Annual Picnic Great Favorite With Kids

Camera Club Photos

PICNICS ARE ESPECIALLY for kids. And, the Librascope summer picnic was no different. As shown above, the small fry really had themselves a day at Mountain Oaks Park. The swimming pool did a fine business all afternoon, and the refreshment booth was more than well patronized.

Two Thousand Have Big Time At Annual Precisioneer Picnic

Nearly 2,000 Librascopers and their families wound their way along the Verdugo foothills to Mountain Oaks Park for the annual picnic September 11. The day was perfect for an outing, and the many oak trees and picnic tables were appreciated by all.

The crowds of children swarming over the grounds gave evidence that Librascope employees are prolific. The kids enjoyed the numerous rides, cotton candy, popcorn and games. Ernie Wenberg was on duty as guard.

The egg throwing contest attracted the largest audience, and developed into a close contest until the Lehmans won with a mighty heave. Paul and Mary Litvinoff made the biggest splash. Rose Somerfield latched on to a luscious egg and decided to crown hubby Lloyd.

MANY SWIMMERS

Bernie Schorr from McCambridge Park did a fine job directing the games, and Eileen Brown was sure busy distributing the prizes, baloons and bubble gum. The swimming pool, beautifully situated on a high knoll, proved very popular.

Saw Dick Schmauss enjoying himself by throwing his boy into the water. Seemed to have a difficult time, though, with his dripping moustache.

The water show was terrific, and was enjoyed by about 250. Jack Nelson and Rose Somerfield were the first on the dance floor at 1:45 p.m. Lloyd Somerfield was trying to keep up with several young chicks dancing the bunny hop. You guessed it — he gave up.

Angie Willis did a bouncy dance to Sh-Boom. Helen Palmore cavorted around the dance floor like a peppy young babe.

The softball games were enjoyed by young and old, and when the swinging was over the Stalwarts had beaten the Swing Shift, 6-2, and the Precisioneers had beaten the Swing Shift, 13-1. (Ouch!)

HARD WORKERS

For arranging this picnic and working hard to see that it was a success, Loy Thompson, Cesar Goldstein, George Henderhahn and Bud Bradley should be congratulated, as well as many others who helped keep the ball rolling.

Following is a list of prize winners at the picnic:

Barrios, Tony—1st boys, P-Nut; 2nd boys and girls, wheel.
Bartis, Elaine — 1st girls, pony; 2nd girls, sack; 2nd girls, 3-leg.
Bartis, Irene — 1st girls, sack; 1st girls, pony.
Blahofski, Terry — 2nd girls (8-12), 50 yds.
Bright, Greg — 2nd boys, pony.
Brown, Gary — 1st boys, pony; 2nd boys, 3-leg.
Brown, Jeff — 1st byos, pony.
Brown, Peter — 2nd boys, 3-leg.
Camp, Joyce — 1st girls, P-Nut; 1st girls (9-12), 50 yds.
Davis, Perry — 1st boys, 3-leg; 2nd boys and girls, wheel.
Dobstaff, Janet—1st girls (6-8), 50 yds.
Emond, Christian—1st boys and girls, 3-leg; 1st girls, 3-leg.
Harrison, Sandy — 1st boys and girls, wheel; 2nd boys and girls, 3-leg.

(Cont. on Page 3)

McAboy Victorious In Calcutta Playoff

Bill McAboy, assistant chief engineer, shot a sparkling game to defeat vice-president Bill Bratton, 6 and 5, in the finals of the Librascope Calcutta Playoff golf tourney at the Oakmont Country Club Friday, October 1.

McAboy apparently has what amounts to a permanent lease on the title, this being the sixth time in seven years he has taken top honors.

The first phase of the Calcutta took place at the Fox Hill course in June, when the 16 players with the lowest gross scores qualified for the playoffs from an original field of 53 entrants.

In accordance with the rules of Calcutta play, the qualified players were "auctioned," and the person "buying" the player collects the prize money. Each player was given the prerogative of buying 25 percent of himself if he chose to do so.

An arbitrary limit of $10 apiece was placed on each man, and the $60 thus collected was divided as prize money—eight dollars to each of the first eight winners; $12 to the next four winners, and $16 to the winners of the semi-final and final matches.

Thus, perhaps the real winners should be announced as Bill Singleton, master scheduling, who collected $52 on McAboy's efforts; and Bob Berg, production, who realized $36 on Bratton.

Qualifiers in addition to McAboy and Bratton were Bob Berg, production, Arnie Brown, engineering; Bill Brown, accounting, Frank Copple, methods; Carl Culver, assembly; Ken Gowan, jig boring; John Grieshaber, accounting; Bert Haber, engineering; Chuck Keesling, gear hobbing; M. L. Lindahl, vice-president; Bill Roxbury, adjusting; Glen Seltzer, engineering; Bill Singleton, master scheduling; and Ed Sullivan, methods.

McAboy reached the finals by beating Copple, Bill Brown and Keesling, while Bratton turned back Haber, Culver and Gowan, who owned the lowest qualifying score of 81.

