



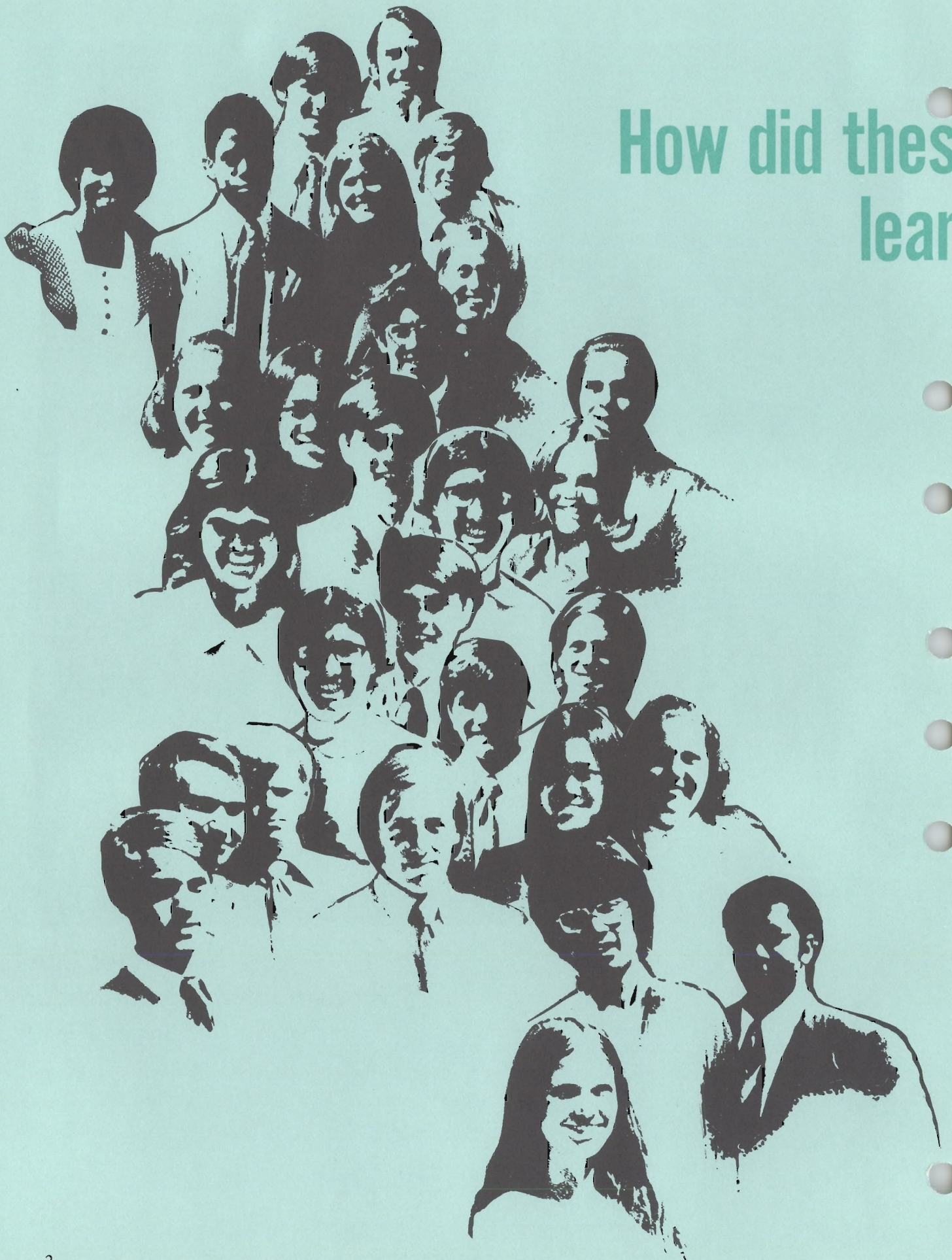
***How HP creates jobs  
through international trade:  
pages 7–10***

# Measure

For the men and women of Hewlett-Packard/SEP-OCT 1972



# How did these learn





# young people to become winners?

What can turn a so-so Cs and Ds student into a scholarship winner?

Why is one young fellow so clear sighted in what he wants to do in life, while his buddies—no less able—haven't the foggiest?

And where do some young kids acquire the maturity to contemplate years of study and self-imposed discipline while others see only frustration?

A lot of arguments have been generated to explain such dramatic differences, arguments that raise questions of heredity, social environment, or genetics.

But many of today's psychologists, teachers—and even successful parents—believe there is something vital missing from theoretical discussions of this nature. That missing element, they suggest, is the emotional experience of the individual, the positive or negative feedback coming to him or her from family, friends, teachers and the community.

Certainly, the backgrounds of this year's HP employee scholarship candidates support the idea that young people become motivated to help themselves mainly where affection, trust, and/or interest are manifest.

In a few cases, the beginnings of the change in personal attitudes were rather sudden. A teacher who brought kind words and encouragement was one instance. A coach who took an interest was another. Their acceptance was the key to a bright new view of themselves by the kids. For most, however, it was mainly a case of rub off from a loving family or an encouraging school environment. Because of it the young people were able to see their world and themselves as having worth.

How far this can take a young person along the road to responsibility is perhaps suggested by the following examples from the list of scholarship winners:

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## the winners

When you add energy to talent and intellect you get someone like **Lizabeth Stephens**. Her father, Microwave Marketing's Leo Stephens, recalls that Betsy always was super active: "She slept less than any kid I ever knew.

Never a wasted moment. And she never did anything half way." Her record at Emil Buchser High School in Santa Clara totally substantiates Leo's judgment. Betsy graduated Number One in her class, had a 4.0 grade point average, was class valedictorian, performed the lead in the school's "Funny Face" production, and participated very actively in choir. Said her principal: "The keenest of intellects and her abilities in drama and music qualify her, in my judgment, more than any other twelfth grade student to succeed as a college student."

