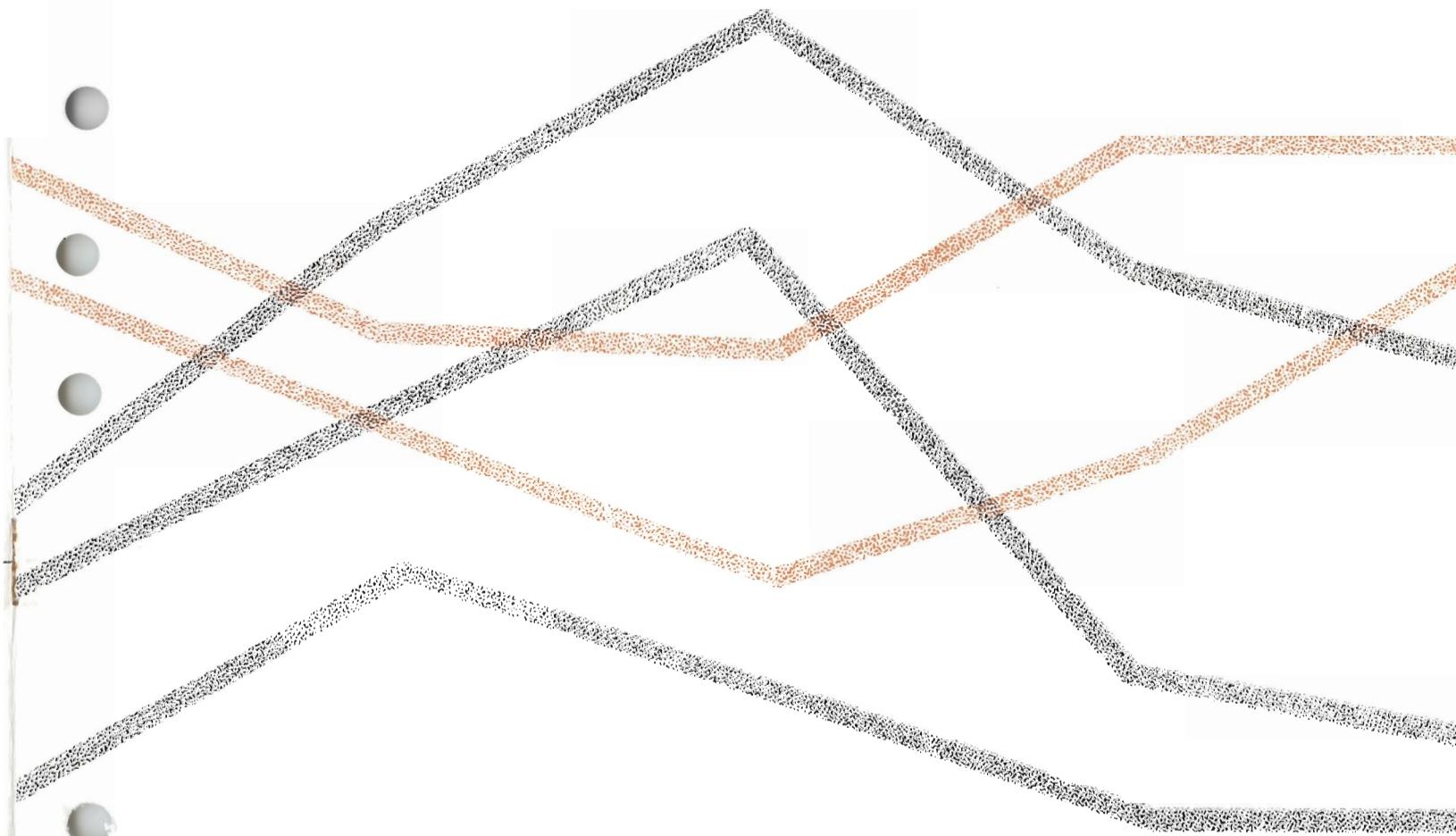


# Measure

For the men and women of Hewlett-Packard/OCTOBER 1968





# NOW... .

The voice on the phone is clear and confident. The manner is friendly. The answers are to the point.

Today, if Linda Martin doesn't have the answer to a particular question asked by a customer, she knows where to find it. As a primary source there's the three-foot wide "book" of product data common to HP order desks around the world. Or, if the inquiry gets technical, she can always refer it to the staff engineers. Linda also knows how to reach other parts of the HP organization, and understands what kinds of demands she can make on behalf of the buyers. She understands the order processing procedures, too. And she enjoys her associates at the North Hollywood sales office.

But Linda, in common with so many of us, can look back on a day when the job seemed totally strange. The names of products, divisions, people and customers were words of an alien language. Peoples' descriptions of their work and procedures left large and puzzling gaps. The minutes and hours rushed by. But she knew she had ability—why, otherwise, would they have hired her? But did anyone really expect her to master that incredible mass of product information in the big book? And how about getting along with her



## and THEN

co-workers? It had never been a problem—but this was a new scene.

First day on the job can indeed bring all kinds of questions to the surface. For Linda that day took place early last June. On that day, and for some time thereafter, two main questions loomed in her mind: Would the HP organization live up to the very high rating the employment agency had given it? And would it lead to the kind of customer relations work she had in mind—plenty of contacts and variety? During the first day she also faced meeting many new people. Later she would have to go back and learn most of their names all over again and relate them to an organization that seemed, for the moment, to have the structural clarity of chicken chow mein. By day's end, Linda—then 21, single, five feet, five inches, 113 pounds, brunette, native of Providence, Rhode Island, graduate of North Hollywood High, evening student in social science at Los Angeles Valley College, former long-distance telephone operator and customer service employee, golf and tennis player—had been introduced and oriented all 'round. Those first eight hours on the job are highlighted on the following two pages. They summarize an experience we've all been through—difficult to forget, hard to remember.

