MOTOROLA ANNUAL REPORT 1965

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ABOUT THE COVER The dramatic overview of San Jose, California, symbolizes an American community on the move. The same photograph introduces a special pictorial section on pages 15-24 showing how Motorola's diverse products serve in the daily life of just one of America's many dynamic cities.

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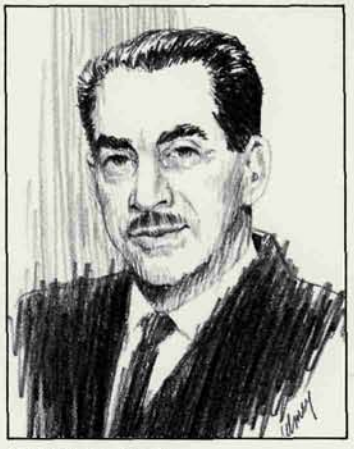

ARTHUR L. REESE

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HIGHLIGHTS OF 1965

Motorola's finest year in sales and earnings

World's largest manufacturer of silicon semiconductors

Third position in color TV, a leader in rectangular color sales

First all-solid-state 2-way radio base stations

Accelerated deliveries for Viet Nam

Auto stereo tape player featured by Ford

Business overseas up over 25%

More than $30,000,000 expended in research & development

Color TV picture tube plant ready

Plans for 2,400,000 feet of plant expansion

Perfect performance on space flights

$12,000,000 in fuze contracts

TO THE SHAREHOLDERS:

The year 1965 was the most challenging and rewarding in Motorola's history.

Sales of $516,973,065 were 23% over the $419,066,694 in 1964. Earnings of $31,838,678 or $5.23 per share were 54% above the $20,666,724, or $3.41 per share for the previous year.

During the year public attention was focused on the explosive demand for color television. This favored Motorola along with other companies taking a leading role in this product.

This newsworthy development tended to overshadow advances made by the company in other products. The fact is that all six of Motorola's product divisions scored gains in sales and contributed to the earnings increase for the year.

The semiconductor products division again attained a remarkable percentage sales increase to continue its growth at a pace well above that of the industry. Integrated circuit dollar volume tripled over the year before. The division is now the largest supplier of silicon semiconductor devices in the world. The year ahead looks equally promising for continued sales growth.

Our communications division, which has for years maintained a strong rate of growth, exceeded the rate of previous years in 1965, with an attractive profit return. The division continues to lead its competition in the established mobile and portable two-way radio lines, and to set the pace in newer types of FM paging and hospital communications systems.

A major dollar gain in both sales and earnings was scored by consumer products. This reflected the color TV upsurge and the full recovery of the outlay of previous years in the development of a rectangular color tube. It also reflects the fine public acceptance of new stereo record play-

ers, black and white television, car radio sales in the after-market, and radios for the home.

In 1966 the division is targeted for color television sales volume at least 2½ times the 1965 total and color television tubes continue to be the limiting factor. Our new color picture tube plant came on stream in the first quarter of 1966. The major portion of our color picture tubes will be purchased outside this year, and about one half will be purchased outside in subsequent years.

The company's participation in military and space programs was at a level higher than in 1964 and continued in the customary 12-15% range of our total business. Motorola equipment has a perfect record on all space probes. Work progressed on the important Agena and Apollo contracts. During the year the military electronics division complied with defense department requests for accelerated deliveries and increased quantities of certain items for Viet Nam.

The automotive products division was hampered by a strike situation at one major customer for car radio and alternators, but finished the year with a sales gain. There was an increase in sales of alternators to a widening variety of customers. The requirement for stereo tape players by Ford Motor Company was greater than had been initially anticipated.

A large percentage gain in sales was attained by the newest and smallest division, control systems. Two large contracts, one approaching a million dollars, aided this growth. The division continues to operate at a loss, but has reached an important marketing milestone.

Our business overseas showed a substantial increase and new relationships were formed. We continue to support the voluntary balance of payments program.

As good a year as 1965 was, it was also an important year in planning for the future. And we entered 1966 with the largest capital expenditure program, by far, in our history.

In early 1965, the company occupied some 4,000,000 square feet of space. By year end, 1966, we expect to be occupying nearly 6,400,000 feet of space. During these two years we shall have entered, as a major employer, three more U.S. communities and three abroad which were totally new to us.

To illustrate the dimension and complexity of the facility expansion problem, we have included with this annual report a special booklet showing the present and projected space requirements and facilities.

Capital expenditures for enlarged and new facilities in 1965 were $25,173,248, almost double the average for the preceding five years of $14,000,000. For 1966 the capital investment will approach $45,000,000.

The company has arranged for a $30,000,000 revolving credit with eight banks for three years, convertible at the company's option to a five year term loan. While the company's financial position is strong, it was deemed prudent to have available adequate funds for the proposed capital expenditures and the increased working capital required for substantially larger sales volume.

Because of these large requirements, we feel that any change at this time in the cash dividend would not be in the best interest of shareholders. As a part of this judgment, we do not now anticipate a stock split, which otherwise would accompany an increase in the cash dividend.

During 1965 the management of the company was strengthened. Daniel E. Noble, the company's chief technical officer was named vice chairman of the board. He continues as group executive for the four technical operating divisions. C. Lester Hogan, vice president and general manager of the semiconductor division, was elected to the board of directors. Edwin P. Vanderwicken was advanced to executive vice president for finance, and Arthur L. Reese to executive vice president in charge of the consumer products division. William J. Weisz was advanced to vice president and general manager, communications division, and Oscar P. Kusisto to vice president and general manager of the automotive division. John A. Hubeny moved from controller to vice president and controller. New officers elected were John T. Hickey, vice president, planning; Lewis D. Spencer, vice president and general attorney; and Roger C. Smith, treasurer.

Taken altogether, or product by product, our competitive posture has never been stronger. Our major product categories should resist any moderate fluctuations in the gross national product or the nation's commitments at home or abroad.

The atmosphere within the company at all levels of responsibility is one of zest for the challenges ahead. On all sides we see evidence of personal initiative to maximize each individual's influence on the company's success. This springs naturally from the company's profit sharing concept and the high respect in which excellent performance is held.

For this spirit of enthusiasm and personal initiative we are grateful to all Motorolans throughout the world. It makes the responsibility of management still more rewarding to see this demonstration of "reaching out."

FOR THE BOARD OF DIRECTORS

CHAIRMAN OF THE BOARD

PRESIDENT

MARCH 14, 1966

CONSOLIDATED BALANCE SHEET *as of December 31*

Motorola, Inc. and Subsidiaries

ASSETS	1965	1964
CURRENT ASSETS		
Cash	$ 9,311,856	$ 7,922,825
Short-term investments, at cost	21,059,960	7,027,114
Accounts receivable		
United States government	14,059,782	13,528,545
Other	73,243,350	66,798,241
Allowance for doubtful accounts	(2,665,799)	(2,473,803)
Costs recoverable under United States government contracts, less progress billings	8,130,556	5,403,575
Inventories, at the lower of cost (first-in, first-out) or market	67,263,601	60,280,741
Other current assets	3,556,119	2,656,833
TOTAL CURRENT ASSETS	193,959,425	161,144,071
Plant and equipment—less depreciation (note 1)	81,082,588	67,836,835
Sundry assets, net	4,219,466	3,099,867
	$279,261,479	$232,080,773

NOTES TO FINANCIAL STATEMENTS

1 The companies' investment in plant and equipment at December 31, 1965 and 1964 was as follows:

	1965	*1964*
Land—at cost	$ 5,186,181	$ 3,488,342
Buildings—at cost, less depreciation (1965, $18,902,917; 1964, $16,179,559).	43,815,023	39,698,127
Machinery and equipment—at cost, less depreciation (1965, $25,498,763; 1964, $22,250,963)	29,039,687	22,260,707
Dies, tools, and leasehold improvements —at cost, less amortization	3,041,697	2,389,659
	$81,082,588	$67,836,835

2 Long-term debt at December 31, 1965 and 1964 consisted of the following:

	1965	*1964*
4¾% debentures due April 1, 1986 (with annual sinking fund requirements commencing in 1967)	$30,000,000	$30,000,000
Notes payable:		
3¾%, due $1,500,000 in 1966 and $500,000 annually thereafter to 1972	4,500,000	5,500,000
4⅜%, due $500,000 annually, 1966–1976	5,500,000	6,000,000
Real estate mortgages	632,218	1,103,150
	40,632,218	42,603,150
Less current maturities, included in current liabilities	2,317,766	1,573,931
Noncurrent portion of long-term debt	$38,314,452	$41,029,219

