

Annual Report 1984



MOTOROLA INC.



- 1** Financial Highlights
- 2** To Our Stockholders and Friends
- 4** Semiconductor Products Sector
- 8** Communications Sector
- 12** Information Systems Group
- 14** Automotive and Industrial Electronics Group
- 16** Government Electronics Group
- 18** People Values
- 19** Financial Review
- 21** Financial Statements
- 24** Notes to Consolidated Financial Statements
- 31** Five Year Financial Summary
- 33** Directors
- 34** Officers
- 36** Major Facilities and Products

Motorola, Inc. is one of the world's leading manufacturers of electronic equipment, systems and components produced for both United States and international markets. Motorola products include two-way radios, other forms of electronic communications systems, semiconductors, defense and aerospace electronics, automotive and industrial electronic equipment, data communications and information processing and handling equipment. Motorola is one of the few end-equipment manufacturers that can draw on expertise in both semiconductor technology and government electronics.

On the cover

Motorola microprocessors like the ones shown on the cover are at the heart of the Information Age. They symbolize the pervasiveness of electronics, which provides the framework of today's high-technology society.

Financial Highlights

Motorola, Inc. and Consolidated Subsidiaries, Years ended December 31

(In millions of dollars, except per share data)	1984	1983
Net sales	\$5,534	\$4,328
Earnings before income taxes	466	309
% to sales	8.4%	7.1%
Net earnings excluding DISC tax cancellation	349	244
% to sales	6.3%	5.6%
Net earnings	387	244
% to sales	7.0%	5.6%
Net earnings per share excluding DISC tax cancellation	2.95	2.09 ¹
Net earnings per share	3.27	2.09 ¹
Research and development expenditures	411	336
Fixed asset expenditures	783	406
Working capital	1,001	894
Current ratio	1.83	2.07
Return on average invested capital (stockholders' equity plus long- and short-term debt, net of marketable securities) excluding DISC tax cancellation	14.5%	12.2%
% of total debt less marketable securities to total debt less marketable securities plus equity	18.0%	4.3%
Book value per common share	19.19	16.49 ¹
Year-end employment (approximate)	99,900	88,800

¹Restated to reflect 3-for-1 stock split in 1984.

Annual Meeting of Stockholders

The annual meeting will be held on May 6, 1985. A notice of the meeting, together with a form of proxy and a proxy statement, will be mailed to stockholders on or about March 20, 1985, at which time proxies will be solicited by the Board of Directors.

Form 10-K

After the close of each fiscal year, Motorola submits a report on Form 10-K to the Securities and Exchange Commission containing certain additional information concerning its business. A copy of this report may be obtained without charge by addressing your request to the Secretary, Motorola, Inc., Corporate Offices, Motorola Center, 1303 E. Algonquin Road, Schaumburg, Ill. 60196.

Transfer Agent and Registrar

Harris Trust and Savings Bank
111 W. Monroe Street
Chicago, Ill. 60603

Auditors

Peat, Marwick, Mitchell & Co.
303 E. Wacker Drive
Chicago, Ill. 60601

To Our Stockholders and Friends

Motorola reached new levels of excellence in 1984 and invested heavily in programs to achieve long-term leadership in the markets we serve.

It was a year in which sales climbed beyond \$5.5 billion for the first time, earnings continued to increase, and Motorola investment in new plants and equipment rose dramatically. Sales in our Semiconductor Products Sector and Communications Sector each exceeded \$2 billion, also for the first time. Much of our success in 1984 stems from the increasingly productive efforts by our employees to provide high-quality products for our customers.

Net sales for 1984 rose 28 percent to \$5.53 billion from \$4.33 billion in 1983. Earnings, excluding a non-recurring DISC tax cancellation of \$38 million, were \$349 million, or \$2.95 per share, up from \$244 million, or \$2.09 per share, a year earlier. Details of the tax benefit are discussed elsewhere in this report.

Earnings in 1984 including the tax benefit were \$387 million, or \$3.27 per share. The 1983 per-share figure is restated for a 3-for-1 stock split in the form of a 200 percent stock dividend.

Net margin on sales improved to 6.3 percent in 1984 from 5.6 percent in 1983. Return on average invested capital (stockholders' equity plus long- and short-term debt, net of marketable securities) was 14.5 percent compared with 12.2 percent in 1983. The 1984 percentages exclude the non-recurring tax benefit.

Operations Overview

The Semiconductor Products Sector had record sales, operating profits and orders. Sales increased nearly 40 percent, operating profits were up sharply, and new orders rose 5 percent. Backlog was slightly higher than at the end of 1983.

The exceptionally high rate of new orders in the first half of 1984 moderated at midyear, although actual product usage by customers apparently

remained at high levels throughout the year. Customer inventory adjustments and reduced lead times for many products contributed to lower orders in the second half.

The Communications Sector's sales rose 27 percent and operating profits were sharply higher. New orders rose 16 percent while backlog increased 6 percent.

The sector's two-way radio and paging businesses were strong throughout the year. Although cellular telephone revenues rose rapidly in 1984 as systems began to operate in more U.S. cities, operating losses for cellular increased later in the year. Licenses and construction permits were delayed in several major cities, and Japanese-manufactured car telephones were sold in the United States at what we believe was less than fair value. As a result, Motorola filed an antidumping petition in November with the U.S. International Trade Commission (ITC) and the Commerce Department. The ITC made a preliminary determination of material injury to the U.S. cellular industry. Final action in the case is expected in late 1985.

Information Systems Group sales gained 20 percent, while new orders advanced 14 percent. Backlog was 8 percent higher than at the end of 1983. The group had a small operating profit in 1984 compared with a small loss in 1983. The group introduced several major new products in its integrated line of data transmission and distributed data processing systems, and strengthened its direct sales and service operation in international markets.

Sales in the Automotive and Industrial Electronics Group increased 11 percent, new orders rose 7 percent and backlog was slightly higher. Operating profits declined somewhat from 1983's excellent level. The group expanded its business portfolio through investment in product lines serving the automotive, computer equipment and appliance control markets.

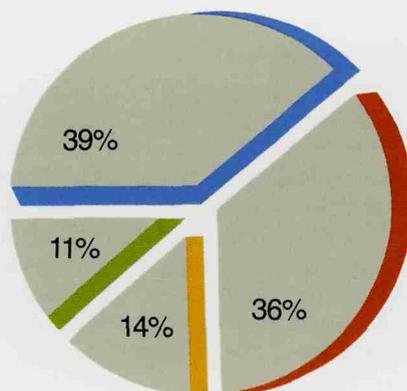
Government Electronics Group sales gained 19 percent, orders increased 13 percent and backlog was 18 percent higher. Operating profits were slightly lower. Tactical electronics and radar products led the growth in orders.

Fixed Asset Expenditures

Spending on fixed assets increased 93 percent to \$783 million in 1984, compared with \$406 million in 1983. The emphasis was on additional laboratory, test and production equipment to enhance productivity and quality while also increasing our capacity to meet the growing demand for many of our products.

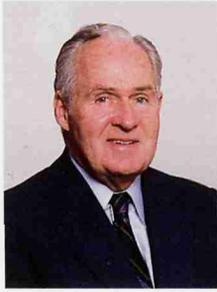
Research and Development

Our commitment to technological leadership extends throughout the company. Research and development expenditures, exclusive of government-funded work, reached \$411 million in 1984, up 22 percent from \$336 million in 1983. This effort results in the products and services described in this report, and also nurtures the technologies that should keep us in the forefront in the years to come.



1984 Net Sales by Business Segment

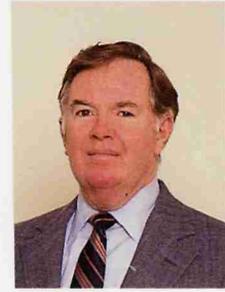
- Semiconductor Products Sector
- Communications Sector
- Information Systems Group
- Other (Automotive and Industrial Electronics Group/Government Electronics Group)



Robert W. Galvin



William J. Weisz



John F. Mitchell

Investment in People

We also emphasized professional development and improving the skills of our people. During 1984, we devoted about one million employee hours to formal training. Construction began on a training and education center in Schaumburg, Ill.

International Trade

It has become increasingly evident that many U.S.-based industries, notably including electronics companies, suffer a significant disadvantage to competitors located elsewhere in the world, particularly the Asia-Pacific region.

The causes of this disadvantage, which are beyond the control of otherwise highly efficient U.S.-based manufacturers, are the value of the dollar, the cost of capital, direct and indirect costs of labor and a generally tilted competitive field wherein easy access is given to foreign participants in U.S. markets while U.S. producers continue to confront a variety of impediments to participation in corresponding foreign markets.

Motorola has vigorously attempted to formulate and propose fairer trade policies, but we have been unsuccessful in persuading the U.S. government to adopt such corrective policies. We intend to continue this effort but must also acknowledge, for the benefit of our customers and shareholders, that as we grow, we shall continue to increase the allocation of our product development and manufacturing resources to non-U.S. sites that provide better competitive conditions.

We believe that more and more companies will also continue to do likewise and that there will thus be an apparent and adverse change in the makeup of the U.S. economy and its employment base. However, and until the U.S. government achieves a greater sensitivity to the need for more balanced trade policies, manufacturing industry appears to have no viable alternative to greater offshore resource deployment.

In Memoriam

With profound sorrow and regret, and with recognition of his many contributions as a sales executive and senior officer in the Communications Sector and in corporate management over a span of 44 years, we note the death on February 2, 1985, of Homer L. Marris, member of the Board of Directors.

Board of Directors, Officers

Three new members were elected to the Board of Directors at the 1984 Annual Meeting. They are Lawrence Howe, a former vice chairman of Jewel Companies, Inc.; Anne P. Jones, a partner in the law firm of Sutherland, Asbill & Brennan; and Walter E. Massey, vice president for research and for Argonne National Laboratory, The University of Chicago.

John J. Antalek, a director since 1978, is not standing for re-election to the board at the next annual meeting in accordance with Motorola's policy on tenure of directors. We acknowledge with appreciation his many contributions to Motorola over these years.

Several of our operating units were restructured during 1984 to serve our customers more effectively. This resulted in several management changes. The list of elected officers which appears on pages 34 and 35 indicates which of the officers has advanced in rank or assumed a new position since our last annual report to stockholders.

Stock Split, Dividend Increase

A 3-for-1 stock split in the form of a 200 percent stock dividend was distributed June 1, 1984. The quarterly dividend on the new shares has been initially set at 16 cents per share, equivalent to 48 cents quarterly on the old shares, representing a 20 percent increased rate of dividend payout.

Outlook

In 1984 the benefits of our long-term strategy became even more apparent as we were able to grow rapidly in an expanding economy, with many new products

servicing both existing and new applications. The recovery seems to have matured, so we expect to operate in an environment of more modest growth during 1985.

We believe that worldwide market growth for our electronic products, systems and components will exceed the rate of overall economic expansion. We are strategically well positioned to serve the needs of our customers in their growing businesses.

Our earnings performance in the second half of 1984 tapered off from the higher levels of the first half. Customers for our semiconductor components have been adjusting inventories and component order lead times, but actual usage of our products apparently remains at high levels and we expect growth in orders to resume later in 1985. In the capital goods sector, spending is expected to continue growing, especially for high-technology communications and information systems to improve productivity.

A more challenging economic environment means reaching out for ever higher standards of performance that will benefit our customers, our employees and our stockholders. We look forward to continued growth in the years to come.

Yours very truly,

Robert W. Galvin
Chairman

William J. Weisz
Vice Chairman

John F. Mitchell
President

Semiconductor Products Sector

GROUPS & DIVISIONS:

Discrete and Special Technologies Group

Low-frequency Power Transistor/Thyristor Products Division
RF and Optoelectronic Products Division
Small Signal and Sensor Products Division
Zener/Rectifier Products Division

International Semiconductor Group

Asia Pacific Semiconductor Products Division

European Semiconductor Group

Discrete and Analog Products Division (Toulouse, France)
Microsystems ASIC and Digital Products Division (Munich, West Germany)
MOS Memory and Microprocessor Division (East Kilbride, Scotland)

Microprocessor Products Group

MOS Memory Products Group

MOS Wafer Processing Division

Standard Logic and Analog IC Group

Bipolar Analog IC Division
Bipolar Logic and Memory IC Division
Bipolar Wafer Fabrication and Process Technology Division
MOS Logic and Analog IC Division

Applications Specific IC Products Division

Assembly Manufacturing and Equipment Engineering Division

The Semiconductor Products Sector (SPS) achieved record sales, new orders and operating profits in 1984 and introduced many advanced products, including the world's most powerful commercially available microprocessor, the 32-bit MC68020.

Sales rose nearly 40 percent to \$2.23 billion. New orders were 5 percent higher and operating profits increased sharply. Backlog ended 1984 slightly higher.

Exceptionally high orders in the first half of 1984 resulted in long delivery lead times for Motorola and the semiconductor industry. Bookings moderated with the maturing of the economic recovery at midyear, but actual product usage by customers apparently continued at high levels throughout the year. New orders declined in the second half as many customers worked off large semiconductor inventories and as delivery lead times decreased for most products. More aggressive pricing resulted in lower average selling prices.

In the U.S. market, the communications and computer segments showed the strongest growth, followed by distribution, industrial and automotive. The military-federal segment grew moderately and continued strong in the second half, while the consumer segment, which includes home electronics and personal computers, gained only slightly.

New orders in Japan were very strong and gains in Europe were significant. Bookings moderated in the Asia-Pacific region during the second half because of softness in the personal computer peripherals and telephone receiver segments, as well as inventory reductions.

To provide greater product focus and serve its customers more effectively, SPS restructured its two process technology-based integrated circuits groups, bipolar and MOS (metal oxide semiconductor), into four distinct product operations. Major operations within both the Discrete and International groups were elevated to division status, to recognize their increased size and importance. The new structure is shown on this page.

International Developments

The European Semiconductor Division was elevated to group status and its operations realigned to products-based organizations and designated as divisions.

Products introduced in Europe included three new VME-format memory boards designed in Munich and a new 8-bit microprocessor designed in Geneva, Switzerland, at the group's design center. A highly automated assembly module went into operation in Scotland. Production is to begin in the second quarter 1985 at an HMOS/HCMOS (high-performance complementary MOS) wafer fabrication line there.

In Japan, the Aizu Wakamatsu facility began producing additional products. SPS established an integrated circuit design center in Hong Kong and increased its production testing capacity.

In Taiwan, Motorola purchased a facil-

ity to manufacture, assemble and test integrated circuits. Production is to begin in the second half of 1985.

