

LIBRAZETTE

LIBRASCOPE

A
GENERAL
PRECISION
COMPANY

AN EXCHANGE OF NEWS AND KNOWLEDGE

Vol. 7, No. 6

November, 1959



JUNIOR ACHIEVEMENT officers of Koke-A-Koaster company and their Librascope advisors, line up for the news camera at JA headquarters in Burbank, after organizational meeting. In front, (l-r)

Secretary Kathy O'Hare; Vice-Pres. Gyda Messmer; Pres Bill Klemme, Treasurer Christy Thompson. In back, Charlie Cole, Joe Fido, John Fatz, Art Pederson and Chuck White. (Crawford photo)

Company Again Sponsors Junior Achievement Group

A score of high school students with a desire to learn how the American free enterprise system operates are getting an introduction to that complex subject under the auspices of Librascope and the Junior Achievement movement.

They are officers, stockholders and "employees" of the Koke-A-Koaster Company, organized to manufacture, distribute and sell a consumer product with what they believe to be considerable consumer necessity and acceptance. The product is a set of handsomely colored coasters, made of anodized aluminum and lined with cork.

The Junior Achievement organization, nationwide in scope, is dedicated to providing a working opportunity for youngsters to learn how American business operates. Through the medium of JA-sponsored companies, organized and staffed by the young "achievers," they handle all the details of organizing and financing a company, choosing a product, designing it, creating a management to organize production, distribution and selling.

Librascope Sponsor

Librascope is now in its sixth year of participation as a counseling firm, and President Lewis W. Imm is serving his fourth term as secretary of Junior Achievement Corp of Los Angeles, Inc., J.A.'s sponsoring group in this area.

The companies have a short life, purposely, in order to acquaint as many achievers as possible with the details of business management. Companies are organized in October, and operate until the following May, when they are formally liquidated. Profits—if any—are then distributed to the stockholders and the company dissolved. The companies generally do make money!

Cooperating companies supply advisors to the young achievers, but after the first one or two meetings, take a back seat and step in only when invited. This year eight staffers are serving as advisors and alternates. They are:

Business—John Fatz, chief time-keeper; George Pope, accounting, alternate.

Accounting—Chuck White, IBM; Harry Ewing, IBM, alternate.

Production—Charlie Cole, Model Shop supervisor; Roy Van Holm, Model Shop, alternate.

Sales—Art Pederson, Personnel; Joe Fido, Bldg-Main, alternate.

Issue Stock

The Librascope team has taken the Koke-A-Koaster achievers through the process of company organization, selection of a product and name, issuance of stock (at 50 cents a share), and election of officers. Tooling to produce the product was turned out by the Model Shop from Cole's designs. The tooling fits into existing machines in JA headquarters at 121 East Verdugo, Burbank, and the achievers have already had a test run on production.

With the advisors standing by, the K-A-K organization had elected its top officers, is to name a board of directors and then hire its operating department heads and production employees from the group. Top officers are:

President—Bill Klemme; Vice-Pres — Gyda Messmer; Sec'y — Kathy O'Hare; Treasurer—Christy Thompson. All but Klemme are on the distaff side, which may give a hint to what future corporate officers will be in the world of big business!

LIBRAZETTE will follow the career of K-A-K in issues to come—and tell you where and for how much Koke-A-Koasters may be bought.

LGP-30 Assembly Moves to Verdugo St

Burbank now has taken over all space in its Verdugo street building and plans are being drawn to shift some manufacturing activity there from Tujunga, according to Manager Dick Hastings.

Final assembly of the LGP-30 and future versions of that computer will move to Verdugo street. Manufacture of components, wiring and related work will remain in the Tujunga street building, using present second floor space and the area vacated by the LGP-30 production line.

Report Correct Address

With income tax reporting time not far off, Mildred Huggins, assistant controller, urges all employees to make certain that Personnel is supplied with correct home addresses. All employees are required by law to report employee income to the Federal and State governments—and to furnish correct home addresses as well, she points out.

Kids' Xmas Party Set For Dec. 19

Plans for the Precisioners annual Christmas Party for Librascope children are complete and the affair promises to be one of the best ever, according to Chuck Brennaun, Purchasing, chairman of the arrangements committee.

Date for the party is Dec. 19 and the time from one to four P.M. Scene will be the auditorium of Hoover High School, 651 Glenwood Road, Glendale.

Entertainment will include a program of movie cartoons, a community sing and, a special feature this year, a puppet show presented by Ralph Rousseau, parts dispatcher in Production Control and his wife, Anna. Both are well-known professionals in puppetry.

Santa Claus, making an early-season appearance, will be the guest artiste of the day and will have a bag full of gifts for all youngsters, age 1-12, who are on hand.

Promote Writers

Two members of Publication's technical writing staff have been promoted by Phil Hiner, Publications manager. Bob Fosler, who started with Librascope seven years ago as a wireman in assembly, was promoted from writer to senior writer. Henry Welp, who joined Publications in February of this year as an assistant writer, was elevated to full writer status.

Organization Change Creates New Division

A Glendale division with general management responsibility over all Glendale engineering, Quality Control and Production, was established Nov 1 in an executive order from President Lewis W. Imm, and placed under Don Webster as Vice President and Division Manager.

The order also announced that further organization changes, primarily in the activities under M. L. "Lindy" Lindahl, vice president and controller, will be announced within two weeks. A new master organization chart will follow.

The Nov 1 order involved several realignments of functions and management assignments. They are:

Bob Dietrich, shifted from his post as Chief Engineer of Airborne, and named Assistant Division Manager under Webster. He has responsibility for advanced planning and technical review of all Glendale operations.

Bill McAboy, who has been Chief Administrative Engineer of Engineering Administration, also named Assistant Division Manager under Webster. He has responsibility for operations review.

Hank Norris, appointed Chief Engineer of Airborne Engineering, succeeding Dietrich.

All SUBROC engineering effort has been centralized, in a unit separate from Shipboard Engineering, and placed under Arnold Larson as SUBROC project director. Larson will report to Webster. As the SUBROC design program moves toward completion, personnel on this job will return to Shipboard.

Decentralize

Decentralization of engineering service sections, under way for some months, was carried forward into new areas by Mr. Imm's order. Four sections formerly grouped under Engineering Administration, are now absorbed by the design engineering groups they served. Affected are:

Drafting and Checking; Production Engineering; the Mechanical Laboratories and Test Equipment Design.

A new service unit grouping under the title of Engineering Services was set up under Galen Mann as manager, and reporting to Webster. Engineering Services includes Publications, Engineering Standards and Service Operations.

