

**More than Photography...
A Visit to Eastman Kodak Company**



A visit to . . .



Kodak Park . . . and other facilities for photographic materials manufacturing. Page 2.



Kodak Apparatus Division . . . and other facilities for making precision equipment. Page 6.



Tennessee Eastman Company . . . and other facilities for producing fibers, plastics, and chemicals. Page 8.

Eastman Kodak Company— More than Photography

For nearly a century Eastman Kodak Company has been making cameras and film. Its innovative photographic wares have won consumer approval on every continent. So, it's natural for many people to identify the company with Kodak Instamatic® cameras and Kodak film in familiar yellow boxes.

But, photographic supplies are only the first-born of a thriving family of Kodak products. Around the world, people rely on Kodak materials to print magazines, take x-rays, build automobiles, store and retrieve information, and make carpeting, plastics, and pharmaceuticals.

Kodak is a diversified, multinational company which employs more than 120,000 men and women. About 60 percent of Kodak's employees are located in the United States. The others produce, sell, and service Kodak products in other parts of the world.

Although Kodak today bears little physical resemblance to the company founded by George Eastman, the solid philosophy which has been Kodak's cornerstone remains unchanged. The company operates in the interest of both the public and its shareholders. Every effort is made to treat employees fairly. Regardless of the product, the company emphasizes quality, reliability, customer convenience, and safety. Kodak continually tries to apply its knowledge to broader fields.

Kodak's Employees Count

Kodak believes a company is only as good as its people. It attracts and keeps skilled employees through a diversified program of benefits and career advancement opportunities.

Every year since 1912, with one exception, Kodak employees have shared a wage dividend which recognizes their contributions to the company's success. Fair wages and safe working conditions are provided as a matter of course. Tuition aid for continuing education; paid vacations and sickness allowances; a liberal retirement plan; and group life, hospital, surgical, and extended health care insurance are a sampling of Kodak benefits.

Kodak also recognizes that its people need to be challenged by their jobs. Work should be more than a meal ticket. Kodak constantly strives to enrich employees' jobs. As a result of Kodak's benefits and attitude, the company boasts a turnover rate well below the national average.

A Commitment to Innovation

Drawing on its employees' talents, Kodak constantly renews its commitment to develop and manufacture innovative, easy-to-use, high-quality products such as the Kodak Instamatic camera. The Instamatic

camera eliminated fumbling with spools and backing paper by providing drop-in loading. Other capabilities built into the cartridge ushered in the age of "aim-and-shoot" photography.

In the first seven years following the 1963 introduction, 50 million Instamatic cameras were sold. Film use increased as more people took pictures and liked the results. So, Kodak adapted the cartridge concept to the home-movie field. Then, in 1971, Kodak introduced existing-light movie cameras, making movie lights unnecessary. In 1972, the Kodak pocket Instamatic camera made toting a camera almost as convenient as carrying a wallet. The following year, sound was added to home movies with the introduction of Kodak Ektasound cameras and projectors.

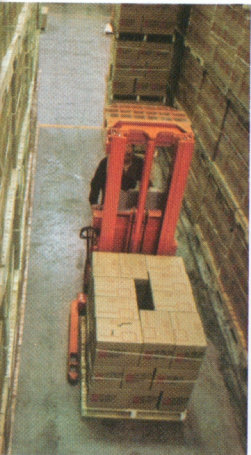
Convenience and ease of operation also are built into Kodak products for radiography, education, entertainment, business systems, and professional, commercial, and industrial photographic applications.

New Horizons

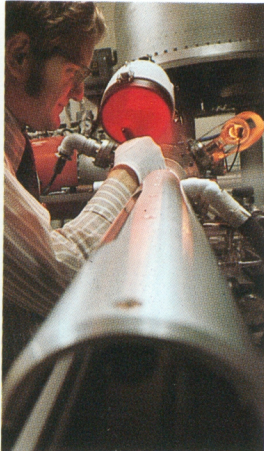
Kodak's early experience in product diversification has led it into new areas of interest. Tennessee Eastman Company, part of Eastman Chemicals Division, is a leading producer of plastics, fibers, and chemicals. Initially a supplier of raw materials for film, Tennessee Eastman now makes products for textile companies, automobile manufacturers, package makers, and other chemical companies. In 1972, Kodak formed a new subsidiary, Eastman Technology, Inc., to investigate, develop, and commercialize new ideas, inventions, and business opportunities.

To serve customers efficiently in more than 100 countries and territories, Kodak's International Photographic Division has established facilities abroad. Manufacturing units for Kodak cameras, films, or papers exist in eight foreign countries, while non-manufacturing facilities can be found in about forty. Almost all of the more than 43,000 Kodak employees outside the United States are natives of the countries in which they work.

This booklet is designed as a tour guide which will introduce you to the world of Eastman Kodak Company—its facilities, products, people, and purpose.



Kodak Distribution Center . . . and other facilities for serving customers. Page 10.



The Kodak Research Laboratories . . . and other facilities for research. Page 12.

