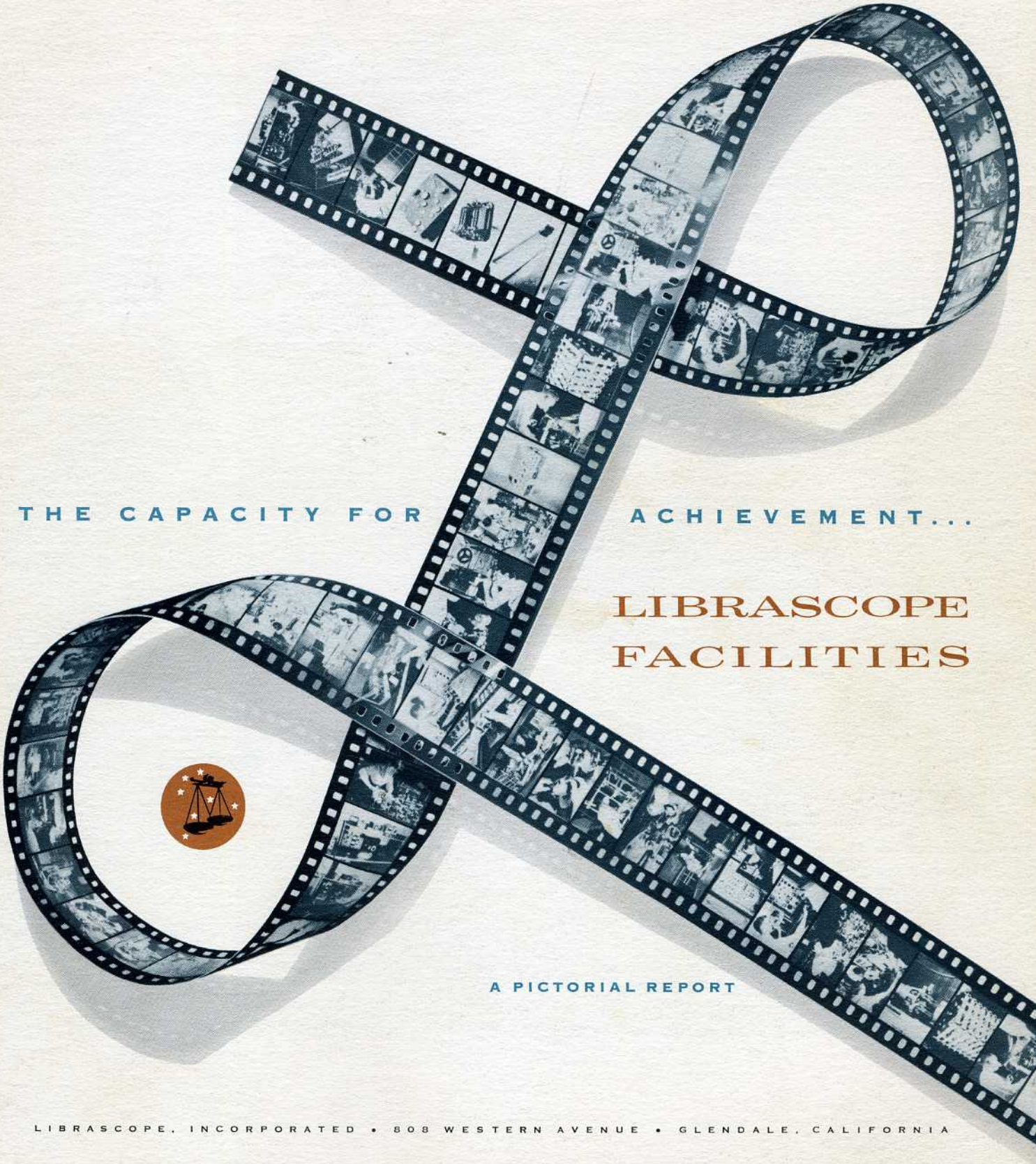


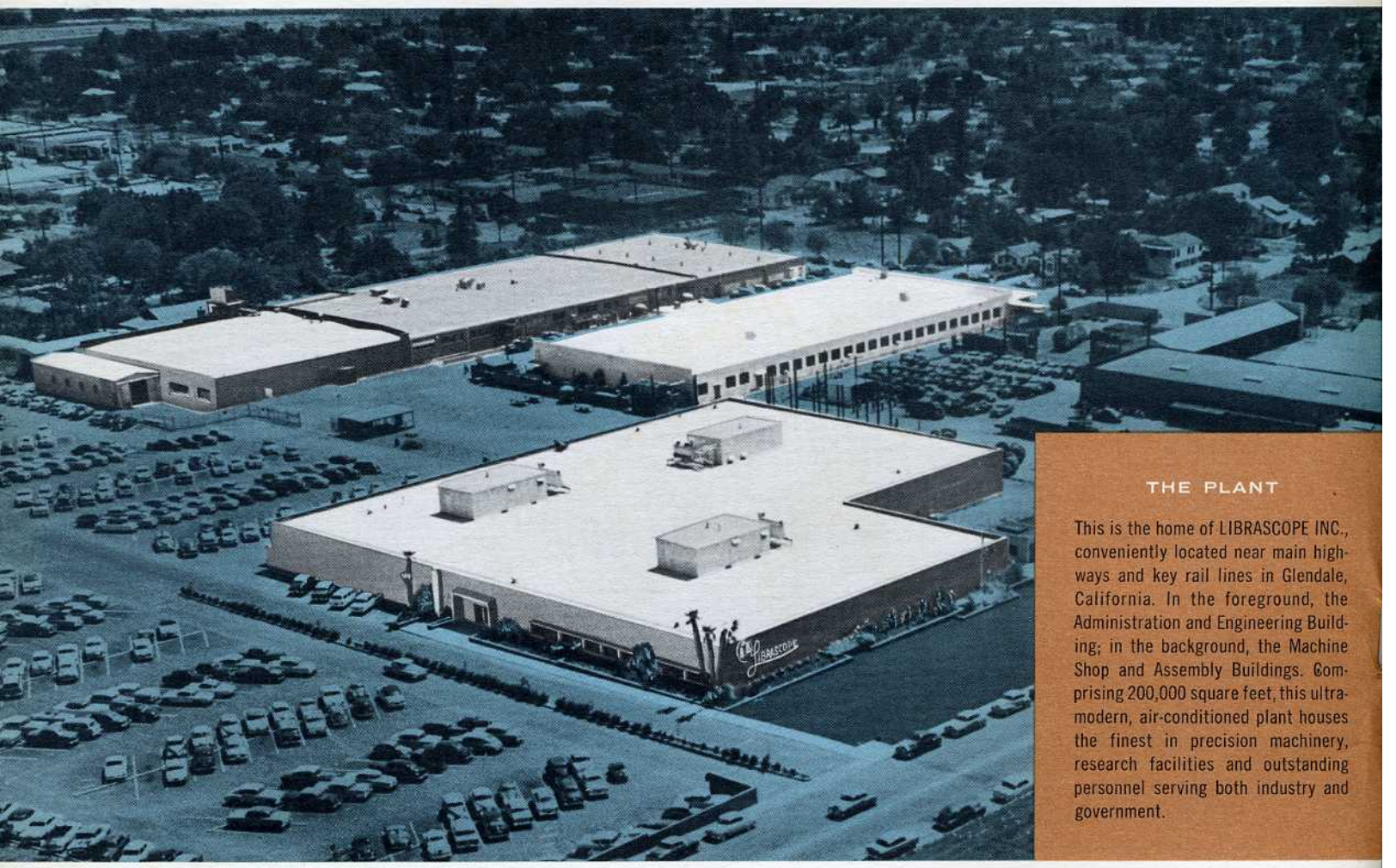
THE CAPACITY FOR ACHIEVEMENT...

LIBRASCOPE FACILITIES

A PICTORIAL REPORT

LIBRASCOPE, INCORPORATED • 808 WESTERN AVENUE • GLENDALE, CALIFORNIA

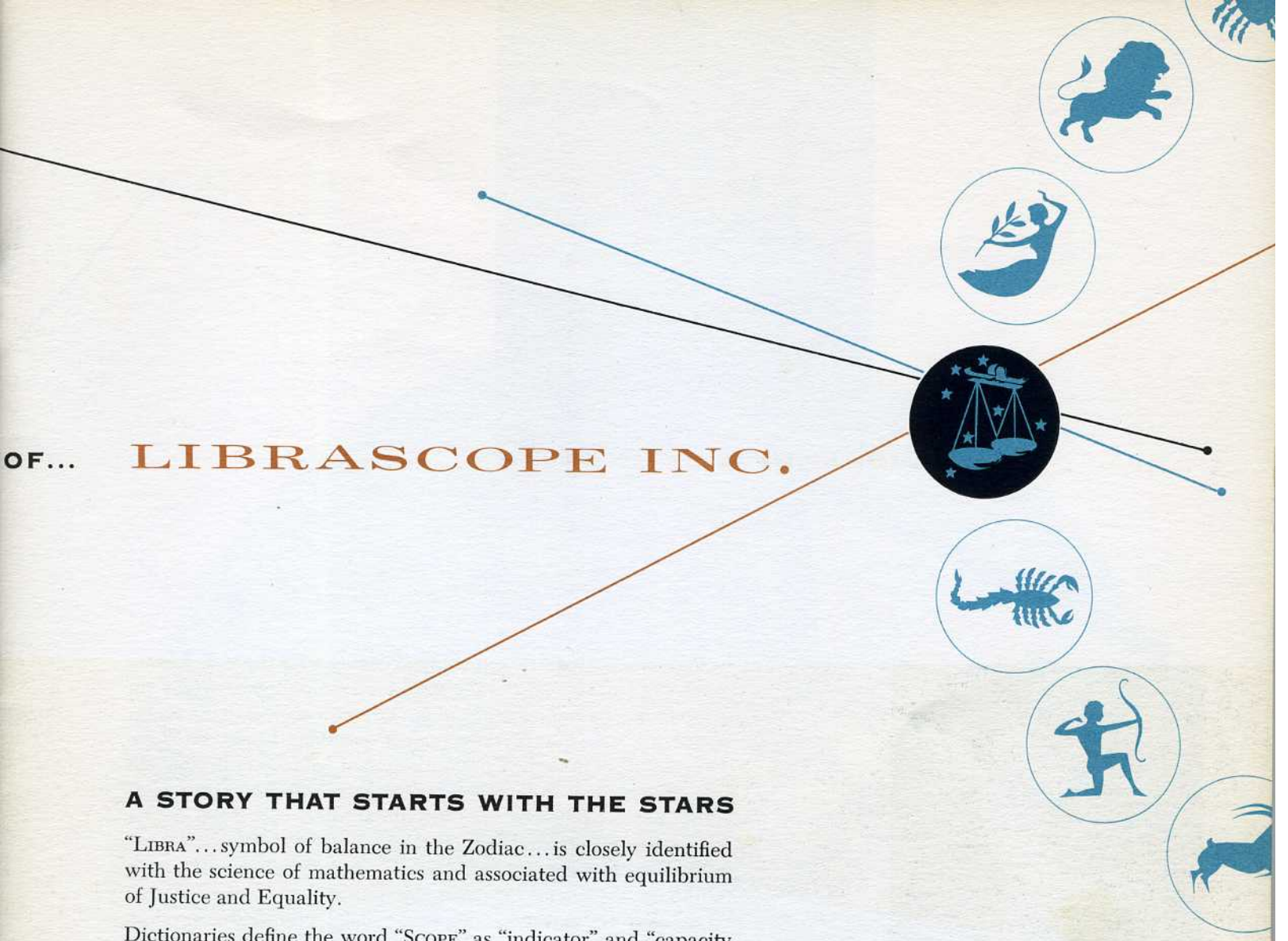
A COMPREHENSIVE REPORT ON THE HISTORY, FACILITIES AND SERVICES



THE PLANT

This is the home of LIBRASCOPE INC., conveniently located near main highways and key rail lines in Glendale, California. In the foreground, the Administration and Engineering Building; in the background, the Machine Shop and Assembly Buildings. Comprising 200,000 square feet, this ultra-modern, air-conditioned plant houses the finest in precision machinery, research facilities and outstanding personnel serving both industry and government.

OF... LIBRASCOPE INC.



A STORY THAT STARTS WITH THE STARS

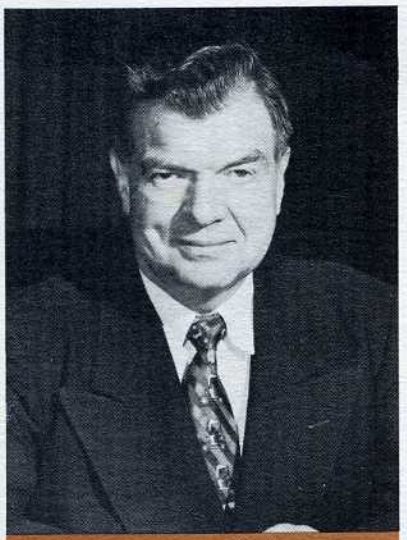
"LIBRA"... symbol of balance in the Zodiac... is closely identified with the science of mathematics and associated with equilibrium of Justice and Equality.

Dictionaries define the word "SCOPE" as "indicator" and "capacity for achievement." Because these concepts represent both the company's ideals and basic business philosophy, LIBRA and SCOPE were combined to form the corporate name of "LIBRASCOPE."

From a modest beginning in 1937, Librascope has progressed into more and more advanced, complex fields of endeavor, acquiring facilities and personnel to maintain perfect balance between what the mind of man can conceive and what man-made machines can produce.

A unique skill and facility for utilizing and combining mechanical, electrical, magnetic, electronic and optical techniques has established Librascope in a position of leadership in the design and production of industrial control systems, computers and components, military weapons systems and navigational devices. The story of Librascope starts with the stars—and continues, challenging the unknown, unsolved problems of industry.

ANTICIPATING A NEED...



MR. LEWIS W. IMM

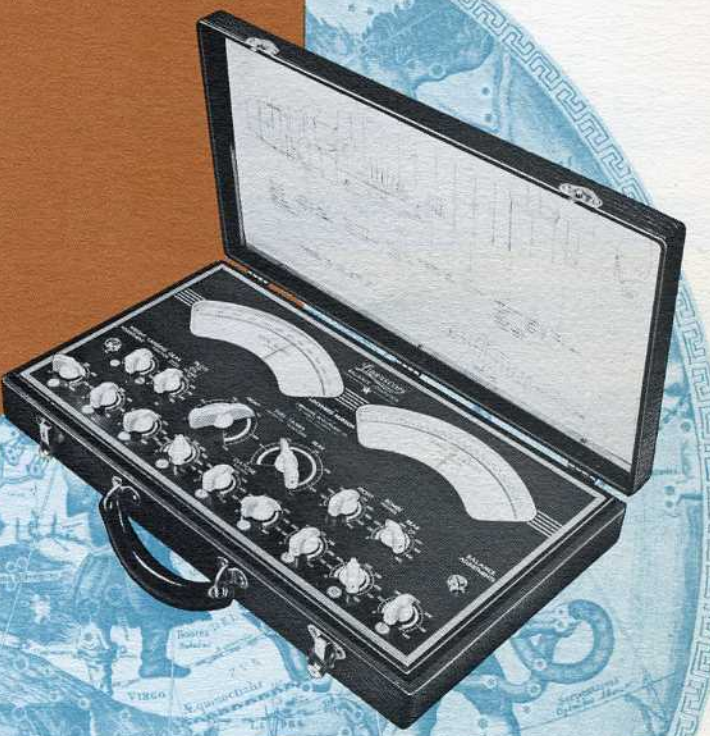
Founder and President
of
LIBRASCOPE INCORPORATED

In 1937, Lewis W. Imm, aeronautical engineer for the U.S. Bureau of Air Commerce, realized the need for a simplified computer for determining optimum loading of aircraft with respect to the center of gravity. Leaving his government position, Lewis W. Imm devoted full time to developing the visual balance indicator. His venture met with instant acceptance and more and more computing devices followed until incoming orders called for greater production capacity and finances than were available to most small companies. To meet this increased demand Librascope became a subsidiary of General Precision Equipment Corporation. During World War II Librascope engaged prominently in the development and production of military computers. By 1949 the original 10 man company had grown to number 200 employees. Today, Librascope Inc., has a personnel in excess of 1500 with a corresponding vast increase in plant area, facilities and highly specialized technical equipment. While anticipating and leading in the design of new control instruments for military use, Librascope has greatly expanded its activities in the development and manufacture of commercial products. This has been accelerated by new skills, equipment and techniques developed by Librascope and also through the purchase of other companies prominent in their respective fields—part of a long range program anticipating the constantly growing demands of both government and industry. Librascope and its subsidiaries have available today many basic items of industry to meet the onward rush of automation. Electronic and electro-mechanical computers, controls and components —magnetic memory devices and scores of other highly complex scientific and technical advances are here—now—ready for immediate application. Still others are on the horizon. Tomorrow's demands... anticipated, developed and ready today at Librascope.

