May 1966

Measure

In this issue

The purposeful character that typifies the HP production line leader is reflected in this portrait of Moseley supervisors, from left: Bob McClelland, Gene Dietz, Roy Nelson, and Jim Kirkes.

HP's supervisors: Men who get things done

THE COVER Training new employees is one of a line supervisor's important jobs. Here, Moseley's Roy Nelson explains a procedure to Yolanda Gonzales.

IN THE ARMY you'd rank him as top sergeant. At sea he'd rate as a chief bosun's mate. In an insurance company—office manager. In a steel plant—foreman. On the HP instrument production lines he's known as a line supervisor. Or line leader. By either title he's a man who gets things done.

□ Roy Nelson of the Moseley Division plant in Pasadena, Calif., is one such man. Roy is in charge of the 11 x 17-inch X-Y recorder production line. His basic job is to see that the people on the line perform their jobs to the best of their abilities so that the production department will meet its quota of orders—on time and up to specs.

Stated that way, it sounds reasonably simple. But people are never simple—and Roy must deal with people all day long.

Most of his contacts will be made among the 60 people on the line. A newly-hired girl, with three days of soldering class as a start, will want to know more about a particular procedure. One of his lead men—his troubleshooter—has a quick report to make.

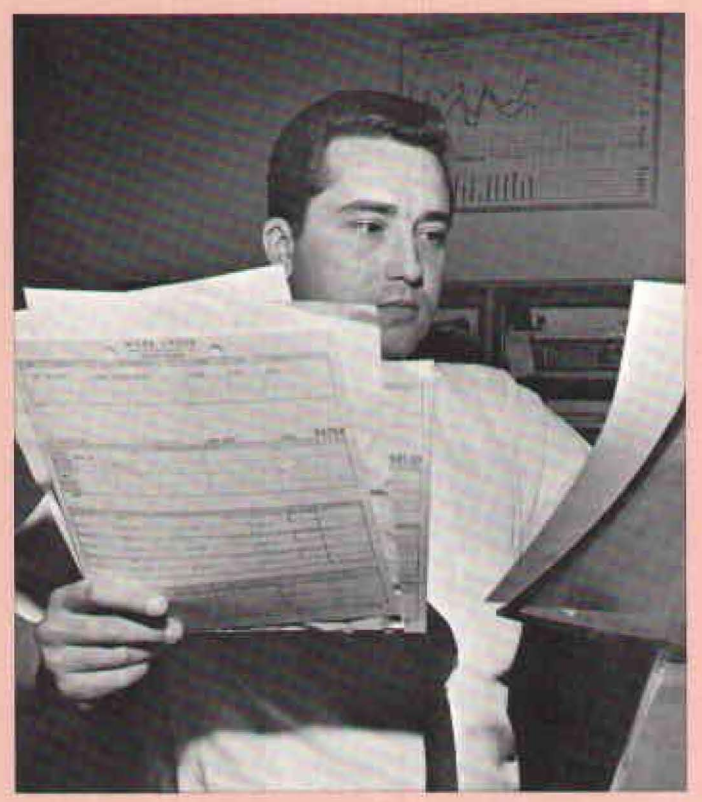
Further along the line he's asked about the possibility of making a change in the vacation schedule. Another employee, with youngsters at home, confides her worry about the shortage of baby sitters. Roy worries, too, because that is his job, and because he cares about the people who work with him.

In the course of his duties, Roy can expect almost daily contact with people from almost every department of the division. The instrument production supervisor wants to discuss next week's supply situation. The cost accountant calls, asking him to stop by and explain an item in the monthly production report. And the production manager and quality assurance manager want to review ways and means of keeping the rejection rate down. Meanwhile, messages from the personnel department accumulate: for one thing, he's wanted to talk over a new hire who's starting her training in the morning.