LIABILITIES AND SHAREHOLDERS' EQUITY	1965	1964
CURRENT LIABILITIES		
Current maturities of long-term debt	$ 2,317,766	$ 1,573,931
Accounts payable	32,301,338	19,251,327
Accrued compensation	6,348,538	4,081,544
Federal income taxes, less United States Treasury obligations of $18,404,814 in 1965 and $13,191,650 in 1964	—	897,102
Other (including withheld) taxes	5,182,528	5,461,114
Contribution to employees' profit sharing fund	11,442,542	6,947,697
Product and service warranties	2,973,026	2,079,931
Other	15,379,007	13,225,486
TOTAL CURRENT LIABILITIES	75,944,745	53,518,132
Long-term debt (note 2)	38,314,452	41,029,219
SHAREHOLDERS' EQUITY		
Capital stock, $3.00 par value (note 3) Authorized: 1965, 10,000,000 shares; 1964, 6,000,000 shares Outstanding: 1965, 6,088,868 shares; 1964, 4,035,822 shares	18,266,604	12,107,466
Additional paid-in capital (note 3)	16,083,471	14,486,641
Retained earnings (note 2)	130,652,207	110,939,315
TOTAL SHAREHOLDERS' EQUITY	165,002,282	137,533,422
	$279,261,479	$232,080,773

Early in 1966, the company arranged a $30,000,000 revolving credit, convertible to a term loan on or prior to February 1, 1969. The agreement contains provisions restricting, among other things, the payment of cash dividends which are not to exceed $10,000,000 plus earnings after December 31, 1965. It also requires the company to maintain consolidated working capital of not less than $75,000,000.

3 Under the Employee Share Option Plan adopted in 1960, options have been granted to key employees to purchase Motorola, Inc. shares at not less than 95% of market value at date of grant if granted prior to January 1, 1964 and at 100% of market if granted thereafter. The options become exercisable two years after date of grant; they expire at the end of ten years, if granted prior to January 1, 1964 and five years if granted thereafter, and are contingent upon continued employment by the company or its subsidiaries.

During 1965 options to purchase 30,000 shares were granted, options on 2,100 shares were terminated, and options on 35,135 shares were exercised; the excess ($1,596,830) of the option price over the par value of the capital stock issued was credited to additional paid-in capital. At the year end 109,810 shares were under option, at an aggregate option price of $6,331,068, of which 80,560 shares were currently exercisable, in the total amount of $3,878,924. Authority to grant options under the plan terminated during 1965.

4 The companies are obligated under repurchase and other agreements, principally in connection with the financing of sales of products to consumers, and are defendants in suits and claims, which it is believed will have no material effect on the business of the companies.

STATEMENT OF CONSOLIDATED EARNINGS AND RETAINED EARNINGS *Motorola, Inc. and Subsidiaries*

YEARS ENDED DECEMBER 31	1965	1964
SALES AND OTHER REVENUES	$516,973,065	$419,066,694
Manufacturing and other costs of sales	359,486,354	294,060,184
Selling, service, and administrative expenses	76,023,648	67,875,746
Depreciation of plant and equipment	10,202,882	9,235,479
Contribution to employees' profit sharing fund	11,442,542	6,947,697
Interest and amortization of debenture expense	1,978,961	2,020,864
TOTAL COSTS AND OTHER EXPENSES	459,134,387	380,139,970
Income before federal income taxes	57,838,678	38,926,724
Federal income taxes, net of investment credit of $923,000 in 1965; $1,272,000 in 1964	26,000,000	18,260,000
EARNINGS		
(per share outstanding at end of year: 1965, $5.23; 1964, $3.41, adjusted for share distribution)	31,838,678	20,666,724
Retained earnings at beginning of year	110,939,315	94,809,931
TOTAL	142,777,993	115,476,655
DEDUCT:		
Cash dividends declared (per share: 1965, $1.00; 1964, $.75, adjusted for share distribution)	6,068,033	4,537,340
Three-for-two share distribution—par value of 2,019,251 shares transferred to capital stock	6,057,753	—
TOTAL DEDUCTIONS	12,125,786	4,537,340
Retained earnings at end of year (note 2)	$130,652,207	$110,939,315

See accompanying notes to financial statements.

PEAT, MARWICK, MITCHELL & CO.
CERTIFIED PUBLIC ACCOUNTANTS,
CHICAGO, ILLINOIS

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

We have examined the consolidated balance sheet of Motorola, Inc. and subsidiaries as of December 31, 1965 and the related statement of earnings and retained earnings for the year then ended. 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 confirm accounts receivable from United States government departments or agencies by communication with them but we satisfied ourselves as to such accounts by means of other auditing procedures.

In our opinion, the accompanying consolidated balance sheet and statement of consolidated earnings and retained earnings present fairly the financial position of Motorola, Inc. and subsidiaries at December 31, 1965 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.

PEAT, MARWICK, MITCHELL & CO.

February 21, 1966

TEN YEAR FINANCIAL SUMMARY

	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
SALES AND OTHER REVENUES	$229,266,055	228,431,385	218,909,968	293,081,127	301,049,185	298,219,845	346,881,779	377,852,809	419,066,694	**516,973,065**
INCOME BEFORE INCOME TAXES	$ 16,936,334	15,756,431	15,171,013	27,756,237	26,548,813	19,900,308	26,514,514	27,126,526	38,926,724	**57,838,678**
EARNINGS	$ 7,966,817	7,824,431	7,356,213	14,171,237	12,633,813	9,517,308	13,206,514	12,926,526	20,666,724	**31,838,678**
EARNINGS PER SHARE*	1.37	1.35	1.27	2.39	2.09	1.57	2.02	2.14	3.41	**5.23**
WORKING CAPITAL	$ 54,936,569	56,425,360	59,585,830	63,336,998	73,790,019	95,078,616	96,804,189	92,358,852	107,625,939	**118,014,680**
NET INVESTMENT IN PLANT AND EQUIPMENT	$ 25,388,866	27,167,597	27,615,287	33,436,676	44,594,599	48,427,446	54,783,818	67,283,543	67,836,835	**81,082,588**
SHAREHOLDERS' EQUITY	$ 61,305,080	66,172,446	71,533,020	83,338,386	97,166,850	102,655,506	111,835,713	120,735,367	137,533,422	**165,002,282**

**Earnings per share are based on the number of shares outstanding at the end of the respective years, adjusted for share distributions.*

Earnings per share shown above for 1962 do not include 17¢ of nonrecurring capital gain from sale of finance subsidiary.

SEMICONDUCTOR PRODUCTS DIVISION

For the seventh consecutive year, record highs in both sales and earnings were established in the semiconductor products division. The dollar sales increase rate was substantially more than that of the industry.

The outstanding records resulted from the continued acceptance of existing product lines, new product developments, and the steadily growing market for Motorola integrated circuits.

The most significant development during the year was the introduction of a full line of high-performance, low-cost, plastic encapsulated silicon transistors. These devices, competing successfully with comparable quality transistors made anywhere in the world, are being widely accepted in the new and important consumer products market.

Late in the year, Motorola was issued four patents covering annular transistor devices, which use special structural techniques to provide both high voltage and the highest level of reliability and performance available from any existing transistor. The annular process has made it possible for the division to introduce a steady stream of improved, low-level, high-current and fast-switching silicon devices. As a result, the division became the largest producer of silicon semiconductor devices in the world.

The annular structure is also being used by Motorola in the production of other semiconductor devices, including integrated circuits, where its ability to prevent surface leakage is extremely important.

In the integrated circuits area, sales volume was stimulated by the growing demand by computer designers for the Motorola-developed MECL circuits, the introduction of three new linear (amplifier) integrated circuits, and the entry into production of three new major families of integrated logic circuits. With the addition of these families, the division now manufactures all of the major logic systems being used by the computer industry today.

The families include full lines of high-speed diode-transistor logic (DTL) circuits for military and industrial use, adjustable-performance variable threshold logic (VTL) circuits for numerous high-noise environment applications, and milliwatt resistor-transistor logic (RTL) circuits for space and military use. More than 200 integrated circuits are now available as standard, "off-the-shelf" types.

