











# Motorola

Annual Report Television
Home Radios
Car Radios
Two-Way Communications
Military Electronics

## Motorola Inc.

4545 AUGUSTA BLVD., CHICAGO 51, ILLINOIS

The annual meeting will be held on Monday, May 5, 1952. A notice of the meeting, together with a form of proxy and a proxy statement, will be mailed to stockholders on or about April 14, 1952, at which time proxies will be solicited by the management.

### Board of Directors

Paul V. Galvin

Robert W. Galvin

Matthew J. Hickey, Jr. President, Hickey & Company

George R. MacDonald

Daniel E. Noble

Frank J. O'Brien

Walter H. Stellner

Elmer H. Wavering

### Officers

Paul V. Galvin President

Robert W. Galvin

Executive Vice-President

Elmer H. Wavering Vice-Pres. in Charge of Products Division

Frank J. O'Brien Vice-Pres. in Charge of Purchasing

Daniel E. Noble
Vice-Pres. in Charge of Communications
and Electronics Division

William H. Kelley Vice-Pres. in Charge of Sales

Edwin P. Vanderwicken
Vice-Pres. in Charge of Finance and Treasurer

Charles E. Green Secretary

### Transfer Agents

Chemical Bank and Trust Co. 165 Broadway, New York 15, New York

Harris Trust and Savings Bank 115 West Monroe Street, Chicago 90, Illinois

### Registrars

Irving Trust Company
One Wall Street, New York 15, New York

Continental Illinois National Bank and Trust Company of Chicago 231 South LaSalle St., Chicago 90, Illinois

# A review of

# the past 10 years at Motorola

Year	Net Sales	Net Earnings	Net Earnings Per Share <sup>1</sup>	Working Capital	Investment in Plant and Equipment <sup>2</sup>	Net Worth
1942	\$ 30,918,014	\$ 858,456	\$ .98	\$ 2,048,294	\$1,209,574	\$ 3,377,949
1943	78,454,461	1,259,302	1.43	2,854,250	1,345,746	4,405,889
1944	86,946,631	1,448,351	1.65	3,133,942	1,913,486	5,672,512
1945	67,896,597	851,882	.97	4,671,851	1,273,523	6,311,719
1946	23,201,107	656,286	.75	5,862,933	2,464,598	8,733,345
1947	46,679,148	2,510,410	2.85	7,028,844	2,811,211	10,635,345
1948³	61,981,442	3,550,347	4.04	11,088,342	3,148,206	13,085,196
19494	81,803,358	5,280,196	6.00	14,558,505	4,071,987	17,165,391
19504	177,104,669	12,809,247	14.56	21,079,362	5,794,309	26,574,638
19514	135,285,086	7,289,102	8.29	29,056,342	9,159,487	31,648,532

<sup>&</sup>lt;sup>1</sup>Earnings per share of common stock based upon 879,605 shares outstanding at December 31, 1951.

<sup>&</sup>lt;sup>2</sup>Net investment after deduction of depreciation reserves.

<sup>&</sup>lt;sup>3</sup>Thirteen month period ended December 31, 1948.

<sup>\*</sup>Consolidated information including financial data of whollyowned subsidiaries.

### President's Report to Stockholders of Motorola

The year 1951 was one of progress for Motorola although sales and earnings were considerably lower than those for the previous year. Consolidated net sales of \$135,285,086 were 24% below 1950 sales and net earnings of \$7,289,102 were 43% under the 1950 figure. 1951 earnings were equal to \$8.29 per share of common stock outstanding.

In a sense the past year tested the ability of your company to adjust to an unfavorable market condition which was the reverse, and partly the result, of scare buying following the outbreak of war in Korea. This condition did not find the company unprepared, however, and neither the company nor its distributors was affected to the degree which normally would have been expected. Despite a low point of sales during midsummer, a comfortable earning position was maintained each month. Actually, for purposes of analysis, the years 1950 and 1951 are better viewed as a unit than by comparison of one with the other.

Important advances in design of television sets achieved by our engineering department saved large amounts of scarce metals and so enabled the

company to sustain high output. These improvements also resulted in better performing sets which were sold at lower prices. I believe the superior design and quality of our television sets, together with lower prices and aggressive merchandising methods, further strengthened the position of the company during 1951.

