



MOTOROLA INC.

**ANNUAL
REPORT
1959**

*More for Mankind...
through Electronics*

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Transfer Agents

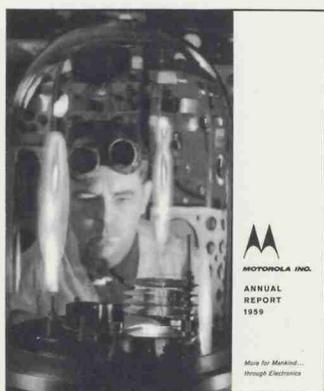
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About the Cover

Pictured on the cover is an electronics engineer observing the thin film evaporation process in a laboratory at Motorola's Solid State Electronics Department in Phoenix, Arizona. The growing complexity of electronic devices requires higher standards of reliability and a new approach to micro-miniaturization. The thin film art, which the cover photograph depicts, is still in the developmental stage. It promises complete electronic functional circuits less than the thickness of this page, and a solution to the problems of size, weight, power consumption, and reliability. For additional information concerning solid state electronics see page 8 of this report.

The annual meeting will be held on Monday, May 2, 1960. A notice of the meeting, together with a form of proxy and a proxy statement, will be mailed to shareholders on or about April 6, 1960, at which time proxies will be solicited by the management.

Directors and Officers of Motorola



Robert W. Galvin
Director, President



Daniel E. Noble
Director, Executive Vice President, Communications, Semiconductor and Military Electronics Divisions



Edward R. Taylor
Director, Executive Vice President, Consumer Products Division



Elmer H. Wavering
Director, Executive Vice President, Automotive Products Division



Matthew J. Hickey, Jr.
Director



Frank J. O'Brien
Director, Vice President, Purchasing



Arthur L. Reese
Vice President, Communications Division



Walter B. Scott
Director, Vice President, Consumer and Automotive Production



Edwin P. Vanderwicken
Director, Vice President for Finance, Treasurer and Secretary



Alex Arnold
Controller



Joseph A. Chambers
Vice President, Western Area Military Electronics Center



John I. Davis
Vice President, Consumer Products Engineering



Sylvester R. Herkes
Vice President, Consumer Products Marketing



William S. Wheeler
Vice President, Military Electronics Division



PAUL VINCENT GALVIN

RESOLVED: The Board of Directors of this corporation mourns the passing of Paul Galvin, founder, builder and leader of Motorola, on November 5, 1959.

He was a just man and a courageous man and a man of vision. He was a warm and understanding friend. His inspiration, encouragement and high regard for human dignity endeared him to all of us. His humility testified to his greatness. On every hand we see the indestructible mark of Paul Galvin. For the opportunity to have been associated with him, we are deeply grateful.



PRESIDENT'S REVIEW

To the Shareholders of Motorola:

Motorola's sales and earnings in 1959 were the highest in its 31 year history. Consolidated sales, which do not include Motorola Finance Corporation operations, were \$289,529,444, a 33 per cent increase over 1958.

Net earnings of \$14,171,237 were 92 per cent larger than 1958. Earnings per share of common stock were \$7.17 in 1959 compared with \$3.80 in 1958.

The enthusiastic acceptance by consumers of our home entertainment products resulted in substantially improved sales and earnings. An important reason is that we achieved a new high standard in performance and fine cabinetry, particularly in the higher end of our line.

The Communications Division continued an unbroken record of increasing sales and earnings, aided by new and improved products and as a result of availability of two-way radio to more business uses.

The Automotive Products Division benefited from the improved volume of its principal customers,

Ford, Chrysler, American Motors, and International Harvester.

The Semiconductor Products Division made important strides in development and production of new types of semiconductors. While continuing to supply many of our company's own needs, the majority of sales are now made to other users.

The Military Electronics Division maintained its sales volume and improved its earnings.

The reorganization of our international operations was completed in 1959 and its contribution to the company increased.

The business of the company was further diversified by acquisition of The Dahlberg Company and the LearCal Division of Lear, Inc. whose business is described later in this report.

At the end of 1959, consolidated working capital was \$57,061,000 compared with \$54,644,000 at the 1958 year-end. The increase in sales and the consequent need for more working capital and increased capital expenditures have dictated a conservative dividend policy.

However, subject to approval of shareholders at the annual meeting, it is proposed to double the authorized common shares and to issue to shareholders of record June 30 one share for each share then held. It is also proposed to declare a quarterly dividend of 25 cents on the increased shares then outstanding, representing a 33 per cent increase in the dividend payment.

We believe 1960 will be another good year for the country's economy and, particularly, for the electronics industry. If the general pace is maintained, we believe Motorola will experience a 10 per cent gain in sales in 1960 and a similar improvement in earnings.

A record year such as 1959 does not occur without an imaginative, responsible, and responsive group of people making it occur. I am particularly grateful this year, when the loss of my father weighs heavily, to the management and all the employees of the company for their devotion to Motorola. No memorial would have pleased him more.

For the Board of Directors

Robert W. Galvin
PRESIDENT

March 10, 1960

District of Columbia's Deputy Commissioner of Traffic, Francis Twiss (L), discusses the new Motorola radio traffic control system with Regional Sales Manager, John Fussell.

COMMUNICATIONS DIVISION

Serving Industry and the Community

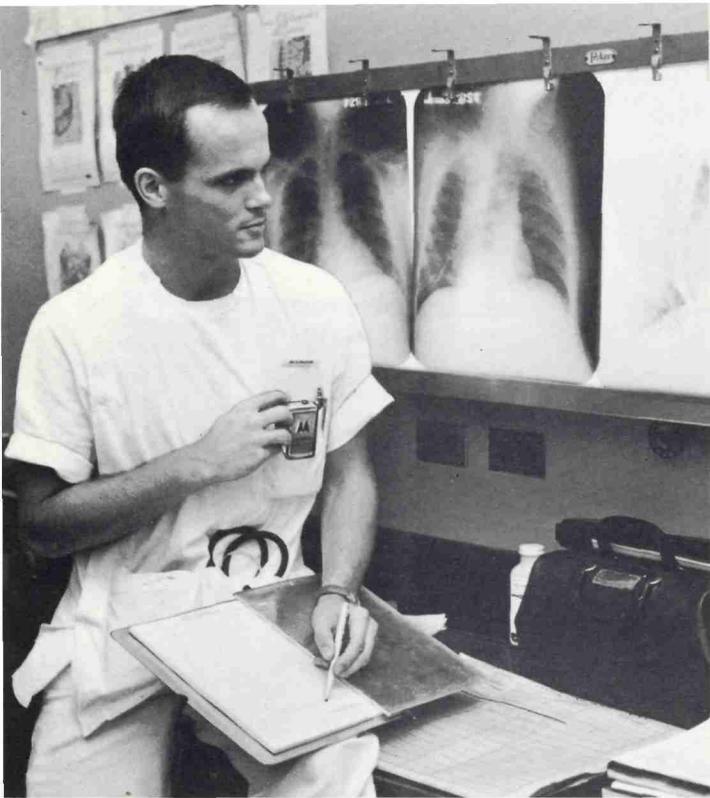
Electronic communications equipment plays an increasingly important part in Motorola's total performance and has proved the wisdom of the company's continuing policy of diversification in electronics.