The original

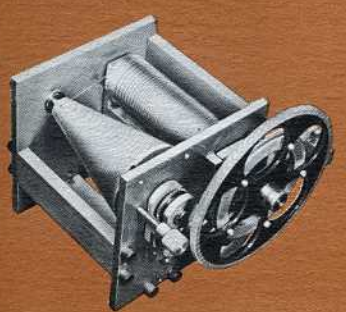
LIBRASCOPE VISUAL BALANCE INDICATOR

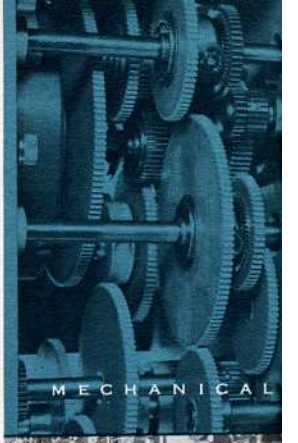
that revolutionized methods of loading transport planes

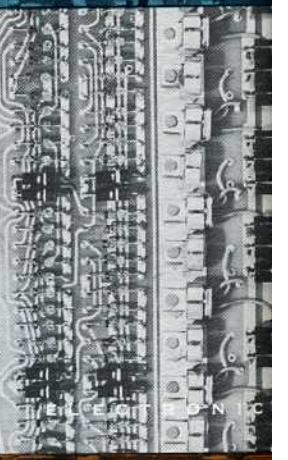


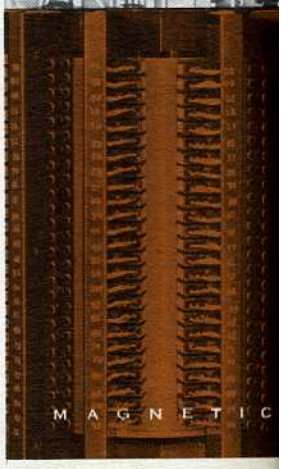
CONE SQUARING MECHANISM

A multi-turn function generator type of analog computer, developed in 1943 by Lewis W. Imm. This device is based on the principal of the Archimedean spiral—spiral length is proportional to the square of the generating angle. It is capable of accuracy on the order of 1 part in 15,000.



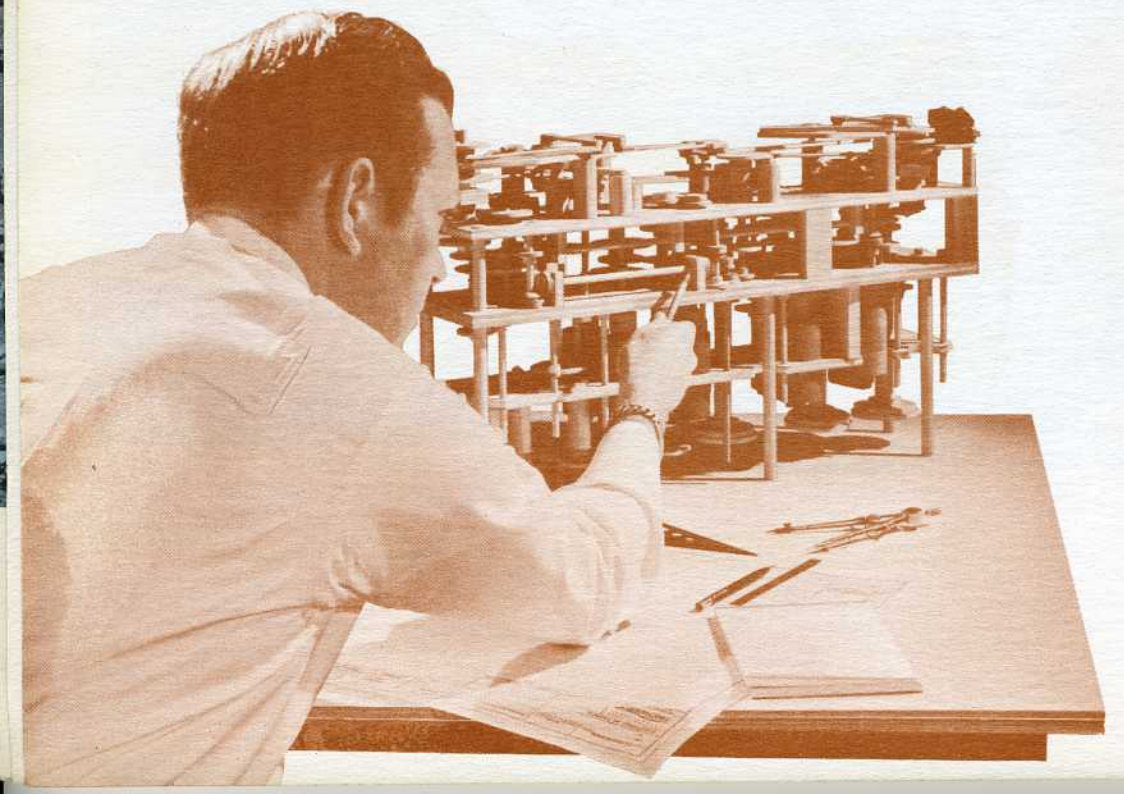




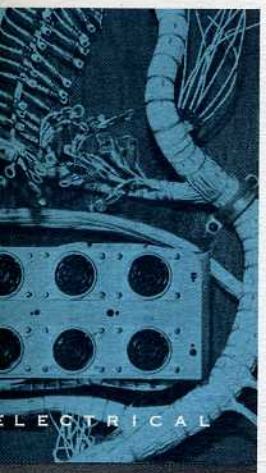


THE NEEDS OF TOMORROW

On the brink of an automated age there emerges a dynamic picture of industrial development and achievement. Estimates projected for the next five years show that electronics will rank with the very biggest among American industries in dollar volume. Librascope expansion planning for the future calls for greatly increased capacity in the production of machines that sense more than fingers, see more than eyes and think faster than minds. But such complex devices do not spring into being overnight. Farsighted thinking and a particular faculty for foreseeing the future must be coordinated to develop new ideas. To this end, a large percentage of the total time of Librascope's large staff of engineers, physicists and mathematicians is devoted to pure research . . . to anticipate today the needs of tomorrow.



FACILITIES

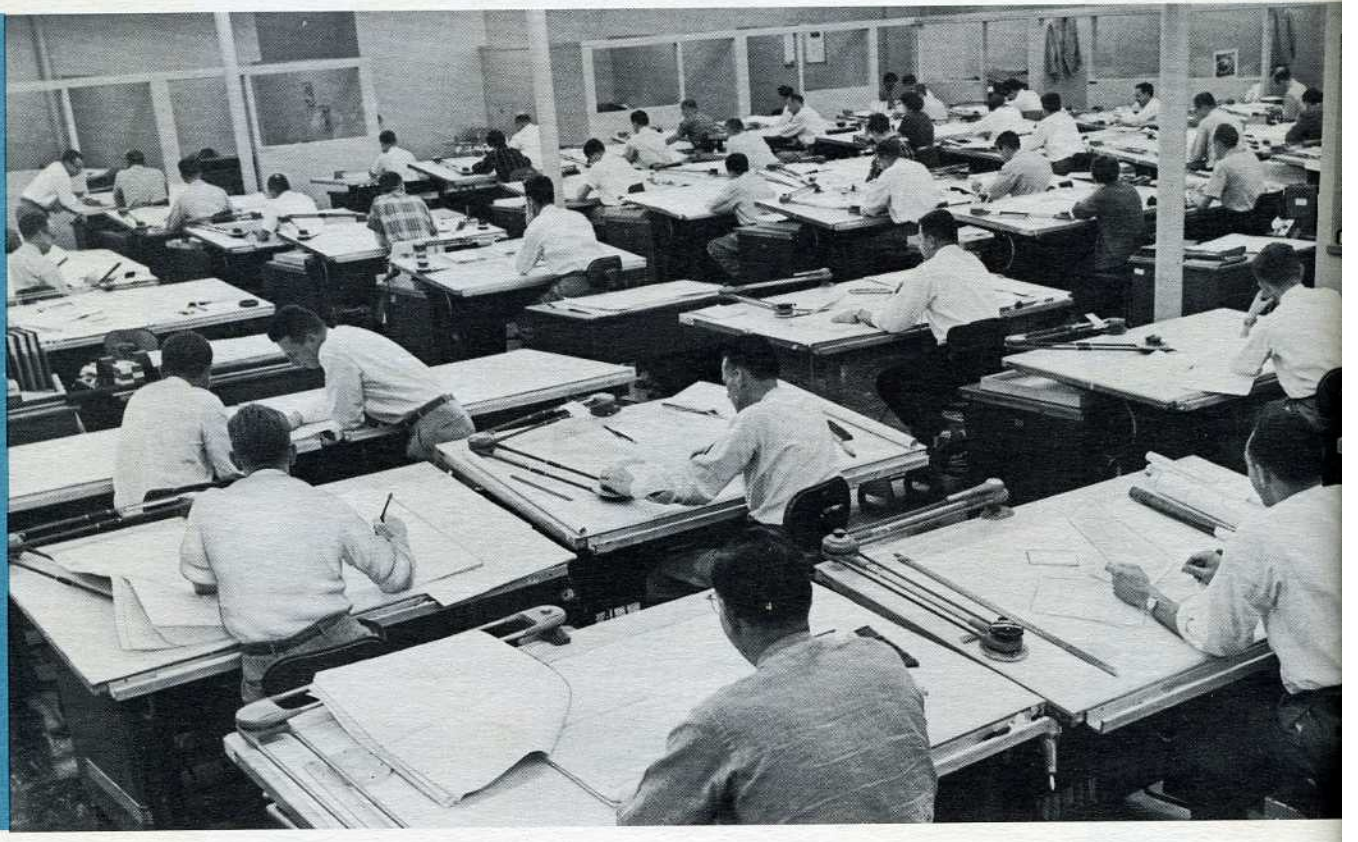


INDEX

LIBRASCOPE FACILITIES

ENGINEERING

Librascope vast Engineering Department consists of five major divisions; Administrative—Shipboard Equipment—Airborne Equipment—Commercial Equipment and Special Devices. Each Engineering Division has its own specialized complement of engineers, physicists and mathematicians but, when occasion arises, may call upon the experience and skill of any—or all—of the many members of the Librascope engineering staff.



Section of Engineering Drafting Department

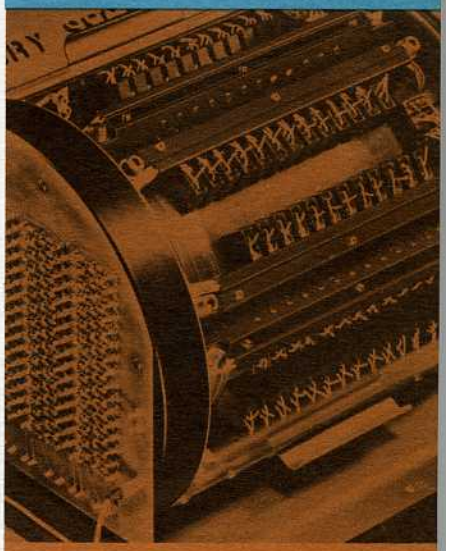
ENGINEERING DEPARTMENT

The scope of activity and accomplishment by Librascope Engineering is indicated by outstanding results already achieved in development and production contracts executed for both government and industry.

Utilizing mechanical, electrical, magnetic, electronic and optical techniques—or combinations of all known techniques—Librascope engineers daily demonstrate versatile creative skill and exceptional technical ingenuity.

For nearly two decades Librascope has specialized in generation of new designs—modification or improvement of existing designs—proper instrument application for the solution of problems related to the manufacture of products—and advanced development of complex devices and systems required by modern sea and air craft.

Our record of success in these fields of technological endeavor is a tangible testimonial to the skill and ability of the engineers of Librascope.



A magnetic memory storage drum, used on one of Librascope's digital computing systems.

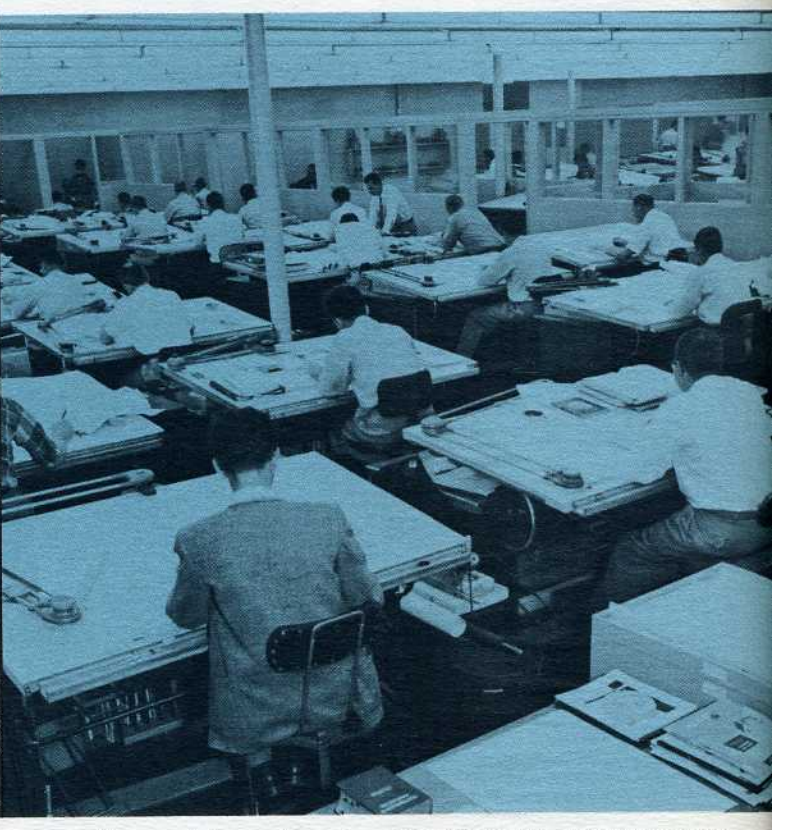
ADMINISTRATION SHIPBOARD AIRBORNE COMMERCIAL SPECIAL DEVICES

LIBRASCOPE FACILITIES

ENGINEERING

Invention, research and development are long range engineering assignments. The successful resolution of these distinctively creative functions requires, however, great and essential supplementary support. Librascope engineers have available every possible tool, test equipment, measuring devices and some of the most specialized instruments to aid them in the successful completion of their various projects.

Librascope maintains a large staff of artists, draftsmen and technical illustrators to prepare pictorial material for manuals, brochures, catalog and specification sheets, etc.

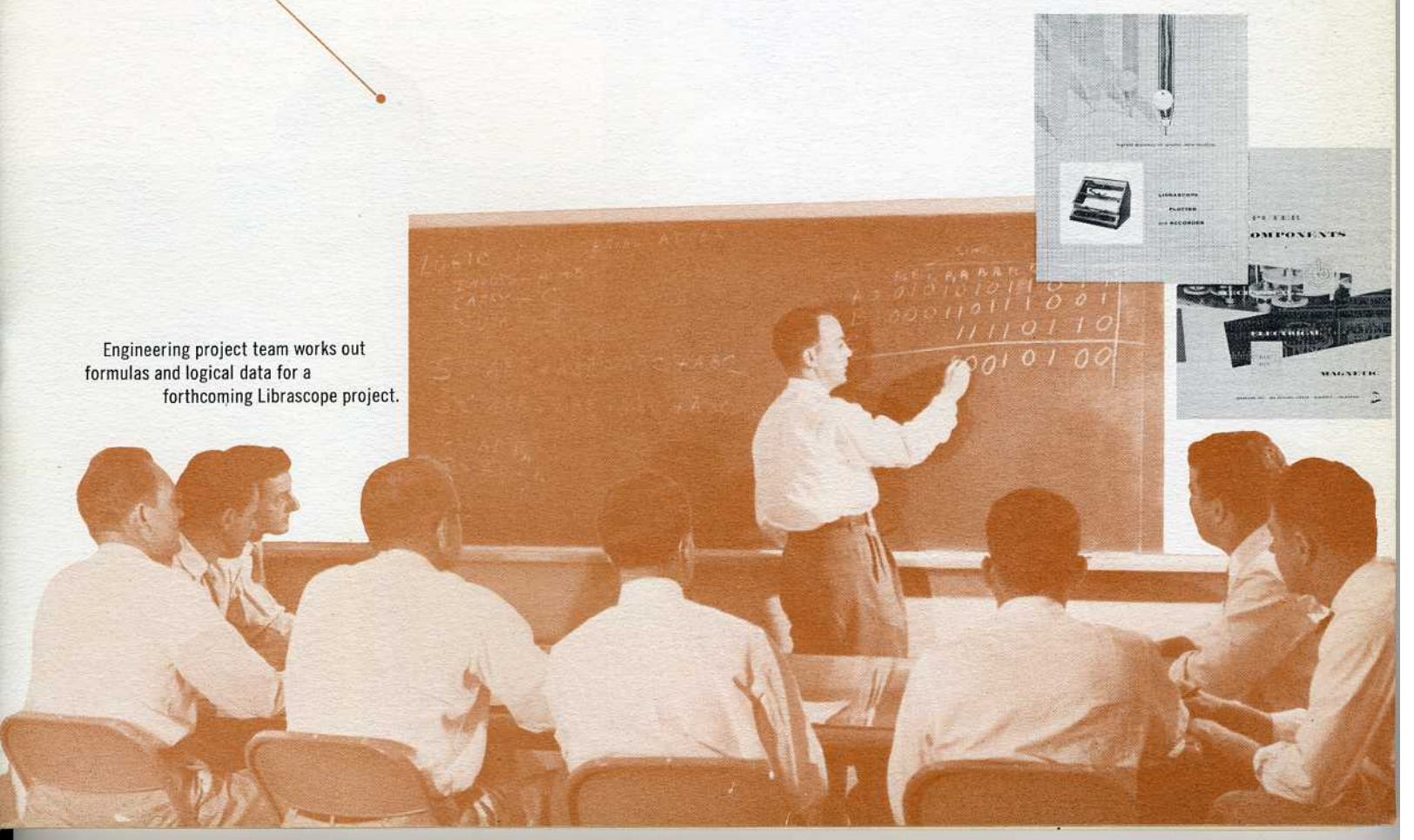


Librascope's large and ever increasing staff of engineers includes specialists in every known phase of technology.