Photographic Materials



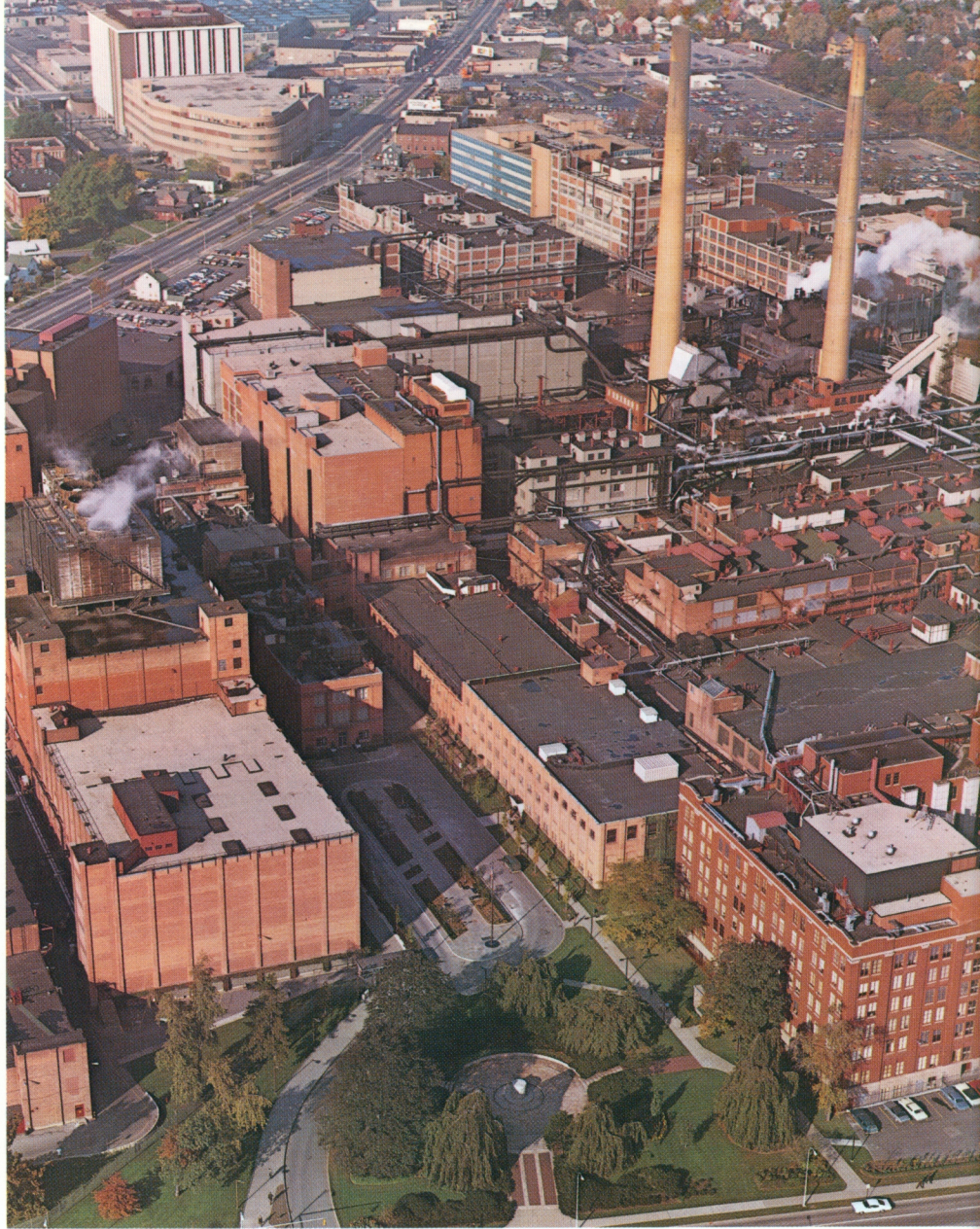
Kodak Colorado Division, Windsor, Colorado

Kodak Park is the company's oldest and largest manufacturing complex. Construction of this Rochester, New York, facility began back in 1891. Today, Kodak Park has grown to encompass some 1,950 acres and more than 180 buildings.

Because of its history and size, Kodak Park is a good place to begin a visit to Kodak. Here, skilled men and women make some 500 distinct varieties of film, almost 300 kinds of photographic paper—not including variations in size—and more than 900 chemical formulations used in processing film and paper.

Kodak Park is truly a city within a city. Stretching for seven miles, the plant has 17 miles of railroads, 24 miles of streets and 15,000 telephones. A laundry processes the special lint-free clothing some employees must wear, and cafeterias serve about 26,000 Kodak people a day.

Kodak Park's supporting facilities take care of vital services found in almost any



Kodak Park, Rochester, New York

community. Its power plants generate close to three million pounds of steam hourly to meet heat, light, and energy needs. It has its own water and fire departments. Medical facilities, staffed by nurses and doctors, assure prompt medical attention for employees.

Like any community, Kodak also must dispose of its wastes. It does so with care for the environment. A modern treatment plant processes the industrial waste water before it enters the Genesee River, while waste disposal units incinerate combustible solids.

Within this Kodak Park community there

are plumbers and chemists, glass blowers and engineers, electricians and artists. In fact, there are about 160 different occupations for people to enter at Kodak Park. These diverse skills are needed because Kodak Park is really a collection of many smaller specialized plants.

In Kodak Park's printing plant, instruction sheets, labels, and a variety of printed materials are produced. A metal fabrication and plastic molding plant produces packaging materials, including film spools, cans, and cartridges.

And these activities haven't even touched on the main business of Kodak



Thousands of Kodacolor prints are processed each day at Kodak Park.

Park—manufacturing photographic films, papers, and chemicals. Preparing the ingredients for these major products also requires many “mini” plants.

Ingredients—Handled with Care

Did you know that gelatin is an important element in photographic films and papers? In an emulsion, gelatin acts as a suspending medium that holds light-sensitive materials in place.

Kodak prepares all of its own gelatin at two plants—one in Kodak Park, the other at Eastman Gelatine Corporation in Peabody, Massachusetts. Carloads of carefully selected bones, trimmings from the hides of cattle, and pigskins are shipped to these plants from South America, Europe, and across the U.S. These raw materials are processed using rigid controls to assure the highest purity and special characteristics of the gelatin. It has to be right—the performance of Kodak films and papers depends on it.

One of the key raw materials in both films and papers is silver. Kodak is among the world’s largest users of silver. The company buys bullion in bars weighing 75 to 80 pounds each. The silver is dissolved in nitric acid and dried to form crystals of silver nitrate. These crystals are mixed with the gelatin and other chemicals to form an emulsion.

Operations Cloaked by Darkness

This process—in fact, all operations involving the light-sensitive compounds—must take place in the dark. For many Kodak Park visitors, the highlight of a plant tour is walking alongside a work area wrapped in a protective cocoon of darkness. Employees in such areas are accustomed to the strategically placed safe-lights.

Once the emulsion is finished, it’s coat-



Paper base is inspected after manufacturing for physical perfection.

ed onto a paper or film base. The thickness of a film base must be held within strict limits and manufacturing must take place in a dust-free atmosphere. Most film base ingredients are supplied by Tennessee Eastman Company and Texas Eastman Company.

The papers manufactured at Kodak Park are also quite special. They must withstand heat, immersion in processing solutions and water, and aging that would make ordinary paper wrinkle, curl, yellow, or disintegrate. Every day, Kodak Park paper mills turn wood fibers and additives into photographic papers for use in many different applications.

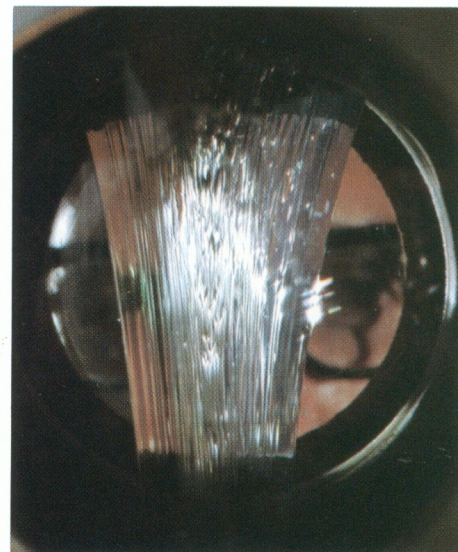
Besides making almost 300 types of photographic paper, Kodak Park produces backing paper for roll films and packaging papers for emulsion-coated products.