In addition to increased domestic market penetration, the division also made substantial progress in the development of its international marketing organization. A product and applications customer service center was established in Geneva, Switzerland. Together with the London sales office, established a year earlier, the service center will help increase Motorola's share of the fast-rising European military, industrial and consumer products semiconductor markets.

Also of continuing importance, because of the swiftly developing semiconductor science, there is the need to keep manufacturers abreast of the most recent advances in the state of the art. To this end, the division held an internationally successful integrated circuits seminar in Paris, France, and also published the first comprehensive integrated circuit applications textbook in the industry.

With the rapid increase in sales volume and spiraling production operations required to handle the resulting product demands, the division found itself literally overflowing the existing buildings. To partially satisfy the need for added space, several administrative office functions were moved to downtown Phoenix, Arizona.

The acquisition of an 80-acre tract in Mesa, Arizona and the construction in 1966 of additional facilities for a laboratory and production of integrated circuits will further relieve the problem.

While more types of semiconductor devices were produced at an ever increasing rate, continued attention was given to product quality in the manufacturing process. In August, the division became the first in its industry to participate in the national "Zero Defects" effort with the introduction of its PRIDE program. PRIDE is carefully planned and implemented to inspire employee pride and craftsmanship to assure continued high quality.

COMMUNICATIONS DIVISION

The communications division achieved record sales in all major segments of its business. The year was highlighted by new products introduced in all categories and by expansion of production and distribution facilities.

Product development in the two-way radio field featured new high-powered and medium-powered transistorized base stations, and the industry's first all-solid-state base station. The pace setting MOTRAC radio line was further improved by additional transistorization, new channel elements and higher powered transmitters. MOTRAC continues to be the country's most popular mobile radio.

Portable product development activity centered on new VHF radio paging products. New "pageboy" paging models were introduced. They received excellent reception in both the private and common carrier system markets. The very compact personal radio pagers for city wide use are carried by doctors, engineers, servicemen and others so that they can be contacted instantly.

Certain critical communications needs of the urban transit industry were met with the introduction of a new Transit Dispatcher radio especially designed for use in subway and rapid transit cars. A large pilot system of transit dispatcher radios was installed for the New York Transit Authority.

New closed circuit television cameras and monitors offering higher resolution were placed on the market. The hospital communications product lines were strengthened with the industry's first solid state designs in its Audio-Visory and Manumatic nurse call products. The first standard portable remote control systems for overhead industrial cranes were delivered.

Major individual sales were registered in all product areas. For example, the Cincinnati Gas and Electric Company and the State of California awarded Motorola major contracts for new base stations and all-solid-state MOTRAN mobile radios. Installation began on a series of radio paging systems for IBM. The largest hospital products order on record was received from Mercy Hospital of Chicago.

Activity in the overseas market intensified with the establishment of a joint venture in England. Continued excellent growth was enjoyed by all overseas joint ventures, and especially by Motorola-Israel, Ltd. and Canadian Motorola Electronics Company.

Major shipments were made to Southeast Asia in support of our country's commitment in Viet Nam. Motorola's role in this conflict is indicated by the following excerpt in a letter from the South Vietnamese Chief of Combined Telecommunications in the Upper Mekong Region:

> "Our MOTRAN radio system is so good that every telecommunications unit, especially military people, becomes jealous of it. We are in special type of war and only means of communications as good as MOTRAN radio can help us associate our effort to fight against the Viet Cong."

Additional production facilities were leased in Palatine, Illinois. Plans were also approved to begin construction of a major plant in Schaumburg, Illinois.

A new building was completed at Reston, Virginia to house the Mid-Eastern area headquarters for Motorola Communications & Electronics, Inc., the division's sales-service subsidiary. A new sales-service area was established to increase coverage in the Western states. It will be headquartered in a new building in Los Angeles. Other new facilities are planned for area headquarters in San Francisco and Dallas.

The increasingly serious problem of radio spectrum congestion received attention. Key executives and engineers have major roles in the Land Mobile Advisory Committee of the Federal Communications Commission and in the Land Mobile Communications Section of the Electronic Industries Association.

CONSUMER PRODUCTS DIVISION

The solid success of Motorola's 23-inch rectangular color television receivers at the market place contributed importantly to the consumer products division's record sales in 1965. Color television dollar volume, for the first time, topped that of black and white receiver sales.

An explosive break-out in consumer demand caused severe industry shortages of color television sets during the latter months of the year. Receiver production was limited by the availability of color picture tubes. However, Motorola's program with National Video Corporation on the rectangular color tube positioned the company favorably and it was generally acknowledged in the industry that Motorola solidified its third position in industry color television sales.

The company's color picture tube plant constructed at Franklin Park to provide a second source of supply was completed during the year, with plans for production in 1966 proceeding on schedule.

Best estimates are that the now pent-up demand for color television receivers will continue at least through 1966. It may be several years before supply levels off with demand.

To meet the growing requirements of the marketplace, the consumer products division embarked upon a substantial expansion program that was well underway at year's end. Black and white television production is being shifted to the Quincy, Illinois plant, an experienced home electronics facility which has been making home and portable radios and portable phonographs for a number of years. A major expansion is under construction in Quincy, scheduled for completion by mid-1966, to handle the increased volume.

Removal of much of the black and white production from Franklin Park will open up production areas for expanded color television production. Additionally, the corporation acquired in late 1965 a plant in Elgin, Illinois which has been converted into a feeder facility for the Franklin Park color television assembly plant.

While color television attracted the headlines in 1965, black and white receiver sales continued at a strong pace but were limited somewhat by strains on production. The company expects black and white television sales to continue to mount as small screen portables move into more homes as second and third sets, with color consoles taking over the living room television viewing.

Phonograph sales went ahead during the year, in both portable and console categories. The Audio Master Control Center, a design innovation in consoles, moved the division well ahead of industry performance in this product area. Radio sales were mixed, with strength in some lines, little change in others.

During the present year, the division will introduce a Motorola brand car stereo tape player unit for after-market sales. This product can develop into a substantial business.

An exciting and dynamic market looms ahead for the consumer products division during the next few years. Preparing for a continued growth in business, organizational changes were implemented during the year, giving the division a high degree of integrated effectiveness and pointing toward achievement of optimum results in an attractive environment of brisk demand for our products. The division's outlook for improved profitability and market position is excellent.

MILITARY ELECTRONICS DIVISION

Motorola strengthened its role as a major producer of ultra-reliable electronics equipment for critical space and defense programs. The division achieved new highs in sales, profits and backlog volume.

Three factors contributed significantly to these records: the success of research programs in developing a wide variety of profitable proprietary products, the expansion of participation in the nation's space efforts, and the acceleration of communications and other electronic contracts in support of the commitment in Viet Nam.

Through company-sponsored research, the already highly successful instrumentation product line was broadened. New command receivers and transponders were developed for both space and non-space use.

The TP-4000, a lower cost, high-speed, all-electronic teleprinter, was introduced. This teleprinter will provide readout for data processing computers and is applicable to the rapidly growing management-information field.

A line of solid state microwave communications and data transmission equipment was developed, and is being well received in the marketplace.

In addition to the U. S. space programs, the division has produced devices for use in the space programs of virtually all free-world countries.

Ranging equipment and receivers were built for the space-ground link system in U. S. Air Force space programs.

In the Gemini manned space programs, Motorola continued to supply the successful space-proven digital command system. This advanced electronic command unit receives signals from earth, relieving the astronauts of many time consuming functions. It has been described by one space expert as "like having a third astronaut on board." A similar unit is being produced for the Agena space rendezvous target vehicle.

Participation in the Apollo program continued to expand during the year.

The Apollo command module will contain a Motorola two-way communications S-band transponder and an "up data link" which will receive data from earth for on-board equipment. For the lunar excursion module, Motorola is building a transceiver. This communications unit will be used by astronauts to transmit voice and television to earth from the spacecraft on the surface of the moon.

The division is also developing a special low-profile helmet mounted antenna to enable the moon-probing astronauts to communicate back to their lunar landing vehicle.

The new digital test command systems being produced for the prelaunch checkout of the Apollo spacecraft are the first large scale systems of their kind to be fully implemented using integrated circuits. The systems will use over 300,000 MECL logic circuits produced by Motorola's semiconductor products division, selected because of their inherent speed and reliability.