A unique feature is the operation of a Simulation Laboratory. This is composed of Librascope-designed equipment for checking out military fire control under conditions simulating actual use.

In addition to the many in-the-plant services Librascope maintains a staff of experienced field engineers for the installation and maintenance of all Librascope equipment in the field according to warranty of service contracts.

Simulation Lab—a unique Librascope-designed instrument assembly which tests equipment under realistically simulated actual working conditions.



Engineering project team works out formulas and logical data for a forthcoming Librascope project.

LIBRASCOPE FACILITIES

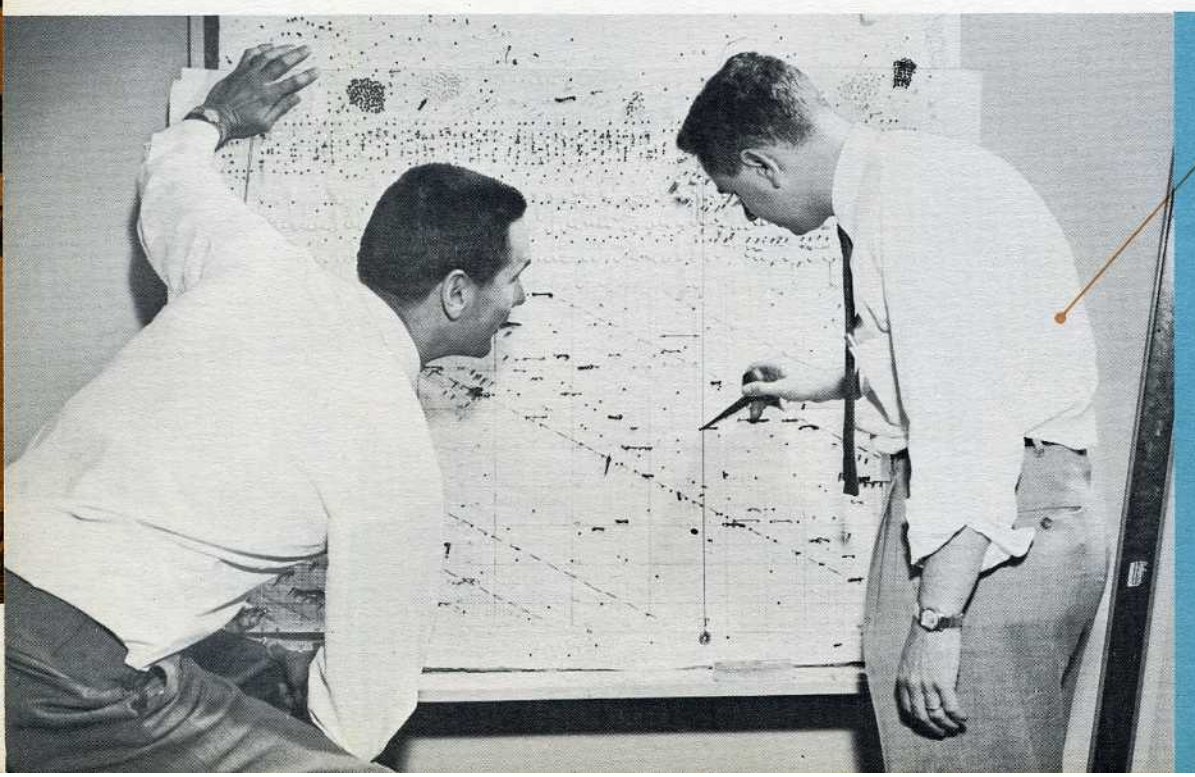
ENGINEERING

RESEARCH AND DEVELOPMENT

Librascope has one of the largest research and development organizations, not only in the computer and control field, but in the entire instrument and electronic industry.

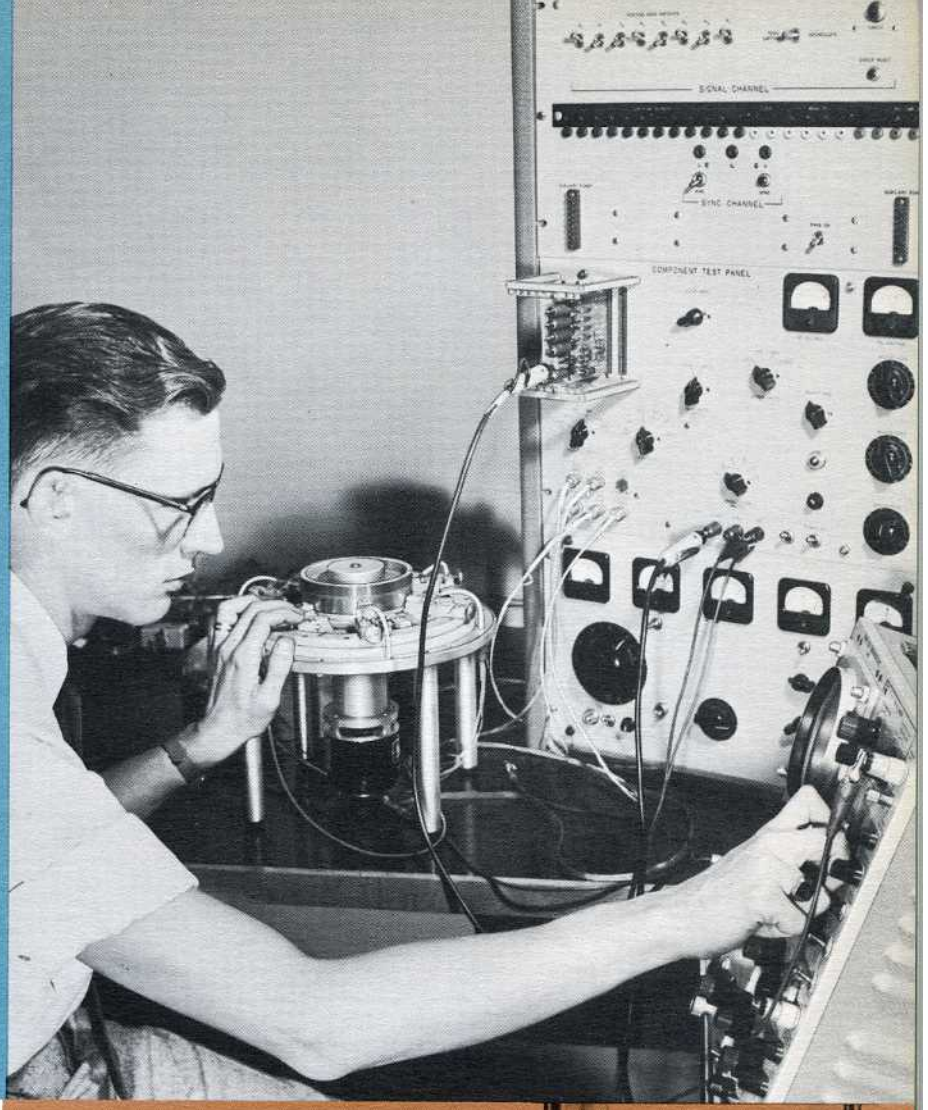
A basic idea presented to Librascope's research and development department may come from anywhere. A product may originate from the needs of a customer—or it may come into being on an engineer's drafting table—but an idea, once approved, regardless of its origin, is backed to the limit by the facilities, resources and know-how of the entire Librascope organization.

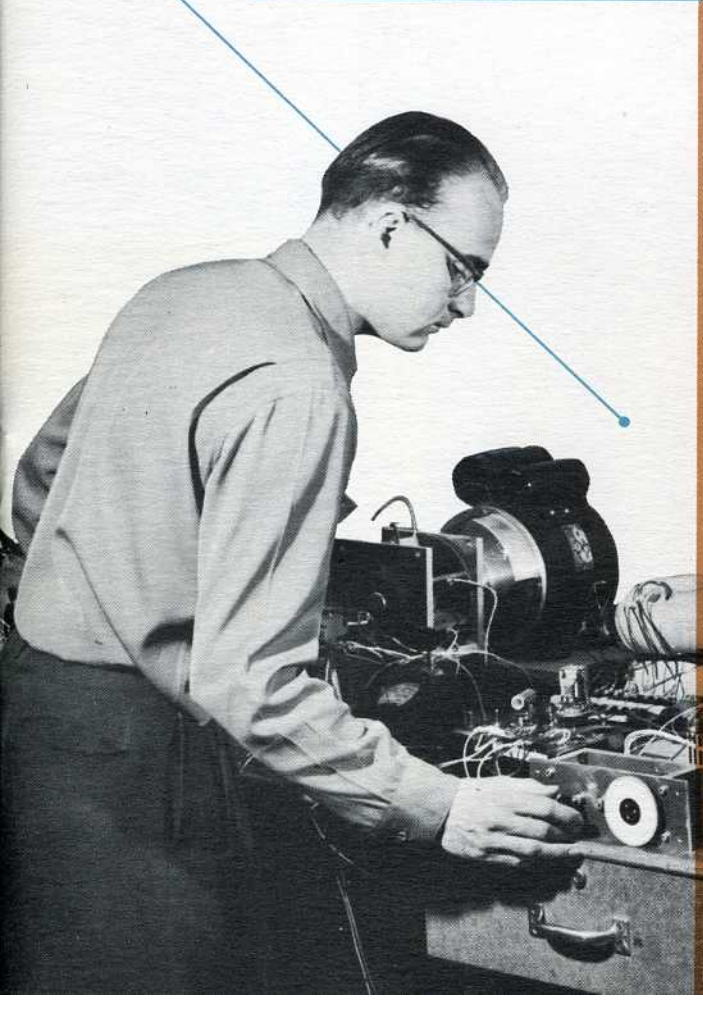
As an outgrowth of Librascope's research and development the design and construction of computer and control systems and scores of other devices of extreme accuracy and phenomenal performance are made possible. At Librascope, research and development is constantly in progress on electronic, magnetic, electrical, mechanical and optical projects. This has resulted in many completely new developments being brought to successful culmination.

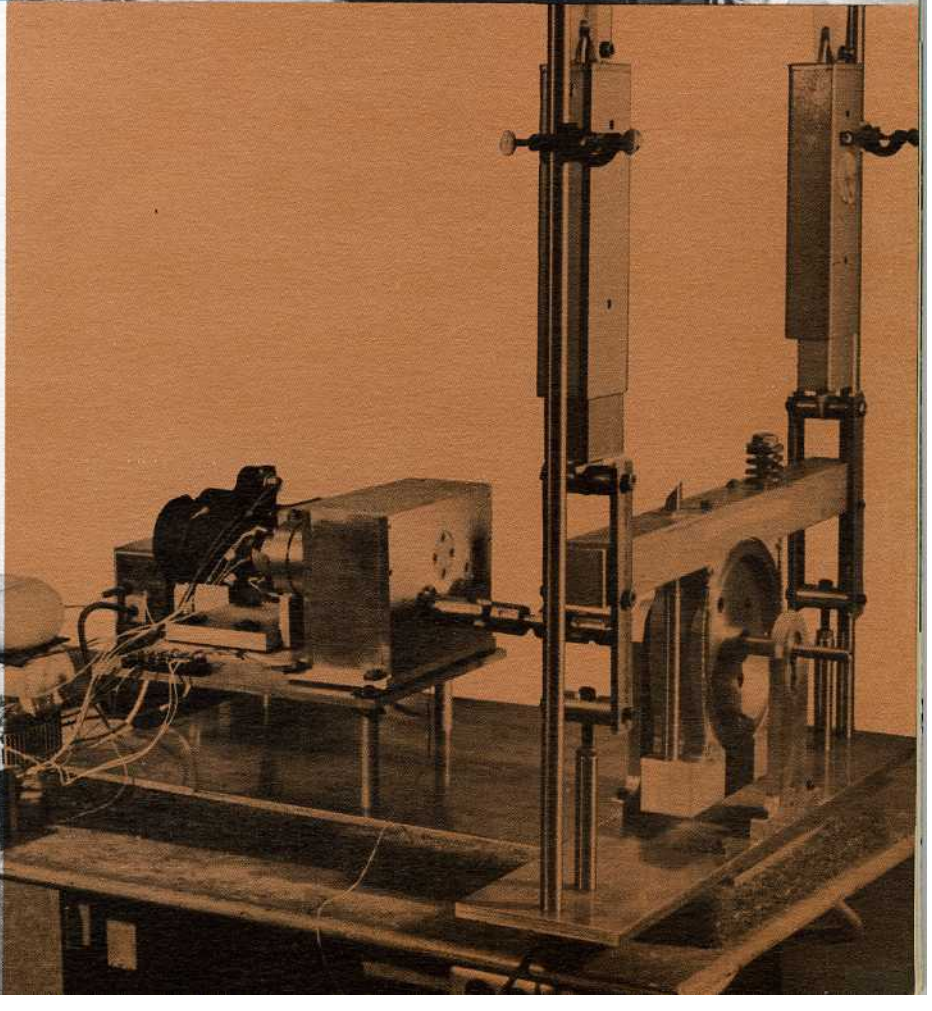


Development of a Logic Layout for a Librascope computer—capable of many operations per second—crystallizes the engineering philosophy and planning for a computer.

Proceeding on a premise of inevitable change and growth ahead, specially trained Librascope mathematicians, physicists and engineers formulate a given problem into equations suitable for mechanization — reducing theories into tangible, effective machines or instruments of great economic potential.







LIBRASCOPE FACILITIES

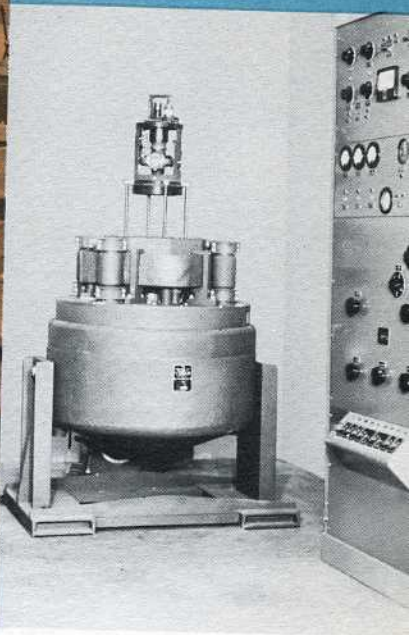
ENGINEERING

LABORATORIES AND MODEL SHOP PROTOTYPE DEVELOPMENT

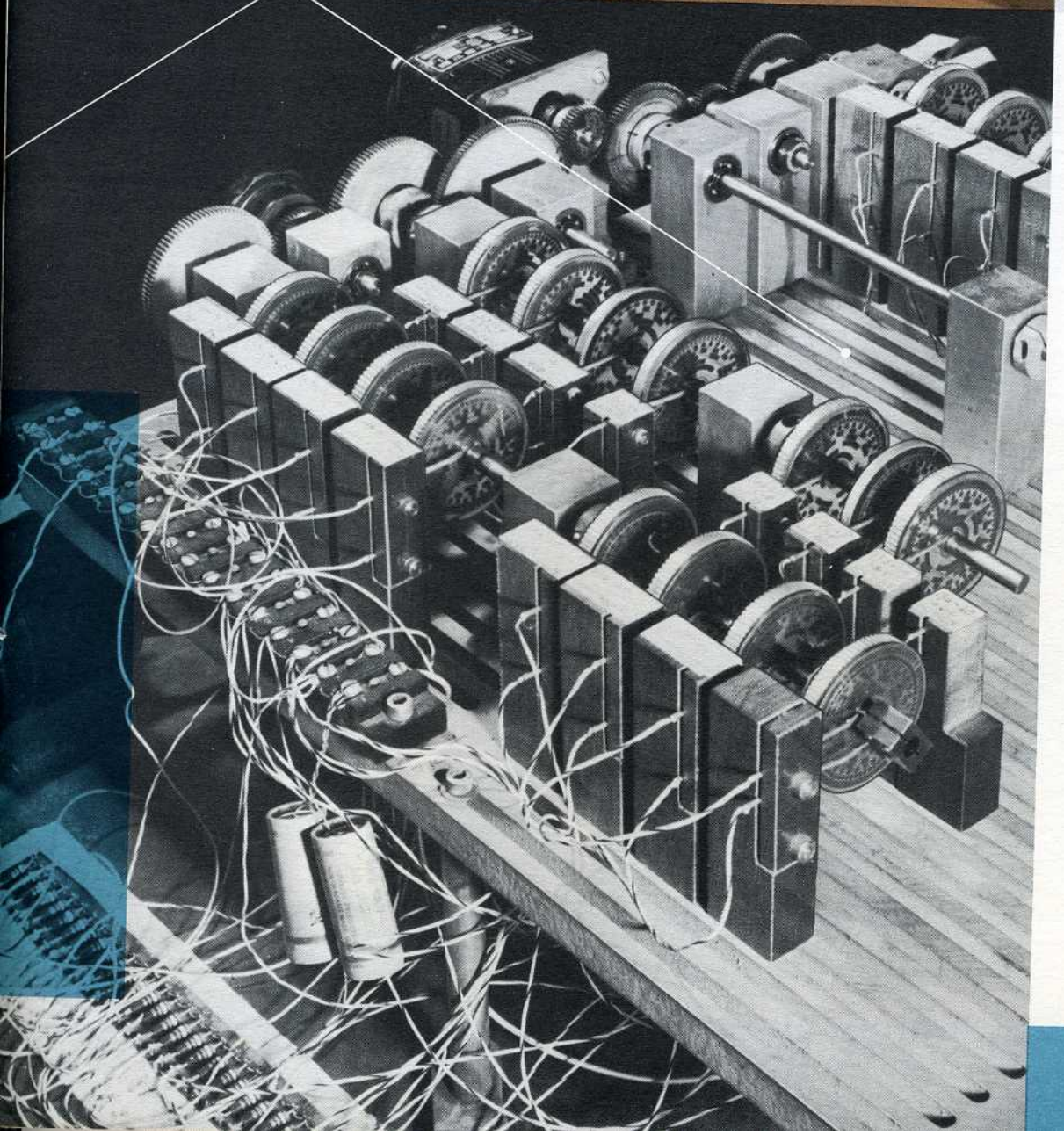
ELECTRONICS LAB

These vitally essential areas are primarily concerned with circuit design, research and development. Here electronic portions of new Librascope products are developed. In these excellently staffed and finely equipped laboratories theory is transmuted into fact with miniaturization and advanced circuitry.

