



LIBRAZETTE

AN EXCHANGE OF NEWS AND KNOWLEDGE

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808 WESTERN

Contracts for FRAM

Contracts totaling almost \$6,000,000 were awarded to the Glendale Branch early this month by the Navy's Bureau of Weapons, according to Branch Manager T. D. Bryant.

The contracts are for the production of Mk 114 Fire Control Systems and development of the Mk 143 computer. Both contracts are part of the FRAM program.

An option to expand the Mk 114 FCS contract, at prices advantageous to the Navy, would carry production of the system contract through Dec. 1963, according to Division Director of Contracts Clifford S. Godwin.

Dollar volume of the Mk 143 computer development contract, according to Arnold D. Larson, Glendale Chief Engineer, is approximately \$500,000.

Calibrating Commercially

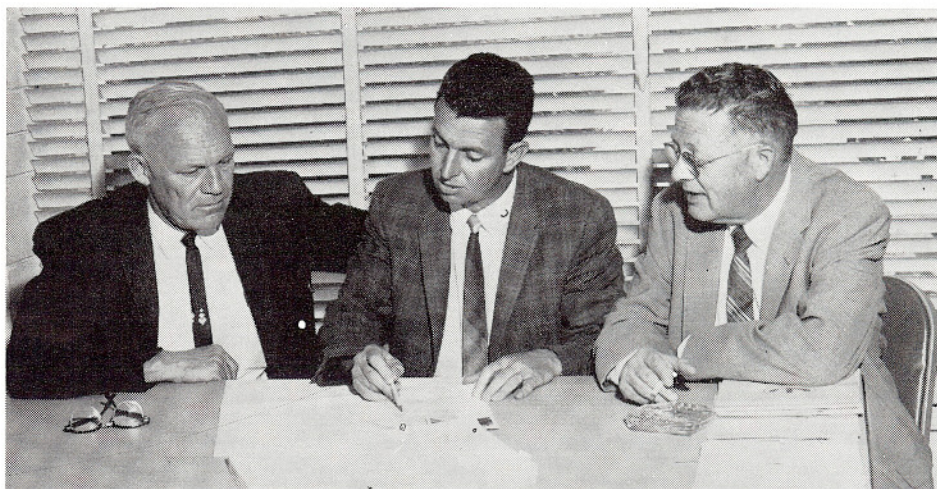
Librascope is launching a business effort in a new and promising field—the commercial calibration, maintenance and rental of electronic test/measurement equipment—and early results show solid signs of a healthy, profitable growth operation.

BASE OF the new venture—Librascope's first in the service industry field—is the Company's Metrology Laboratory, rated one of the best in the nation. Sparkplugs of the effort are Dave H. Harrison, Director of Division Quality Control, Don L. Lusk, the Laboratory's Chief Metrologist and W. E. "Bill" Waterhouse, former QC Supvr, Administrative Manager of the new operation.

The Laboratory has been operating in its new field on a pilot basis since last October and customer acceptance has been "terrific," says Harrison.

"Without advertising and with limited sales effort, we acquired 51 regular customers by May 31 and currently are negotiating with 17 more. In addition we have many requests from other firms which we are tabling for the time being because we need more working space and more staff to given proper service."

SEVERAL LOCATIONS, which would more than triple the Lab's present floor space, are under consideration, Harrison told LIBRAZETTE.



LUSK, HARRISON AND WATERHOUSE
Plotting the Future for Commercial Calibration

Included in the Lab's current list of customers are such bluechip firms as Ampex, Components Div; Giannini Controls; Litton Systems; Packard-Bell Electronics; General Controls; Lockheed; American Electronics; Hydro-Aire and Fairchild Aerial Camera.

While it has plans to expand its outside activities to all practical limits, the Laboratory will continue to render the same quality and volume of service to the Branches.

"THE BRANCHES are and will remain the solid base upon which this venture will build," Harrison said. "There will be a different business relationship, but the Branches will always be among our preferred customers."

Physical assets of the new business include the majority of Librascope's electronic test/measurement equipment and its many standards devices developed over the years. The intangible assets: the "know-how" and skills of its staff, the recognized quality of the lab's work and Librascope's nationwide reputation in the electronics field.

Branches will be charged a non-profit rental for equipment in their possession. Equipment not required by a Branch will be turned in to the Laboratory and made available to other Branches or to commercial customers on a short-term rental basis.

THE INCOME from commercial operations, Harrison said, will help reduce

the cost of metrology services to the Branches and provide a "neat monthly income where previously there was only expense."

Future of the new business looks more that good, Harrison believes. "It's a competitive business, like the electronics industry we serve. But our prices, calculated to bring a proper return on investment, are competitive, too. Our growing list of customers is proof of that."

Profits Up in '61

GPE's sales of \$234.6 million in 1961 were the second highest in corporate history, being topped only by record sales of \$244.4 million in 1960. But, although sales were down, profits were up: earnings per common share in 1961 were \$3.45, as compared to \$3.22 per share on the number of common shares outstanding in 1960.

The information was made public in a preliminary annual report to stockholders from GPE Chairman J. W. Murray. He attributed the profit improvement to selective bidding on new business booked, and to close attention to costs.

GPE's year-end backlog amounted to \$173 million. And prospects of increased sales during 1962, based on business received so far this year and on contracts now under negotiation, are good, Murray said.

LIBRAZETTE

**GENERAL
PRECISION**

LIBRASCOPE DIVISION
GENERAL PRECISION INC.
GLENDALE 1, CALIFORNIA

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LIBRAZETTE is a member of the International Council of Industrial Editors and the Southern California Industrial Editors Association.

RPC Wholly Owned

Royal Precision Corporation is now owned in its entirety by General Precision Equipment Corporation, Librascope's corporate parent.

GPE previously owned 50% of RPC, bought the other half last month from Royal McBee Corporation, for an undisclosed price. Marketing of RPC equipment (formerly done by Royal McBee) will now be handled by Royal Precision.

Librascope's Burbank branch will continue to develop and manufacture equipment for Royal Precision.

New Branch Manager

Antonio R. Vallarino, Operations Manager of Sunnyvale Branch, has been appointed Branch Manager, succeeding R. Carroll Maninger, by Group Vice-President D. C. Webster. Maninger has been given a special assignment in Librascope's research operations.

Vallarino, a physicist who graduated from Stanford University, joined the GPE



VALLARINO



MANINGER

corporate family in 1955, when he became part of the engineering staff of Precision Technology, Inc., organized by GPE in 1953. PTI became part of Librascope in 1957.

Before joining PTI Vallarino was Head of Electronic Development with the Federal Telecommunications Laboratory of the International Telephone and Telegraph Company.

Prior to becoming Sunnyvale's Operations Manager Vallarino was Staff Engineer in charge of Advanced Planning and then Chief Engineer. Under his direction Sunnyvale developed ultra high-speed electronic cameras, proximity scoring devices used in measuring anti-missile strike accuracy and various other electronic devices involving sophisticated circuitry design. He also was a contributor

to the development of Sunnyvale's EBW explosives detonation designs.