A Motorola transponder and flight data encoder also performed perfectly from liftoff to impact on the historic Ranger lunar photographic probe.

Two other missions which benefited from reliable Motorola communications equipment performance were the eight-month Mariner/Mars photographic mission successfully completed in July, and the Pegasus B scientific satellite still in operation. On the Mariner/Mars spacecraft a Motorola transponder and flight command subsystem operated to a distance of 183 million miles, bettering all previous distance communication records.

In the non-space areas, the Bureau of Naval Weapons contracted for a large quantity of guidance and control systems for the Sidewinder Missile. The division received a contract to supply the second in a series of weather radar relay systems for the U. S. Weather Bureau. AN/TRC-87 ground-air communications systems, regarded as the most modern, reliable and readily maintainable UHF voice communications system currently in production, were delivered to the Air Force. Security classified fuze contracts for a variety of applications exceeded $12 million in 1965. Advances were also made in the areas of combat surveillance, terrain-following/terrain-avoidance radar and undersea electronics.

The diversified awards and accomplishments throughout the year resulted from the division's predetermined balance of contracts from various government agencies which permits a continuing high degree of employment stability.

AUTOMOTIVE PRODUCTS DIVISION

The automotive products division set another sales record in 1965 with increased volume of car radios, electronic alternators and new products.

New highs were reached in radio sales as a result of the record volume of 9.3 million automobiles. The division continued to supply radios to Ford Motor Company, Chrysler Corporation, American Motors Corporation, Volkswagen, Renault, British Motors Corporation, and Standard Triumph and to truck manufacturers such as International Harvester Company, the White Motor Company, Mack Truck and Kenworth Motor Truck Company. With quality and reliability as the keynote, Motorola continued to be the leader in the independent automobile radio industry.

An outstanding achievement during the year was the design, development and phasing into production of the 8-track stereo tape player. With a joint program among Ford, Motorola, and RCA using the Lear cartridge, Ford was able to lead the industry by one model year in offering the tape player as optional factory or dealer installed equipment. Tape player models, including AM radio, were offered for the Continental, Thunderbird, and Mustang cars, fitting into the dash in place of the regular radio. Straight tape players were provided for Ford and Mercury automobiles.

The division is in the process of negotiating contracts to supply stereo tape units to other car manufacturers and will supply the tape deck as a component to other manufacturers for home and auto stereo tape players.

The division broadened its line of electronic alternators by the addition of a totally enclosed unit with companion transistor regulator. This unit is designed for use in tractors and industrial equipment where severe dust conditions or fire hazards prevail. A unit with the transistor regulator mounted as an integral part of the alternator was also added to the line, providing ease of assembly and reduction in wiring harnesses for both industrial and automotive application. The list of companies using Motorola alternators continues to expand with the addition of many smaller manufacturers of industrial and specialized equipment.

The marine alternator line was expanded, with the heavy duty line being listed by the Yacht Safety Bureau. Chris Craft is now installing alternators in a majority of their new craft and several other marine engine companies are also fitting their equipment with the Motorola system.

Continued expansion in the international area is evidenced by a new plant in Midland, Ontario, designed to build car radios for both Canadian and U.S. markets as well as consumer product items for Canadian distribution. A joint venture company, Motorola-South Africa, has been formed to manufacture alternators in the Union of South Africa. S.E.V.-Motorola S.A. in Paris, France, is experiencing increasing sales in auto rectifier diodes and alternators as the European industry is gradually replacing the DC generators. Corporacion Nacional Distribuidora is improving its alternator penetration in the Mexican car market.

CONTROL SYSTEMS DIVISION

Motorola achieved greater strength and stature in the highly competitive industrial controls field during 1965.

In all three of the division's product lines—supervisory control systems, data systems, and process control systems—significant advances were scored in product development, expansion of sales and market penetration.

Mobil Oil Company and Texaco Inc. were important additions to the growing customer list which now includes all major American oil companies.

One of the industry's largest single contracts was awarded to Motorola by Mobil Oil for a Veritrak process control system to be installed at one of the company's West Coast refineries. The computer-controlled system is part of Mobil's multi-million-dollar modernization program for this refinery.

The Veritrak product line was enhanced with the development of a computer set station to provide an interface between electronic analog control systems and a digital computer.

Late in the year, the division obtained the Canadian Standards Association and Factory Mutual approvals on the "intrinsic safety" concept engineered into the Veritrak process control equipment. This important safety recognition is an industry first.

During the year, Motorola sold more bulk petroleum terminal data systems than all of its competitors combined. There are now nearly 100 Motorola systems in service throughout the country. Every major American oil company has purchased some type of Motorola data system.

An automatic data system for self-service fleet vehicle fueling operations was introduced in September. The driver-operated system records the data of the complete transaction. This includes driver and vehicle identity, type of fuel, and gallons pumped. It also allows automation of accounting and operations-control procedures.

Consolidated Gas Supply Company, Clarksburg, West Virginia, contracted for a telememory remote digital control system. This large contract demonstrates Motorola's ability to supply a completely integrated system. In addition to the supervisory control equipment, Motorola is supplying a microwave communications system for the pipeline operation, and is purchasing, integrating and supplying the needed computer.

Development of a compact TM-10 remote digital monitor and control system provides, for the first time, the low-cost monitoring and controlling of up to ten status points.

The sales force was further strengthened with the opening of district offices in Atlanta, Georgia and New Orleans, Louisiana.

Further progress in market penetration is projected for 1966.

INTERNATIONAL OPERATIONS

Motorola Overseas Corporation continued to show sales gains around the world for the diversified product lines of five of the company's divisions.

Sales were the highest in the subsidiary's history; orders received in 1965 exceeded the previous year by over 25%. Royalty revenues also made substantial gains, reflecting healthy sales increases of overseas licensees. An additional office was opened in Burlingame, California to service foreign clients. New distributors were added in many free-world nations.

As in past years, communications equipment accounted for a substantial portion of the increases, particularly in the European and Far Eastern regions. In the former area, important sales of portables and base stations were made to the Finnish, Belgian and Greek police organizations. Improved commercial radio sales were noted in Holland. Significant orders were received from Sweden for high-stability oscillators. Under the guidance of the company's Brussels office, a sizeable and efficient group of European technicians continued to service U. S. Air Force equipment throughout Europe.

In the Far East, increased activity in Southeast Asia resulted in the formation of a technical service group there, as well as in the achievement of major contracts with the government of Viet Nam. Motorola sales engineers worked with several international organizations in providing communications support of peace-keeping operations, in the Middle East, Cyprus, India and Pakistan. Gains were shown by our Philippine associate in the expanding business radio market there.

In the Middle East, an important system of mobiles and base stations was contracted for by the Turkish police, and by the Bureau of Forestry for single sideband units. Motorola Israel Ltd. enjoyed a successful year and is expanding its staff and scope of operations. In Panama Motorola obtained a contract for communications equipment for the proposed sea-level canal project, to include a complete package of mobiles, portables, base stations, microwave and single sideband units. One of the world's largest and most modern hospital projects, underway in Puerto Rico, will use Motorola hospital communications equipment, principally doctors' registers and low-frequency pagers. Canadian Motorola Electronics Company also produced important sales of hospital equipment including the Scarborough Centenary Hospital in Toronto and Rocky View Hospital in Alberta.

Consumer product sales improved in several Latin American markets, particularly Puerto Rico and Venezuela. New distributors were added in Iceland and several developing African countries. Licensed production of car radios, stereo phonographs and TV improved in Argentina, and market penetration for locally-assembled consumer products was achieved in Chile and Uruguay. Production of car radios in Brazil went into high-gear, and in Mexico our affiliate became the major supplier to automobile manufacturers, an enviable position already held by our Argentine associate.