Communications and electronic equipment sales, which include electronic equipment for the defense effort, increased in 1951 over 1950. Development work and preparation for production of military electronics were important activities but they do not reflect in the figures in the way that actual production does. There will be a considerable increase in military production in 1952.

Motorola completed and placed in operation last year the first large microwave radio communications system for industrial use. It extends for about 1000 miles, paralleling a major midwest gas pipeline. Other similar systems were completed and have already proved themselves in operation.

During the year the complete lines of auto, home and portable radios were redesigned and then presented to our distributors in February, 1952. These are important segments of our business which, under pressure in recent years for television development and production, have carried on under their own momentum but now justify this special attention.

#### FINANCIAL CONDITION

At December 31, 1951 the consolidated working capital amounted to \$29,056,342, an increase of \$7,976,980 over the previous year-end. Current assets were 2.30 times current liabilities at the end of 1951 compared with 1.79 a year earlier. Consolidated net worth increased \$5,073,894 during the year. Additional funds were acquired by refinancing in November of the company's note payable to Prudential Insurance Company which resulted in \$6,298,000 added working capital.

During the year the company purchased a plant containing 204,000 sq. ft. of floor space adjoining its main location in Chicago which, with added facilities and other improvements, resulted in an increase of \$3,365,178 in plant and equipment accounts after allowance for depreciation. The company's investment in subsidiary corporations increased about \$600,000, largely as the result of formation of a new company in New York City to carry on the distribution of Motorola products there.

#### **DIVIDENDS**

Regular quarterly dividends of 50c per share were paid in 1951 plus a 10% stock dividend paid in January, 1951. In December, 1951 the Directors raised the quarterly dividend to 62½c per share and

declared an extra cash dividend of 37½c per share, making a total of \$1.00 per share paid in January, 1952. In view of the increasing amount of working capital required and the facilities added in 1951, the Directors were of the opinion that continuation of a conservative dividend policy was in order.

At the close of the year there were 3,250 Motorola stockholders. Directors, officers and their immediate families owned directly or beneficially 290,793 shares of Motorola stock.

#### PROFIT SHARING

The primary purpose of Motorola's profit sharing plan is to encourage employees to participate somewhat as partners in this enterprise. Under this plan members share in the profits of the company according to a formula. Thus their interest in the business becomes more than one of mere employment. We believe they consequently derive more real satisfaction from their work as well as share the stockholders interest in the efficient operation of the business. The trust fund serves to build up means for retirement through savings placed in the fund by employees, the sharing in company profits and the income of the fund itself.

On December 31, 1951, 5,287 employees were participating in the fund and since its inception in 1947 the fund has grown to a market value of \$10,552,794, made up of about \$4,500,000 in government bonds, \$1,600,000 in corporate bonds and \$1,400,000 in corporation stocks. The balance of the fund was in cash and receivables. At the year-end the fund owned 10,175 shares of Motorola common stock.

STOCKHOLDERS OF MOTOROLA

#### **FUTURE**

Viewing the prospect of Motorola for 1952, I think it is a reasonable expectancy, in the light of known factors, that we shall have as good and probably a better year than 1951. Total sales volume should be greater, but net profit after taxes cannot increase greatly for the reason that excess profits taxes cut into earnings sharply, leaving only a relatively small amount to accrue to the common stock.

Although the outlook is somewhat spotty for sales of certain products and in some territories, radios sold to car manufacturers are probably the only line that will experience an over-all decline in 1952. This will be because car manufacturers are expected to build fewer automobiles.

It is probable that the long existing prohibition on construction of new television stations will soon be lifted by the Federal Communications Commission. At the same time we shall probably see the extension of the coaxial cable to important cities including Miami, New Orleans, Oklahoma City, Dallas, Fort Worth and Houston. These developments will result in opening of new markets for sales of television sets. The two major political conventions and campaigns coming in 1952, as well as the improving quality of television entertainment, will further stimulate interest in television. I therefore see 1952 a good year for television sales and we expect to get at least our share of the business.

