

March 1966



M e a s u r e

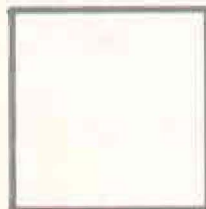
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They'd rather not let George do it



ONE HUNDRED AND SEVENTY-NINE YEARS and twenty-two amendments later, the flood of political energies released by constitutional rights spelled out in Philadelphia in 1787 continues to sweep across the U.S. countryside as regularly as election day.

No other people in all history can record such an exuberant outpouring of money, time, words—and sheer “grass roots” toil—as Americans expend on behalf of issues and candidates.

Money is a big factor, unquestionably. But there's nothing new about that. Thirty-five years ago Will Rogers was lamenting that “Politics has got so expensive that it takes lots of money to even get beat with.”

□ What every cause, or candidate, wants at least as much as money is dedication. They want pavement-pounding, stamp-licking, door-knocking, handshaking, poster-pasting, phone-calling, coffee-klatching dedication. And they get it—voluntary, unpaid, anonymous, and even grateful dedication by hundreds of thousands of Americans.

Why do these Americans, including many HP people, do it?

Why do they spend their off-hours and weekends working for goals and personalities that sometimes stand a less-than-even chance for success at the polls?

A great many HP people have their own answers to these questions—and the answers are as varied as the people and issues involved.

□ For example, “Tiny” Yewell, manager of the Yewell Sales Division (see opposite page), obviously thrives on his involvement in Massachusetts' Republican politics. He helped elect the incumbent governor, and is campaign manager for a Boston selectman who this month runs again. But he does have his cross to bear: Donna Young, his hard-working, loyal-on-the-job secretary, turns into a Democrat on leaving the office. Moreover, she is just as politically active as he is . . . and just as determined as the picture shows.

In Donna's case, it's partly a matter of lending a hand to her first cousin, Ed McCormack, who expects to run for governor against Tiny's candidate.

"It's lots of fun—and lots of hard work, too," says Donna, "but I do enjoy meeting the voters, going into stores and stopping people with a leaflet or two.

"Why do I think it necessary to go beyond voting to express political responsibility? I guess it's kind of a feeling—pride in your belief, pride in the candidate.

□ "We hear of so many countries where people don't have the privilege of a voice in government. Truthfully, I can't say *this* is why I think responsibility is important; I mean, when you have something and take it for granted, you can't imagine what it's like not to have it.

"I guess there's a feeling of personal satisfaction in helping something you believe in."

Dave Randle, designer in the research and engineering department of F&M Scientific Division, got into politics because of his belief in a particular cause—town planning. His campaign on behalf of a write-in candidate for East Bradford Township (Pa.) supervisor made a good, though unsuccessful, showing. But Dave's interest in township affairs is stronger than ever. He is now serving on the Water and Sanitation Committee for the township.

In spite of the fact that his wife is Democratic Committeewoman for Pennsbury Township, Ed Neel, also of F&M, believes in the importance of people exercising their right to vote regardless of party affiliation. During elections he drives people to the polls, Republicans and Democrats alike.

□ Patti Cooper, secretary at Neely Sales Division at Englewood, Colo., who is the most attractive thing about the MEASURE cover this issue, decided five years ago that "if I wanted the right to complain, I'd better get into politics." She feels local government is very important because "that's where our politicians get their start," and backs up this belief with a full range of precinct work.

The HP organization has its share of politically involved people. The company's posture on this is clear and simple: Good citizenship is always encouraged. A further sampling of the HP "active" list is presented on the following pages.

(continued)



They'd rather not let George do it



Loveland, Colorado's burgeoning growth (population up 50% in 6 years), has put great strain on community facilities. Al Davis, HP's Loveland Division planning administrator, doesn't believe that waiting for George to do it will solve problems. He plugged hard for last year's school bond issue (it passed by 99 votes), and now he's active on a hospital bond campaign.

Personal involvement is the proper way to express political convictions, says Marcia Boyer, public relations department illustrator at Palo Alto. Accordingly, Marcia puts her talents to work for the local party organization.



For a coastal campaign there's nothing like a 28-foot powerboat. Gene Dashiell, area manager for the HP Florida Sales Division, put his to work recently on behalf of a city commissioner candidate with the apt name of Mate. Gene reports Mate won by a "landslide"—which somehow doesn't fit this picture.