Reliability and Environmental Test, previously in the old Engineering Administration group, now report to Dietrich.

Further delineation of function and areas of responsibility, with organization charts for the division, are to be issued shortly by Webster.

"PB" Stokes Joins Airborne As Project Mgr

Powell B. Stokes, internationally known civilian scientist with the Air Force, has joined Librascope's Airborne engineering department as manager of a new project in the Advanced Systems and Planning section. He will report to Bob Williamson, section director.



Known familiarly as "P.B.", Stokes was Technical Director of Systems Engineering of a special Air Force group at Kelly Field, San Antonio. He had held that post for three years and, altogether, had been a top-level civilian scientist with the AF for the past nine years.

A native of Texas, long and lean as the proverbial cowpuncher (as he might be portrayed in a movie by Gregory Peck), Stokes received his early education in Wichita Falls, took his Bachelor's degree in Physics at Tulane University. He did graduate work at the same school while on the Physics department staff as a designer of electronic research instruments, before entering government service. Earlier he spent two years in the Navy as a V-12 student.

Stokes will be Librascope's representative on a Research and Development team with RCA at Camden, N. J. Other participants in the project are Westinghouse, IBM, Systems Development Corp., Temco and the architectural firm of Daniel Mann, Johnson and Mendenhall.

Stokes, who has just turned 33, is married to the former Miss Betty Preston of Monroe, Ga. They have three young daughters—Susan, 11, Julia, 7, and Betty, 6. Moving day from San Antonio is in the offing—after the end of the school semester.

Old World Travelers Return; Recount Lively Experiences

Europe is all that the travel posters say it is and the Librascope party just returned from a flying visit to the Old World have already started saving for the next trip. And what they say about the gallant French, Italians and Swiss also is true*, say the distaffers who made the trip.

"We had a marvelous time everywhere we went," says Eileen Brown, manager of the Precisioneer store. "It couldn't have been nicer. We went everywhere and saw everything there was to see. I just wish the trip could have lasted three weeks more!"

The group flew to New York via American Airlines, then crossed the ocean in KLM's "Flying Dutchman" to Amsterdam and Brussels. At Brussels they were picked up by their own private "bus" and started a seven-nation tour that took them to Heidelberg, Lucerne, Venice, Rome, Paris, London and Edinburgh, with many a way-station in between.

"Venice was beautiful and the atmosphere was downright overwhelming," says Eileen. "Mable Steiner and I were sitting in the Plaza of St. Mark, waiting for the evening band concert, when a group moved in back of us and started chattering away in English. Mable's reverie was so disturbed that she turned around and hissed: 'Speak Italian!'"

"In Lucerne I discovered you can go a long way from home and still run into familiar faces. Strolling across a bridge I ran into Hank Norris and Garland White of Airborne. And what does Hank say to me, right in the middle of all that history surrounding us? 'I'm having trouble with that camera you sold me!'"

"In Paris we took in the show at the Folies Bergere and I can understand why all visitors go there. It was a good show, but I'd hate to make a living selling brassieres backstage."

Everybody came back laden with the maximum of duty-free merchandise their pocketbooks would let them buy, and the friends and relatives of Eileen, Mable, Mr. and Mrs. Bill Dudas, Clarine Miller and Jim Monte should be well-supplied with French perfume and silks for sometime to come.

Now what do they say about the gallant French, Italians and Swiss that's so true? (They pinch!)

Operation Big Lift Sets World's Record In "Raising The Roof"

"Operation Big Lift", the Herculean task of raising four giant slabs of reinforced concrete weighing almost 8,500,000 pounds to a height 14 feet above ground level, to form the roof and parking lot for the new Production building on Sonora street, set a new world's record for size and weight of the lift.

Each slab—189 by 97 feet—weighed 2,107,500 pounds and was the largest and heaviest piece of reinforced concrete ever to be lifted anywhere on the face of the earth, Henning Vagtberg, head of the lifting firm handling the project, reported to Building Engineer Cliff Dahl.

"The previous record was held by a lift 500,000 pounds lighter," Vagtberg said, "and was purely a test operation. The Librascope job is the biggest on record anywhere."

Saved \$42,500

"Operation Big Lift" saved an estimated \$42,500 and four weeks in construction time over conventional methods, according to Dahl. Decision to use this method was made during the planning stage by Faxon, Gruys and Saylor, Librascope's architects, and Bibb, Remmen and Bibb, the builders.

The huge slabs, ranging in thickness from three and a half feet at the "centers," to three inches at the thinnest point, were cast on the 85,000 square foot building's concrete floor, over a web of reinforcing steel and a "waffled" forming structure of corrugated cardboard boxes. Use of these seemingly frail (but actually very strong) boxes saved hundreds of hours in construction time over conventional wooden forms, produced a structurally strong and relatively light slab.

Some statistics on the "big lift":

Each section of the roof is 189 by 97 feet.

There are 490 cubic yards of concrete in each section, for a total of 1,984,500 pounds.

Each cubic yard weighs 4,050 pounds.

Total reinforcing steel used—104,000 pounds per section.

Over-all weight per section—2,107,500 pounds.

Before the slabs were poured, the huge pre-cast reinforced concrete columns that were to support the roof, were put in place over concrete and steel caissons set deep

Ed Forgey, 14-Year Veteran Joins M/R Staff

Ed Forgey, who was four months short of his 21st birthday when he came to work for Librascope as a machinist early in 1945, was promoted this month from senior production engineering associate to staff representative in Military Relations. He will work on the staff of Ed Quilter, manager of M/R's Glendale office.



A well known figure both at Librascope and in his home community of Glendale, Forgey is a native of Marshall, Mo., who liked what he saw of California during service in the Marine Corps, settled down here after his discharge.

In his 14 years with the company, youthful looking Ed (who just turned 35) has moved steadily up the ladder. He has been a machinist, experimental machinist, optical instrument maker, assistant foreman, foreman in optical adjusting, a production engineering associate and until this month, a senior associate.

into the ground. After the slabs were poured and had cured for several weeks, huge hydraulic jacks, each with a 70-ton lifting capacity, were mounted on top of each column. The jacks, 18 of them for each slab, were linked to large steel rings buried in the slabs around openings for the columns. Linkage was provided by thick, steel rods, threaded like bolts.

Each jack then was hooked up to a powerful hydraulic pump through two control mechanisms called "consoles." At a signal given by the contractor, console operators opened valves, sending hydraulic fluid under tremendous pressure to each of the jacks. The jacks, thrusting downward, pulled the slabs up the threaded rods; locking nuts, spun into place by the jacks, held the slab in place between each lifting operation.