□ The role of supervisor is just about a way of life for Roy Nelson. He's among the first to be asked to help promote employee recreation activities. His involvement also entails a real concern for methods of improving the production process he supervises. As it happens, Roy is credited with several ideas that have affected instrument design and production methods. And to cover the many bases needed to meet the standards he himself helps to set, he willingly puts in the necessary evening hours. He will wind the job up only when he's satisfied that he can do no more that day. Likewise, Saturdays at the plant are no exception.

Though Roy Nelson is very much an individual, his involvement and dedication typify the pivotal role played by HP line supervisors throughout the company. ◁

Supervising a production line means long hours, an open mind, a sharp eye, miles



For Roy Nelson, the day's work can often begin the night before when he stays late to clear up accumulated work. A variety of reports pertaining to production results and future scheduling must be studied with care.

Nelson's key role in production means frequent meetings with Jan Smits, quality control manager at left, and Myron Hunt, plant production manager, center. Potential improvements are discussed at length with the aid of production performance chart.

The path to the cost accounting office is well known to Roy Nelson. It means some searching questions, such as Dan Sullivan is raising here concerning a work-in-process report fresh off the plant's computer.

and miles of footwork--and the chance to prove yourself every day.

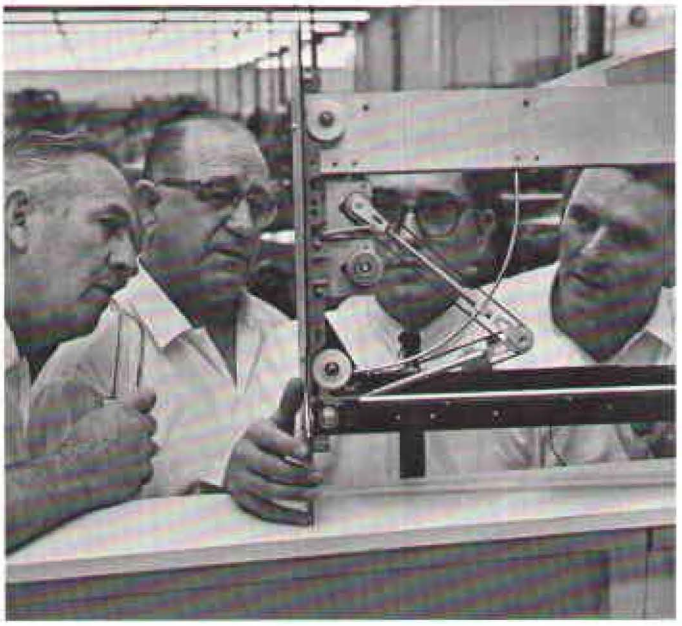
(continued)

HP's supervisors: Men who get things done

Planning details of production scheduling is up to the line supervisor. Here, Roy checks next month's quota with his leadmen—Don Shumaker (left) and Dick Stein.

How will a model change affect production? That frequent question draws the concentrated interest of Don Hoiland, plant production engineer, and Roy who must help assess the potential benefits.

Off to Disneyland. An employee outing is the subject of this coffee-break discussion among Roy and Kris Lester (left), Mary Nichols, and Bert Walton.



Major product changes require checking and double checking between the line supervisor and the various shop supervisors. From left: Nelson Warner (mills and drill presses), Ray Duncan (sheet metal), Roy, and Harry Oats (lathes) confer about a modification to a recorder assembly.

What can be done about changing vacation plans? Lorene Sample, an eight-year Moseley employee, poses one of the dozens of personal questions Roy will hear during his rounds. Each one requires his careful consideration.

At day's end, Martin Lockamy, instrument production supervisor, accepts a ride home. Roy and Martin both live in Covina and share interests in boating, swimming, and scuba diving.

PEOPLE ON THE MOVE

HP - PALO ALTO

Chick Alexander, Palo Alto personnel staff—to corporate personnel staff (training).

George Climo, corporate personnel staff—to Palo Alto personnel manager.

Keith Elledge, Palo Alto personnel staff—to corporate personnel staff.