Vallarino is married, the father of four youngsters and makes his home in Menlo Park.

A Special Conference

Librascope was among a selected group of "equal employment opportunity" industrial organizations and such governmental groups as the President's Committee on Equal Employment Opportunities, taking part in a special conference held Mar. 31 in Los Angeles.

Sponsored by the Los Angeles Council of Mexican-American Affairs, the conference dealt with the employment needs of the area, the existing skills of its Mexican-American citizens and the educational preparation needed to produce other needed skills among the group.

In addition to Librascope other participants included Douglas, Lockheed and North American, among the aircraft companies, General Dynamics and General Telephone among the electronics firms, municipal, state and Federal government bureaus and the educational professions.

G. W. Seltzer, Division Employment Manager and C. E. Talbot, Glendale Branch Employment Supervisor, participated in the industrial sessions and later explained the Company's operations and talent needs to conference attendees.

MARKETING

New Burbank Section

Formation of the Advanced Management Systems section of Burbank's Systems Applications department, was announced this month by Eugene W. Kyle, Manager of Systems Applications.

Function of the new section is to exploit the markets for computer-based



KYLE



CLARK

data-gathering and reporting systems in both military and commercial areas.

Named by Kyle to head the new group was George B. Clark, formerly Manager, Industrial Engineering, Glendale branch. Clark formed and directed the group which developed the Librascope Operations Control System.

Shelby Drucker and Donald B. Guy, former members of the LOCS design and development staff, also have been assigned by Kyle to the Advanced Management Systems section.



FOREIGN VISITORS—Members of the Japan Electric Machine Industry Association on tour of the Los Angeles recently, paid a special visit to Librascope to view our Numerically Controlled production equipment and the Librascope Operations Control System. R. W. Putnam, LOCS Supvr (back to camera), is shown explaining the system to the interested visitors.

Milan Mraz — Assignment Europe

When Librascope decided some months back to place more emphasis on its technical liaison and application engineering in Europe, it had no difficulty in finding the right man to fill the job. Within the organization were several who met the highly specialized requirements and the search almost immediately became a matter of selection.

Chosen for the position—Engineering Liaison Representative—was Milan R. Mraz, Senior Production Engineer in the Glendale branch.

Mraz was selected by Vice-Pres, Customer Relations J. R. Harkness, and E. W. Silvertooth, Director, Foreign Applications, because of an impressive list of qualifications, including:

A degree in Electrical Engineering from Los Angeles State College; a degree in import-export economics from the Economics University of Prague; his knowledge of Librascope products and technology; linguistic abilities (he speaks and writes four languages) and his familiarity with European business operations.

In his new assignment Mraz will represent the entire Librascope Division with existing and potential commercial and military customers in Continental Europe. His base will be the Minden, Germany, headquarters of Eurocomp GmbH, the European computer company jointly owned by Schoppe and Faeser, Librascope's German licensee, and General Precision. Reporting to Silvertooth, he will work closely with Dipl. Ing. Kurt Bojak, President of Eurocomp.

Mraz's selection to his new post is another chapter in the continuing American story of success achieved as the result of hard work. Ten years ago he and



LIBRASCOPE'S FIRST Engineering Liaison Representative to be stationed in Europe—Milan R. Mraz (far right, seated)— is briefed on his mission by Vice-Pres Customer Relations, J. R. Harkness (center). Also taking part in the session were Dipl. Ing. Kurt Bojak (left), President of Eurocomp GmbH, European computer firm in which GPI holds an interest, and E. W. Silvertooth, Director, Foreign Applications, Librascope Customer Relations.

his wife Marie arrived in the U.S. as refugees from Czechoslovakia, their pockets empty but with hearts full of hope.

There were no opportunities for Mraz in the export-import work he had been educated for, so he turned his hand to whatever offered. (So did Mrs. Mraz; the two once worked together as butler and

maid.) Landing a job as handyman in a Pasadena metal-working factory, Mraz worked his way up to become a skilled machinist, factory superintendent, and finally a graduate engineer.

Now, at 36, Milan Mraz, American, has started a new career, confident that he will make a success of it for Librascope and for Milan and Marie Mraz.

New Regional Rep

Joe A. Wascavage has joined the Washington regional office as Government Relations representative, reporting to Librascope Vice-Pres M. R. Prevatte.

With an extensive background in applications engineering and marketing, Wascavage comes to Librascope from Epsco Inc., Cambridge, Mass., where he served as manager of corporate military sales.

He was formerly director of marketing for Aeronca Aerospace Div., Baltimore, and spent five years with Westinghouse Air Arm Div. as sales engineer responsible for airborne R&D system and subsystem programs.

Born in Kulpmont, Pa., Wascavage received his BSEE from the University of



Indiana, later attended the Universities of Pittsburgh and Buffalo for graduate studies in engineering, mathematics and business management. He is married and lives in Severna Park, Md.

Displaying at IRE

Product displays from Librascope and other GPI Divisions were features of the 850 engineering exhibits at the 1962 Institute of Radio Engineers (IRE) show and convention held at the New York Coliseum, March 26-30.

This year's convention, commemorating the fiftieth anniversary of IRE, provided the setting for the public introduction of Model 887-18—the new line of miniaturized noncontact magnetic encoders developed by the Burbank branch.

Also on display was DECISION MAKER, Librascope's electronic component tester (formerly named SATE). A revised version of the original model, DECISION MAKER is equipped with a new, bifurcated socket which provides greater

testing accuracies for transistors than previously possible.

Other items displayed at the Librascope booth included Model 791-S analog-to-digital converters; Model 500 Series miniature servo amplifiers; and Model 100 Series miniature servo systems.

In addition to the new product displays, 240 technical papers were delivered as part of the technical program.

MARK YOUR CALENDAR

May 26 has been chosen as the date for the "Silver Anniversary Ball," marking the founding of Librascope 25 years ago, Precisioneer President Louise Morton announced this month.

The Biltmore Hotel ballroom is the scene, and Al Harding and his orchestra, who played at the Xmas Dance will provide the music.

Tickets, with a \$2.50 per couple tag, will be available shortly, according to Dance Chairman Bill Cawthra of Glen-Eng.



RECORDED SEMINAR—Members of the Logical Design Professional Group gathered in a conference room at Saylee's restaurant last month for a high-level engineering discussion of the advanced state-of-the-art in logical design theory and techniques. The group, comprised of members from Division, Glendale, Burbank and Aerospace branches, holds its regular meeting every 12 weeks. Seated from left to right: C. M. Lekvin, Division Operations Planning; W. F. Scott, Aerospace; G. E.



Stone, Glendale; V. H. Wilson, Glendale; E. L. Considine, Division Training; and H. L. Stahle, Burbank. Standing in rear are C. W. Johnson, Burbank; R. B. Steves, Aerospace; and J. L. Cass, Burbank. In photo at right, training coordinator Considine is seen tape recording the meeting as part of an information dissemination program for other interested groups and individuals.

ENGINEERING

Branches Regroup

An engineering realignment among the Glendale, Burbank and Aerospace branches involving the creation of a new Glendale engineering section and branch transfers for various groups and individuals, took place last month.