Slow Moving

The entire lifting movement was barely visible to the eye, as the tremendous weights moved upward at the rate of one and one-third inches per minute. But progress, though seemingly slow, was steady and each slab was lifted into place without a crack appearing in the surface.

A steel ring, set into the columns when they were cast, marked the end of the lift, when the ring emerged on the underside of the slab. With all rings at the proper location, the job of permanently locking the slab to the column was begun. This was achieved by teams of two men, who wrestled large and weighty semi-circle steel inserts into the rings; when locked into place the weight of the slab was transferred from the threaded steel rods to the inserts and thus to the column. The inserts were then welded to steel plates on the underside of the slabs and to the rings in the columns as well.

These welding operations made the roof, supporting columns and the caissons one integral unit. No part of the roof's tremendous weight is carried by the building's walls.

The roof's four sections will be knit into one piece in later operations by the pouring of other concrete sections around the edges where the slabs flank the walls, and by a large section in the building's center. This section, with two three-quarter inch joints, will provide the necessary expansion and contraction spaces.

But to return to "Big Lift." That operation was completed with the welding—except for one thing. Somebody had to go around and pull out all the 19,000 pounds of cartons that had stuck to the undersides of the slabs!

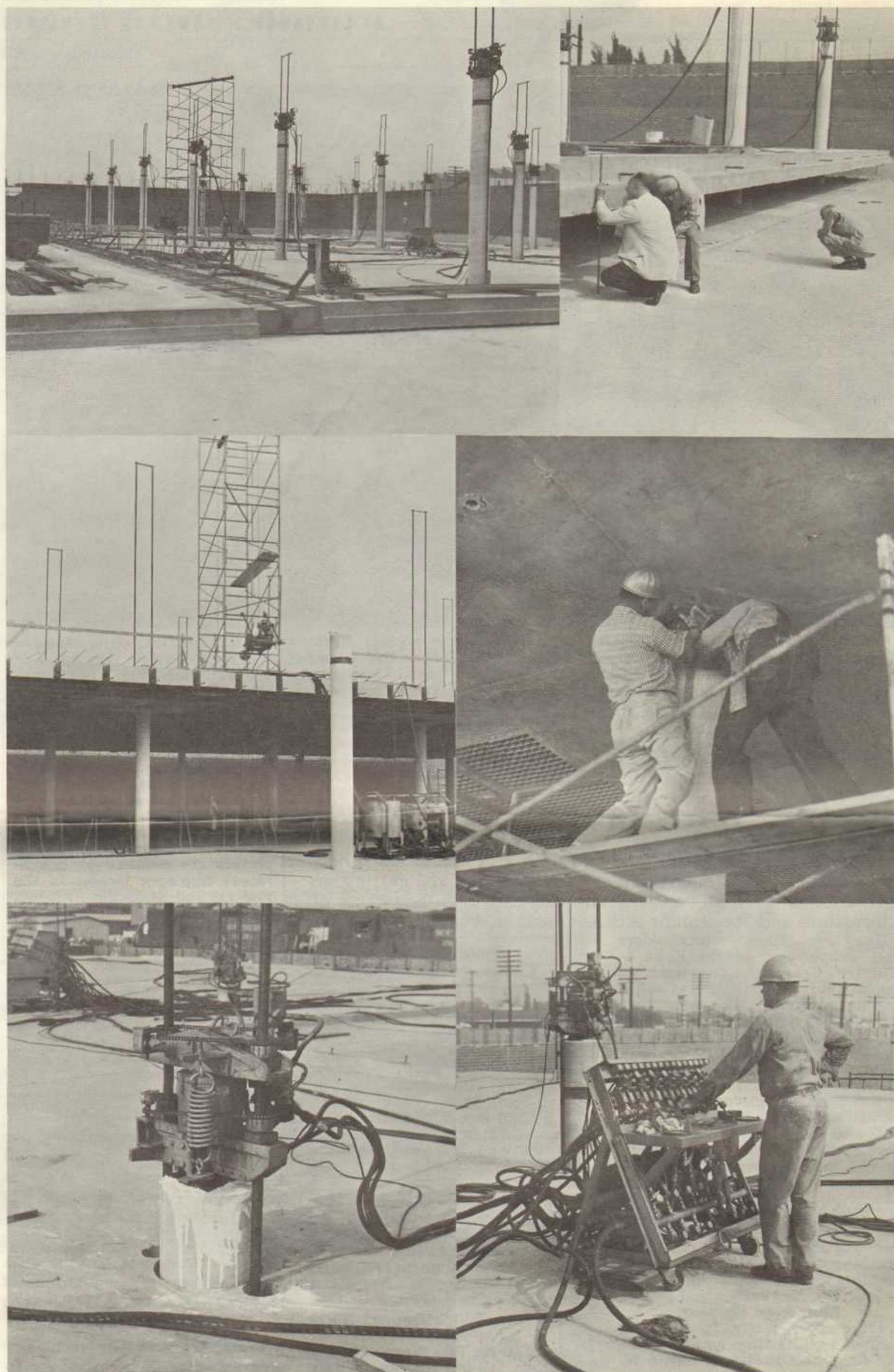
New Cafeteria Slated For Shipboard-Eng

Personnel of Shipboard Engineering are going to have their own cafeteria at their new Airway Avenue home. Building Engineering has completed plans for remodeling and refurbishing of the small structure between Bldgs 21 and 22 as an eating establishment and work was to start early in November.

When completed, Caterer Bob Bruce will have a kitchen and serving setup similar to that now in operation between Bldgs 1 and 2. Two serving lines will dispense hot lunches, sandwiches and a full line of hot and cold beverages.

Meanwhile, remodeling of Bldg 21, which will be the main Ship-Eng building, moves toward completion. Several sections temporarily housed in Bldg 22 were to move to Bldg 21 in late October. Others were to shift on weekends of Nov. 7, 14 and 21. The department expects to be completely moved by Jan. 1.

Up, Up, Up, An Inch At A Time--



Les Bentley Details Organizational Changes In Special Devices

Changes and realignments in the internal organizational structure of Special Devices have been put into effect by Chief Engineer Les Bentley. Objectives of the move are to fix responsibility and authority in some areas, to free technical staff to concentrate on technical areas and to eliminate day-to-day problems of program management from an important development section.

"Our growth, like the over-all growth of Librascope, has brought organizational problems," Bentley told LIBRAZETTE. "We believe that we are on the way toward workable solutions by the changes we have made."