*(continued)*

# first day on the job



*Previewing the work she is aiming for — and eventually gets — Linda hears about order coordinating from Sheila Smith and Charlie Roberts, order department manager.*



*Introductions all 'round — that's first-day SOP at the North Hollywood office. Fe DiJulio, right, escorts Linda through various departments, including literature, which Mary Cooley describes here.*



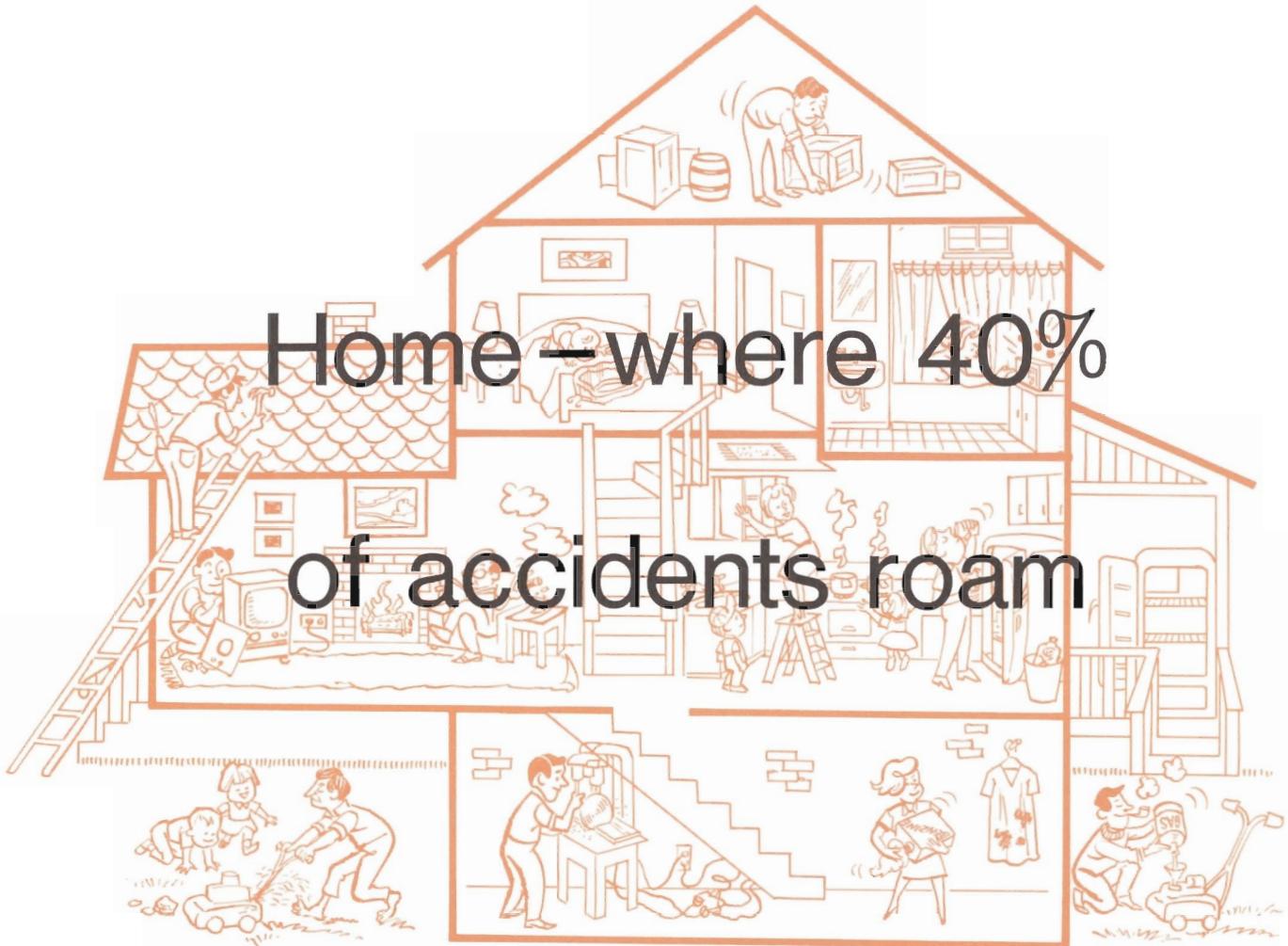
*Linda, having a lunch break here with Lenora Sharinshinski, soon learns that what she was told is true — HP is a friendly place in which to work, that informal communications and helping one another are important.*



*There's lots of learning to be done — perhaps some months of it — before Linda knows the HP organization and way of business well enough to go on the order desk. Here, with Lenora, she gets a taste of the order processing system — her job for the time being.*



*Tomorrow it will be easier. Tomorrow she will know more. She will remember a few more names. The TWX keyboard won't seem so strange. Meanwhile, it's been a big day but there's still time to get out on the tennis courts for a set or two before it's over.*



Winter may be chestnuts-roasting-by-an-open-fire and all that. But it's also, perforce, the time of year when you and your family spend a great many hours at home, indoors, running a gamut of perils that would put Pauline to shame.

Just count the modern conveniences in your home—the appliances, chemicals, sliding glass doors, aerosols, medicines, power equipment, tools and toys—and there you have a catalog of just some of the newer ways by which people are disabling themselves accidentally. And all of these hazards will get a bigger workout than ever this winter.

Estimates by the National Safety Council indicate that out of the 11-million accidents in 1967 that disabled people beyond the day of accident, more than 4.5-million occurred in and around the home. This was more than twice the number of accidents reported for any other single category, including motor vehicle, work-related, or public accidents.

There was considerable expense to go with the household pain: The cost of lost wages, medical expenses, insurance administrative costs, and property damage was estimated at more than \$2-billion.

A key finding of accident investigators is that luck—bad luck—plays less and less a role in home accidents. They can be prevented, and the dramatic reduction in the rate of fatal home accidents, from 28 per 100,000 population in 1912 to 15 in 1966, is proof of the effectiveness of safety programs and standards. The following describe some basic, simple measures that can increase your margin of home safety in the season ahead:

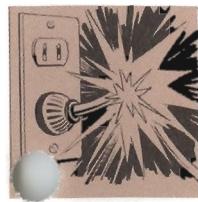
**Gasoline** to fuel power lawn mowers, outboard motors, bikes and scooters is a household item in many homes. Its explosive vapors are also a source of death and destruction. If you must have gasoline in the garage or basement, store it in a sturdy metal container (never in glass). Make it inaccessible to small children. Fuel your mower or other powered equipment outdoors (it can flash at minus 50° Fahrenheit). Never use gasoline as a solvent for cleaning purposes — isolate it from all sources of ignition, especially the water heater in your garage.



**Poisoning** will claim more than half a million accident victims requiring medical treatment during the next year, more than half of them children under five. Since such youngsters will eat and drink almost anything, the first rule in handling medicines, chemicals, and many household preparations, is to store them out of sight and reach. Aspirin is the biggest headache in this regard because it is often kept in a number of places about the home. Don't ever tell a child that a medicine will taste like ~~honey~~—they may later go hunting for it. And always clean out old medicines and prescriptions. If a child does swallow harmful fluid, first countermeasures are to make the youngster drink plenty of water to dilute the material, induce vomiting (unless corrosive and petroleum products are involved), and summon medical help.