Carl Culver, chairman of the tourney, was in perhaps the toughest spot of all. President Lewis Imm bought his chances in the tourney—which should give a guy lots of backing. However, the first two men he faced were our two vice-presidents, Messrs. Lindahl and Bratton. What to do? Carl met the situation very nicely by winning one and losing one, and at the same time managing to save all but two dollars of Mr. Imm's investment.

LIBRAZETTE
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Several Thousand See Plant At Librascope's Open House

Sunday, September 19, the doors of Librascope's three plants were thrown open to relatives and friends of company employees — for the first time in many years.

For many families of workers here it was their first chance to see the plant where husbands and fathers worked, and several thousand people took advantage of the opportunity.

The occasion for the open house, of course, was the recent construction of our new administration and engineering building.

Upon entering the lobby, visitors were treated to the sight of masses of beautiful flowers, sent to Librascope by its many friends and well wishers.

The carpeted area was a major source of interest for visitors, who could be heard exclaiming over the well appointed offices and modern conference rooms. President Lewis Imm's office came in for a large share of attention.

Employees could be seen in every office and corridor, pointing out places of interest and explaining to family and friends where they worked and what they did.

(Cont. on Page 3)

Librascope Employee Drowns at La Jolla

Robert Simmons, 35, statistical clerk in the analysis department, was one of three people who were drowned Sunday, September 26, in the heavy surf near La Jolla.

Simmons had been swimming at the Wind and Sea Beach with several friends, according to reports. He disappeared at sea after he had headed into the water with a surfboard. It was presumed he was struck by the board or some other object in the surf. His body was recovered by searchers Wednesday, September 29.

Simmons, who had worked at Librascope only about three weeks, is survived by his mother, Mrs. May B. Simmons, of Pasadena.

Minard Heads New Company

Official bulletins released early this month announced the appointment of Librascope's production manager, Everett S. Minard, to the position of division manager of the newly established Minnesota Electronics Corporation California Associates in Santa Ana.

The newly formed division, to be known as MECCA, will be concerned chiefly with the development of food processing equipment and electronic controls for such equipment, and is nicely timed to coincide with a tremendous upsurge of interest in new types of processing equipment. The first project for development will be a special automatic can filling fachine—an extremely versatile device with wide application.

The appointment of Minard as division manager is considered a fortunate choice due, among many other qualifications, to an intimate knowledge of food processing equipment. Minard came to Librascope in 1951 as chief design engineer, and became production manager in November, 1952. Before coming to Librascope he spent 10 years with Pfaudler Co., Rochester, N. Y., as plant superintendent, with responsibility for the design and manufacturing of all food processing equipment, as well as a line of chemical and brewery tank equipment.

In addition to food processing equipment, MECCA also will be engaged in the development of a new line of precision potentiometers, aimed at meeting an increasing demand throughout the United States. Development of this line is expected to begin at an early date.

It's Time to Start Yule Shopping

Although the summer heat was still with us when this article was written, this month is the time to begin about Christmas gifts.

Eileen Brown, at the Precisioneer Store, reports that one of the specials for the coming season will be watches. Some of them are up to 50 percent off. So, pick out your Christmas watches now.

The specials for this month include a seven-piece kitchen tool set for $5.50, automatic electric toasters at $11.50, and part wool blankets in lovely shades, in a zippered plastic case, for $5.50.

Also, Eileen notes, the Precisioneers now carry the new Lewyt vacuum cleaner on wheels.

Scene From Recent Dedication

LIBRASCOPE'S PRESIDENT, Lewis Imm, addresses the crowd gathered before the new administrative-engineering building at the dedication ceremonies held September 17. Seated on the platform with Mr. Imm are (front row, left to right) Capt. R. F. Sellers, acting commander, USNOTS, Inyokern; Mr. Hall Hibbard, vice-president of engineering at Lockheed Aircraft; Mr. Harold Wright, mayor of Glendale; (back row, left to right) Capt. F. C. Manville, Naval Res. Ordnance Plant; Admiral J. S. Laidlaw, (USN Ret.) and Capt. R. L. Adams, USN, Bureau of Ordnance, Ma.

Large Accounting Group Poses for Camera

MEMBERS OF Librascope's accounting section gather together for the photographer. (See story below.) Seated from left to right are: Marie Andresino, Nell Cox, Muriel Brown, Ila Musko, Vi Tarbell, Lorraine Thompson, Thelma Robertson and Laura Pond. Standing from left to right are: Doris Tasker, Margie Dillon, Jean Ball, Joy Ward, Nettie Stone, Esther Runge, Bill Stickler, Bernadette Johns, Lea De Capite, Chuck Freeman, Carolyn Geiger, Ray Carbans, Edie Wrobel, Evelyn Schaffer, Cleta Berlin, Mary Robson, Dot Arbogast, Bob Laperle, Johnny Grieshaber, Art Curley, Al Sharp, Bill Bell, Bill Burns, Bill Brown, Johnny Anderson, Eloy Barrios, Peggy Mathews and Don Barnes. In the section, but not shown in the above picture, are: Gene Kulesza, Bob Gorman, Mildred Gregorwicz, Henry Van Doorne, Jeanette Tetrault, Mildred Huggins and Dana Nixon.