New Microprocessors

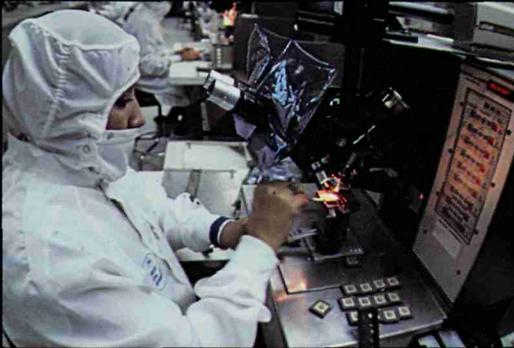
In June 1984, Motorola introduced the MC68020 microprocessor, a "mainframe computer on a chip" featuring full 32-bit internal and external architecture. The device is fabricated in a two-micron advanced HCMOS technology to squeeze 200,000 transistors on a three-eighths-inch square chip. Accessing up to 4 billion bytes of memory, it provides sustained computing power of 2.5 million instructions per second (MIPS) and burst rates of 8 MIPS, equivalent to some mainframe computers.

Applications for the MC68020 include controllers for color graphics, telecommunications, robotics and other industrial uses; next-generation personal computers; super micro/minicomputers; engineering workstations for computer-aided design and manufacturing and many others. The 32-bit machine is fully software compatible with the 8- and 16-bit members of the M68000 family. More than 100 customer applications were being readied by the end of 1984.

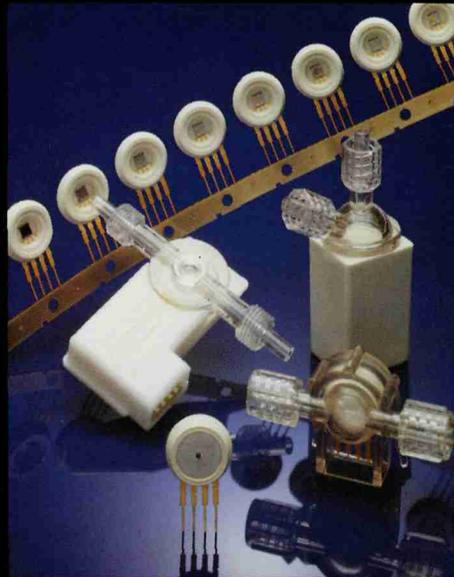
Peripheral chips for the MC68020 also were introduced. A memory management controller consists of a gate array circuit and will be followed by a fully integrated MOS version. A floating point coprocessor is scheduled for sampling in the first part of 1985. Shipments of the Benchmark 20™, an MC68020-based evaluation and development system, began in the fourth quarter.

The 8-bit microprocessor portfolio was expanded with the introduction of the MC68HC11, an advanced HCMOS single-chip microcomputer that is software compatible with the M6801 family. The new device has on-chip EEPROM (electrically erasable programmable read-only memory), which enables customers to tailor the microcomputer to specific applications. This is the first device of its kind. SPS also introduced the MC68012, an enhanced version of the MC68010 virtual

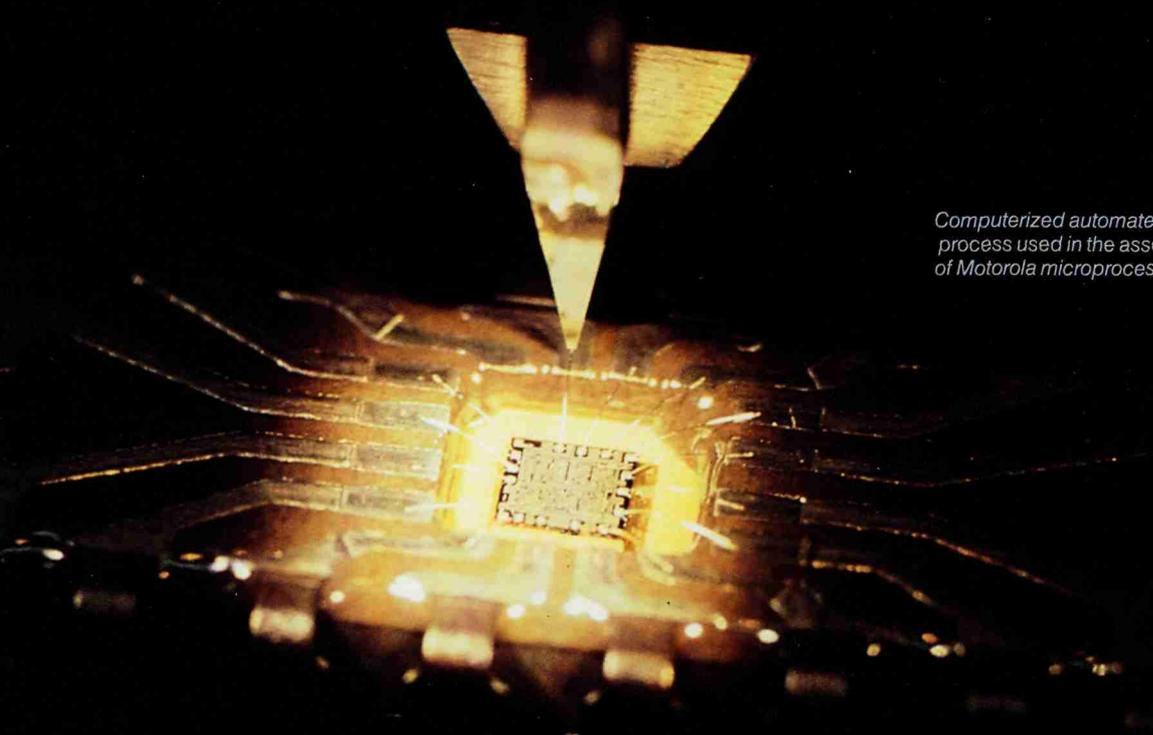
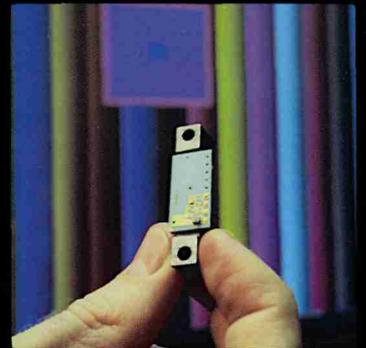
Technician assembles an MC68020, the 32-bit "mainframe computer on a chip."



Disposable pressure sensors with on-chip calibration and temperature compensation are used for blood-pressure measurement and other medical applications.



This three-channel video driver chip is used for high-resolution color video transmission over fiber-optic cable.



Computerized automated wire-bonding process used in the assembly of Motorola microprocessors.

memory machine.

Software offerings increased during 1984. A key achievement was AT&T's validation of Motorola's UNIX System V/68 port to the MC68000, the industry's first validation of this standard operating system. (UNIX is a registered trademark of Bell Laboratories.) Another 14 VME board-level products were introduced.

New products also included additions to the 6805, 6804 and 6801 HMOS and HCMOS microcomputer families. The Microprocessor Group moved into a new facility in Oak Hill, Texas, a suburb of Austin.

MOS Memories

SPS continued to increase output and reduce costs of its 64K DRAMs (dynamic random access memories). A smaller die size went into volume production. A new-generation advanced-design 256K DRAM began production in the fourth quarter of 1984. A third generation 64K DRAM, using the same advanced design and process approach as the new 256K device, also was sampled.

Volume production of two new 16K very fast static RAMs began. Fabricated in HMOS and providing sub-50 nanosecond performance, these devices establish Motorola's capability in advanced SRAM technology. The first in a series of HCMOS static RAMs, a 16K device using 1.5 micron processing, was sampled at year-end, and three configurations of 64K SRAMs in the same technology were being readied for introduction in 1985. A new one-time programmable 64K EPROM began shipments in December.

Production expanded at the new HCMOS wafer fabrication facility in Austin, Texas. MOS research and development laboratories were moved from Mesa, Ariz., to Austin.

Logic Families

The sector's Standard Logic and Analog Integrated Circuits Group expanded its high-speed CMOS logic family with 15 new devices and the bipolar logic families of FAST (Fairchild Advanced Schottky Transistor-logic) with nine new devices, and MECL (Motorola Emitter-

Coupled Logic) 10KH, with nine devices.

The group introduced a two-chip-set Raster Memory System, which provides low-cost, high resolution graphics for personal computers, intelligent workstations, videotext terminals, computer-animated graphics and word processing applications. For the communications market, the group introduced an HCMOS voice-data UDLT (Universal Digital Loop Transceiver) providing voice and data capability in communications systems at less cost than current voice-only systems; a telephone tone ringer circuit; and a single-chip speakerphone device.

Other new products include a line of single-chip color processors for TV and monitor applications, a very fast ECL bipolar 16K x 1 Static RAM and enhanced versions of two 4K bipolar RAMs.

During 1984, Motorola's C-QUAM AM Stereo decoder chip was established as the industry standard, with major U.S. auto manufacturers specifying the device, and several Japanese companies adopting it for both auto and home receivers.

The group began construction during the year on new facilities for its Bipolar Technology Center at its headquarters plant in Mesa, Ariz.

Discrete and Special Technologies

Motorola introduced more than 300 new opto-electronic, power and RF (radio-frequency) devices in 1984 to augment its discrete product portfolio, the most comprehensive in the industry. The retitled Discrete and Special Technologies Group was restructured, elevating four strategic business units to division level, and creating a new Special Technologies organization to focus on developing new semiconductor and packaging technologies. The Bubble Memory Operation was transferred to this group.

New products included the first device in a new line called SMARTpower II™, a technology of intelligent power controllers integrating CMOS logic and a power MOSFET (MOS field effect transistor) on a single chip. The initial product is a voltage-temperature protection circuit for use in sensitive systems and memories.

A family of monolithic diode arrays also was introduced, along with a series of Switchmode power transistors meeting U.S. and European standards, and an addition to the group's line of pressure sensors for low-pressure applications such as fuel level measurement. Expansions of existing product families included high performance optocouplers, fiber optics components and RF devices. A highly advanced gallium arsenide production facility was placed into operation during the year.

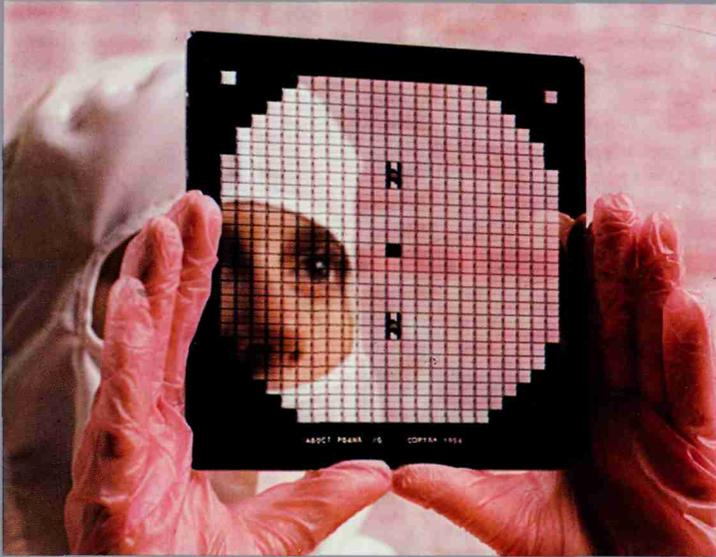
The new Applications Specific Integrated Circuits Division includes the sector's semicustom and military products. The division announced several new Macrocell Array products, which are customer-designed semicustom logic devices. Production began on a full line of CMOS arrays in two-micron processing. For the military market, the division introduced more than 40 linear, logic and memory products. To serve the semicustom standard cell market, the division continued to develop an enhanced version of Motorola's internal HCMOS standard cell library for introduction in 1985.

Research

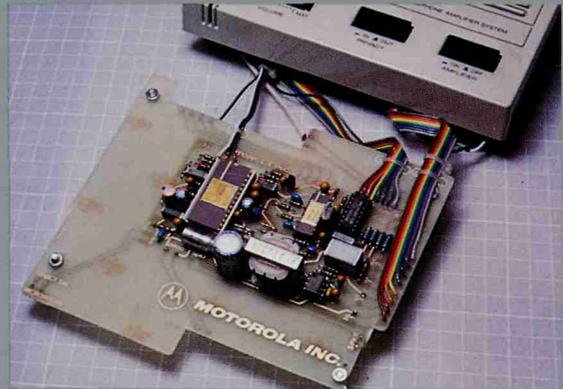
SPS is participating in the U.S. Department of Defense's Very High Speed Integrated Circuits (VHSIC) Program. In Phase II, the sector is teamed with TRW to develop one-half micron CMOS circuits and with Honeywell to develop one-half micron bipolar devices. Motorola is the only merchant market semiconductor supplier on any Phase II VHSIC team.

The highly automated SPS assembly facility in Chandler, Ariz., completed its first full year of operation. Production grew substantially each quarter, and high levels of quality were achieved.