M. M. Birnbaum, Proj-Mgr of the Burbank photogrammetric group, has been named Supvr of the newly created Glendale Circuit Design section. He reports to J. L. Deitz, Director of Glen Eng Data Processing Equipment Dept.

Along with Birnbaum, the new group is comprised of Engineers R. W. Peterson, P. L. Salomon, and Clyde LeFevre; design specialist R. W. Nielsen; and electronic technicians L. J. Ridenour, T. A. Carpenter, and Felix Saldumbide. All transferred from the Burbank branch.

Other Burbank-to-Glendale switches include: Proj-Mgr M. I. Smokler and Sen-Eng R. T. Shone, reporting to Dietz; Staff Eng H. R. Johnston (See NEW FACES) assigned to Glendale Systems and Logical Design group, reporting to Supvr Grey Stone; and Sen Designer J. M. Stewart and Design Specialist E. G. Edwards reporting to J. L. Saiers, Supvr, Glendale Electro-Mech Design group.

"More mistakes are likely through waiting than through making up one's mind."
—Robert S. McNamara, Secretary of Defense

FROM THE ROSTRUM

Senior Engineer Grey E. Lange, of Data Processing Equipment section, Glendale Engineering, will make a presentation on "Automation of Electrical Documentation" May 24 in San Diego. Lange will be appearing before the American Ordnance Association's documentation session, to be attended by 140 documentation experts from defense industries across the nation.

Lange's talk will be a reprise of one he gave recently in New York, in which he detailed how the SUBROC project saved considerable time, money and effort by substituting data processing techniques for conventional wiring diagrams in assembly processes.

"The Astroguide—A Space-Vehicle Navigation System", was the topic of a paper presented by M. M. Birnbaum, Supvr, Glendale Eng Circuit Design, at the recent IRE International Convention in New York City.

The paper, presented Mar 27, at the Waldorf-Astoria Hotel, outlined the practicality of using camera tubes as sensor elements in a space-vehicle navigation system.

Birnbaum's co-author on the IRE paper, was engineer P. M. Salomon.

Marvin R. Carpenter, Reliability Engineer, has been invited to present a paper at the IAS National Aerospace Systems Reliability Symposium, April 16-18, in Salt Lake City.

The paper, titled "Vendor Data—Fact

or Fiction?", was the joint effort of Carpenter and L. G. Rado, Reliability Eng Supvr.

* * * * *

George B. Clark and Donald B. Guy of the Advanced Management Systems section of Burbank's Systems Application Department, will take part in a seminar on "New Frontiers in Industrial Engineering and Management," at UCLA April 18. Clark and Guy will make a presentation and lead discussion on the topic: "Design of an Integrated Management Control System."

Our Best Recruiters

Assistance of all Librascopers in recruiting professional and technical support personnel is sought by Librascope, Glen W. Seltzer, Division employment manager, said this month.

Current needs in the Branches and the Division office are for 40 professionals and 38 technical support personnel. Planned recruiting is being carried on throughout the country, but referrals of qualified people by Librascope employees ("our best recruiters") are earnestly invited, Seltzer said.

Included in the personnel requirements are physicists, mathematicians, electronics engineers, technical editors, technical writers, field service engineers and metrology laboratory technicians.

Seltzer may be reached on X-1204 and X-1963.

"Important decisions cannot be deferred pending attempts to satisfy and please everyone."—Roswell L. Gilpatric, Deputy Secretary of Defense

BILL WELSH:

Amateur Radio's 'Man of the Year'

Bill Welsh, engineering writer in Glendale Publications received national acclaim recently, when he was named winner of the 1961 Edison Radio Amateur Award for outstanding public service.

A comparative newcomer to California—he joined Librascope last December—the stocky, soft-spoken New Englander has devoted nearly 30 hours over the past 10 years to organizing and conducting free radio classes to better than 2800 people—young and old alike.

The award, sponsored by General Electric Company, is considered to be the "Nobel Prize" for amateur radio operators. It is awarded yearly to an individual who has performed an outstanding or meritorious service in behalf of an individual, group, or general public.

Welsh was chosen from among 23 candidates across the nation as the tenth winner of the award by a panel of judges consisting of Commissioner Rosel Hyde of the Federal Communications Commission, E. R. Harriman, Chairman of the Board of the American National Red Cross, and G. L. Doslund, President of the American Radio Relay League—the amateur radio operators' national organization.

Welsh was nominated for the award by several individuals in the Boston area, including the engineer-in-charge of the Boston FCC office, the director

of a vocational high school, and a Catholic priest.

Squeezed somewhere in between his regular job and his after-work instruction courses, Welsh found time to develop a 91-page instructor's handbook to help other radio teachers. He also developed and distributed a series of tape recorded courses of instruction for use by his students and by study groups throughout the U.S. and in 12 foreign countries. More than 75 per cent of the students have passed Welsh's course, considered a high ratio in the radio field.

A special area of interest to Welsh is radio instruction for the blind. Already, nine of his blind students have received their amateur radio licenses. He presently has a series of specially taped courses awaiting acceptance by the Library of Congress.

In addition to his voluntary instruction which, at times, extended to seven nights a week, Welsh taught a radio class at Massachusetts Institute of Technology, sponsored by the State Dept of Education. It was the only course for which he was paid, and characteristically, he used the money to buy duplicating equipment and materials to further his voluntary teaching efforts.

His public services activities, however, extend beyond the continental confines of the United States. One of his most gratifying efforts has been the development of a communications network among missionary groups in South America.

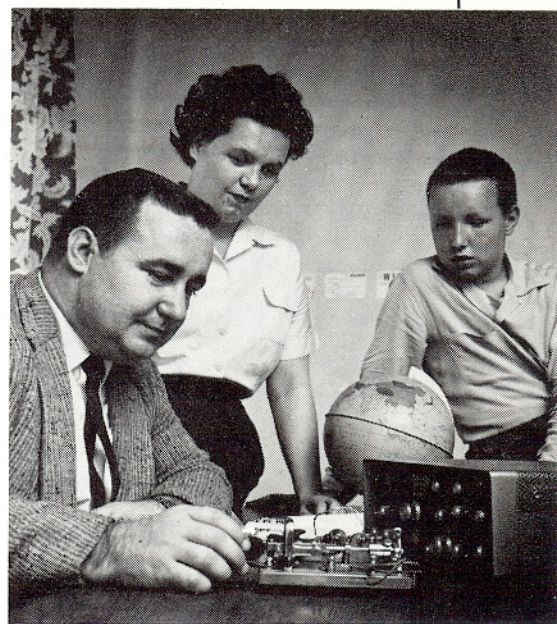
Welsh not only set up the only communications link—an amateur radio system—between the groups and their United States headquarters, but also sent them equipment and parts that were available only in the U.S.

Installation of the missionary network, located in Peru and Bolivia, was directed by Welsh via correspondence with the Carmelite and St. James the Apostle religious orders.

Both the governments of Peru and Bolivia have licensed the missionary radio stations to operate on regular frequencies on which they have aired a series of educational programs.