"Many people who complain the most about government, political issues, and candidates aren't even registered to vote," says Jack Kidd of corporate purchasing in Palo Alto. Kidd and his wife are not only registered to vote, but are active on the San Jose election board. For several recent elections Jack has converted his garage into a polling place.



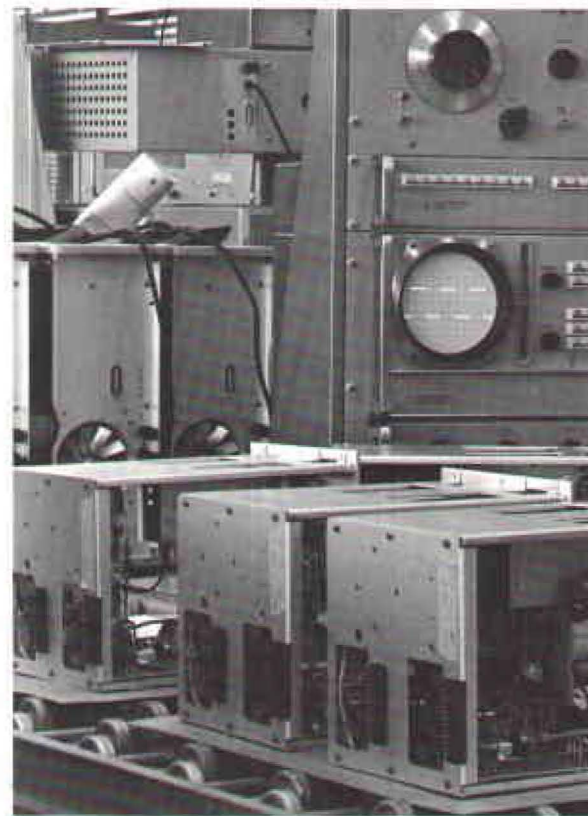
"An uninformed voter is worse than someone who doesn't vote at all." So Dale Ebersbacher of Colorado Springs Division makes it his political project to inform people of the issues through personal contact. This means many after-work hours of knocking on doors, passing out literature, and talking, talking, talking.

As county committeeman in Berkeley Heights, N.J., Dominick Scarillo (center) spends long hours in meetings. Scarillo, a Harrison Division coil winder, strongly advocates the two-party system and thinks Americans are fortunate to have a choice when they vote. "But just voting isn't enough," he says. "We must participate."





The Springs responds to the challenge



Bob Beamer tests instruments using the 155A/1550A programmable scope. This new achievement—the 155A/1550A programmable scope—has a jaw-breaking name, system makes

MOTIVATED: The word seems particularly apt in describing the people at HP's Colorado Springs Division. For a start, there's the motivating force of environment—the lure of Pikes Peak, Rocky Mountain air, and good living in an exceedingly pleasant and progressive community.

But this year, at 1900 Garden of the Gods Road, the heady sense of stimulation is stronger than ever. And with good reason, for it is evident that the division is coming of age in several important respects. This maturity is being gained through industry's traditional toughening process — the response to challenge.

□ Challenge was the name of the game right from the start of HP's entry into the oscilloscope business some ten years ago. Competition already was well established. For example, one of the industry pioneers, Tektronix, had been formed in 1946, giving it a head start which it has continued to hold.

Against this situation, HP made its initial entry in 1956 with a low-frequency scope, the 130A. It was rated as a technical contribution, and was well accepted by many customers.

In 1957, the 150A high-frequency scope was introduced, and it ran into tougher competitive waters. Potential customers were reluctant to take on the new brand, and inexperience led to production problems. Then in 1960, the company made a tremendous contribution in measurement art with the 185A sampling scope. Circuit designers could now make high-frequency measurements with an ease not previously available.

Another turn for the good was an interest by the military in the HP scope, and the company cooperated to give them a custom scope they couldn't interest others in providing. The

association proved valuable to HP in building greater reliability and sophistication into its products.

It directly launched the company into development and manufacture of the 175A scope which featured a unique cathode ray tube design. But competition again made itself felt strongly, this time with several redesigned products that brought them up to some of the capabilities of the 175A.

□ Competition continues as the most important fact of life for all members of the industry. According to Division Manager Stan Selby, competition between the three major scope manufacturers has created a tremendously high level of sophistication in the development, production, and marketing of scopes.