Personnel, facilities, equipment and experience to maintain, calibrate and standardize all types of electronic instruments, are kept at the top level at Librascope. Extreme accuracy and precision are standard procedure, with calibrations made to 0.01 per cent or better—and secondary standards checked against primary standards whenever necessary. Equipment in the Electronics Laboratory is both diversified and complete—new equipment being added whenever needed for projects at hand. Over 35 different types of machines, tools and test instruments in this department include: lathes, drill presses, jig bores and accessories, height gages, gage blocks, micro-projectors, potentiometer indicators, binocular microscopes, strobotacs, cathode ray oscillographs, voltage regulator power supplies, dynamometers, viscosity cups, force indicators, force measuring devices, torque watches and all types of torque testing equipment.



Shake Table . . . a part of Librascope's facilities for complete environmental tests.

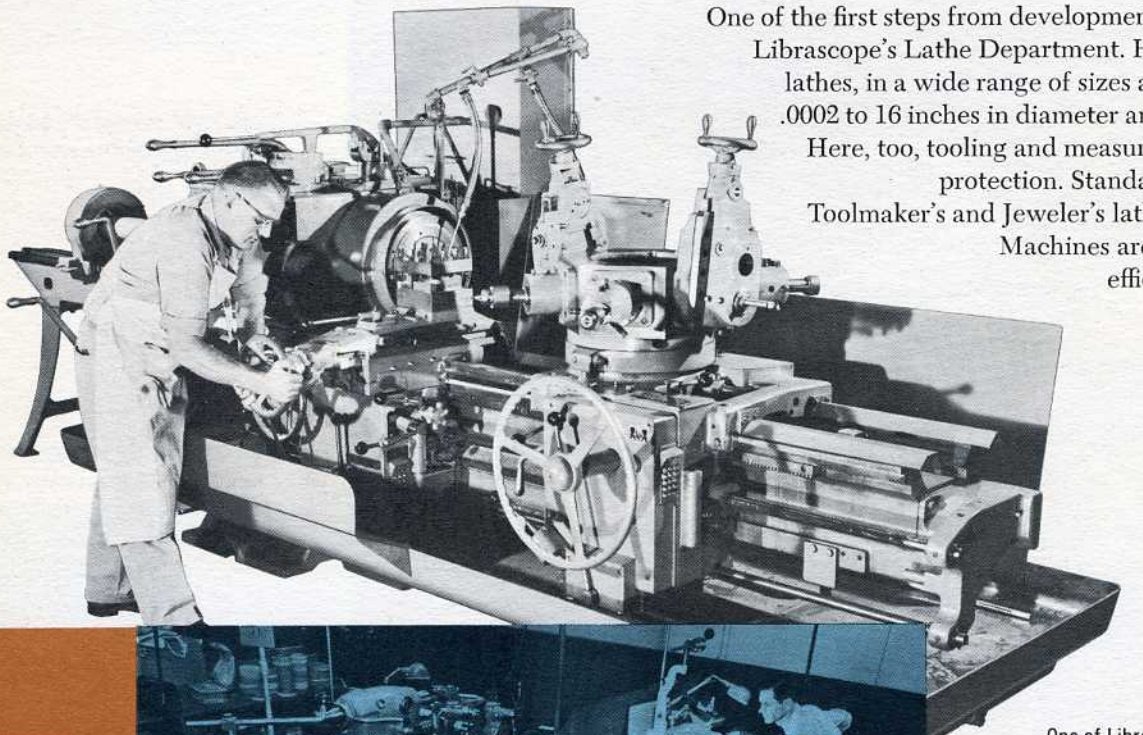


The Librascope Model Shop presents a composite of practically every phase of production activity. Here, the diversity of operations is reflected in the wide range of equipment required. Massive milling machines, tiny jewelers lathes, punch presses, borers, saws and grinders all enact important roles in fabricating prototypes of all kinds. In the Model Shop also are found a large assortment of arbor presses, a complete sheet metal shop, potting tools, vacuum pumps, bell jars and complete wiring and soldering equipment. Librascope's own printed circuit plating and processing facilities function in this department and the electronic checking devices section of the model shop, with its meters, power supplies, oscillographs, etc., is complete in every detail.

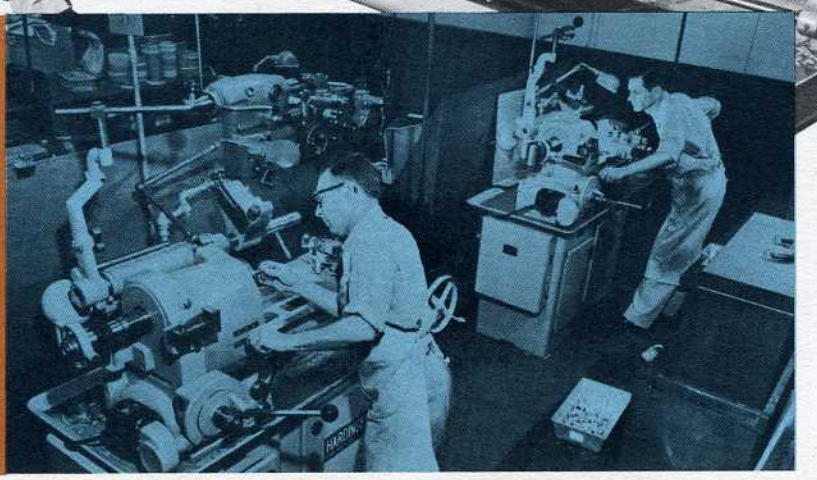
LIBRASCOPE FACILITIES

LATHE DEPARTMENT

One of the first steps from development to production begins in Librascope's Lathe Department. Here both engine and turret lathes, in a wide range of sizes and versatility, bore from .0002 to 16 inches in diameter and up to 65 inches in length. Here, too, tooling and measurements are checked for protection. Standard, Heavy Duty, Precision, Toolmaker's and Jeweler's lathes, as well as Chucking Machines are included in Librascope's efficient Lathe Department.



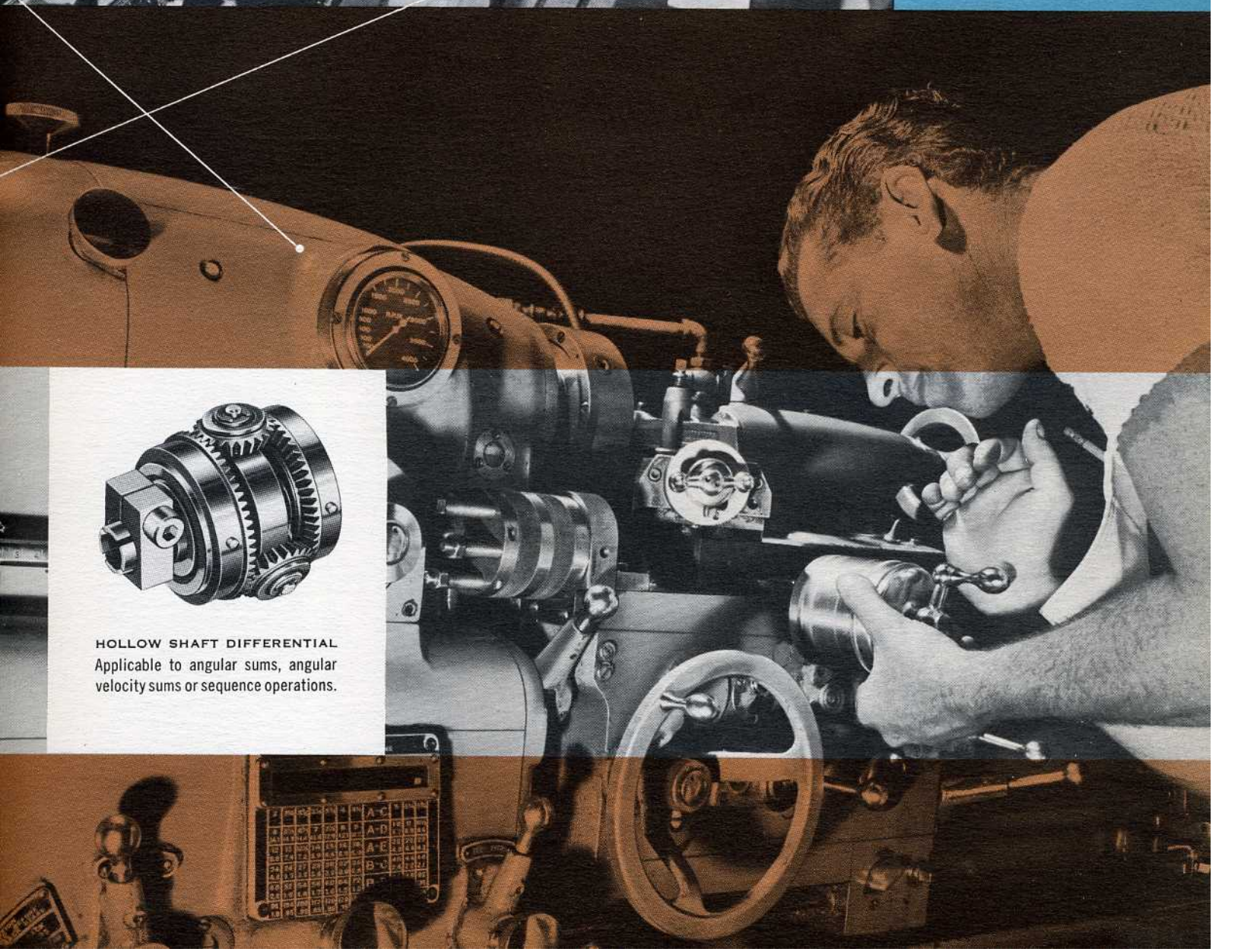
One of Librascope's big battery of Warner and Swasey lathes used for large turret work.



A Hardinge lathe, being used to ream the pen carriage bearing block castings for the Librascope X-Y Plotter

Lathes are counted by the score in Librascope's Lathe Department. The quantity and quality of lathe work called for in this division utilizes equipment, built to Librascope specifications, from practically all established manufacturers including: Monarch, Reed and Prentice, South Bend, Jones and Lamson, Hardinge, Warner and Swasey and others.

Librascope utilizes a battery of Monarch Engine Lathes, each having a 12" swing turning diameter, for Boring, Threading and Turning.

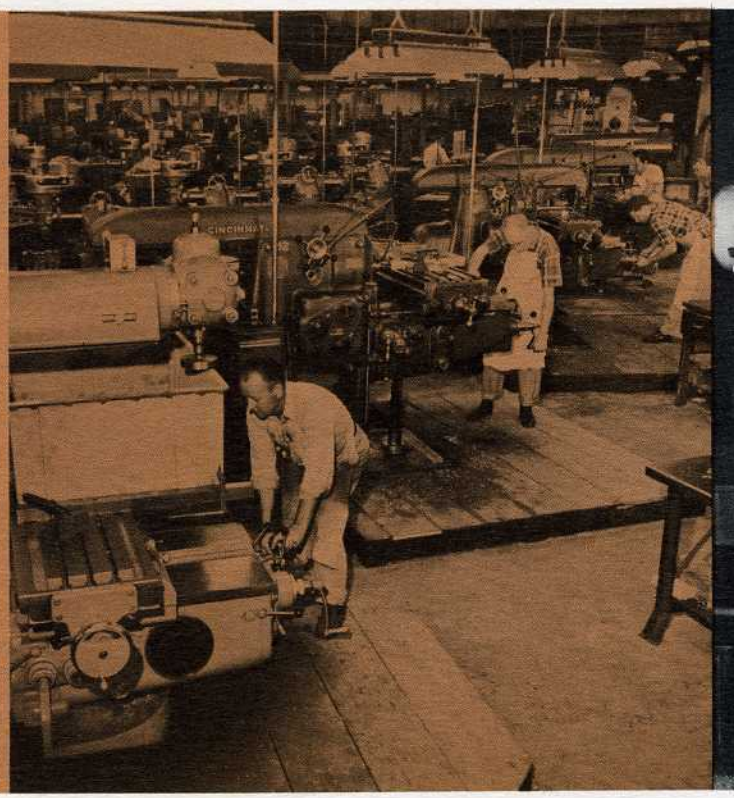


HOLLOW SHAFT DIFFERENTIAL
Applicable to angular sums, angular velocity sums or sequence operations.

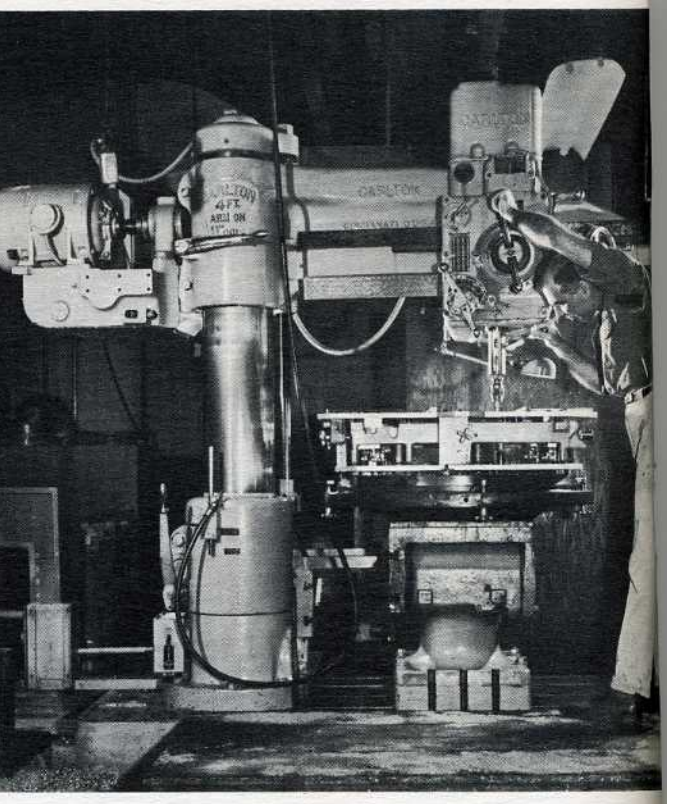
LIBRASCOPE FACILITIES

MILLING DEPARTMENT

Librascope's completely equipped Milling Department specializes in milling castings to close tolerances. One of the many unique adaptations of machinery in this department allows milling machines to be used for precision layouts as well as for precision milling. Critical milling operations are completed on a wide range of the latest, most modern horizontal, vertical and omniversal equipment. The Librascope Milling Department is capable of handling work up to 32"x32"x54".