Four promotions of engineers resulted from the change. They are:



Marv Ettinghoff, formerly supervisor of a circuits group, was upped to director of a project management section for electronic equipment. He also wears the hat of associate director of the FAA program, under Lane Wolman. A Chicagoan who got his start in technology at famed Crane Technical High school, Ettinghoff went on to Chicago's Herzl Junior College. He holds a B.S. in Physics from the University of Chicago and a Master's in electrical engineering from Illinois Institute of Technology.

Ettinghoff joined Librascope in February of this year from Space Technology Laboratory, where he was head of a circuit development group in the space physics section. Earlier he had been with Litton Industries and Lockheed's Missile Systems Division. Earlier still he spent three years with Librascope's old electronics division.



Wes Stupar, promoted from Senior Engineer to Project Manager, is in charge of development of the computer portion of the Air Traffic Control data processing unit under development for the Federal Airways Administration.

Stupar joined Librascope five years ago upon graduation from the University of California at Berkeley, where he took his degree in engineering. (He also was manager of Cal's 1950 crew). He is a native of Buffalo, N. Y., received his earlier education in public schools in Santa Ana, Calif. He is married and the father of a three-year-old daughter, Lisa Dawn, and makes his home in Burbank.

David E. Hartig, raised from Senior Engineer to Project Manager, heads the buffer unit group on the ATC data processing program. Hartig joined Librascope in January of this year, after working in digital system design for Aeronutronics and Electrodata. Earlier he operated in Central America with petroleum firms, using electronic techniques to evaluate the results of exploratory oil well drilling.

An Air Force veteran who spent four years in radar work, Hartig is a native of Minneapolis, received his early education in Robbinsdale, Minn., schools, and at Pasadena Junior College. He took his degree in electronic engineering from the University of Minnesota. He is married and the father of two youngsters, lives in Altadena.

Marty O'Neill (subject of a biographical sketch in the August '59 issue of LIBRAZETTE), was promoted from Senior Engineer to Supervisor of a technical services group. This unit, acting in support of the engineering groups, coordinates efforts in documentation, drawings, specifications and parts listing, operates an IBM data processing center which, among other functions, is producing a simplified

substitution for complex wiring diagrams in some phases of the FAA DPU assembly.

Systems Group

The realignment proposes to gradually free the Systems Engineering Section from its day-to-day responsibility for the FAA programs, and permit it to concentrate on long range technical planning, advanced techniques, preliminary design and proposals for new business. Lane Wolman continues as director, will gradually "phase out" of the FAA assignment.

The electro-mechanical section headed by Fred Merkel, which has been tied to the FAA program because of that project's high priority, has now been set up as a separate electro-mechanical and optical section, will devote its efforts to new ventures in those fields.

The planning staff of Harry Lyons and Jim Russell will continue its long range market planning. They also will be responsible for coordination of technical proposals and first level presentations.

In a staff memorandum outlining the department changes, Bentley observed that "... the ideal engineering organizational structure has not been devised, and probably never will be. Charts and memos can only serve as guides ... and, since an organization consists of people, the utmost cooperation on the part of each of us is required to fulfill our quite promising future."

Shutter Clique Names Winners In Pix Contest

Winners in the vacation photograph contest conducted by the Shutter Clique, were announced this month by President Sam Zarkin, Toolroom.

Grand Prize winner, black and white or color, was Paul Biegler of Bldg-Main, whose color slide of a stretch of Monterey coastline was judged best by Clique members.

First prize, black and white, went to Fred Machel, Insp, with a shot of a youngster relaxing in a patio chair.

First Prize, color, was taken by Fritz Held, Customer Service, with a slide of a pet Bassett hound.

Biegler was awarded a \$10 gift certificate on the store by the sponsoring Precisioners. Machel and Held each won \$5 certificates.

Name Wilkison Senior Engineer

Gene Wilkison, who became a five-year Libravet this September, was promoted from engineer to senior engineer last month by Chief Engineer Bob Dietrich of Airborne Engineering.



A bachelor of science from UCLA, Wilkison studied earlier at Cal-Tech and at Pasadena JC. Before joining Librascope he was with Beckman Instruments. He is a member of the engineering team which developed the CP-209 and ASN-24 airborne computers.

Originally from Borger, Texas, Wilkison is married and now makes his home in Montrose. He is the father of a daughter, Pamela, 4.

Up To Date Directory

Company-wide expansion has outmoded many of the telephone directory entries — and a new directory won't be published until major department moves are completed.

The present directory can be brought reasonably up-to-date, however, if all telephone users cooperate. Larry Cahill, resident engineer for the Pacific Telephone Company, urges all to enter new numbers as they learn about them — and thus avoid excess use of the system and wastage of time by calling wrong numbers.

Crystal Ballroom Chosen For Annual Christmas Dance

The Precisioners' annual Christmas dinner dance, high point of the year's social season, moves to a new location this year — the Huntington-Sheraton hotel in Pasadena — a setting far larger and more sumptuous than in any previous year.

"We have engaged the Crystal Ballroom, the San Marino Room and the Central patio," says Bob Garrett, Precisioner president. "This will provide room for as many as a thousand people. Since we don't expect quite that many to attend, nobody should be cramped for space."

Date for the affair is Saturday evening, Dec. 26. Dinner will be served at 8 o'clock, preceded by a cocktail hour starting at 7. Dress will be semi-formal.

Dancing will be continuous from 9:00 PM to 1:00 AM, with Al Harding and his orchestra alternating with a combo. Lynn Marshall, once of the Librascope staff, will sing with the orchestra. A full hour of extra entertainment, still being planned, also is on the program.

Tariff for the evening—\$5.25 per person, tip included. Tickets will go on sale the first week of December. Better get yours early!



Carl P. Christie

One year after signing on at Librascope as an electrical inspector, Carl P. Christie has been promoted from leadman to foreman in Inspection by Paul Metzger, chief inspector. A graduate of Glendale College, Christie came to Librascope after service with the Navy as an electronics technician. He lists as one exciting experience a visit to "Little America," headquarters base of the American Geophysical Year expedition to the Antarctic. He is quite literally one of the "biggest men" at Librascope, tipping the scale at 230 pounds and standing six feet four inches tall.

Bible Study Meetings

The Bible Study Club, sponsored by the Precisioners, is holding meetings each Wednesday during the lunch hour in Bldg 1, Edith Shelton, Purchasing, is the group's leader, and shortly will start a study of the Gospel of St. John. All interested Librascopes are invited to attend the sessions, from 12:00-12:25. Assistant Purchasing Agent C. M. Brown has made his office available for the meetings.