A SPECIAL REPORT:

MOTOROLA

SERVING SAN JOSE

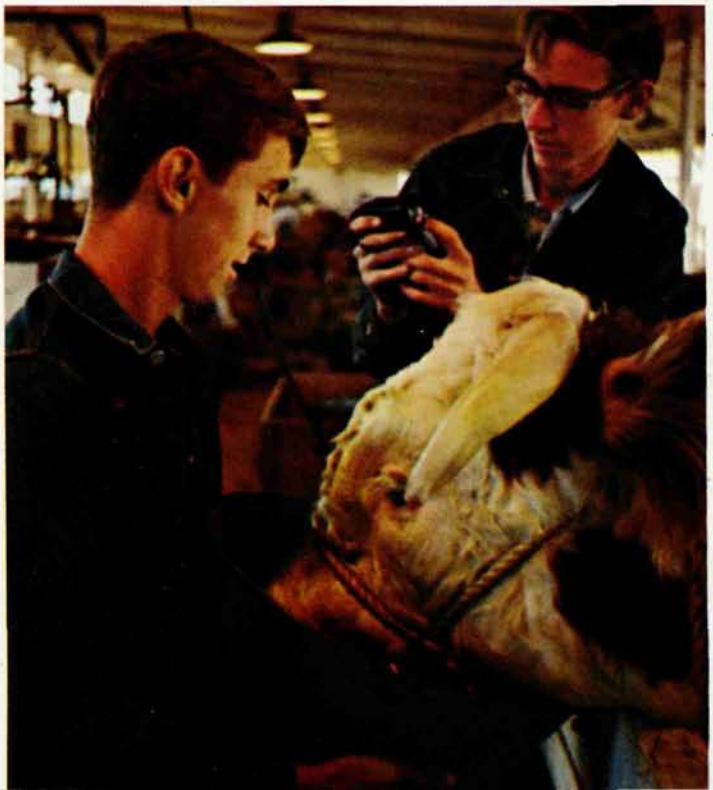
Through its product diversification, Motorola can touch the lives of everyone, one way or another. ■ Millions enjoy leisure time watching television—on a Motorola set, color or monochrome. Events around the world are brought into the living room, bedroom or kitchen by radio. We can hear beautiful music at home through stereophonic high fidelity equipment. The radio or stereo tape player in the automobile, may be Motorola's. ■ Municipalities and metropolitan areas rely on Motorola communications systems. In every state and in hundreds of cities, residents are protected, given help when needed and provided efficient service through two-way radio communications systems operated by police, fire and sheriff's departments, utilities, and numerous individual businesses. ■ Electronic components made by Motorola go into many other products used daily or constantly available for everyone's benefit. ■ Sophisticated communications equipment systems help the defense services protect our

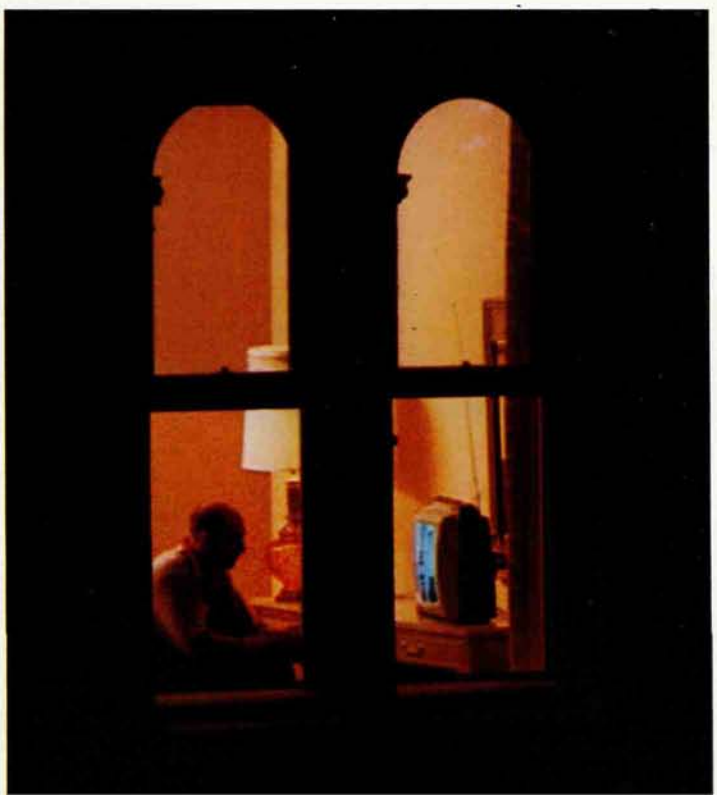
country and move our nation forward in space exploration. ■ In virtually every community in the nation, Motorola products work to improve the efficiency of industrial organizations and commercial businesses; other products entertain or inform or protect and save lives. ■ On the following pages is a picture story showing how Motorola products serve one city. ■ We selected a middle-sized city, San Jose, California. It is a city that captures the feel of a nation on the move. There are many such cities —like Dayton, Jacksonville, Hartford, Omaha. The population of San Jose is approximately 300,000, Santa Clara county about 700,000. In its missions and vineyards, it is steeped in American tradition. In its burgeoning population and prosperity, it represents mainstream today. With its involvement in the space age, it forecasts a wave of the future. It is a *Look* magazine All-American City, home of industrial giants and small stable businesses. ■ And now, to San Jose . . .

ABOVE—*Color television captures the imagination. The youngsters of the Don Malcolm family are among many in the San Jose area now being delighted by programs with the added dimension of color. Adults like programs in color too for the added realism and beauty.*

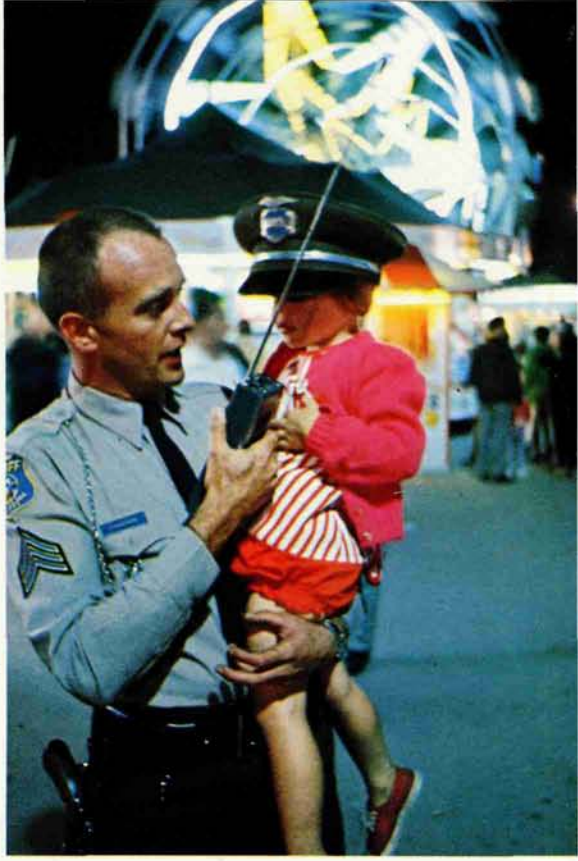
BELOW LEFT—*Tiny transistor radios filled with interest the hours that these two youngsters, David and Lee Leonard, spent while waiting to show their livestock at the Santa Clara County fair in San Jose last summer. "Joe Bright Eyes" apparently liked the music as well. He was named the Grand Champion bull.*

BELOW—*San Francisco Basketball Coach Alex Hannum relaxes in his room at the Hotel St. Claire watching television after a practice session. This large downtown San Jose hotel has equipped all of its rooms with Motorola television sets for the enjoyment of its guests.*





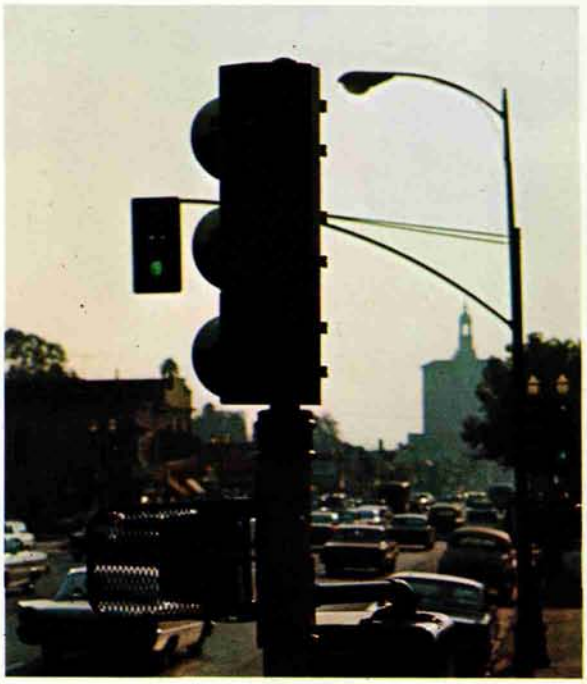
Virtually all San Jose municipal departments depend upon two-way radio to do their jobs effectively. In order to make sure that radio coverage blankets every block of the city, San Jose communications experts have installed base station and microwave radio equipment and antennas on this mountain overlooking the valley.



