September 1965

Measure

In this issue

A product goes to market

STANDING BEFORE THE HEART of one of the nation's most important electronic trade shows (see cover), a Hewlett-Packard marketing executive holds the latest product of his division's cumulative, coordinated effort. If his expression is one of intense seriousness and determination, it is because the moment is one of great importance to himself, to his division, to his company.

☐ To Marketing Manager Tom Kelley of Loveland—and to virtually everyone else in the division—the newborn product signifies the happy result of a year and a half of study, research, development, production engineering, market planning, and a multitude of other activities. Thousands of man hours, some fraught with frustration, preceded this moment in August when Kelley could say at Wescon that "we are ready. Our new volt/ohmmeter is the only one of its kind. It fills a need. It is available."

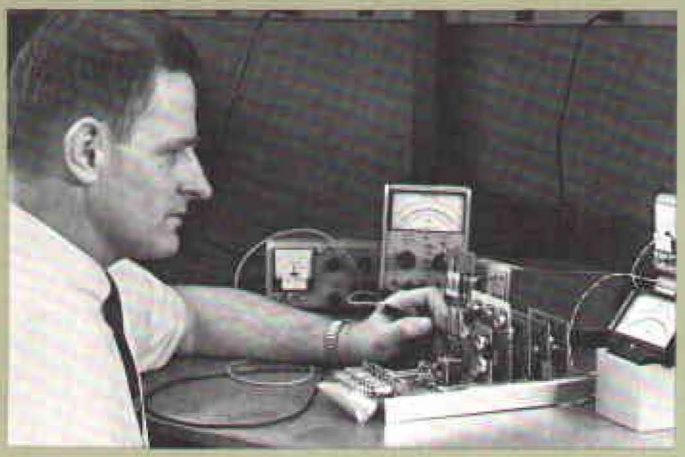
In many ways, the course Loveland's new product followed to the marketplace is typical of product introductions by other HP divisions. In many ways it serves as a model of intelligent planning, attention to detail, teamwork, and complete success in meeting target dates.

☐ The story of how the 414A solid state volt/ohmmeter got to this year's Wescon in San Francisco as a marketable product goes back to the origin of the ideas which made the product possible. Marketing begins here because products must be created for a purpose, they must have sales potential. There can be no isolation between the people who create the product, the ones who produce it, and those who must plan and carry out its sale.

In a successful, profit-oriented company, the marketing man must ask many questions before large sums of money can be spent developing a new product, regardless of how much that product reflects inventive genius. In the case of the 414A, Loveland's marketing people asked if the instrument could be sold by HP's existing field sales organization. Would it be bought by the same types of customers already being called on—which minimizes sales costs—or would it require expanding the sales force with special personnel to deal with a new class of customers?

☐ What about competition? Are there similar products on the market, and if so, does this new product offer important advantages? And how about applications? Are there enough real and potential uses for such a product to warrant the time, effort, and money to develop and produce it?

Timing of new product introductions is yet another vital consideration. If you are too far ahead of your market, there can be a long and expensive education job to acquaint customers with new measuring techniques. On the other hand, if you are too late, customers may be "locked in" with other manufacturers. ▷



In a sense marketing starts when a product is little more than an idea. Is it practical, does it make a contribution, will it sell? Here, one of the pioneers of the new autovoltmeter, Don Schulz, checks an experimental circuit. He was project director for the Loveland product.

Product designer Jerry Blanz was vitally concerned with the 414A's mechanical design. Simplicity of construction, ease of maintenance, low cost, durability—these all bear importantly on a product's sale.

After it has been developed, the product is modified as necessary for mass production. Here Arlene Ireland is shown working in the assembly area.

Down the conveyor to the shipping area goes the first unit. Now the marketing people move in. They have been working hard for months to be ready for this moment.

(continued from page 3)

Furthermore, the question must be asked, does the instrument compete with other HP products? If so, would the resulting loss in the sale of those products be more than offset by the sale of the product-to-be?