As indicated previously, with complete new lines of home, portable and car radio sets for 1952, we propose to pursue vigorously the merchandising of all these products and expect a marked increase in sales for the year.

In the field of technical communications equipment our prospects are excellent. New uses are being found and recent developments such as microwave radio relay systems are only now proving their value to potential users. The reputation of Motorola for engineering skill and quality of product in these new lines is firmly established. In our opinion much of the potential of microwave is unknown at this time, but we judge future prospects to be very encouraging.

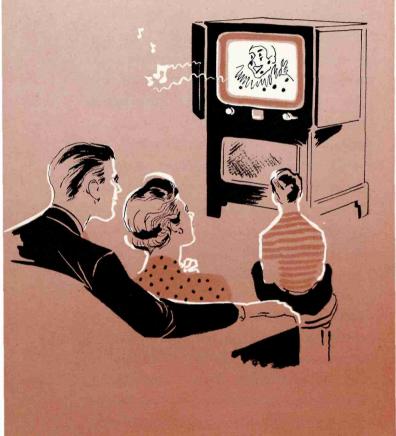
With the completion of the initial stages of tooling and preparation for some military production contracts behind us, production will increase and I anticipate that military billings will account for the largest portion of the expected increase in sales of the company in 1952.

In the main, we have confined our appraisal of the future to 1952 prospects, but we would be remiss if we did not express an opinion that potentially the electronics industry is among the most promising for future revolutionary developments. We, at Motorola, are fully aware of this prospect and to that end we will continue aggressively to pursue important research and development opportunities.

In behalf of Management, it is again a pleasure for me to express sincere thanks to employees, customers, stockholders and suppliers for the confidence and cooperation they gave in making 1951 a successful year for Motorola, Inc.

President
For the Board of Directors

# Motorola



# Television and Radio

**TELEVISION**—Motorola continued to maintain its strong position in the television industry during 1951 by scooping the industry on many new developments.

Among the outstanding features that helped keep Motorola television receivers in a best selling position were a new "Concentrated Power" chassis incorporating a new simplified design, Glare Guard anti-reflection screen, Acoustinator Tone Control, and Area Selector Switch for improved local and distant signal pick-up.

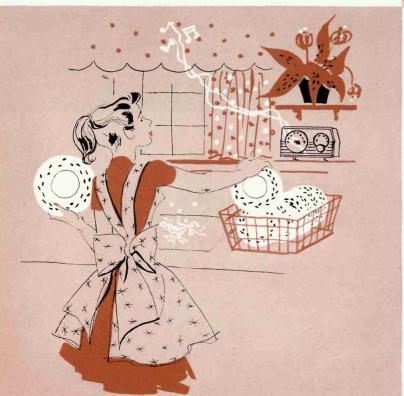
All Motorola sets are easily adapted to Ultra High Frequency reception through the installation of a built-in unit or by using the new Motorola self-contained Strato-tuner which is readily installed by the customer.

car radio—Motorola's top leadership in car radio continued through 1951. To strengthen our position a new, simplified, custom car radio line has been engineered and developed to allow for greater flexibility in sales and installation. This new series was introduced recently and has been given enthusiastic endorsement.



clock radio combination, introduced in 1950, has become extremely popular in the past year and is providing substantial volume. It is featured in three striking colors. The clock radio is equipped with an alarm, an appliance plug and a slumber switch, all operating automatically. Indications are that 1952 will prove to be another excellent Motorola clock radio year.





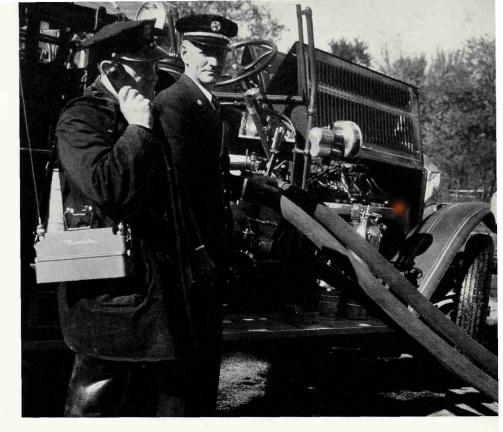
**TABLE RADIO**—During the past year Motorola developed, and early in 1952 introduced, a complete new line of table radios, including an AM-FM receiver with improved sensitivity and finer tone.