In the tragic Peruvian landslide earlier this year, which took the lives of thousands of villagers, it was one on the Welsh-inspired missionary stations that first beamed news of the catastrophe to the outside world.

At his home in Burbank, Bill is only one of three licensed amateur radio operators. His wife, Marie (who has



BILL, MARIE AND RICHARD WELSH
They Make Amateur Radio a Family Affair

also aided Bill in his instruction program), and his oldest son, Richard, 12, are also "ham" radio operators.

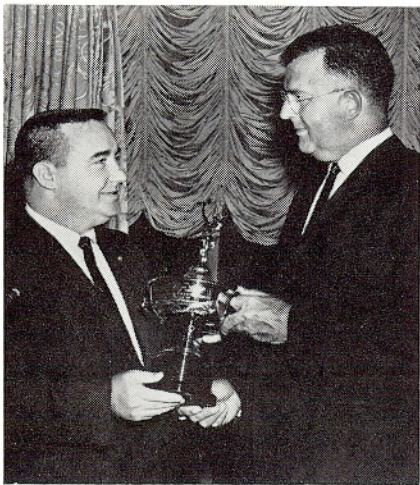
Bill operates station WA6VTL, Marie has station WA6VTM, and Richard's call letters are WA6VTN. Other members of the Welsh clan who will undoubtedly take up the fascinating pastime include Lois, 11, Marie, 9, Billy, 7, and one-year-old Carl.

While in Washington

In addition to a trophy, a \$500 cash award, and guest-of-honor at a gala presentation banquet at the Sheraton-Carlton Hotel on March 1, Bill Welsh also saw and participated in a host of other activities during his five-day stay in the nation's capitol.

He and his wife, Marie, were given a special tour of the White House, the Government Printing Office and the Library of Congress. During his visit to the Library of Congress, he witnessed the transcription of one of his special instruction tapes for the blind.

During his visit to Congress, he had the privilege of addressing the 16-member Senate Commerce Committee for ten minutes. His topic: Senate Bill 2361, a reciprocal licensing bill, allowing foreigners in this country to operate licensed amateur radios.



TROPHY PRESENTED—Bill Welsh is shown receiving the Edison Radio Amateur Award at the March 1 presentation banquet in Washington. L. B. Davis, General Electric Vice-Pres, presented Welsh with the trophy and a \$500 cash award.

Presenting:

"NC" Equipment and the People



JIM MADISON AND IKE FRANKLIN
The Decision to Go "NC"

In December of 1960, "Numerically Controlled" production equipment came to Librascope. It came in the form of a Burgmaster turret drill press, equipped with Hughes numerical positioning controls.

The following April, a Fosdick jig bore—another piece of "NC" equipment—was installed in Bldg A-01. And three months ago, a second Burgmaster machine tool arrived, taking its place alongside its tape-controlled brethren.

These three machine tools constitute our first unit of semi-automatic production equipment. And if there were any early doubts or misapprehensions as to the ability of "NC" equipment, they have since been dispelled. The tape-controlled machinery, according to I. G. "Ike" Franklin, manager of Glen Industrial Engineering, has done everything asked of it—and then some. Among its impressive achievements, our "NC" equipment has:

- quadrupled the capacity of jig bore and drill press operations;



PROGRAMMERS KRONE AND NICHOLS
Makers of the Numbered Commands

- drastically reduced setup time and excessive tooling costs;

- realized major \$\$\$ savings through a reduction of scrap and rework, also through a reduction of excess inventory;

- introduced extremely close tolerance work considered to be unmanageable on manually operated machine tools.

To the casual observer who has witnessed the equipment spin through its electronically-controlled paces, it is a continual source of wonderment. The push of a button sets it in motion, and from then until the end of the job, it is virtually on its own. The machine table moves in various directions, spindles move into position and bore or drill to incredibly close tolerances—and all without benefit of human guidance.

Or so it would seem.

But from the largest move to the smallest incremental adjustment, the performance of the machine is only the end product of an entirely human effort. Each piece of numerically controlled equipment would be as futile as a Stone Age tool in today's precision industry, if it weren't for the team of specialists responsible for making it run.

Librascope has such a team. And from the earliest step until the completion of a tape-controlled program, this group of specially trained individuals is in entire control of what the machine will later do on its own. Here is how it happens:

ANALYSIS — When an engineering drawing is released to Industrial Engineering, it is forwarded to the desk of Industrial Engineer Jim Madison. It is the stepping-off point in the making of a tape-controlled program.

Madison studies the blueprint and analyzes it on the basis of economic producibility. His main point of evaluation: Will it save time and cut costs to have the job programmed for the Fosdick or Burgmaster machine tools?

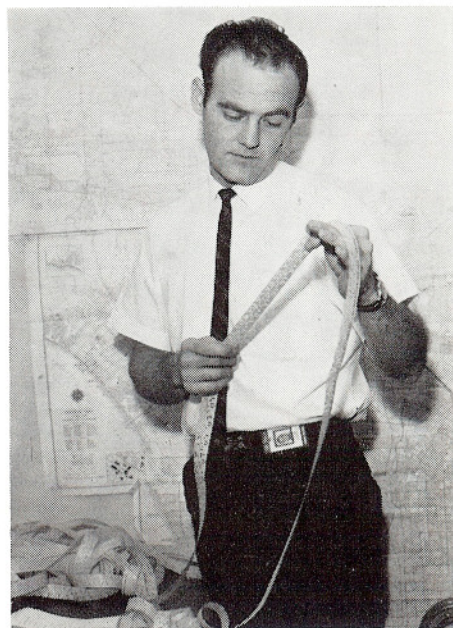
One recent job—a gear plate bottom—called for 428 distinct operations to be performed. Because of the complexity of the job and the excessive tooling costs involved if it were to be produced manually, Madison assigned it to the tape-controlled equipment. After rubber-stamping the print with a red "NC"-B&F (the job required both Burgmaster and Fosdick operations), it was forwarded to the second station in the development of a taped program.

PROGRAMMING — From Madison's desk, the job moves on to one or both of the Mechanical Methods Analysts — George Nichols and Chuck Krone. It is at this point that the first transformation takes place. The directions on the blueprint are translated into numbered commands for the machine.

With the job scheduled for both types of NC equipment, the drawings are first given to Nichols, who programs the ma-



TAPE PREPARATION
Marianne Westbury, Virginia Rapa, Rae Heathman



SCOTTY BARR
Even "NC" Needs "QC"

Who Make It Go



ION TEAM
Virginia Brown, and Marilyn Saunders (seated)



HARRY ORR & JOHN DELLEFAVE
Another "Master" to Tape Library

terial for the Burgmaster, then on to Fosdick programmer Krone.

After preparing an Operation Sheet, each programmer reviews the entire job and ascertains the most economical approach to performing the work.

Both Krone and Nichols calculate the programs on a point-to-point movement of the machine. Thus, each set of figures must be right on the money, since the many intricate moves made by the big machine hinge on their accuracy.

The engineering drawings, now translated into numbered commands, are verified and ready for yet another change in the appearance of the program.