CREDIT UNION HOURS
11:30 a.m. to 12:30 p.m.
4:00 p.m. to 4:45 p.m.
Monday through Friday

Polaris Contract Upped To \$9 Million; Imm Hails Teamwork

Librascope has been awarded a new contract to produce additional units of the analog computer for the Polaris missile. Total amount of the contract has been upped from \$6.7 million dollars to \$9-million plus, according to Executive Vice President Bill Bratton.

The new contract came as Shipboard shipped the first production model of the computer to General Electric, prime contractor of the missile's guidance system. Over-all systems contractor is Lockheed's missile division.

Librascope's first production unit is destined for the USS George Washington, the Navy's first nuclear-powered fleet ballistic missile submarine. Within hours of arriving at GE's Pittsfield, Mass., ordnance center, the Polaris computer was installed in the test birth area and GE engineers had started its integrity tests.

The computer was shipped Oct 10 by air cargo plane, after a crew of Shipping personnel had worked all of the previous day and much of the night. They worked so well and so fast that the shipment was ready at Lockheed airport before the arrival of the huge transport chartered to fly the computer directly to Pittsfield.

Concentrated Effort

Shipping's efforts were the tag-end of two weeks of concentrated work by Librascope engineers and adjusters, aided by Fred Augenstein of General Electric and a group of his engineers, to prepare the equipment for final acceptance tests. These were completed on Oct 9, the day before shipping.

From a pleased GE came this telegram to President Lewis Imm, signed by M. D. Voorhees, chief buyer on the Polaris project:

"You have been continuously aware of the problems in design, development and fabrication of this equipment ... problems which necessitated daily changes to meet operational requirements ... requirements which border on the threshold of engineering-state-of-the-art."

"Your people have given untold hours of effort into this project, in many cases at great personal sacrifice, to accomplish this engineering and production feat. The result is a quality product on which Librascope can confidently place its name. General Electric heartily congratulates you on this achievement."

An equally-pleased President Imm, in a letter to all management personnel, had this to say about the Polaris effort:

"I want all of you and your people to know about this and to pass on my personal thanks to every individual who had anything to do with the accomplishments which you have collectively achieved on this job for General Electric ... one of our nation's major defense programs."

Sertic Initiates Training Classes

The first of a series of Training Section classes for second shift personnel has been concluded and a new one is in the works, according to Walt Sertic, training director.

Seven leadmen attended five two-hour sessions conducted by Sertic on the techniques of how to teach a job to manufacturing employees. Using the workshop technique, each student was first exposed to the theory of the problem, then asked to demonstrate how he would do the job. Roles were then reversed and the student became the instructor.

"It was a good class and I believe everybody in it learned something of value," says Sertic. "I know that I did—and I was the teacher!"

Those taking the instruction were: Carl Frain, Jig Boring; Charles March, Drill Press; Thole Isebrands, Lathe; Helmer Peterson, Mill; Earle Tempesta, Gears; Ernest Wekerle, Boring Mill, and Jim Williams, Plating.

Here's Timetable On Polaris Project

At Librascope the Polaris project moved rapidly from design through manufacture. Although it was several times expanded to include devices not embraced in the original proposals, Librascope met the schedule on everything that was company-produced, lost time only when delayed by late delivery of outside-produced components.

Actually, there were three projects running side-by-side, all part of the over-all system. These were:

1) The Mariner project, which is a ship-based computer that permits the entire Polaris system to be tested and evaluated before an actual submarine is equipped with the system.

2) Shore-support equipment, essentially consisting of devices used to check out the missile itself;

3) The Polaris computer, the ultimate product, to be installed in Navy nuclear submarines as part of the fire control system.

Design and manufacture of the Mariner and Polaris systems ran parallel. Heart of each is essentially the same, but the packaging (size and shape of the units) varies considerably.

Project Timetable

Time-table of the triple-project ran like this:

Sept. 1957. Librascope invited to submit proposals for shore-support units. Shipboard Engineers go to GE's Pittsfield, Mass., ordnance plant for briefings. So do seven of our competitors.

One week later Shipboard staffers, after burning much midnight oil, complete and submit proposal. Dec. 1957. Librascope, beating all competition, is successful and lowest bidder, is awarded 200-thousand-dollar contract.

Jan 1958. Engineering group formed, with Arnold Larson as project manager. Others on team, Project Engineer Dick Potter, Senior Engineer John Gustafson and Senior Design Specialist Vince Nahrstedt. Ultimately, 15 designers and 35 draftsmen are added to group.

Feb 1958. Scope of effort is expanded by GE to include design and manufacture of Mariner prototype. Additional contract — \$250-thousand — is awarded.

Ship First Unit

April 1958. First unit of shore support equipment has moved through study, design, manufacture and shipping to customer.

June 1958. GE furnishes description of what Polaris fire control system must accomplish, physical dimensions and other data. Librascope submits proposal, is awarded \$16-million-plus contract.

August 1958. Additional shore support equipment requested, including the missile checkout device. Ultimately 12 of these are built, are now being used by the Navy, Lockheed, GE, MIT and other organizations engaged in the Polaris project.

Sept 1958-June 1959. Over-all design of the Mariner and Polaris computers forges ahead, various modules are completed. As prototypes are built and checked out, they are shipped to GE for incorporation in the computer's digital system mockups.

July 1959. First complete Mariner computer is built, checked out and shipped. This also serves as prototype for Polaris computer.

Oct 10, 1959. First production model of Polaris is shipped by chartered air-freighter to GE.

Libravets Celebrate Librascope's 22nd Year

Veteran Librascope employees, spouses and escorts, turned out for the 8th Annual Libravet party Oct. 23 at Sportsmen's Lodge, saw 17 fellow guests receive 10-year service award buttons and one other receive a 30-year award.

A crowd of just under 250 was present for the occasion. High point of the evening was a brief talk by President Lewis W. Imm in which he paid tribute to employee loyalty to the company as a potent factor in Librascope's recent growth and forecast a continuation of company expansion.

Theme of the evening was the company's explosive growth, symbolized by centerpieces on the tables depicting Librascope as a western boomtown.

George Kucks, Materiel Control, who has been 15 years with Librascope, was the recipient of a 30-year service button from Mr. Imm, who founded the company just 22 years ago. This seeming paradox is explained by the 15 years of seniority that Kucks brought with him when he transferred from another GPE affiliate.

Those receiving 10 year service buttons were:

Wayne Blackburn, Arnold E. Brown, Clare Burgis, Ed Dobstaff, Harold Engle, Henry Liebetrau, Walt Newcomer, Jr., Henry Norris, Orville Oliver, Harry Plunkett, Paul Porco, Earl Rearley, Ray Rockwell, Juanita Vanderford, John Veytia, Jr., Jay Wiltsie and Lane Wolman.