Betsy's present plan is to take these qualifications to Pacific Lutheran University where she will major in English. Though she seems to have been a natural force from the start, the Stephens offer their four children both encouragement (help with homework any time) and discipline (no TV from 5 to 7 p.m. school nights).

**Dave Myers**, son of Cecil Myers, analytical service specialist at the New York Area sales office in Paramus, New Jersey, is really a one-man happening. To wit, writer (yearbook editor-in-chief, magazine contributor), drama (Parsippany Hills Players, Barn Theatre, Morristown Little Theatre, Mt. Tabor Players), music (school chorus, summer program at London's Royal Academy of Music, guitar, piano), photography (darkroom, Film Society), scholarship (National Honor Society, Spanish Club), and hobbies (tropical fishkeeping, electronics, travel).

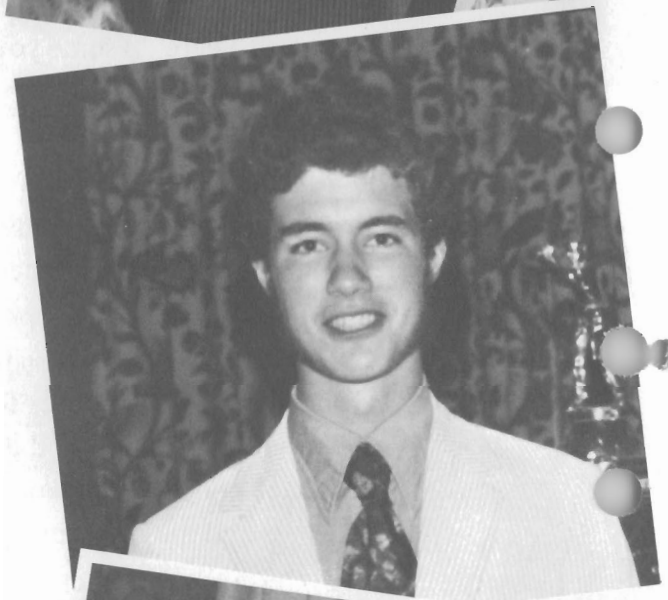
So what will he pursue at Tufts University? Law. Dave says that although most people influence a person one way or another, he "can't think of anyone whose decisions have shaped my life as far as interests or ambitions are concerned. I think the initial spark of curiosity, that inkling that one may be bent in a special direction, is a matter altogether of individuality."

In Dave's case—some spark!

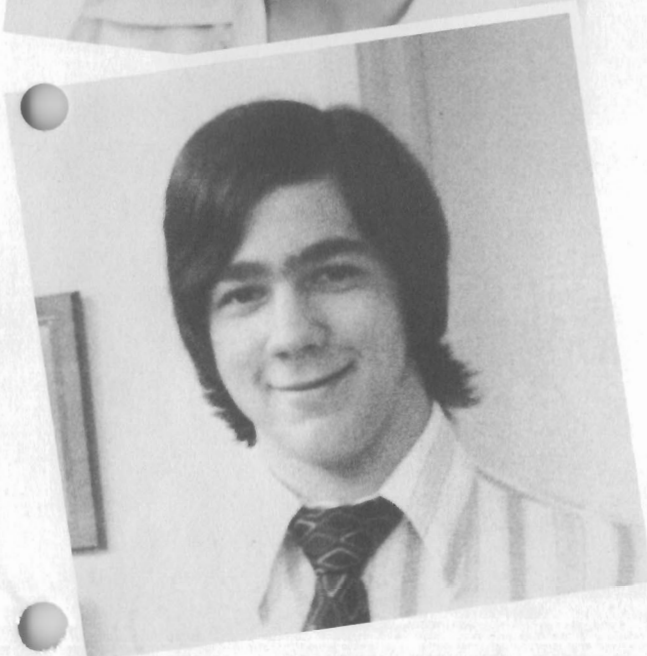
It's clear that **Ann Beery** was not destined to become a *football great*, even though her dad, Wallace Beery, electronics field engineer out of the Atlanta, Georgia, office once had daydreams along those lines. So Ann set about becoming successful in other ways, particularly school work.

"My parents plus my grandparents definitely had the most influence on my motivations. They all took an interest in my studies, and I tried not to let them down."

A special emphasis on science and medicine, which she will take to DeKalb this fall, began about the 5th grade when she got hooked on biology and chemistry. She feels lucky about all that: "Because many students are left out of the main stream of school life. They need something that will motivate them to participate more actively—something other than football spectatorship!"







A geology teacher, some forest rangers, and friends who introduced him to wilderness backpacking were among the important influences helping to shape **Jim Jenke's** interest in earth sciences. Jim, son of Microwave's John Jenke (systems analyst, Materials Control), is entering Stanford this fall with the aim of becoming a geologist, or oceanographer, or forester—"As long as it's out of doors and relates to research in earth resources." Jim feels that having such an aim—even if it changes in time—is an advantage. "It gives you a direction to take, and I've found that very useful in school." Indeed, at Palo Alto's Cubberly High School, Jim earned a high grade point average, won writing awards, was an all-league defensive back in football for two years, sports editor of the school newspaper, assisted on the yearbook, and traveled to Yosemite, Hawaii and Death Valley to study geology. His twin brother, John H., exhibits very similar drive and talent, was voted the school's "most valuable senior," and also won a 1972 HP Employee scholarship which will help get him started as an English major at Stanford. Obviously, there must have been good "vibes" at the Jenke home to produce two such winners.

Her teachers and counselors see **Audre Karasa** as "the solid, reliable type of youngster that typically forms the backbone of the college student body." Perhaps so. But Audre, whose dad, Norm Karasa, is a member of the manufacturing department at the New Jersey Division, seems to have acquired a self-knowledge beyond her years. Describing her experience as a volunteer at Children's Shelter, where youngsters from broken homes are temporarily housed. Audre noted: "Most of all they gave me a rare insight into myself. I realized that I have a need to feel needed." As a result, she will take this insight to Douglass College this fall and aim for a career in social work.