"Today we're dealing right out there in the state-of-the-art when we develop a new product," Selby says. "Scopes have a very short product life because frequent change is so necessary to match or get ahead of competition. It's a terrific challenge, and we can't take a 'me too' approach because it just won't work in this market."

□ The division is confident it can increase its share of the world-wide scope market by accelerating in the area of product contributions. Past successes, such as the time domain reflectometer, spur it on.

Further incentive is provided by the division's success in improving the quality and performance of its cathode ray tubes, and by the knowledge that CRT production yield remains a challenge to the entire industry.

Already introduced as part of the current new product development program is the 141A variable persistence storage oscilloscope, the 155A/1550A programmable scope and pro-



One of the division's more remarkable new products is the programmable scope and programmer. In spite of multiple measurements with speed, simplicity,

programmer for automated measuring, and the 191A television monitor to help evaluate transmission quality of color TV pictures. New plug-ins have also contributed added flexibility and value to the HP line of scope products.

Other new products are on the way, some of which will be introduced at the IEEE show in New York City late this month. Among these is a new "driftless" plug-in for the 140A, a high-performance, low-cost pulse generator, and the 197A scope camera offering a passel of features at a very competitive price.

There is no question about the important role of these new products. Marketing Manager Bill Terry says the division is hopeful they will lead, not only to increased business, but also to a growing share in the world market for scopes—currently at the \$150-million mark. "Scopes are universal. They're the screwdriver of the electronic measurement field," Terry says, "and prospects for growth are excellent."

Growth at Colorado Springs Division has been pretty substantial as it is. It began with the location there of a small pilot plant operation in 1962, staffed with 33 people. By the time the new 137,000-square-foot plant opened in October, 1964, the division had some 350 employees on the payroll. Employment currently is over the 700 mark, and expectations are that it will build up to a level of 1,200 employees within two or three years. To go with this expansion, plans call for an additional 140,000 square feet of plant space.

These developments are sure to be signaled far beyond the shadow of Pikes Peak. And it's unlikely they will go unchallenged.



As one stage in the production of printed circuit boards, Charmene Arajakis drills holes to accommodate components.



John Cannon checks on quality of printed circuit boards which have been copper plated in electrolytic baths.



Precision drilling is done in machine shop by this tape controlled equipment, shown here being set up by Peter Penninga.



A cathode ray tube turns slowly on special equipment as Lee McLaren applies a conductive coating to the inside of the tube.



With skilled hands, Penny Adragna assembles CRT guns. Of division's 715 people, 532 work in production, 125 in engineering.



New television waveform oscilloscope undergoes various controlled environmental conditions under Norm Glasser's watchful eye.



Division's management team includes (clockwise from left): Bill Terry, marketing; Wally Klingman, reliability engineering; Stan Selby, division manager; Hal Edmondson, manufacturing; Bob Grimes, finance; Dar Howard, engineering; Del Fillmore, cost accounting; L. A. Fulgham, personnel.



William P. Doolittle
Vice President, International Operations

International impact on HP marketing

SALES OF HEWLETT-PACKARD PRODUCTS outside of the United States now account for nearly one-quarter of our corporate business. In fact, international sales of some of our domestic divisions amount to 40% of their total volume.

This is a vigorous, fast growing market, and its importance to all of us will continue to increase each year.

□ At the January Monterey Conference considerable emphasis was placed on HP's international business, and its growing impact on all divisions. For example, the European area, which accounts for nearly two-thirds of our international business, is larger in terms of order volume than two of our four domestic sales regions.

In addition, the European electronic market is nearing half that of the U.S. electronic market, and is growing at a much faster rate. Of special importance is the knowledge that although our European market penetration is less than in the U.S., it is rapidly catching up.

To insure the same rate of penetration as we have in the U.S. market, it is essential that we provide our overseas plants and sales offices with the same level of backup and support provided to our domestic operations.

□ With this in mind, we have made a number of organizational realignments within the corporate international office which will provide faster, more direct contact between domestic and overseas locations. The purpose of these changes is to eliminate the "middleman role" of the corporate international office, and at the same time increase the back-up services available to our overseas locations.