**Falling** is by far the leading cause of accidental deaths in the home, and is also presumed to result in the greatest number of disabling injuries. It is the unexpected that brings about most falls — spilled substances, abrupt changes in walking level, insecure surfaces such as icy paths and small throw rugs, hard-to-see obstacles including toys, extension cords and thick carpet edges, and, of course, soap on the bathroom or shower floor. Kitchen falls are particularly hazardous because of the proximity of stoves to heated foods. Stairways, balconies, and roofs obviously figure in many of the more severe injuries. Most of these causes suggest their own cure: Keep walkways uncluttered and clean, install skid-resistant mats in bathroom areas, use a stable portable step to reach upper shelves, install safety railings wherever needed, anchor all carpeting, and — if you must climb high outside to paint or repair — start with a sturdy ladder properly braced, and hang a rope nearby as a safety belt or handhold.



**Electricity** figures in several major home-accident hazards. Overloading of circuits is the most common cause of fires. The average home circuit using a 15 amp. fuse can safely carry 1800 watts, or 1400 if appliances have motors. You can readily check the load by adding up the wattage of all the lights and appliances

(multiply amps by 120 to obtain wattage) you would use on any one circuit at any one time. When in doubt, have your electric utility representative or electrician check your wiring. Replace frayed extension cords. Electrical shock victims must be approached with due care. Remember to pull the plug or turn off the current, otherwise you could be endangered, also.

**Gas-burning** devices have been vastly improved in safety in recent years. But problems can lead to explosions, asphyxiation, and fires. If furnaces and heaters have had a summer layoff, be sure burners are clean, pilot light is lit, blower is operating, thermostat works, and loose dust and soot are removed. Make an occasional nose test when devices are not working to check for line leaks. If a leak is detected, turn off the gas supply and open doors and windows — and do not turn on switches or light matches. Be sure all space heaters are vented.



**Large glass doors** and windows are causing a sharp rise in disfiguring injuries. Contrary to expectations, most large glass installations in the home are of relatively thin glass having little impact resistance. A 1962 survey of glass accidents showed just as many adults as children were involved, and horseplay and stumbling were not major factors. In many cases the victims were hurrying but simply failed to see the glass. Nine out of ten of the doors broken did not have any design, decal or other device to warn or protect the walker. Half of them were only  $\frac{3}{16}$  of an inch thick. If your home was built or remodeled more than five years ago, chances are high that it does not have safety glass sliding doors or what is known as a "muntin" bar across the middle of the door.



**Fire** comes second only to falls as a cause of fatal home accidents and disabling injuries. Prevention starts with good construction and good practice in maintaining and using electrical and gas utilities, as discussed above. There are other steps that can be taken, though.



First, have a family plan — even a drill that maps out escape routes and alternatives. Keep in mind that stairways are often the first areas to be blocked by heat and smoke. If fire or smoke are detected, alert everyone and get them outside. Turn in the alarm. If you can, shut off gas and electricity when everyone is safe. If the blaze is a small one, try to put it out. Don't swing open any door that feels hot to the touch. Have handy at least one fire extinguisher, preferably a  $2\frac{1}{2}$ -pound dry-chemical type with a UL or FM label, but install it away from hazard areas. And be careful when it comes to alarm systems: some are fine, many are inadequate, and competent installation is a must. Check your local fire department.



Racing against the "clock"—an HP 5532A timing system in foreground—Mickey Thompson pushes past the starting mark of the oval track at Utah's Bonneville Salt Flats in a hot 1969 model 427 cu. in. pony car that erased more than 200 national and international records last month.



## Assault on the

This time next year, if things go according to Art Arfons' plan, another green "Monster" will crouch on the surrealistic landscape of Utah's Bonneville Salt Flats and attempt to blaze a path to a new world jet-powered land-speed record. Last November Arfons and his original "Monster" roared through Bonneville's measured mile at 585.366 mph. Conceivably, on his return run he could have pushed the 17,500-horsepower jet past the 600.601 mark set by Craig Breedlove in November, 1965. But near the end of that early morning run the "Monster"—still accelerating—flipped over, rolling and skidding for two more miles on the salt course before its devastated remains came to a stop. Arfons was hauled out, bruised but unbroken.

Next year it could be different. If it is, an old-time motorcycle test driver named Joe Petrale will wheel his station wagon up to the "Monster" after the first run. As chief timer for the United States Auto Club, Petrale will bring news of his timings for both the mile and the kilometer. He'll read them from a slip of yellow pad paper. And if Arfons' expectations are fulfilled, Petrale will say something like "610 through the mile"—which was the speed Arfons achieved too late in his 1967 attempt. Or he may have to make it on the return run which historically has produced the most records.

That yellow pad paper is about the only unscientific note in an otherwise perfectionist timing routine developed by USAC. The 12-mile-long Bonneville straightaway includes 10 miles of marked course. Electric eyes are located at measured intervals down the track. Midway down the course is the official measured mile. Nearby are other courses, including a hot-rod strip and a 10-mile circular track for en-



The Bonneville Salt Flats—actually a mix of gypsum and sodium chloride—offer a strange combination of properties ideal for test driving. The surface is generally very level, gives excellent traction, and stays cool in spite of the sun due to reflectance and cooling ground water just inches below.

## Salt

durance runs. At the service of all of them, and located in the trailer that has become a familiar sight at USAC events, is the official clock—an HP 5532A timing system. It is the only instrument in the United States authorized for timing attempts at world records subject to recognition by the Federation Internationale de L'Automobile in Paris.

The timing system is basically a counter and digital timer combination modified to operate as a continuously running clock that will print out the time of day on receipt of a print command. That command comes at Bonneville whenever an Arfons, a Breedlove or a Mickey Thompson zooms past an electric eye. The printout expresses the command in terms of the hour, minute and second to one-thousandth. The elapsed time between two or more electric eyes is then converted readily into miles per hour.

The system is getting a very busy workout at this time of year, which is favored because of its cooler, calmer days. Teams representing various manufacturers are there in force, testing new models and equipment that is expected to have special appeal to speed-minded buyers. Last month, for example, Petrale and his crew opened the season by recording a Class B run of 500 miles by a 1969 model "pony" car with a 427-cubic-inch engine that broke more than 200 records, and a Class C marathon that averaged 157.663 mph for 24 hours using a 302-cubic-inch displacement engine.

Mickey Thompson, the lead driver in those record-breaking assaults in B- and C-class cars, hopes to be back on Bonneville, perhaps next month, for a try at beating the piston-powered world land speed record of 409.277 mph set by Bob Summers in his "Goldenrod" three years ago. Thompson's car will be loaded with four big engines.