Putting It All Together

Conversion of these basic materials into sensitized goods takes place in the dark in coating machines. Precision is extremely important and the thickness of an emulsion layer isn’t allowed to vary more than one-millionth of an inch.

After coating, the photographic paper or film is slit into appropriate lengths. Any cutting scraps are carefully collected so that the silver they contain may be recovered and reused. The company also recycles most film base scraps.

As one might imagine, the manufacturing equipment used at Kodak Park is



The solution from which film base is made is carefully filtered to remove any dirt or undissolved material.

highly sophisticated. The plant has its own staff of engineers and technicians who design, build, and service these electro-mechanical wonders. One such machine brings together film, backing paper, and cartridge; then notches the cartridges, brands them with code letters, and applies appropriate labels—and ready-to-use film cartridges emerge.

The film is now inserted in an attractive package which protects it from light and moisture. Finally, the product is dated and stored in air-conditioned warehouses until it’s shipped to the customer.

Special-Purpose Chemicals

Chemicals are needed in the manufacture of films and papers as well as in film and paper processing. Kodak Park's chemical facilities provide support for emulsion making, film base production, and paper manufacturing.

Kodak Park produces nearly 1,000 different kinds of packaged chemicals in the form of powders, liquid concentrates, and ready-to-use solutions for film and paper processing and other photographic purposes. Some chemical formulas are produced in vast quantities—ranging up to 200 tons per week. Other research chemicals may be made by the ounce.

Kodak makes and markets about 6,000 synthetic organic chemicals for universities, laboratories, research institutions, and industries.

The company's Health and Safety Laboratory at Kodak Park maintains information on the potential hazards and safe handling of chemicals the company sells. U.S. poison control centers have been provided with an emergency telephone number for contacting the lab.

In Colorado

Kodak's newest manufacturing facility is located near Windsor, Colorado—about 45 miles north of Denver. Kodak Colorado Division began operations in late 1971. Manufacture of lithographic plates, used in the graphic arts, began in 1972. Large light-sensitive rolls of papers and films from Kodak Park in Rochester are slit to standard photographic widths, respooled at proper lengths, and packaged. Sensitizing operations for photographic films and papers are scheduled to begin in 1976, with Estar film base manufacturing to become operational the following year.

International Manufacturing Units

The same manufacturing processes employed at Kodak Park are used around the world—in England, Canada, Mexico, France, Brazil, and Australia. Harrow Works, on the outskirts of London, is Kodak's second largest and second oldest sensitized goods plant. Part of Kodak Limited, Harrow Works makes both sensitized papers and films.

Processing the Film

After you take a picture, there's an unseen image on the film. To make that image visible, the exposed film must be processed.

There are hundreds of independent photofinishers across the country, many of whom process film with chemicals and equipment purchased from Kodak. In addition, Kodak itself has ten photofinishing laboratories in the United States. Outside the U.S., the company owns and operates



Kodak Canada Ltd., Toronto, Canada



Kodak Industrial, S.A. de C.V., Guadalajara, Mexico



Kodak-Pathé, Chalon sur Saône, France



Kodak (Australasia) Pty. Limited, Coburg, Australia

film processing and photofinishing labs in more than 30 countries.

The Kodak photofinishing laboratories operate with white-glove care. Color balance is carefully controlled. Any print that doesn't measure up to Kodak's rigid quality standards is rejected and made over. Every order is inspected before release. A special group at Kodak Park constantly tries to improve the photofinishing process.

As a result of such efforts, in 1972, Kodak introduced a new method of paper processing that reduces the volume of the chemicals discharged during processing.

Your Pictures Have a Silver Lining

Four basic elements are needed to make a photograph:

- Light
 - A material that's sensitive to light—film
 - A device to control the exposure of light to film—a camera
 - Chemicals to process the film
- Kodak makes everything but the light.

How does film capture an image? The secret is a silver lining.

There are two basic parts to film: a support and an emulsion. Like the foundation of a house, the support is needed to hold up the all-important upper layer. The emulsion is a layer of very pure gelatin containing chemicals and silver salts. It is extremely thin. If you took a human hair and split it in ten parts, each part would be thicker than the emulsion layer.

When light reflected by an object strikes this emulsion, a few atoms in the silver crystals are transformed into metallic silver. These changed atoms form the nucleus of a negative. When the exposed film is brought into contact with developing chemicals, a chain reaction is triggered in the silver crystals, forming up to 500 million times more metallic silver than was created by the initial exposure. The developer is then washed away along with the unexposed silver salts, leaving a "negative."

A negative is simply the reverse of the scene that is photographed. Where the most light strikes the film, more dark metallic silver atoms are formed. This means the darkest areas in a negative correspond

Films for Special Purposes

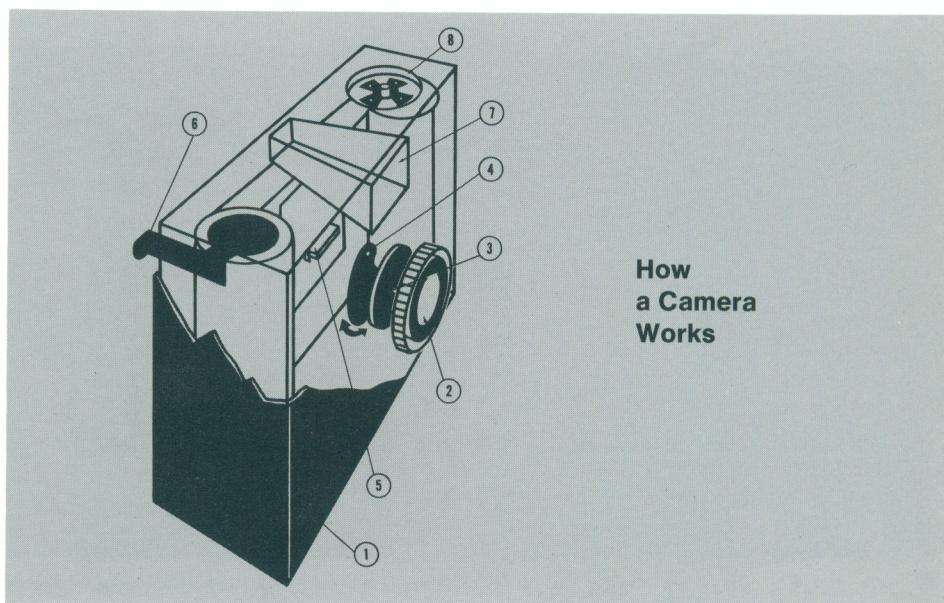
The beginning of this section stated that Kodak Park produces 500 varieties of film. Most people are familiar with only a fraction of that number. That's because many Kodak films have a very elite clientele.