93 New Libravets

A total of 93 Libravets became 5-year Libravets this year. All told, 579 employees with five or more years of service are now on the roster. Of these, 126 have served 10 or more years.

In his talk Mr. Imm sketched an outline of company plans and told about new products now under development. He reported that more than 25 per cent of company business this year will be commercial and that the desired 50-50 ratio of military-commercial production is attainable within the foreseeable future.

Speaking in detail about the explosive bridge wire system developed by Librascope's Sunnyvale division, Mr. Imm declared that it

will be used in such new missiles as the Polaris, Pershing and Minute Man. He forecast wide use of that system in future air transport and cargo ships using jet-assisted takeoff power and saw strong possibilities of its use in the explosive forming of complex shapes in automobile, furniture and airplane manufacture.

Cites FAA Device

Mr. Imm cited as a major example of Librascope's non-military operations the development of the FAA data processor by Special Devices and asserted that the company has a good chance of major participation in future production of this complex computer system.

Librascope-Burbank is enjoying good business and future prospects are excellent, Mr. Imm said. The division will shortly present a new, transistorized version of the LGP-30 general purpose computer, sales of which continue to increase steadily, despite a very competitive market. Delivery of Burbank's first Libratrol-500 process control computer will be made early in November, he said, and prospects for that product's future sales are excellent.

Following Mr. Imm's talk, the partygoers enjoyed several hours of dancing to Carroll Wax's orchestra, ended the evening with a hearty buffet breakfast at midnight.

Arrangements for the party were made by a committee composed of Galen Mannen, chairman, Keith Kinnaird, Carl Culver, Jr., Dotty Gifford, Marie Sagar and Ed Mason.



Employment Hits New High; See 3,200-Mark This Month

Total employment in all of Librascope's divisions is now at the highest point in the company's 22-year history. The 3,000-mark was reached and passed on the same day—Oct. 23—and, if procurement objectives are attained, the total will be well past the 3,200 mark by mid-November.

The 3,000 figure, according to C. P. McKeague, personnel manager, represents an almost 50 per cent increase over the payroll total at the beginning of the year.

All divisions and departments are at their highest-ever levels.

Largest single employer is Manufacturing, with almost 1,300 on

its lists. Engineering is second with almost 950; Administration is third with just short of 400. Burbank at not quite 350 and Sunnyvale with just over 100 are fourth and fifth.

Total employment at the Glendale main plant is well over 2,500.

Employment will continue to rise, President Lewis W. Imm told those present at the annual Libravet party last month. By the end of 1960, he said, the total figure should hit 4,600, on the basis of production orders now in hand.

Credit Union Leader Urges Buying Caution

Librascope's credit union urges all employees to proceed with caution in making use of the various new credit card systems now available—and to look for the hidden "hook" of cost.

Many of the systems, says President Ted Donley, are simply a "finance" plan in different dress—and using them can cost the cardholder as much as 15 per cent a year in carrying charges.

"For making sizeable purchases you are far better off borrowing from the credit union," Donley says, "or taking out a bank loan, at a pre-determined rate of interest. In that way you know what hiring the money is going to cost."

"Piling purchase on top of purchase with a credit card has you, in effect, carrying a loan for each purchase—for which you pay handsomely. And it certainly isn't very good economics to 'finance' small purchases if there is a carrying charge involved."

"Pay cash for your day-to-day needs, and save your credit for the big things."



Paul Nelson, electronic and mechanical technician in Adjoining, has been promoted to Foreman on the night shift by John Blake, Adjoining General Foreman. Nelson, a Librascoper since Feb 1958, is a native of Syracuse, N. Y., went to school in Washington, D. C., and Alexandria, Va. He is a veteran of four years in the Navy as a sonar technician, came to Librascope from Hughes Electronics.

TEN YEAR Libravets—17 of them—line up for the news camera in top picture, after receiving their service pins and certificates from President Imm at annual Libravet party at Sportsmen's Lodge. Below left, Mr. Imm congratulates George Kucks, Materiel Control, company's only 30-year vet. Same row, Mr. and Mrs. Imm entertain group of old-timers at their table.

DANCE FLOOR drew many of the partygoers to try out their steps to Carroll Wax's music, including Mr. and Mrs. Imm (left) and Bldg 5 receptionist Pat Hansen and husband Al at right. Between dances, lots of visiting at the tables, as Libravets who may work five miles apart, seize chance to visit with old-time colleagues.

Shipboard Promotes Two Engineers, Three Planners

An engineer has been promoted to senior engineer, a junior to full engineer and three engineering planners also have been upgraded in Shipboard Engineering. They are:

Gray Lange, a Librascope since Dec 1955, was promoted from engineer to senior engineer by Section Director Jerry Deitz. He formerly was with Northrop Aviation and IBM. A native Angeleno, Lange attended Los Angeles Elementary schools, South Pasadena High and USC. He currently is completing his work for a BS at USC. He is married and makes his home in La Crescenta and presently is assigned to digital development work on ASW systems.

Dick Schleicher, who came to Librascope in Sept. 1958, was raised from junior engineer to engineer by Project Manager Dick Potter. Schleicher was born in New York City, attended public schools there and in San Diego. He is a graduate of Valley Junior College, currently is completing his work for a BS degree at USC. He expects to graduate in June, 1960.

Schleicher joined Librascope as an electronic technician, was promoted to junior engineer last January. Earlier he had been a research technician with Lockheed. He is married, the father of Laurie, 7, and Kim, 3, and makes his home in Reseda. He is assigned to circuit and system design on the Polaris project.

Don Augustine, came to Librascope originally in Jan 1957, has been promoted from engineering planner to staff assistant to Section Director Arnold Larson. A graduate industrial engineer from Millikin University, Augustine has a background of work with General Motors and Borg-Warner, as methods and quality control engineer, also has operated his own business. At Librascope he started as a design draftsman, became a designer, then an engineering planner.

Augustine was a B-24 gunner with the Air Force in World War II, went to college in his home town of Decatur, Ill., after leaving

service. In Larson's group he has been active in the administrative end of the Mariner and Polaris projects. He is married and makes his home in Montrose.

Larry Daniels, a June '56 graduate in business administration from UCLA, has been upped to staff planner from engineering planner by Jack Pelamati, assistant to Chief Engineer Tom Bryant. He is a New Yorker by birth, got his early education there, joined Librascope in June of this year.

While at UCLA, Daniels was a teaching assistant and lecturer, currently is working on a Master's degree at USC. He came to Librascope from Rocketdyne, where he spent 2½ years following graduation from UCLA. He is married and lives in North Hollywood. The budget form currently in use throughout the plant is one of his products and a new overtime form is under consideration.