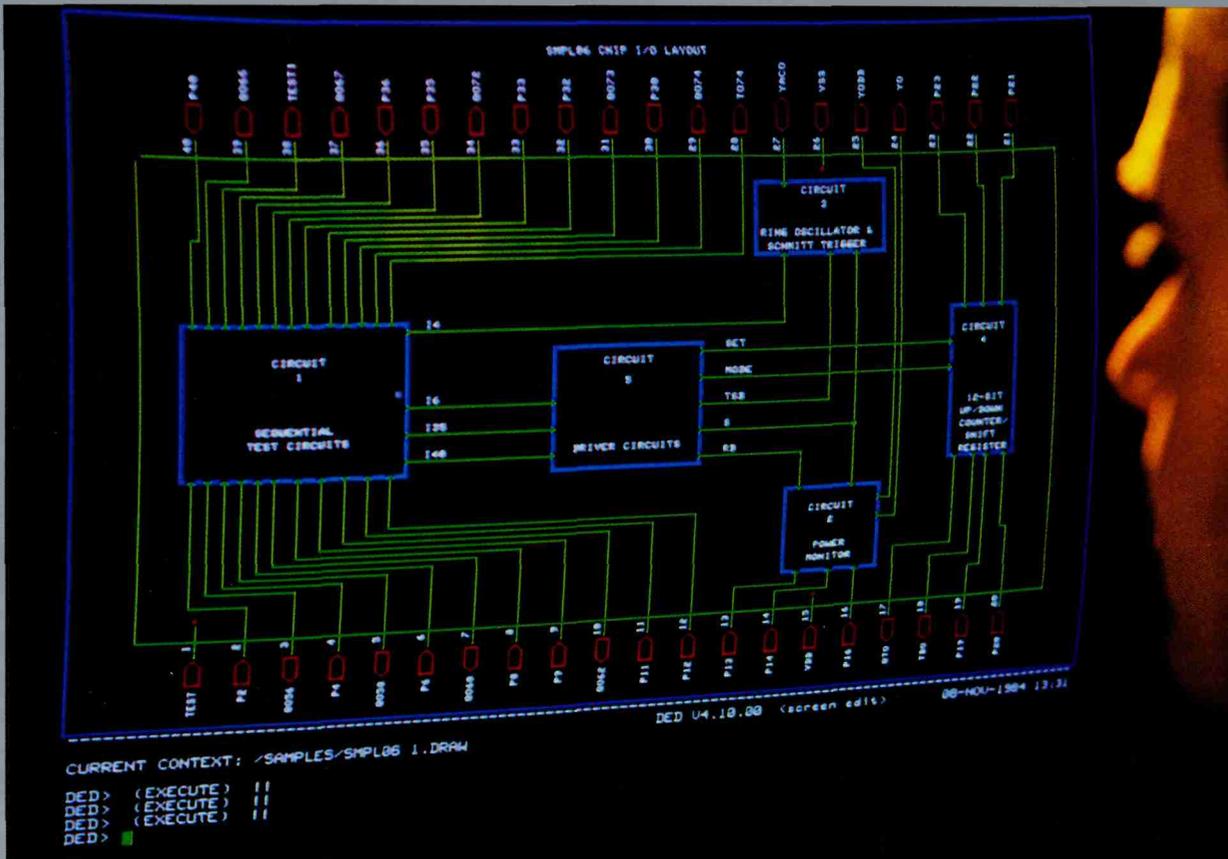
A technical manufacturing supervisor inspects a glass-and-chrome mask used in the production of memory chips.



Integrated circuit for "hands-free" speakerphones for use in computer terminals, intercoms and automobiles.



(Below) This workstation is used in Motorola's Macrocell (gate) Array program. It enables semicustom integrated circuits to be designed by the customer for specific applications.



GROUPS & DIVISIONS:

Cellular Systems Group

Communications Distribution Group

*Commercial Markets Division
Distribution Service Division
Government Markets Division
Special Markets Division*

Communications International Group

European Division

Fixed and Mobile Group

*Fixed Division
Mobile Division*

Portable/Paging/Components Group

*Components Division
Paging Division
Portable Division*

The Communications Sector's sales rose 27 percent in 1984 to a record \$2.06 billion, while operating profits improved substantially. Successful strategic investments, as well as a stronger economy, contributed to the increases.

Worldwide new orders were up 16 percent, while backlog increased 6 percent. All major domestic market segments registered significant gains. International new orders were about even with 1983 as the U.S. dollar continued to strengthen during the year.

Two-way Radio Systems

The sector enhanced its leadership in the two-way land mobile radio business by expanding its lines of mobiles, portables and base stations.

An example of this leadership is found in trunked radio systems, which provide computer-aided sharing of a small number of channels by many users.

One of the new trunked mobile products, the Privacy Plus® 1000 radiophone, features a telephone-type handset and combines full duplex telephone interconnect with standard trunked two-way dispatch capabilities. This means the user can access other two-way radios in the system or place and receive telephone calls.

Motorola's advanced trunked system offers many enhanced features, such as interagency communications for governmental users. The sector received a \$10 million order from the New Jersey State Police for an 800 MHz communications network, one of the first statewide advanced trunking systems. Other orders for advanced trunked systems came from DeKalb County, Georgia, and the City of Miami, Florida, as well as Gulf Oil Co. and Public Service Co. of Colorado.

The sector expanded its line of Expo™ portable two-way radios with a new model for secure voice communications systems. Customers throughout the world have ordered this compact "pager-sized" radio. Other additions to the secure voice communications product

line included new models of the MCX100® and Syntor-X® mobile radios.

In microwave communications, the new Starpoint® 2000 radio combines compact design with new standards of performance for medium-density 2 GHz products. The Starpoint® 6000 line also was expanded with a new digital model for data and voice communications.

New fixed two-way radio equipment includes a compact version of the MSF 5000™ base station. Only 18 inches high, it offers increased flexibility where space is limited or equipment needs to be relocated frequently.

Paging

New models and systems enhanced Motorola's leadership in paging during 1984. The Optrx® alphanumeric display pager line was expanded to include a silent, vibrate-alert model. New features were added to the BPR 2000™ numeric display pagers.

A new alphanumeric display paging system helps make factories more efficient. In this system, a Modem Plus terminal communicates with a computer that monitors the status of automatic machinery on production lines. When a machine malfunctions, the computer sends a message to the Modem Plus, automatically initiating a page to a supervisor or maintenance worker. The page identifies the particular machine that has failed, along with the type of failure.

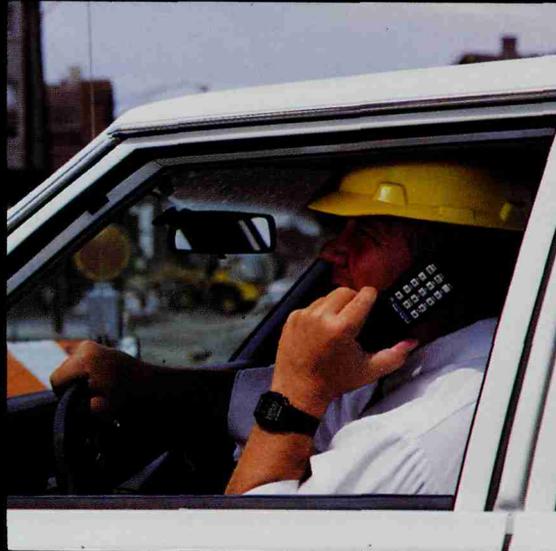
Portable Radio/Data Systems

Motorola's portable radio/data communications systems improve productivity by allowing field personnel to access a computerized database without using a telephone. A system designed and built by Motorola for IBM's field service organization is operating in many U.S. metropolitan areas, and is expected to be fully operational in more than 250 cities nationwide by the end of 1985. Motorola is supplying systems for other customers in the railroad and utility industries.

A Miami police officer uses a new two-way portable radio, part of an advanced trunking system purchased by the City of Miami.

(below) One of Motorola's advanced trunking systems is tested by the sector's Central Systems Organization before shipping.

Privacy Plus® 1000 radiophone enables users to make and receive telephone calls directly from their trunked two-way dispatch radio.



Fully synthesized 20-channel trunked STX™ portable two-way radio undergoes a performance measurement in an anechoic chamber, used to evaluate antenna designs.

Cellular Radiotelephone

The rapid growth in orders and shipments that began at the end of 1983 continued throughout 1984. During the year, however, shipments were affected by delays in the granting of licenses and construction permits in many U.S. cities.

Motorola won more cellular system awards for fixed network equipment in the 90 largest U.S. metropolitan areas than any other supplier. This included a 1984 contract for more than \$25 million from United Telespectrum, a subsidiary of United Telecommunications, for complete Dyna T•A•C® cellular systems in six cities plus subscriber equipment.

In the United Kingdom, British Telecom-Securicor awarded Motorola a \$13 million order for mobile and portable subscriber units and a \$10 million order for infrastructure equipment in addition to its original contract.

Motorola's joint venture in Hong Kong received a license to operate a cellular system there, and a Motorola Israel Ltd. joint venture also was granted permission to operate a system in that country. These licenses enable the company to participate in the ongoing revenue stream as a system operator. The sector also installed two cellular systems in the Republic of Korea, one of which covers the city of Seoul.

In subscriber equipment, Motorola announced the most comprehensive line of cellular phones available. The Dyna T•A•C family now includes seven mobiles and two portables.

Motorola filed an antidumping petition in November 1984 with the U.S. International Trade Commission and the Commerce Department. The petition asserts that Japanese companies have sold cellular car telephones in the United States at less than fair value. The ITC made a preliminary determination of material injury to the U.S. cellular industry. Final action in the case is expected in late 1985.

The sector established the Cellular Systems Group, incorporating sales and

product operations that were previously separate.

International Developments

In addition to the cellular expansion overseas, the sector's other businesses made important advances. A new Expo portable radio was designed for Japan's industrial and commercial markets. The very compact Maxar® 50 mobile radio also was introduced for the Japanese market.

Pocket Bell pagers are being shipped to Nippon Telegraph and Telephone in Japan at a rate of more than 70,000 per year, with product reliability surpassing required performance levels. At the end of 1984, about 200,000 Motorola pagers were in operation in Japan. The sector also has contributed significantly to the design of the next generation NTT pager, which features CMOS microprocessor technology in a smaller design. It is to begin shipping in 1985.

The national telephone company in Italy has installed the first of four Motorola Metropage 200 terminals that will link cities in a national paging system. Using the same pager and phone number, a subscriber will be able to be paged in any major city in Italy.

The new BMD™ pager was introduced to serve a variety of international markets, including European fire departments and other public safety agencies.

Major international orders included awards from the Bangladesh Telephone and Telegraph Co. for microwave equipment and the Colombian National Police for portables and mobiles.

Expansion

Production facilities expanded throughout the world. In Singapore, manufacturing operations began in a leased facility, producing microelectronic circuits and assemblies for pagers and portable two-way radios. Construction also started on a new facility in Singapore to replace the leased space.

In the United States, the Paging Division completed its move into the new plant in Boynton Beach, Fla. The sector

acquired a building in Arlington Heights, Ill., for future manufacturing and engineering space for cellular telephone fixed base station and terminal systems.

Existing facilities in Schaumburg, Ill., were expanded to provide additional engineering and manufacturing capability, primarily for fixed two-way communications systems.

Olympic Communications

As Official Radio Communications Sponsor for both the Winter Olympic Games in Sarajevo, Yugoslavia, and the Summer Games in Los Angeles, Motorola supplied portables, mobiles, pagers, base stations, consoles and related equipment. Users included officials, coaches, athletes, judges and security officers.

For the Summer Games in Los Angeles, the sector installed and maintained the most sophisticated state-of-the-art communications system in Olympic history. To assure effective communications over the entire 4,500-square-mile area in six Southern California counties, Motorola provided three types of radio systems. About 3,000 pagers were used in the paging system covering a 200-mile corridor as well as various Olympic sites. A mobile system included trunked two-way mobile radios and cellular car telephones. In addition, 32 separate two-way systems were installed at the various locations for events or operations, with more than 200 base stations and repeaters and almost 4,000 portables. In total, Motorola provided more than 10,000 pieces of equipment for the communications network.

Motorola provided communications systems for the Summer Olympic Games in Los Angeles.



Modem Plus terminal automatically notifies supervisor with an Optrx® pager, giving information on a malfunctioning machine.



Compact Starpoint® radios and multiplex units represent the state of the art in microwave technology.



ORGANIZATIONS:

Codex Corporation
Four-Phase Systems, Inc.
International Division
Universal Data Systems

The Information Systems Group (ISG) expanded in 1984 with new products in its integrated line of data transmission and distributed data processing systems. The group also strengthened its direct sales and service operations in international markets.

Sales rose 20 percent from a year earlier, while new orders advanced 14 percent. Backlog was 8 percent higher than at the end of 1983. The group had a small operating profit in 1984 compared with a small loss in 1983.

Investment continued heavy in the development and support of new systems resulting in integrated information transportation networks. A number of Codex/Four-Phase Systems joint bids and deliveries of Internal Revenue Service Center systems illustrate the emphasis on the integrated approach.

Codex

Codex introduced several major new products, including the Codex 2600 series high-speed modems. The 2600 series transmits data at up to 16,800 bits per second using a trellis-coded modulation scheme never before implemented in a commercial modem. The 2600 design is based on the Motorola MC68000 microprocessor and a proprietary custom VLSI signal processing chip set produced for Codex by the Semiconductor Products Sector. These modems offer a variety of advanced software-based features, with essentially unlimited capability for future additions.

RCA Cylis Communications Network signed a three-year agreement for up to 8,000 of the new 2640 modems. Codex also received a \$6.6 million contract to supply Metropolitan Life Insurance Co. with 2600 series modems.

The new Codex 6240 Digital Transmission Multiplexer is a high-speed time division multiplexer designed to integrate voice, data and video transmission over "T1" circuits.

Also introduced during 1984 were the 4002 general purpose local area network (LAN), the 2132 integrated Digital Service Unit/Channel Service Unit (DSU/CSU) and the 6005 and 6035, two intelligent network processors. The 4002 is an important extension of Codex's experience and leadership in networking. The 2132 represents entry into the digital transmission market. The 6005 and 6035 are high-efficiency statistical multiplexers with advanced networking features.

Common carriers in 1984 increased their orders for Codex products to resell under their own label. Customers include PacTel Communications Systems, Sonacor and U.S. West.

Universal Data Systems

Universal Data Systems (UDS) entered the digital communications market in 1984 with new 56,000 and 9,600 bits per second digital service units (DSU/CSU). The first 12,000 bits per second digital voice modems were shipped to Motorola's Communications Sector for use in its systems.

UDS developed the FasTalk™ series of microcomputer modems. They include 300 and 1,200 bits per second standalone models and a 1,200 bps plug-in card for IBM personal computers. All models come with necessary communications software.

UDS had exceptional demand across its entire product portfolio. BellSouth Services Inc. awarded UDS a two-year contract to supply modems and related equipment.

Four-Phase Systems

Four-Phase Systems introduced a family of state-of-the-art front-office systems, the Series 6000, based on the Motorola M68000 microprocessor family and the UNIX V operating system. (UNIX is a registered trademark of Bell Laboratories.)

Series 6000 applications software includes word processing, spreadsheet support, database management, data collection and software development tools. More than 40 Value Added Resellers were signed under the new Series 6000 VAR program.

Series 5000 orders were strong throughout the year. These systems, a significantly more powerful extension of the Series 4000, provide users with exceptional back-office transaction data processing and data entry capability. The Series 2000, a high-performance M68000-based UNIX workstation, continues to attract orders from both VARs and end users.