Steve Muto, Microwave Division thin film development—to evaporated film, Advanced R&D staff.

Al Steiner, R&D lab staff, Microwave Division—to product training staff, corporate Marketing.

Harry Taylor, Western Service Center repair staff—to mechanical lab technician, Advanced R&D, Physics.

George Wertz, plant engineering staff—to engineering and construction staff.

COLORADO SPRINGS

Del Fillmore, chief cost accountant—to data processing manager, Colorado Springs Division.

DYMEC

Dave Weibel, quality assurance, Microwave Division—to computer production, Dymec Division.

Jerry Worth, manufacturing engineering, HP-Palo Alto — to pre-fab manager, manufacturing, Dymec Division.

LOVELAND

Charles Kingsford-Smith, engineering staff, F&T Division—to R&D staff, Loveland Division.

MICROWAVE

David Baker, engineering staff, F&T Division—to materials engineering staff, Microwave Division.

Charles Hubbard, electronic tooling, F&T Division—to magnetic recorder engineering, Microwave Division.

Doug Lanterman, materials management training—to inventory control, Microwave Division.

Pete Rich, marketing staff (Microwave)—to engineering lab (Microwave).

SANBORN

David Muncy, change request coordinator—to foreman, printed circuit assembly.

Allan Rosenberg, test engineer—to supervisor, test equipment maintenance and standards.

EASTERN SALES REGION

Don Gross, contracts manager, contract marketing division—to staff engineer, Eastern sales region (W. Conshohocken office).

Phil Hadley, medical sales engineer, Eastern sales region—to sales representative-medical instrumentation, New York office.

Hal Plamjack, field engineer, Eastern sales region (New York office)—to branch manager, Long Island office.

Pete Roddy, branch manager, contract marketing division—to field engineer, Eastern sales region (W. Conshohocken office).

Rosemary Sarisky, secretary, contract marketing division—to secretary, Eastern sales region (W. Conshohocken office).

NEELY SALES

Bill Shellooe, senior engineer, Sylvania — to staff engineer, Neely Sales, Palo Alto office.

New honors for Packard, Oliver

Awards further recognizing their contributions to the fields of engineering and education were bestowed recently on Dave Packard, HP board chairman, and Barney Oliver, vice president for research and development.

Packard was one of five men selected to receive honorary Doctor of Laws degrees from the University of California. The award was made at recent ceremonies inaugurating Dean E. McHenry as chancellor for the University's new Santa Cruz campus.

Dr. Oliver is one of 27 new members elected to the National Academy of Engineering. The Academy, which now numbers 95 members including HP's Bill Hewlett, shares with the National Academy of Sciences the responsibility for advising the federal government, upon request, in matters of science and technology.

In announcing the new NAE members, Dr. Augustus B. Kinzel, president of the Academy, said, "The range of distinguished individual accomplishment represented in this group greatly strengthens the capacity of our Academy for effective service to the nation and to the engineering profession."

Their slogan is 'Service Second to None'

LET THE BUYER BEWARE! Any manufacturer attempting nowadays to sell products on the basis of that ancient maxim would soon find himself as unpopular as sundials at a Swiss watchmaking convention. In fact, making service available to customers—before, during, and after sales—has become so vital to modern industry that it is now a major business in itself.

☐ Although HP has offered customer service in one form or another since the day it was founded, such service has been given priority in recent years because it has proven to be one of the most effective marketing tools to help sell more products. More customers and more products naturally mean a boom in demand for customer service—replacement parts and repairs. At the same time, many customers in the new disciplines HP now serves do not want to do their own repairs. A medical researcher, for example, generally wants to know only enough to operate the instruments he uses. Problems? Call HP.

The company's first response is to put the customer in contact with one of the 200 customer service personnel operating out of HP sales offices throughout the country. More than half of all repair orders to HP are filled by this field organization. However, if replacement parts are needed, or if factory-level repair is indicated, the order will be forwarded to one or the other of HP's unique service centers—the Western Service Center in Palo Alto, or the Eastern Service Center at Rockaway, New Jersey.