Some time between his freshman and senior years at Salesianum School in Wilmington, Delaware, **Nicholas LePore**, son of Avondale Division's Joan LePore, made some important discoveries and decisions about himself. Each year his record shows significant gains in grade point average, class standing, and participation in school sports and activities. This trend was also spotted by his guidance director, who noted "a real change in the personality of this young man . . . a real maturing process going on." It's probably no coincidence that during this period he also acquired a strong desire to become a lawyer. To that end he hopes to attend Temple University with the help of the HP Employee Scholarship. That way, he feels, he can become "a contributing element of my society . . . and repay everyone who has helped me!"

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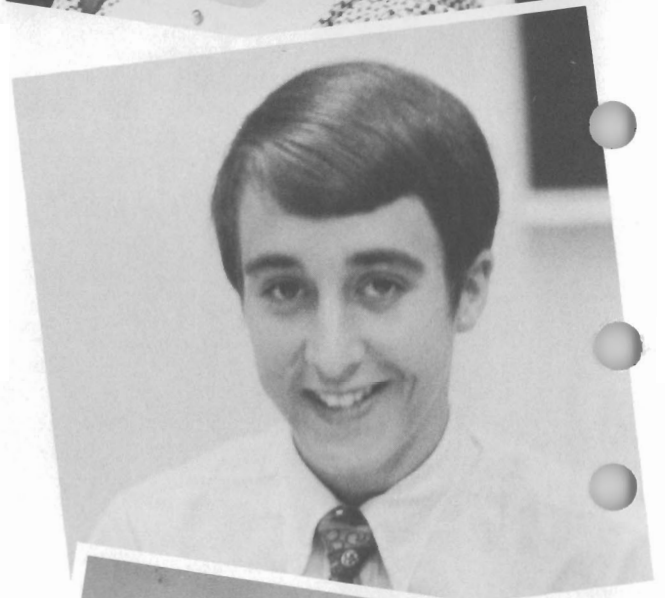
## the winners

**Orlinda Hamel** has a smile that can light you right up.

But it failed her one time. Invited to visit the Palo Alto Veterans Hospital by a friend who served as a volunteer, she observed her first blood test involving a rabbit—and fainted. But Orlinda, daughter of Microwave's Dorothy Hamel, quickly recovered, took another good look around—and then began seriously thinking of medicine as a career. More specifically, her aim is to become a neuro-surgeon. "It's going to take a lot of doing, but I know I can do it because I'm not in a rush to do anything else." Orlinda's record at Cubberley High School in Palo Alto and outside of school is reason for such confidence: a very high grade-point average (math, science, English), year-round part-time work, volunteer work as a nuclear medicine lab assistant, plus bowling, coin collecting and modeling. Orlinda's school counselor made particular note that she comes from a cooperative family that supports her desire to attend college. The HP scholarship, one of two scholarships she received, will also be very useful support during her first year at Howard University.

**Wayne Miller** was brought up to make decisions. His father, Bob Miller, a service technician at the Skokie, Illinois, sales office, had a hand in that. So by the time of his sophomore year at Forest View High School, Wayne was quite prepared to make a very important decision: "The athletic coach impressed me. We seemed to have a lot in common, and he liked his job . . . that impressed me. That's when I decided what I wanted to do. There were things I liked to do and I saw I could fulfill them in the same way he did, in teaching and coaching." As a member of a household of seven brothers and sisters, Wayne obviously can make good use of the HP scholarship during his first year at Southern Utah State where he will major in physical education and automotive education.

**Kathy Milheim** is presently aiming for a business career, and is very businesslike in getting there. But it wasn't always so. Teachers and acquaintances can recall that just a year or so ago Kathy was very much an average student with an average sort of attitude. Her mother, San Diego Division's Dorothy Alexander, remembers Kathy having childhood dreams of becoming an actress—or a housewife. Then, in her second year in high school, she was fortunate to have a counselor who took an interest in her. Somehow the counselor was able to look below the surface and recognize a talent—and bring it out. The result was a complete turnabout. Her grades in the past two years have become straight As. She's moved more strongly into reading, sports, and organic gardening. Kathy also learned about direct selling from friends. That experience plus her eagerness for meeting people shaped her goal of seeking a business career via Palomar College.







# The challenge to our international trade

## Prologue

□ In an era of broad affluence and high total employment, the persistence of joblessness in the U. S. of between 5 to 6 percent is rightly considered too high. All observers agree that “something should be done” to lower that rate. For their part, some labor leaders and others have decided that the jobless are victims of the operations of multi-national companies. They claim that by deploying money, resources and technology abroad, these companies undercut U. S. industries and take jobs out of the country.

To halt those alleged effects, organized labor is now supporting legislation that would put strong curbs on the multi-nationals. This proposed legislation calls for a sharp increase in the taxation of profits earned abroad, curtailment of the use of U. S. patents overseas, and the imposition of quotas on imports into the United States. Their hope is to protect American workers by halting the “export” of jobs.

But would these restrictions actually result in a better employment picture in the U. S.? The experience of Hewlett-Packard—though far from being a typical international firm yet clearly a multi-national company with almost 40 percent of its sales coming from outside the United States—strongly suggests quite the opposite.

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# our international trade

## Interview with Bill Doolittle, vice president-International:

"In every case where HP has established a manufacturing plant abroad—in West Germany, the United Kingdom, Japan, and France—the principal motive has been to protect our markets.

"Manufacturing at these locations largely eliminates local tariffs. This makes our products more competitive with those of local manufacturers. Actually, we produce a limited number of instruments abroad and these tend to be our more standard products involving less technical sophistication. However, manufacturing even a relatively limited variety of products overseas identifies us as a local supplier and this benefits all of our product lines and services. As a result, exports from our U.S. plants of products manufactured only in the U.S. have grown significantly faster than our overseas manufacturing operations.