Two-Way Radio

The Motrac transistorized mobile two-way radio, completing its first year of mass production, surpassed sales expectations by more than 50 per cent. It provides another example of Motorola's leadership in design, reliability, and performance. The Motrac radio demonstrates that for many users, extra value and reduced long-run cost outweigh a higher initial cost.

Mass production of Handie-Talkie pocket receivers and transmitters was achieved in 1959. Wireless radio-paging product sales to hospitals, hotels, industrial plants, and stores also exceeded expectations. These products represent another major step in miniaturization and personalization of two-way radio facilities. These "personal" radio systems, which provide selective, private communications, found application in coordinating efforts of work teams such as field engineers, military squads, and plant supervisors, whose personnel are dispersed over wide areas. Motorola expects an increasing demand for such mobile and portable personal communications equipment.





Doctors, busy executives, plant engineers—men who must be instantly available — can be reached immediately with the Motorola Handie-Talkie radio pager. The radio pager, which weighs only 10 ounces, provides rapid, private communications.

Noticeably influencing the sales of two-way radio equipment this year was the impact of the Federal Communications Commission's earlier decision to extend availability of the radio spectrum for use by private business. Opening of the "Business Radio Service" band, making two-way radio licensing available to virtually all commercial enterprises, has greatly increased the number of new applications for radio licenses by small businesses across the nation.

Microwave Communications Systems

Sales and installations of microwave point-to-point communications systems during 1959 substantiate Motorola's belief that this product will become increasingly important as industry and government organizations make greater use of computers and data processing devices.

The United States Weather Bureau, for example, installed a Motorola microwave system in the District of Columbia area to link two computer centers. In the petroleum field, the new 450 mile Motorola microwave system of The Natural Gas Pipeline Company of America, a subsidiary of The Peoples Gas Light and Coke Company, brings vital computer data from Nebraska to Chicago where it is duplicated on punched cards and fed into an "electronic brain". Similarly, the Freeport Sulphur Company extended its Motorola microwave system to a new sulphur mine.



Communications Division Vice President, Arthur L. Reese (R), reviews latest production methods of Motorola Motrac units at the Chicago production facility with William J. Weisz, Manager of Motorola Mobile and Portable Communications Products.

The development of high speed facsimile equipment also promotes the use of microwave. Notable in 1959 was the sale of a 700 mile system to the Denver and Rio Grande Western Railroad. A major use of the network will be transmission of facsimile pictures of waybills between major rail terminals.

Transistorization also emerged in microwave systems during the year with the introduction of the MC-22 multiplex unit. This is a fully transistorized package for use by power utilities in protective relaying functions.

Radio Traffic Control Systems

Another highlight of the year, further evidence of Motorola's broad diversification in electronics, was the dedication of the first phase of the Washington, D. C., system for radio control of traffic signals. Some of this equipment is shown on the opposite page.

The system, in which traffic light patterns are determined on punched tape, is designed to control the flow of normal traffic throughout the day, including rush-hour periods. It is capable of synchronizing lights instantly, via radio, for any given traffic situation.

A contract for installation of a similar system has been received from New York City, differing only in the respect that its control patterns are set up on punched cards rather than by the tape method.



Twenty-four hour service for two-way radio users is provided by some 800 Motorola system maintenance centers located

throughout the U. S. Above, communications equipment on a fire truck is serviced by a Freeport, N.Y. service center.

Communications Division (continued)

Closed Circuit Television

Motorola further developed its interest in closed circuit television. Its system was designed initially for municipal, educational, and private industry application. A thorough exploration of the many possible applications for military use of closed circuit television presently is being undertaken in anticipation of broadening the company's market in this field.

In 1959 Motorola's Communications Division also entered the field of precision test and measurement equipment, not only for its own products, but for industrial use as well.

Communications Division Expansion

The growth of the Communications Division necessitates a physical expansion in the near future. Its major facility located on Augusta Boulevard in Chicago is no longer adequate to meet requirements for production space and personnel.

Upon completion of the new engineering laboratory and office space, and the consolidation of Consumer Product manufacturing at the present Franklin Park location, the Communications Division will take over an adjoining area on Augusta Boule-

vard presently occupied by offices, laboratories, and consumer production lines. A major portion of the Augusta Boulevard plants will then be devoted to the Communications Division.

Nationwide Field Service For Customers

During 1960, the Communications Division also will occupy a new eastern headquarters for sales, parts, and service in Fair Lawn, New Jersey, to accommodate eastern seaboard states from the Carolinas to New England. Other Motorola sales, parts, and service area offices are located in Burlingame, California, Chicago, Illinois, and Dallas, Texas. There also are Motorola communications sales and service personnel in 20 regional offices throughout the United States. In addition, contract maintenance and installation of Motorola communications equipment is provided by a national service organization of more than 800 independently owned stations operating under Motorola supervision and providing 24-hours-a-day, seven-days-a-week service. Including both Motorola employees and independent service stations, there are more than 4,000 people engaged primarily in service activities for Motorola communications systems.

AUTOMOTIVE PRODUCTS DIVISION

Serving the Automotive Industry

With the recovery of the automobile industry from the 1958 recession period, sales of radios by Motorola's Automotive Products Division in 1959 showed a substantial increase over the previous year. Motorola continued to have an excellent working association with Ford, Chrysler, American Motors, and International Harvester.

Contracts Include Radios For New "Compact" Automobiles

Contract relationships with the automotive companies were renewed with the announcement of the 1960 auto models. Of special interest were the contracts as sole producer of auto radios for the new compact cars, the Ford "Falcon" and "Comet", the Chrysler "Valiant", and the American Motors "Rambler" and "American". Motorola also will supply all the requirements for auto radios to the "Thunderbird" and "Plymouth" along with one-half the needs of "Ford", "Dodge", and "Dart".

Push-button and manual sets are manufactured and custom designed to the individual car builder's requirements. The trend toward miniaturization was accelerated with the introduction of a new, compact push-button tuner, and further development in this area is expected.