Accounting Handles More Than Paychecks

Everyone is acquainted with the accounting department, and each person has his own impression as to the purpose of that group. To most employees it represents a pay check. However, there are many other phases of accounting of equal importance, but not so well known. The important functions of delivering and receiving in a monetary sense are performed here. Webster's definition of accounting is, "The art of recording, classifying and summarizing commercial transactions in monetary terms." Anyway you look at it, accounting is a lot of work.

Before we look into the operation of any one section, it is well to mention that there are three distinct categories in accounting. The first is the disbursing of money, the second receiving money, and the third category is the recording of amounts spent and received.

The payroll section falls into the first category. The issuing of pay checks is no doubt most heartily approved by all of us. There are seven employees in this group. Here job cards, received each day from the time control section, are rated and tabulated daily, then recorded to individual weekly accrual cards. Each Tuesday and Wednesday these cards are placed in the new National Cash Register Check writing machine by department, and by an operator's merely pressing a variety of buttons — presto — a check is ejected from the machine ready for distribution Thursday.

OTHER FUNCTIONS

Other functions of this section include the withholding and distribution to proper agencies of such items as taxes, credit union deductions, union dues, insurance, etc. All these involve considerable posting, calculating, and recording, which from the surface appears to be an imposing task, but is well performed by this group.

Now let's investigate the other spending division known as accounts payable. Here invoices from vendors who have performed services for our company are received. The four girls in this section have been with Librascope for a combined total of 20 years. These girls receive copies of purchase orders awarded to outside vendors from the purchasing department. As the work or service is completed by vendors and merchandise or service is received, the accounts payable group see that the vendors are paid. We could refer to this section as the outside payroll department.

The second category, receiving money, is ably handled by the accounts receivable group. Because of government contract requirements, this involves detailed billings of various types ranging from the CPFF billings which must show every hour expended and each item of material used, and the complicated progress type billing, to an ordinary billing on a commercial order.

One group in accounting, the job cost section, comprised of seven employees, must account for expenditures of the payroll and accounts payable section. This group keeps perpetual records of amounts paid to employees, outside vendors, cost of material, overhead costs and all other costs to the company. All of these expenses are broken down and charged to the job against which they were accrued. At any time auditors or other personel who rely on such records can determine how much went where, by whom, and when.

PARTS COST

Parts cost is similar to job cost, being different in that there are several hundred to a few thousand parts in each job. Each part has the following cost factors: labor, material, and outside production. There are seven employees in this group gathering information necessary to determine this cost. Their efforts are appreciated not only by our department, but by methods, estimating, and others, who reference their records for information helpful to them.

The time control section is the liaison group between manufacturing and accounting. A total of eight timecheckers supply payroll, job cost and parts cost sections with detailed labor hours.

The third category, records, is equally as important as the first two mentioned. Statements and reports are issued periodically to show the financial status of the company.

This large department is headed by Mildred Huggins, assistant to the controller (profile in the June '53 issue of Librazette). She and Dana Nixon, chief accountant, with their crew of 40 employees consisting of accountants, timecheckers, statistical typists,a secretary, and several types of clerks, payroll, accounting, and departmental, all working together with close coordination and cooperation, keep the accounting functions running smoothly and management well informed of the company's financial condition.

Clarice Flynn, machine shop, was still recovering in St. Joseph's Hospital, not allowed visitors, when this was written, following a major operation. Clarice was not expected to return to work for about three months.

Accounting News

Because of the special issue of the Librazette last month, the accounting news is a little late.

Don Barnes and family made the round trip to Lake Tahoe and reported the weather perfect. All had an enjoyable time.

Lake Tahoe seems to be the vacation spot this year, as Dorothy Arbogast and family spent a week there before going to Crestline for another week of summer sports. Nettie Stone also vacationed at the lake with her family; then went on to Yosemite and San Francisco.

Edie Wrobel had a full schedule planned, as she went first to Portland, Ore., then to Pittsburgh, Pa., for family visits. On the way home she stopped off in Chicago on personal business for her Women of the Moose, which included a tour of Mooseheart, "The Child City."

Peggy Mathews went home to Detroit, to spend some time catching up on the gossip and visiting old acquaintances.

Henry Van Doorne flew to Detroit and back; then drove to San Francisco, Denver, Oregon, and the northern California beaches. Fortunately, he had a month in which to do this. He needed it.

Art Curley also spent his week at northern California beaches.

Ray Carbans is back at work after a trip to Las Vegas. Did you spend all your money, Ray?

Johnny Grieshaber didn't wander far from home, going to San Diego and Knott's Berry Farm. Smart boy, Johnny. A vacation is supposed to be for resting, we're told.

Accounting lost another worker this month to Sir Stork. She is Carol Marshall. Hope it is the boy you want, Carol.

We lost one of our bachelor gals this month, too, as Ila Quarnstrom took unto herself one Pete Musko. Congratulations, Ila. We hope you like the toaster you got at your shower.