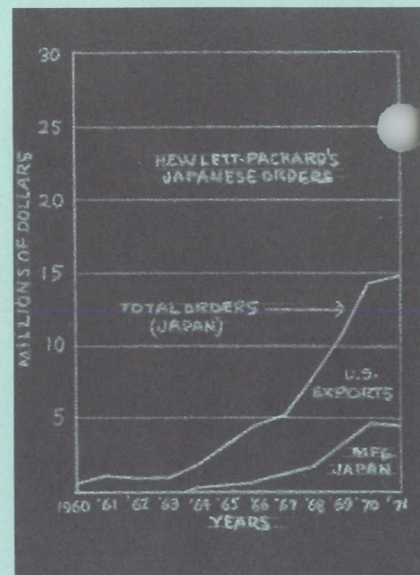
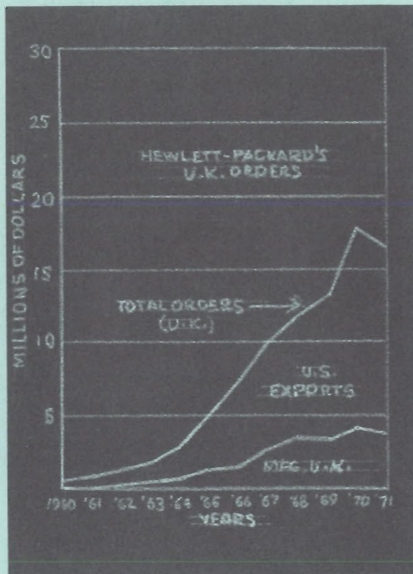
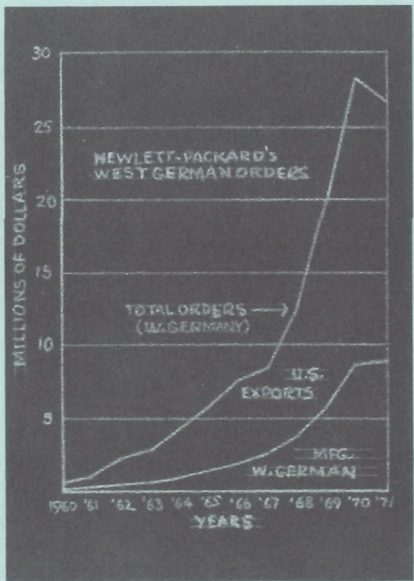
"The three small charts below show that orders for our U.S. products increased dramatically after we established manufacturing plants in West Germany, the United Kingdom and Japan. Our French plant was established only last year, so although we expect our U.S. exports to France to follow a similar pattern, it is still too early to tell.

"It's worth noting, too, that manufacturing abroad can be complicated. For example, the lower labor rates abroad tend to be offset by higher material costs. Our overseas plants have to pay the cost of importing many of their parts and components, and they also don't enjoy the efficiency of long production runs. When you add these up, some instruments may actually cost more to produce abroad. But in spite of that, we can sell them locally for less than identical products imported from the U.S. because we avoid the local tariffs."

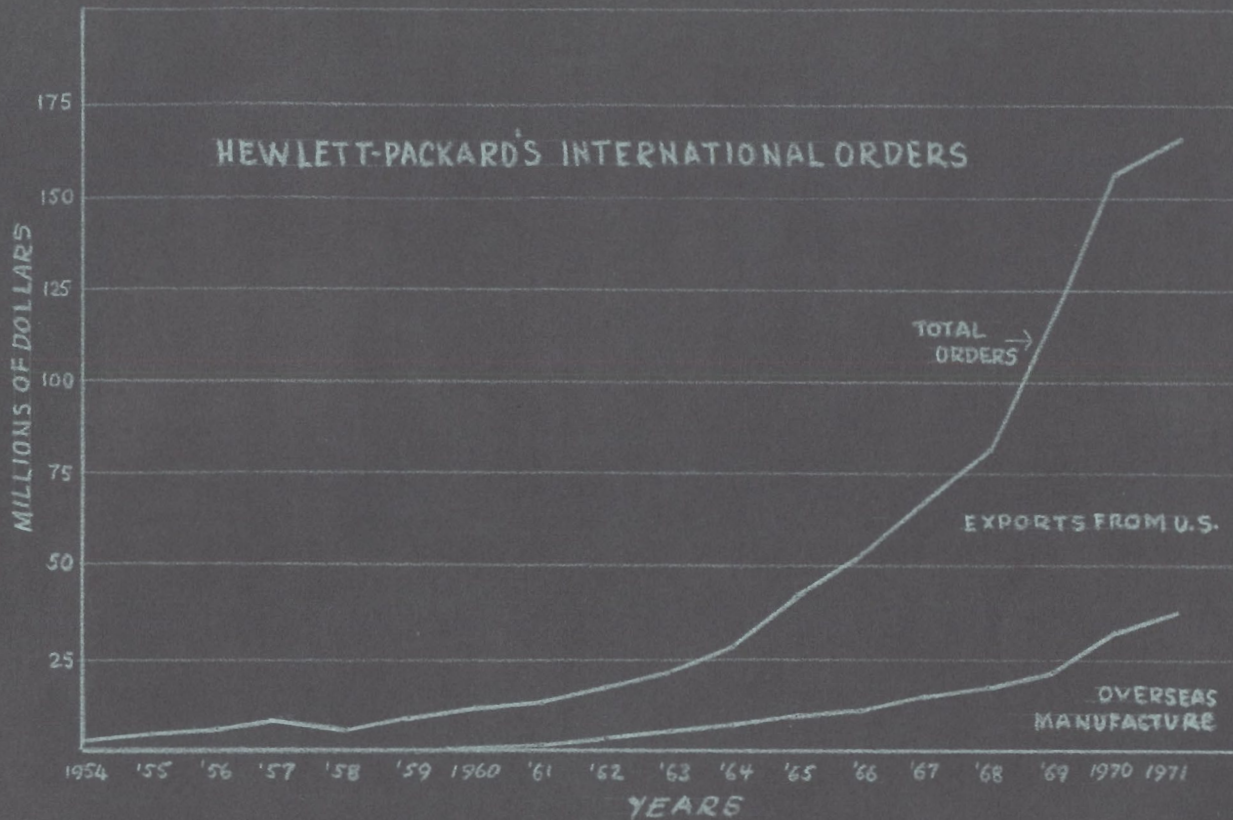
## U.S. employment

Asked about the effects of overseas production on employment in the U.S. divisions, Bill Doolittle chalk-talked his way through the large chart at right:

"The top curve shows, first, that in 1971 our orders received from outside the United States reached \$164 million, nearly 40 percent of total HP orders. The bottom curve shows the growing percentage of orders accounted for by overseas manufacture. The value added abroad was \$35 million, or 10 percent of the corporate total in 1971. The area between the two curves represents what we export from the U.S.—in 1971 about \$129 million or 30 percent of the corporation's business and some 75 per-







cent of our international volume.