For example, special Kodak films have been aboard all the manned space flights, beginning with John Glenn's first successful orbit in 1962. Kodak films also played an important part in unmanned exploratory

flights, providing scientists with detailed coverage of 96 percent of the moon's surface.

Kodak's infrared films have been used by aerial photographers and scientists to pinpoint pollution and to detect Dutch Elm disease, corn leaf blight, and other crop diseases.

Other films aid oceanographers, microbiologists, and astronomers as they probe the mysteries of our universe.



**How
a Camera
Works**

to the lightest areas in the original scene.

To make a "positive" print from the negative, the exposure process is repeated—light is directed through the negative onto an emulsion-coated paper.

That's how black-and-white pictures are made. As one might expect, creating color photographs is a bit more complicated.

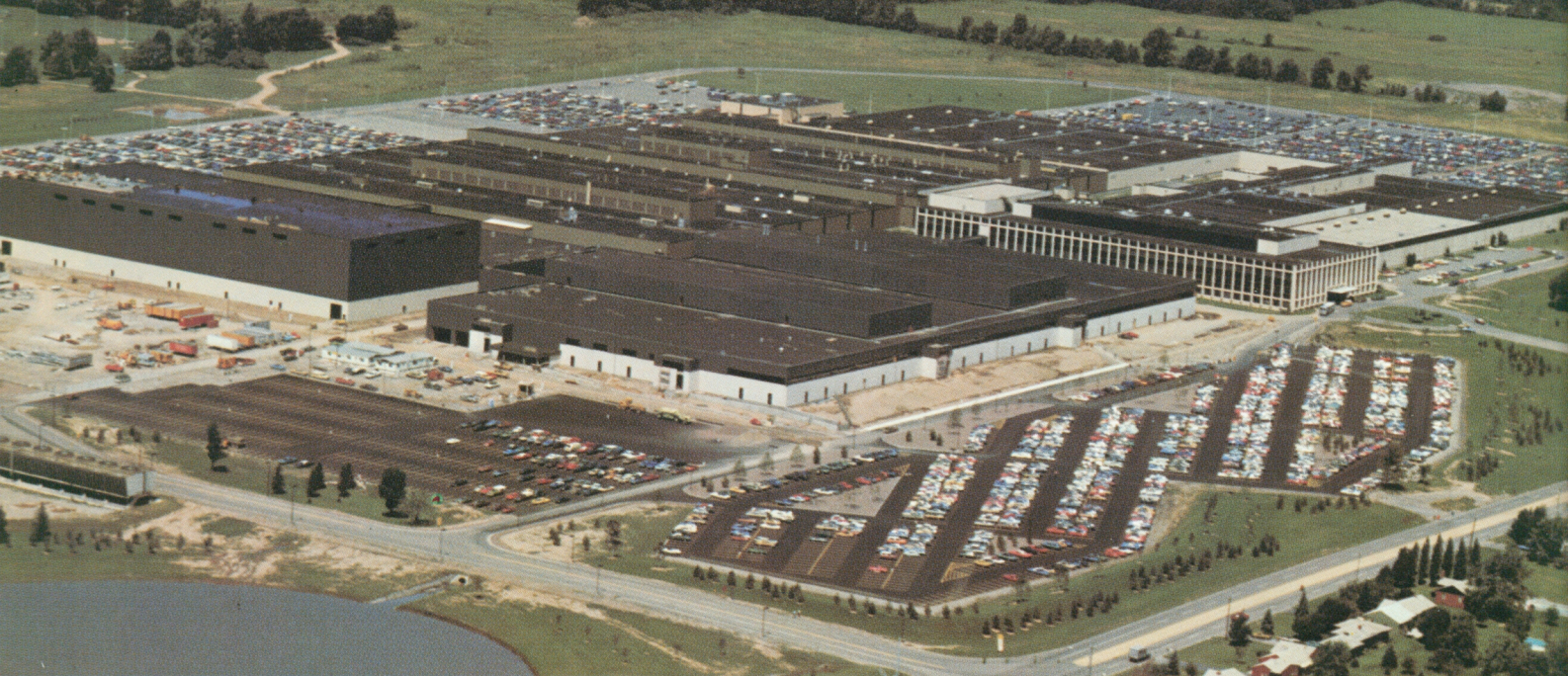
Color films and papers are stacked with up to 14 layers of emulsions and other coatings. Each of these emulsions responds to a different part of the color spectrum. Though silver salts are still an essential ingredient, chemicals called "color couplers" are vital, too. These couplers replace the silver salts with dyes that form when the film is processed.

Of course, film can't take pictures. A camera is the other half of the picture-taking partnership. It's needed to control how much light reaches the film. Regardless of design or complexity, every camera has the same basic parts.

(1) A lighttight box. This keeps light out and holds the other camera parts together.

(2) A lens. It collects the light reflected from a subject and focuses that light on the film. (3) A lens opening. It controls the intensity of light reaching the film while the shutter is open. (4) A shutter. It keeps light out of the camera except while a picture is being taken. Then, it acts as a valve to control how long light is allowed to expose the film. (5) A shutter release. It opens and closes the shutter. (6) A film-advance mechanism. It advances the film for the next exposure. (7) A finder. It allows the photographer to frame his subject. (8) A flash socket. Most cameras have a socket for a flashcube, flash bulb, or flash bulb holder.

On many of Kodak's easy-to-operate cameras, the lens opening and shutter adjust automatically to the lighting conditions when the photographer presses the shutter release.



Elmgrove Plant, Rochester, New York

Precision Equipment

Precision equipment is the other half of the photographic equation. The Kodak Apparatus Division (KAD) in Rochester manufactures a wide selection of still and movie cameras, projectors, and processing equipment.

In all, KAD produces more than 1,500 optical, mechanical, and electronic products, ranging in price from less than \$10 to more than \$100,000. There is a constant flow of new and improved products from Kodak—more than 100 annually—and many of these are made by KAD.

KAD Facilities

Kodak Apparatus Division is headquartered at the Elmgrove Plant, on about 700 acres in suburban Gates—approximately seven miles from downtown Rochester. Elmgrove Plant houses administrative offices and is involved in such activities as machining, plastic molding, finishing operations, and assembly. From Elmgrove Plant come myriad products, including not



Skilled worker performs a rangefinder adjustment on a Kodak XL movie camera.

only still and motion-picture cameras and projectors but also equipment for photo-finishing, x-ray processing, microfilming, and electronic information-handling. Support functions include research, design, engineering, development, quality control, purchasing, and industrial relations.