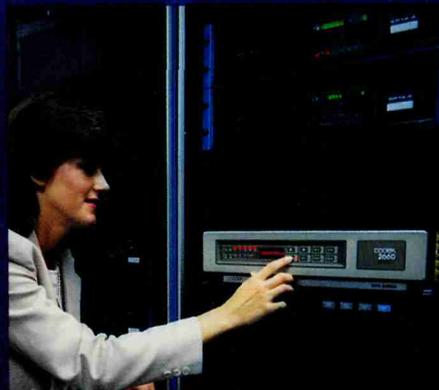
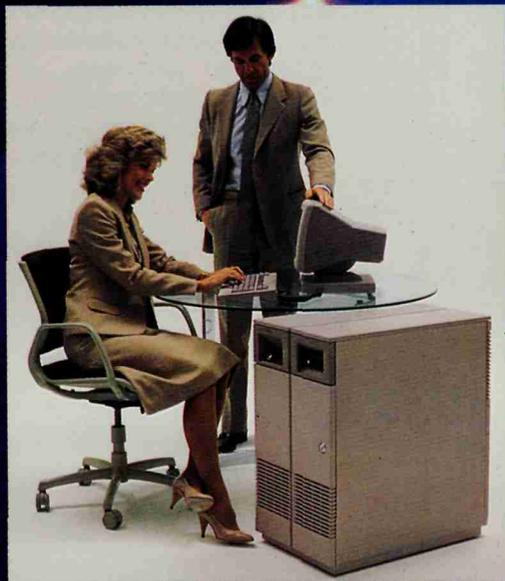
Four-Phase expanded available software through partnerships with independent developers as well as through internal development.

In a major reorganization, Four-Phase streamlined its management and administrative systems, implemented a product management organization with functions realigned along product lines, and consolidated its field sales and service operations for more focused customer support. Four-Phase completed its senior management team with the addition of a new senior vice president of marketing and a new senior vice president of manufacturing operations. Three other new vice presidents joined Four-Phase to augment quality and marketing functions and to implement the product management organization.

International

ISG data communications equipment was purchased for use in large private networks in West Germany, Belgium, Portugal, Korea and Turkey. New local-area network products were introduced internationally, with pilot installations in the United Kingdom and West Germany. The division continued its direct distribution and service program with the addition of a subsidiary in Israel.

Mobil Oil of Germany signed a contract for 10 series 5000 computer systems. The European VAR program was launched successfully.



(above) The world's largest airlines are served by Motorola data communications systems.

(far left) The new Series 6000 integrated office systems are based on the Motorola M68000 micro-processor family.

(above left) The DDS-56, a new 56,000 bps digital service unit from Universal Data Systems.

(below left) The Codex 2600 series high-speed modems offer advanced software-based features.

BUSINESSES:

**Automotive Electronics Division
Display and Terminal Systems
Electronic Appliance Controls
Telecommunications
International Operations**

The Automotive and Industrial Electronics Group (AIEG) strengthened its business portfolio in 1984 through investments in high-growth product lines serving the automotive, computer equipment, telecommunications and appliance control markets.

Sales increased 11 percent over 1983, while new orders were 7 percent higher. Backlog at the end of 1984 was slightly higher than a year earlier. Operating profits declined somewhat from the excellent level of 1983 as spending increased on strategic investments and the repositioning of the group's businesses continued.

New Technologies and Products

The Automotive Electronics Division made substantial progress in developing new technologies and applications in single-point fuel-injection systems and pressure sensors, including silicon and glass capacitive and piezo-resistive technologies.

Additional electronic engine control applications were developed for Ford Motor Co.'s 1985 model year vehicles. The division received a development and sourcing award from a major diesel engine manufacturer to design electronic engine controls for the truck and industrial market.

The division also began shipping electronic instrumentation for the 1985 Chrysler LeBaron GTS and Lancer series and launched production of a new microprocessor-based speedometer, odometer and tachometer for International Harvester trucks. This instrument is fully programmable at the customer's point of assembly and can accommodate any combination of engine, transmission, axle or tire size.

The Electronic Appliance Controls business enhanced its leadership in the microwave oven control market. It also expanded its product portfolio with fully electronic controls for other major appliance and commercial applications that have traditionally used electromechanical devices.

Terminal Systems began shipping its first bit-mapped graphics product and was awarded a major three-year contract for a family of data entry and office automation terminals.

Display Systems introduced a series of high-resolution monochrome products using technology that permits higher frequency, greater reliability and lower cost. Very high-resolution monochrome and color products reached advanced stages of development.

International Operations

The major investments in international facilities that began in 1983 substantially improved AIEG's manufacturing capabilities in Europe. During 1984, the group began producing a thick-film ignition module and an integrated-circuit, thick-film hermetic voltage regulator at the Angers, France, facility. In addition, the group launched production of a new mapped ignition control system in Stotfold, England.

Advanced Manufacturing and Design

AIEG invested heavily in advanced technologies and applications to increase flexibility and quality, decrease cost and improve response/total cycle time.

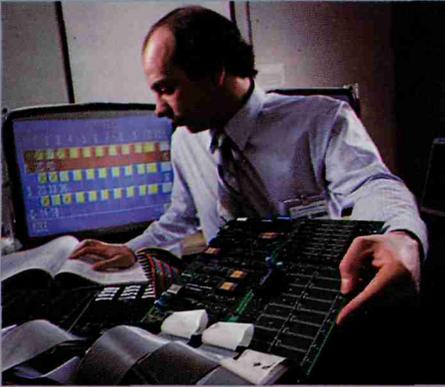
An automated process for manufacturing CRT displays that can run up to four product models simultaneously was installed. Other advancements include an integrated robotic assembly line for applying odd-form parts to printed circuit boards and an upgraded system for material and resource planning.

Significant advancements in computer-aided design and engineering systems were implemented across the group. Enhanced capability for schematic capture, logic simulation, mechanical design and artwork layout have cut the response time for the group's products by up to one-third.

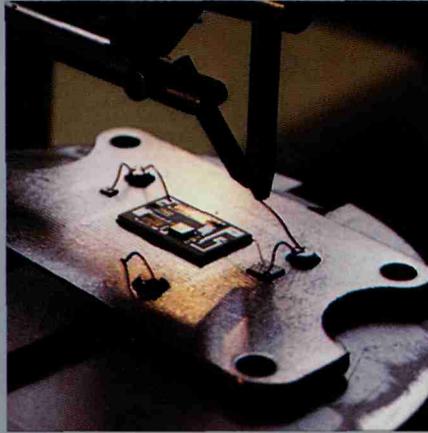


Programmable electronic controls are being developed and manufactured for appliances and commercial applications that have traditionally used electro-mechanical devices.

Functional testing of a custom-developed bit-mapped graphics subsystem.



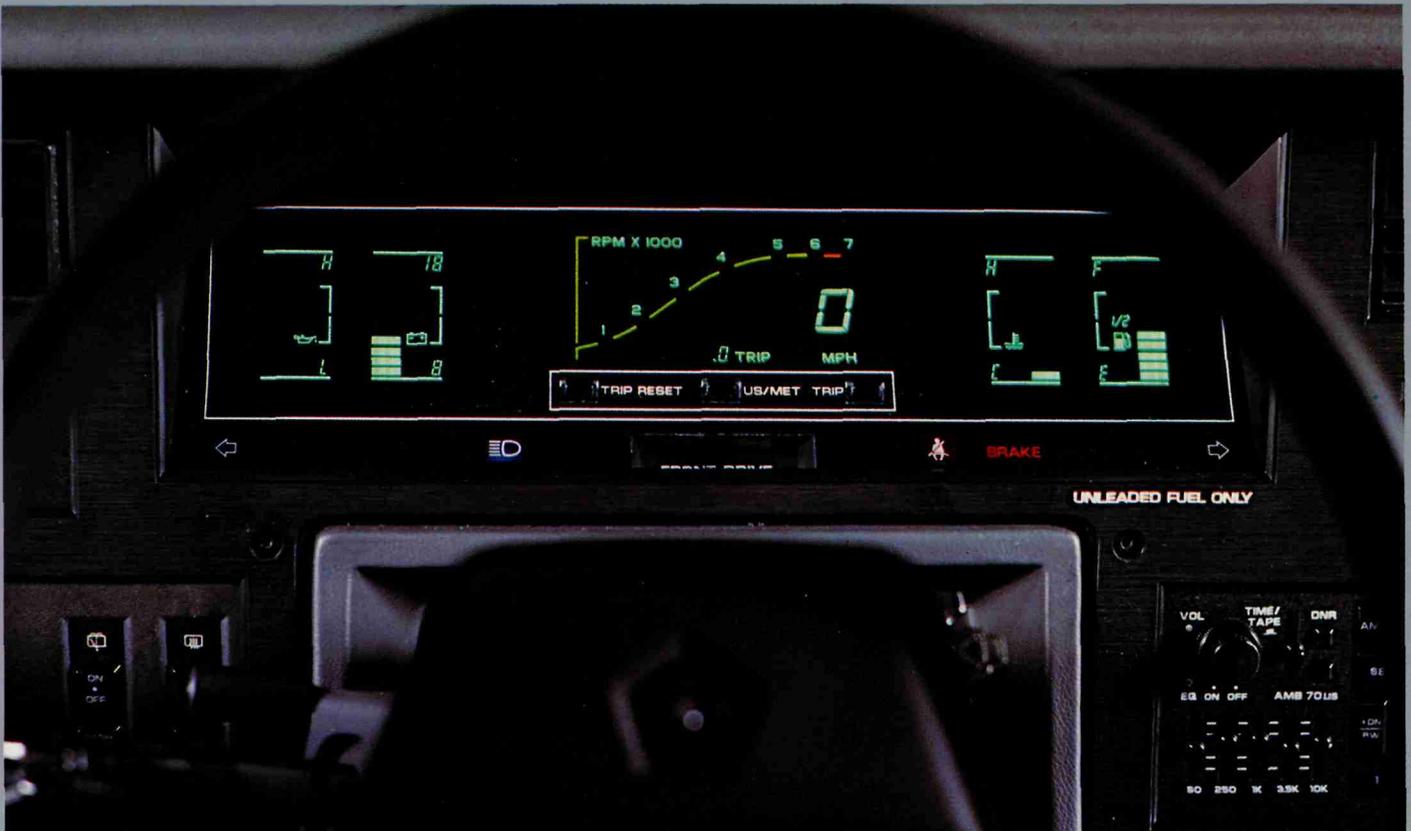
Ultrasonic wire bonding of integrated-circuit automotive regulator made in Angers, France.



Software engineer uses universal calibration console, which displays engine performance parameters under on-road conditions, to calibrate and test electronic engine control modules.



Electronic instrument cluster built for Chrysler LeBaron and Lancer vehicles.



BUSINESSES:

Communications Division
Tactical Electronics Division
Aerospace Operations
Radar Operations

The steady growth of the Government Electronics Group (GEG) continued during 1984. Sales increased 19 percent and new orders rose 13 percent. Backlog was 18 percent higher than at the end of 1983.

Operating profits were slightly lower than in 1983, when the group benefited from several large international contracts

completed at better-than-expected profit levels. Tactical electronics and radar products led the growth in 1984 orders.

Communications Technology

GEG is engaged in research placing it at the forefront of satellite communications technology. During 1984 the group continued developing a baseband processor for NASA's Advanced Communications Technology Satellite (ACTS) program. A proof-of-concept model was delivered for the system, which will perform a variety of data and voice communications functions when the satellite is launched in the late 1980s.

The group also introduced an advanced communications system analyzer that tests cellular radio equipment as well as military systems. Sales of the analyzers advanced sharply during 1984.

Development work continued on a compact, 24-ounce military survival radio to be used to locate downed air crew members. Pre-production models are being tested in 1985. The multi-channel radios combine voice communications and beacon capabilities in a single unit.

Major Contracts

Significant contracts during 1984 include:

- A \$31 million award from the U.S. Army to develop and produce ground station modules to be used with an airborne, joint-service radar system called Joint STARS. The Army-Air Force system allows real time information to be transmitted from the forward battle line to ground stations located at Army and Air Force control centers. The first ground station module was successfully completed and deployed in 1984.
- A \$30 million increment from the U.S. Navy for follow-on production of modules for the Demand Assigned Multiple Access (DAMA) communications system. These UHF multiplexer systems are used with a radio system to increase the capability of satellite communications channels.

- More than \$54 million in follow-on production funding from the U.S. Navy for three different models of target detection devices and related support for the Navy's STANDARD missile. GEG has produced the devices for more than 12 years.
- A \$17.5 million follow-on production award, also from the Navy, for a quantity of FMU 139/B electronic fuzes.
- An additional \$14.7 million in production funding from the U.S. Air Force for AN/ALT-16 solid-state amplifiers to be used aboard the Strategic Air Command's operational B-52 aircraft. The amplifiers are used in conjunction with the aircraft's electronic countermeasures systems, which GEG previously developed and produced.
- A \$14 million full-scale engineering development contract from the U.S. Army for XM-84 wide-area, side-penetrating mines (WASPM).
- A \$12.6 million initial production contract from the U.S. Army for radar transponder sets and related technical data packages. The multifunctional beacon transponders are used by military aircraft to locate targets.

New Facilities

During 1984, GEG completed the core building and operations module for its Tactical Electronics Division, bringing this Scottsdale, Ariz., campus to more than 550,000 square feet.

The group also broke ground for Phase I of its new campus in Chandler, Ariz. Construction for the first 382,000-square-foot module will be completed during the first half of 1986. The site has been selected to house Aerospace Operations, which requires expanded facilities.

Reorganization

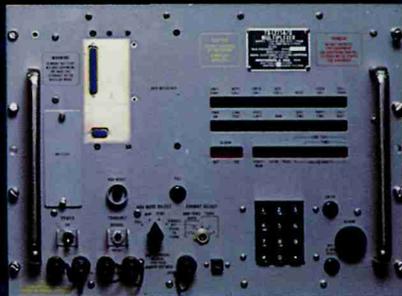
During 1984, GEG elevated its Tactical Electronics Operations to division status. The group's Aerospace Operations was separated from the Communications Division to prepare for the operation's move to Chandler.



This AN/PRC-112(V) lightweight survival transceiver is designed to locate crews of downed aircraft.



The Demand Assigned Multiple Access (DAMA) system uses multiplexing to make satellite communications far more accessible. The latest miniaturization techniques enable the subscriber unit, left, to perform more efficiently than the earlier module, right. The U.S. Navy uses the system for navigation and communications.



The AN/URC line of tactical transceivers provides highly mobile military units with line-of-sight, satellite or data communications.



People Values

The nine "people values" shown on this page represent corporate objectives that enable Motorola to succeed in serving its customers. Our personnel contribute their skills and talents; in return, they are treated with dignity and rewarded fairly, on the basis of capability.

Many of our significant programs in 1984 illustrate how we achieve these objectives. For example, to provide personal opportunities for training and development, we increased our offerings in software, engineering, manufacturing management and personal skills development. About one million employee hours were invested in training during 1984. In the future, many Motorola locations will offer training through satellite communications with a training and education center under construction in Schaumburg, Ill.