"I think it's fair to assume that this export activity requires a proportionate amount of our total employment. That would mean, conservatively, one out of every three or four of our U.S. manufacturing jobs exists to support our international activities—which in turn have grown so fast only because of the investments in marketing and manufacturing facilities we have made abroad.

"Let's look at these growth figures. They show that Hewlett-Packard has grown much faster than the growth of the U.S. economy.

"In the years 1960 to 1970, for example, the average annual increase of the U.S. gross national product was a little less than 7 percent. For HP sales as a whole, it was slightly over 16 percent, but for HP's exports the annual average increase amounted to almost 28 percent!

"Similarly, while total employment in the U.S. grew less than 2 percent per year from 1960 to 1970, HP's manu-

facturing employment in the U.S. rose at an average annual rate of about 14 percent, while our U.S. manufacturing employment dependent on exports averaged a 24 percent annual increase.

"We're not alone with this kind of experience. Business International, an information and research firm, reports that manufacturers who increased overseas investment the fastest also increased domestic employment the fastest. Another research study, by Professor Robert Stobaugh of the Harvard Business School, indicates that unemployment would rise sharply in this country if there were no U.S. investments abroad. Our experience during the recent U.S. recession bears this out. While the U.S. economy was dropping, international business remained high. Partly as a result of this, and partly because our people in the U.S. were willing to take a temporary 10 percent reduction in their work schedules and paychecks, HP was one of the few U.S. electronic companies that didn't have

to resort to layoffs.

"This is not to deny that some of America's industries have real problems in losing jobs to competition from abroad. This seems to have been particularly true of several older industries—shoes, steel and textiles, for example—where U.S. technology holds no particular advantage and where the cost of labor is significant. When you look at the relative labor costs—the U.S. versus abroad—it's obvious the U.S. has a difficult time competing head-to-head in all except high technology industries.

"It's not easy on the people working or wanting to work in these older industries, and they should have some form of protection. But most experts in the field believe that their best long-term protection is to be trained into other industries where the U.S. is more efficient and competitive. A lot of retraining would be required, which again is not an easy undertaking. But isn't that better than putting up bar-

*(continued)*



## our international trade

riers that would seriously hurt everyone by restricting or shutting off two-way trade?"

### Overseas R&D

*Along with its parallel manufacturing operations abroad, Hewlett-Packard has encouraged each of its overseas plants to create and market their own proprietary items in product areas determined by themselves and not duplicated by our U.S. divisions. In this respect HP can be considered unusual among multi-national companies, which generally centralize their R&D programs.*

"This approach is based in part on our belief that engineering competence in many areas abroad is equal to that available in the United States, and in fact offers unique experience in various fields.

"For instance, our German plant has gained expertise in heart monitoring and acoustics. The result was a fetal heart monitoring instrument, developed in conjunction with a world-famed German medical authority, that found world-wide acceptance. Efforts in the acoustics field brought about HP's airport noise monitoring system now in operation at a number of major international airports in the U.S. and abroad.

"Similarly, HP-Limited recognized the need for a microwave link analyzer in world markets at a time when the U.S. need for such an instrument was not apparent. However, the MLA proved to be ideally suited to the developing needs of telecommunications companies throughout the world including the Bell System. The result has been a great success on a world-wide basis.

"In Japan, the burgeoning electronics industry created a broad market for impedance meters, Q meters and other component-measuring instruments. The company's engineers at YHP have pursued this avenue of development with considerable success.

"Where conditions favor it, over-

seas developments such as the fetal heart monitor are also manufactured in the U.S.—for the same reasons we establish parallel production abroad. So it's a two-way street.

"The net effect of our international development program has been to increase the number of product areas in which the company could become involved. A source of design talent in host countries has been discovered and utilized. The overseas factories have taken great pride in their developmental activities, something which no amount of parallel production could have achieved. And last but certainly not least, our local selling organizations have been stimulated, customers have gained some valuable and sophisticated new products, and more are on the way.

"At the present time, 15 to 30 percent of our overseas production of each of our international manufacturing facilities consists of products developed by the international manufacturing subsidiaries. This percentage should continue to rise in the future due to an ever-increasing emphasis on the production of locally developed products.

"A lot of friendly competition and interchange goes on between our U.S. and international divisions now. It's all very stimulating. As a result, horizons have been widened for all members of the HP family."

### HP Singapore

*HP Singapore is a somewhat different case from the other international facilities in West Germany, the United Kingdom, Japan and France. Hewlett-Packard set up its own core-memory assembly operation in Singapore two years ago to secure an assured and lower-cost source of core memories for its computer products. Previously, cores had been obtained from other Far East sources owned by U.S. companies.*

"Some critics like to claim that the main reason these products have never been made in commercial quantities in the U.S. has been the cost of labor. Actually, we attempted it here, but found that Americans are just not temperamentally suited to the intensive assembly work required in stringing core memories.

"In addition to core memories, our Singapore plant now assembles or

packages a number of high-technology items such as integrated circuits and semiconductor devices. Most of the parts for these devices come from the U.S. The devices are assembled and tested abroad and then shipped back as finished components to the U.S. divisions who use them in their instruments or sometimes sell them outside the company.