During 1959, almost all contract auto radios were produced with Motorola's plated circuit chassis and mechanized assembly techniques. Circuitry for the new models was re-designed, resulting in improved reliability. Research is being actively pursued in other automotive areas where electronics and transistorized circuitry are applicable.

Higher Volume, Improved Quality

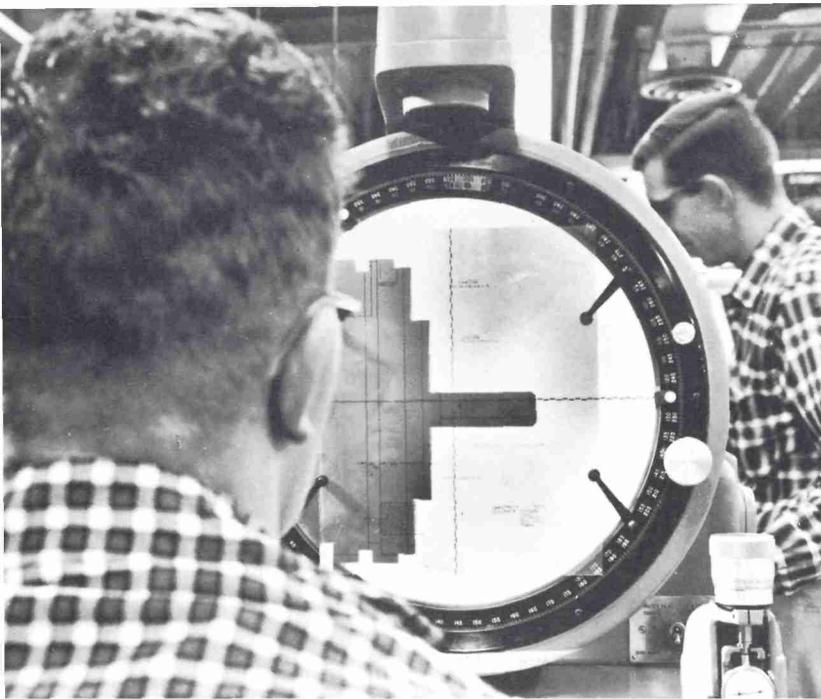
With the recently developed mechanized assembly methods associated with plated circuitry, the quantity of radios manufactured at the Quincy, Illinois, plant reached a substantially greater volume. In addition, an improved quality control program has

been introduced to insure maximum quality of outgoing products.

All contract auto radios are manufactured at Quincy, Illinois, the tuners for these sets being supplied from the Motorola plant in Arcade, New York.

Elmer H. Wavering (L), Automotive Division Executive Vice President, discusses quality control for auto radio receiver plated circuitry with Frank Brewster, Director, Automotive Engineering.





Reliability is mandatory in complex military electronic products. Optical comparators, above, are one of the many devices used for precision inspection by Military Division personnel.



Airborne digital computers undergoing reliability tests above are examples of the "sophisticated hardware" being developed by technical personnel in Motorola's Military Electronics Division.

MILITARY ELECTRONICS DIVISION

Serving the Military Establishment for National Defense

Since 1940, Motorola has carried on aggressive research, development, and production in the field of military electronics. Today, in research and production centers in Chicago, Illinois, in Phoenix, Arizona, and in Riverside, California, Motorola engineers and scientists are at work on a broad range of military projects. Included in Motorola's military capability are: communication systems and equipment; data transmission, processing, and display programs; missile systems, testing, and instrumentation; electronic warfare and countermeasures; anti-submarine warfare systems and equipment; applied research and development in microelectronics; advanced radar and sensor developments; solid state developments in materials and devices; navigation systems and equipment; surveillance systems.

Sales About Same As 1958

In 1959, sales of the Military Electronics Division were about the same as in 1958. The cancellation of the management contract for development of the Mission and Traffic Control System for the B-70 tri-sonic bomber program will adversely affect the planned increase in sales volume for 1960, and the division now expects to do about the same volume in military electronics as it did in 1959.

Solid State Electronics

The natural extension of performance requirements for military electronics systems demands an accompanying increase in equipment complexity. For present construction techniques dependent upon the interconnection of multitudes of components, a saturation point is rapidly approaching, beyond which an acceptable level of reliability cannot be achieved. The imperative need for new high levels of reliability is the prime motivation behind Motorola's interest in solid state electronics.

Chicago Military Electronics Center



While the need for more reliable systems is the dominating reason for vigorous emphasis in the field of solid state electronics, the successful development of equipment for missiles, satellites, and space exploration will depend heavily on advancements in this new art to provide functional units of minimum weight, minimum cubical contents, and low power consumption.

Four Capabilities Needed For Progress In Solid State Art

Significant progress in the solid state art requires four prime capabilities in addition to breadth and depth of experience with equipment circuitry and systems. Required are: a well developed semiconductor capability; a fundamental research capability in the thin-film art; thorough competence in the field of electronic ceramics, such as ferrites, ferroelectrics, and piezoelectric ceramics; a mastery of surface passivation techniques.

Motorola's Phoenix solid state and semiconductor laboratories have developed substantial capabilities in all of these fields, and in some the activity is already moving at advanced levels. The Solid State Electronics Department and the Semiconductor Products Division comprise Motorola's team for progress in solid state electronics — today's most promising field of research, and tomorrow's source for new ideas, new products, and new systems which will pace the progress of the electronics industry for the next forty years.



Shown in the Materials Laboratory of the Solid State Dept. are Daniel E. Noble (L), Executive Vice President for Military, Semiconductor, and Communications divisions; William S. Wheeler, Vice President, Military Electronics Division; and Dr. H. William Welch, Director of Military Research and Development.

Western Military Electronics Center, Phoenix

Solid State Electronics Dept., Phoenix

Systems Research Laboratory, Riverside, Cal.



SEMICONDUCTOR PRODUCTS DIVISION

Volume Production • Exacting Standards of Quality

During the next ten years the design, production, and application of electronic equipment will undergo a transition with the use of semiconductor devices. A great many of Motorola's products already utilize the tiny transistor, and aggressive research is moving toward advances in microelectronics which will radically reduce size, weight, and power consumption of equipment and effectively increase reliability.

Improved Earning Potential

Motorola's investment in expanded production facilities and transistor development and engineering has resulted in improved earning possibilities for its semiconductor business. While the division is a major

supplier to other divisions of Motorola, a large and increasing part of its production is sold to customers outside the company.

Motorola is currently a leader in the manufacture of both power transistors and the ultra-precision Mesa transistor. Diversification of the semiconductor line to include families of audio transistors, switching transistors, zener diodes, and rectifiers was accomplished during 1959.