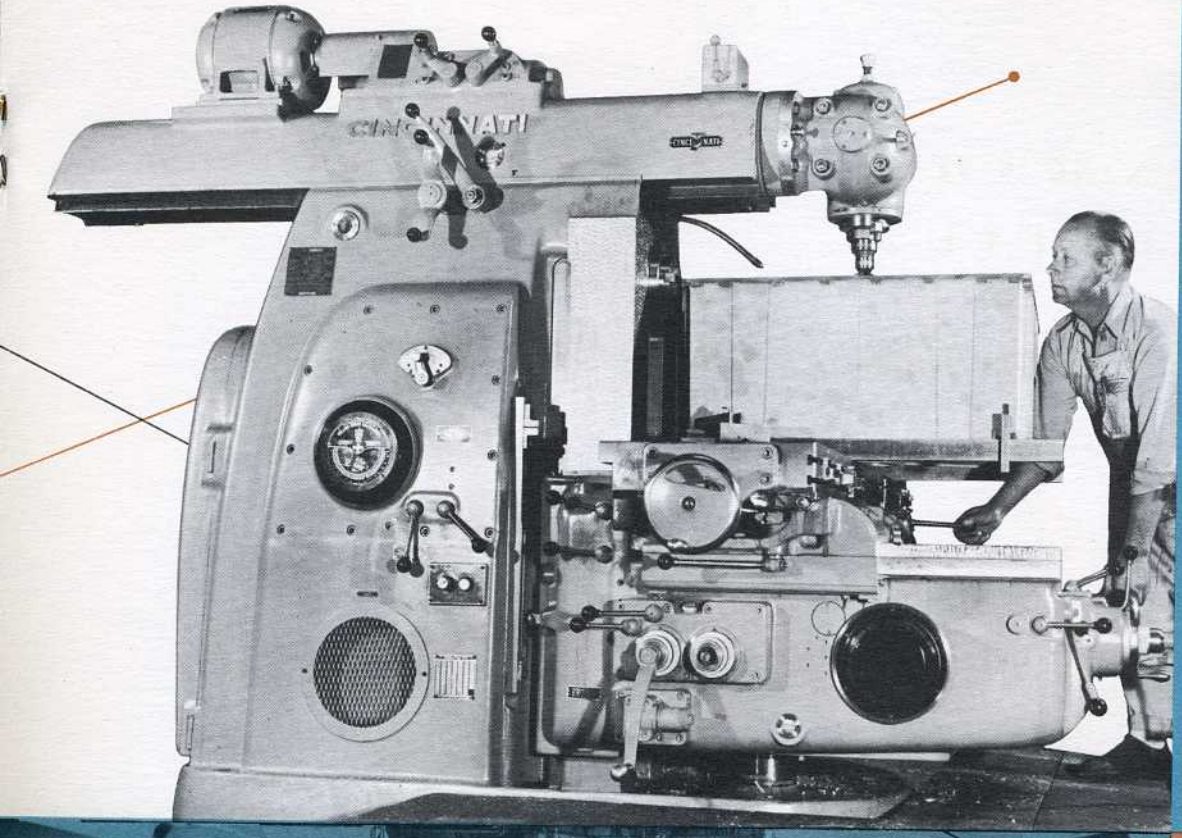


Battery of very modern overhead ram-driver Cincinnati Milling Machines in Librascope's Milling Department.

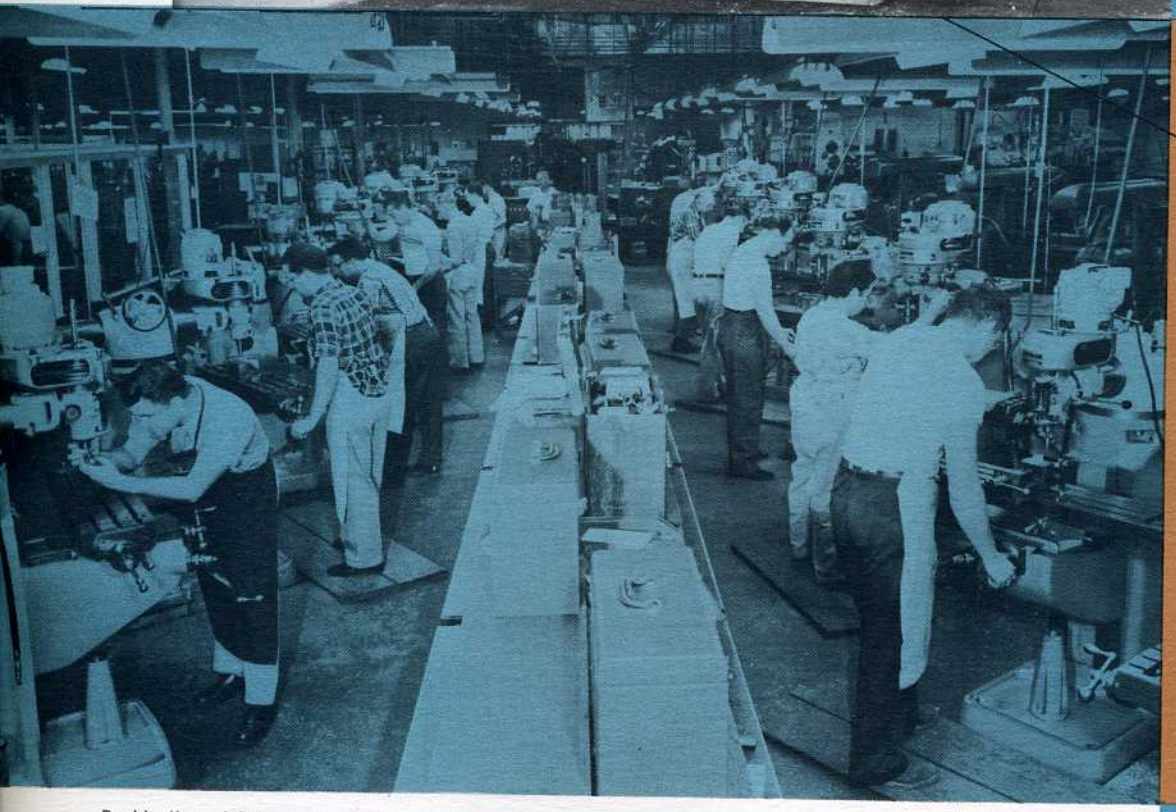


Carlton Radial Drill with 4 foot arm and 11 foot Cot—a most versatile and flexible machine for Librascope's complex jig and index drilling.

Typical of Librascope's modern machinery, this overhead drive Cincinnati No. 4, mills horizontally, vertically or at any angle.

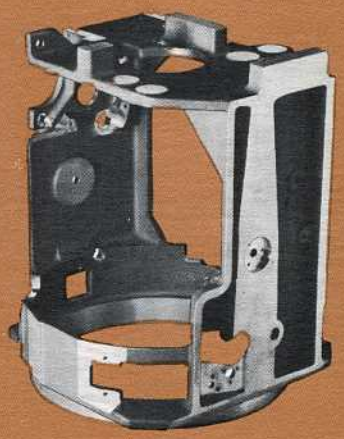


The close tolerances necessary for the volume of work passing through Librascope's Milling Department requires a large quantity of the very finest in milling machinery. In the over half a hundred pieces of equipment in this department are Bridgeport, Cincinnati and Milwaukee Vertical and Horizontal mills of all sizes, omniversal and universal horizontal and vertical mills, together with all types of profiling and broaching machinery.



Double line of Bridgeport Mill Machines especially adjusted by Librascope for unusually precise work.

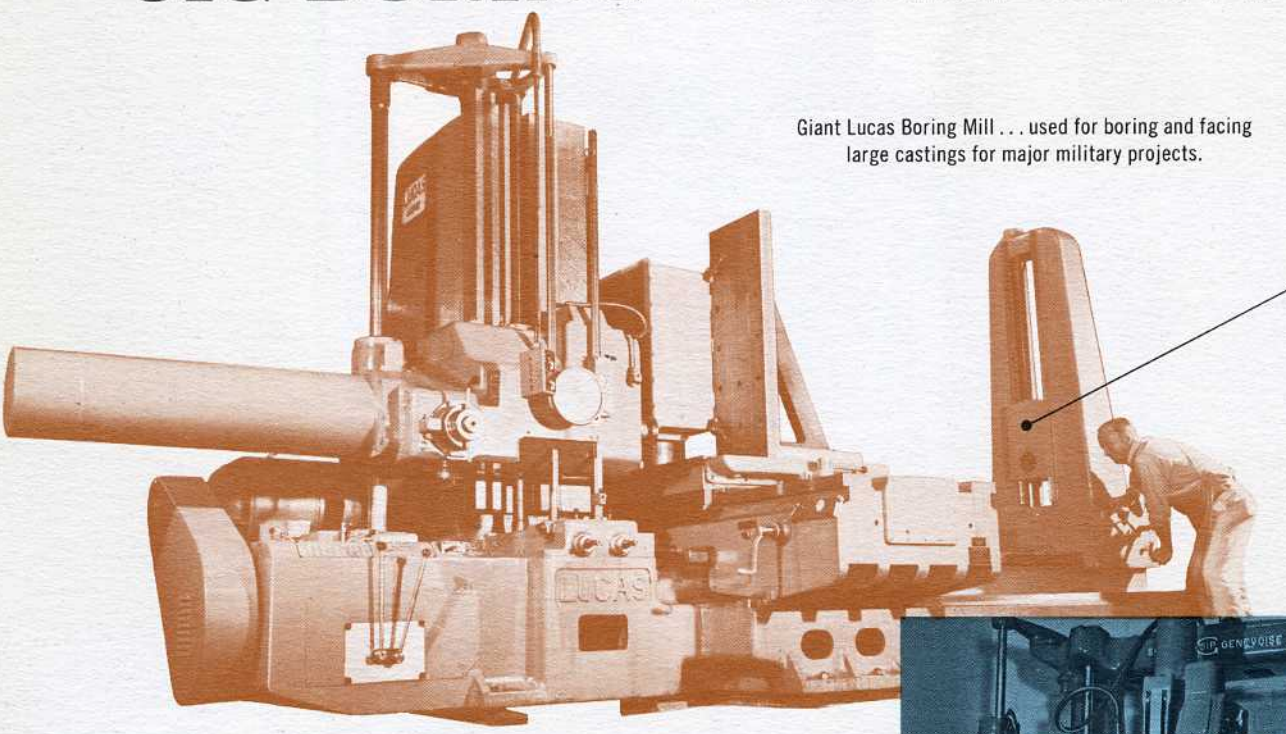
A complex casting processed in Librascope's Milling Department.



Ultra modern Kearney & Trecker Autometric Boring Machine complete critical part of a control system.

LIBRASCOPE FACILITIES

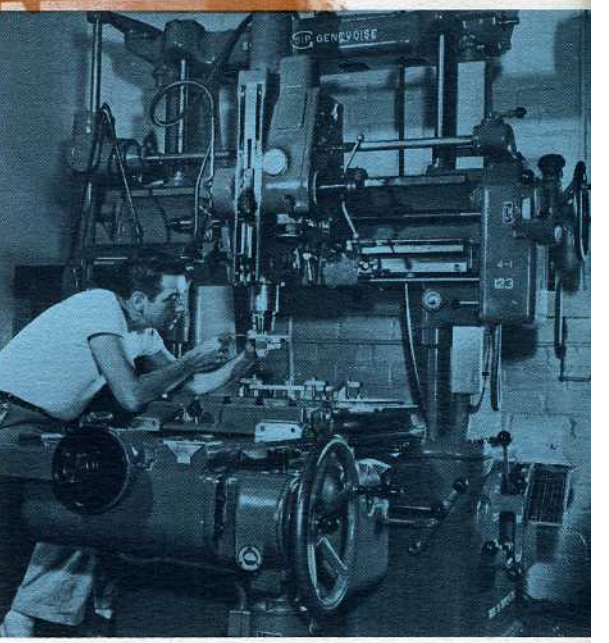
JIG BORING DEPARTMENT



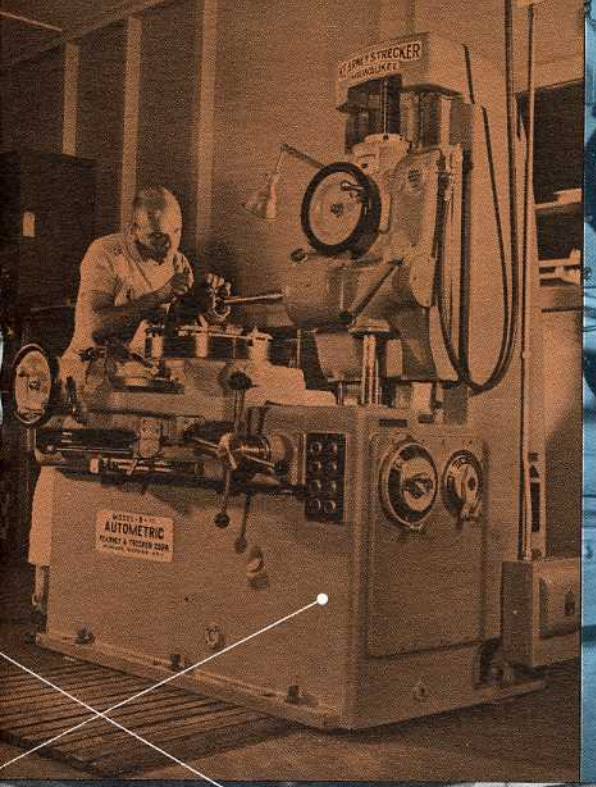
Giant Lucas Boring Mill . . . used for boring and facing large castings for major military projects.

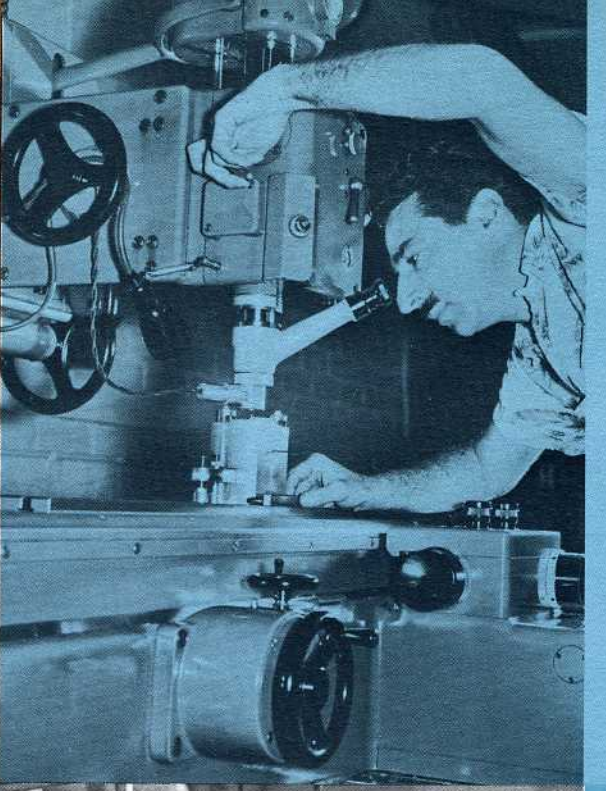
Considered to be the finest precision shop in Southern California, the Jig Boring Department shares a major part in maintaining Librascope's high standards of tolerance. All materials, standards and machines in use are kept in a closed room at 70°. Uniform moisture content is regulated by automatic temperature and humidity controls.

Librascope designed metal boxes are used to store all metal standards, to prevent absorbtion of heat normally retained in wooden frames. Librascope also make their own boring bars exclusively for all repetitive work. The very best in European and American equipment is used to provide the fine precision specifications demanded by the exacting standards at Librascope.



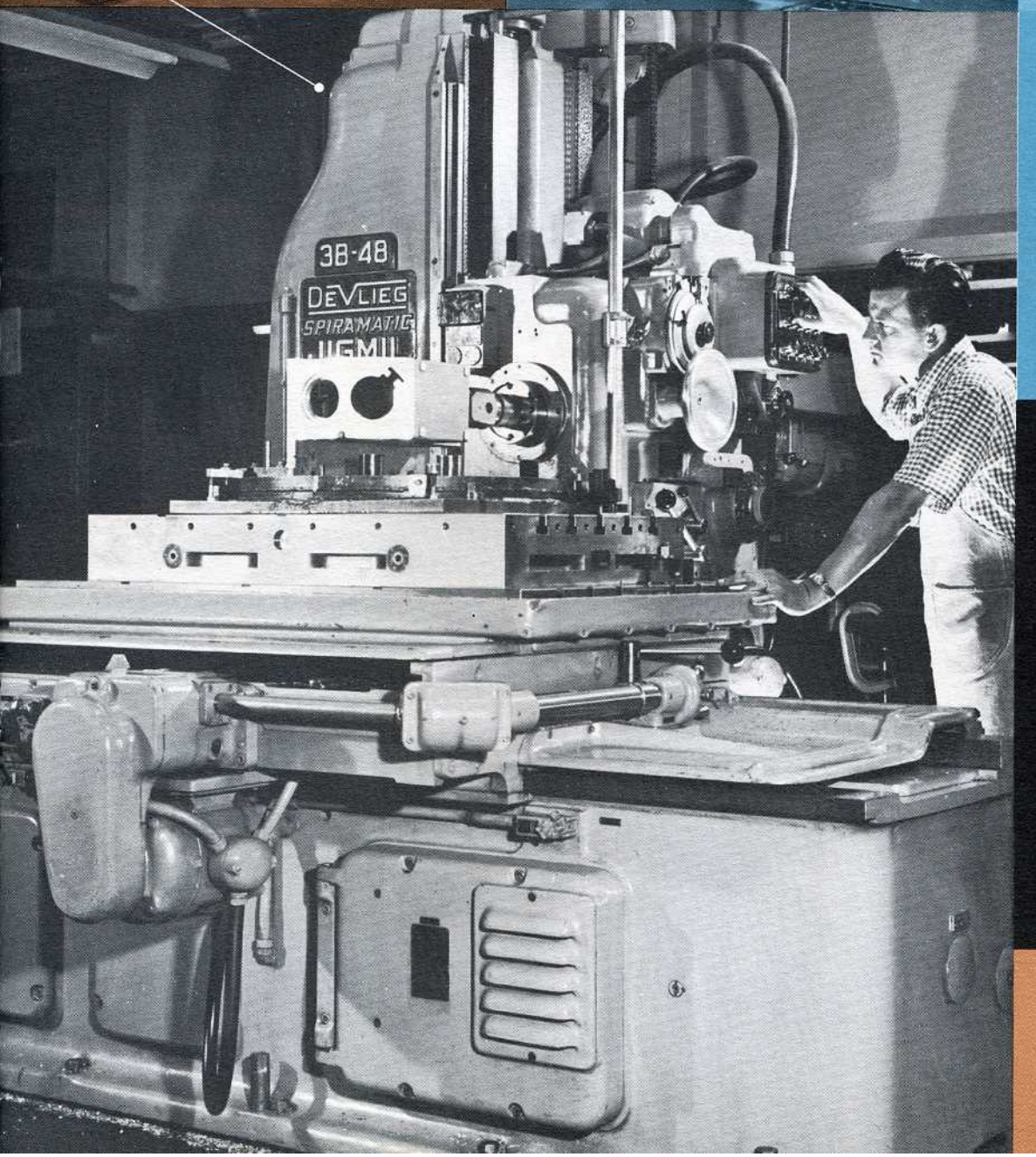
SIP JIG BORE: A constant temperature of 70° F. is necessary to maintain the most delicate and extra sensitive adjustments of this rare Swiss machine.