Finding the parents of lost children was just one of many functions performed by the Santa Clara county sheriff's department at the fair. Sgt. W. E. Johnson radios headquarters to report that three-year-old Martha Evans is found and fine. The vast two-way radio network speeds service to some 41 cities and towns in the county.

Farsighted San Jose officials employ electronics to ease the increasing load of traffic. This new system combines radio, microwave and computers to count cars, determine best traffic pattern programs, then automatically put those programs into effect. The system synchronizes traffic signals so they are green or red at the right time to maximize the flow.

Patients can enjoy radio or television, and instantly contact a nurse, through the all-in-one system at the new Alexian Brothers Hospital. Focal point is this control unit held by Mrs. William Jenkins. With this unit, patients can talk to a nurse, and operate a combination radio-television set. A similar system is being operated throughout Doctors Hospital, another San Jose hospital.

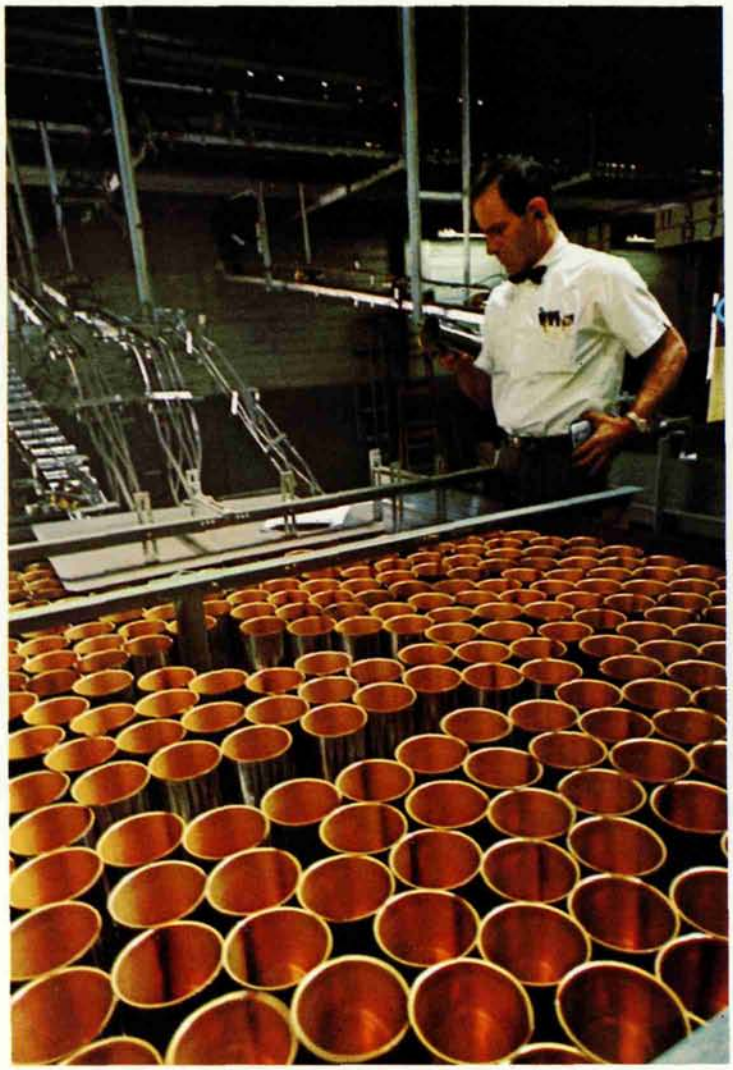


A compact portable television set is right at home at this California patio party. San Jose Architect Will Blessing, his wife, Suzanne, right, and close friends, Mr. and Mrs. Robert Ferini, watch 12-inch TV on the patio.

PROTECTING LIVES AND PROPERTY

Lightning-like communications puts the San Jose police department right where needed to protect the lives and property of its citizens. Two-way radio directed the chase that cornered these car thieves.

Lightweight, portable two-way radios extend contact for the fire department beyond the station and vehicle so that firemen can go into burning buildings, if need be, to coordinate rescues and save property. The unit being operated by Chief Chris Shannon weighs just 33 ounces.



Motorola radio pagers make it easy to reach a man in five seconds anywhere in the sprawling San Jose Continental Can Company complex. With thousands of cans made each minute, pinpoint communications are essential to insure quality control levels and highest production output. The small pager can be carried in the pocket or on the belt as Quality Control Supervisor John G. Rogers has his. Calls to key personnel can be originated from any telephone in the plant.

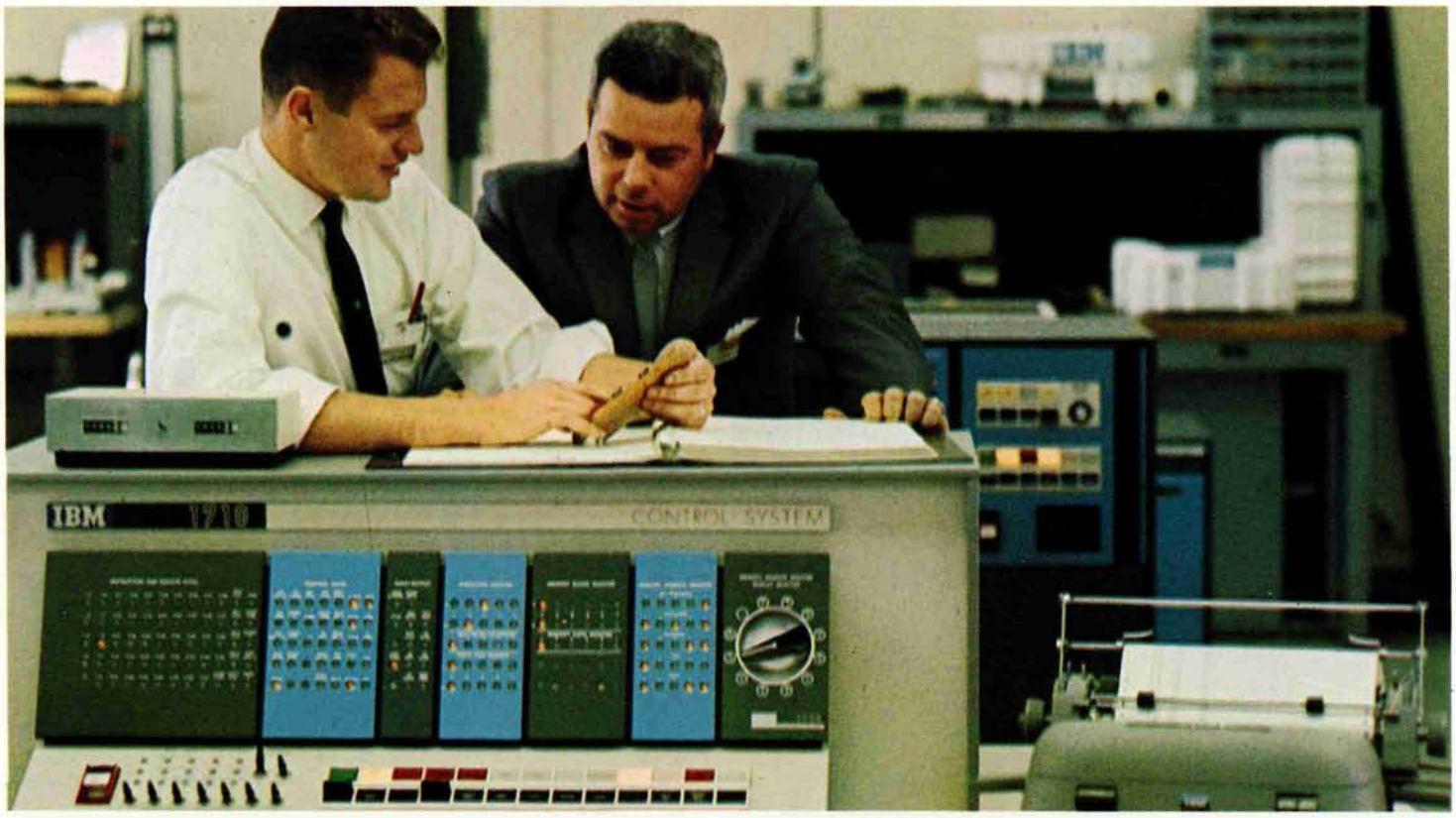
Radio helps cover the news and deliver the daily papers. Two-way units rush San Jose Mercury and News trucks to homes where deliveries were missed. Reporters and photographers drive radio-equipped cars to be where the news is happening.