Considerable expansion of the division's marketing organization took place this year to increase the sale of semiconductors for military and industrial application. Regional offices have been established in Ridgefield, New Jersey, Chicago, Illinois, Boston,

At the far right is Motorola's 1959 addition to its semiconductor building in Phoenix. The division plans additional major ex-

pansion over the next 18 months, permitting greatly increased output of Mesa transistors and other semiconductor products.



Massachusetts, and Los Angeles, California, with an automotive representative in Detroit, Michigan, and a district sales manager in Phoenix, Arizona. Twenty-three distributorships are located throughout the U. S., with one representative in Canada. Overseas sales are handled by Motorola's international operations. Plans are underway presently to establish additional sales offices to better serve customers.

Production Facilities Greatly Expanded

Last summer, Motorola added some 129,000 square feet to its Semiconductor Products Division building in Phoenix, Arizona. The construction provided more than five times the previous production facilities for Mesa transistors and permitted a threefold expansion of other semiconductor product lines. Major additional construction will be started in 1960.

The Meg-A-Life program of component reliability assurance was developed this year by Motorola. Each production lot of industrial alloy transistors for use by non-military customers undergoes complete mechanical, electrical, environmental, and life tests in accordance with general military specifications for transistors . . . MIL-T-19500A. All tests represent the most adverse conditions under which the device would be used, and provide evidence of the extreme reliability for user applications.

The Motorola Mesa Transistor

We believe the Motorola Mesa units are the most advanced transistor devices in the semiconductor art. Their adaptability to miniaturization of complete electronic systems helps answer the need for reduction in size and weight of electronic devices for aircraft, missiles, and rockets.

We also believe the Motorola Mesa is the most precise semiconductor available today, and the smallest, mass-produced transistor manufactured.

The active region of Mesa transistors can be covered by an area less than the cross-sectional area of a human hair, yet they are manufactured by methods so precise that they are turned out on a production line basis to meet rigid standards of reliability. Mesa transistors are produced in meticulously clean laboratories having closely regulated temperature and humidity. Production personnel wear special uniforms to minimize dust contamination.

Extension of the Mesa design to higher powers and higher frequencies will be introduced in the near future. Soon there will be an entire family of the highly-precision Mesa transistors, devices that will open whole new areas of transistor application.



Dr. C. Lester Hogan (R), General Manager of Semiconductor Products Division, and C. Harry Knowles, Mesa Transistor Product Manager, examine Mesa production yield figures. The closed circuit television system aids in monitoring production quality.

Below is a greatly magnified view of the very small Motorola Mesa transistor with the cap removed. Gold contact wires are visible. The active region of the Mesa transistor can be covered by an area less than the cross-section area of a human hair.





CONSUMER PRODUCTS

More to Enjoy in Sight and Sound

Motorola had the most successful year in its history in 1959 in the acceptance of its products by consumers.

One of the significant reasons for success was the genuine enthusiasm among Motorola distributors and dealers for our stereo, television, and radio products. This enthusiasm became all the more evident early last summer with the introduction of the 1960 lines at 15 product meetings throughout the country, attended by over 10,000 Motorola dealers and distributors.

Leadership In Stereo-Hi-Fi

Electronic advancements to further improve home entertainment products and provide additional quality features also played an important part in stimulating customer demand for Motorola consumer products.

In stereo-hi-fi, for example, an outstanding improvement in phonograph sound reproduction was achieved by Motorola in its engineering of instruments having three separate amplifiers and speaker systems. From a standard stereo record, the Motorola Golden Audio Separator separates the low frequency notes of the record from the high and mid-range notes. The audio is then fed into three separate amplifiers and three separate speaker systems. Previous stereo systems required listeners to be in a certain location to enjoy stereo effects. However, with Motorola's new instruments, wall-to-wall stereo sound can be enjoyed from any part of the room.

Because this system permits stereo sound from a single cabinet, Motorola was able to lead in the trend away from multiple speaker cabinets which had proved awkward to place in most homes. Three separate amplifiers and speaker systems, emphasis on single cabinets, and outstanding design in furniture styling helped Motorola distributors and dealers to greatly increase their stereo-hi-fi sales in 1959 de-

DIVISION

spite lagging sales in the industry as a whole. Today, Motorola is acknowledged to be the number one producer and seller of packaged stereo high-fidelity instruments.

Reputation For TV Quality Increases

Increased public acceptance also resulted in a rise in unit television sales of nearly 35 per cent over 1958, a substantially higher increase than the TV industry average. Motorola believes the year's sales performance has demonstrated that the consumer, while cost conscious, has become dissatisfied with the least expensive TV on the market and is now more interested in improved sound and picture, increased reliability, and fine cabinet styling.

A greatly improved plated circuit television chassis was introduced by Motorola in its new 17-inch slim-line portable model. The set was thoroughly tested before being released to the public and was found to be extremely rugged and dependable. Color coding on both sides of the board, improved strength of the board, and rapid chassis removal permits greater ease in servicing the set.

The Golden "M" series of features which include Golden "M" tubes and parts, the Super Golden "M" Chassis, the Frame Grid Tube, the Aluminized Picture Tube, and the Tube Sentry unit, continued to establish Motorola as a quality leader in television. And Motorola's new "Custom-Matic" tuner ends the need for fine tuning every time a channel is changed.

Drexel And Heritage

The association of Motorola with the fine furniture styling of the Drexel Furniture Company and Heritage Furniture Inc. further contributed to Motorola's leadership in the appearance design field, complementing the company's reputation for quality in electronic engineering. At the annual



Consumer Products Division (continued)

Winter Home Furnishings Market in Chicago last January, the Mahogany Industry Association sponsored a competition to select the finest designs in six different categories of furniture. We are pleased that the Motorola-Heritage "Laureate" stereo instrument received the highest design award for electronic home products. At the same time, the Drexel "Triune" group not only won the award in the correlated furniture category but was chosen "best of show" as well.

Motorola Car Radios

Motorola maintained its leadership in the branded car radio business with sales setting a new record. These are car radios sold through distributor-dealer outlets to individual car owners.

In December, Motorola revealed the FM-900 and

has become the first major American company to mass produce an FM car radio. With the ever-increasing popularity of home FM and the large number of cars today in which the FM-900 can be installed, Motorola's FM car radio should add substantially to the success of the Motorola brand car radio business.

Significant Rise In Radio Sales

Unit sales of table, clock, and portable radios substantially increased during 1959. Table radio was up nearly 70 per cent, with clock and portable radio up 80 per cent over unit sales for the previous year. Portable radio continued a transition in 1959 from tubes to transistors, with Motorola's shirt-pocket size transistor portable attracting the most consumer attention.