With the trend toward smaller radios, emphasis was placed on compact size through new chassis engineering and modern styling with the use of handsome colors on sturdy plastic cabinets.

PORTABLE RADIO—In the field of portable radios in 1951, your company featured three models in a wide range of prices, styles and colors. Early in 1952 four new models were introduced which featured streamlined size, durable cabinets of sturdy plastic or armored steel, and exceptional sensitivity.







# Motorola Turo-way Communications

The Communications and Electronics Division of Motorola in 1951 moved into a newly acquired building just east of the main plant in Chicago. This new building adds over 200,000 square feet of plant and office space and permits consolidation on an efficient basis of all activities (except military electronics) of this growing division.

Principal civilian activities of this division are the design, manufacture and sale of:

- 1) Two-way mobile radio systems which provide means of sending and receiving FM radio communications between a dispatching center and mobile units such as police cars and taxis.
- 2) Microwave radio relay systems. These comprise a series of relay towers spaced at intervals of about 25 miles which, together with transmitting and receiving equipment, provide economical communication over long distances by radio. Pipeline, railroad and industrial companies offer a large potential market for these systems.
- 3) Carrier and control systems which are used for multiple radio communications over a single electric power line. In addition, Motorola furnishes electronic equipment as

a means for metering and controlling remote power distribution functions from a central point.

Sales of Motorola two-way mobile radio equipment continued high, the principal purchasers being fire and police departments, taxi-cab companies, construction, public utility, pipeline, railroad and other industries for varied applications including materials handling and production and inventory control. Motorola has maintained its leadership in this expanding business, its sales accounting for well over half of the industry's total in this field.

Early in 1951 Motorola placed in operation for the Mid-Valley Pipeline Co. a 1000-mile microwave system and in December another 1000-mile system, this one for the Texas Illinois Natural Gas Pipeline Company, was completed. These are the two largest, operating, industrial microwave systems in the world. Motorola has installed and put into operation more than 21 microwave relay systems, and has the lead position in this field.

Power line carrier equipment sales increased as a result of Motorola's superior design which provides more channels of communication over longer distances with less interference than previously were attainable.





# Motorola Military Electronics

Motorola's Military Electronics Department was formed in the early part of 1951 to handle military business for the company. This department, principally located at our Clybourn Avenue plant in Chicago, has its own purchasing, engineering, production and administrative departments. The entire facilities of this plant, consisting of 178,000 square feet, will eventually be devoted to military business. From the standpoint of design and development, production and accounting records, military business is like a new business. Because of the continued growth of this segment of the business its separation from other lines appeared desirable.

Motorola's military contracts relate to many types of electronic equipment. Development contracts, under which the company undertakes to design and create a piece of military equipment, are largely handled in the engineering laboratory in Phoenix, Arizona. Production is effected at the Clybourn plant in Chicago. The policy of the company has been to limit its military activities to the field of electronics in which its skill and knowledge may be applied efficiently and economically.

While it is impractical to describe the nature of Motorola's military contracts, it can be stated that in the event of war or an accelerated defense program the company would be prepared to produce a large volume of important military equipment.

Military production in 1952 is expected to increase to a point where it will become a substantial segment of the business whereas in 1951 development contracts, which result in relatively small dollar income, were the principal military activity. Most government business is done on smaller than normal margins and is then subject to price redetermination, renegotiation and, of course, taxes. It therefore tends to dilute the earning power of the company.

During the last war Motorola was recognized by the government as an important supplier of equipment. Technical contributions, such as the development and production of the now famous Handie-Talkie and Walkie-Talkie radios, and Motorola's outstanding production record, earned for the company a lasting reputation for quality and performance. Motorola is again eager to make its best contribution to the defense effort.

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# Merchandising and Advertising





Merchandising activities for 1951 included a successful sales training program, in which 35,000 dealers' personnel participated, and an improvement in the service activities in many territories. Dealer window and floor displays of Motorola products were promoted through an effective display contest. Dealer identification through the use of outdoor and window signs showed further progress; over 5,000 neon signs were placed in dealers' stores in 1951.