TOP—*San Jose has hundreds of radio stations. Residents can tune in only a few, however. The rest are two-way radio systems operated privately by the city and county and by many industrial and business firms. One is O. C. McDonald Co., Inc., a plumbing, heating and air conditioning company. These systems slash hours and miles off travel to boost a company's own efficiency while helping it give customers faster service.*

MIDDLE —*Two-way radio plays an important role in scheduling the Piazza Construction Company's operations. Foremen at remote and hard-to-reach construction sites can be in touch with the home office in seconds. By just such efficiency, time and money are saved.*

BOTTOM—*Motorola electronic alternator systems make sure the battery is charged so the vehicle will go: they replace generators. Businessmen and car owners save money, time and aggravation. Outfits like Peninsula Crane & Rigging, Inc. of San Jose help protect profits by keeping their giant rigs on the job every minute—with reliability provided by Motorola alternators.*

HELPING INDUSTRY BUILD SUPERIOR PRODUCTS

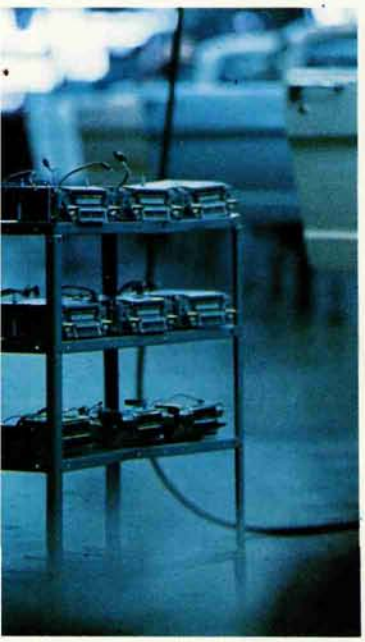


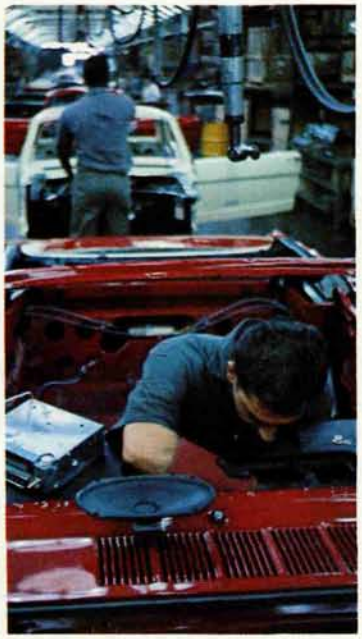
Little electronic components often do big jobs in control systems. A Motorola diode, no larger than a quarter of an inch, performs key operational functions in a 1710 control system produced by International Business Machines Corporation at its ultra-modern San Jose facility. As IBM Senior Associate Engineer Rodney G. Rockwell studies location of a diode on a circuit board, Motorola District Sales Manager Charles P. Shaw stands ready to assist.

Combination AM radio and stereo tape players made by Motorola are installed in 1966 Mustangs at Ford's San Jose assembly plant. Tapes produce up to 80 minutes of concert stereo sound.

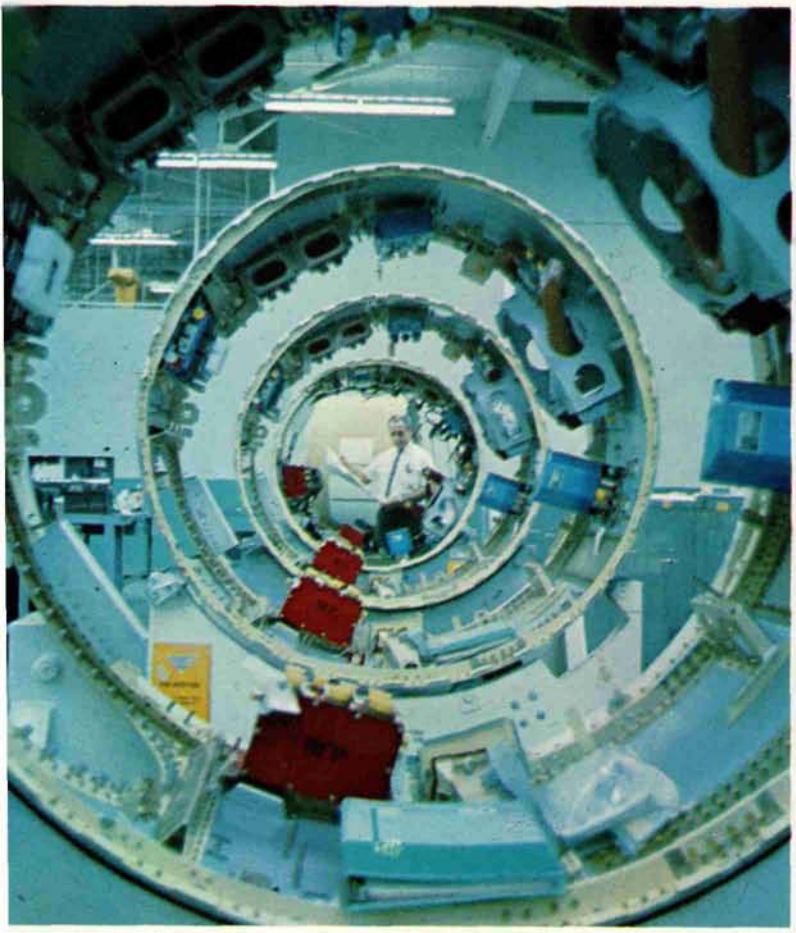
BELOW—*FMC Corporation, one of the nation's most diversified industrial giants, headquartered in San Jose, uses Motorola semiconductors in many sophisticated systems such as teaching machines, automatic warehouses and this high-speed mail sorter being checked by Senior Engineer David G. Curphey.*

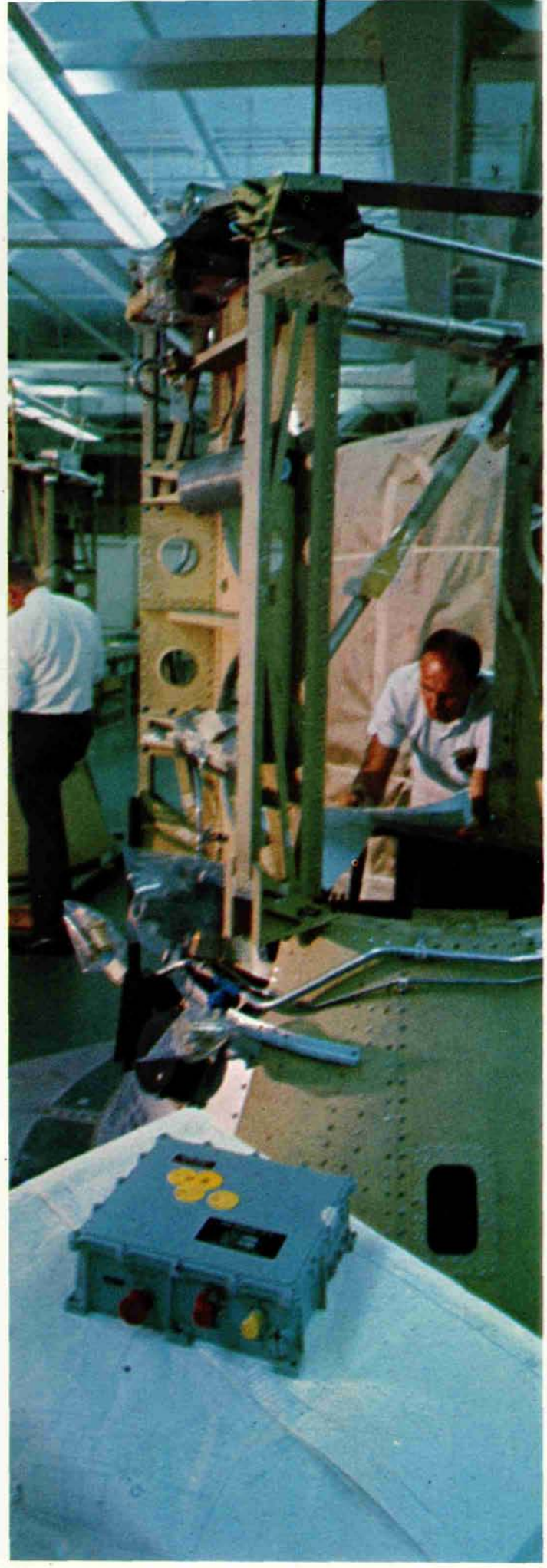
BELOW RIGHT—*A most important advance in electronics is represented by these integrated circuits used by Link Group of General Precision, Inc. Examining boards consisting of Motorola MECL integrated circuits for a new Link GP-4 computer are Dr. John Hunt, vice president for research and engineering, Link Group, and Robert Porter, director, Western Division, Link Group.*