According to Chuck Ernst, manager of Corporate Customer Service, the centers were formally created in 1964 to relieve the divisions of the heavy repair and parts work so they could concentrate on sales and manufacturing, and to "present a uniform, consistent image of service to our customers."

☐ The centers have grown to a total of some 200 people, divided almost equally between East and West. This year they have had a 46% sales increase over last year and expect to handle more than $16,000,000 in service orders—with replacement parts accounting for more than $14,000,000.

The centers are geared for speed. Each is linked directly to all field offices by a TWX order handling system. Parts can be ordered, processed, and shipped in one day. Each center is also equipped with a "Recordak" microfilm system which can retrieve any item of information from 50,000 pages of data within one minute for on-the-spot identification.

The rapid buildup in the number of customer orders processed—now more than 19,000 per month—has posed a

(continued)

Careful packaging precedes all shipments from HP's service centers. Johanna Arnold, ESC, readies a package with protective filler. The HP centers have pioneered numerous packaging innovations.

Their slogan is 'Service Second to None'

special inventory challenge for the centers. Even though 18,000 different parts are stocked, the stock is turned four times a year and 90% of all orders are shipped the same day received. Soon the centers will begin utilizing a computer to maintain up-to-the-minute parts records, thus enabling them to improve further the service given to HP customers.

☐ The other essential service ingredient—quality—is very much in evidence at the centers. Most instruments shipped in for repair are first given a thorough washing. According to center technicians, this bath sometimes is enough to restore grime-covered instruments to operating health. For many older instruments, the next step is "updating"—bringing them as close as possible to current specifications by modernizing their circuitry, replacing components, dials and the like. Then they are turned over to specialists for testing, calibration, and repair. Final testing for mechanical and electrical quality is performed by quality assurance inspectors.

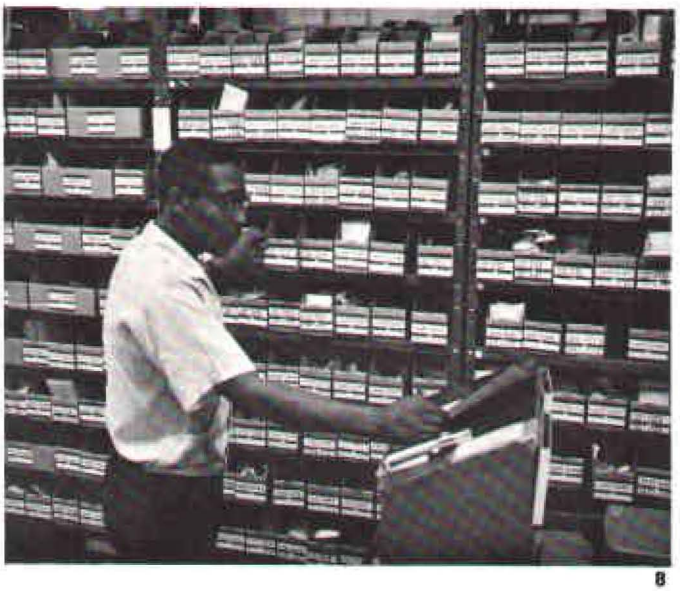
1. Centers process combined total of over 1,600 instrument repairs per month. Shown is repair section at Rockaway, N.J. **2.** At Palo Alto, Lois Oakes applies detergent spray to instrument prior to repair work. **3.** Hal Smith, quality assurance inspector at WSC, performs final mechanical inspection of repairs. **4.** Same-day shipment of urgent parts is speeded by TWX order processing system linking centers and HP field sales offices. **5.** Chuck Ernst, Corporate Customer Service manager, at right, calls a conference of key men in Palo Alto. On hand, from left, are: Jerry Carlson, WSC manager; Jim Hodel, corporate service engineering; Bob Clark, corporate repair and pricing. Pam Berget, WSC secretary, awaits with message.