Motorola also strives to compensate fairly by salary, benefits, and where possible, incentives. Benefit programs are reviewed continually with this objective in mind. In the United States, for example, in 1984 our people were able to further match benefits to their personal needs through new programs of flexible medical benefits and greater choice in capital accumulation investments. We also continued our U.S. leadership in promoting "worksharing" legislation that allows a shortened work week, supplemented by partial unemployment compensation, as an alternative to layoffs in times of economic softness. Illinois and Florida joined Arizona, where the concept already has proved successful.

Looking to the future, businesses throughout Motorola studied their organizational effectiveness and devised structures that would enable them to better serve growing customer needs. Each Motorola officer spent a week of concentrated study on "Asia: Past, Present and Future," and how it relates to the company's businesses.

Our Participative Management Program (PMP) expanded in 1984, especially among non-manufacturing and international employees.

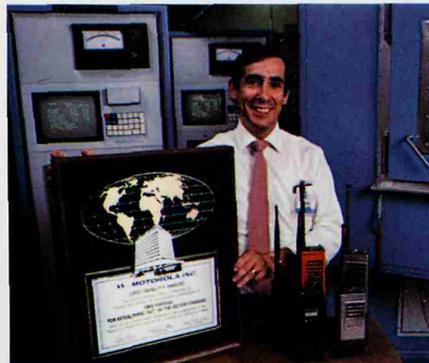
Quality

Motorola continues to focus on achieving the highest standards of quality. This commitment took on a new dimension in 1984 with the establishment of the Chief Executive Office Quality Award, Motorola's highest award for quality performance.

Winners were:

- Employees of the Communications Sector's mobile products facility in Mount Pleasant, Iowa, for zero-delinquency delivery.
- Employees of the Automotive and Industrial Electronics Group's display products facility in Joplin, Mo., for achieving zero defects in quality audits across all product lines.
- Employees of the Manufacturing Quality Control department at Codex Corp. involved in the introduction of the 2600 series modems.
- Mike Fontana, quality and reliability engineering manager at the Communications Sector's portable products facility in Fort Lauderdale, Fla., for developing specific reliability testing throughout the sector.

We are continuing the successful program to increase quality tenfold over five years. Many of our operations have exceeded their goals.



Mike Fontana, winner of a Chief Executive Office Quality Award.

People Values

- 1 To treat each employee with dignity.
 - 2 To treat each employee as an individual.
 - 3 To maintain an open atmosphere where direct communication with employees affords the opportunity to contribute to the maximum of their potential.
 - 4 To foster unity of purpose between employees and Motorola.
 - 5 To provide personal opportunities for training and development to ensure the most capable and most effective work force.
 - 6 To respect senior service.
 - 7 To compensate fairly by salary, benefits, and where possible, incentives.
 - 8 To promote on the basis of capability.
 - 9 To practice the commonly accepted policies of equal opportunity and affirmative action.
-

Financial Condition

Motorola's strategic policy of maintaining a strong balance sheet continues to be emphasized, even though in 1984 total debt increased substantially from \$270 million to \$642 million. The increased debt results from slightly higher weeks of accounts receivable, lower inventory turns, and larger expenditures for strategically important fixed assets. Net of marketable securities, the debt/debt plus equity ratio changed from 4.3 percent the previous year to 18 percent at December, 1984. This ratio, while significantly higher, still reflects a strong financial condition, well within our plan of remaining a strong AA credit.

Receivables and Inventories

Over the several years ending in 1983, the weeks of sales in accounts receivable had steadily declined, for a variety of reasons, including improved computer based billing and receivable systems and emphasized collection efforts. During 1984 weeks of receivables increased from 6.5 to 7.0, still better than 7.1 weeks at December, 1982. The small increase is partially caused by a shift to more complex products and systems, which have traditionally resulted in somewhat slower customer processing.

Similarly, turnover of inventories decreased during 1984, particularly in the latter part of the year, as billings were modestly lower than we had expected earlier. However, inventory turnover at December 31, 1984, was also better than at the end of 1982. We believe that there is potential for not only restoring inventory turnover to the 1983 level, but achieving even further improvement. Substantial management attention through a variety of incentive and other programs is being given to inventory turnover.

Current Ratio

In the 1983 Annual Report we suggested that further reductions in the current ratio (current assets/current liabilities) could occur as our inventory and receivable turnover would continue to improve without corresponding reductions in trade liabilities.

In 1984 the current ratio did drop from 2.07 to 1.83 despite the fact that turnover of current assets did not improve and even slightly deteriorated. The 1984 reduction in the current ratio was caused by sharply increased yearend current liabilities including, for the first time in several years, current debt (\$111 million). The increase in yearend current liabilities was also caused by higher employee profit sharing and incentive bonus provisions (not yet disbursed at yearend) and the increasing momentum of fixed asset expenditures as the year ended, reflected in larger accounts payable. We believe that the good quality of our current assets and our relatively modest debt, especially as a portion of capital at work, reflect a continually strong financial position despite the lower current ratio. Net working capital at yearend increased to \$1 billion from \$894 million at the previous yearend.

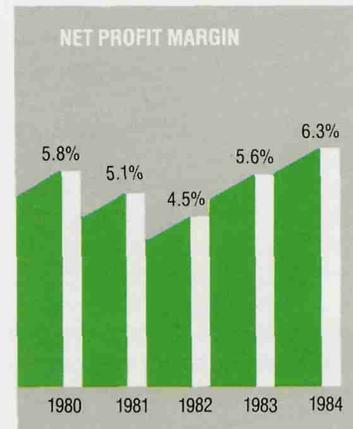
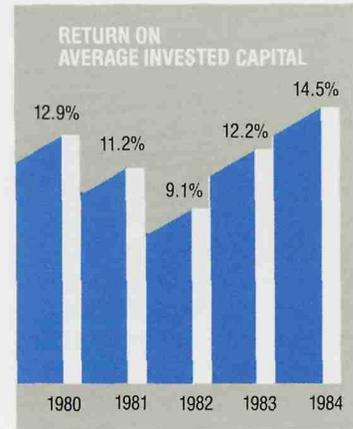
Our December 31, 1984 balance sheet includes \$143 million in short term investments. Of this total \$94 million represents as yet unrepatriated earnings of our Puerto Rico subsidiary corporations.

Fixed Asset Expenditures

Fixed asset expenditures in 1984 sharply increased, both in absolute terms and related to sales volume, from 1983. 1984 expenditures were \$783 million, up from \$406 million in 1983. The major portion of 1984 expenditures was devoted to production, laboratory, and test equipment to increase potential output, enhance productivity and better provide for a high level of quality. We currently expect a further increase in fixed asset expenditures in 1985. As is shown in the Segment information in this Annual Report the largest portion of our fixed asset expenditures are in the Semiconductor Products Sector.

Debt and Its Makeup

1984 saw the corporation's total debt increase from \$270 million to \$642 million. During the year several steps were taken to increase the portion which enjoys fixed or relatively fixed interest rates and thereby reduce our exposure to possible sharp increases in market rates. In December



\$75 million of Eurodollar debentures were sold and \$28 million in pollution control debt instruments were sold earlier in the year. The pollution control securities, while not having fixed rates, do enjoy substantially lower than general market rates. Details are contained in Note 4 to the financial statements.

DISC Tax Cancellation

The Tax Reform Act of 1984 cancelled previously deferred federal taxes on certain earnings of Domestic International Sales Corporations (DISC). Prior to 1984 Motorola had provided approximately \$38 million for these taxes. In the third quarter of 1984 this provision was reversed and the Financial Highlights and other information in this report makes a maximum effort to separate this DISC tax cancellation benefit from our ongoing net income.

As we have reported on several occasions in past years on similar matters, we were again disappointed by the refusal of the Financial Accounting Standards Board (FASB) to allow corporations to record this DISC tax cancellation benefit as either an extraordinary item or via a direct credit to surplus. We also proposed, and the FASB also refused, that the benefit might be recorded via restatement of earnings in the previous years in which the tax was accrued. The FASB decision has forced corporations to include this item in "net income." This creates, we believe, undesirable lack of comparability between results of the same corporations over a series of years and between the results of some corporations and others, as not all companies accrued this potential tax liability in past years. Thus, we have made maximum effort to separately identify the \$38 million (32 cents per share) in this report.

Earnings

The pre-tax and after-tax margins on sales (excluding the DISC benefit) improved from 7.1 percent and 5.6 percent in 1983 to 8.4 percent and 6.3 percent in 1984, and the return on average invested capital and return on stockholders' equity

both also improved, from 12.2 percent and 13.5 percent in 1983 to 14.5 percent and 16.4 percent in 1984. We recognize, however, that even these improved levels of profitability are somewhat short of our longer range goals. Also, it is noteworthy that these statistics were somewhat lower as 1984 ended than earlier in the year.

Stock Split

During 1984 the stockholders authorized an increase in the number of outstanding common shares from 50 million to 150 million. In an associated action the company distributed a 200 percent stock dividend on June 1, 1984, thereby effecting a three-for-one stock split. The initial quarterly dividend on the new shares, 16 cents, is 20 percent higher than the previous quarterly dividend rate. The number of registered stockholders has increased approximately 30 percent since distribution of the stock dividend.

Key Financial Regulatory and Legislative Issues

As we consider the company's finances, now and in the future, and our own strong desire to properly and clearly report financial information, certain current regulatory and legislative matters come to mind, including:

- The occasional actions of the Financial Accounting Standards Board (FASB) which we believe hinder our ability to report our earnings and financial condition accurately, conservatively, and understandably are of concern to us. Previous such issues have included the recording of gains and losses from foreign currency rate changes and the above discussed requirements that the DISC tax cancellation benefit be included in net income. The FASB is now studying and preparing accounting rules on the recording and reporting of employee retirement liabilities. Preliminary documents which have been circulated cause us to believe that the new rules may risk causing more confusion than clarification.
- The U.S. government is now considering a series of proposals by the Treasury

Department aimed at tax simplification and fairness. We thoroughly applaud these objectives. However, the Treasury Department proposals would, if enacted, very substantially increase Motorola's tax payments and therefore decrease the cash flow available for growth and dividends. Notably the new proposals would require us to depreciate fixed assets for tax purposes considerably slower than we do for public reporting purposes and we believe that our current depreciation practices properly reflect the economic lives of our various categories of assets.

Also the proposed near cancellation of the favorable tax treatment given to operations in Puerto Rico would materially and adversely affect Motorola and, even more seriously we believe, would materially and adversely impact employment and social stability in Puerto Rico. Furthermore, we believe the incremental tax revenue that the Treasury Department expects from this change would not occur because many corporations would be forced to relocate these facilities to lower cost foreign nations in order to be competitive on a world-wide basis.

- The Research and Experimentation Tax Credit, enacted in 1981, which allows corporations to take as a credit against their U.S. tax liability a portion of year-to-year increases in the amounts spent on qualified research and development, is scheduled to expire at the end of 1985. The recent Treasury Department proposals include extension of this technology-generating tax incentive and we expect to actively participate in and support public debate on this matter over the coming months.

Statements Of Consolidated Earnings

Motorola, Inc. and Consolidated Subsidiaries, Years ended December 31

(In millions of dollars, except per share data)	1984	1983	1982
Net Sales	\$ 5,534	\$ 4,328	\$ 3,786
Manufacturing and other costs of sales	3,206	2,593	2,269
Selling, general and administrative expense	1,475	1,113	1,013
Depreciation of plant and equipment	353	289	244
Interest expense, net	34	24	48
Total costs and other expenses	5,068	4,019	3,574
Earnings before income taxes and extraordinary gain	466	309	212
Income taxes provided on earnings	117	65	42
Cancellation of DISC taxes	(38)	—	—
Income taxes	79	65	42
Net earnings before extraordinary gain	387	244	170
Extraordinary gain (note 7)	—	—	8
Net earnings	387	244	178
Net earnings per share before extraordinary gain (note 7)	\$ 3.27	\$ 2.09	\$ 1.55
Net earnings per share	\$ 3.27	\$ 2.09	\$ 1.62
Average shares outstanding (in thousands) (Note 2)	118,491	117,138	109,518

See accompanying notes to consolidated financial statements.

Statements Of Consolidated Stockholders' Equity

Motorola, Inc. and Consolidated Subsidiaries, Years ended December 31

(In millions of dollars, except per share data)	Common Stock and Additional Paid-in Capital			Retained Earnings		
	1984	1983	1982	1984	1983	1982
Balances at January 1,	\$581	\$515	\$344	\$1,367	\$1,185	\$1,066
Stock split (3-for-1)	237	—	—	(237)	—	—
Net earnings	—	—	—	387	244	178
Stock option plans	16	26	15	—	—	—
Conversions of debentures	—	40	—	—	—	—
Common stock sold in public offering and exchanged for outstanding debentures	—	—	156	—	—	—
Dividends declared (\$.61 per share in 1984 and \$.53 per share in 1983 and 1982)	—	—	—	(73)	(62)	(59)
Balances at December 31,	\$834	\$581	\$515	\$1,444	\$1,367	\$1,185

See accompanying notes to consolidated financial statements.

Consolidated Balance Sheets

Motorola, Inc. and Consolidated Subsidiaries, as of December 31

Assets	(In millions of dollars, except per share data)	1984	1983
Current assets			
Cash		\$ 25	\$ 25
Short-term investments, at cost (approximating market)		143	182
Accounts receivable, less allowance for doubtful accounts (1984, \$29; 1983, \$23)		817	655
Inventories:			
Finished goods		161	103
Work in process and production materials		776	576
Future income tax benefits		148	103
Other current assets		133	86
Total current assets		2,203	1,730
Property, plant and equipment			
Land		59	44
Buildings		872	717
Machinery		1,867	1,366
Accumulated depreciation		(1,056)	(849)
Property, plant and equipment, net		1,742	1,278
Equipment leased to others, net		150	151
Sundry assets		99	77
Total assets		\$4,194	\$3,236
Liabilities and Stockholders' Equity			
Current liabilities			
Notes payable and current portion of long-term debt		\$ 111	\$ 8
Accounts payable		436	340
Accrued liabilities		540	398
Income taxes payable		115	90
Total current liabilities		1,202	836
Long-term debt		531	262
Noncurrent deferred taxes		102	108
Other noncurrent liabilities		81	82
Stockholders' equity			
Common stock, \$3 par value.			
Authorized shares: 1984, 150,000,000; 1983, 50,000,000			
Outstanding shares: 1984, 118,775,938; 1983, 39,384,281		356	118
Preferred stock, \$100 par value issuable in series.			
Authorized shares: 500,000 (none issued)		—	—
Additional paid-in capital		478	463
Retained earnings		1,444	1,367
Total stockholders' equity		2,278	1,948
Total liabilities and stockholders' equity		\$4,194	\$3,236

See accompanying notes to consolidated financial statements.