For example, the corporate international office has provided a manufacturing support liaison between domestic manufacturing divisions and the overseas locations for a number of years. The group performing this function has been dissolved, and in the future HP GmbH, HP Ltd., and YHP will deal directly with the corresponding U.S. division on all matters relating to product transfers and support. Corporate manufacturing engineering support to the overseas plants will be provided on the same basis as that provided to the U.S. plants, by Ralph Lee's corporate manufacturing group. We are also combining the functions of Overseas Sales and Support Marketing into a new group, Export Marketing. It will have responsibility for promotion of U.S.-produced HP products in all overseas areas not covered by HPSA (Western Europe) and HPIA (Western Hemisphere). It will also have responsibility for the promotion, world-wide, of products developed by our overseas plants—excluding only the factories' immediate marketing areas.

□ Because of the importance of these modifications, and the increasing impact of the international scene, we felt that the time had come to hold our first European Management Conference. And so, several weeks ago, the managers of our European sales offices and the key people from our plants in Boeblingen and Bedford gathered at Les Diablerets in Switzerland. In addition to myself, those from Palo Alto included Noel Eldred, vice president of marketing, and Austin Marx of the corporate planning group.

Participants were given a report on the company's 1965 performance, discussed our corporate objectives and long-range goals, reviewed current international operations and set targets for the future, received information about the status of the U.S. economy and its importance to the international scene, and discussed specific engineering, manufacturing, and marketing topics as related to the European area.

□ As at Monterey, it was readily apparent that the opportunities internationally are there waiting for us. We can seize upon these opportunities most efficiently by recognizing that HP's world is getting smaller every day, and by strengthening the cooperative efforts between our domestic and overseas operations. ◁

Sanborn volunteer instructors give the unskilled a big lift

"I want to better myself before I get too old." That's how one Boston woman explained her interest in a course she had just completed in wiring, soldering, and assembly. The instructors were Fred Morris and Janett Urquhart of the Sanborn plant in Waltham, both of whom volunteered to help teach skills to people who otherwise could hold little more than menial jobs in industry.

The course, sponsored by a non-profit employment agency in Boston called Jobs Clearing House, lasted for one week in early February. "On the first day," Morris recalls, "I held up a pair of pliers and asked, 'Who can tell me what these are?' There was dead silence."

The going was slow at first and by Wednesday, Morris was ready to wash out the entire class. "Then something happened," he says. "All of a sudden everything began to click."

By the end of the week, eight of the original group of ten had mastered new skills and were ready for employment at any number of electronic firms in the area. Employers were waiting for them. As for the other two people, wiring, soldering, and assembly just wasn't their cup of tea. But Jobs Clearing House people saw that they were placed in more suitable work.

With this success behind them, Mrs. Urquhart and Morris, with the assistance of Sanborn's Don Greene, are conducting a similar seven-week course at the Cambridge Community Center. This time there are 20 "students" who meet for three evening hours twice a week.

Mrs. Urquhart is administrative assistant for women in manufacturing. Morris is a supervisor in manufacturing and Greene is a production leadman.



Sanborn's Janett Urquhart demonstrates assembly techniques to enthusiastic group of women at Cambridge Community Center. Other Sanborn volunteers are Don Greene and Fred Morris (standing l to r).

HP donates instruments to three Colorado schools



Colorado School of Mines officials receive donation of electronic equipment. From left: HP's Bill Terry, Mines' Dr. Robert McAllister, Mick Spano, HP senior field engineer with Neely at Englewood, Colo., and Dr. V. Allan Long, head of physics department at Mines.

"Through such gifts . . . we are able to maintain modern and excellent laboratory facilities for our engineering students."

Thus, Arlie Paige, electrical engineering department head at the University of Denver, wrote his thanks to Colorado Springs Marketing Manager Bill Terry for HP's donation of generators, transformers, and a voltmeter.

Almost simultaneously, two other Colorado educational institutions were receiving and acknowledging similar HP donations. They included the Colorado School of Mines at Golden, and the University of Colorado at Boulder.

The School of Mines will utilize the new equipment in nuclear physics research and an electronics laboratory course. The University of Colorado plans to use its instruments in graduate and undergraduate studies in the electrical engineering department. A \$500 undergraduate scholarship established by the Neely Sales Division also was donated to CU under the company's broad educational assistance program.

The awards were made in recognition of Colorado's "notable contribution to the training of scientists and engineers."

PEOPLE ON THE MOVE

HP PALO ALTO

Hi Hayashi, manufacturing support, International Operations — to corporate manufacturing engineering staff.

Dave Johnstone, process engineering—to personnel development, corporate and Palo Alto Personnel staff.

Charles Mabey, Western Service Center—to corporate contract sales, marketing.