If average service is required, the instrument will be shipped back to the owner in little over a week. It will be one of more than 1,600 instruments repaired by the two centers each month. In some cases, customers can ask for one-day service or even "while-you-wait" repair.

□ Change is very much in the air around the centers these days. One change is the broad implementation of service contracts throughout the country. Under a service contract a customer can be provided with complete support of his HP instruments at a fixed price per year.

Another change is pending for the Western center which expects to gain needed growing room by moving into a new building now under construction in Mountain View.

In spite of the change and the rapidly expanding number of HP products that must be supported, the aim of the centers is steadily on target—to give HP customers "service second to none in the industry"—in order to help sell more new products. ◁



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6. Don Greening, WSC field service representative, loads Sanborn instrument for customer call. **7.** Alan Thoburn, ESC manager, and secretary, Judy Sorensen, catch up on correspondence. **8.** Centers stock up to 18,000 different parts. Willis Holt of ESC draws one of 700 items handled during average day. **9.** "Recordak" microfilm library scans 2,000 documents in 10 seconds. ESC's John Flaherty has fast answer for query. **10.** In program to encourage easier identification of parts in field, Budd Cady prepares "exploded" drawings of HP instruments. **11.** Up to six skid loads of packed parts ship out of the Palo Alto center each night. From left, Supervisor Hank Meadows, Grant Jenkins and Ray Barrett ready the shipment.

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Let's play 20 questions: *What's your HP/IQ?*

Here are 20 questions to test your knowledge of your company. In a few cases there will be more than one correct answer per question, and because of this there is a total possible score of 25 correct answers. Check those you think are correct by marking in the appropriate squares. Compare your selection with the official answers given in the upside-down column on this page. Now, tally your score. If you have scored 25—perfect! Between 20 and 25—congratulations! From 15 to 20—good try! Less than 15—try again!

1. Funds for the HP Employee Profit Sharing program are contributed by:
- ☐ a. Federal government
- ☐ b. The company
- ☐ c. Employees

2. The total number of HP employees is approximately:
- ☐ a. 9,500
- ☐ b. 3,750
- ☐ c. 7,500

3. HP's total sales last year were approximately:
- ☐ a. $95,000,000
- ☐ b. $42,000,000
- ☐ c. $163,000,000

4. Which of the following is *not* produced by HP Associates:
- ☐ a. Microwave switches
- ☐ b. Diodes
- ☐ c. Voltmeters

5. HP's corporate growth has been financed chiefly out of:
- ☐ a. Bank loans
- ☐ b. Sale of common stock
- ☐ c. Profits

6. HP's Travelabs are designed to provide:
- ☐ a. Emergency customer services
- ☐ b. Mobile sales demonstrations
- ☐ c. Faster delivery of orders

7. In 1965, HP's international orders reached:
- ☐ a. $37,000,000
- ☐ b. 101 foreign countries
- ☐ c. 22% of total corporate sales

8. The company's first instrument was first developed in a:
- ☐ a. Laboratory
- ☐ b. Vacuum
- ☐ c. Garage

9. In relation to total sales for 1965, HP's net profit after taxes amounted to:
- ☐ a. 8½ per cent
- ☐ b. 10 cents on the dollar
- ☐ c. one dollar per share of common stock

10. HP believes that good management is best achieved through establishment of:
- ☐ a. Stock options
- ☐ b. Objectives
- ☐ c. Committees

11. Major markets for HP's instruments are:
- ☐ a. Concentrated in medical research
- ☐ b. Restricted to electronics research
- ☐ c. Becoming more diversified

12. One of HP's first big customers was:
- ☐ a. Walt Whitman
- ☐ b. Walt Disney
- ☐ c. Walter Winchell

13. HP's objectives recognize that the single best measure of our corporate contribution to society is:
- ☐ a. Fixed assets
- ☐ b. Charitable donations
- ☐ c. Profits