Edward R. Taylor (R), Executive Vice President for the Consumer Products Division, is shown making the final selection of

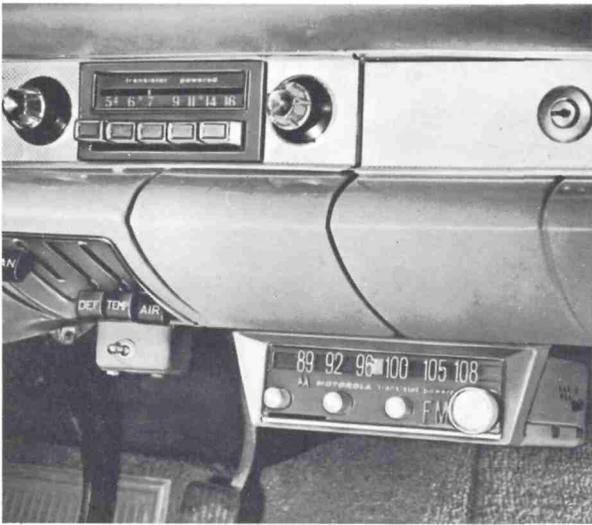
television cabinetry designs with Herbert J. Zeller, Director of the Motorola Design and Cabinet Engineering Department.





Sales of Motorola's home radios continued to rise significantly with the company gaining an increased share of the nine million units sold by the industry during 1959. The range of Motorola

home radio products extends from AM/FM sets to multi-feature clock radios, low-priced and deluxe table models, various sized portables, and the popular shirt-pocket size portable.



Designed for under-the-dash installation, the new Motorola FM car radio operates independently of or in addition to the car's AM set. The FM-900 can reproduce the entire hi-fi audio range.

"Camera look" styling gives Motorola's 17-inch portable TV an appearance to match its reliability and performance. This set, like all Motorola TV's, has full-year warranty on tubes and parts.



NEW SUBSIDIARIES DIVERSIFY MOTOROLA

The Dahlberg Company

Continuation of Motorola's policy of diversification in electronics resulted in the acquisition of The Dahlberg Company in the fall of 1959.

Dahlberg is the fourth largest producer of hearing aids in this country, and a number of hearing aid "firsts" prove the ability of its young and aggressive management. The hearing aid industry was early to use transistors in a consumer product, and Dahlberg was one of the first companies to market an all-transistor hearing aid. It was a leader in marketing a one-piece hearing aid small enough to be worn wholly inside the ear, and pioneered eyeglass hearing aids.

Dahlberg hospital communications began with a pillow speaker radio system. This business evolved into a complete communications system that includes: automatic remote control radio and TV

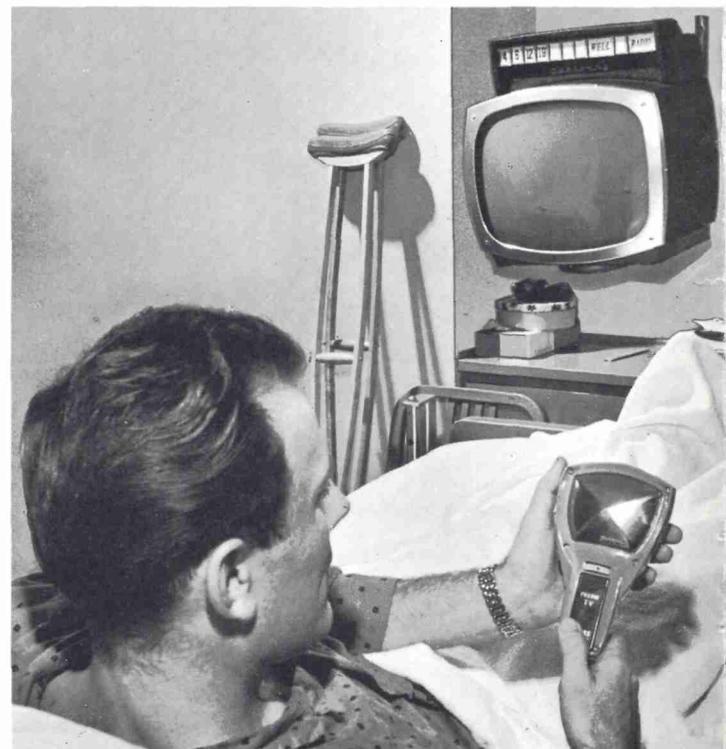
operated through the Pillow Speaker; two-way communications between the patient and the nurse, including audio-visual nurse call; closed circuit television for hospital use for both staff administration purposes and patient recreation and comfort. Dahlberg also manufactures the broadcasting console responsible for operating the complete external and internal communications system.

The Dahlberg Company operates from a 38,000 square foot plant in Golden Valley (Minneapolis), Minnesota. Some 200 distributors handle Dahlberg products in the U. S. and 18 foreign countries.

Dahlberg is accelerating its efforts in miniaturization of electronic components and bringing to bear the research and engineering of Motorola to its own areas of electronic activity.

Kenneth H. Dahlberg (R), President of The Dahlberg Company, and Arnold R. Dahlberg, Executive Vice President, show the newest of their hearing aid product line—the ¼ ounce Miracle Ear III—believed to be the world's smallest, complete hearing aid.

The unique Pillow Speaker, heart of a complete hospital communications system produced by The Dahlberg Company, is ready at the patient's pillow to bring him TV or radio, change stations, or put him in direct communications with his nurse.



Motorola International, S. A.

While Motorola will continue to aggressively market its American-made products overseas, it is evident that the new opportunities for serving foreign markets lie in the manufacturing or assembly of Motorola products in the countries where they will be sold. Consequently, in 1959, the company established Motorola International, S. A., a wholly owned subsidiary, to provide for overseas licensing, manufacturing, and assembly.

New production arrangements were completed for marketing of Motorola products in Argentina and Mexico, while existing manufacturing operations were strengthened in Canada, England, and Australia.

Sales were substantially higher than in 1958, and we expect further improvement in 1960. Negotiations presently are underway to participate in the European Common Market and the newly created European Free Trade Association. These combined markets offer excellent potential for local manufacturing and sale of Motorola consumer products, communications products, and semiconductor devices.



Thomas P. Collier, President of Motorola International, S. A., directs distributorships, licensees, and joint venture manufacturing operations in over 60 countries throughout the world.

Kenneth M. Miller, Manager of Motorola's aviation products activity, holds the transmitter portion of a VHF communications system, one of the new aviation product lines acquired by Motorola.

Motorola Aviation Electronics Inc.

Negotiations also took place in 1959 for the acquisition of the LearCal Division of Lear, Inc., located in Santa Monica, California. This business has now become a part of the company's Communications Division, and markets its products through a new subsidiary, Motorola Aviation Electronics Inc.