Libravets Pick New Committee

A new Libravet committee for the 1954-1955 season will be named by the time this issue goes to press, it has been announced.

Each member of Librascope's organization for veterans of five years or more listed four Libravets to serve on the committee. A tally was scheduled for October 6, with the four most named people to comprise the new committee.

Outgoing committee members are Galen Mannan, Dave Harrison, Keith Kinnaird and Art Davis.

Big Turnout at Shutter Clique Meet

Members of Librascope's Shutter Clique gathered at the home of Cesar Goldstein in Van Nuys September 29. There was a large turnout, and it was possible to discuss many and important topics concerning photography.

Upon closing the snapshot contest, all prints submitted were classified in their proper categories, and the judges were chosen to pick the winners, who will be announced in the Librazette.

A field trip was planned to San Pedro Harbor for all club members and their families, with an invitation issued to anyone interested to join the group.

The annual photo get-together for dinner was postponed for Wednesday, November 10, at the Thistle Inn.

A program for future monthly assignments was made. The subject for October is "wet," with "angles and curves" chosen for November, and night pictures set for December.

President Cory gave a flash demonstration of various bulbs on the market today, from the peanut bulb to flash powder.

The next meeting will be held in the home of E. Pusl in Burbank, and the invitation is open to anyone wishing to participate in the field of amateur photography.

Ex-Librascoper Wed Recently

The Glendale Presbyterian Church was the scene of a ceremony uniting Doris Marie Newcomer, former member of Librascope's production control group, and Rev. Joseph S. Stephens, Friday, September 17, at 8 p.m.

The bride, attired in a white satin gown with lace overskirt and train, was given away by her father, Walter D. Newcomer. Matron of honor was Mrs. Penny Nagle. Bridesmaids were Joyce Newcomer, cousin of the bride; Marian Payne, Ruth Stephens, sister of the groom; and Andrea Newcomer, cousin of the bride.

The best man was Paul Stephens, brother of the groom. Ushers were Dean Wolfe, Cliff Bower, Darean Yanlin, and Walter Newcomer, brother of the bride. Three-year-old David Newcomer, son of the bride's brother, was ring bearer.

More than 1200 guests were present at the ceremony. A reception was held following the wedding.

President Lewis Imm's young son, Bobby, underwent an appendectomy last month at Hollywood Presbyterian Hospital.

Bobby, age 8, is doing nicely, his father reports, and is quite proud of his scar.

Big Machine First of Many

"However, you people in the other buildings need not feel forgotten, for yesterday I signed a contract with the Navy for new machinery which will cost nearly as much as the new building."

This promise to Librascope workers was made by President Lewis Imm during his dedication speech. Within a week preparations were being made to install the first machine.

Soon resting upon, and consuming an entire railroad flat-car, was a gigantic Lucas drilling and boring machine capable of machining the largest casting with unbelievable accuracy.

To make way for this huge piece of equipment it was necessary to construct a mounting platform to withstand the weight and to help absorb the operational shock of this 20-ton monster. An excavation nine feet wide, 18 feet long and four feet deep, to be filled with 23 cubic yards of concrete, was finished.

The machine then was unloaded, moved through Glendale to Building One, and temporarily stored in receiving. This end of the job was handled by the Pearson Truck Company, of Los Angeles, experts in the handling of heavy equipment. Because of the size of this piece of equipment, the move took real ability on the part of the Pearson engineer.

Librascope maintenance men took over from there. On Saturday, October 9, they handled the ticklish job of "snaking" the huge machine through the plant to the location site (immediately in front of the jig-bore room), set, leveled, and tied it down. The job called for the utmost skill and patience.

According to Ivan Franklin, supervisor of tooling and plant maintenance, the machine should be in operation by the time this paper reaches you.

By Bob McCollum

Librascope staffers wish to offer their condolences to Burl Garner on the recent loss of his wife, and to Thole Isebrands, on the loss of his father.

Bring on the Steak

EMPLOYEES OF THE jig bore and boring departments and their wives held a get-together recently at the home of Ray Setty. After a feast of barbequed steak and all the trimmings, the group was entertained by Al Fonseca at the piano and Carl Frain with a vocal. Pat Hannon rendered an Irish ballad. Others enjoyed playing cards, dancing, or just shooting the breeze. Everyone had a good time, and more events are planned for the future. Shown in the picture above are (left to right around the table) Verle McClure, Mrs. Al Fonseca, Al Fonseca, Mrs. Ed Grossman, Ray Letty, Ed Grossman, Mrs. Jean Edmond, Mrs. Chuck Pierson, and Jean Emond. Also present, but not in the picture, were Messrs. and Mesdames Carl Frain, Leon Gabel, Pat Hannon, James Johnson, Matt Masa, Bill Given, James Watkins, Ralph Woodward, Chuck Piersan and Mrs. Ray Setty.

Steady Progress Marks Career Of William McAboy at Librascope

Some 50-odd miles west of the capitol of West Virginia on the Ohio River is the town of Huntington. It's not a large city — about the size of Burbank — but it's the biggest in the state.