(continued)



Time and timing are critical at Bonneville. Here crew completes Mickey Thompson pit stop in seconds, as 302-cu.-in. displacement car goes on to cover 3,783 miles in 24 hours—an average of 157.663 mph. Many new products and advertising campaigns are at stake in such tests.

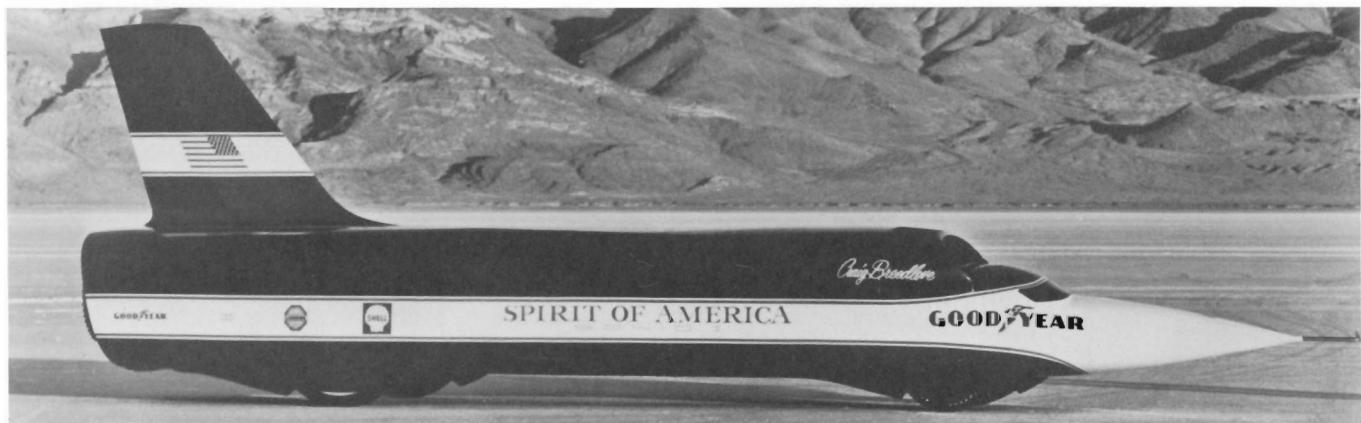
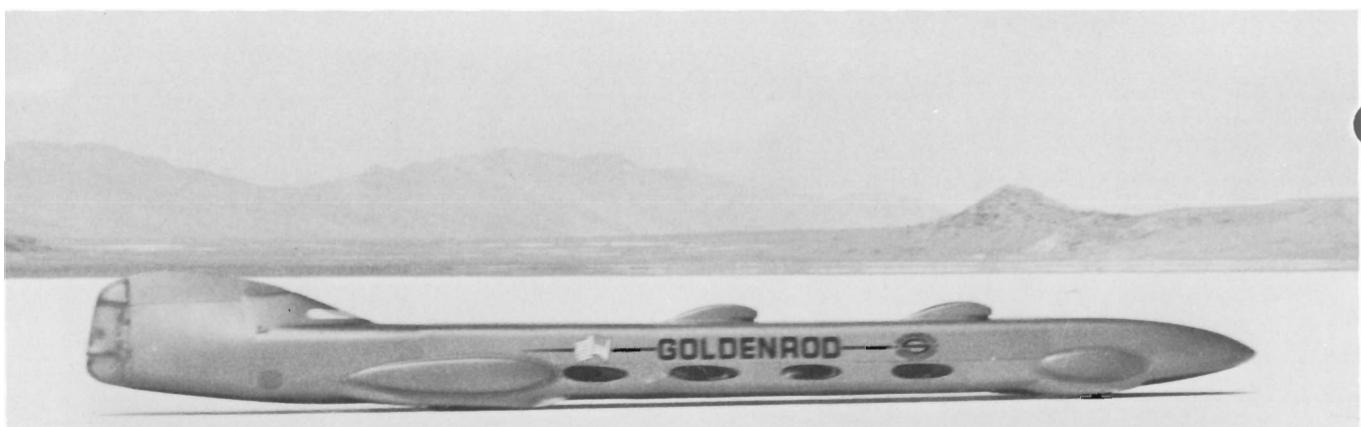
## on the Salt

Under such circumstances, with such an investment at stake in time, gear and manpower, the competitors and USAC officials obviously want both instant accuracy and no failures in the all-important timing procedures. The need for a speedy system comes into play particularly when a long-distance driver needs to know "how fast am I going?" Often there are only non-technical people available to man the equipment, so fool-proof simplicity of controls is essential. The system also has an emergency power source that operates the printout without loss of one millisecond.

Somewhat similar timing systems are in use by other racing groups. For example, on the other side of the Rockies from Bonneville, at Pikes Peak, the annual hill climb has recently been making use of two HP counters. Both are activated simultaneously at the start of the race day. One is retained at the bottom to record starters, while the second is stationed at the top to capture finishing time. And thanks to some volunteer assistance by local HP people, the same system has been used for the Colorado Springs Soap Box Derby. Those kids are serious!



Observed by USAC officials, Chief Steward Joe Petrale, left, and Official Timer, John Wetton, timing system made up of an HP counter and digital recorder prints out speed times to the thousandth of a second.



Challenges are in the offing for these unlimited world land-speed record holders. Mickey Thompson hopes later this year to surpass the 409.277 mph of "Goldenrod" in wheel-driven class, while Art Arfons plans to return to Bonneville next year with another "Monster" to contend against Breedlove's "Spirit of America" jet record of 600.601 mph.