The subsidiary markets commercial air-borne communications and navigation equipment and light aircraft autopilots designed for broad coverage of the non-military aircraft market.

Diversification by Motorola into commercial aviation electronics was a move complementing Motorola's position in the commercial communications field. Motorola believes it can make a distinctive contribution to this new field, not only in research, development, and engineering, but also by its long experience in serving the needs of radio communications users. The acquisition provides Motorola the opportunity to become a major factor in serving the aviation market.



MOTOROLA INC. AND CONSOLIDATED SUBSIDIARIES

Balance Sheets as of December 31, 1959 and 1958

ASSETS	1959	1958
<i>Current assets:</i>		
Cash	\$ 9,764,963	\$ 6,659,888
Accounts and notes receivable:		
United States Government	8,211,446	11,962,424
Other trade receivables (less allowance for doubtful accounts — 1959, \$1,280,000; 1958, \$823,000)	42,177,791	35,031,700
Other	811,391	558,052
Costs recoverable under United States Government contracts, less progress billings	6,987,467	11,660,723
Inventories, at the lower of average cost or market	37,073,833	26,666,528
Prepaid expenses	586,072	423,890
<i>Total current assets</i>	105,612,963	92,963,205
<i>Investment in Motorola Finance Corporation, subsidiary not consolidated (see accompanying balance sheet)</i>	6,275,059	4,941,391
<i>Other assets</i>	4,268,196	2,196,979
<i>Plant and equipment—less depreciation (Note A)</i>	33,436,676	27,615,287
<i>Patents and trademarks—less amortization</i>	170,666	184,924
	\$149,763,560	\$127,901,786

Notes to Consolidated Financial Statements

A—The companies' investment in plant and equipment on December 31, 1959 and 1958 was as follows:

	1959	1958
Land—at cost	\$ 2,902,444	\$ 2,531,231
Buildings—at cost, less depreciation (1959, \$5,126,978; 1958, \$3,876,323)	18,947,221	13,735,990
Machinery and equipment—at cost, less depreciation (1959, \$8,743,004; 1958, \$7,109,917)	10,117,611	9,372,123
Dies, tools, and leasehold improvements—at cost, less amortization	1,469,400	1,975,943
	\$33,436,676	\$27,615,287

B—Long-term debt on December 31, 1959 and 1958 consisted of the following:

	1959	1958
Notes payable:		
3¾%, maturing \$1,000,000 annually to 1965, \$1,500,000 in 1966, and \$500,000 annually thereafter to 1972	\$10,500,000	\$11,500,000
4¾%, maturing \$500,000 annually 1963 to 1976	7,000,000	7,000,000
Real estate mortgages:		
Maturing serially to 1974	885,908	4,756
Due in 1966 and 1968	550,000	550,000
	18,935,908	19,054,756
Less current maturities, included in current liabilities	1,061,758	1,004,756
	\$17,874,150	\$18,050,000

LIABILITIES	1959	1958
<i>Current liabilities:</i>		
Notes payable to banks	\$ 12,150,000	\$ 9,500,000
Current maturities of long-term debt	1,061,758	1,004,756
Accounts payable—trade	9,530,791	10,034,733
Accrued taxes	11,566,558	6,597,591
Contribution to employees' profit sharing fund	5,147,133	2,401,376
Product and service warranties	590,000	678,853
Other	<u>8,504,784</u>	<u>8,101,457</u>
<i>Total current liabilities</i>	<u>48,551,024</u>	<u>38,318,766</u>
<i>Long-term debt (Note B)</i>	<u>17,874,150</u>	<u>18,050,000</u>
<i>Shareholders' equity:</i>		
Capital stock, \$3.00 par value—authorized, 3,000,000 shares; issued and outstanding—1959, 1,975,131 shares; 1958, 1,935,131 shares	5,925,393	5,805,393
Additional paid-in capital (Note C)	8,983,786	9,018,506
Retained earnings (Note B)	<u>68,429,207</u>	<u>56,709,121</u>
<i>Total shareholders' equity</i>	<u>83,338,386</u>	<u>71,533,020</u>
	<u>\$149,763,560</u>	<u>\$127,901,786</u>

On December 31, 1959 approximately \$14,000,000 of retained earnings was free from dividend restrictions contained in the long-term notes payable agreements.

C—During 1959 the company acquired all of the outstanding capital stock of The Dahlberg Company and an affiliate in exchange for shares of Motorola, Inc. This transaction has been treated as a pooling of interests. The excess of the par value of Motorola shares issued over the paid-in capital of the companies acquired (\$34,720) has been charged to additional paid-in capital. The retained earnings as of January 1, 1959 of the companies acquired have been credited to consolidated retained earnings. The results of operations for 1959 of the companies acquired have been included in the accompanying statement of earnings.

The financial statements for 1958 do not include amounts with respect to these companies.

D—Effective January 1, 1960 the company purchased certain assets pertaining to aviation radio, navigation, and flight control products of Lear, Incorporated, as agreed upon in November, 1959. On January 12, 1960 the company issued 40,000 shares of its capital stock in payment therefor subject to final adjustment of the purchase price, expected to be nominal in amount.

E—In connection with the financing of sales of products to consumers, Motorola, Inc. and consolidated subsidiaries are obligated under repurchase and other agreements with Motorola Finance Corporation and other financing agencies. It is believed that these obligations will have no material effect on the business of the companies.

MOTOROLA INC.

AND CONSOLIDATED SUBSIDIARIES

Statement of Consolidated Earnings and Retained Earnings

Years ended December 31, 1959 and 1958

	1959	1958
Sales.....	\$289,529,444	\$216,590,325
Net earnings of Motorola Finance Corporation— subsidiary not consolidated.....	333,668	231,863
Other income.....	2,013,846	1,273,014
<i>Total income</i>	<u>291,876,958</u>	<u>218,095,202</u>
Manufacturing and other costs of sales.....	215,241,106	167,839,009
Selling, service, and administrative expenses.....	38,579,284	28,173,818
Depreciation of plant and equipment.....	3,696,916	3,101,868
Contribution to employees' profit sharing fund.....	5,147,133	2,401,376
Interest and other expenses.....	1,806,282	1,647,918
<i>Total costs and other expenses</i>	<u>264,470,721</u>	<u>203,163,989</u>
Net income before federal taxes on income.....	27,406,237	14,931,213
Federal taxes on income.....	13,235,000	7,575,000
Net earnings (per share outstanding at end of year— 1959, \$7.17; 1958, \$3.80).....	14,171,237	7,356,213
Retained earnings at beginning of year.....	56,709,121	51,348,547
Retained earnings at January 1, 1959 of companies acquired during 1959 (Note C).....	466,546	—
Credit for adjustment of inventory valuation.....	—	907,057
<i>Total</i>	<u>71,346,904</u>	<u>59,611,817</u>
Less dividends—\$1.50 per share.....	2,917,697	2,902,696
Retained earnings at end of year (Note B).....	<u>\$ 68,429,207</u>	<u>\$ 56,709,121</u>

See accompanying notes to consolidated financial statements.