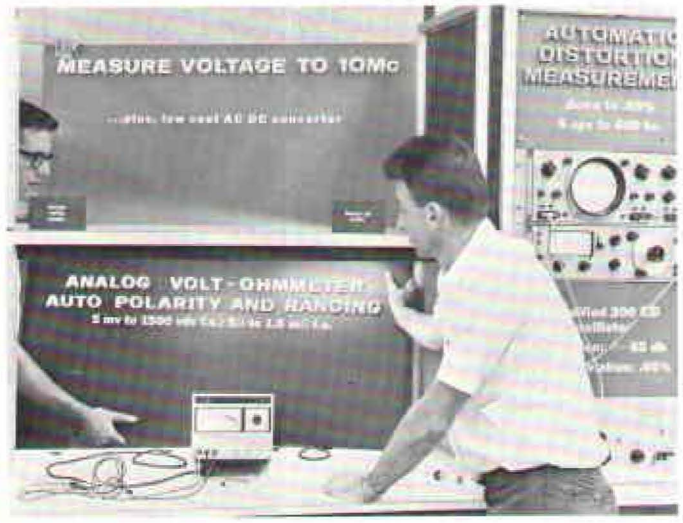
□ To find answers to all these questions about the proposed new volt/ohmmeter—with its solid state circuitry and autoranging features—Loveland market planners left no stones unturned. Customers were queried, the literature of the industry was researched, and page after page of statistical data was gathered from authoritative sources. When the returns were in, the course was clear. The 414A would serve a market suited to HP's selling organization. The product with its unique features would meet true state-of-the-art standards. There was nothing quite like it. It would be useful in a variety of production line and bench operations, fitting an area of applications not ideally served by conventional adjustable meters, on the one hand, or the expensive automatic data acquisition devices on the other.

In other words, Loveland was on to something big. Engineering proceeded at top speed. Meantime, the marketing people set about to lay plans in great detail. One major problem with this, or any other product introduction for that matter, is to assure that all the steps involved happen at the right time. If an instrument is fully developed long before the manufacturing operation is ready, time is lost. If the marketers start their promotion and pull in orders before production can deliver, a less than desirable condition exists. So the key is that tired old expression—teamwork.

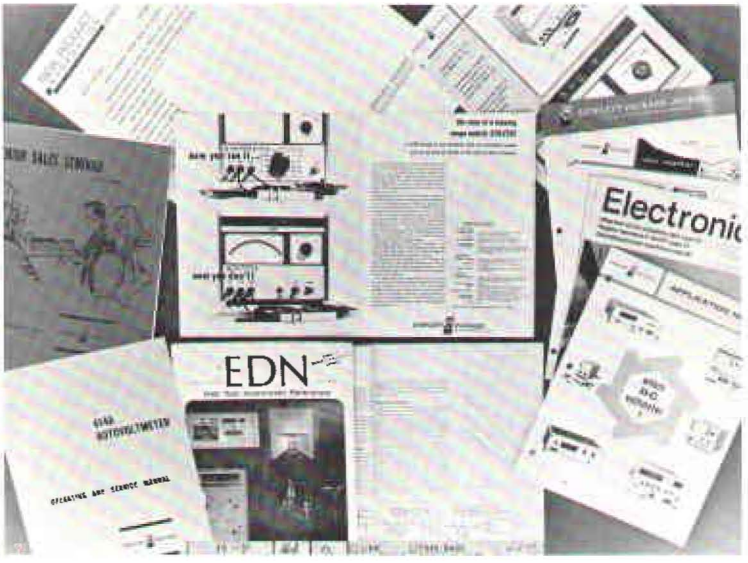
□ The 414A is a state-of-the-art instrument, a proud thing for the company because it means it is a first. *Electronics* magazine has described it as the best solution yet against meter burnouts from pushing the wrong button or flipping the wrong switch. The 414A autoranging meter can't burn out, as *Electronics* correctly states "because it senses the voltage being measured and automatically switches to the right range within 300 milliseconds."