Huntington is a railroad center, and claims a considerable amount of industry in the fields of glass, tobacco, oil and ceramics.

No, this isn't a travel article. Huntington is of interest to Librascopers because it was the birthplace of our assistant chief engineer, William K. McAboy.

HOME TOWN BOY

Bill was quite a home town boy. He was born and raised in Huntington, and even went to Marshall College in the same town. He happened to be in college when tempers were flaring throughout various countries of the world. In early 1941, when Uncle Sam was canvassing the country for potential military talent, Bill decided to take advantage of the opportunity to leave Huntington and see the world. He signed up with the Marines and, upon graduation, was granted the 90-day wonder commission of Second Lieutenant in the Marine Corps.

Bill's career in the Corps was to come to an abrupt end, however, when he was handed a medical discharge six months after his appointment. In a way this was bad for Bill, because he hadn't been in long enough to make plans for his future. So, he decided he could make plans just as well while visiting his sister who recently had moved to California.

Almost everyone knows what a blind ad is. Example: "Used car salesman needed. Call FI 4-2121 and ask for Sam." Well, Bill happened to see one of these ads for a junior draftsman. He answered it, was accepted, and found himself working for Librascope. This was 12 years ago.

It appears that Bill had the necessary qualifications for success, because he has moved up the ladder steadily through junior draftsman, draftsman, group leader, (now called designer) engineer, project engineer, chief project engineer, to his present position as assistant chief engineer.

SETTLED DOWN

During his term in office as chief project engineer, Bill married and settled down in Glendale. It wasn't long, however, before he and Peggy moved to La Canada and started a family. He now has a two-year-old daughter, Mary Margaret, and another due in a couple of months.

If anyone has any wood-working power tools to sell, there may be a chance to unload them on Bill, because he intends to build a shop at home to play around in when he isn't out on the golf course. He is a pretty shrewd golfer, and has come out on top in all of the Librascope tournaments except last year's, which was won by Bob Berg. Bill also won this year's Calcutta playoff.

(See story on page 1)

By Val Castle

More on Picnic

(Cont. from Page 1)

Hirt, E. R. — 2nd men and women, egg throw.

Hodgkin, Larry — 2nd boys, P-Nut.

Jackson, Diane — 2nd girls, 3-leg.

Jacobs, Fred — 2nd boys (6-8), 50 yds.

Johnson, Art — 1st men and women, 3-leg; 1st men, sack.

Klenske, Ronny — 1st boys and girls, wheel; 1st boys, sack; 1st boys, 3-leg.

Lehman, Allan — 2nd boys (9-12), 50 yds.

Lehman, Moe and Mabel —1st men and women, egg throw.

Marfine, Deidra — 2nd girls, pony.

Pinkston — 2nd women, sack.

Reid — 1st men and women, sack; 1st men and women, wheel.

Robinson, Gail — 2nd girls (9-12), 50 yds.

Saunders, Leslie — 2nd girls, P-Nut.

Saunders, Scott — 1st boys and girls, 3-leg.

Slavin, Howard — 1st boys, 3-leg; 2nd boys and girls, 3-leg.

Stein, JoAnn — 2nd girls, pony.

Van Holm — 2nd men and women, wheel.

Vicenti, Allan — 1st (6-8), 50 yds.

Voissem—2nd men and women, 3-leg.

Wertz, Chas. — 2nd boys, pony; 2nd boys, sack.

Wexsteins, David — 2nd boys (9-12), 50 yds.

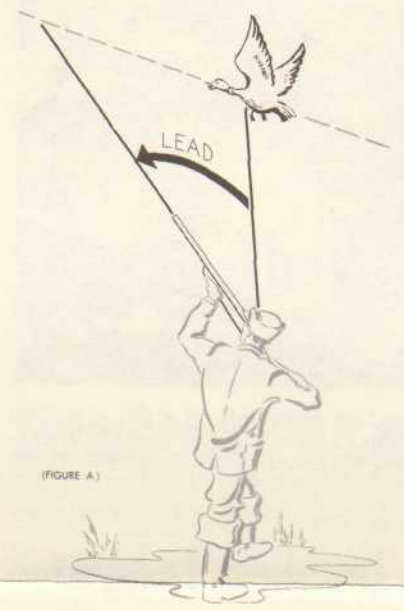
— By Joseph Leonardi

Fire Control Problem Is Explained Simply

When the average person hears the words "fire control" he may think of a fire extinguisher or he may picture a C-54 flying a load of Hopi Indians in from New Mexico to battle a fire in the San Gabriel Mountains.

We who work at Librascope naturally think of "fire control" in the military sense, but perhaps its meaning becomes more forceful if we use the expression "gunfire control."