# The comeback year

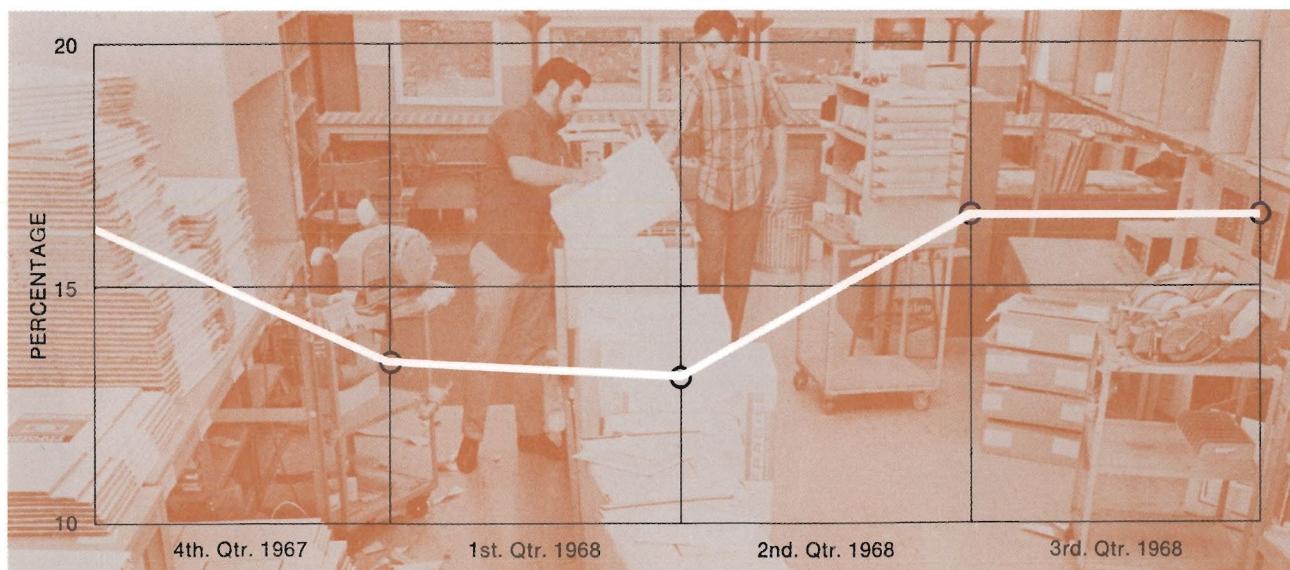
**PRE-TAX PROFIT MARGIN** is a very important overall indicator. It shows what is left of the sales dollar after all expenses, other than taxes, have been paid for. Thus it provides an "apples-to-apples" comparison of the company's performance from one period to another. An adequate margin is needed to insure the company's ability to continue its policy of financing growth out of profits. Profit margins are also examined closely by investors. As the chart below shows, the HP margin was shrinking late last year, and it was doing so in spite of record pretax profit because there were more total sales dollars (employee profit-sharing participants will also recall that there were more people to share with). A company-wide effort to reverse the trend began to show real results after the New Year season. That trend in the last financial quarter of 1968 continues upward—but there is still room for improvement.

Approximately two-hundred-and-sixty-five-million dollars and twelve months ago, the Hewlett-Packard organization was showing signs of sluggish shipments, overweight inventories, creaky cost control, swollen warranty payments, high scrap rates plus other miscellaneous symptoms, all of which added up to a pain in the profit margin. It was a condition—not serious but clearly uncomfortable—that called for positive remedies without delay. In the main, the necessary therapy consisted of some well-established prescriptions: a tonic to speed up shipments, and a stricter diet of spending to cool the corporate temperature.

What really happened, of course, was that, once the situation was made clear, people throughout the company adjusted their targets and efforts accordingly. On the one hand it meant many hundreds of individual decisions not to spend—to delay non-critical purchases. On the other hand, strong emphasis was given to improving our ability to meet shipment targets. As described in the "Target for '68" series of articles in MEASURE, new and improved ways were found to test increasingly complex finished products. More efficient methods of production control were developed. New systems helped the marketing organizations slice their communications costs. R&D groups trimmed costs during the year without sacrifice of important new-product programs. Corporate overhead also was held below target.

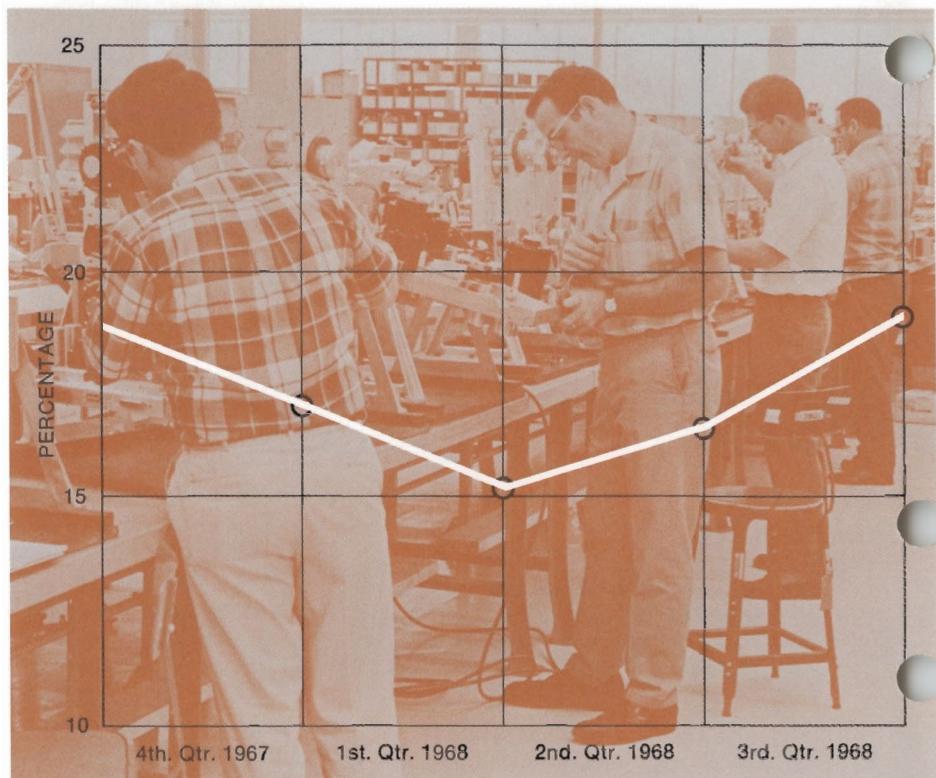
Obviously there were factors influencing the year's results that neither you nor your fellow employee nor top management could do anything about. The new Federal income-tax surcharge, for one, comes right off the top: When final figures for the year are in they are expected to show the surtax having the effect of holding 1968 earnings very close to those of 1967. Vietnam continued as the focus of heavy military spending and international uncertainty. The scientific community, a major customer, did not receive the funds necessary to start or maintain many of its research projects. Costs of materials and services continued their rise. Still, as the following charts show, Fiscal 1968 represents a solid comeback year for almost all major parts of the organization. The trends that brought on those disturbing symptoms in late 1967 and early 1968 have been substantially reversed. The patient is on the road to health again. More than ever, he's aware of how easy it is to get out of shape. The task, then, is to stay in training in 1969.