14. More than 12,000,000 shares of HP stock are held by:
- ☐ a. Brokerage firms
- ☐ b. Almost 20,000 share owners
- ☐ c. New York Stock Exchange

15. Last year, the number of different HP products reached:
- ☐ a. Just under 1,100
- ☐ b. Infinity
- ☐ c. Slightly over 1,500

16. HP Employees Fund scholarships went to 16 HP sons and daughters last year. Each received:
- ☐ a. A stock certificate
- ☐ b. $500
- ☐ c. An engraved diploma

17. Which was the first type of electronic instrument developed by HP:
- ☐ a. Audio oscillator
- ☐ b. Oscilloscope
- ☐ c. Frequency counter

18. A record investment in research and development is budgeted for 1966 at approximately:
- ☐ a. 10 per cent of sales
- ☐ b. $2,000,000
- ☐ c. $19,000,000

19. Federal and foreign taxes on HP operating profit in 1965 amounted to:
- ☐ a. $13,289,691
- ☐ b. Almost $1,500 per employee
- ☐ c. Nearly 50% of the operating profit

20. The company's largest manufacturing division in number of employees is:
- ☐ a. Microwave
- ☐ b. F&T
- ☐ c. Loveland

ANSWERS:

1. b	6. b	11. c	16. b
2. a	7. a, b, c	12. b	17. a
3. c	8. c	13. c	18. a, c
4. c	9. a	14. b	19. a, b, c
5. c	10. b	15. c	20. c

from the chairman's desk

NEXT MONTH WE WILL CONDUCT our annual U.S. Savings Bond campaign at all HP plants and sales offices throughout the country. This marks the twenty-fifth year of the Savings Bond program, and the twenty-fifth year in which our company has participated.

It is especially important that we lend our wholehearted support and cooperation to this year's campaign. In addition to supporting our military effort in Vietnam and advancing the cause of freedom throughout the world, savings bonds add strength and stability to our economy. They reduce the threat of inflation, thereby lessening the prospect of tax increases, wage and price controls, and other anti-inflationary measures. No one, either in or out of the government, wants to see these controls imposed, but they may become necessary if we cannot stabilize our economy on a voluntary, cooperative basis.

From the individual's standpoint, there is no better way of assuring the security of his family and himself than by setting aside a small amount each month for the purchase of bonds. Regular payroll deductions steadily accumulate savings for a more comfortable retirement, for financing a youngster's college education, for taking an extended trip, for buying a new home, or making other major purchases requiring careful financial planning.

This year there is even a greater personal incentive for enrolling in the Savings Bond program. The government has recently raised the interest rate on Series E bonds from 3.75 to 4.15 percent and reduced their maturity period to seven years. There are also improved redemption values and investment yields if the new bonds are held for less than the full seven years.

Bond holders enjoy tax advantages not accruing to other forms of savings. Interest on the bonds is exempt from State and local income taxes. Moreover, the Federal income tax on the interest can be deferred until the bonds are cashed.

Within the next few weeks you will receive a card by which you can authorize a payroll deduction, in the amount of your choice, to buy bonds. I urge that each of you seriously consider this prudent, profitable way of not only helping your government, but also helping you and your families enjoy a brighter, more secure future. It's good business and good citizenship.