"The benefits we gain from the ability to produce competitively with other international producers has had a healthy effect on our overall U.S. business. As a result, many new kinds of jobs have been created in the U.S. to design these sophisticated components and to develop and manufacture finished products which employ them.

"Now let's look at it from the other point of view. Singapore is at the crossroads of a very large market among emerging nations. Our manufacturing operations there will enable us to become an integral part of that market, just as our other international plants do in their markets.

"Manufacturing in Singapore is not without its problems, however. Singapore is also a tremendous example of a country that has made great strides by bringing in industries such as ours. So much so that labor is becoming increasingly scarce there. In projecting our requirements, we've seen the necessity to look for an additional manufacturing capacity in the same general area. As a result, neighboring Malaysia has invited us to locate there. This would give us great flexibility for some time to come. And it would help alleviate Malaysia's present severe unemployment problem. As a company operating in world markets, we feel this would be a contribution to orderly international development.

"To sum it up, HP's overall experience indicates a very strong correlation between our growth at home and our ability to compete abroad. To place restrictions on that ability, by erecting arbitrary barriers to international trade and investment, would certainly impede our growth, resulting in fewer jobs and opportunities for our people both in the United States and our international organizations."





# Jetports fight the noise jungle

Business, the managers of major airports can tell you,  
has never been better. Or worse.

Traffic volume is tremendous. But, unfortunately,  
so is the volume of aircraft noise and vibration.  
And also the volume of liability suits seeking compensation for  
damages allegedly caused by the rumble, roar  
and fumes resulting from jetport operations.

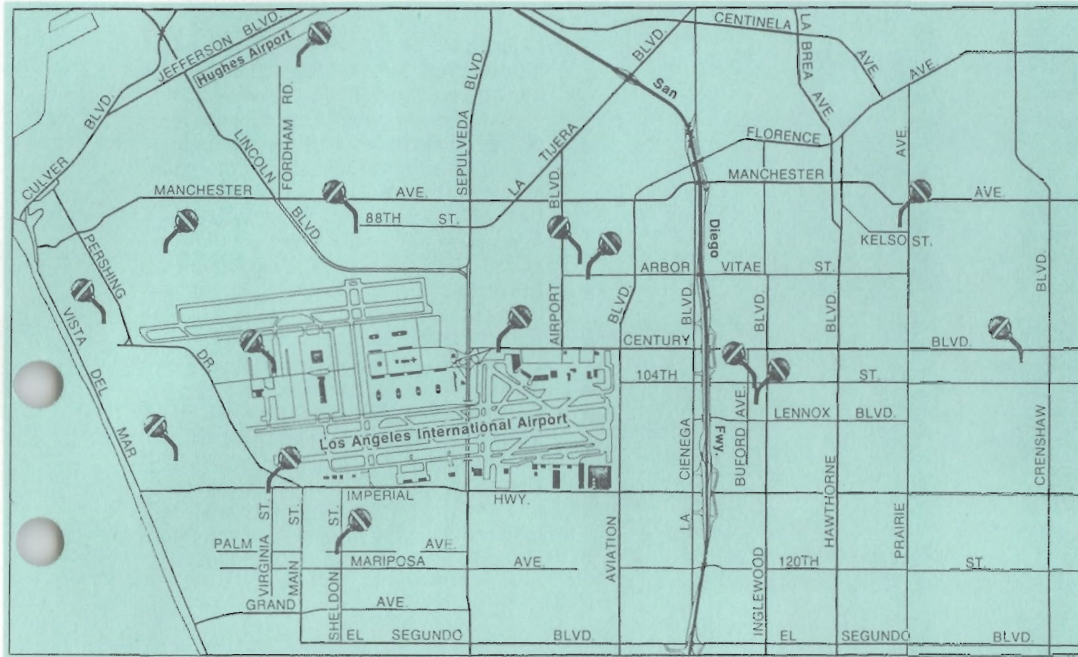


## the noise jungle



Heart of noise-monitoring network, an HP 80500B system, is checked by Henry Mitchell, superintendent of operations at Los Angeles International Airport. First goal of the system is to meet the California law that becomes effective in December. Long range, the aim is to shrink the area of noise impact over the next 13 years.





The fifteen HP microphone locations around the airport are indicated by symbols. Residents in the area are responsible for many of the almost \$4-billion in suits pending against the airport, alleging damage by noise, vibration and fumes of jet craft. Rugged HP microphones relay decibel reading from planes passing overhead to radio equipment which transmits data to computerized system at the airport.

In Los Angeles, for example, the city attorney recently reported that its international airport had some \$4 billion in damage suits pending against it. He went so far as to recommend the shutting down of the huge airport to protect the city from further claims and until airlines agreed to indemnify the city. The airport also faced a December 1, 1972 deadline by California law placing a firm lid on airport noise levels. The law states that the noise level as of December 1, 1971 cannot be exceeded. Thus operations that add to the noise level are prohibited, as are noisier aircraft.

Meanwhile, the airport management has taken a significant step toward informing itself about the real nature of the noise problem; a Hewlett-Packard noise monitoring system was installed. Four months ago the \$220,000 system went on full-time operation with a network of 15 microphone locations connected to a computerized center which records and analyzes the noise data.

Los Angeles thus joins some seven other cities—Stuttgart, Geneva, Sydney, London, Amsterdam, Vienna and Zurich—who have chosen the HP system as a key weapon in combating the noise problem.

It has proven itself to be a versatile weapon. Defensively, its very presence on airport premises has tended to encourage greater care by pilots in how they operate their aircraft. Offensively, the system has been quite effective in pinpointing violations of noise abatement policies.

But the main purpose of the system at Los Angeles, according to Walter Collins, director of the airport's Sound Abatement Coordinating Committee, continues to be the study of airport noise.