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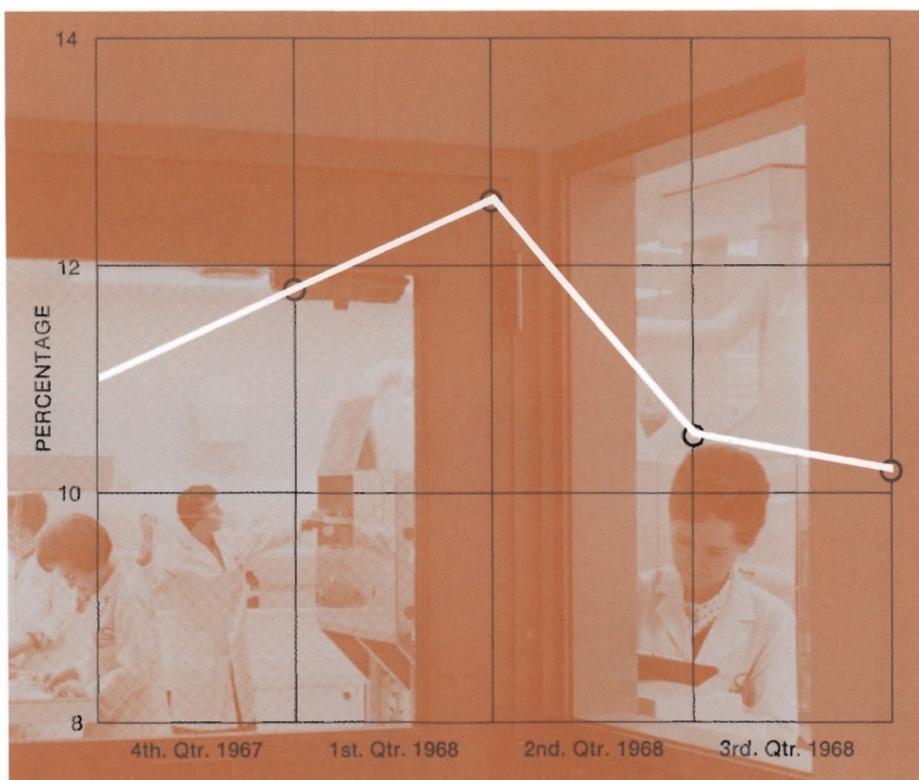
PRETAX PROFIT MARGIN

**MANUFACTURING ROA** or return on assets summarizes scores of factors — and hundreds of successful efforts through the year by the manufacturing divisions to control costs and improve efficiency. ROA measures how profitably the divisions performed in relation to their assets — the equipment, facilities, inventories and money they had available. Everything from tighter scrap control, to inventory reductions, to improved work methods and a new production scheduling system was involved. The goal was to get shipments out quicker at less cost.



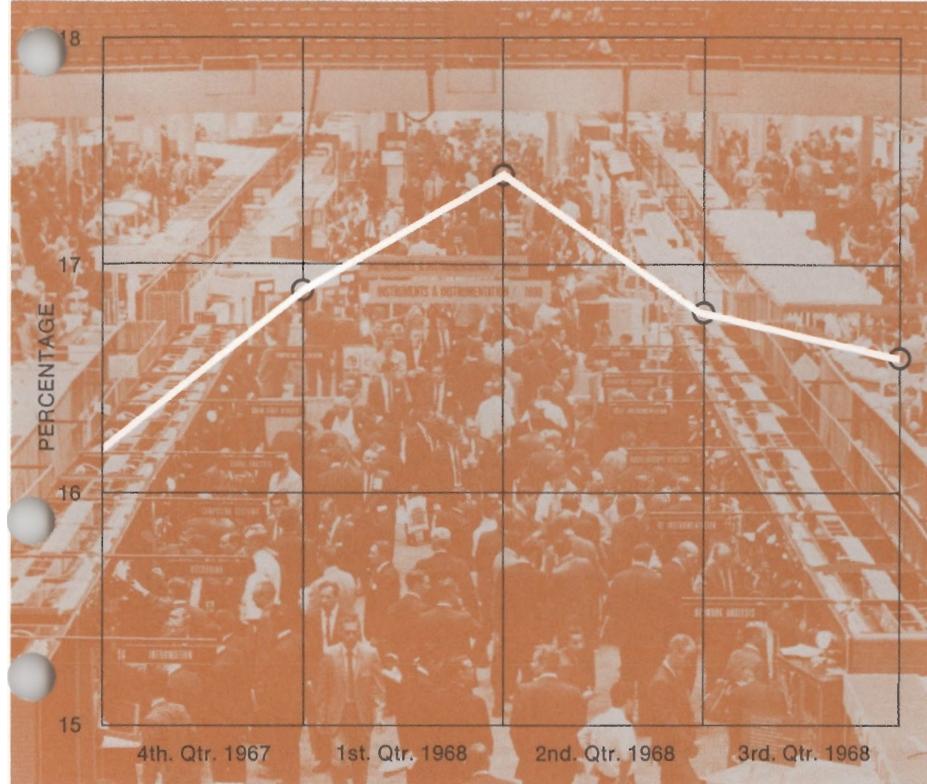
MANUFACTURING — Return on assets

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Total R & D Costs related to sales

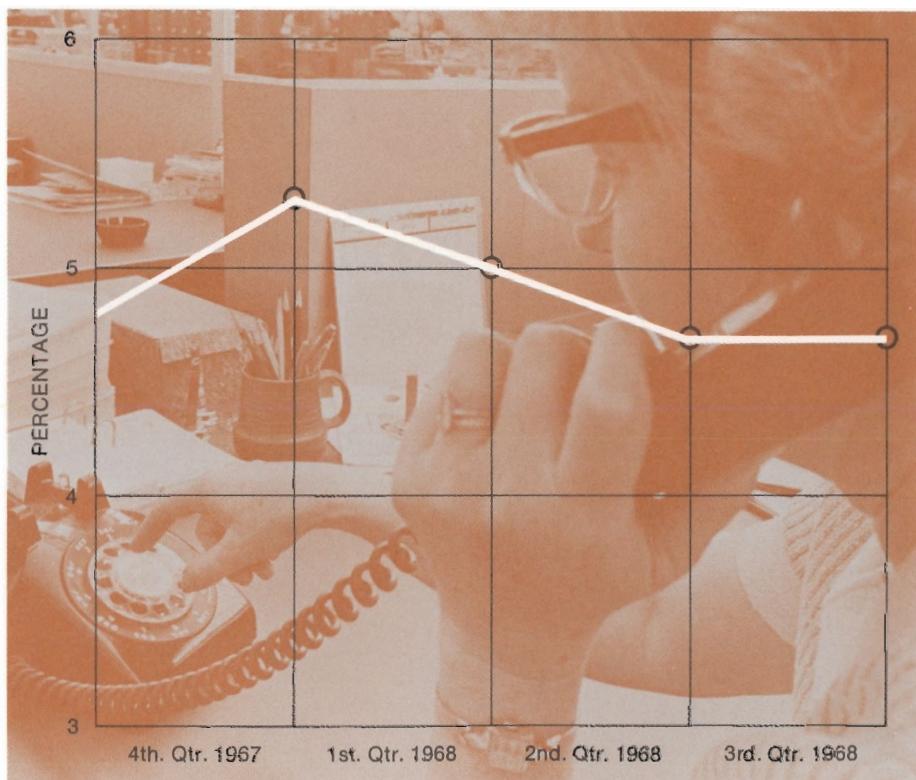
**R&D COSTS:** When shipments slowed late in fiscal 1967 and early 1968, research and development groups throughout the company found themselves in a position where their combined project costs were higher in relations to sales — higher than the approximate 10 percent considered desirable and practical for corporate growth. By putting more effort into those projects that had immediate prospects of completion and by lowering the priority on others, they expedited the introduction of new products while effectively reducing costs relative to shipments.