Statements Of Consolidated Changes In Financial Position

Motorola, Inc. and Consolidated Subsidiaries, Years ended December 31

(In millions of dollars)	1984	1983	1982
Operations			
Net earnings before extraordinary gain	\$387	\$244	\$170
Add (deduct) noncash items:			
Depreciation of plant and equipment	353	289	244
Change in deferred taxes	(51)	(28)	16
Funds provided by operations	689	505	430
Funds provided by (used for):			
Accounts receivable, net	(162)	(102)	(10)
Inventories	(258)	(26)	(2)
Other current assets	(47)	(8)	(6)
Accounts payable and accrued liabilities	238	197	(18)
Income taxes payable	25	52	(28)
Sundry assets	(22)	(22)	3
Other noncurrent liabilities	(1)	18	8
Net funds provided by operations	462	614	377
Financing			
Extraordinary gain	—	—	8
Increase (decrease) in notes payable and current portion of long term debt	103	(1)	2
Increase (decrease) in long-term debt	269	(107)	(57)
Issuance of common stock	16	66	172
Net funds provided by (used for) financing	388	(42)	125
Dividends Declared	(73)	(62)	(59)
Investments			
Fixed asset expenditures	(783)	(406)	(355)
Expenditures for equipment leased to others	(75)	(72)	(80)
Disposals and other changes to plant and equipment, net	42	26	17
Net funds used for investments	(816)	(452)	(418)
Net increase (decrease) in cash and short-term investments	\$ (39)	\$ 58	\$ 25

See accompanying notes to consolidated financial statements.



Certified Public Accountants

Peat Marwick Plaza
303 East Wacker Drive
Chicago, Illinois 60601
(312) 938-1000

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

We have examined the consolidated balance sheets of Motorola, Inc. and consolidated subsidiaries as of December 31, 1984 and 1983, and the related statements of consolidated earnings, stockholders' equity, and changes in financial position for each of the years in the three-year period ended December 31, 1984. Our examinations were 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.

In our opinion, the aforementioned consolidated financial statements present fairly the financial position of Motorola, Inc., and consolidated subsidiaries at December 31, 1984 and 1983, and the results of their operations and changes in their financial position for each of the years in the three-year period ended December 31, 1984, in conformity with generally accepted accounting principles applied on a consistent basis.

Peat Marwick Mitchell Co.

January 23, 1985

1. Accounting Policies: Following is a summary of accounting policies used in the preparation of these consolidated financial statements.

Consolidation: The consolidated financial statements include the accounts of the Company and all majority-owned subsidiaries except for financial subsidiaries, which are not significant and are accounted for on the equity basis. All significant intercompany accounts and transactions have been eliminated in consolidation.

Inventories: Inventories are valued at the lower of average cost (which approximates computation on a first-in, first-out basis) or market (i.e., net realizable value or replacement cost).

Investment Tax Credits: Investment tax credits are recorded under the flow through method.

Property, Plant and Equipment and Equipment Leased to Others: Property, plant and equipment is stated at cost. Equipment leased to others is stated at cost, net of accumulated depreciation. The cost of buildings, machinery and equipment is depreciated generally by the declining-balance method over the estimated useful lives of such assets, as follows: Buildings and building equipment, 5-50 years, machinery and equipment, 2-12 years.

Foreign Currency Translation: The Company uses the U.S. dollar as the functional currency for financial reporting. Gains and losses from translation to U.S. dollars are included in the determination of net income in the period in which they occur.

2. Stock Split: In the second quarter of 1984, the Company completed a 3-for-1 stock split effected in the form of a 200% stock dividend. The par value remains at \$3 per share. The stock split resulted in the transfer of \$237 million from retained earnings to common stock and a 200% increase in common shares outstanding. Prior period per-share and average shares outstanding amounts have been restated to reflect this transaction.

3. Income Taxes

The Company provides for income taxes based on earnings reported for financial statement purposes. Income tax expense differs from income taxes currently payable because of timing differences in the recognition of certain income and expense items for tax and financial statement purposes.

The components of earnings before income taxes and extraordinary gain are as follows:

(In millions of dollars)	1984	1983	1982
U.S. and U.S. possessions	\$327	\$236	\$178
Other nations	139	73	34
Total	\$466	\$309	\$212

The components of the provision for income taxes are as follows:

(In millions of dollars)	1984	1983	1982
Taxes currently payable:			
United States	\$ 80	\$ 68	\$ 12
Other nations	34	12	8
State income taxes (U.S.)	16	13	6
Total currently payable	130	93	26
Total change in deferred taxes	(51)	(28)	16
Total income tax expense	\$ 79	\$ 65	\$ 42

A reconciliation of the statutory corporate income tax rate with the effective income tax rate (before the 1982 extraordinary gain) in the statement of consolidated earnings is as follows:

	1984	1983	1982
U.S. Federal corporate income tax rate	46.0%	46.0%	46.0%
Increase (decrease) in tax rate resulting from:			
Taxes on earnings in other nations and U.S. possessions	(9.1)	(11.9)	(10.1)
Investment tax credit	(7.7)	(7.7)	(13.8)
Research and experimentation tax credit	(4.6)	(5.1)	(6.0)
State income taxes	1.9	1.6	2.0
Other	(1.5)	(1.9)	1.9
Effective tax rate, excluding DISC tax cancellation	25.0%	21.0%	20.0%
Cancellation of DISC taxes	(8.1)	—	—
Effective tax rate	16.9%	21.0%	20.0%

The Tax Reform Act of 1984 cancelled any future obligations for previously deferred Federal taxes on certain earnings of Domestic International Sales Corporations (DISC). Prior to 1984 the Company had provided such deferred taxes, totaling approximately \$38 million, on the earnings of its DISC which, accordingly, have been reversed.

Income taxes have not been provided on the undistributed earnings of certain of the Company's foreign subsidiaries amounting to \$285 million, \$201 million and \$150 million at December 31, 1984, 1983 and 1982, respectively. It is intended that these earnings will be permanently invested in operations outside the United States. Should these earnings be distributed, foreign tax credits would reduce the additional U.S. income tax which would be payable.

At December 31, 1984, certain non-U.S. subsidiaries had loss carryforwards for financial reporting purposes of approximately \$20 million.

The Internal Revenue Service has examined the Federal income tax returns for Motorola, Inc. through 1978 and the returns have been settled through 1975. While the Company has not agreed to all proposed adjustments in the 1976 to 1978 audits, in the opinion of management, the ultimate disposition of these matters will not have a material adverse effect on the business or financial position of the Company.

An analysis of the changes in deferred taxes is as follows:

(In millions of dollars)	1984	1983	1982
Change to completed contract accounting	\$ 20	\$ —	\$ —
Cancellation of DISC tax liability	(38)	—	—
Depreciation	16	5	8
Income tax on profits of Domestic International Sales Corporations	—	6	8
Earnings of foreign subsidiaries anticipated to be repatriated in the future	7	(2)	9
Research and development costs	(1)	(6)	(4)
Income from long-term lease of equipment	(10)	(5)	15
Tax credits recognized as reductions in deferred taxes	(4)	(9)	(9)
Inventory valuations	(24)	(13)	(7)
Future employee benefits	(4)	(7)	3
Other, net	(13)	3	(7)
Total change in deferred taxes	\$ (51)	\$ (28)	\$ 16

4. Long-Term Debt and Backup Credit Facilities: Long-term debt at December 31, consisted of the following:

(In millions of dollars)	1984	1983
Floating Rate Debt:		
Commercial paper supported by revolving credit commitments from banks	\$317	\$ 81
Variable rate redeemable pollution control revenue bonds supported by revolving credit commitments from banks	28	—
Foreign notes payable (generally at prevailing local rates) due in installments to 1991	20	23
Notes payable supported by revolving credit commitments from banks (generally at prevailing prime rates)	—	69
Fixed Rate Debt:		
12¼% eurodollar bonds due December 15, 1994	75	—
8% sinking fund debentures due October 1, 2007 (callable at 105.5% reducing to 100.0% of the principal amount)	62	62
7¾% industrial revenue bonds due January 1, 2014	20	20
4¾% debentures due April 1, 1986	6	6
Other long term debt	9	9
	537	270
Less current maturities	(6)	(8)
Long-term debt	\$531	\$262

In November 1984, the Company issued \$28 million in pollution control revenue bonds which are variable rate demand notes. The interest rate is adjusted weekly and was 6.5% on December 31, 1984. The bondholders may redeem the bonds at par upon giving seven days notice. In December 1984, the Company issued \$75 million in 12¼% bearer eurodollar bonds which were issued exclusively to foreign investors and mature on December 15, 1994. These bonds were issued with detachable warrants which allow the purchase of an additional \$75 million of 12% bearer bonds. The Company, at its option, can call the original bonds in amounts equal to the principal amount of warrants exercised.

The Company had total backup credit facilities of \$717 million at December 31, 1984, including \$345 million of revolving credit agreements and \$305 million of annually renewable (but withdrawable at any time) lines of credit. Of the available backup credit facilities \$178 million remain unused at December 31, 1984. The Company pays commitment fees generally of ¼% of unused lines of credit. Borrowings are generally at the market rate.

The aggregate maturities and sinking fund requirements for long-term debt during the next five years are as follows:

(In millions of dollars)				
1985	1986	1987	1988	1989
6	15	130	158	64

Maturities and sinking fund requirements in the year 1987 and thereafter include commercial paper notes payable and revenue bonds supported by revolving credit commitments.

5. Leases

The Company owns most of its major facilities, but does lease certain office, factory and warehouse space, land, data processing and other sundry equipment.

Rental expense was \$100 million in 1984, \$87 million in 1983, and \$73 million in 1982.

Minimum future lease revenues as well as the Company's minimum future lease obligations, net of minimal sublease rentals, both of which were based on noncancellable leases in effect at year-end, 1984 were as follows:

(In millions of dollars)	Future Lease Revenues	Future Lease Obligations
Year ending December 31:		
1985	\$122	\$64
1986	67	41
1987	28	30
1988	8	20
1989	2	14
Later	—	95

6. Employee Benefit and Incentive Plans

Management Incentive: The Company may provide up to 7% of its annual consolidated pretax earnings, as defined in the Motorola Executive Incentive Plan, for the payment of cash incentive awards to key employees. Amounts of \$23 million in 1984, \$13 million in 1983, and \$5 million in 1982 were provided for incentive awards.

Retirement Benefits: The Company and certain subsidiaries have profit-sharing plans, principally contributory, in which all eligible employees participate. The Company contributions to profit-sharing funds in the United States and other nations, which are generally based upon percentages of pretax earnings from those operations, as defined, were \$76 million in 1984, \$42 million in 1983, and \$22 million in 1982.

The Company has a noncontributory pension plan covering most domestic employees after one year of service. The Company's policy is to fund pension cost as accrued. Expenses for this domestic plan under the aggregate cost valuation method were \$11 million in 1984, \$12 million in 1983, and \$11 million in 1982.

During 1984, the Company changed the salary increase assumption from 6% to 5%. This change in assumption reduced the 1984 pension expense by \$3 million. During 1983, the Company changed the actuarial method for valuing pension assets to respond better to changes in market value. A change in one of the plan benefits in 1982, also had an impact in 1983. The net effect of these two changes on 1983 pension expense was insignificant.

Actuarial valuation and plan asset data for this plan is set forth below.

(In millions of dollars)	As of January 1	
	1984	1983
Net plan assets available to pay benefits	\$273	\$234
Actuarial present value of accumulated plan benefits	133	111
Vested accumulated plan benefits	109	91
Interest rate assumed	7%	7%

Certain foreign subsidiaries have varying types of retirement plans providing benefits for substantially all of their employees. Essentially all of the cost of these plans is borne by the subsidiaries. Amounts charged to earnings for the plan were \$8 million in 1984, \$7 million in 1983, and \$4 million in 1982.

In addition to providing pension benefits the Company provides certain health care benefits to its retired employees. The majority of its domestic employees may become eligible for these benefits if they reach normal retirement age while working for the Company. The cost of retiree health care benefits is recognized as expense when claims are paid and totaled \$2 million in 1984. There are no significant post-retirement health care benefit plans in foreign countries.

Stock Options: Under the Company's employee stock option plans, shares of common stock have been made available for grant to key employees. The exercise price of each option granted is 100% of market value on the date of grant.

Shares subject to option under these plans during 1984 and 1983 are as follows:

(In thousands of shares)	1984	1983
Options outstanding beginning of year	1,577	1,840
Increase due to stock split (3-for-1)	3,155	—
Additional options granted	1,207	296
Options exercised	(676)	(495)
Options terminated, cancelled or expired	(63)	(64)
Options outstanding at end of year	5,200	1,577
Shares reserved for possible future options grants	2,033	1,066
Total shares reserved	7,233	2,643
Total options exercisable	3,662	967

Options exercised during 1984, including options previously granted to employees of Four-Phase Systems, Inc. were at per share prices of \$8.96 to \$39.69 all adjusted for the stock split in 1984. Options outstanding at December 31, 1984 were at per share prices of \$8.96 to \$43.71.

7. Other Financial Data

(In millions of dollars)	1984	1983	1982
Interest expense	\$ 53	\$ 39	\$ 68
Interest income	(15)	(11)	(15)
Interest capitalized	(4)	(4)	(5)
Net interest expense	\$ 34	\$ 24	\$ 48
Research and development expenditures	411	336	278
Foreign currency gains	2	8	10
Accrued liabilities:			
Taxes (other than income taxes)	\$ 59	\$ 46	\$ 41
Contribution to employees' pension and profit-sharing funds	85	52	32
Accrued compensation	159	115	84
Dividends payable	19	16	15
Other	218	169	146
Total accrued liabilities	\$540	\$398	\$318

Extraordinary Gain: During 1982, the Company issued 2,000,000 shares of common stock at \$78.10 per share (before restatement for stock split). Approximately 80 percent of these shares were sold for cash. The remaining shares were exchanged for \$41 million aggregate principal amount of the Company's 4¾% debentures and 8% sinking fund debentures, resulting in an extraordinary gain of \$8 million which is stated net of additional profit sharing expense and the related income tax effect.

8. Contingencies: The Company is a defendant in various suits and claims which arise in the normal course of business and is obligated under repurchase and other agreements principally in connection with the financing of sales.