Nevertheless, as a state-of-the-art instrument, Loveland marketing people had to take special pains to see that the product got the best possible introduction, at the best possible time, to a vast range of customers. The pictures on these pages show how the 414A went to market. ◁

Long before the first instrument rolls off the production line, artists, writers, and promotion specialists are busy planning and creating printed materials which will explain and help sell the new product. Artist Allan Howe (seated) and Art Director Jerry Farm discuss ideas for the best ways to present the 414A graphically.



Great variety of literature, advertising, and publicity must be created. Brochures often take months to produce, ads and magazine features must be placed well in advance in order to coincide with product introduction date.



Decision was made to unveil 414A at Wescon in August. Here Roger Davisson and Peter Kertesz (right) apply finishing touches to Loveland display booth before shipping ten days in advance of show.

Before they can tell customers all about the new state-of-the-art instrument, field engineers must study it themselves. Dick Jablonski conducted a seminar last February for field engineers, several of whom attended the Wescon introduction.

Excellent opportunity for full technical discussion of instrument with potential customers is provided by Wescon technical sessions. Don Schulz presented a paper before a large audience of scientists and engineers.

Jim Kistler (left), design engineer on the 414A project, shares his deep knowledge of the product's technology with a booth visitor.

Hundreds, perhaps thousands, of customers have seen the product in action at the booth. For Loveland marketing men, and HP sales people everywhere, it's a thing of beauty to see a prospective buyer fill out the card saying he is interested and wants to know more. The product has gone to market.

HP Perspective:
Harrison Division

Per person productivity at Harrison is highest in the company. Skillful circuit board inserting is shown being done here by Mary Kilian.

Leadership in a competitive

BARELY 11 YEARS AGO Harrison Laboratories opened its doors for business in a tiny, 1,500-square-foot Berkeley Heights, N.J., office. Five stockholders formed the young corporation, and two of them—the husband and wife team of Bill and Gwen Harrison—were the company's only employees. Their first product was an aperture equalizer for television cameras.

☐ Today the Harrison Division of Hewlett-Packard occupies a modern, two-story, 45,000 square-foot facility (expandable to 90,000 square feet) on a nine-acre site near the Berkeley Heights foothills of the Watchung Mountains. The company no longer manufactures TV camera aperture equalizers. Instead, HP's Harrison Division is among the nation's top four leading manufacturers of power supplies, one of the most competitive fields in American industry.

Several factors have contributed to the dramatic success and continuing growth at Harrison. The energy, rugged individualism, and vision of the founders have certainly played an important role. The teamwork, enthusiasm, and know-how of Harrison's employees have also been a major force. And since it joined HP in 1961, the streamlined techniques, marketing knowledge, and support of the parent organization have proved to be other essential elements.

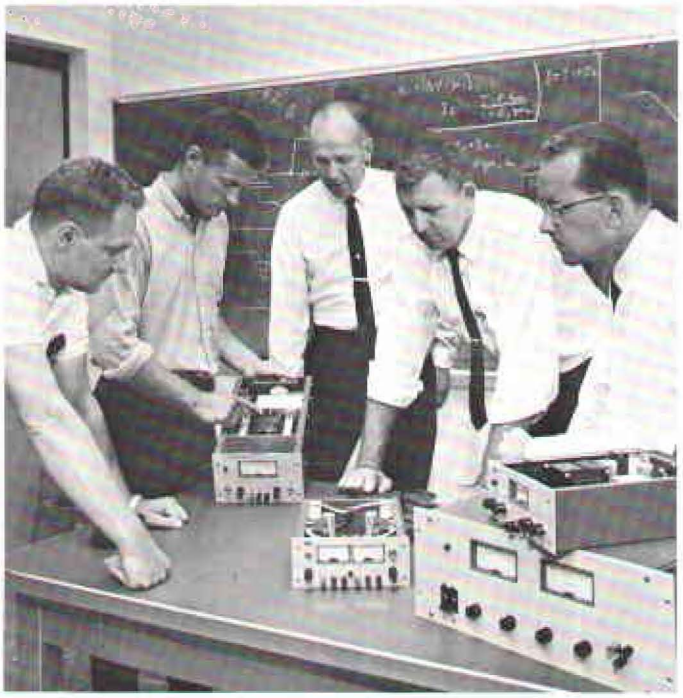
The transition from a minor producer of television accessories to one of the country's top manufacturers of power supplies has been steady, but Harrison still markets one of its products from the early days, a video monitor.