ACCOUNTANTS' REPORT

The Board of Directors and
Shareholders of Motorola, Inc.:

We have examined the balance sheet of Motorola, Inc. and consolidated subsidiaries as of December 31, 1959 and the related statement of consolidated earnings and retained earnings for the year then ended, and the balance sheet of Motorola Finance Corporation as of

December 31, 1959. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. It was not practicable to attempt to obtain confirmations of certain receivables from the United States Government, but we

MOTOROLA FINANCE CORPORATION

Balance Sheets as of December 31, 1959 and 1958

ASSETS	1959	1958
Cash	\$ 4,160,881	\$ 4,273,186
Receivables:		
Lease and conditional sales contracts (including instal- ments maturing beyond one year—1959, \$12,915,000; 1958, \$10,636,000)	20,210,058	16,082,874
Notes receivable, distributors—maturing within one year Total	7,842,626	5,454,179
	28,052,684	21,537,053
Less unearned income on lease and conditional sales contracts	3,794,675	3,023,405
Net	24,258,009	18,513,648
Other assets	359,727	403,907
	<u>\$ 28,778,617</u>	<u>\$ 23,190,741</u>
LIABILITIES		
Current liabilities:		
Notes payable to banks	\$ 22,000,000	\$ 18,000,000
Accrued taxes	235,296	200,067
Other	268,262	49,283
Total current liabilities	22,503,558	18,249,350
Subordinated notes payable to Motorola, Inc.—due 1961 and 1962	3,500,000	2,500,000
Shareholder's equity:		
Capital stock, \$1.00 par value—authorized and issued, 20,000 shares	20,000	20,000
Additional paid-in capital	1,980,000	1,980,000
Retained earnings (net earnings since inception, March 7, 1956)	775,059	441,391
Total shareholder's equity	2,775,059	2,441,391
Total subordinated notes and share- holder's equity	6,275,059	4,941,391
	<u>\$ 28,778,617</u>	<u>\$ 23,190,741</u>

Note—All receivables of Motorola Finance Corporation are covered by the repurchase and other agreements mentioned in Note E of notes to consolidated financial statements.

satisfied ourselves as to their substantial accuracy by means of other auditing procedures.

In our opinion, the accompanying financial statements present fairly (a) the financial position of Motorola, Inc. and consolidated subsidiaries at December 31, 1959 and the results of their operations for the year then ended and (b) the financial position of Motorola Finance

Corporation at December 31, 1959, all in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

PEAT, MARWICK, MITCHELL & CO.

Chicago, Illinois
February 19, 1960

TEN YEAR FINANCIAL SUMMARY

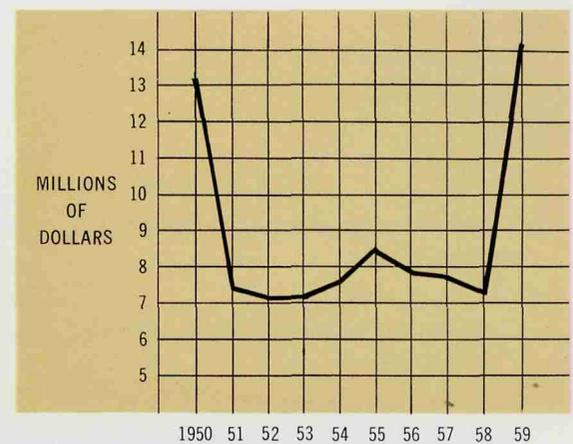
YEAR	NET SALES	EARNINGS BEFORE TAXES ON INCOME	NET EARNINGS
1950	177,104,669	27,368,061	13,130,246
1951	135,285,086	14,020,739	7,240,452
1952	168,734,653	15,576,165	7,012,700
1953	217,964,074	15,512,489	7,076,335
1954	205,226,077	16,523,889	7,572,024
1955	226,653,953	18,740,426	8,490,539
1956	227,562,168	16,887,834	7,966,817
1957	226,361,190	15,597,031	7,824,431
1958	216,590,325	14,931,213	7,356,213
1959	289,529,444	27,406,237	14,171,237

Net earnings per share are based upon 1,935,131 shares for 1958 and prior years and upon 1,975,131 shares for 1959.