The Hawk-Eye Plant, another KAD production facility, is located in northeast Rochester. Hawk-Eye people develop and manufacture precision optics for cameras, projectors, and the various other equipment provided by KAD.

Lincoln Plant, located on the west side of Rochester, is a government-owned fa-

cility operated by KAD. Its activities are aimed toward research, development, and manufacture of special products for the government. At Lincoln Plant, such items as the Lunar Orbiter (needed for photographically mapping the moon) have been designed and built. The Lunar Orbiter included a processor the-size-of-a-shoe-box which could develop film in a weightless environment, then convert the images into a continuous video signal. That signal was recorded on a Kodak-built electron device back on earth.

Like Kodak Park, KAD has sister facilities in other countries. These units which

also produce precision equipment are located in Argentina, Australia, Brazil, Canada, Germany, and the United Kingdom. They operate with the same care and emphasis on quality that characterize the Kodak Apparatus Division.

Every working day at KAD, more than nine million parts are assembled into products. Most of these are fabricated right in KAD's own manufacturing departments. Every part must conform to rigid standards to maintain Kodak's reputation for high-quality, reliable equipment.

Quality Lenses

Many KAD products require lenses. Though the lenses are made from many different materials, they all must meet the same design and optical engineering standards. One family of lens materials developed by Kodak scientists is Kodak rare-element glass. Unlike most glass, which is based on silica, the Kodak glass starts with boric oxide. Its elements are mixed and melted in platinum crucibles, each worth about \$11,000. The glass is heated to 2700°F, then poured and cooled very slowly to remove any strain that could distort its unique optical qualities. The lenses are shaped to the proper curvature by diamond cutters. Kodak annually uses about 7,000 carats of industrial diamonds in lens grinding.

Plastic lenses are manufactured to particular specifications in a modern injection molding process. In one optically clean room, it's now possible to mold the lenses, coat them, and assemble a camera's optical system without the components being touched by an operator.

Fabricating Parts

Fabricating and finishing metal and plastic parts for Kodak equipment is another major effort. The division's parts fabrication building equals the size of 11 football fields. On some of the machines housed here, skilled operators produce parts with tolerances less than one-thousandth of an inch. Other machines are controlled electronically by punched tapes. Depending upon their use, the parts made on these machines are coated with a finish such as copper, chrome, silver, and even gold.

High Volume Brings Low Prices

The finished parts are assembled on large-volume production lines. Some products can be put together in the time it takes to walk the length of the line. Many subassemblies feed these lines. For example, light meters and the tiny motors that drive film in Kodak movie cameras are put together in special "clean" rooms.

Operations are mechanized whenever feasible to provide the double advantages



Kodak, A.G., Stuttgart, Germany



Hawk-Eye Plant, Rochester, New York

of consistent high quality and low cost. For instance, assembly of seven components for an inexpensive, high-volume Instamatic camera takes place every 2.5 seconds on an automated machine.

Contrasting sharply with the mass production of cameras is the assembly of

business and professional products such as film processors and microfilmers. Because production quantities are smaller and a large number of parts are involved, the assembly times are long. Some products are even custom-built to customer specifications.

Fibers, Plastics, and Chemicals



Texas Eastman Company, Longview, Texas

The modern chemical industry in the United States began after World War I cut off trade with Germany—then the world's most important supplier of synthetic organic chemicals. The cutoff prevented American scientists from obtaining chemical supplies. In 1918, Kodak, with the help of scientists at the University of Illinois, established a synthetic organic chemical laboratory to make organic chemicals for use in this country's research.

At about the same time, Kodak needed a source of large quantities of wood alcohol, or methanol—then used in the manufacture of photographic film base. In 1920, Kodak bought from the government a hardwood distillation plant at Kingsport, Tennessee. That plant was the beginning of Tennessee Eastman Company.

Today, Tennessee Eastman Company ranks as one of the major industrial complexes in the Southeast. The main plant at Kingsport covers an area of 415 acres



A distillation column at Tennessee Eastman Company, Kingsport, Tennessee

and includes more than 200 buildings. It is the largest unit of Kodak's diverse chemical business. It manufactures three basic textile fibers, more than 200 industrial and specialty chemicals, more than 100 textile dyes, four of the seven types of plastics produced by the Eastman Chemicals Division, and several plastic products.

Eastman Chemicals Division

Tennessee Eastman Company is one of four manufacturing units in the Eastman Chemicals Division of Eastman Kodak Company. The others are: Texas Eastman

Company (Longview, Texas), Carolina Eastman Company (Columbia, South Carolina), and Distillation Products Industries (Rochester, New York).

Although Texas Eastman produces no consumer goods, its chemical compounds and plastics find their way into thousands of products used in daily American life. For example, low-molecular-weight resins and adhesives, developed by company researchers, are used in candles, carpet backing, paper coatings, carton and bag sealing, printing inks, and textile finishes.

Carolina Eastman, the newest member

of Eastman Chemicals Division, manufactures Kodel polyester fiber and yarn. In 1971, Carolina Eastman completed a plant to produce Kodel polyester continuous filament yarn.

Distillation Products Industries, located adjacent to Kodak Park in Rochester, was formed in 1938 as an outgrowth of high-vacuum research conducted by Kodak scientists in the late 1920s and 1930s. It's associated with chemical products most people wouldn't link to the Kodak name—Vitamin A and E products to fill the needs of the pharmaceutical, food, and animal-feed industries, and distilled mono-glycerides for use in baked goods and other food items. Distillation Products Industries became part of the Eastman Chemicals Division in 1968.

Four companies—Eastman Chemical Products, Inc., Eastman Chemical Inter-American Ltd., Eastman Chemical International A.G., and Eastman Chemical International Company—market the division's products around the world. There are marketing offices in 22 U.S. cities and five foreign countries.

Chemicals and Plastics

The growth of the Eastman Chemicals Division has paralleled that of the chemical industry as a whole, moving from an early dependence on forest products to its current raw materials sources, including natural gas and petroleum.

At Texas Eastman, for example, 10 pipelines—one of which is 275 miles long—bring ethane, propane, and natural gas to the plant. Texas Eastman supplies raw materials for the Tennessee plant as well as using the raw materials to make a variety of intermediate chemicals for general industrial markets.

Tenite polyethylene, Tenite polypropylene, and Tenite polyallomer also are produced at Texas Eastman. (All Eastman plastics are marketed under the Tenite trademark.)

Tenite polyethylene is flexible, resistant to water and strong acid, and a fine electrical insulator. Dramatic proof of its corrosion-resistant quality is its use to carry hydrofluoric acid, a chemical so corrosive it dissolves glass. Housewares, toys, tubing, wire covering, packaging film, and paper are a few of the products made with this plastic.