"How can we expect to solve the noise problem unless we know the extent of that problem," Collins said. Already, for example, it has been learned that atmospheric conditions bear importantly on noise levels. The so-called "inversion layer"—infamous because of its role in the creation of smog in the Los Angeles basin—has an affect on noise. Temperature, wind and humidity also are influences that can help determine whether the noise of a jet takeoff produces irritation or indifference among people on the ground.

Los Angeles selected the HP system from among four competitive bids early in 1971. The system was developed originally by HP GmbH engineers at the Boeblingen plant in 1967. Their Aircraft Systems marketing program is now represented in the U.S. by Dick Procnier at Santa Clara Division.

Commenting on the Los Angeles installation which he supervised, Dick said it now represents the only computer-based, real-time multi-terminal airport system in the U.S.

One key to HP's winning bid, he noted, was the microphone. "We spent three to four years developing a mike that can take a lot of exposure outdoors. Our system is also the most complete in terms of noise measurement and in our ability to provide field support and service?"

One problem faced by HP's noise monitoring people is the fact that airport managements are not among the company's usual customers; by and large they don't know who we are. Perhaps that situation will change as the Los Angeles story—and more recently the Sydney and London stories—are told to a world looking for answers to a problem of growing irritation and litigation. □





In just a little over two years since its introduction, the 3800A distance meter has helped engineers and surveyors establish many a landmark around the world — the Disney World monorail in Florida and the Olympic structures in Munich to mention two notable examples. Early this August the Loveland-based instrument reached a landmark of its own — production of the 2,000th unit (production of 3800Bs by HP-France at Grenoble not included). Taking note of the occasion are these Civil Engineering Products production people, from left: Barbara Haas, Laraine Meyer, Kelvin Werth, Gen Visser, Carol Dykes, Gwen Dougal, Maxine Brunmeier, Loyd Minor and Doug Jackson. Congratulations were also received from Bill Hewlett who inspired the 3800 project after watching cumbersome surveying techniques during a visit to Afghanistan in 1965.

## News in Brief

**Palo Alto** — Sales and earnings for the third quarter of the current fiscal year were well above the corresponding period of fiscal 1971.

Sales for the quarter ended July 31 totaled \$124,977,000, up 33 percent over sales of \$94,017,000 during last year's third quarter. Net earnings amounted to \$9,256,000, equal to 35 cents per share on 26,386,398 shares of common stock outstanding. This compares with earnings of \$5,408,000, equal to 20 cents a share on 25,955,257 shares, during the corresponding period of 1971.

President Bill Hewlett said the company's incoming orders for the quarter amounted to \$137,349,000, a gain of 28 percent over orders of \$107,384,000 booked in last year's third quarter. For the nine-month period ended July 31, orders totaled \$375,121,000, up 26 percent from a year ago.

Sales for the nine months amounted to \$339,513,000, a 24 percent increase over the corresponding period of 1971. Net earn-

ings rose 57 percent to \$24,458,000, equal to 93 cents a share. This compares with earnings of \$15,628,000, equal to 60 cents a share, during the first nine months of last year.

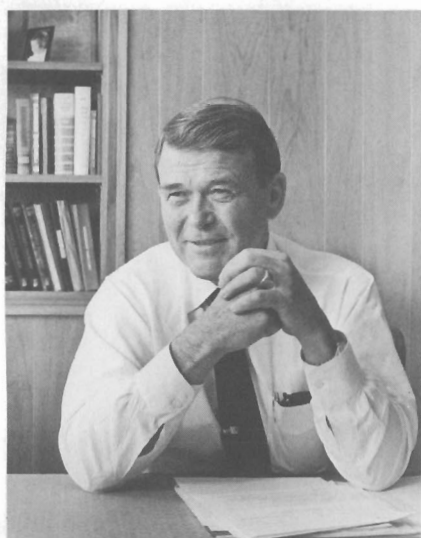
Hewlett said virtually all of HP's operating divisions are reporting a higher level of business in 1972.

"Domestic markets have been particularly strong," he noted, "with orders from U.S. customers amounting to \$230,577,000 for the nine-month period. This represents a gain of 31 percent over the corresponding period of 1971. International orders for the same period have risen 19 percent to \$144,544,000."

**Colorado Springs** — A major building expansion has been announced by the Colorado Springs Division.

Designed to accommodate steady growth, the 250,000-square-foot addition will almost double plant capacity at the Garden of the Gods site. Construction is due to get underway this Fall, with completion late next year.





## From the president's desk

In this issue there is a very excellent article about Hewlett-Packard's international business, with some interesting and worthwhile comments on the role of the multinational company. I thought it might be of interest to talk a little bit about HP's philosophy on management of international operations.

To me there is one key point on which all else hangs. That point is that if you have a subsidiary company in country A, the company is first and foremost a citizen of that country and in the last analysis must be managed so that its operation promotes the interests of the host country. Once this point is accepted, policy-making becomes clearer, and risks become more evident.

Let me expand on these concepts. Winston Churchill once commented, "Few people are so gifted that they can understand the politics of their own country; none are so gifted that they understand the politics of another country." If this is true, then this says most eloquently that a foreign subsidiary, except in certain special cases, should be managed by nationals of that country. This is why we have worked toward the use of indigenous management in our international operations. At the present time, out of 5,000 HP people employed outside the United States, we have only 11 U.S. management people involved in foreign management assignments. Of these, four are handling start-up operations, and another four are concerned with management of HP corporate headquarters for Europe in Geneva.

A factory in any area should do more for a community than simply pay taxes and provide employment—it should be a means of raising the total standard of living in the area. In a business such as ours, which is based on high technology, a local research and development program is a good example of such action. An effective R&D program serves as an excellent conduit for transfer of technology. Incidentally, this has a dual benefit in that although much of the technological

flow will be from the U.S., a very significant amount also flows in the reverse direction.

A business can also be an important source of training, both in the field of management and in technical areas. In the former case, we have encouraged our overseas managers to expand their management skills and in many cases have brought them to the U.S. for additional study. A good example of technical training is the very effective engineer apprenticeship training program in operation at HP GmbH in Germany.