Total MARKETING Costs related to sales

## back year

**CORPORATE** staffs, whose costs are carried as corporate overhead, reversed a trend to higher rates of expense. They did this basically by applying good old-fashioned economy — making the most of existing facilities and people and seeking out areas where real savings could be made, such as in communications systems. In spite of such evident success — in all areas of the company as well as corporate staffs — it is clear that continued success in 1969 will depend on more of the same cost consciousness. Not only profits but also growth and advancement opportunities and profit sharing are involved.



CORPORATE Overhead related to sales

**MARKETING** organizations throughout the company walked a tight path in 1968 between the need to control costs on one hand and, on the other, the need to put more men in the field and in supporting positions. The latter was necessitated particularly by the introduction of new products and new product families.

On the cost-cutting side, a major and successful effort was made to install a more efficient order-processing system and to reduce communication costs.

## News in brief

**Kuala Lumpur, Malaysia**—The first product demonstrations of their kind ever held in Southeast Asia were staged recently in Kuala Lumpur and Singapore by Hewlett-Packard and its local distributor.

The open-house exhibits attracted engineers, scientists, educators and government officials in both cities. Sponsoring the events was Mechanical and Combustion Engineering Company, Ltd., the HP distributor. In addition to the customer program, HP conducted a two-day sem-

inar in Singapore for sales engineers representing distributors in Hong Kong, India, Indonesia, Malaysia, the Philippines and Thailand.

**Palo Alto** — Employees who were hired between November 1, 1964 and October 31, 1965 and have uninterrupted service through the end of this month, will be added to the company's profit-sharing retirement plan effective next month. With the new listing, the total number of people covered by the plan will be approximately 5,800. New participants

will be introduced to the plan at meetings to be held in the near future.

**Geneva** — HPSA personnel are scheduled to move into their new European marketing headquarters building at Meyrin over the Christmas season. In addition to marketing administration and field engineering staffs, the new building will accommodate the regional service center people.

**Great Falls, Montana** — The influence of university research in attracting and holding industry was the subject of a paper presented by HP President Bill Hewlett at the annual meeting of the Federation of Rocky Mountain States September 13. Among visitors attending were governors of four of the eight member states of the Federation whose purpose is to promote regional economic development and tourism. Gov. Love of Colorado was the chairman of the session.

### People on the move

**Corporate**—Don Loughry, to corporate interface engineer, office of corporate Engineering, from engineering/systems, Palo Alto Division; John Mahorney, to product training, corporate Marketing, from in-plant engineering, F&T; Kay Magleby, to data systems coordinator, HP Laboratories, from data products development staff, Palo Alto Division; Jim Phelps, to corporate compensation manager, Personnel, from personnel manager, Waltham; Ron Smith, to electronics research labs, from physical electronics labs, HP Laboratories.

**Avondale** — Bob Gray, to engineering staff, from physical electronics labs, HP Laboratories.

**F&T** — Ross Campbell, to in-plant engineering, from instrument systems, Palo Alto Division; Gordon Hedley, to R&D staff, from environmental test; George Quillan, to marketing staff,

from service technician, Midwest Sales Region, Skokie.

**International** — Dick Mobilio, to marketing manager, from marketing services manager, HPSA.

**Microwave** — Gerry Ainsworth, to R&D staff, from R&D, Mountain View; Dick Barg, to R&D staff, from R&D staff, Rockaway; Norm O'Neal, to R&D staff, from R&D staff, Colorado Springs; Fred Riley, to fabrication project engineer, from production engineering; Dick Shores, to manufacturing supervisor, production, from production engineering; Al Tykulsky, to R&D staff, from R&D staff, F&T; Fred Woodhull, to systems production, from customer service center (repair).

**Mountain View** — Dick Arms, to assistant to engineering manager, from R&D staff, Avondale; Roger Fairfield, Jim Herlinger, and Tor Larsen, to R&D

staff, from data products development, Palo Alto Division.

**Palo Alto** — Dick Horner, to systems and specials staff, from customer service center (repair).

**Waltham** — Mike Rudd, to customer service manager, medical instrumentation marketing group, from product specialist, blood chemistry.

**Eastern Sales** — Bill Carlin, to field engineer, Norwalk, from staff engineer, East Hartford; Bob DosPassos, to district service manager, Cherry Hill, from service technician, West Conshohocken; Bob Price, to calculator sales engineer, Lexington, from same position, Paramus; Al Whiting, to field engineer, Rockville, from promotion manager, Paramus.

**Southern** — Morris Frazier, to sales representative, medical instruments, Houston, from same position, Eastern Sales, Rockville.



## *from the chairman's desk*

In the July issue of MEASURE I mentioned that at our June management meeting we had discussed possible changes in our corporate organizational structure that would enable us to do a better job of directing our growth and taking advantage of future opportunities. Discussions along these lines have been continuing since then, and during the next few months we will begin to make some specific changes.

I think it is important for everyone to understand the objectives of these changes and to realize, in particular, that they do not represent any deviation from our traditional philosophy of management. We have been guided by the belief that groups of people should be given responsibility for specific areas of activity with wide latitude to develop their own plans and make their own decisions. Our new organizational plan does not alter this basic concept, but strengthens it.

We hope to accomplish two things with our new plan. One is to regroup various activities into compatible units that can work together more effectively on a day-to-day basis. The second is to move toward the decentralization of our top management structure, recognizing the company is expanding to a point where much of the overall planning and decision making should be decentralized.

Thus, we plan to combine several divisions into what we call a group structure. The purpose is not to reduce autonomy at the operating level in any way at all, but instead provide improved coordination and communication for groups at the operating level. Perhaps more important is that this grouping will decentralize some top management functions so that the group manager and his staff will have responsibilities for some of the things presently done by the corporate vice presidents.