TAPE PREPARATION—The project—first an engineering drawing, then a series of numbered commands on a program sheet—now takes on its final transformation in the form of a punched tape.

The people responsible for the program's new shape are the Flexowriter operators, four young ladies who prepare the paper tape that runs the numerically controlled equipment.

The preparation of a tape is done by an electric typewriter, but one with a special feature. In addition to its standard typing function, the machine has a small box on one side containing a roll of tape. As the operator types the numbers on the program sheet, the machine translates them into binary coded form and punches appropriate holes on the tape.

After the preliminary tape (called the "pink") has been cut, it is proofread, errors corrected, and the master and working tapes cut. The tape-controlled package is then ready for a final check, and it is forwarded to the "backstop" of the NC team—Quality Control.

VERIFICATION—The role of Quality Control in preparing a Fosdick or Burgmaster program, comes into the picture at two critical points along the way. The QC man behind the scenes is A. M. "Scotty" Barr, who's specifically assigned to the verification of the taped programs.

Barr's first contact with the job comes after the programmers have finished their calculations for a tape. Before the program is sent to the Flexowriter operators, it is taken by Barr along with the original drawing for verification of the programmers' work.

If the program checks out, he sends it along for preparation of the preliminary tape.

QC again comes into the team effort after the working and master tapes have been prepared. Prior to final release, the tapes are again proofread by Barr to make sure that no errors have mysteriously crept into the program. If no errors are found, QC then accepts ("buys") the program, and it is forwarded to yet another station.



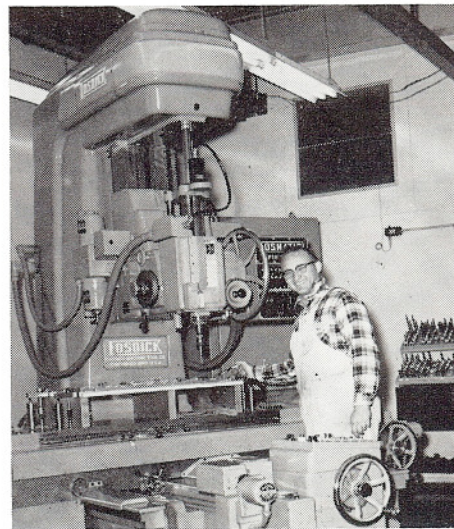
ORAL BROWN AND TOM HUMPHREY
Receiving a Tape Tool for the "Burgie"

READY FOR USE—With final inspection and approval by QCman Barr, what was formerly a tape now becomes a tool, ready for use on the big machines.

The green master tape is forwarded on to the Tool Control group, where it is logged in and filed in the tape library. The second copy—the blue working tape—is sent to the tool crib, ready for delivery to the operators of the NC machine tools.

The job has now come full cycle—from an engineering drawing to a series of numbered calculations, then onto tape and its final classification as a working tool.

Thanks to Numerically Controlled equipment, production time and costs have been drastically reduced while quality has increased. Thanks, too, to the people involved, who aren't seen when that finished gear plate with its 428 holes comes off the machine. They are the behind-the-scenes team of specialists that make "NC" equipment a mighty successful operation.



CHUCK PIERSON AND FOSDICK
Where the Tape Does Its Work



NEW FACES

Harold M. Gulick, senior engineer, has joined the Aerospace branch, assigned to the Technical Planning section, W. F. Scott, Director.

With a diversified background in electronics, chemistry and communications, Gulick comes to Librascope from Minneapolis Honeywell's Aero Division, where he was Sr-Eng on horizon scanner and Dyna-Soar projects.

He was formerly with Exodyne Inc., Van Nuys, where he headed a medical-electronics program; was chief engineer for Communications, Inc., Coral Gables, Fla.; and was instrumental in the development of a smog-eliminating device for autos, while at Technical Industries Inc., Pasadena.

Gulick received his BS degree from the University of Florida, where he majored in chemical and electrical engineering. He is the holder of 50 patents, granted and pending.

A native of Champaign, Ill., Gulick is married, makes his home in Westchester.

* * * *

Howard R. Johnston has joined Glendale Engineering as staff engineer, reporting to Grey Stone, Supvr, Systems and Logical Design.

Born in Humboldt, Saskatchewan, Canada, Johnston spent the past two years with Benson-Lehner, Santa Monica, as proj-mgr of their automatic charting systems program.

He was formerly with Canadian Applied Research of Toronto, and Photographic Survey Corp., where he headed R&D program on airborne survey equipment. He was instrumental in the development of an airborne profile recorder, and Stereo-mat, an automatic plotting device.

Johnston is married, lives in Northridge.

* * * *

Herbert J. Steinitz was recently added to Glendale branch Contracts Administration as Contracts Administrator, reporting to D. J. Beushausen, CA supervisor.

Prior to joining Librascope, Steinitz was manager, contracts administration



GULICK



JOHNSTON



STEINITZ



SMITH

for Pacific Automation Prod., Inc.; served as contracts administrator and division sales manager for Monogram Precision Inc., Culver City; and was senior proposal negotiator for Litton Industries, Inc., Beverly Hills.

A former electronics instructor in the Navy, Steinitz is married, has two children and lives in Van Nuys.

* * * *

Cdr George C. Smith, USN (ret), has joined Glendale Engineering as administrative assistant in Data Processing Equipment section. He reports to J. L. Deitz.

During his 21-year naval career, Smith served as assistant comptroller at the Navy Gun Factory, Wash., D.C.; was director, Industrial Mobilization Div., Bureau of Supplies and Accounts; and, most recently, was officer-in-charge of the commissary store, NAS, Pensacola.

In his pre-naval days, Smith attended NYU and Rutgers University, and spent six years as asst purchasing agent, Grace Line Steamship Co.

Married and father of four, Smith makes his home in Los Angeles.

* * * *

A new addition to Division Applied Research is Senior Chemist **Frank J. Marasa**. He has been assigned to integrated diode circuits research, reporting to Dr. Herman Graff.

Marasa comes to Librascope with more than eight years experience in the semiconductor field, including three-year stints with International Rectifier Corp., El Segundo, and Radio Receptor Corp., Brooklyn.

He received his BA in chemistry from Washington Square College, NYU, and a

MS in physical chemistry from NYU graduate School of Arts and Sciences.

Married and the father of a girl and two boys, Marasa resides in South Pasadena.

* * * *

Engineer **L. S. "Bud" Bleininger** has joined Burbank Data Processing Systems Engineering, reporting to proj-mgr J. P. Casey.

A 1960 BSME graduate of Ohio Northern University, Bleininger (pronounced blen-in-gur), spent six months with Bryant Computer Products as a project engineer on a disc file memory system.

Born in Navarre, Ohio, Bleininger and his wife, Jean, now make their home in Northridge.

* * * *

Two writer-directors have been added to the Audio-Visual Services section of Customer Relations, reporting to supvr L. B. Eisenhower.

Carl E. Kling joins A-VS following four years as film writer-director with U.S. Electrical Motors in Los Angeles.

An Army Signal Corps veteran, Kling spent 18 months at the Pentagon as special still- and motion-picture photographer.