In 1952 it is planned further to improve the merchandising effort, both through more effective promotion and more accurate direction of that effort. Emphasis will be placed on market forecasting, particularly with respect to such developments as the lifting of the Federal Communications Commission "freeze" on new stations and the effect of more VHF and UHF stations on the marketing program.

Motorola's advertising program continued through 1951 at the same aggressive pace that was set in 1950. At the conclusion of the year, surveys clearly indicated that Motorola's position in the industry had been strengthened and its acceptance by the consuming public definitely increased.

Campaigns in leading magazines gave Motorola good national coverage. Radio spots were used extensively. During the year the company sponsored the Four Star Revue on television, MacArthur's return to Washington and, at the conclusion of the year, the East-West football game on a coast-to-coast network.

The central theme of the current television advertising program is "The Picture Tells The Story". Comparison will prove that Motorola TV is best.

# rola

# Plants and Personnel





During the year a program of plant rearrangement was carried out. The Communications and Electronics Division was consolidated in its new building adjoining the main plant in Chicago, except for military production which was centered at the Clybourn plant in Chicago. Further rearrangement to gain efficiency in production in other plants is in progress.

Motorola-Chicago Co., the company's subsidiary which distributes its products in Chicago, moved into a new building constructed for its purposes on North Pulaski Avenue in Chicago, containing 54,000 sq. ft. of warehouse and office space. Motorola-Detroit Co., acquired land in Detroit for later construction.

Total plant and office area now exceeds 1,200,000 square feet in Chicago, Quincy, Phoenix, New York, Philadelphia and Detroit.

Motorola recognizes that its men and women are the most important factor in the company's success and endeavors to give them opportunity for satisfaction in their work. Motorola seeks to build the spirit of an organization in dynamic movement with every person doing his best and accommodating himself to others to the end of achieving a mutual goal. There is personal satisfaction for employees in participating as members of the flexible, hard-hitting, scoring team which is the Motorola family.

Wage and salary rates are equal to the highest in the industry and there is a cost of living wage escalation program, a broad and liberal welfare program and a profit sharing plan, all tangible evidence that Motorola is a desirable place to work.

At the year-end there were 6,640 employees.

## Motorola Inc.

AND SUBSIDIARIES

Consolidated

Statement

of

Financial

Condition

	DECEMBER 31	
	1951	1950
Current Assets:		
Cash	\$ 8,527,985	\$11,289,747
United States Government obligations—short term, at cost	5,976,180	3,995,920
Accounts receivable (less reserve for uncollectible accounts—		
1951, \$215,000; 1950, \$202,500)	11,541,614	12,091,412
Other current receivables	1,431,242	289,567
Inventories	23,600,510	19,822,645
Prepaid expenses	366,555	413,952
TOTAL CURRENT ASSETS	\$51,444,086	\$47,903,243
Current Liabilities:		
Notes payable (by subsidiaries)	\$ 485,227	\$ 145,742
Accounts payable and sundry accruals	11,785,288	10,391,366
Accrued taxes	8,348,673	15,016,115
Dividend payable	879,605	400,000
Reserves for product warranties	888,951	870,658
TOTAL CURRENT LIABILITIES	\$22,387,744	\$26,823,881
	<u> </u>	420/020/00
WORKING CAPITAL (excess of current assets over current liabilities)	\$29,056,342	\$21,079,362
Deferred items applicable to future periods	401,196	529,733
Sundry assets	276,396	275,338
Equipment leased to others—less depreciation	444,762	259,665
Plant and equipment—less depreciation	9,159,487	5,794,309
Patents and trademarks—less amortization	92,841	81,767
TOTAL WORKING CAPITAL AND OTHER ASSETS	\$39,431,024	\$28,020,174
Long-term debt less (in 1950) current prepayment requirements	7,750,000	1,395,000
Excess of assets over liabilities	\$31,681,024	\$26,625,174
Deduct deferred television service and warranty income	32,492	50,536
STOCKHOLDERS' EQUITY	\$31,648,532	\$26,574,638
	φ31,046,332 ———————————————————————————————————	\$20,37 4,036
Stockholders' Equity Represented By:		4
Capital stock—\$3 par value; 1951, 879,605 shares;	¢ 2420015	\$ 2,400,000
Capital stock—\$3 par value; 1951, 879,605 shares; 1950, 800,000 shares	\$ 2,638,815	
Capital stock—\$3 par value; 1951, 879,605 shares; 1950, 800,000 shares	4,173,217	1,227,832
Capital stock—\$3 par value; 1951, 879,605 shares; 1950, 800,000 shares		\$ 2,400,000 1,227,832 22,946,806 \$26,574,638