The gunfire control problem includes all measurements and calculations necessary to detect and track a target, and to control weapons with which to destroy a target. All of us who are hunters have solved a gunfire problem many times. When game is sighted we bring our rifles to the position of the target by turning towards the target and elevating the rifle to the target position. We make quick mental calculations for the effects of range, wind, and movement of the target so as to determine the correct amount to lead the target, **figure a.**



GUNFIRE CONTROL

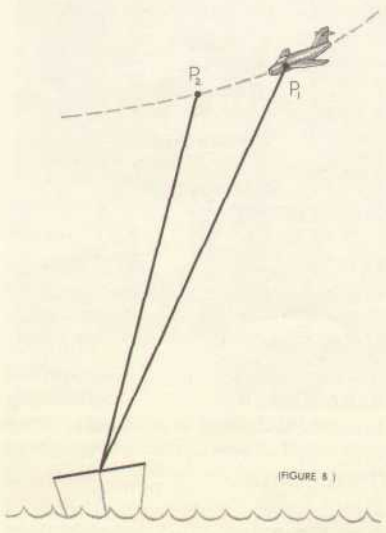
The gunfire control problem solved by Librascope computers is similar to the problem solved when we hunt. **Figure b** shows two points in space: P1 and P2. P1 represents the present position of a target. This target could be a 700-mile an hour airplane, or it could be a submarine or surface vessel.

Our computing instruments determine the direction the target is headed and how fast it is going and with this information we predict where it will be at some future time. P2 represents this future or predicted position of the target.

Just as there are certain measurable things about the motion of the target we must know to solve the gunfire control problem, there are also certain measurable things about the motion of our projectile that we must know. As an example, what is the effect of wind on the course the projectile will follow and the length of time it requires to reach the predicted target position? What is the effect of gravity?

MANY FACTORS

Because of many such factors that affect its motion a projectile does not travel in a straight line.



Likewise, it does not reach a target instantaneously upon being fired. So it becomes obvious that we cannot aim our gun at the predicted target position, P2, and expect to score a hit. Instead, we must determine a third point, P3 in **figure c,** at which to point our gun.

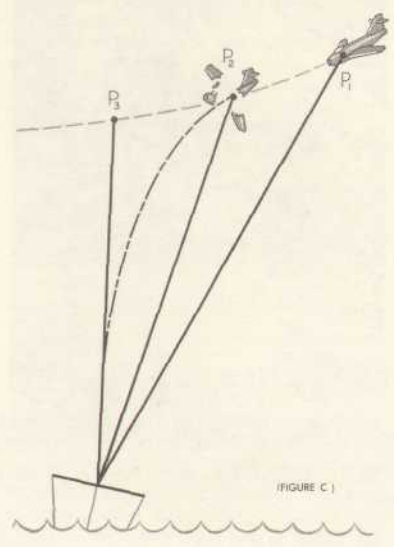
If our calculations are correct and we aim and fire our gun at point P3 while the target is at point P1, the target and the projectile will reach point P2 at the same time.

Today, the gunfire problem is not solved by a single instrument but by a complex control system consisting of many instruments. A system computes continuous gun orders, taking into account all significant factors affecting gunfire. The computations allow for the motions of our own ship and the target during the time the projectile is in flight; for the curvature of the projectile's path caused by gravity; for draft, wind, pitch and roll, and for numerous other factors.

THREE POINTS

Let's consider the same three points in space from the standpoint of today's modern electronic gunfire control system, **figure d.** P1 is continuously defined by the system observation or detection equipment. We can locate and track a surface or air target visually with telescopes and range finders, or with modern radar equipment. We can locate and track underwater targets with modern sonar equipment. Our detection equipment is the EYES of the fire control system. The EYES inform the computer of target location in terms of distance, bearing, and elevation.

Point P2, the target's predicted position, is continuously defined by system computers which must be able to determine target course and target speed from changes observed by the detection equipment. The computers must be able



to respond almost instantaneously to changes in target motion so as to continuously define the location of point P2.

System computers must also be capable of continuously defining point P3, the weapon aim point, so as to furnish automatic weapon orders. These computers must take into consideration the effects of wind, gravity, drift, the weight of the projectile, the temperature of the impellant powder, and the air density during the projectile's time of flight.

EARTH ROTATION

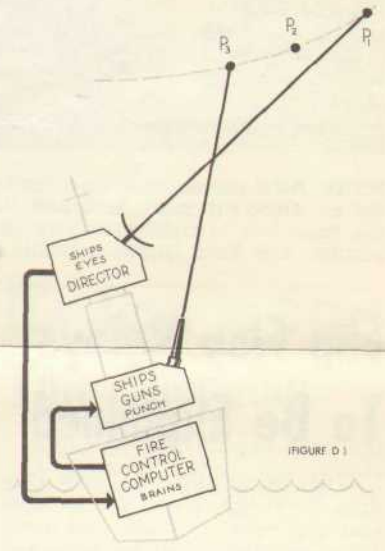
For long range surface targets even the rotation of the earth about its axis during the projectile's time of flight must be considered. For the antisubmarine problem we must consider not only the time of flight, but also the time required for the charge to sink through the water to the target's depth.

Still another factor which system computers must consider is one obvious to everyone who has ever stepped aboard any type of vessel. Our own ship is continuously rolling and pitching while we are tracking a target and aiming our weapon. Solutions must continuously be corrected for roll and pitch to keep the gun pointing precisely at point P3, regardless of ship motion. Computers that define points P2 and P3 and supply weapon orders can be considered the BRAINS of the gunfire control system.