A graduate of UCLA, Kling received his BA in Theatre Arts. He is single and lives in Westchester.

Writer-director **Austin H. McKinney** comes to Librascope from Alfred Huggins Productions, where he produced and edited a series of public relations films for industry. Previously he spent two years with James T. Bishop motion picture service as writer-director of industrial films. McKinney, who also is a cinematographer, photographed "Flash, the Teen-Age Otter," a 45-minute feature film for Walt Disney Studios.

Born in San Jose, McKinney attended San Jose State College and later UCLA, majoring in motion picture production. He is single, resides in Hollywood.

* * * *

John A. Flynn, Jr., has joined Glendale Contracts as contract specialist, reporting to D. L. Simon. A graduate from the University of New Hampshire (BA, Economics) Flynn comes to Librascope from Aerojet-General, where he was contracts coordinator for two years.



MARASA



BLEININGER



KLING



McKINNEY

Burbank Branch Enriches 'Bank' Account

Before the Red Cross Bloodmobile pulled away from Bldg B-08 on the afternoon of March 1, it had added 78 more pints of blood to the account of the Burbank branch.

This, along with the 79 remaining pints from Burbank's first Blood Bank last year, brings the reserve total up to 157 pints.) During the past year, the healthy Burbankers used only six pints from their account.)

The turnout, according to Blood Bank Chairman John Batten, was excellent. "This makes our Blood Bank account a pretty solvent one." Batten told LIBRA-ZETTE. "We have been very fortunate to be able to build such a reservoir of donations, and we are certainly grateful to every donor who has made this possible," he added.

The accompanying pictures show some of the donors before, during, and after their "gift of life" to the employee Blood Bank.



1962 Burbank 'Roll of Honor'

Jim Davis
Gilbert Blossfield
Joe Taylor
Jerry Varner
Larry Kerr
Robert Geno
Ronald St. Pierre
Mike Hirsh
Don Marshall
Jerry Asher
Paul Shipp
Merrill Eisenberg
Bob Shone
Morrie Kimmel
Bill Murray
Bill Chase
Fred Sullivan
Bernice Gabriel
Donna Seals
Ray Robinson
Dorothy Bender
Barbara Martin
Lane Wolman
Gary Cramer
Jerry Michaelson
Art Moreno

John Lalley
Robert Smith
Robert Greer
Fred Harrison
Helen Strait
Barbara Houghton
Jim Hunter
Joe DiGiovanni
Peggy Wagner
Karen Paulsen
Elaine Christensen
Mel Nelson
Anne Lovasco
Joyce Miles
Shirley Rosdahl
Willis Putnam
Benny Benoit
Mardi Graham
Adeline Smith
Oscar Orth
Frances Eberwein
Joyce Garite
Lou Isaacs
Bernie Martin
Dale Dean
Arlington Mosher

Betty Paradise
Mary Winkler
Marg Kelleher
Dave Wallen
Norbert Haug
Thora Vaughn
Bill Nance
Norman Bogan
Paul Barcik
Sue Barcik
Bob Day
Jim Cawthorne
Wayne Van Buren
John Ashton
Juanita Delle Fave
Bob Shattuck
Ken Rendler
Glen Garrett
Walter Hall
John Stevens
Tom McCabe
John Batten
Glenda Nuzzi
Dorothy Shaffo
Edward Boycks

COMMITTEES

Unusual Measurements

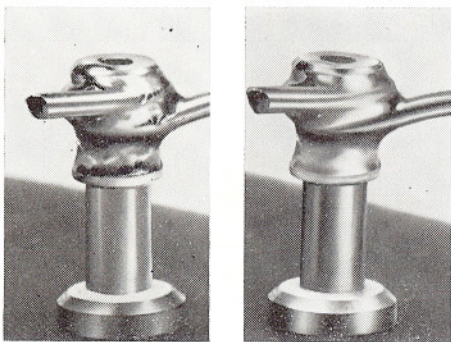
Without a true dimension or tolerance to go by, the newly created Quality Control-Standards Committee has given itself a difficult assignment: to measure the heretofore unmeasurable; to narrow down the amount of "opinion work" involved in various areas of our operation.

One of the areas of committee investigation is solder connections. What constitutes a proper solder connection? What are the tools of measurement, and how are they applied? Is it strictly an opinion judgment, and if it is, might there not be a considerable diversity of opinion as to what is acceptable or unacceptable?

"We certainly can't eliminate or standardize 'opinion work,'" says Committee Chairman Dave Sweeney of Glendale Methods Improvement. "But where we will direct our efforts is toward estab-



GPI PURCHASING—Librascope acted as official host at the Feb 12 and 13 GPI Group Purchasing Committee Meeting. The group meets quarterly to discuss new ideas, methods, and techniques that will produce more effective procurement operations and realize additional cost savings. Pictured from left to right: B. E. Roper, Purchasing Agent, Aerospace Branch; S. P. Herbert, Vice-Pres and Director of Personnel, Kearfott; Col. G. B. Richardson, Special Consultant to the Pres., GPI; H. M. Zimmermann, Director of Procurement, Kearfott; M. L. Cowan, Librascope Director of Materiel; M. B. Bird, Link Purchasing Agent; W. L. Vaughn, Manager of Materials, GPL; C. H. Brown, Purchasing Agent, Link-Palo Alto; and W. J. Flanagan, Glendale Branch Materiel Manager.



ONLY ONE GOOD—In the opinion of the QC-Standards committee, only the turret terminal at right proved to be acceptable. In the opinion of the committee, it has a smooth, even flow of semi-glossy solder moderately applied to cover the contour of the parts. Terminal at left was judged a reject because of its distorted, uneven appearance. Such a terminal is the result of insufficient heat, a cold joint, or an excessively dirty part.

lishing an educational program through use of photos, samples, and display boards, to limit the scope-of-opinion work on those items that aren't governed by a precise set of measurements."

There are currently over 2000 rejection reports issued monthly by Quality Control, and of that number, at least one-fourth are classified as "opinion item" rejections, according to Sweeney.

"If we can successfully narrow the spectrum of opinion work, our committee feels that we will be able to realize an annual saving of at least \$25,000," Sweeney added.

The Committee is currently assisting Glendale branch Standards section in developing a new wireman's Manual. Included in the manual will be photos of such opinion items as acceptable and unacceptable solder connections (see above photo). The overall effect is expected to be a closer coordination and understand-

ing between the man on the line performing the work and the man who finally inspects it.

In addition to Sweeney, other committee members include: S. J. Baker, R. R. Head, and F. R. McCarthy, Quality Control; W. C. Roxbury, Standards; C. C. Culver, Assembly; and J. C. Schmidt, Division Training.

Long-Range Planning

The 23rd meeting of the GPE Standards Committee was held in Bldg A-16 conference room Feb 27 through Mar 2, with the participants investigating the need for long-range programming through standardization.

Opening remarks were made by Vice-Pres D. C. Webster, who declared that one of the surest methods to reduce costs was to implement an effective standardization program.