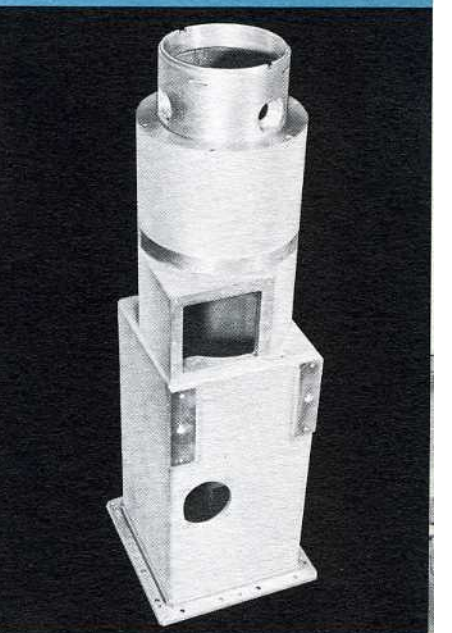


The most skillful of machine technicians are required to operate and maintain machines, more delicate than the finest watch, used in Librascope's Jig Boring Department. In addition to the precision units pictured here, many Hauser, Autometric, Moore, Bryant and special Librascope built units are included in the equipment inventory.

◀ SIP JIG BORE: Microscopic accuracy (1/10,000th of an inch) is a feature of this superfine Swiss made machine.



◀ DeVlieg Spiramatic Jig Mill—used for Tooling and Milling. The most highly skilled, expert operators are required to handle the extremely delicate adjustments of these remarkable machines.

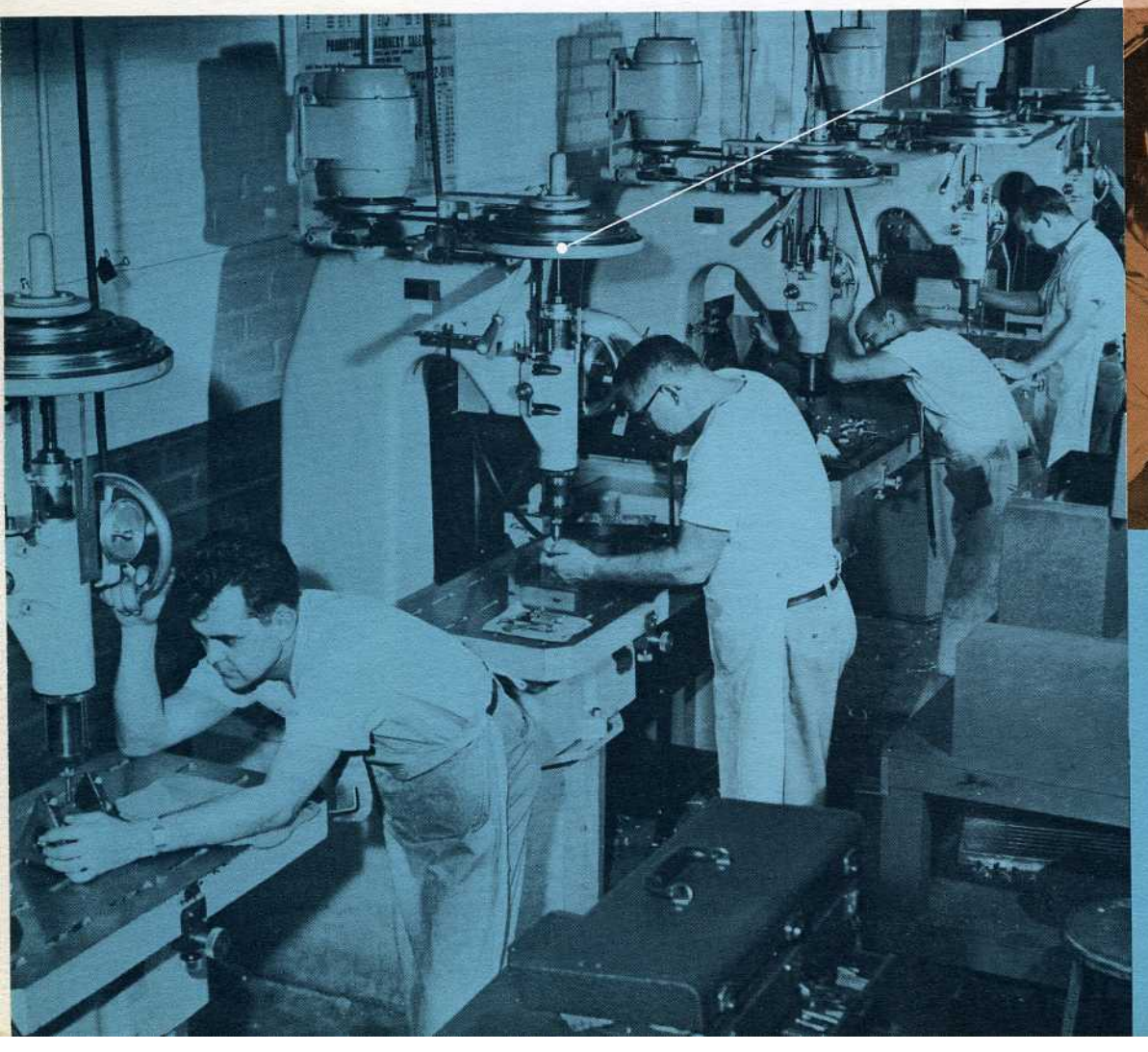


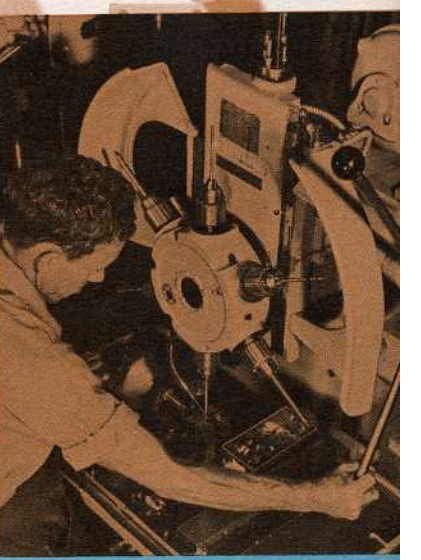
"Cathedral" casting for periscope. A striking example of fine, intricate machining at Librascope.

LIBRASCOPE FACILITIES

BORING DEPARTMENT

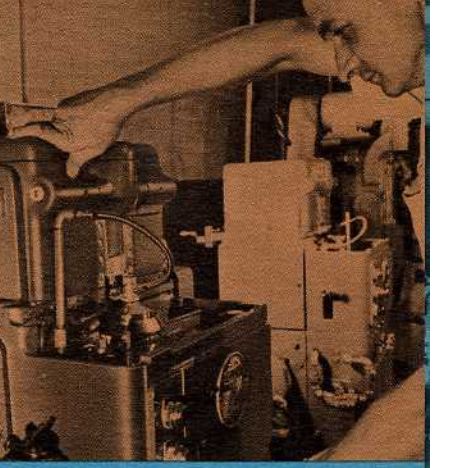
Speed, efficiency and economy are attained in this department through special equipment designed and adapted by Librascope. Here Librascope designed machines use center hole templates for precision boring on repetitive work for large economy runs.





▲ On this Burgmaster drill press, work is held in an air vice while an operator makes precision drilling.

◀ Seventeen Librascope Hi Speed precision boring machines, accurate to .0005", handle Librascope volume production with the utmost speed and accuracy.



Fine-Pitch Fellows Gear Shaper. produces internal and external spur gears with an accuracy to .0005 composite error.

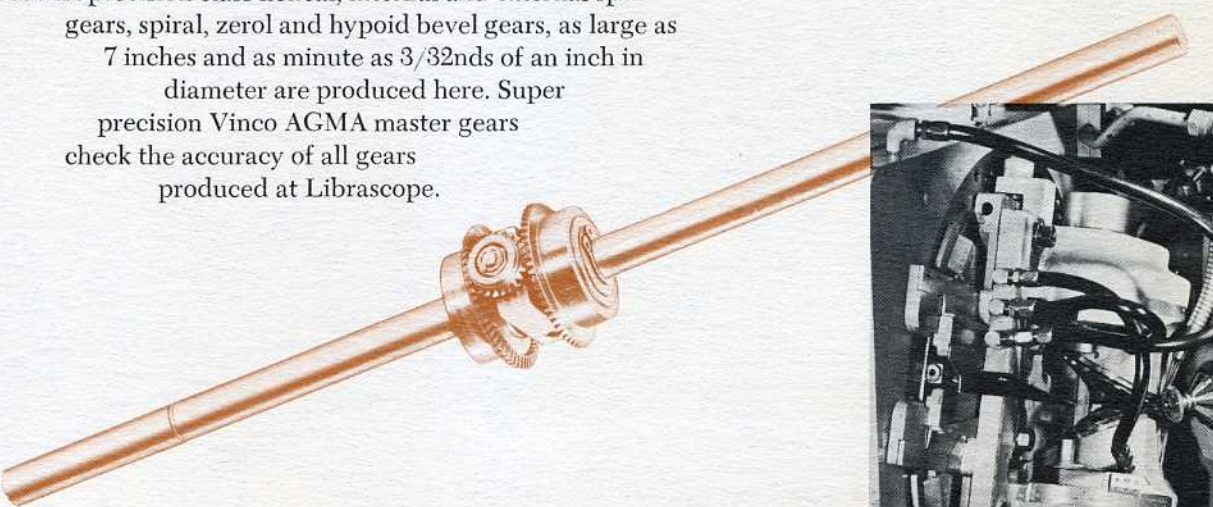
The quality, versatility and quantity of the gears produced at Librascope calls for the most of the best in gear making machinery and equipment.

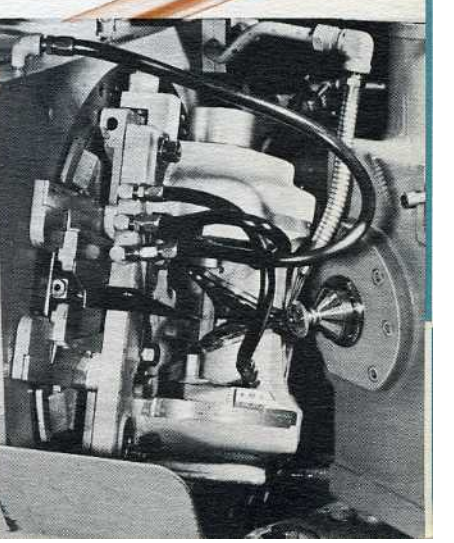
A full complement of gear generators, gear shapers, shavers, testers and red-liners from Gleason, Fellows and other noted gear machinery makers is found in the inventory of the Librascope Gear Making Department.

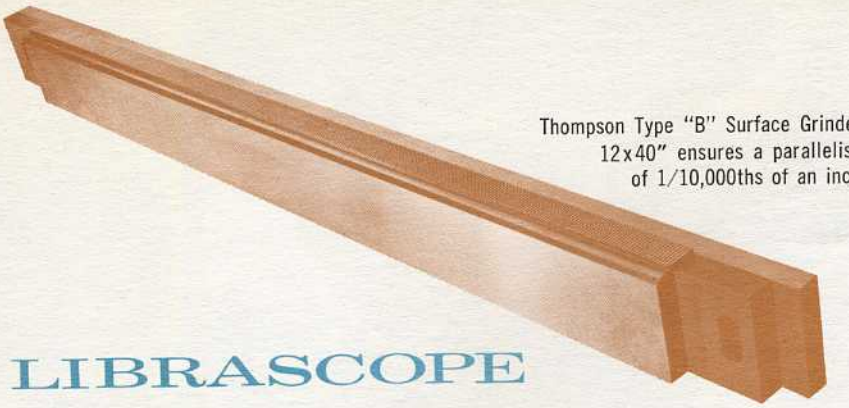
Modern Gleason Generators for producing zerol, spiral, bevel and hypoid gears. These machines are capable of holding a total composite error of .0005.

GEAR CUTTING DEPARTMENT

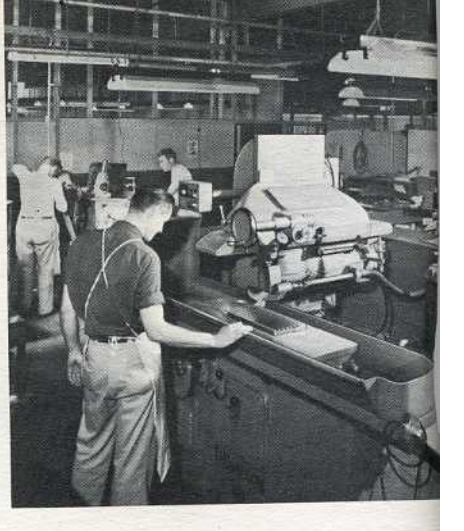
Librascope's Gear Cutting Department is noted for producing the closest possible tolerances, often exceeding the machine manufacturer's specifications for his own equipment. AGMA precision class helical, internal and external spur gears, spiral, zerol and hypoid bevel gears, as large as 7 inches and as minute as 3/32nds of an inch in diameter are produced here. Super precision Vinco AGMA master gears check the accuracy of all gears produced at Librascope.







Thompson Type "B" Surface Grinder, 12x40" ensures a parallelism of 1/10,000ths of an inch.



LIBRASCOPE FACILITIES

GRINDING DEPARTMENT

It requires the most exacting of foreign and American machinery to meet the close tolerances (to .0002) which prevail throughout the Librascope Grinding Department. Librascope was the first plant—and still is one of the very few in Southern California—to install a Gardner Double-Disc Grinder for high speed production. Working with extreme accuracy, this machine grinds both sides simultaneously. While precision is always the primary consideration, high speed production is also achieved by Librascope's superb equipment and highly skilled personnel.

The Librascope Grinding Department with over 50 units comprising Hones, Surface, Internal, Centerless, Tool and Cutter, Double Disc, Double End, Universal, Outside Diameter, Monoset and Center Lapping Grinders.

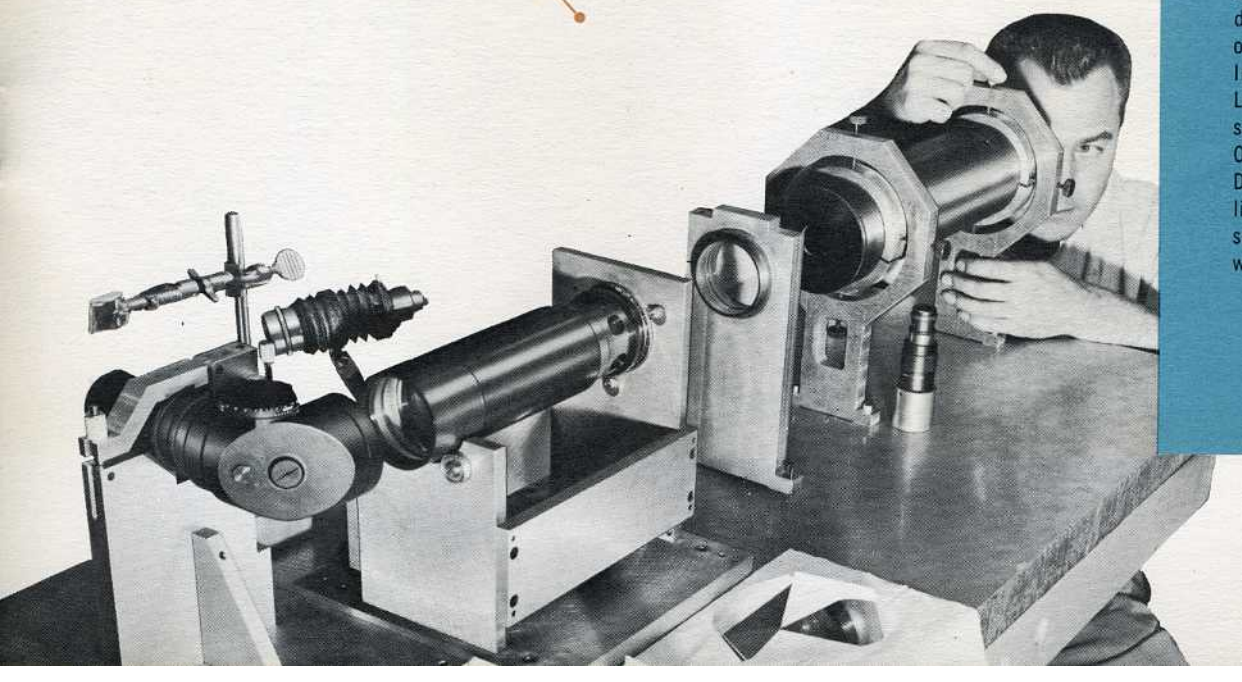
The equipment inventory of the Librascope Grinding Department presents a representative cross-section of the world's best machinery for grinding purposes. Cincinnati, Gleason, Norton, Brown & Sharpe, Fortune-Werke, Thompson, Gallmeyer, Reid, Delta, Sanford, Gardner, Blanchard, Hisey-Wolfe, Van Dorn, Crane, Atlas, Stanley and many other famous grinding machine manufacturers are represented here. But even the foremost American and European manufacturers were unable to furnish some of the highly specialized grinders required for Librascope's ultra-precision work. Many of these units were designed and built by Librascope technicians and craftsmen.