☐ The big switch in product lines came a few years after formation of the original company. One of the giants of the television industry, Columbia Broadcasting System, casually included in one of its orders an instrument that Harrison had never built before—a power supply.

There isn't much doubt that Harrison met all of CBS's stringent requirements, despite the fact that it was the little New Jersey company's entry into an entirely new field. The TV network reordered at such a quickening pace that Harrison soon had to turn over more and more of its production facilities to power supplies.

☐ While the orders from CBS represent the significant breakthrough, those original power supplies were a lot different from Harrison's product line these days. Today, the Harrison Division manufactures nearly 100 separate models

Management group discusses new power supply models. Left to right: Bob Buchner, quality assurance; John Fay, production foreman; Charles Horvath, production planning and order processing; Don Tighe, general manager; and Art Darbie, marketing.



business

of power supplies ranging in price from the 238-pound 6450A at $1,550 to the three-pound 6346A at $120. And their specifications and features are just as varied, depending upon customer needs.

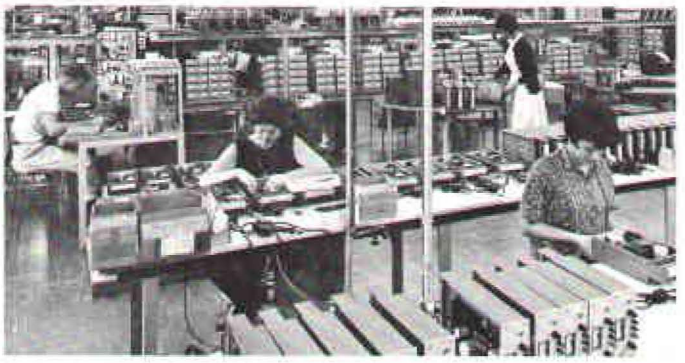
Berkeley Heights, which is primarily a residential community with a population of 11,500, is located 27 miles west of New York City. The Harrison Division's staff has grown to 124 employees, with 20% in engineering and laboratory positions, 60% in manufacturing, and 20% in service and administration.

☐ Although one of HP's smaller divisions, Harrison rates high in productivity and profits. The pride, spirit, and enthusiasm among employees, a holdover from the early days in that 1,500-square-foot office, still prevail. These seem to be characteristics of everyone at Harrison, whether they work in production, engineering, service, or administration. And though the division can point to a remarkable record of success, it is also looking forward to advancing toward even greater leadership among the country's power supply manufacturers. ◁

Two dozen Harrison people do laboratory and engineering work. Development of better products keeps division ahead of stiff competition.

Major markets include aerospace, electronics, R&D labs, government agencies. Marketing men shown are Marsh Johnson, Art Darbie, Mel Lipton (left to right).

Small company atmosphere prevails throughout division. As one employee put it: "If someone is out sick, there are 123 others who care."



Main production area is neat, well organized. Power supplies made here convert power from AC to DC for operating other electronic units.

New disability insurance plan is near "sellout"

HP's new long-term disability insurance program got off to a resoundingly successful start last month. By the end of August, a total of 96 percent of the more than 7,000 eligible employees in participating domestic divisions had joined.

Coordinators of the program said three key factors were responsible for the astonishingly high, fast return:

☐ Everyone eligible was given complete advance information on the program.

☐ Elimination of the need for medical examination for prompt enrollment served as an excellent incentive for many people.

☐ The program itself seemed just too good to pass up (96 percent can't be wrong).

The basic objective of the program is to insure that members and their families are protected against the financial hardships resulting from extended illness or injury. It provides income up to two-thirds of wage or salary, commencing after the 90th consecutive day of disability.