## Motorola Inc.

AND SUBSIDIARIES

### CONSOLIDATED STATEMENT OF INCOME AND EXPENSE

	YEARS ENDED DECEMBER 31		
	1951	1950	
Sales	\$135,285,086	\$177,104,669	
Other income	559,443	736,147	
Total income	\$135,844,529	\$177,840,816	
Deduct:			
Manufacturing and other costs of sales	\$101,488,878	\$129,659,612	
Selling, service and administrative expenses	16,473,029	18,823,521	
Contribution to employees' profit-sharing fund	2,938,449	2,295,901	
Provision for federal and state taxes on income	7,400,128	13,890,323	
Other expenses	254,943	362,212	
Total deductions	\$128,555,427	\$165,031,569	
Net income	\$ 7,289,102	\$ 12,809,247	

### CONSOLIDATED STATEMENT

OF	SURPLUS	

YEARS ENDED DECEMBER 31

	1731		1730			
	Paid-in Surplus	Earned Surplus	1	Paid-in Surplus		Earned Surplus
Balances, beginning of year	\$1,227,832	\$22,946,806	\$	1,227,832	\$	13,537,559
Net income for the year		7,289,102				12,809,247
Total	\$1,227,832	\$30,235,908	\$	1,227,832	\$	26,346,806
Cash dividends declared: \$2.50 per share, 1951; \$4.25 per share, 1950		\$ 2,199,013			\$	3,400,000
Stock dividend —10%: 79,605 shares at \$40.00 per share (fractional shares paid in cash, \$16,195)		3,200,395				
Excess of value fixed by the directors over par value	\$2,945,385*	- 1				
Total	\$2,945,385*	\$ 5,399,408	\$		\$	3,400,000
Balances, end of year	\$4,173,217	\$24,836,500	\$	1,227,832	\$	22,946,806
* Addition						

Consolidated

Statements

of Income

and Expense

and Surplus

### Notes to Financial Statements

Inventories are valued at the lower of cost or market, on a first-in first-out basis. The inventories on December 31, 1951 and 1950 are detailed as follows:

	1951	1950
Finished stock	\$ 3,402,244	\$ 3,416,294
Government contracts in process	5,230,774	830,778
Other work in process	563,560	758,437
Raw materials and supplies	14,403,932	14,817,136
Total	\$23,600,510	\$19,822,645
Plant and equipment on December 31, 1951 and 1950, at cost, are detailed	l as follows:	
	1951	1950
Buildings and equipment—less depreciation	\$ 8,101,858	\$ 5,134,936
Dies—less amortization	464,575	252,788
Land	593,054	406,585
Total	\$ 9,159,487	\$ 5,794,309

Depreciation included in costs and expenses (including amortization of emergency facilities), for the year ended December 31, 1951, totaled \$521,320.

The company is defendant in a lawsuit brought by a former distributor, in which the plaintiff alleges damages of \$1,320,000, with a request for trebling. In the opinion of company counsel, there is only a remote, if any, possibility that the company will be held liable in any amount.