CONTRIBUTING TO OUR NATION'S MILITARY AND SPACE PROGRAMS



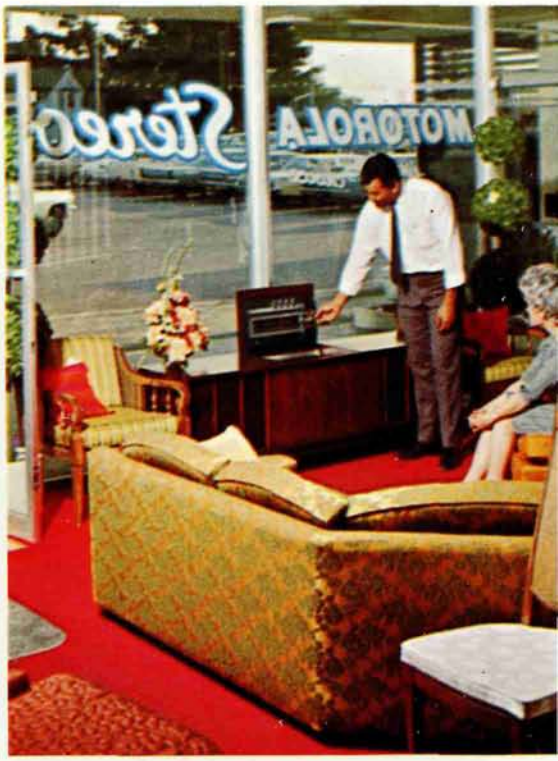


ABOVE—*Motorola teams up with Lockheed Aircraft Corporation in a number of major space programs. Here at Lockheed's mammoth Sunnyvale facility, part of the greater San Jose area, Polaris missile components incorporating Motorola command receivers are assembled.*

RIGHT—*Motorola digital command equipment and a radar Transponder will link earth with the Agena space vehicle being built by Lockheed for the rendezvous missions of the dramatic Gemini program. The Motorola units are installed in this aft equipment rack being studied by Lockheed Electronics System Inspector Fernando Penelli.*

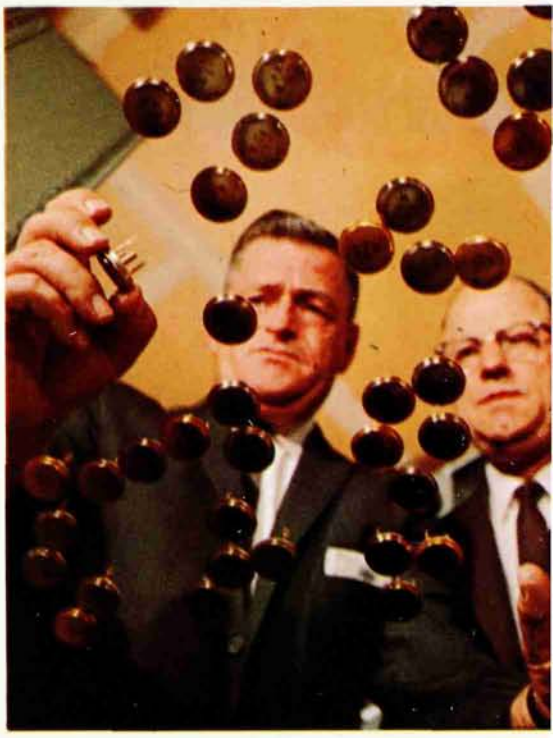
BOOSTING BUSINESS FOR BUSINESSES

Chester Spink, of the beautiful department store, The Emporium Stevens Creek, describes sets in the Motorola television line to Mrs. Charles N. Strotz.

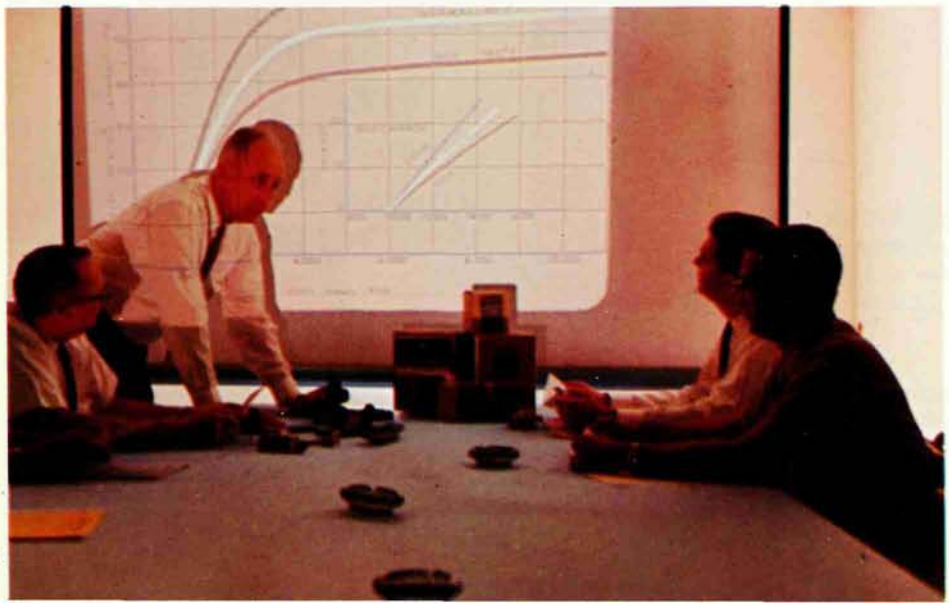


ABOVE RIGHT—*The comprehensive array of Motorola entertainment products handled by Everybody's Appliance includes this handsome stereo phonograph with lift-top tuning being demonstrated for Mrs. Ginger Silvera by William Estrada.*

Sales representatives and mechanics from San Jose auto supply companies learn the engineering and selling features of Motorola electronic alternator systems from William J. Peck, district sales manager for the automotive products division. Clinics sharpen sales and service abilities of companies to increase their volume of business. At this session are representatives of Carburetor Electric Service Company and United Automotive Service.



RIGHT—*Motorola semiconductors are made available to manufacturers in the San Jose area by local companies. Looking over a series of transistors are Mario Chirone, right, vice president of Elmar Electronics, a Motorola distributor, and Russell E. Wilson, purchasing agent for Applied Technology, Inc.*



ANNUAL MEETING

The annual meeting will be held on Monday, May 2, 1966. A notice of the meeting, together with a form of proxy and a proxy statement, will be mailed to shareholders on or about April 1, 1966, at which time proxies will be solicited by management.

TRANSFER AGENTS

Harris Trust and Savings Bank
111 W. Monroe St., Chicago, Illinois 60690

Chemical Bank New York Trust Company
165 Broadway, New York, New York 10015

REGISTRARS

Continental Illinois National Bank and Trust Company of Chicago
231 S. LaSalle St., Chicago, Illinois 60690

Irving Trust Company
1 Wall St., New York, New York 10015

MOTOROLA INC.

9401 WEST GRAND AVENUE
FRANKLIN PARK, ILLINOIS 60131

MAJOR FACILITIES LOCATED AT:

Chicago, Franklin Park, Quincy,
Elgin, and Palatine, Illinois
Phoenix, Scottsdale, and Mesa, Arizona
Arcade, New York
Midland, Ontario

MOTOROLA INC., 9401 WEST GRAND AVENUE, FRANKLIN PARK, ILLINOIS 60131

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