Of course, Texas Eastman does not manufacture any of these consumer products. Tenite plastics in pellet form are supplied to the molders and extruders for product manufacture.

A Colorful World

Tenite plastics are produced in more than 70,000 colors. The colors must be added



Carolina Eastman Company, Columbia, South Carolina



Strands of Kodel polyester fiber travel through dryers before being cut to staple lengths at Carolina Eastman.

either during or after processing. Some Eastman scientists specialize in the study of color and color perception. The Tenite plastics color laboratory contains more than 70,000 color standards and is equipped with up-to-date facilities for analyzing a color and reproducing it. This allows matching the color of any material to meet a customer's precise needs.

At Tennessee Eastman Company, other Tenite plastics, such as Eastman's cellulose and polyterephthalate plastics, are produced.

Tenite butyrate, one of the Eastman

cellulosics, is an extremely tough material used in the manufacture of telephones, steering wheels, business machine keys, tool handles, football helmets, industrial piping, marine floats, and outdoor signs.

Eastman plastic products include weather-resistant Uvex plastic sheeting that is particularly useful for outdoor signs, Eastman twine, Kodacel film and sheet, and powder coatings.

Eastman's Man-Made Fibers

Within the past half-century, traditional natural fibers—cotton, wool, linen, and silk—have been supplemented by many man-made fibers. The new fibers were designed to meet specific consumer needs—ease of care, flame resistance, variety in texture, wide range of colors, wrinkle resistance—and what the textile industry calls "hand," the feel and drape of a fabric. Small wonder such fabrics have received an enthusiastic reception.

Eastman makes three basic types of textile fibers: Estron and Chromspun acetate yarns, Verel modacrylic fiber, and Kodel polyester fiber and yarn.

Eastman introduced Estron acetate yarn back in 1931 and is now one of the country's major suppliers of acetate filament yarn. In 1951, Chromspun acetate yarn became available. In the manufacture of Chromspun yarn, the coloring material is an integral part of the fiber before it's spun. The result is a light-fast yarn available in a wide range of colors for apparel and home furnishings.

Verel modacrylic fiber was introduced in 1956. Its applications include floor covering, pile fabrics, draperies, knits, and various specialty items. Verel fiber's flame-resistant characteristics make it ideal for many applications.

Eastman began production of Kodel polyester fiber in 1958. This fiber, too, is available in a variety of types. Kodel fibers are used for carpeting, scatter rugs, woven and knit fabrics for apparel uses, sewing threads, pile fabrics, and nonwovens. Staple fiber and filament yarn also are available in Kodel polyester, providing both styling and functional features in the finished products. The Eastman Chemicals Division has an annual capacity of about 360 million pounds of Kodel polyester staple fiber and 20 million pounds of Kodel polyester filament yarn.



Distribution Center, Rochester, New York

Distribution, Sales, Service

Manufacturing products is only part of the task. Kodak's thousands of different products must be placed in the hands of millions of customers throughout the world.

Regardless of quality, a product is useless if it is not in the right place at the right time. Distribution makes sure Kodak products are there, where and when they are needed, and at a reasonable cost and in good condition.

Distribution

The Kodak Distribution Division is a vital link between marketing and manufacturing. Working with a variety of inputs, Distribution establishes the unit sales estimates for all photographic finished products produced in the United States and translates those estimates into production delivery schedules.

The finished products are delivered from Kodak's manufacturing divisions in Rochester, New York, and Windsor, Colorado, to Central Distribution Centers also located in Rochester and Windsor. The Distribution Center—Rochester, for example, is a facility containing some 1.5 million square feet, handling more than 13,000 regularly stocked and 24,000 special-order items.

Almost 65% of the products handled by the two Central Distribution Centers are reshipped to seven regions and more than thirty district locations. From these facilities Kodak products go to more than 100,000 customers in the United States. Computer systems assure automatic replenishment of products through this



The public Kodak Gallery and Photo Information Center in New York City is housed with regional marketing headquarters at 1133 Avenue of the Americas.



Kodak personnel at Kodak Consumer Centers in about 38 metropolitan areas provide customers with technical expertise and counseling. Kodak also maintains regional headquarters in San Francisco; Whittier, Calif.; Dallas; Atlanta; Chicago; Rochester; and New York City.

pipeline as well as billing and other inventory management functions.

Approximately 25% of the photographic products are destined for export markets. Using its knowledge of trade zones, duties quotas, and rates, Distribution handles the complex documentation required in international commerce.

Kodak distribution transportation specialists have pioneered such concepts as "pool" trucks and containerization. Thanks to such innovations, the average cost of moving Kodak products over long hauls remains about the same as it was 10 to 15 years ago—despite substantial increases in basic transportation rates.

Sales

Kodak's marketing efforts are organized

according to product use. There are six major markets divisions: Business Systems, Consumer, Graphics, Motion Picture and Audiovisual, Professional and Finishing, and Radiography.

Kodak sales personnel, specially trained in specific marketing areas, not only sell Kodak products to customers but provide technical expertise and counseling as well. For instance, a technical sales representative whose customers are photofinishers must be knowledgeable in matters as varied as production management, small business procedures, and photographic chemical replenisher rates.

Service

Similarly, Kodak serves customers whose only interest in photography is big, clear

snapshots. In about 45 locations across the country, Kodak Consumer Centers provide customers with free assistance and photographic information—including minor adjustments on Kodak amateur photographic equipment.

The centers also advise on the cost and nature of more complicated service and stock a wide variety of Kodak literature.

The centers are only one portion of Kodak's comprehensive service program. In Rochester, photo information specialists answer about 180,000 customer letters and 5,000 phone calls yearly. Kodak distributes more than 100 pamphlets and 25 books on picture-taking and related skills.

Nationally, the Customer Equipment Services Division maintains eight centers which service and repair Kodak equipment. Of course, Kodak would be delighted if none of its products ever needed repair. But damage from dropping or years of wear and tear make some repair work inevitable. The quality of these repairs is under constant surveillance.

We Dedicated a Building to Consumerism

"Over the long haul you sell more by helping people get the results they want . . ."

That's what Gerald B. Zornow, then Kodak president, said at the 1971 dedication of the Kodak Marketing Education Center in Rochester.

Each year, about 20,000 customers, dealers, and company sales and technical personnel come there for training in the use, sale, and servicing of Kodak products. The student body is cosmopolitan and includes a yearly average of 600 people from other lands.