The Government Electronics Group (GEG) of the Company, which represents less than 10% of the Company's revenues, is working with the Office of the Inspector General of the Department of Defense in an investigation into GEG's defense manufacturing activities. Those activities include development and manufacture of radar, tactical and government communications equipment. The investigation appears to involve how labor charges have been billed in connection with certain defense equipment contracts between GEG and the U.S. Government. The investigation is in an early stage. The Company cannot predict the investigation's duration, outcome, financial impact or effect, if any, on government contracts. The Company has undertaken its own investigation and is effecting appropriate procedural and management changes. In addition, GEG's pricing and marketing support costs are being audited in connection with such defense contracts.

The Semiconductor Products Sector (SPS) of the Company has undertaken a review of its practices in processing and testing military semiconductor components. SPS is in the process of resolving discrepancies as to such processing and testing with its customers and working with the relevant agencies of the U.S. Government.

In the opinion of management, the ultimate disposition of these matters will not have a material adverse effect on the business or financial position of the Company.

9. Information by Industry Segment and Geographic Region: Information about the Company's operations in different industry segments for the years ended December 31 is summarized below (in millions of dollars):

	NET SALES			OPERATING PROFIT		
	1984	1983	1982	1984	1983	1982
Semiconductor Products	\$2,227	\$1,603	\$1,298	\$373	\$205	\$97
Communications Products	2,055	1,620	1,527	143	92	139
Information Systems Products	618	514	485	1	(5)	34
Other products	812	693	564	67	89	44
Adjustments and eliminations	(178)	(102)	(88)	(13)	(4)	(7)
Industry totals	\$5,534	\$4,328	\$3,786	571	377	307
General corporate expenses				(71)	(47)	(47)
Interest expense, net				(34)	(24)	(48)
Other, net				—	3	—
Earnings before income taxes and extraordinary gain				\$466	\$309	\$212

The 1983 operating loss for the Information Systems segment includes an \$11 million charge for the discontinuation of a line of central processing equipment.

	ASSETS		
	1984	1983	1982
Semiconductor Products	\$1,495	\$1,143	\$1,009
Communications Products	1,425	1,053	926
Information Systems Products	592	470	424
Other products	432	304	276
Adjustments and eliminations	(32)	(16)	(19)
Industry totals	3,912	2,954	2,616
General corporate assets	242	238	181
Other, net	40	44	36
Consolidated totals	\$4,194	\$3,236	\$2,833

	FIXED ASSET EXPENDITURES			DEPRECIATION		
	1984	1983	1982	1984	1983	1982
Semiconductor Products	\$412	\$174	\$160	\$150	\$116	\$97
Communications Products	170	119	110	68	57	48
Information Systems Products	72	35	37	26	22	18

Expenditures and depreciation for property, plant and equipment do not include amounts for equipment leased to others.

Information about the Company's operations in different geographic regions for the years ended December 31 is summarized below (in millions of dollars):

	NET SALES			OPERATING PROFIT		
	1984	1983	1982	1984	1983	1982
United States	\$5,260	\$4,104	\$3,572	\$434	\$290	\$254
Other nations	1,870	1,414	1,231	173	91	58
Adjustments and eliminations	(1,596)	(1,190)	(1,017)	(36)	(4)	(5)
Geographic totals	\$5,534	\$4,328	\$3,786	571	377	307
General corporate expenses				(71)	(47)	(47)
Interest expense, net				(34)	(24)	(48)
Other, net				—	3	—
Earnings before income taxes and extraordinary gain				\$466	\$309	\$212

ASSETS

	1984	1983	1982
United States	\$3,031	\$2,291	\$1,980
Other nations	950	724	688
Adjustments and eliminations	(69)	(61)	(52)
Geographic totals	3,912	2,954	2,616
General corporate assets	242	238	181
Other, net	40	44	36
Consolidated totals	\$4,194	\$3,236	\$2,833

Motorola operates predominantly in one industry, electronic equipment and components. Operations involve the design, manufacture and sale of a diversified line of electronic products, which includes, but is not limited to, two-way radio and communications systems; semiconductors, including integrated circuits and microprocessor units; data communication and distributive data processing equipment and systems; electronic equipment and industrial electronic products. For the three years of industry segments presented above, semiconductor, communications, and information systems products represent the Company's significant industry segments. The Company operates manufacturing and distribution facilities outside the United States. No single country outside the United States accounts for more than 10% of consolidated net sales or total assets.

Operating profit was computed as total revenues less operating expenses. In computing operating profit, none of the following items have been included: general corporate expenses, net interest, income

taxes and the extraordinary gain from the exchange of debt for stock in 1982. Identifiable assets are those assets of the Company that are identified to classes of similar products or operations in each geographical area, excluding internal receivables. Corporate assets are principally cash and marketable securities, the corporate administrative headquarters, and future income tax benefits. Intersegment sales, principally semiconductor components, amounted to \$137 million for 1984, \$78 million for 1983, and \$66 million for 1982. Intersegment and intergeographic transfers are accounted for on an arm's length pricing basis and are consistent with rules and regulations of domestic and foreign taxing authorities.

Sales to United States federal government agencies aggregated \$696 million for 1984, and \$543 million for 1983. No other single customer (or group of customers under common control) accounted for 10% or more of the Company's sales.

The equity in the net assets of non-U.S. subsidiaries amounted to \$613 million at December 31, 1984 and \$472 million at December 31, 1983.

Supplementary Information On The Effects Of Changing Prices

Statement Of Consolidated Earnings Adjusted For Changing Prices

The following tables present certain information adjusted for the effects of specific price changes as adjusted for equivalent service potential of replacement assets (current cost). Inventories were estimated based on quantities on hand at year end 1984 adjusted to reflect current replacement cost. Cost of sales was estimated by adjusting the historical cost of sales to reflect LIFO (last in, first out) inventory valuation. The current cost of property, plant, and equipment was estimated by adjusting historical cost by externally generated industrial prices indices relevant to the plant and equipment of Motorola. Depreciation expense was computed assuming straight-line depreciation using the same indices used to develop the estimated current cost of property, plant, and equipment.

Motorola, like other companies, has experienced increases in the cost of its production resources. However, the electronic components and equipment industry (e.g., semiconductors and semiconductor based equipment) has been able to accomplish significant productivity gains in its manufacturing processes, which have reduced the cost of products sold beyond the increase in the costs of production resources. Thereby, over time, selling prices generally decrease. Productivity gains in Motorola's other business have reduced the effects of increased production costs, resulting in price increases over time at rates significantly less than general inflation.

This method of calculating current cost data ignores both productivity gains available from engineering and labor as well as inflationary pressures in selling, general, and administrative costs.

At December 31, 1984, the estimated current cost of inventories was \$882 million and the estimated current cost of property, plant and equipment, net of accumulated depreciation was \$2,665 million.

The Company uses accelerated methods of depreciation in its historical cost financial statements in part to conservatively value earnings as a result of the increasing prices the Company will have to pay to replace these assets. Had depreciation expense under the current cost method been computed using accelerated methods, the depreciation charged would have approximated \$430 million for 1984.

Year ended December 31, 1984 (In millions of dollars)	Historical Cost	Current Cost
Net sales	\$5,534	\$5,534
Manufacturing and other costs of sales	3,206	3,175
Selling, general and administrative expense	1,475	1,475
Depreciation of plant and equipment	353	332
Interest expense, net	34	34
Income taxes	79	79
Total costs and expenses	5,147	5,095
Net earnings	387	439
Gain from decline in purchasing power of net payables		10
Decrease in specific prices (current cost) of inventories and property, plant, and equipment held during the year		(53)
Effect of increase in general price level		119
Excess of increase in general price level over decrease in specific prices		\$172

STATEMENT OF CONSOLIDATED EARNINGS ADJUSTED FOR CHANGING PRICES

Years ended December 31

(In millions of average 1984 dollars, except per share data)	1984	1983	1982	1981	1980
Net sales	\$5,534	\$4,512	\$4,072	\$4,077	\$4,140
Net earnings before extraordinary gain	439	298	236	228	230
Gain from decline in purchasing power of net payables	10	7	13	19	29
Excess of increases in general price level over decrease in specific prices	172	182	(201)	(26)	137
Net assets	3,047	2,805	2,692	2,121	2,036
Net earnings per share	3.71	2.55	2.15	2.13	2.19
Cash dividends declared per share	.61	.56	.57	.61	.61
Market price per share	33.75	47.61	31.19	21.99	30.46
Average consumer price index	311.1	298.4	289.3	272.4	246.8

Five Year Financial Summary

Motorola, Inc. and Consolidated Subsidiaries, years ended December 31

	1984	1983	1982	1981	1980
Operating Results (In millions of dollars)					
Net sales	\$ 5,534	\$ 4,328	\$ 3,786	\$ 3,570	\$ 3,284
Manufacturing and other costs of sales	3,206	2,593	2,269	2,086	1,896
Selling, general and administrative expense	1,475	1,113	1,013	985	877
Depreciation of plant and equipment	353	289	244	205	173
Net interest expense	34	24	48	35	43
Special charge	—	—	—	—	13
Total costs and other expenses	5,068	4,019	3,574	3,311	3,002
Earnings before income taxes and extraordinary gain	466	309	212	259	282
Income taxes provided on earnings	117	65	42	77	90
Cancellation of DISC taxes	(38)	—	—	—	—
Net earnings before extraordinary gain	387	244	170	182	192
Extraordinary gain	—	—	8	—	—
Net earnings	\$ 387	\$ 244	\$ 178	\$ 182	\$ 192
Net earnings excluding cancellation of DISC taxes	\$ 349	\$ 244	\$ 178	\$ 182	\$ 192
Net earnings excluding cancellation of DISC taxes as a percent of sales	6.3%	5.6%	4.5%	5.1%	5.8%
Per Share Data³					
Net earnings	\$ 3.27	\$ 2.09	\$ 1.62 ¹	\$ 1.70	\$ 1.82
Net earnings excluding cancellation of DISC taxes	\$ 2.95	\$ 2.09	\$ 1.62 ¹	\$ 1.70	\$ 1.82
Dividends declared	.61	.53	.53	.53	.48
Balance Sheet					
Total assets	\$ 4,194	\$ 3,236	\$ 2,833	\$ 2,615	\$ 2,292
Working capital	1,001	894	924	833	788
Long-term debt	531	262	369	427	383
Total debt	642	270	378	433	389
Stockholders' equity	\$ 2,278	\$ 1,948	\$ 1,700	\$ 1,409	\$ 1,256
Other Data					
Current ratio	1.83	2.07	2.57	2.32	2.45
Return on average invested capital	14.5% ²	12.2%	9.1%	11.2%	12.9%
Return on average stockholders' equity	16.4% ²	13.5%	11.3%	13.7%	16.3%
Year-end employment (approximate)	99,900	88,800	78,800	80,800	75,200
Average shares outstanding (in thousands) ³	118,491	117,138	109,518	107,142	105,351

NOTES

1. Includes the extraordinary gain.
2. Excludes cancellation of DISC taxes.
3. Years 1980 through 1983 have been restated to reflect the 3-for-1 stock split.

Quarterly and Other Financial Data

Motorola, Inc. and Consolidated Subsidiaries

The principal market for Motorola Common Stock is the New York Stock Exchange. The table below sets forth the high and low sales price per share for Motorola Common Stock as reported by the New York Stock Exchange and the dividends declared and paid for the periods indicated. All per share and stock price data has been restated to reflect the 3-for-1 stock split distributed in the form of a stock dividend in 1984.

(In millions of dollars, except per share data)	1984				1983			
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Net sales	\$1,256	\$1,416	\$1,377	\$1,485	\$ 942	\$1,044	\$1,074	\$1,268
Gross profit before depreciation	541	615	583	587	372	422	420	521
Net earnings	78	98	124	87	32	51	66	95
Net earnings per share	.66	.83	1.04	.73	.28	.44	.56	.81
Dividends:								
Declared and Paid	.13	.16	.16	.16	.13	.13	.13	.13
Stock prices:								
High	46.92	41.79	44.25	38.00	38.92	46.58	50.00	49.71
Low	35.33	29.25	29.50	31.00	27.33	33.71	41.62	43.08

The number of holders of record of Motorola Common Stock on January 31, 1985 was 13,505.

Management's Discussion And Analysis Of Financial Condition And Results Of Operations

Operations: The Company's principal operations are the Semiconductor, Communications, and Information Systems Products segments. Note 9 to the consolidated financial statements indicates each segment's relative contributions to the Company's overall sales and operating profit for each of the past three years.

Sales for 1984 in the Semiconductor Products segment continued the significant growth that began in 1983. Demand for these products remained strong through the first half of 1984, but moderated in the second half of the year. Operating profits rose sharply over the strengthening 1983 level, and increases were experienced across a broad spectrum of product offerings.

The Communications Products segment sales increased significantly from the 1983 level. Operating profit increased sharply over 1983. The segment's two-way radio and paging businesses were strong throughout the year. Although cellular telephone revenues rose rapidly in 1984 as systems began operation in more U.S. cities, operating losses for cellular increased later in the year.

Sales for the Information Systems Products segment showed a good increase over the trend from the last two years. The segment had a small operating profit in 1984 compared to a small operating loss in 1983. The 1983 loss included a charge for the discontinuation of a line of central processing equipment.

For the Company as a whole, sales and operating profits increased significantly. General improvements in the world's economic condition helped to favorably impact these figures. Also, the Company's significant strategic investments in new products, technologies, quality, and fixed assets, in prior years, assisted in developing market demand for the Company's products in 1984. As in prior years, the Company's sales were adversely affected by the impact of the generally strong U.S. dollar on foreign operations. The Company's 1984 effective tax rate was lower than expected due to the effects of the Tax Reform Act of 1984, which cancelled previously deferred Federal taxes on certain earnings of the Company's Domestic

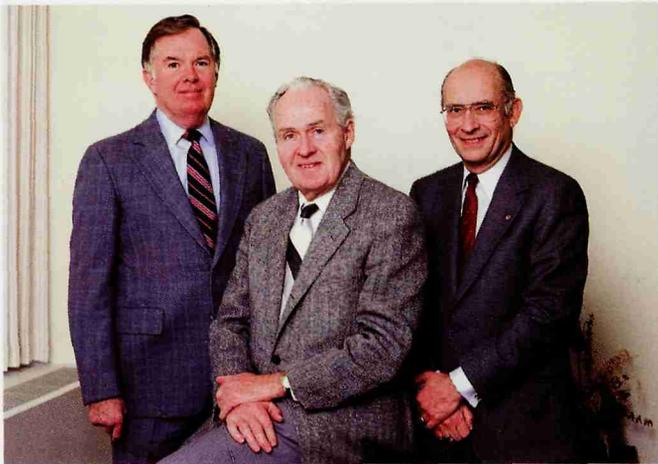
International Sales Corporation (DISC). The SEC and the FASB required reporting of this cancellation in the earnings from continuing operations, rather than as an extraordinary item. Investment tax credits and research and development tax credits continue to contribute to the Company's low effective tax rate (see note 3). Net profits for the Company were up significantly from 1983.