Tom Ross, who came to Librascope in Sept 1954 as an adjuster, has been promoted from engineering planner to staff assistant by Section Director Myron Prevatte. Originally from Butler, Pa., Ross has been a Californian since the end of his five year hitch in the Navy as a fire controlman.

From adjuster Ross moved to instrument technician, then to instrument maker, electronic technician and senior technician before switching to technical administration. He has been active in the RAT and ASROC projects. Currently he is carrying a heavy after-work load as a college student, in pursuit of an engineer's degree. He is married and lives in Inglewood.

The Librazette

Copyright 1959 by Librascope, Inc.
808 Western Avenue, Glendale.

Editor Bill Keith
Art Editor Photographers
Keith Kinnaird Earl Crawford and
Fred Beindorf

Photographic layout by Andy Cook



ACTION at 4:30 for all handlers of classified material, is lockup time. Security Officer Don Knox and staff aide Carolyn Horton act out the proper routine for LIBRAZETTE's camera as a reminder that proper safe-guarding of classified documents is a first—and last—order of everyday operations at Librascope. (Beindorf photo)

Xmas Shopping Note

The Precisioner store will have a special shop for Christmas gift buyers, according to Manager Eileen Brown. One of the trailers formerly occupied by job-shop draftsmen near the Guard's gate has been taken over for the season and already is filled with merchandise which far-seeing Eileen bought months ago. The trailer shop will be open Monday nights from 7-9, as well as the regular store hours.

Blackburn Directs New Research Dept.

A new department of applied research, headed by Wayne Blackburn, begins operations in Bldg. 3 within a month. Its mission: to investigate new concepts in such advanced electronic areas as solid-state physics. The planned end-products: improved techniques and components for which there is a known or future demand.

Creation of the new department, which will complement Hal Hamilton's advanced research department, was announced by Executive Vice-President Bill Bratton.

In outlining the new department's objectives Blackburn told LIBRAZETTE:

"The space age is demanding miniaturized equipment which operates at high speeds and elevated temperatures. Industrial processes are becoming more complex and need to be constantly monitored at many stations with delicate equipment. It will be our job to seek out techniques to solve these intricate problems and produce working prototypes."

In the meantime, Blackburn said, the results of applied research efforts will be funneled into the various departments to keep them abreast of new developments, so that no time will be lost in making use of new components.

Research Under Way

Specific research and development efforts already launched by Blackburn while head of Commercial Engineering, will be carried forward by his group now operating in the Clubhouse. Other activities he directed in the Burbank division buildings have been absorbed by Charlie Krill's Burbank engineering group, with Krill as Burbank chief engineer reporting to Manager Dick Hastings.

Projects now under way at the Clubhouse include:

Investigation of new light filters, expected to have wide use in chemical analyses, temperature monitoring in industrial processes, and guidance for outer space vehicles. Photoelectric devices to make possible long range observation of things which the eye can't see. These devices will utilize a cell in which the operating temperature is minus 196 degrees centigrade.

Computer memory devices capable of actions measurable in billionths of a second.

Luminescent display of data through use of a device needing no filaments—and only a one-thousandth of an inch thick. This is ex-

Burbank Ships First Process Computer

The Burbank division is scheduled to ship its first production unit of the Libratrol-500 process control computer Nov 5, according to Project Director Joe Ator.

The slick and handsome package (winner of a design prize at this year's Wescon show) will travel in a special van from the Verdugo street building to headquarters of the Public Service Company of Colorado in Denver.

Systems Engineer Hugh Jacobson and Engineer Henry Deutsch will go to Denver in mid-November to supervise installation and see the \$85,000 device through its first days of operation.

Imm Named Trustee Of HEAR Foundation

President Lewis W. Imm has accepted appointment to the board of trustees of the HEAR Foundation, and will serve as honorary chairman of the group's \$100,000 Budget and Research fund-raising campaign.

In his letter of acceptance to Dr. Ciwa Griffiths, founder and executive director of HEAR, Mr. Imm declared:

"Your recent presentation clearly demonstrated to me the urgent need for helping youngsters with critical hearing losses. Further, it indicated that the Foundation's fresh new approach to the problem is attaining positive results.

"By effectively combining your own auditory training methods with the magic of electronics, you are enabling deaf and hard of hearing infants and children to lead normal or nearly normal lives. You are helping them to enjoy all the happy pursuits of a normal childhood in a world full of happy sounds.

"Because these youngsters have learned to listen, then to vocalize and to communicate at the HEAR Foundation, they will become productive members of our society. Their future contributions will better equip our nation to meet the challenge of the future.

"Believing sincerely in the importance of your program and long-term goals, I shall be happy to serve as Honorary Chairman of the 1959-60 Budget and Research Campaign, and as a member of the foundation's Board of Trustees. I earnestly hope that my contribution may perhaps further enhance the over-all effectiveness of the HEAR Foundation."

5) On top of many factories there are spinning metal globes having flutes or vanes. These are for the purpose of forcing air in or out, or something else — Which? (Copyright 1959, Librascope, Inc.)

Would you like to get honorable mention with a new problem in our next issue? Requirements: it must be "different", without numbers and have an unexpected answer. Send it to Ed Quilter, Military Relations, Glendale, Bldg. 3.

Quiz Without Numbers

- 1) After a siphon transfers as much water as it can, all the water runs out of it. Will this be true if a full loop is made in the siphon?
- 2) What is the shape of the smallest airfield which will give the same take-off run in all directions?
- 3) What is the smallest number of nail holes that must be punched in a beer can to guarantee that it will sink if thrown into the ocean (without beer)?
- 4) If all visible planets in the sky appeared only as triangles or quadrilaterals, what deduction could be made about the shape of the earth?

McDonald Moves Office

Engineering wage and salary administration, headed by Ray McDonald, has moved from Bldg 3 to Bldg 14 in the Rodler street area. The telephone number is 491 (Clubhouse switchboard). The move is preliminary to permanent location in the Frances Court building now going up.



END OF visual confusion, at least, over Librascope's two Chuck Flickingers, can be found in this news photo. That's Charles "H" Flickinger, foreman in Assembly, on the left, and that's Charles "E" Flickinger, engineer with Airborne Engineering, on right. Now if the Mailroom, Payroll, Credit Union, Personnel and all others will cooperate, mail, pay checks, bills and official notices will always go to the right man.

(Beindorf photo)

Hoopsters Gird For New Season Seek More Men

by George Spelvin

With some players so eager for action they are turning out for extra practice sessions, the Champion Precisioneer basketball team is fast getting ready for the 1959-60. The boys aim to repeat last season's sweep of honors in the Burbank Industrial League, when they copped the league championship and the Shaughnessy playoffs, too.