Meanwhile, members will note only a very modest deduction from their paychecks—about one-third of one percent of monthly earnings—to cover the cost of participation. As Chairman Dave Packard noted in the July issue of *Measure*, even 15 years of regular contributions would not equal one monthly payment received in case of disability.

PEOPLE ON THE MOVE

HP PALO ALTO

Joe Barr, finance manager, Loveland Division—to manager, internal audit, corporate Finance.

Joyce Hanna, International Operations staff—to corporate Planning office.

Dave Johnston, F&T production—to process engineering.

Ray Stewart, management staff, Datamec Division—to corporate Marketing staff.

Lee Seligson, personnel manager, Sanborn Division—to management development, corporate Personnel.

COLORADO SPRINGS

Ralph Reiser, AR&D—to group leader, real time scopes, Colorado Springs.

DYMEC

Tor Larsen, AR&D — to development engineering, Dymec.

HP ASSOCIATES

Shef Haddad, sales engineer, Yewell-Burlington—to regional sales engineer (New England and upstate New York), HP Associates.

Jerry Heigl, Microwave machine shop—to supervisor, model shop, HP Associates.

George Kaposhilin, Airborne Instrument Labs—to applications engineering manager, HP Associates.

Paul Lufkin, intra-company sales manager—*and* international sales manager, HP Associates.

Dan Scheel, sales engineer—to domestic sales manager, HP Associates.

INTERNATIONAL

Pierre Ardichvili, sales manager, HP-Benelux (Brussels)—to manager, HP-France.

MICROWAVE

Phil Foster, AR&D—to Microwave engineering.

Marty Ganschow, Microwave sheet metal—to Microwave production control.

Fritz Kohne, Western Service Center—to Microwave sales engineering.

Charlotte Russell, Personnel Department staff (insurance)—to secretary to waveguide supervisor, Microwave Division.

LOVELAND DIVISION

Russ Becker, chief cost accountant—to finance manager.

NEELY

George Glenday, field engineer, Neely-Tucson—to field engineer, North Hollywood office.

Jerry Johnson, F&M Scientific—to technical representative-chemical, Neely-Palo Alto.

Mickey McAllister, F&M Scientific—to technical representative-chemical, Neely-North Hollywood.

Mel Nathanson, F&M Scientific—to technical representative-chemical, Neely-North Hollywood.

Pete Palmerson, senior field engineer, Neely-North Hollywood—to Arizona district manager, Neely-Scottsdale.

Don Williams, F&M Scientific—to district manager, chemical instrumentation, Neely-North Hollywood.

SANBORN

Bob Burnett, F&T production control—to production control supervisor, Sanborn Division.

Frank Wezniak, sales manager, HP Associates—to marketing manager, Sanborn Division.

JUST A FEW WEEKS AGO Hewlett-Packard announced its sales and earnings figures for the third quarter of fiscal 1965. These figures, plus those for the first nine months of the fiscal year, are discussed by Dave Packard in his column in this month's issue.

Communication of our operating results and financial position to employees, stockholders, and the general public is very important. Under terms of our listing agreement with the New York Stock Exchange, we are required to announce quarterly figures to the public as quickly as they are available. We do this by issuing a news release to various newspapers, magazines, and news wire services throughout the country, and simultaneously posting copies of the release on company bulletin boards. By terms of our listing agreement, we are forbidden to disclose figures to employees prior to their release to the general public.

☐ Another important way of communicating financial information is through our quarterly and annual reports to stockholders. These reports, prepared and issued by the corporate offices in Palo Alto, are based on figures supplied by our various manufacturing and sales divisions. Each month the divisions submit certain financial information to corporate headquarters, and each quarter they provide complete profit and loss statements and balance sheets.

These financial statements arrive from the manufacturing locations on the 10th working day following the end of the quarter, and from the sales divisions on the 12th working day. Upon receipt, the corporate finance office begins the job of reconciling and combining these sets of figures.

HP's quarterly and annual reports are consolidated, which means that sales within the "family" and profits in inventories resulting from such inter-divisional sales must be eliminated. Thus, the published reports recognize HP as a single entity that can have no transactions with itself.