Other speakers during the four-day conference included H. J. Hamilton, Advanced Research Director; R. R. Williamson, Technical Assistant to the President; W. K. McAboy, Operations Planning Director; L. G. Rado, Supvr, Reliability Engineering; and G. E. Lange, Glendale branch Senior Engineer. Each emphasized the growing role of standards as it relates to the great technological expansion of our time.

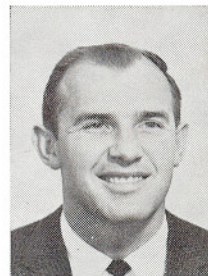
The committee comprised of representatives from Librascope, Link, Kearfott and GPL Divisions, approved and adopted six new GPE Standards. They include: a revised screw thread standard; a new standard on logic symbols and logic diagrams; standard prefixes for multiples and sub-multiple of units; revised surface roughness standard; a new standard on sheet metal design; and a new standard on electrical and electronic symbols.

New Supervisor

Frank H. Yapp, former Glendale Wage and Salary analyst, has been named Supvr, Glendale W&S, according to R. R. McDonald, Glendale Personnel Mgr.

Yapp, who joined Librascope in November, 1959, is an economics graduate from Stanford University, later attended UCLA for graduate work in personnel management and industrial relations.

A Navy veteran (1951-54), Yapp is married, makes his home in Los Angeles.



To Add to Your Kit

Along with the March 9 pay checks, all Librascopers received a second, larger envelope that day. Its title: "Family and Home Survival Kit." Its purpose: To bring into each home an informative library of information on effective civil defense.

"The response to the survival kit has been excellent," declared C. E. Dahl, Librascope Industrial Defense and Disaster Director. "As other significant material is available, it will be passed out to employees in the same manner as the original kit."

Future material scheduled for distribution to employees include pamphlets on first aid, Conelrad, emergency sanitation at home, facts about fallout protection, survival of nuclear attack, and a handbook for emergencies.

Should anyone desire an extra copy of the Survival Kit, they are available by contacting Dahl's office, ext 2311.

"AOML"

(With this issue LIBRAZETTE launches a section devoted to news of our fellow employees whose personnel records show the letters—AOML—Absent on Military Leave. Our men in uniform—in the Army, the Navy, the Air Force—are manning the ramparts in Europe, continental USA, and Asia and other sections of the global coldwar battlefield.)

A/2c Conrad A. Sillars, Glendale Inspection, who enlisted in the Air Force in June, 1960, is stationed at a "remote site" in France. His outfit is a microwave radio relay unit, part of a NATO communications network, 60 miles from the nearest American base. The monotony of isolation is relieved by occasional visits to service friends at other U.S. installations in Belgium, Luxembourg, Holland and Germany. Address him thusly:

A/2c Conrad A. Sillars, AF 19671098
Det 2, 1141st SPACETRON, Location S-8
APO 17, New York, New York.

Pvt Carl A. Jappe, Glendale Eng-Support detail draftsman, who entered the Army last Oct, is with the Field Artillery at Fort Sill, Okla., making drawings and charts for classroom use in the Artillery school. Romance has entered his life and he's getting married in April. His address:

Pvt Carl A. Jappe, US 56343583
Staff & Fac Batt, USAAMSC
Fort Sill, Okla.

A/3c Tom A. Vinceri, draftsman in Div Plant-Eng, who enlisted in the Air Force a year ago, is with a military police unit in the Far East. He can be reached by writing:

A/3c T. A. Vinceri, AF 19695153
6313 APRON
APO 239, San Francisco, Calif.

E/4 Harold G. Whitworth, Aerospace Sen. Elect-Tech, has been in the Army since May 1960. Currently he's an instructor-technician in guided missile launching control at Redstone Arsenal; he also inspects, tests and maintains electronic gear in Nike Ajax and Nike-Hercules missiles. Write him as follows:

E/4 H. G. Whitworth
"A" Co Ord GM Sch
Redstone Arsenal
Huntsville, Ala.

Sp/4c Lionel W. Comport, Burbank stockroom, has been in the Army since April 1960, is now with an ordnance depot in France which, like Southern California, has not been so sunny this year. He has found time to visit nearby countries and rates Paris as "terrific, so long as you don't get caught between the Algerians, the OAS and the gendarmerie."

Sp/4c L. W. Comport, US 56325836
Ord Co USAAP/TF
APO 287, New York City.

A/3c Richard W. Bossley, Glen-Receiving, after completing his basic airman training, is enrolled in a 41-week training course for Air Force cryptographic equipment repairman. Dick received this choice assignment because of his previous experience in electrical assembly with Librascope. Write him this way:

A/3c R. W. Bossley, AF 19718025
BMT Area, Box 1547
Lackland AFB, Lackland, Texas.

Sp/4c Wayne M. Niehuus, Aerospace designor, Army reservist who was called up last Fall, is serving with an engineering group in Maryland. You can reach him by writing:

Sp/4c W. M. Niehuus
8 Laurel Manor Court, Apt 2
5th St & Gorman Ave
Laurel, Maryland.

Pvt Jesus A. Navarro, Glen-Assembly, is taking his Army basic training, hopes for an assignment in electronics when training is completed. You can reach him thusly:

Pvt J. A. Navarro, US 56352140
2d Plat Co, 7th BG, 3rd BDE
Fort Ord, Calif.

Lt. (JG) David R. Finley, Glendale Engineering, Navy reservist who was called to active duty last Fall, is somewhere in the Pacific aboard the USS Marsh, a destroyer he helped recommission at Long Beach. His Naval address:

Lt. (JG) D. R. Finley
USS Marsh, DD698
FPO, San Francisco, Calif.

Another Navy man is **EM/FN John T. Hendrix**, Glen-QC technician. Reservist Hendrix reported for active duty last Fall, is on destroyer duty. His address:

EM/FN J. T. Hendrix
USS Colohan, DD 658
Long Beach Naval Base
Long Beach, Calif.

1st Lt. Harold E. Compton, Div-Training, is with his Army reserve unit, called into active service last October. Write him as follows:

1st Lt. H. E. Compton, 0-4040286
308th Psychological Warfare Co
Fort Bragg, N. C.

Closer to home in their stations, but ranging far and wide in their assignments, are four Librascopers of the Air National Guard at Van Nuys Air Base, called to active duty last Fall:

T/Sgt Paul Diamond, Glen-Publications technical writer; **Capt. Don L. Gallop**, Aerospace field service engineer; **T/Sgt Richard X. Johnson**, Glendale production test equipment designer and **Manuel Salvador, Jr.**, Glen-Adjustment.

Groups to which the airmen are assigned have taken part in several recent airlifts to the Philippines and Germany.

Diamond is in the 115th AT Sqdn, Gallop in the 146th AT Sqdn, Johnson and Salvador in the 146th CAMRON, all at Van Nuys Air Base.

Morris N. Cannon

Morris N. "Mike" Cannon, Librascope's Director of Public Relations and Advertising, died Mar 18 in Dallas, Tex., three days after he was stricken with pneumonia while on a business trip.