Four of last year's starting team—Neil Hinton, Ron Roderick, Nelson Manzanarez and John Kennelly—are back on the courts, as are regulars Jim Arena, Bob Cottriel and Dick Johnson. But Jim Quenomen and Bob Peterson, quenened by late working hours and school work, are unable to take part this year. They'll be missed.

Coach Joe "Tiger" Mesch has high hopes for a group of newcomers, however, says they look like good prospects. All have plenty of experience behind them in high school and college. They are:

Dave Brown, Tool Design; Roy Johnson and Bob Curran, Methods; Jim Kostalecky, Bldg-Maint and Don Mitchell, Spec-Dev draftsman.

The squad is not yet complete and all (male) Librascopers are invited to try out. See Business Manager Charlie McKallor, Timekeeping, for more information.

Practices are held Monday and Thursday evenings at McCambridge Park fieldhouse, Burbank. Several practice games will be played shortly and the regular season gets under way in mid-December. Check the bulletin boards for the schedule. Admission is free and all Librascopers are invited to come out and root for their team.

Holey Rollers Hold Slim Lead In Swing League

Although the Holey Rollers dropped three out of four games to the Mazel Kins Oct 31, the quartet managed to hold on to its lead in the Swing League, by the narrow margin of one game. The Rollers now have won 18 games and have lost 10.

Setty's Snollygrossers are in second place, as the result of a 3-1 win over the Spotters, for a season total of 17-11. The Musketees are in a three-way tie for third place, with 15-13, via a 2-2 split with the Snafus. Also holding down the third spot are the Bloopers and the Gutter Rats, who took three games each from the Pickups and the Moo Fooz, respectively.

Fourth place is a two-way tie between the Pickups and the Spotters, at 14-all. The Mazel Kins are in fifth place with 13-15; the Snafus hold down sixth at 10-18 and the Moos Fooz are in the rear guard position with 9-19.

Gerald Gibbs Joins Contracts Section

Gerald R. Gibbs, lately contracting officer and chief of a procurement section at the Air Force's Wright Air Development Center, Dayton, Ohio, joins Contracts Administration Nov 17 as Contracts Administrator for Airborne Engineering. His appointment was announced by Cliff Godwin, director of contracts.

Gibbs, who has just completed a tour of duty as an Air Force reservist, is a graduate in business administration from Coe College at Cedar Rapids, Iowa. He has been taking graduate work in industrial management at Ohio State while on active duty as a 1st Lieut.

The new Librascoper was an Air Force ROTC officer at Coe, went



Libra Sport News



PRECISIONEER sports award dinner featured presentation of trophies won by Librascope sportsmen, to the company, with Sid Briggs, Assistant to the President, on the receiving end. Upper left, top, Carl Culver, Jr., presents AIRC golf trophy to Briggs. Upper right, Charlie McKallor hands over trophy won by his beloved softballers. At bottom, Fred Killips presents LABA bowling trophy. In background, Bob Garrett, Precisioneer prexy.

MOVING DAY has come every weekend for Shipboard personnel for weeks past, continues for several more. Left, Project Manager Dwight Roof checks his gear before Bekins truck takes it away to Bldg 21. Right, Pacific Telephone installers Jack Cole, (R) and Jack Viggars, hook up phones to link Shipboard with outside world.



Trophy Winners Honored At Sports Dinner

More than a hundred Librascopers turned out for the First Annual Precisioneer Sports Award Dinner Oct 17 at the Five Horsemen's Inn at Pickwick Bowl, to pay tribute to the athletes who carry Librascope's banner into sports arenas of the Southland.

Trophies won by Librascope teams in softball, basketball, bowling and golf were presented by team captains and managers to Sid Briggs, Employee Relations director, in brief ceremonies following the dinner.

The parade of gold and silver plate to the speaker's microphone included the 1958-59 Burbank Industrial League championship basketball trophy and the Shaughnessy playoff cup as well; the 1959 Burbank recreation department AA-Major League softball cup; the AIRC (Associated Industrial Recreational Club) championship trophy won by Librascope's golf team and the Los Angeles Bowling Ass'n Director's cup for Class "B" teams, won by Librascope bowlers early this year.

The presentations, with a brief history of the winning organizations, were made by Charles McKallor, softball team business manager, acting for Manager Al Akins; Carl Culver, Jr., in behalf of the golf association; Fred Killips, for the bowling team and McKallor, again, as manager of the basketball squad. Joe (Tiger) Mesch, coach of the championship hoopsters, was on vacation and unable to attend.

Kilroy's Klick Widens Lead Over Keglers

by C. Culver, Jr.

The Kilroy's Klick quintet lengthened their lead over the rest of the 18-team pack in Mixed League bowling Oct 29 by taking three out of four games for a 24-8 season total from Jennie's Brood at the Grand Central Bowl. Four Hits and No Miss lost its slim hold on second place, falling into a four-way tie with Jennie's Brood, Four Guys and a Doll, and Alpha Lada Schixa, all at 20-12.

Four Dashes and a Dot hold third place with 18-14. The Happy Five hold fourth place with 16½-15½. Fifth place is two-way tie between Carl's Cadets and the Odd Balls at 16-16.

Sixth place is a triple between the Sweepers, the Hapa Haoles and the Pin Busters at 15-17. Ed's Tornadoes hold seventh place in solo with 14-18. Other standings: 8th—the Lucky Strikes, 13-19; 9th—the Woodpeckers, 12½-19½; 10th—The Rejects, 12-20; 11th—The Bandits, 11-21, and 12th—The Sleepers, 10-22.

No Thoroughfare!

The Receiving Dept. in Bldg 1 has been put "off limits" for all personnel except those working or having business there. Employees are requested not to use the area as an entrance or walkway, in line with required security measures.

Librascope, Inc.
808 Western Avenue
Glendale 1, Calif.

First Class Matter

on active duty as a pilot trainee. "But they washed me out during primary flight training," Gibbs says, "when they decided I needed to wear glasses to crack all the books I had to study." Assignment to WADC followed primary flight and Gibbs spent the remainder of his active duty there.

Well known throughout the aviation and electronics industries, Gibbs chose Librascope over numerous other firms seeking his services. He is 26, married to the former Miss Ann Kettler of Rockford, Ill., a fellow student at Coe. They are the parents of Timothy John, 11 months old, and are looking for a home in the Valley.

CREDIT UNION HOURS
11:30 a.m. to 12:30 p.m.
4:00 p.m. to 4:45 p.m.
Monday through Friday