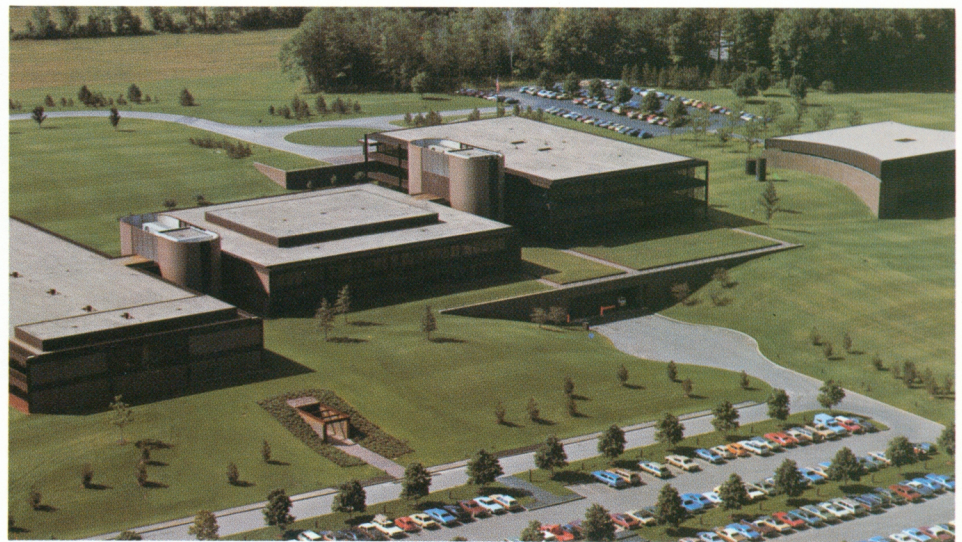
Hugging the banks of the Genesee River, the facility features sleek, modern structures in a campus-like setting minutes from downtown Rochester. Four interconnected buildings house administration, dining rooms, labs, classrooms, and seminar space.

This center represents an investment of millions of dollars in the belief that Kodak should help customers get the most satisfaction and benefits from their purchases.

Here's a sampling of how customers benefited from recent courses. Television news cameramen studied motion-picture techniques which will aid them in filming documentaries. High school and college photography teachers gathered pennywise photo tips that will help them



Kodak Italy is served by this new marketing building and warehouse in Cinisello, a suburb of Milan.



Kodak Marketing Education Center, Rochester, New York

stretch their school budgets while providing quality education.

Industrial radiographers received hands-on training they can apply back home to upgrade nondestructive testing procedures. Representatives from schools, government agencies, and resort areas were trained to repair, maintain, and service their arsenals of Kodak audiovisual equipment. Aerial photographers investigated the use of infrared films for pinpointing pollution and crop disease. And these examples illustrate only a fraction of the

information customers can draw from the center's stockpile of knowledge.

Of course, not all customers can come to Rochester. That's why Kodak has regional education centers in Atlanta, New York City, Chicago, San Francisco, Dallas, and in other countries. In addition, Kodak educational specialists frequently travel abroad to conduct special seminars.

By contributing to customer satisfaction, the company's education centers have become a vital ingredient in Kodak's marketing mix.

Research— Backbone of Future Growth



Experimental materials are prepared on narrow-width coating machines.

Kodak was one of the first companies in the world to establish its own research laboratories. They were organized in 1912 with a 20-man staff. Today, the Kodak Research Laboratories in Rochester are a hub of activity for more than 2,000 scientists, engineers, technicians, and support personnel.

An additional six research units operate at major manufacturing plants in Kingsport, Tennessee; Longview, Texas; Harrow and Kirkby, England; Vincennes, France; and Coburg, Australia. These seven labs employ a total of about 3,500 people.

Each year, Eastman Kodak Company plows back about six percent of its annual income into research and development work. The various research laboratories spend roughly half of this amount. The other half is spent by the manufacturing development groups.

A great many people have benefited



The Kodak Research Laboratories,
Rochester, New York

from the fruits of Kodak's photographic research. Color snapshots, slides, and movies save delightful memories for millions of families. But Kodak's research has touched people's lives in less obvious ways. It has minimized the x-ray dosage a dentist must give a patient when making a radiograph. Microfilm lets law enforcement agencies match fingerprints with a suspect in a matter of seconds. The electronic microcircuits needed for spaceship computers were made possible by the invention of light-sensitive polymers known as "photo resists." Infrared film is helping scientists learn more about earthquake mechanisms.

Similarly, chemical research unrelated to photography has generated many new

products that people want. Synthetic fibers are made into fabrics for clothing and home furnishings. These fibers offer ease of care, flame resistance, and plain good looks. Molding resins find a wide variety of applications including plastic parts for automobiles. A tunable dye laser developed by Kodak scientists has many potential uses such as isotope enrichment, pollution detection and analysis.

Kodak researchers learned early that success and a consumer-oriented approach go hand in hand. What will customers need tomorrow, 15 years from now? Kodak research tries to predict those needs; then discover, invent, or develop the means to satisfy them.

Quality Means Repeat Customers

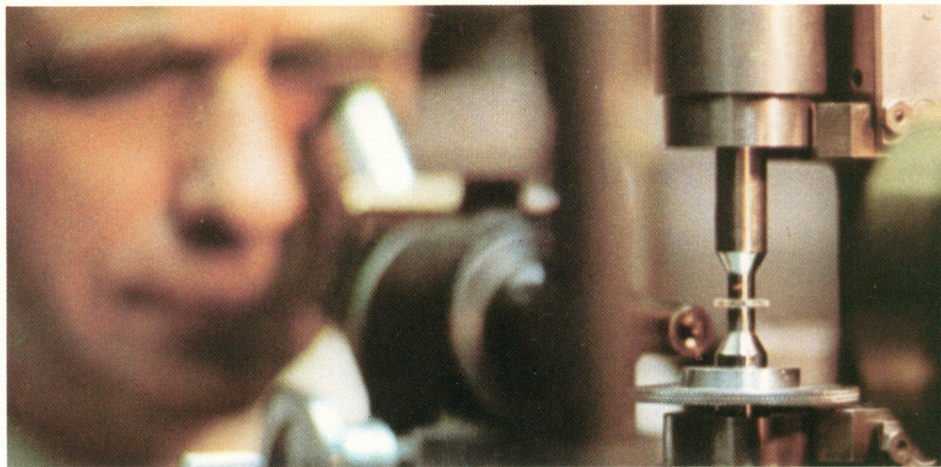
At Kodak Park, walls beside film inspection benches are lined with photographs illustrating how undetected flaws might appear in finished prints.

"We're consumers too," says one Kodak film inspector. "When I'm inspecting film cartridges, I always think about the guy who's making a once-in-a-lifetime trip to Europe. Imagine how he'd feel if his pictures were ruined by defects. Yes, I take pride in my work."

All Kodak facilities share a common concern for product quality. In 1882, Kodak learned its lesson. George Eastman had been selling dry plates for about two years when customers complained that a shipment of plates had lost their sensitivity. The plates were recalled and manufacturing was stopped until the problem was corrected. An inferior batch of gelatin caused the trouble.