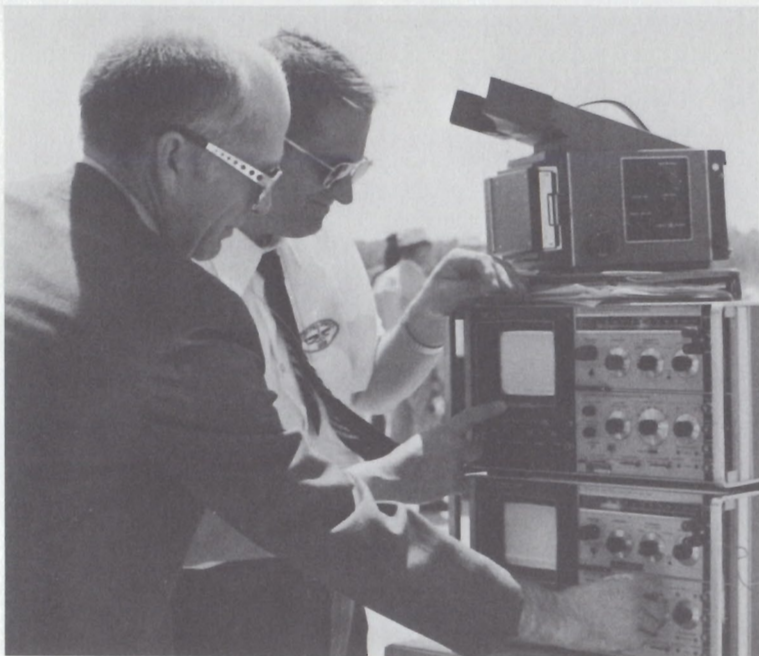
Another area of assistance is in improving the balance of trade of the host country. The ability to participate in and cooperate with export drives is an important by-product of national management.

But, all is not beer and skittles in the international game. National priorities can change and what was once a happy relationship between a foreign subsidiary and a host country can turn sour, and trouble result. This falling out may result from the rise of socialism, as in the case of Chile; a rise in nationalism and the feeling that too much industrial ownership is in foreign hands, as is somewhat the case in Mexico; or particularly, as in the case of natural resources, that such resources are a national asset and that private ownership, foreign or domestic, is inappropriate.

For the most part, once a national policy has been changed it is virtually impossible for a resident foreign company to cause a reversal of the decision—but there is a great deal that the company can do to reduce the likelihood of adverse policy changes. Those international companies that have been most successful in coping with the changing aspirations of a host country are those that have made a determined effort to understand the problems the country faces and have been willing to adjust their own procedures so as to cooperate and work with local government. Those companies that have had the most trouble in the international field are those that have been intransigent in their dealings with foreign governments, and have been unwilling to temper their actions with the changing times.

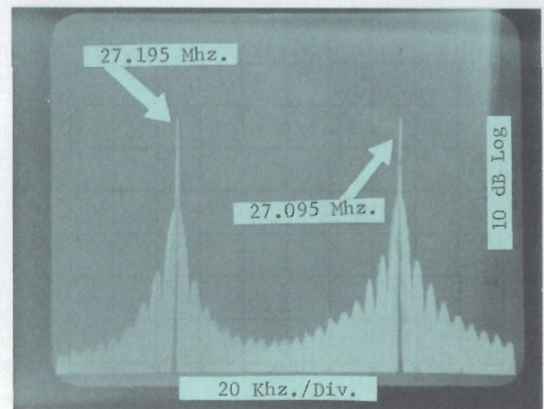
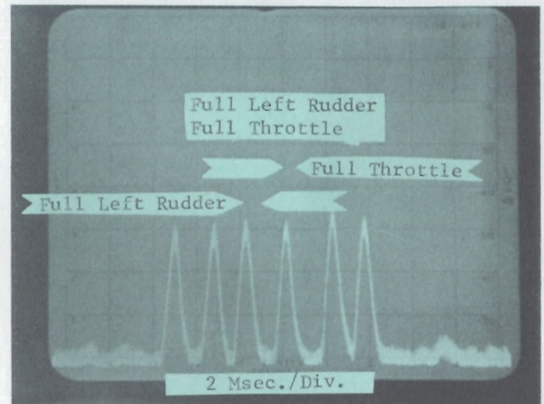
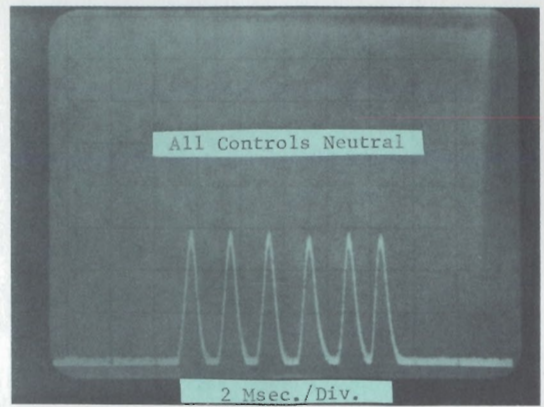
*Bill Hewlett*





**What do you think those men and those spectrum analyzers are up to?** Something serious and purposeful, no doubt—such as model airplane flying! That indeed is what Al Walcek of HP's Rockville (Washington, D.C.) office and an official of the American Modelers Association are up to. The occasion was a demonstration of radio-controlled flying during the transportation industry's recent Transpo-72 exhibit at Dulles International Airport. HP loaned a pair of spectrum analyzers that enabled the modelers to monitor the performance of transmitters used in radio-controlled flights. The paired scope photographs, for example, compare the situation of a model plane whose controls are moved from neutral to full left rudder with full throttle. The shifts can be noted in the distances between various peaks of the six channels, each of which controls a servo motor in the plane.

The scope photo at right pictures a spectrum of two model airplane transmitters operating safely apart in the 27 MHz range. The HP instruments, in fact, were particularly valuable in warning the modelers of any signals that might conflict with their radio commands. Otherwise, kaaraasshhh.



## Measure

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