David Packard

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Measure

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EDITORIAL BOARD
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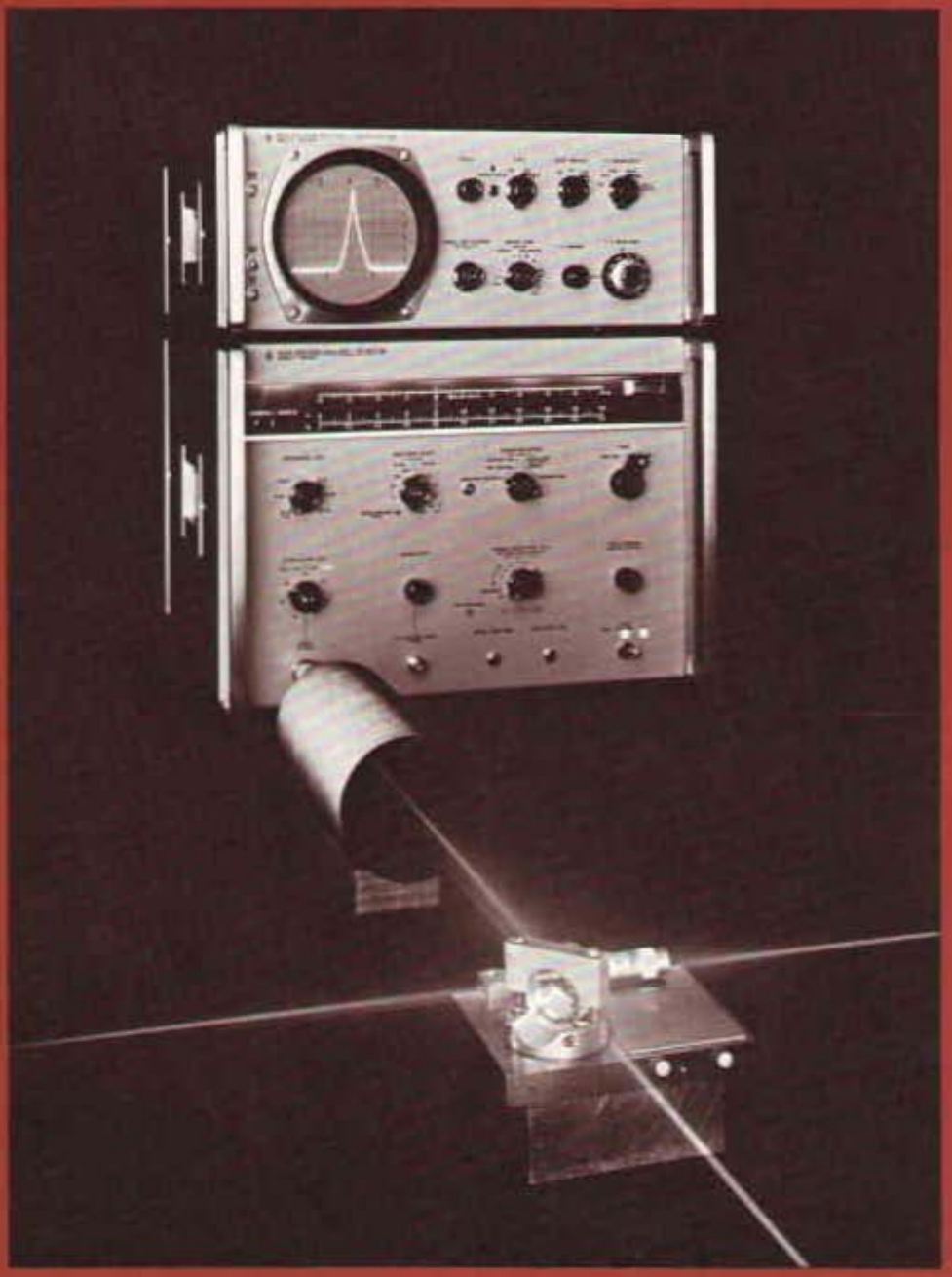
"I often say that when you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind . . ."
LORD KELVIN (1824-1907)



New light on lasers

THE RECIPE IS SIMPLE: Blend two coherent laser beams in a prism system which deflects them into photo multiplier. The photo multiplier then counts the frequency difference between the two beams and the difference is readily shown on an HP spectrum analyzer. As created recently by two Stanford graduate students, using borrowed HP equipment, the experiment was conducted as a purely scientific exercise. But observers pointed out some interesting possibilities in communications to which laser research of this kind could lead. Through frequency modulation techniques, the laser beam may be used as a carrier of radio or television signals, flashing them at the speed of light to space ships and planets throughout the universe.