Another rather marvelous characteristic of modern fire control systems such as Librascope designs and builds is pointed up by the speed with which a solution must be obtained. A 700 mph plane detected at, say 20 miles distance, will pass over our own ship about 90 seconds later. That doesn't give our equipment much time to locate the plane, determine his direction and speed, compute weapon orders from ballistics and target information, and fire the weapon. Solutions must be continuous and almost instantaneous or the target simply isn't going to be around when your projectile arrives at the aim point.

BIG ADVANCE

Compare such a system with the barrage computers of a few years ago. Target data was estimated by eye. Lead angles were computed and verbally relayed to the individual gun stations. The



guns were manually trained and elevated. Fuzes were set manually, the guns loaded manually, and the individual firing circuits were completed by the gun pointer when he was on target.

With present high speed targets such haphazard control would be almost useless. Without the means of putting a charge or projectile in the right place at the right time, the most lethal weapon is just so much stockpiled explosive material. It can't do a job. Fortunately, the control of weapons has become anything but a haphazard operation.

With companies like Librascope engaged in constant research and development, gunfire control is more than keeping abreast with today's new weapons and highly mobile targets.

Big Open House

(Cont. from Page 1)

Refreshments were served by the commisary, and since it was a warm day, many took advantage of the chance to pause during the tour.

Dedication ceremonies were held the preceding Friday after work in the parking lot. Employees, visiting guests and guests of honor heard Mr. Imm as speaker and master of ceremonies.

Speakers included Herman G. Place, president of GPE; Hall Hibbard, vice-president at Lockheed; and Captain F. C. Manville, Naval Inspector of Ordnance, Naval Industrial Reserve Ordnance Plant of Pomona, Calif.

After the dedication ceremony guests of honor and Librascope management gathered for a brief celebration.

Librascope Champs--The Swing Shifters

HERE ARE members of the championship swing shift softball club. Standing from left to right are: Phil Cohen, Dick Freeman, Emanuel Palilla, Harold Babcock, Harold Wolk, John Clifton and Jim Dalton. Kneeling from left to right are: Dick Gusman, Paul Wilson, Tom Ryder. Also on the team, but not present in the picture, are Fred Russell, Archie Willis, and "Buck" Ottens.

Co. Softball Teams Hold Banquet To Celebrate Successful Season

Members of the day and night shift softball squads celebrated the end of a successful season Saturday evening, September 25, with a banquet at Hody's Restaurant in North Hollywood. About 40 softballers and wives were present. Guests were President Lewis Imm and Mr. and Mrs. Jewett.

The swing shift nine had a good reason for celebrating. Although beset by player losses and injuries, they managed to come up with first place honors in their first year of competition.

The swing shifters rolled up eight wins against only one loss while competing against Hydraulic Research, Weber and Adel, while maintaining a .375 average at the plate.

The team was outfitted and supplied through the cooperation of the Precisioneers.

The day shift clubs came in second in the league.

The winner's trophy was donated by the Burbank Recreation Department. The trophy was presented by Bob Jewett and Paul Wilson, and will be on display in the Librascope trophy case.

Individual awards were presented to E. Burkhardt, for his .441 batting average; to E. Lehman, for the most spirited player; and to W. Newcomer, for the most popular player.

Machine Shop

It looks like Don Cady may give up baseball and return to bowling. Don has what you might call batter's knees. Either the batters had it in for him or just can't throw straight. At any rate, the last few games they have been tossing their bats backward and hitting Don's knees or legs with great accuracy. He thinks bowling might be a safer sport.

* * *

Not only are the Cesar Goldsteins bringing home a new baby girl, Lea Ruth, but they are bringing her home to a brand new house. Double congratulations.

* * *

Friends of Virginia Andreson, inspection, ar eglad to see her smiling face around again.

* * *

Everyone will be glad to learn that John Buckens and Clayton Gary are out of the hospital and home. Gary's dog was the happiest of all. He doesn't want to move from Gary's side. Gary and Johnny had a nice visit recently, consoling each other. Both are doing fine.

* * *

Friends of Jimmy Gaines will be sorry to hear that his wife's hands were badly mashed while she was operating a drill press.

* * *

Gordon Loving's little daughter was bitten by a neighbor's dog and required hospital treatment.

* * *

Shop people have traveled widely and extensively this year. All around are heard tales of interesting, far-away places—such as Mexico, New York, Canada, Chicago, Florida, Catalina.

* * *

Charles Tylersmith, Alfred Muglia, Eugene Malone and John Darland have left Librascope to take other positions. Donald Johnson and Gary Dalzell have left to return to school, and William Myhre is going to Florida.

* * *

One of the girls brought a little puzzle to work the other day, with the idea of working it out on the lunch hour. A number of workers tried to solve the gadget, but failed completely. When taken home that evening, the puzzle was worked quite easily by the employee's nine - year - old boy. Guess the adults needed a blueprint.

* * *

One by one the baseball uniforms are being turned in to be put in moth balls until next season. Basketball is next, and interest will soon be turning to that exciting indoor sport.