The first move in this direction, which we expect to put into effect November 1, is to bring the Microwave Division, the Frequency & Time Division, and HP Associates into this new group structure. This involves combining some related product lines, but the net result will be to give various groups of people greater responsibility for their own affairs. Among other things, this restructuring will open up additional opportunities for people to assume more responsibility, both at the group management level and at other levels throughout the group. Specific job assignments for this first group are for the most part firmed up, and we expect to be able to announce these assignments at about the same time you receive this issue of MEASURE.

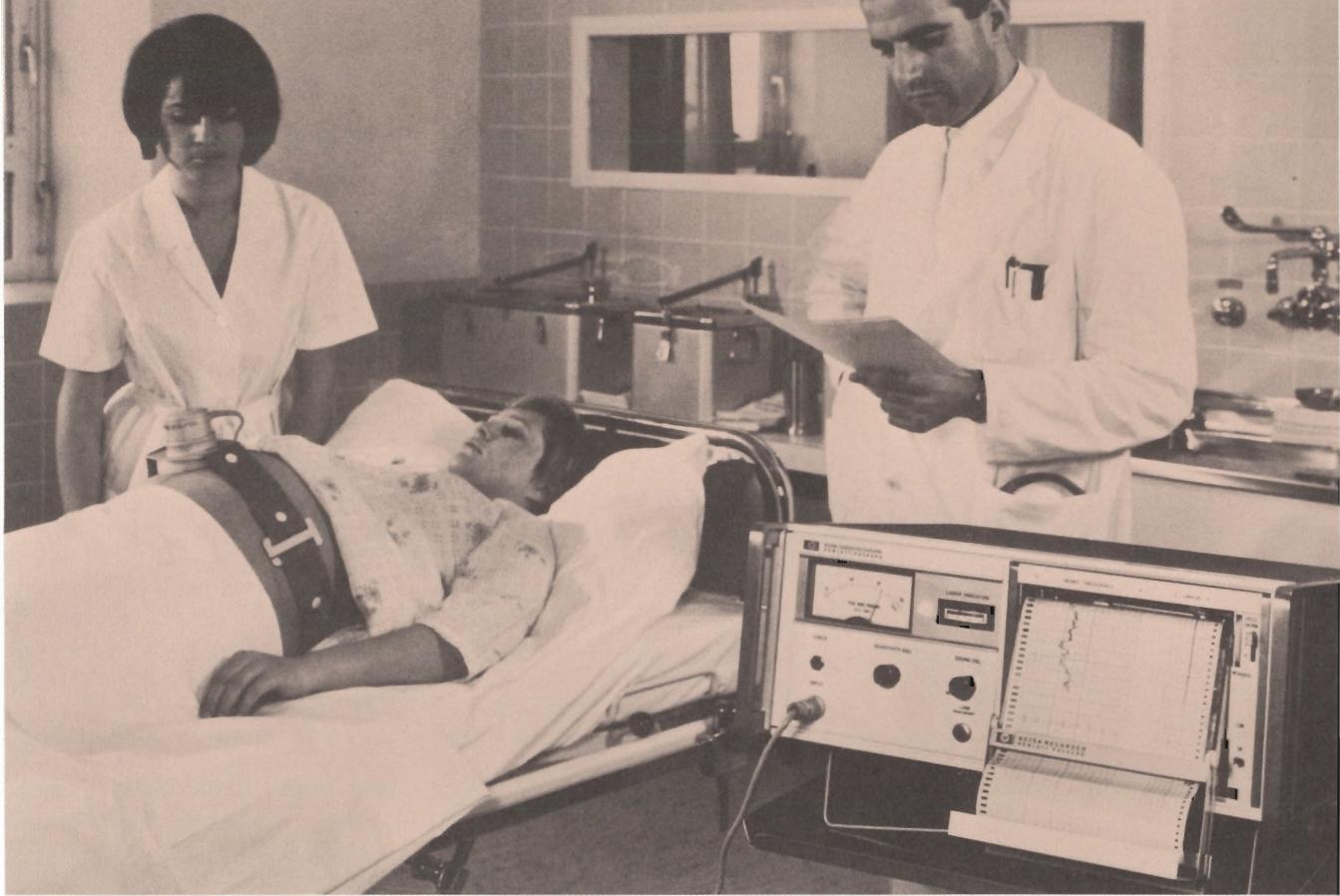
One of the strong motivational factors we have had in our company is the loyalty and enthusiasm for one's own division. While the grouping of divisions may seem counter to this, I'm confident that equally strong loyalties will be built up among these new units as they are established.

Whenever there is a change of this magnitude, it is important that we move carefully so as not to undermine the strengths that we have developed over the years. For that reason, although the basic concept of the group structure will begin to take effect next month, the full implementation will not be realized until late next year when the new Santa Clara plant goes into operation.

It is not likely that this new group structure will have an effect on any of the people who are scheduled to go to the Santa Clara plant, but there may be some additional moves of individuals to the new facility as the new organizational structure develops.

In the meantime, we will be working on plans to combine some of our other activities into logically structured groups. Possibilities include a data products group, encompassing our activities in the computer and calculator fields, and groups representing the medical and analytical instrumentation portions of our business. There will likely be other combinations, as well, as we expand our product lines and markets.

In summary, I am confident these moves will strengthen our company and will provide a greater number of exciting and challenging opportunities for all our people in the years to come.



# HP's new babysitter

They call it the 8020A cardiotocograph, or fetal monitor. Its job is to hear and record the heart sounds of babies just prior to their birth, along with the labor contractions of the mother, and give physicians a warning of any distress being experienced by the unborn child. The mother's heartbeat and other sounds are filtered out. The instrument, now being introduced throughout the U.S., takes the guesswork out of that critical phase of childbirth. Prototypes of the 8020A have already been credited with saving many tiny lives in Europe. According to Wolfgang Ohme, R&D manager at GmbH in Boeblingen, West Germany, the instrument came into being as a joint effort by HP GmbH people and Dr. K. Hammacher of Dusseldorf University, who had devoted many years to clinical studies of fetal monitoring. Its market prospects are considered very bright: In theory, every maternity bed could use one. For HP, the 8020A adds another interesting dimension: A device that monitors the heart at the time of birth, in contrast or complement to various HP monitoring instruments that watch the heart very close to the other end of life's spectrum.

1501 Page Mill Road, Palo Alto, California 94304

dy

Tom Ma

ART DIRECTOR  
Gordon Brown

## Measure