Liquidity and Capital Resources: As a result of the Company's strategic investment in fixed assets and working capital of its operations, long and short term debt were increased during 1984 by \$269 million and \$103 million, respectively. New fixed asset expenditures of \$783 million exceeded the prior year expenditures by \$377 million. Note 4 to the consolidated financial statements details the changes in the Company's long term debt, and note 9 presents by segment the majority of the Company's fixed asset expenditures. The Company owns the majority of its manufacturing and productive resources; however, the Company is actively leasing such resources as computers and certain building equipment (see note 5).

Motorola's return on average invested capital (stockholders' equity plus long- and short-term debt, net of marketable securities) excluding the cancellation of DISC taxes, was 14.5% compared with 12.2% in 1983. Working capital increased by \$107 million during 1984, however, the current ratio decreased to 1.83 from 2.07 at the end of 1983. Current assets increased by \$473 million primarily due to a 38.0% increase in inventories. Also accounts receivable weeks increased to 7.0 from 6.5 weeks during 1984 as a result of the higher sales level. Current liabilities increased by \$366 million reflecting the increase in the level of business activity, fixed asset expenditures, and the Company's increased use of short term credit facilities.

Management believes the Company continues to have sufficient capital resources to meet the needs of its customers.

Directors of Motorola, Inc.



John F. Mitchell, Robert W. Galvin, William J. Weisz

ROBERT W. GALVIN
WILLIAM J. WEISZ
JOHN F. MITCHELL

JOHN J. ANTALEK
Retired; formerly Vice President, TRW Inc.

JOHN T. HICKEY

LAWRENCE HOWE
Former Vice Chairman, Jewel Companies, Inc.

ANNE P. JONES
Partner, Sutherland, Asbill & Brennan law firm

M. JOSEPH LAMBERT
Retired; formerly Senior Vice President and Chief Financial Officer, Kraft, Inc.

STEPHEN L. LEVY

WALTER E. MASSEY
Vice President for research and for Argonne National Laboratory, The University of Chicago

ARTHUR C. NIELSEN, JR.
Retired Chairman of the Board and Chief Executive Officer, A.C. Nielsen Company

WILLIAM G. SALATICH
Business consultant and trader, Chicago Mercantile Exchange; formerly Vice Chairman, Gillette Company

WALTER B. SCOTT
Retired; formerly Vice President, Motorola, Inc.

GARDINER L. TUCKER
Vice President for Technology, International Paper Company

B. KENNETH WEST
Chairman of the Board and Chief Executive Officer, Harris Bankcorp, Inc.

DIRECTOR EMERITUS

ELMER H. WAVERING
Formerly Vice Chairman and Chief Operating Officer, Motorola, Inc.



John J. Antalek, William G. Salatich, Lawrence Howe, Arthur C. Nielsen, Jr.



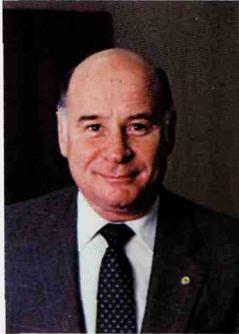
Stephen L. Levy, Walter B. Scott, Walter E. Massey, Gardiner L. Tucker



M. Joseph Lambert, John T. Hickey, Anne P. Jones, B. Kenneth West

Elected Officers of Motorola, Inc.

Executive Vice Presidents



Arthur Carr,
General Manager,
Information Systems Group



Rhesa S. Farmer,
General Manager,
Communications Sector



John T. Hickey,
Chief Financial Officer



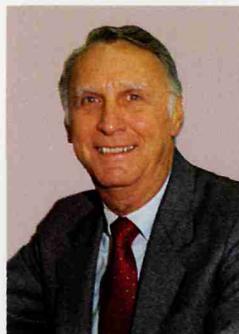
Stephen L. Levy,
General Manager,
Japanese Operations



James R. Lincicome,
General Manager,
Government Electronics Group



Carl E. Lindholm,
General Manager, Automotive
and Industrial Electronics Group



Robert N. Swift,
Director of Personnel



Gary L. Tooker,
General Manager,
Semiconductor Products Sector



John R. Welty,
Chief Corporate Staff Officer

CORPORATE

Robert W. Galvin
Chairman of the Board and
Chief Executive Officer

As of 12/31/84
Age Years of
Service

62 44

William J. Weisz
Vice Chairman of the Board and
Chief Operating Officer

57 36

John F. Mitchell
President and Assistant Chief
Operating Officer

56 31

Stephen L. Levy
Executive Vice President and General
Manager, Japanese Operations

63 20

Levy Katzir
Senior Vice President and
General Manager, New Enterprises

52 28

FINANCE

John T. Hickey
Executive Vice President and
Chief Financial Officer

59 37

Donald R. Jones
Senior Vice President, Assistant Chief
Financial Officer and Treasurer

54 34

Kenneth J. Johnson
Corporate Vice President and
Controller

49 13

H. Richard Klotz
Corporate Vice President and Director
of Taxes

58 9

Victor R. Kopidlansky
Corporate Vice President and
Assistant General Counsel

53 19

Richard H. Weise
Corporate Vice President,
General Counsel and Secretary

49 16

STAFF

John R. Welty
Executive Vice President and
Chief Corporate Staff Officer

62 27

Jack Germain
Senior Vice President and
Motorola Director of Quality

58 34

William G. Howard, Jr.
Senior Vice President and Motorola
Director of Research and Development

43 15

Keith J. Bane
Corporate Vice President and
Motorola Director of Strategy

45 11

Toni Dewey
Corporate Vice President and Motorola
Director of Public Relations and
Advertising

56 8

L. Curtis Foster
Corporate Vice President and Motorola
Director of Engineering

59 10

	Age	Years of Service		Age	Years of Service		Age	Years of Service
R. James Haring Corporate Vice President and Motorola Director of Planning	60	33	*William B. Dimitro Corporate Vice President and Sector Director of Personnel	55	17	Kenneth R. Hessler Corporate Vice President and General Manager, Commercial Markets Division	51	27
C. Travis Marshall Corporate Vice President and Motorola Director of Government Relations	58	14	*Weldon D. Douglas Corporate Vice President and General Manager, Special Technologies Organization	47	24	Bradford K. Kroha Corporate Vice President and General Manager, European Division	58	30
Vincent J. Rauner Corporate Vice President for Patents, Trademarks and Licensing	57	14	*Murray A. Goldman Corporate Vice President and General Manager, Microprocessor Products Group	47	15	*Lawrence R. Paggeot Corporate Vice President and General Manager, Portable Division	44	17
PERSONNEL			David W. Hickie Corporate Vice President and Sector Director of Finance	51	22	Theodore Saltzberg Corporate Vice President and General Manager, Fixed Division	57	29
Robert N. Swift Executive Vice President and Motorola Director of Personnel	61	32	*Frederick T. Tucker Corporate Vice President and General Manager, Bipolar Analog Integrated Circuits Division	44	19	*Edward F. Staiano Corporate Vice President and General Manager, Cellular Systems Group	48	11
James D. Burge Corporate Vice President and Motorola Director of Personnel, United States	50	26	*Kenneth G. Wolf Corporate Vice President and General Manager, Applications Specific Integrated Circuits Division	44	19	Ira W. Walker Corporate Vice President and General Manager, Distribution Service Division	61	29
James Donnelly Corporate Vice President and Motorola Director of Personnel, International	45	15	COMMUNICATIONS SECTOR			INFORMATION SYSTEMS GROUP		
Joseph F. Miraglia Corporate Vice President and Motorola Director of Human Resources	48	6	Rhesa S. Farmer Executive Vice President and General Manager, Communications Sector	58	27	Arthur Carr Executive Vice President and General Manager, Information Systems Group	53	16
SEMICONDUCTOR PRODUCTS SECTOR			*George M.C. Fisher Senior Vice President and Assistant General Manager, Communications Sector	44	8	AUTOMOTIVE AND INDUSTRIAL ELECTRONICS GROUP		
Gary L. Tooker Executive Vice President and General Manager, Semiconductor Products Sector	45	22	*John W. Battin Senior Vice President and General Manager, Portable/Paging/Components Group	47	26	Carl E. Lindholm Executive Vice President and General Manager, Automotive and Industrial Electronics Group	55	17
James R. Fiebiger Senior Vice President and Assistant General Manager, Semiconductor Products Sector	43	7	Arnold S. Brenner Senior Vice President and General Manager, Communications International Group	47	25	Gerhard Schulmeyer Corporate Vice President and Assistant General Manager, Automotive and Industrial Electronics Group	46	4
*Thomas D. George Senior Vice President and General Manager, Standard Logic and Analog Integrated Circuits Group	44	5	Arthur P. Sundry Senior Vice President and General Manager, Communications Distribution Group	56	27	Philip D. Gunderson Corporate Vice President and General Manager, Automotive Electronics Division	46	16
*Gary M. Johnson Senior Vice President and General Manager, MOS Memory Products Group	40	17	Morton L. Topfer Senior Vice President and General Manager, Fixed and Mobile Group	48	13	GOVERNMENT ELECTRONICS GROUP		
James A. Norling Senior Vice President and General Manager, International Semiconductor Group	42	19	David K. Bartram Corporate Vice President and General Manager, Government Markets Division	48	24	James R. Lincicome Executive Vice President and General Manager, Government Electronics Group	59	34
*Geno Ori Senior Vice President and General Manager, Discrete and Special Technologies Group	47	22	*R. LaVance Carson Corporate Vice President and Assistant General Manager, Cellular Systems Group	55	30	*Edward H. Lange, Jr. Corporate Vice President and Director of Group Staff	58	27
Charles E. Thompson Senior Vice President and Sector Director of World Marketing	55	15	Gordon Comerford Corporate Vice President and Sector Director of Business Management	48	10	*Robert J. Solem Corporate Vice President and Director of Group Operations	55	26
*Andre Borrel Corporate Vice President and General Manager, European Semiconductor Group	48	17	*Robert L. Hammer Corporate Vice President and Sector Director of Personnel	49	11			

*Assumed new title or advanced in rank since previous annual report.

Major facilities in:

- Australia**
Melbourne
- Canada**
Ontario
Brampton; North York
- Costa Rica**
Guadalupe
- France**
Angers; Toulouse
- Hong Kong**
Kowloon
- Israel**
Tel Aviv
- Japan**
Aizu Wakamatsu; Tokyo
- Korea**
Seoul
- Malaysia**
Kuala Lumpur; Penang;
Seremban
- Mexico**
Guadalajara; Leon;
Mexico City
- Philippines**
Manila
- Singapore**
Singapore
- South Africa**
Johannesburg
- Switzerland**
Geneva
- United Kingdom**
Basingstoke; East Kilbride;
Stotfold
- United States**
Alabama
Huntsville
- Arizona
Chandler; Mesa;
Phoenix; Scottsdale;
Tempe
- California
Cupertino; Novato
- Florida
Boynton Beach;
Fort Lauderdale
- Illinois
Arlington Heights; Franklin
Park; Schaumburg
- Iowa
Mount Pleasant
- Massachusetts
Canton; Mansfield
- Missouri
Joplin
- New Mexico
Albuquerque
- New York
Arcade
- Texas
Austin; Fort Worth;
Seguin
- Puerto Rico
Vega Alta; Vega Baja
- West Germany**
Munich; Taunusstein

Semiconductor Products Sector

- Bubble memories
- Custom and semicustom semiconductors
- Fiber optic active components
- Field effect transistors
- Interface circuits
- Microcomputer board-level products
- Microcomputer systems
- Microprocessors
- Microwave devices
- MOS and bipolar analog ICs
- MOS and bipolar digital ICs
- MOS and bipolar memories
- MPU development system hardware and software
- Operational amplifiers
- Optoelectronics components
- Power supply circuits
- Pressure and temperature sensors
- Rectifiers
- RF modules
- RF power and small signal transistors
- Telecommunications circuits
- Thyristors
- Triggers
- VLSI macrocell arrays
- Voltage regulator circuits
- Zener and tuning diodes

Communications Sector

- Base stations
- Car telephone systems
- Closed-circuit television systems
- Communications control centers
- Component products
- Digital voice-protection systems
- Electronic command and control systems
- Health care communications systems
- Information-display systems
- Microwave communications systems
- Mobile and portable FM two-way radio
communications systems
- Mobile/portable data communications systems
- Portable data terminals
- Radio paging systems
- Signaling and remote control systems
- Test equipment

Information Systems Group

- Communications processors
- Data network analyzers/emulators
- Digital service/channel service units
- Electronic data switches
- Intelligent terminals
- Leased-line modems
- Limited distance modems
- Local area networks
- Modems
- Multifunction computer systems for distributed
information processing and office automation
applications
- Multiplexers
- Network control and management systems
- OEM modem cards.

- Software for data entry, word processing, office
management
- Switched network modems
- System processors
- Technical control facilities
- Video operator stations

**Automotive and Industrial
Electronics Group**

- Alternator charging systems
- Automotive and industrial digital instrumentation
(tachometers, speedometers, odometers,
hourmeters) and electronic instrument clusters
- Automotive and industrial digital monitoring systems
- Automotive and industrial sensors
- CRT display monitors, color and monochrome
(5" to 23")
- Data and graphics terminals and subsystems
- Electronic appliance controls
- Electronic engine and powertrain controls
- Electronic engine governors
- Electronic fuel-handling systems
- Electronic ignition systems
- Electronic motor controls
- Electronic regulators
- Electronic transmission controls
- Engine management systems
- Telecommunications equipment
- Vehicle monitoring and recording systems
- Wireless systems and devices

Government Electronics Group

- Countermeasures systems
- Drone command and control systems
- Electronic fuze systems
- Electronic positioning and tracking systems
- Fixed and satellite communications systems
- Intelligent display terminals and systems
- Missile and aircraft instrumentation
- Missile guidance systems
- Satellite survey and positioning systems
- Secure communications
- Surveillance radar systems
- Tracking and command transponder systems
- Video processing systems and products



MOTOROLA INC.

Corporate Offices
Motorola Center
1303 E. Algonquin Rd.
Schaumburg, Ill. 60196
Phone: (312) 397-5000

Motorola is an Equal Employment
Opportunity/Affirmative Action Employer

Motorola and  are registered
trademarks of Motorola, Inc.