OPTICAL DEPARTMENT

Here is housed extremely accurate and delicate equipment for designing optical instruments and test fixtures—and for assembling, inspecting and collimating optical elements.

In Librascope's air conditioned, constant temperature, precipitron protected glass enclosed Optical Assembly area, gauge builders, experimental machinists and instrument makers specialize in narrow tolerance assemblies.

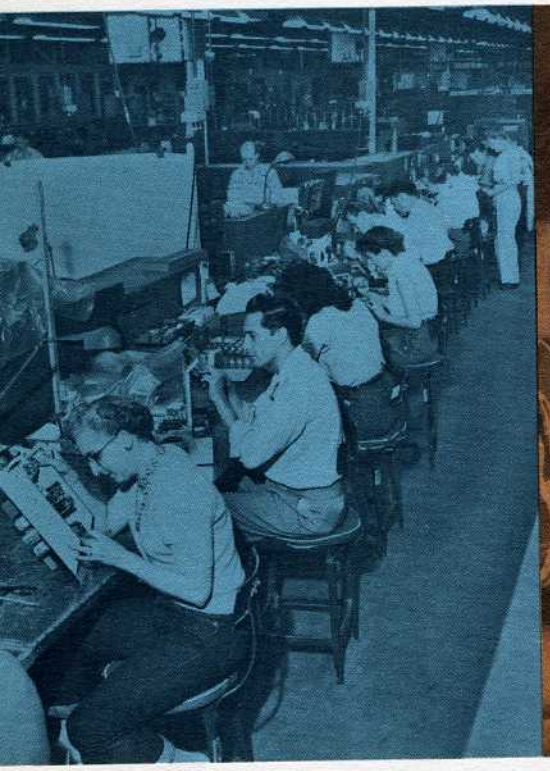
Human eyes alone are inadequate components in the field of precision technology. This is very aptly demonstrated by the Librascope optical department with its vast array of optical facilities which include: Interferometers, Monochromatic Light Sources, Sphereometers, Dynascopes, Spectrometers, Projector Optical Comparators, Beam Splitters, Dioptometers, Strain Indicators, Collimators, Optical Benches and many special optical instruments unique with Librascope.



LIBRASCOPE FACILITIES

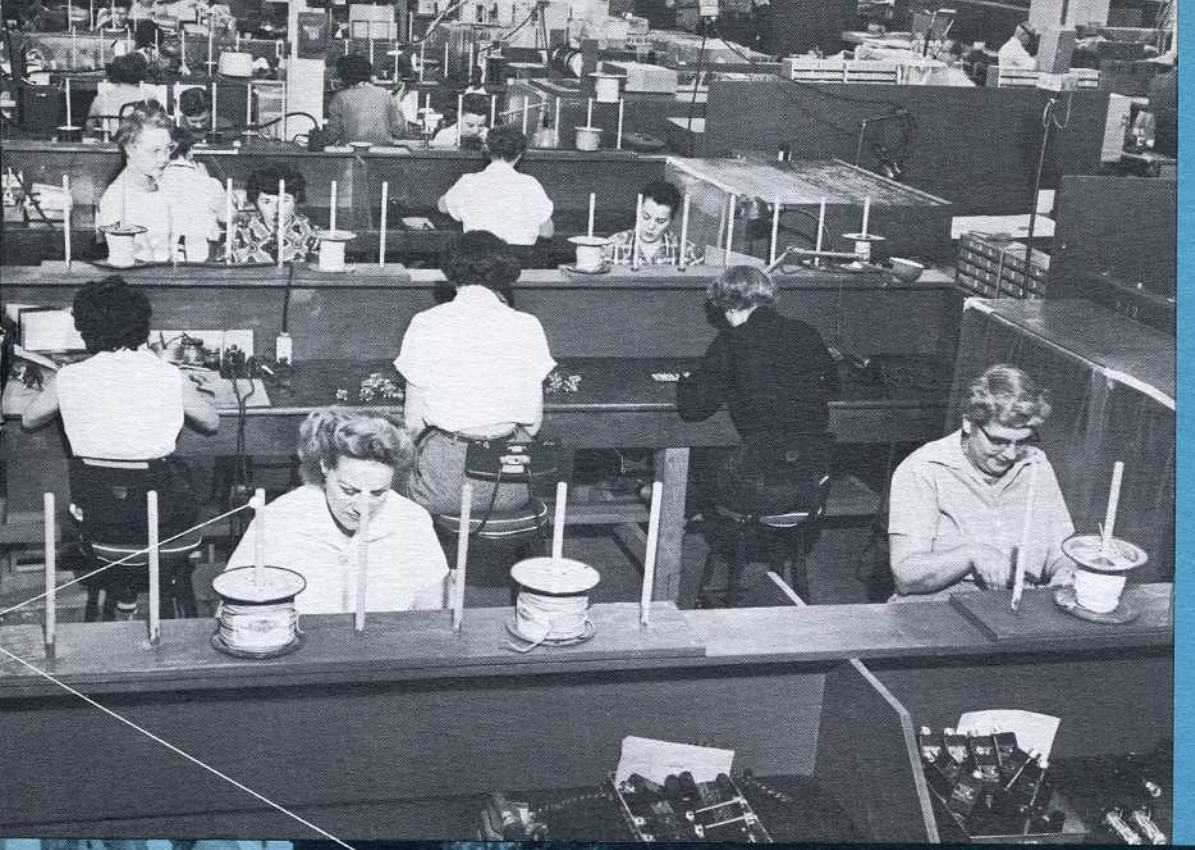
ASSEMBLY DEPARTMENTS

In Librascope's Assembly Department components and parts become precise instruments in the trained hands of highly specialized technicians and instrument makers experienced in electronic and mechanical work. Librascope utilizes over 35,000 square feet of air-conditioned area for the precision assembly of electronic, electro-mechanical and optical instrument components.



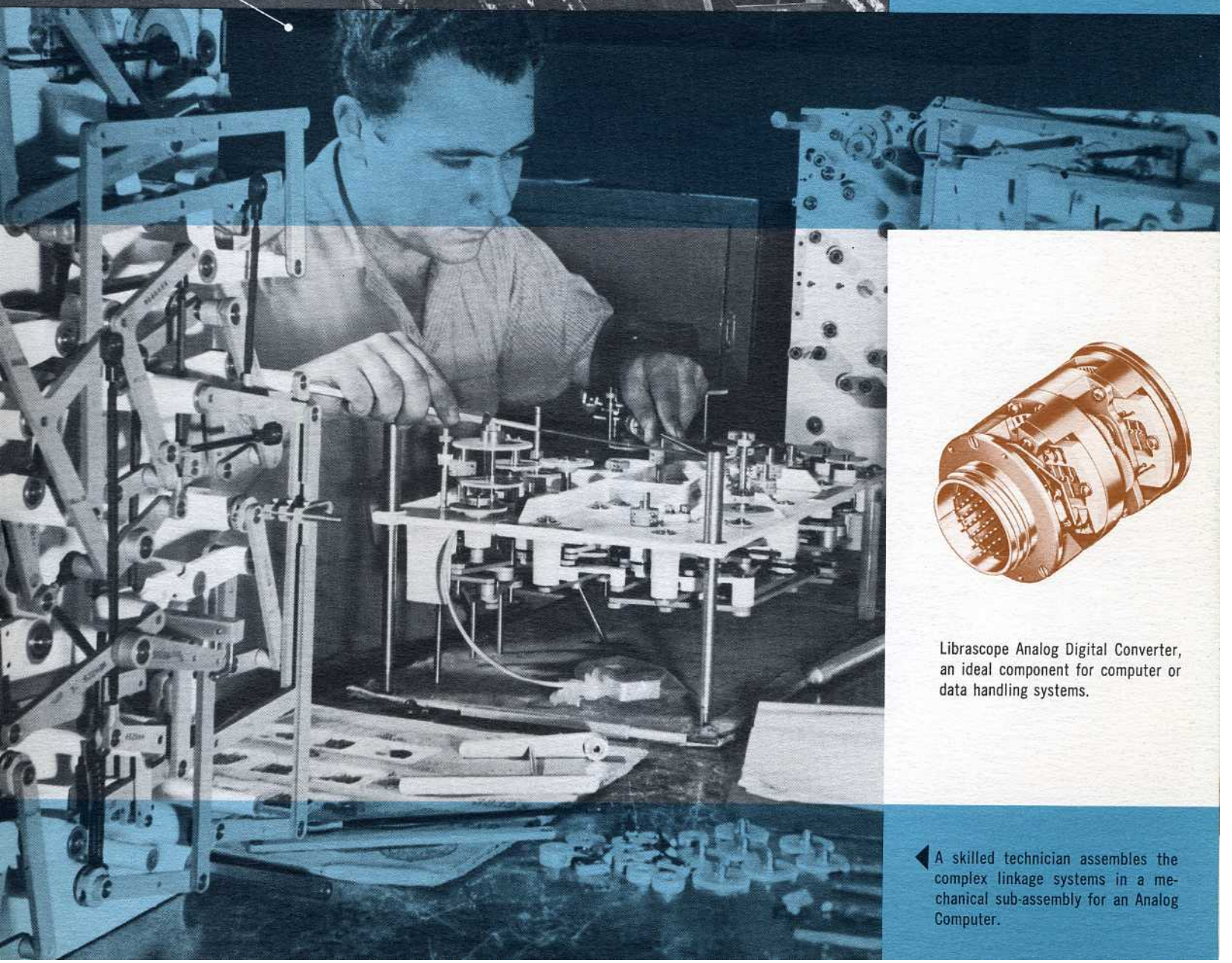
A production line in the Electrical Assembly Department completes the final wiring for amplifiers.

Great skill and experience is required to assemble the main harness which comprises the "nerve" system of a Librascope Analog Computer.



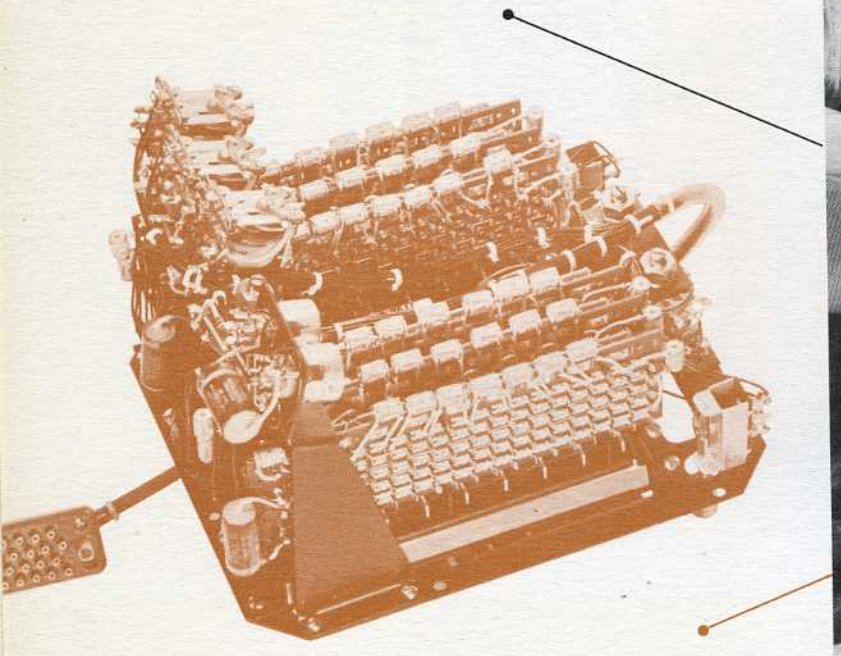
Assembling the complex instruments and devices produced by Librascope is not a simple matter of merely fitting parts and components together to form a given unit. The Librascope Assembly Department involves a vast array of precision equipment and many divisions of expert technicians skilled in mechanical, electrical, optical, electronic and magnetic techniques and working with tools as diversified as watchmakers equipment, microscopes, multimeters, torque testers, lathes, drill presses, assembly jigs and over a hundred other types of apparatus, many of which were designed, developed and fabricated entirely within the Librascope organization.

◀ Sub-assembly components in the wiring department.



Librascope Analog Digital Converter, an ideal component for computer or data handling systems.

◀ A skilled technician assembles the complex linkage systems in a mechanical sub-assembly for an Analog Computer.



Assembling a complex gear unit sub-assembly.

LIBRASCOPE™ FACILITIES

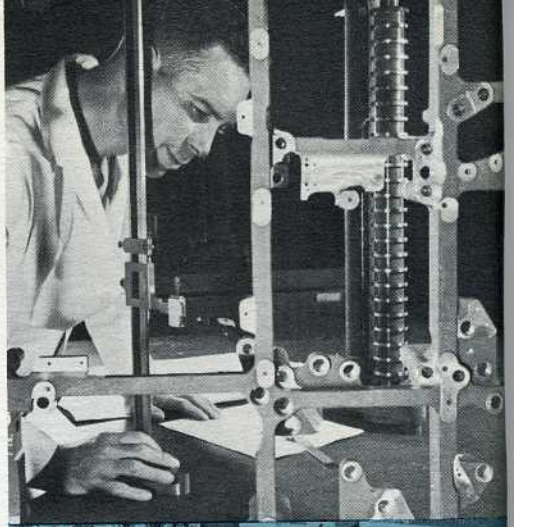
SUB-ASSEMBLY DEPARTMENTS

Careful, precise fitting of every part is required on Librascope's Ball and Disc Integrators.

With 4 major assembly lines under one roof, Librascope operates with an exceptionally high degree of scientific exactness. Librascope engineering requirements call for meticulous exactitude on all parts and component assemblies. This is assured by a stationized line flow which eliminates errors, lost time and wasted motion. Some fine precision work, as in the case of the pick-off brush assembly for Librascope's Analog-digital Converters, must be done by hand under microscopes. Dust-free areas are used where required for precision mechanical assembly. Librascope sub-assemblies play an important integral part in making the superlative products that bear the name LIBRASCOPE.

Here is the focal point of Librascope's entire plant operation. All the theorizing, planning, engineering and drafting that has gone before, materializes in the Final Assembly where all the various parts, components and sub-assemblies are carefully coordinated into complete production units.

FINAL ASSEMBLY

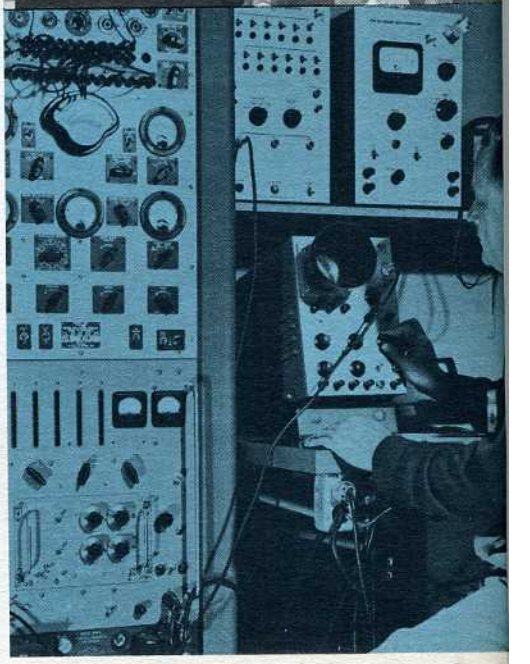


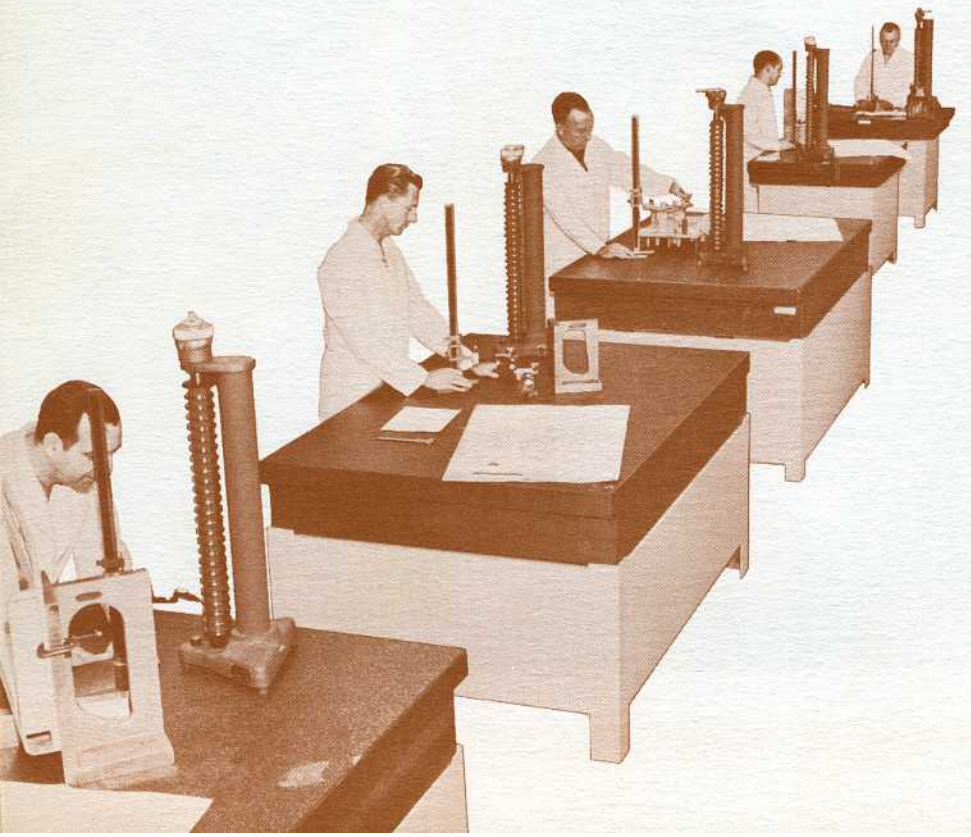
Hole locations on a casting are located by a Librascope technician using a Cadillac Pla-Chek with height gage and indicator.