On December 31, 1951, long-term debt consisted of the following:

33/4% promissory note, due November 1, 1966 (fixed annual sinking	
fund payment requirements of \$500,000 commencing January 1,	
1953)	\$ 7,500,000
Real estate mortgage of subsidiary, 4%, due August 15, 1966	250,000
Total	\$ 7,750,000

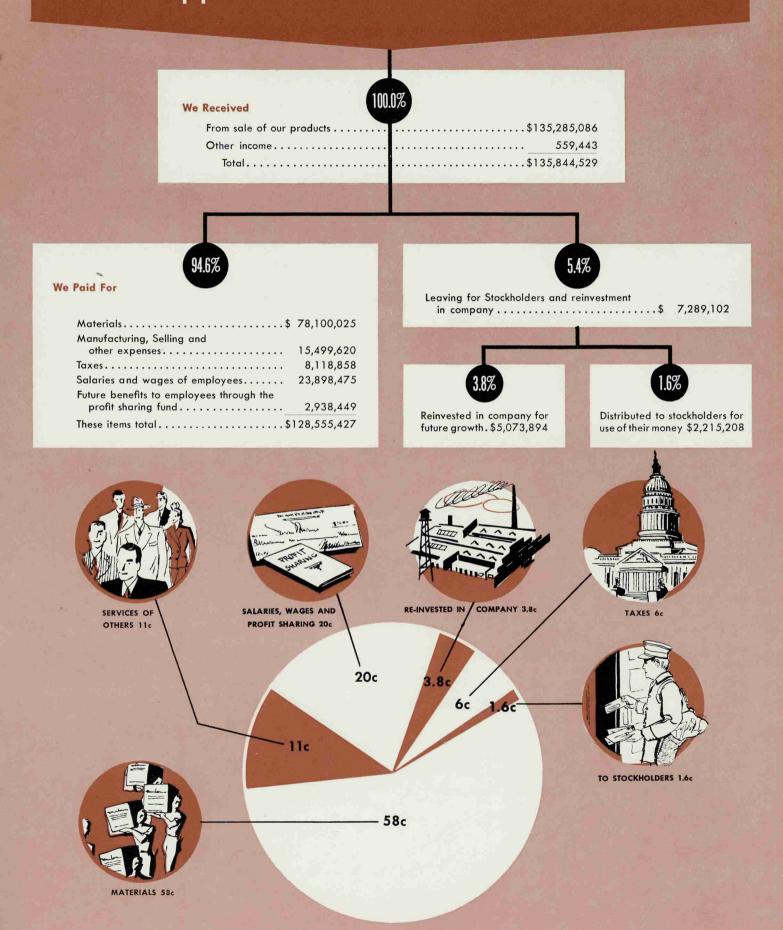
In accordance with restrictive terms of the loan agreement for the  $3\frac{3}{4}$ % promissory note, earned surplus of the parent company in the amount of approximately \$2,555,000 was available on December 31, 1951 for the payment of cash dividends or repurchase of the company's stock.

On December 31, 1951 the company was contingently liable with respect to notes receivable discounted in the amount of approximately \$255,000.

The federal income and excess profits tax returns of the company and its subsidiaries for fiscal years subsequent to December 31, 1949 are subject to review by the Treasury Department.

The company's business under Government contracts is subject to price renegotiation, in accordance with federal statute. No provision has been made in the accounts for renegotiation refund, as the amount thereof (if any) is presently indeterminable.

## What Happens to the Motorola Sales Dollar



## Auditor's Report

#### BAUMANN, FINNEY & CO.

Certified Public Accountants
208 SOUTH LA SALLE STREET
CHICAGO 4, ILLINOIS

Board of Directors, Motorola, Inc.

We have made examinations, for the year ended December 31, 1951, of the accounts of MOTOROLA, INC. (an Illinois corporation) and its subsidiaries, all wholly owned.

Our examinations were directed primarily to the verification of the financial condition of the companies on December 31, 1951, and included a general review of the income and expense accounts, but without a detailed audit of the transactions for the year; they were made in accordance with generally accepted auditing standards applicable in the circumstances, and comprised such tests of the accounting records and supporting evidence and such other auditing procedures as we considered necessary.

In our opinion the accompanying balance sheet and related statements of income and expense and surplus, as footnoted, present fairly the consolidated financial position of Motorola, Inc. and its subsidiaries on December 31, 1951 and the results of their operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

BAUMANN, FINNEY & CO.

Chicago, Illinois March 5, 1952.







## Motorola Inc.



Shown on this page are four of Motorala's sixteen manufacturing, warehousing, sales and laboratory buildings.



23

years of leadership in electronics exclusively

Motorola Inc.