☐ The eliminations and reconciliations become tremendously complex when you consider that reports are received from 16 manufacturing and 22 sales divisions. Each sales division is "buying" from every one of the manufacturing divisions, and of course the manufacturing divisions are themselves "buying" from one another. While the divisions report all these internal transactions to corporate headquarters, corporate in turn must eliminate them in its final, consolidated reports.

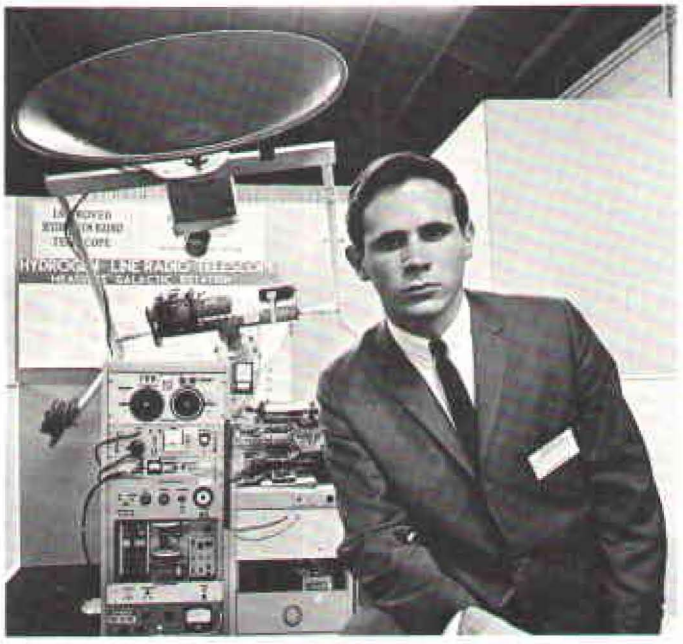
Edwin E. van Bronkhorst
Vice President and Treasurer

Reporting the corporation's growth

Not all of the information for the quarterly and annual reports comes from the divisions. Determination of HP's federal and foreign income taxes, for example, is the responsibility of the corporate finance staff. The company pays income taxes in Canada, the United Kingdom, Holland, Belgium, France, Germany, Italy, and Switzerland in addition to taxes paid in the United States. The corporate staff also tabulates the amount of money to be set aside for such purposes as employee profit sharing.

☐ Finally, there remains the job of recasting or restating figures for previous years. This is necessary for those periods when a new company comes into the HP family. The new company's financial history is usually combined with that of HP's for the years preceding the acquisition, thereby making the figures more comparable and providing a more realistic picture of the corporation's year-to-year growth.

Quarterly and annual reports represent a considerable amount of time and effort on the part of many people; yet, they are essential in keeping the more than 20,000 Hewlett-Packard stockholders (4,200 of whom are HP employees, incidentally) informed as to the financial health and the over-all growth and progress of our company. ◁



A variety of Neely-loaned equipment helped Bruce Bullock of Granada Hills win the Lee De Forest $1,000 scholarship at Wescon's Future Engineers Show last month. Experiment was an "improved hydrogen line radio telescope."

Neely backs big winner at Wescon

Equipment loaned by Neely's North Hollywood office has helped a high school science student literally reach the stars —and win the top scholarship award at the recent Future Engineers Show at Wescon in San Francisco.

For Bruce Bullock of Granada Hills, winning the $1,000 Lee De Forest award for the best experiment at the show caps a summer of outstanding achievement. It began at the Los Angeles County Science Fair where Bruce won first place in the senior physical science category. This win made him eligible for the California Science Fair in which he placed second. Then it was on to Wescon.

Title of his award winning experiment is: "Development of a new method of displaying and mapping radio telescope data for the 1421 MC hydrogen line." The experiment employed a method of displaying output data that "could be an improvement over teletype and hand-plotted contour maps."

Bruce's experiment got underway in mid-1964. His Future Engineers sponsor, Litton Systems, Inc., asked Neely's assistance in lending instrumentation in the high frequency region, such as a signal generator and sweep oscillator.