LIBRASCOPE FACILITIES

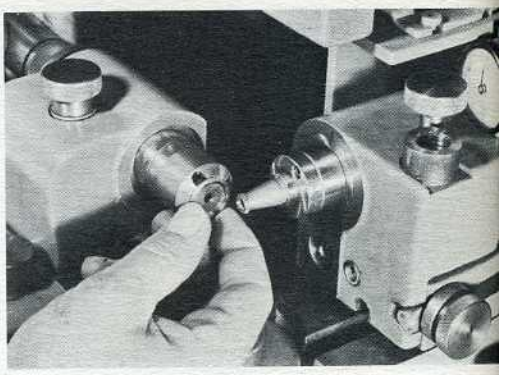
INSPECTION

Constant, vigilant inspection during every phase of production is vitally required and rigidly exacted to maintain the extremely high standards of accuracy established at Librascope. Inspection stations, equipped with the finest devices that technological skill produce, are provided at critical points throughout the entire plant for on-the-job inspection. For especially minute checking considerable inspection is performed in a special glass-enclosed dust free area served by its own precipitron. In addition to all the standard devices generally used, Librascope owns many rare measuring instruments to ensure that every product of Librascope is as close to perfection as human skill and modern science can make it.

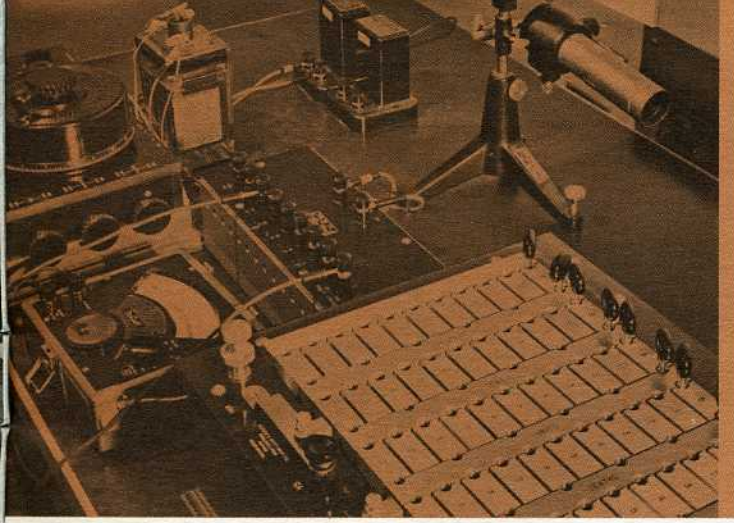




Multi-purpose rack-mounted tester developed by Librascope engineers for tube and frequency analysis, electronic counts, etc. This equipment can count from 100 days of seconds to 200 million per second. This equipment is constantly checked against U. S. Bureau of Standards measurements.



All Librascope Zerol and bevel gears are tested on a Gleason Gear checker for tooth-to-tooth error and composite error. This machine also shows up any eccentricity in gears.

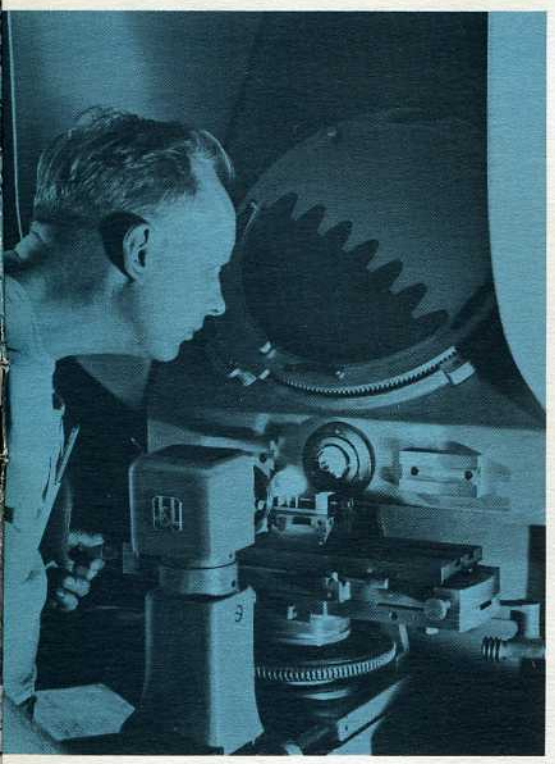


This most sensitive Librascope research meter combines several delicate instruments. Shown are: Leeds and Northrup Anthony pattern precision Wheatstone Bridge... K2 Potentiometer...Volt Box ...Standard Cells...Galvanometer and Standard resistance ohms.

FINAL INSPECTION

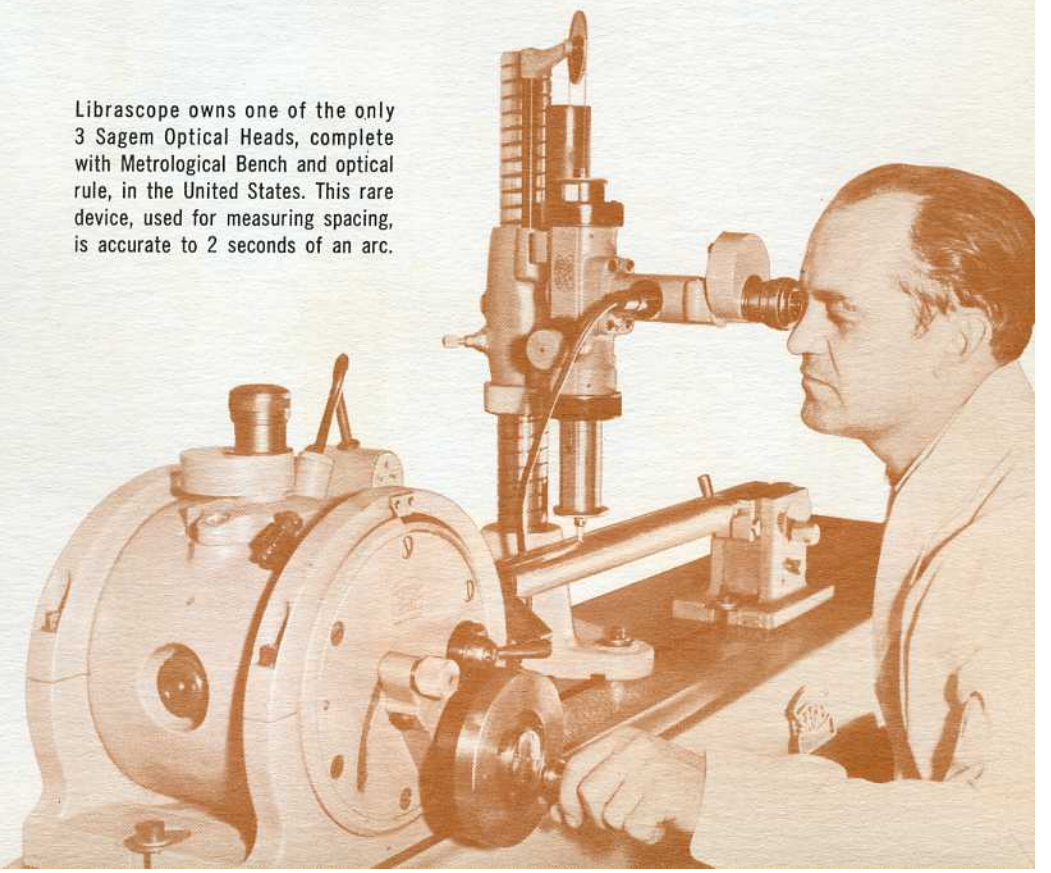
Here each unit receives Librascope's final "OK." Here the acme of exactness is maintained. Final Librascope inspection must assure that each unit comes up to all specifications as to accuracy and limit of operations. A complete check—inside and outside—is made on each instrument. Calibration of dials are checked for veracity—instruments that have internal illumination are checked for lighting. All paint or finish must be free from imperfections—free from mars or chips. Even the details of the name plates and insignia are double checked and verified. This is the last stage before Librascope's finished product is passed on to the consumer.

Over 200 accurate checking and testing devices, one of the finest collections of such instruments to be found in any plant, anywhere, are regularly utilized by the Librascope Final Inspection Department. Master Gauge blocks, certified to .000004 accuracy, AGMA Master Gears, Quartz Optical Flats, scores of Micrometers, different meters, checking devices and unusual test instruments are brought into play to ensure the greatest possible degree of perfection for each and every unit leaving the Librascope plant.



Jones & Lamson Model BCD-14 Optical Comparator tests precision of gear face angles, tooling and measurement.

Librascope owns one of the only 3 Sagem Optical Heads, complete with Metrological Bench and optical rule, in the United States. This rare device, used for measuring spacing, is accurate to 2 seconds of an arc.



ADMINISTRATION

Ever since its inception, Librascope has followed a progressive Administration policy and methods of operation pointed toward producing the ultimate in precision instrumentation at the utmost in savings on cost, time and labor.

Above and beyond the primary management functions of long range planning of products, organization, effective plant operation, finance and expansion of facilities, the Librascope Administration strives to maintain the highest standards in both customer and labor relations.

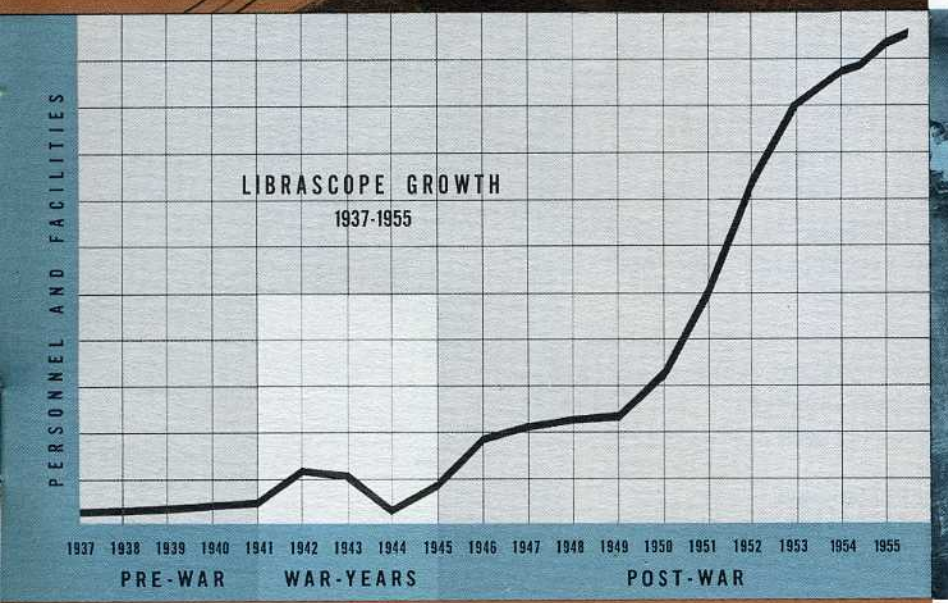
The excellent customer relationship enjoyed by Librascope has long been firmly established on a basis of the uniform high quality of products delivered and services rendered.

Librascope's fine labor relations are found in an organization atmosphere in which every individual has the maximum desire to produce and the comprehension that only through their best individual efforts can they and their company prosper.

Administrative Building is an ultra-modern, earthquake-proof, air-conditioned edifice enclosing 55,000 square feet, housing the Librascope administrative offices, financial, sales, legal, engineering and drafting departments.

The Conference Room is distinguished by a striking photo-mural of majestic Grand Teton range in Wyoming.

Librascope's Production Planning Department is an important factor in maintaining efficient plant operation and a careful check on costs.



The strong, steady growth of Librascope is indicated by a consistent continual increase in personnel and facilities.

The Accounting Department is equipped with the latest in business machines and most modern audit methods.

In this brochure it is merely possible to present

highlights of the facilities and activities of

LIBRASCOPE, INC.

Only a personal visit and first-hand inspection can fully disclose the scope of Librascope's wide-spread operations.

However, if time and distance preclude such a visit, Librascope will gladly bring to you an amplified, more complete, audio-visual film-strip presentation showing what we do, how we do it—and what we have to do it with.

The Librascope film-strip is in full color...running time approximately 25 minutes...and comprises a most informative exposition of recent and current developments in mechanical, electrical, magnetic, electronic and optical techniques as applied to military, industrial and commercial instrumentation.

We will gladly arrange a showing of this production for individual or group presentation, without charge, at your convenience. For reservations please contact the Sales Department.

Literature with detailed information is available on each of the individual products produced by Librascope.

Simply indicate your preference on one of the convenient pre-stamped mailing cards (on opposite page) and your inquiries will receive prompt attention.

The people, technology and facilities of Librascope form a unit with an enviable record of accomplishment. These services, skills and experience are available on problems of research, development, manufacturing and application.

Any opportunity to serve you
is welcomed by LIBRASCOPE.

Lewis H. Imm

LIBRASCOPE
AREA REPRESENTATIVES...

carefully selected for technical competence and ability commensurate with the high standards of Librascope, are strategically located throughout the United States.

All Librascope Sales and Service representatives are qualified and equipped to install and render factory-type service on any and all products manufactured by Librascope.

In addition, Librascope maintains its own staff of field engineers, who are always available to supplement the service of Librascope Area Representatives.

For the address of your nearest Librascope Area Representative, contact:

SALES DEPARTMENT,
LIBRASCOPE, INC.
GLENDALE, CALIFORNIA

DATA REQUEST

Please send me information on the products checked

NAME_____

TITLE_____

COMPANY_____

ADDRESS_____

CITY_____ STATE_____

LIBRASCOPE, INC.

COMPUTERS
- ☐ LGP-30 General Purpose Computer
- ☐ Mech. Flow Computer

INSTRUMENTS
- ☐ X-Y Plotter & Accessories
- ☐ Decimal Keyboards
- ☐ Mechanical Sine Wave Generator
- ☐ Square Root Planimeter

ELECTRICAL-ELECTRONIC COMPONENTS
- ☐ Shaft Position to Digital Converters
- ☐ Magnetic Amplifiers
- ☐ Magnetic Drums
- ☐ Read-Record Heads
- ☐ Servo Amplifiers

MECHANICAL COMPONENTS
- ☐ Sine Co-Sine Mechanism
- ☐ Ball & Disc Integrator
- ☐ Differentials

DATA REQUEST

Please send me information on the products checked

NAME_____

TITLE_____

COMPANY_____

ADDRESS_____

CITY_____ STATE_____

LIBRASCOPE, INC.

COMPUTERS
- ☐ LGP-30 General Purpose Computer
- ☐ Mech. Flow Computer

INSTRUMENTS
- ☐ X-Y Plotter & Accessories
- ☐ Decimal Keyboards
- ☐ Mechanical Sine Wave Generator
- ☐ Square Root Planimeter

ELECTRICAL-ELECTRONIC COMPONENTS
- ☐ Shaft Position to Digital Converters
- ☐ Magnetic Amplifiers
- ☐ Magnetic Drums
- ☐ Read-Record Heads
- ☐ Servo Amplifiers

MECHANICAL COMPONENTS
- ☐ Sine Co-Sine Mechanism
- ☐ Ball & Disc Integrator
- ☐ Differentials

DATA REQUEST

Please send me information on the products checked

NAME_____

TITLE_____

COMPANY_____

ADDRESS_____

CITY_____ STATE_____

LIBRASCOPE, INC.

COMPUTERS
- ☐ LGP-30 General Purpose Computer
- ☐ Mech. Flow Computer

INSTRUMENTS
- ☐ X-Y Plotter & Accessories
- ☐ Decimal Keyboards
- ☐ Mechanical Sine Wave Generator
- ☐ Square Root Planimeter

ELECTRICAL-ELECTRONIC COMPONENTS
- ☐ Shaft Position to Digital Converters
- ☐ Magnetic Amplifiers
- ☐ Magnetic Drums
- ☐ Read-Record Heads
- ☐ Servo Amplifiers

MECHANICAL COMPONENTS
- ☐ Sine Co-Sine Mechanism
- ☐ Ball & Disc Integrator
- ☐ Differentials

A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION

Lithographed in the U.S.A.