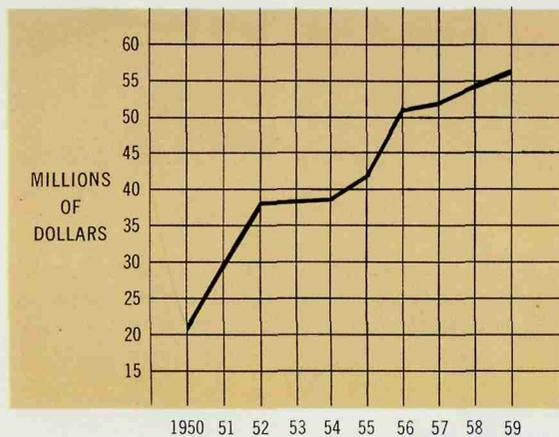
NET SALES



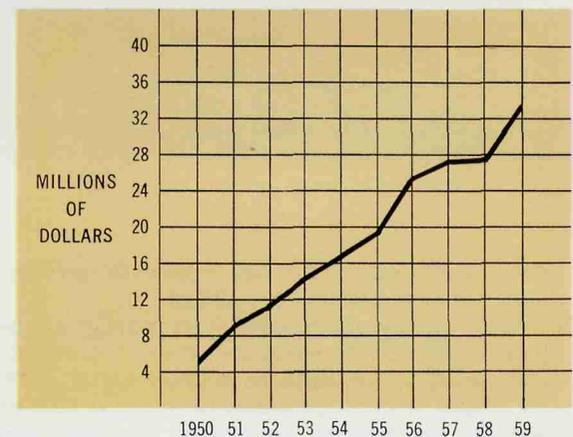
NET EARNINGS



WORKING CAPITAL

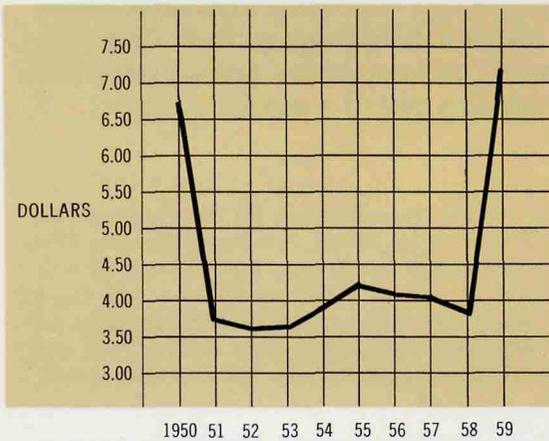


NET INVESTMENT IN PLANT AND EQUIPMENT

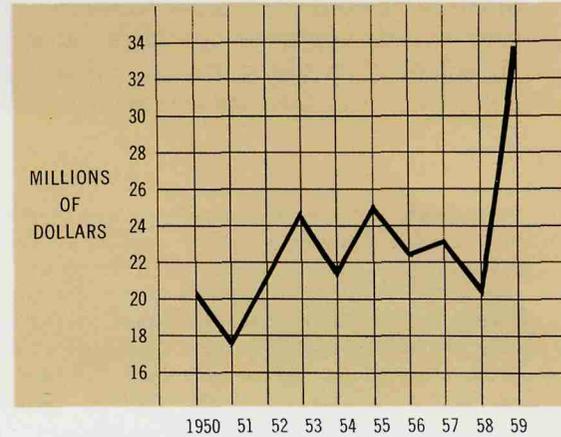


NET EARNINGS PER SHARE	WORKING CAPITAL	NET INVESTMENT IN PLANT AND EQUIPMENT	SHAREHOLDERS' EQUITY
6.78	20,731,871	5,794,309	26,895,638
3.74	29,851,003	9,005,880	31,920,882
3.62	38,007,247	11,429,532	41,755,780
3.66	38,222,001	14,301,004	45,929,419
3.91	38,308,612	16,579,531	50,598,747
4.39	42,892,165	19,179,992	56,186,590
4.12	50,882,200	25,388,866	61,305,080
4.04	52,215,832	27,167,597	66,172,446
3.80	54,644,439	27,615,287	71,533,020
7.17	57,061,939	33,436,676	83,338,386

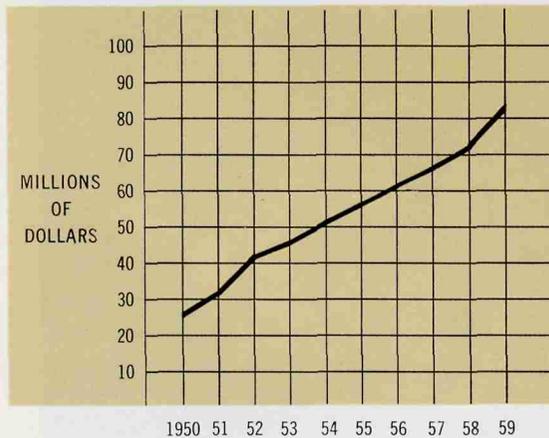
NET EARNINGS PER SHARE



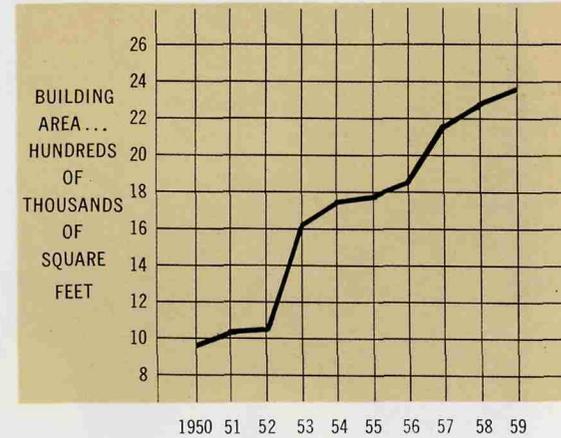
TAXES PAID



SHAREHOLDERS' EQUITY



EXPANSION OVER PAST 10 YEARS



EMPLOYEES' SAVINGS AND PROFIT SHARING FUND

When Motorola's founder, Paul V. Galvin, established the Employees' Savings and Profit Sharing Fund in 1947, he laid the cornerstone for what was to become the second largest deferred-type profit sharing plan in the world. As of December 31, 1959, the value of the Fund reached a total of approximately 45 million dollars.

All employees of Motorola with one year of service or more are eligible to participate in the company's profit sharing plan by voluntarily contributing from two to five per cent of their earnings to the Fund, subject to a maximum of \$200 during any one year. The company contributes a portion of its profits to the Fund which is distributed on a pro rata basis to each employee's account in proportion to his contributions during the year. Employee and company contributions are invested in a diversified

portfolio of government and corporate bonds, and common and preferred stock. Annual earnings of the Fund increase each participant's individual account, in proportion to the value of his account as of the preceding year.

The increase in participants in the Motorola Fund has climbed to a high in 1959 of 10,132 employees. Of the total participation, there are 1,896 employees with 10 years or more service with the company.

Profit sharing has encouraged employee interest in producing and increasing profits because the individual employee will share in those profits. In addition, the success and growth of Motorola profit sharing has helped to encourage experienced personnel to remain with the company. Profit sharing emphasizes the common interest between employees, the stockholders, and the company.

The Motorola Profit Sharing Council, having a representative from each principal Motorola facility, assists the Advisory Committee in communicating profit sharing information to employees. Below, councilors gather in Chicago for first official meeting. (L. to R.) first row: Marty Abenanti, South Plant, Chicago; Bill Bashem, Edgington Plant, Chicago; John Bleistein, Arcade; Ken Bowen, Quincy; Bob Brach, Research, Phoenix; and Marge Donahue, CMEC, Chicago. Second row:

Nick Gill, Flournoy Plant, Chicago; Bill Hull, Semiconductor Plant, Phoenix; Ann Just, WMEC, Phoenix; Al Murawski, Communications, Chicago; Carl Ohlund, Riverside; and Ed Paczosa, North Plant, Chicago. Third row: Mike Rekowski, Cicero Plant, Chicago; Ted Rybicki, Clybourn Plant, Chicago; Jay Schude, Motorola-Chicago; Chuck Yost, Franklin Park; and Ed Wolfgram, Lamon Plant, Chicago. Standing: Mike Rosnick, Ray Orth, and Frank Maher, profit sharing representatives.





MOTOROLA INC.

4545 WEST AUGUSTA BOULEVARD, CHICAGO 51, ILLINOIS

Major Facilities Located In:

Arcade, New York

Chicago, Illinois

Franklin Park, Illinois

Quincy, Illinois

Minneapolis, Minnesota

Phoenix, Arizona

Riverside, California

Santa Monica, California