DYMEC

Ron Grace, materials management staff—to buyer, purchasing department, Dymec Division.

MOSELEY

Ron Whitburn, overseas sales manager, International Operations—to marketing staff, Moseley Division.

PAECO

Walter Eng, vice president of engineering, Foster Transformer Co.—to transformer engineering, Paeco.

Don Higgins, printed circuit department manager—to production manager, Paeco.

INTERNATIONAL

Mary Burkett, from Loveland — to HP Ltd. (training wiring personnel for Scotland facility).

Cliff Edginton, marketing order processing supervisor, F&T Division—to technical support supervisor, International Operations.

Bob Heffernen, international traffic manager, Control Data Corp., Minneapolis—to international traffic manager, International Operations.

To export marketing staff (Ken Tingley, manager): **Al Hannmann**, electronics products manager; **Jim Cochrane**, import products manager; **Ed Slominski**, chemical product specialist; and **Jerry Thompson**, medical product specialist.

FREQUENCY & TIME

Bob Peters, corporate marketing staff—to F&T marketing.

Walt Ross, Mechrolab production and inventory control—to marketing order processing supervisor, F&T Division.

LOVELAND

Ken Jessen, product training—to Loveland on loan.

NEELY SALES

Chuck Quinn, applications engineer, Rockaway staff—to staff engineer, Neely-Palo Alto office.

MICROWAVE

Dick Brockett, corporate process engineering—to tool engineering, Microwave Division.

George Fredrick, manager of manufacturing support group, International Operations—to marketing staff, Microwave Division.

Ray Spoelman, Microwave R&D—to Microwave marketing staff.

HP LABORATORIES

John Cage, general manager, Mechrolab Division—to manager, medical and chemical instrumentation research, HP Laboratories.

Fred Marincic, Frequency & Time accounting—to R&D accounting, HP Laboratories.

Don Norgaard, on loan to Mechrolab — to medical and chemical group, HP Laboratories.

YEWELL SALES

Joe Stout, sales engineer, Hamilton Standard, Division of United Aircraft—to field engineer, Middletown office.



from the chairman's desk

WITHOUT QUESTION, OUR PEOPLE are the most important factor in determining long range success. As we expand our product line to meet the measurement requirements of the future, we will see our instruments becoming more sophisticated and the jobs they are expected to do, more demanding. We will have more complex manufacturing processes to master, and new markets to serve. Because of these needs, we will continue to require people who can readily acquire new knowledge, new skills, and new abilities.

We will be hiring many new people, as our company expands, and some of these will have skills and abilities we do not now have. However, it is well to remember that the most important source of new knowledge, new skills, and new abilities are those we must develop ourselves. This policy provides the most challenging opportunities for each of you because it is quite unlikely that we will be able to hire people better than those presently within the company.

For this reason, I am asking every manager to place greater emphasis on personnel development programs. We want to expand the courses given by the company so as many people as possible can do a more advanced job. We will also encourage the development of additional adult, and other educational courses in the communities where our plants are located. We will also take other steps to provide as many of you as possible the opportunity for self development.

I would encourage each of you to take advantage of the opportunities you have available to increase your knowledge in the area of your job interest, as well as to continue to improve your job skill and ability. This is something you must do for yourself—we can only help.

Our personnel department, under Ray Wilbur, is responsible for encouraging and coordinating the personnel development activities throughout the company. Each division manager has the responsibility to see that personnel development activities are implemented as extensively as possible for all the people in his division.

In many areas we have not been giving this matter of personnel development the attention it deserves to meet our future needs. We must do more. And if we do, we will not only help assure the achievement of the long-range plans for our company, but we will help each of you in the achievement of your personal goals and aspirations.

David Packard

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



HP value, performance will star at IEEE

HP'S EVER-GROWING CONTRIBUTION to the art of measurement will be dramatically demonstrated March 21-24 in New York City with the display of products from nearly all divisions. A large number of these instruments, systems, and components are new—some being unveiled publicly for the first time. The event, of course, is the annual show and convention of the Institute of Electrical and Electronics Engineers which by all accounts is the senior prom of the industry. Each participating company puts on its best bib and tucker in a highly competitive attempt to attract favorable attention from thousands of people who influence the purchase of electronic and electrical products. In recent years HP has become a star of the show. With the product-packed HP booth running along both sides of a 90-foot aisle on the 3rd floor of the New York Coliseum, HP expects its best performance yet.