* * *

The following have been transferred:

Ruth Lantrip from machine shop to inspection.

Ruby Jack from Burr to final assembly.
Robert Thiess to second shift.
John Clifton to day shift.
James Dalton to day shift.
Walter Thompson from special drill to final assembly.
Leonard Szudajski from special drill to final assembly.

Stork Club

T. D. Bryant, analysis, became the father of a seven pound four ounce girl on September 20. Bryant's wife is the former Mary Lee Stone, who worked for Librascope in the blueprint department before her marriage.

Other recent proud parents are:

Shelley Parvin, engineering, a boy.

Kenneth Weindorf, engine lathe, a girl.

Kenneth Gowan, boring, a boy.

Patrick O'Shea, turret lathe, a girl.

Albert Dimpel, inspection, a girl.

Kay Hodges, of engineering services, recently traveled to Chicago to meet her husband, who was discharged from the Armed Forces after spending a year in Europe. Kay wasn't too impressed with the Windy City.

MANY PEOPLE go hunting, but George Henderhahn, of the dust free room, really brings home the meat. The above photo shows George with one of the two deer he baged this season. The first was taken on Libre Mountain, just off old Ridge Route 99 near Gorman on August 7. The second was bagged in the Greenhorn Mountains, Sequoia forest, on September 25. Both deer were fork horns, running about 110 pounds each. George uses a 30-60 rifle with a Smith scope, and tagged both animals at about 150 yards. He reports seeing lots of deer at both locations.

Contest Closes

The Shutter Clique's big plant-wide photo contest was scheduled to end October 1, with judging to follow closely. Prizes for the winners were contributed by the Precisioneers. The Librazette will run winning photographs in the next issue.

All contributions to next month's Librazette should be in the office of the editor or the new editor by October 31. All photos submitted should be clearly marked it the sender wants them returned. Every effort will be made to use your contributions, although this may not always be possible.

Flip Flop Relays To Be Explained

What is a "flip-flop" and how does it work? What are its uses and applications? These and many other questions will be answered in next month's issue of The Librazette when you read Charles Snell's interesting and informative article on this amazing little electronic device.

Performing the function of a switch or relay, anh utilizing electronic tubes so tiny that six of them will fit into an ordinary penny match box, the flip-flop circoit is capable of speeds beyond the comprehension of the average layman.

How many times in a single second can this remarkable circuit switch, or flip-flop? You can read the story of the flip-flops next month; a story of scientific and technical advance, and the vital role that Librascope continues to play in this field.

Stamp Clubbers Hold First Meet

Stamp Clubbers are back in action, and the first meeting of the season was held September 24 at the home of Morrie Kimmel. The pizza and Morrie's excellent home brew helped make the meeting a success. Milk for the kiddies, of course.

Future meetings will be held once a month on the last Friday. They will be held at the home of a different member each month. The October meeting will be an exception, however, as the club will attend the Annual Stamp Exhibit of Southern California at the Elks Temple in Los Angeles, October 15.

The club is looking for new members, and anyone interested in this educational and entertaining hobby is invited to check with Cesar Goldstein in tooling. All Librascope employees and children are welcome.

Big Breakfast

THIS BEAUTY, a two and three-quarter pound, 17½ inch rainbow trout, was pulled in this summer by Don Washcalis, machine shop, who spent two weeks at Twin Lakes. As can be seen, Don managed to keep well supplied with fish dinners while there.

Donna Diedrichs Wed Recently

Donna Diedrichs, senior department clerk in the engineering services section, was married Saturday, October 2, in the Lutheran Church in Burbank, to Arleigh Snyder, of Glendale. Following the marriage, Donna and her new husband took a honeymoon trip into Northern California.

A wedding shower for Donna was held at the home of Martha Seeman on Wednesday evening, September 29. Attending were Lillian Goldberg, Marilyn Marson, June Zemblidge, Anna Staats, Ida Sigel, Pat Swope, Jackie King, Ellen Bunting, Betty Myers, Pat Richards, Marge Anton, and a few ex-Librascope employees.

Donna received a shopping basket chuck full of grocery and canned goods with the labels torn off.

Bowling League Begins Season

As we go to press the Librascope bowling leagues are in full swing for the winter season. Some are new and some are old, but all are working hard to reach the top spots for the trophies and other prizes.

At the end of the third week the top standings were as follows:

1st place — Reluctant Five
2nd place — 4 Jacks and a Jill
3rd place — Pack Rats

Also, something new has been added to the bowling picture this year at Librascope. Five of the plant's top bowlers are members of the Burbank 860 Traveling League. This league is made up of Burbank industrial teams which travel throughout the various alleys in the valley. The Librascope bowlers at the time of this writing were in second place in the league.

Members of this team are Lloyd Somerfield, Bill Carnahan, Carl Culver, Fred Killips and Don Cady. They are sponsored by the Precisioneers.

Two Librascope employees are back to work after undergoing major operations recently. They are Eugene S. Steen, electronics, and Charlie Snavely, of methods.

The Librazette

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