Cannon, who would have been 37 in May, joined Librascope three years ago, after heading his own advertising agency. He was an Army veteran of World War II, and took part in many Pacific campaigns as an intelligence officer.

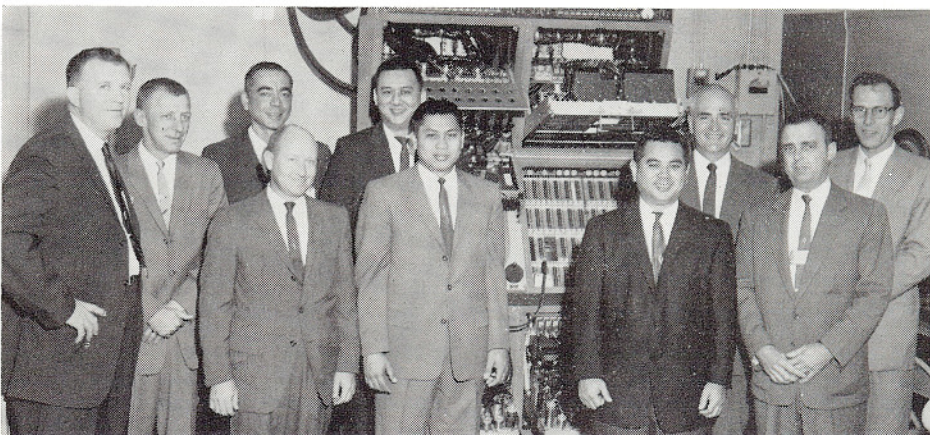
Funeral services were held Mar 21 in Salt Lake City, his birthplace. He is survived by his widow, Bette Jeanne, two sons, Kim, 13, and Stanley, 9.

Scouts at Librascope

High school students with an interest in science are getting a helping hand from Librascope, which has elected to sponsor Explorer Post 28, Verdugo Hills Council, Boy Scouts of America.

The new Post is holding its first organizational meeting April 11, in the Training Section conference room, Bldg 1-03 when members will elect officers and plan the year's program.

Librascope members of the Post Committee include Robert F. McCollum, Division Cust-Rel, Chairman; Bruce E. Larson, Div-Empl, Membership Chairman and Staff-Eng James A. Rummel, Glendale Adv-Proj. A. R. Pederson, Supvr, Division Employee Benefits and Services, is institutional representative.



FROM BOSTON TO PEARL HARBOR—Personnel from six naval shipyards visited Librascope for a 6-week course on familiarization, installation, and checkout procedures for the Mk 53 Attack Console and Mk 114 FCS. Pictured from left to right: Q. P. Cummings, Field Service Engineer and course instructor; Cecil Kendrick, FTCS, USN, Norfolk Naval Shipyard; R. J. Mills, Charleston; C. E. Grune, Pearl Harbor; Santiago Omega, San Francisco; Cummen Wong, San Francisco; Denko Kaneshiro, Pearl Harbor; J. R. Stahl, Boston; Garrett Conlon, Jr., Charleston; and R. L. Bosworth, Boston.

RECREATION

Again, C. Culver, Jr.

(Following the last Golf Club tournament, LI-BRAZETTE had economic presence of mind to save one of its headlines from the Dec '61 issue. We were certain that it could be used again, and we were right. It appears above this story.—Ed.)

The first Golf Club tournament of the year drew 84 members and guests, including five from San Marcos, to the Mountain Meadow Country Club in Pomona, and with a predictable outcome.

The winner, as he seems to be in nearly every tourney he enters, was Carl Culver, Jr., general foreman, Glendale Assembly. He turned in a fine 78, to capture low gross honors, and ended in a tie for second for low net score.

Winner of the low net trophy was Bob Megee, whose 25 handicap sliced his 89 gross to a neat 64. Another repeat winner, Megee captured the President's Cup trophy for low net score at last year's Apple Valley tournament.

Five strokes back of Culver at the St. Patrick's day event was Forrest McColl with an 82. He was followed by Hugh Smith with an 83, and Frank Copple, Frank McQuoid and Bob Rudolph, each with an 85.

Trailing Megee in the low net scoring, were Sam St. Clair and Carl Culver, each with a 65, and Bob Rudolph with a 66. Five others were tied at 68.

Down to the Wire

Everything was up for grabs on the final night of the Librascope 830 Scratch Bowling League, but after it was all over, Smitty's Smashers managed to hold on to their narrow lead, outlasting the Tap-

pers by one-half game, and two ahead of the third-place Jigolos.

In the individual highs for the 30-week league, Pat Patterson posted high series with a 657; Dick Sak and John Davis tied for high game with 256; and Fred Killips maintained the highest average—182. Earl Wolfe was named the most improved bowler by upping his average 14 pins during league play.

The bowlers rest a few weeks, then begin Summer play in a trio league, beginning April 17.

New Aerospace Club

Looking forward to future social and recreation programs, employees at Aerospace-San Marcos last month organized a branch-wide sponsoring group—the Aerospace Employees Club.

Members have elected Robert Freeman, Manufacturing, as President and Donna A. Lauten, Chief Engineer's Office, as Secretary-Treasurer. Robert Smith, Quality Control and Parker Bizzell, Production Engineering, were named directors.

The new group starts off with a substantial financial assist. Branch Manager H. W. Norris has directed that all revenue from vending machines in the buildings shall be paid into the Club's treasury.

2nd Year for Fathomeers

The "Fathomeers," the Precisioneer-sponsored skin diving club, began its second year of operation with the election of a new slate of officers at their March 14 meeting.

Charlie Ha'o, Glendale draftsman, was elected president, succeeding Otto Thress, and Glendale engineer Dick Berns took



HARBINGER OF SPRING — When Harry Callahan brings out his blue "LA" baseball cap, dons his warmup jacket, and begins scanning box scores on the sports page, it can mean only one thing: the Dodgers are about to begin another season. Born and raised in the shadows of Ebbetts Field, Brooklyn-born Harry is Librascope's most ardent Dodger rooter.

office as vice-president, replacing Jerry Carlson. Rusty Johnston, Murial Ellsworth and Frank Collins were re-elected sec'y, treasurer, and dive master, respectively.

Club activities include frequent, informal "dives" along the local coastline, and a more extensive trip by chartered boat scheduled for the summer months.

For the Travel Minded

Early planning for the annual Precisioneer-sponsored vacation tour is now underway, with a tentative list of destinations indicated below. If you have any interests in making such an excursion, Precisioneer store manager Eileen Brown would like to hear from you via the questionnaire furnished below. There is no obligation involved, it is merely an indication of employee preference.

Check one of the following:

August Trips

- ☐ Hawaii for 10 days.....\$295
☐ Hawaii for 17 days.....\$345
 (both trips include a tour of the outer islands)

September Trips

- ☐ Scandinavian countries,
 23 days.....\$1195
☐ Europe, including Spain, via
 the Caribbean Sea,
 23 days.....\$1295

There would be people in my party should I decide to accompany this year's tour.

Employee's Name.....

Extension.....

Librascope Division
General Precision, Inc.
808 Western Avenue
Glendale 1, Calif.

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