES AND COMMITMENTS (notes 5 and 6).		
	\$110,884,922	\$96,432,183

## ON OUR BACK COVER

All fabrication operations having been completed, thousands of integrated circuit "dice" await final assembly operations.

These units, which are actually less than a tenth of an inch square, can duplicate the same electronic functions formerly carried out by four or five large vacuum tubes and dozens of capacitors and resistors.