To prevent such a mishap from recurring, all raw materials—even the water—used at Kodak Park are checked carefully for contaminants.

Screening ingredients is only the first step in Kodak's quality control program. During manufacturing, film can be ruined by light, heat, excessive humidity, dust, dirt, and certain chemicals. So, in critical manufacturing areas, the air is filtered and recirculated every six minutes. Employees frequently wear special shoes and lint-free clothing. The employees working in these



Kodak's quality control program provides high standards of performance. Here a camera's exposure control system is checked.

sensitive areas must even choose their makeup with care—avoiding cosmetics and skin preparations which contain ingredients harmful to emulsion.

Inspection and testing procedures are built into every stage of the manufacturing process. Even film cartons are tumbled to simulate rough handling. Photographic and physical tests are used to achieve the high reliability and uniformity of Kodak products. Kodak was one of the earliest companies to use product dating.

In Kodak's photographic processing laboratories, handling films and prints is white-glove work. Temperature, humidity, and chemical solutions are monitored.

To test the effectiveness of its quality control, Kodak regularly uses assumed

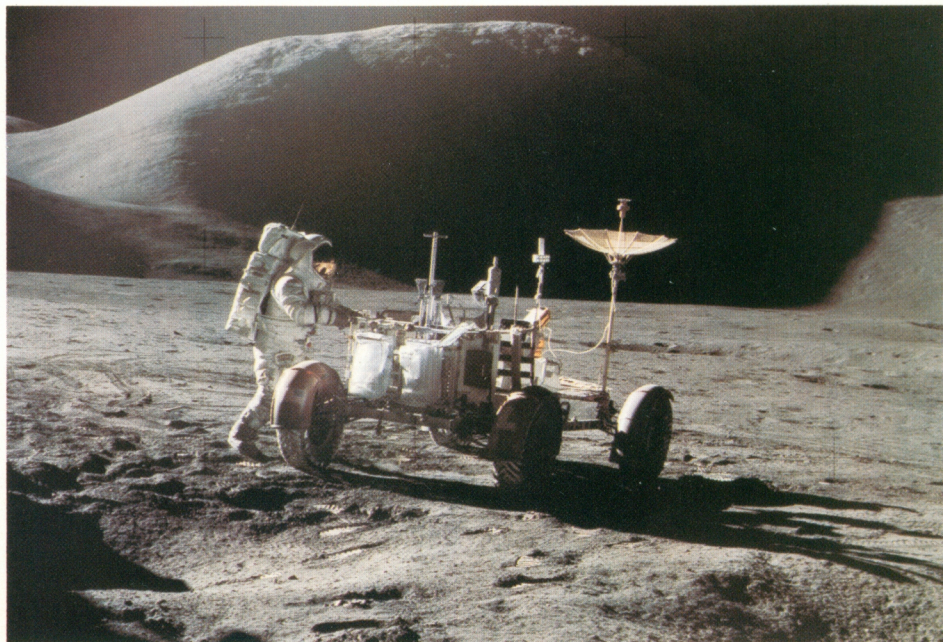
names to send film to be processed at each of its labs—both foreign and domestic. When the film is returned, it's carefully examined for any possible flaw—from color quality to scratches to lint.

At Kodak Apparatus Division, intricate sensors automatically detect defective parts before cameras are assembled. Inspectors perform and monitor thousands of tests. Products are used as they would be by the customer. They also are submitted to extremes of heat, cold, and humidity far beyond the normal range of wear and tear. Other tests include mechanical and electronic measurement and evaluation of parts, dimensions, and performance.

At Kodak, quality control is a nearly century-old art.

Want to Know More?

As this booklet has described, Kodak's world reaches from an Instamatic camera assembly line to picture-taking on the moon. But Kodak knows it must operate as a good citizen of a larger world. It realizes that the concerns of people must be its concerns. These concerns include housing, poverty, education, and other urban problems as well as a commitment to a cleaner environment. If you want to know more about Kodak's participation in social and environmental activities write to: Eastman Kodak Company, Corporate Information Dept., 343 State Street, Rochester, New York 14650.



Kodak's world reaches from Kodak Instamatic camera assembly lines to picture-taking on the moon.

The World of Kodak

Manufacturing Locations

Plus sales, service, processing, distribution, and information centers in many other cities throughout the world.



Rochester, New York

Kodak Park Division:
photographic films, plates,
papers, and chemicals.

Kodak Apparatus Division:
still and motion-picture cameras
and projectors, lenses, filters,
photofinishing and x-ray
processing equipment,
microfilming and electronic
information-handling
equipment.

Distillation Products Industries:
vitamin concentrates,
monoglycerides and specialty
chemicals.

Kodak Office:
administrative headquarters of
the company.

Windsor, Colorado

Kodak Colorado Division:
photographic films, papers, and
lithographic plates.

Kingsport, Tennessee

Tennessee Eastman Company:
man-made fibers, plastics,
industrial chemicals, and
materials for the manufacture of
photographic film.

Longview, Texas

Texas Eastman Company:
plastics and industrial
chemicals.

Columbia, South Carolina

Carolina Eastman Company:
Kodel polyester fiber.

Peabody, Massachusetts

Eastman Gelatine Corporation:
gelatin for use chiefly in the
manufacture of photographic
films and papers.

San Diego, California

Spin Physics, Inc.:
technology and components
in the field of magnetics.

Canada

Kodak Canada Ltd.:
(Toronto)
photographic films, papers,
chemicals, and cameras.

United Kingdom

Kodak Limited:
(plants at Harrow, Hemel
Hempstead, Kirkby, and
Stevenage): photographic films,
papers, chemicals, cameras,
and related products.

Ectona Fibres Ltd.:
(at Workington; co-owned by
Eastman Chemical International
A.G. and Bunzl Pulp and Paper
Limited): cigarette filter tow.

France

Kodak-Pathé:
(plants at Vincennes, Sevrans,
and Chalon sur Saône):
photographic films, papers, and
chemicals; magnetic tape.

Germany

Kodak A.G.:
(Stuttgart): cameras, projectors,
and other photographic
equipment.

Australia

Kodak (Australasia) Pty. Limited:
(Coburg): photographic films,
papers, chemicals, and
cameras.

Argentina

Kodak Argentina S.A.I.C.:
(Buenos Aires): cameras.

Brazil

Kodak Brasileira Comércio e
Indústria, Ltda.:
(São Paulo and São José dos
Campos): photographic papers
and cameras.

Mexico

Kodak Industrial, S.A. de C.V.:
(Guadalajara): photographic
films.



Eastman Kodak Company/Rochester, New York 14650

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