The radio telescope became an amazing amalgam of ingenuity. While the antenna dish was controlled by equipment of utmost sophistication, it was counterbalanced by such homely devices as barbell weights and a weighted tomato can.

HP speeds communications

New equipment now in operation at three HP locations is enabling the company to transmit messages between North America and Europe more quickly, and more economically than ever before.

High speed punch tape consoles have been installed by ITT World Communications Inc. at relay centers in Palo Alto, Rockaway, N.J., and Bedford, England. The new service, called DATEL, is capable of sending well over 1,000 words a minute compared to 66 words a minute for conventional punch tape operated equipment such as TELEX.

Gene Doucette, HP's corporate communications coordinator at Palo Alto, says that "the traffic burden on our older equipment has increased tremendously as the company has expanded. DATEL enables us to handle this traffic efficiently with plenty of room for further growth."

Doucette also points out that the new communications service provides substantial savings. Operating at 1,000 words a minute, the per word cost is about one-fourth as much as conventional equipment transmitting at 66 words a minute.

All HP locations can utilize the service by sending their messages via regular wire equipment to the nearest of the three relay stations. There the messages are put on punch tape and relayed via DATEL.

The company is the first in the Western United States to utilize the service.

ITT's Jim Jones and Leo Palmer and HP's Gene Doucette (left to right) make a first "call" on DATEL console at relay station in Stanford plant. New service is 15 times faster than conventional systems.

from the chairman's desk

OPERATING RESULTS for the first nine months of our current fiscal year were extremely gratifying. As indicated in our interim report to stockholders, sales totaled $112,340,000, up 19% over the corresponding period last year. Net earnings amounted to $9,371,000, a gain of 40% over 1964.

Primarily because of your day-to-day efforts to reduce costs and do a more efficient job, our after-tax profit margin for the nine-month period rose to 8.3 percent of total sales. This exceeds the 8 percent objective we established at the beginning of the year.

The third quarter of our fiscal year, covering the period from May 1 to July 31, traditionally brings a high level of business. This year was no exception, as incoming orders during the quarter totaled $43,554,000. This is the most business ever booked by the company in a single quarter, and is well above the $37,456,000 booked in the third quarter of 1964.

Reflecting the rapid growth of our company in recent years, we did about as much business during the third quarter of 1965 as we did in the entire year of 1957.

Our international markets are continuing to grow significantly. For the first nine months of fiscal 1965, international orders totaled $25,100,000, up 34% over 1964.

While our overall performance during 1965 has been gratifying, there are certain areas of our operations where we could be doing a better job. We've noted, for example, a recent tendency for inventories to become too large and therefore are asking all our division managers to exert tighter inventory control. Also, some of our divisions have not been as successful as others in meeting their sales and profit targets. As I've mentioned in the past, we won't really be satisfied until every division is performing as well as the best.

Last month's Wescon Show attracted 38,000 visitors—a record attendance for the show in San Francisco. We had a well-planned, well-coordinated exhibit featuring products from ten different divisions. It takes a considerable amount of planning and teamwork to put together such an impressive booth as HP's, and everyone connected with our exhibit should be proud of doing an outstanding job.

David Packard

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Measure

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EDITORIAL BOARD
Dave Kirby Merle Mass Bill Bigler

HEWLETT-PACKARD COMPANY
1501 Page Mill Road, Palo Alto, California

"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)

Instant fault finding

PREVENTIVE MAINTENANCE SYSTEM which virtually eliminates downtime has been developed by engineers at Consolidated Gas Supply Corporation's pumping station in Davis, W.Va. . . . and three Hewlett-Packard products are helping make it possible. By utilizing an HP 196B oscilloscope camera, a 120B oscilloscope, and a Delcon Division Ultrasonic Translator detector, along with an engine analyzer, a two-man team can find the exact location of such malfunctions as piston ring blow-by and cylinder scoring in any of the company's 30 compressor stations. Further, they find these faults within one minute, and in advance of equipment breakdown. The technician standing on platform holds probe of Delcon detector against cylinder head as his co-worker observes scope and photographs ultrasonic profile.