

Tektronix, Inc.

Annual Report • 33rd Year • May 26, 1979



A world of difference, a world of sameness
Een wereld van verschil, een wereld van gelijkheid

違いも同じも世界はひとつ

© 2011 Tektronix, Inc. All rights reserved.

FRONT COVER – High-resolution full-color alphanumerics and graphics are provided by Tektronix' new 4027 color graphics terminal.

Tektronix 1979 Financial Highlights

1978		1979		Increase		
\$650,000,000		\$847,000,000		\$197,000,000	30%	ORDERS RECEIVED from customers and distributors
179,000,000		239,000,000		60,000,000	34%	UNFILLED ORDERS at year end
598,886,000	100%	786,936,000	100%	188,050,000	31%	FROM SALES of
470,377,000	79%	616,541,000	78%	146,164,000	31%	TEST AND MEASUREMENT products
128,509,000	21%	170,395,000	22%	41,886,000	33%	INFORMATION DISPLAY products
542,040,000	91%	709,785,000	90%	167,745,000	31%	COSTS AND EXPENSES to be paid
288,997,000	48%	381,025,000	48%	92,028,000	32%	TO EMPLOYEES who design, produce, sell and service our products as well as those who support their efforts
194,018,000	33%	253,394,000	32%	59,376,000	31%	TO SUPPLIERS for materials, components, supplies, services and the use of their property and funds
43,731,000	7%	54,108,000	7%	10,377,000	24%	TO GOVERNMENTS as taxes both in the United States and abroad and to provide
15,294,000	3%	21,258,000	3%	5,964,000	39%	FOR FACILITIES depreciation of the cost in buildings, machinery and furnishings caused by use, wear and age
56,846,000	9%	77,151,000	10%	20,305,000	36%	RESULTING IN EARNINGS to be reinvested in expansion of the business and to pay to shareowners as dividends
\$3.19		\$4.28		\$1.09	34%	EARNINGS PER SHARE based on average shares outstanding
\$.48		\$.60		\$.12	25%	DIVIDENDS PAID per share to our shareowners

The accounting year is the 52 or 53 weeks ending the last Saturday in May.



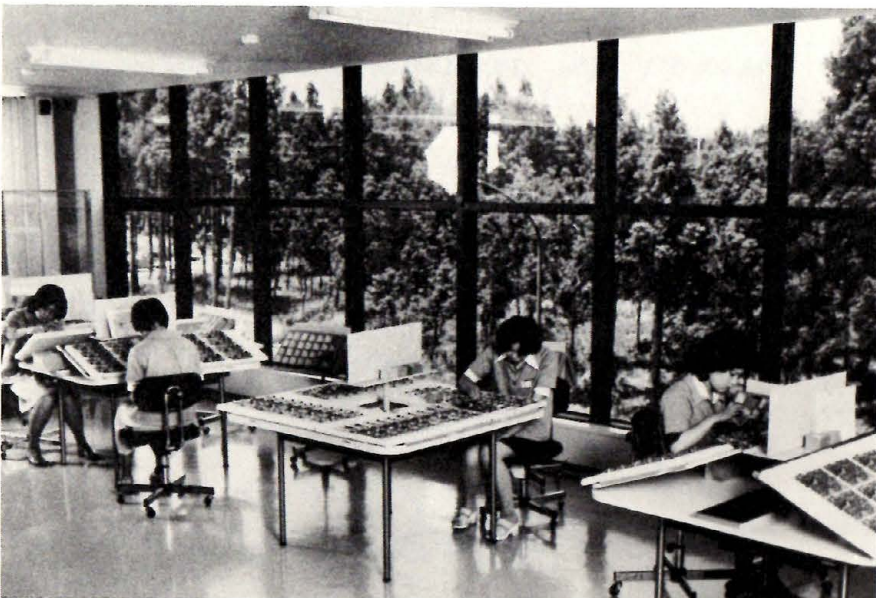
ON GUERNSEY



AT HEERENVEEN



IN TOKYO



AT GOTEMBA

AS TO the year's highlights, nothing comes to mind. It was a fine year. But not an outstanding one, since there was nothing for it to stand out *from*. Tektronix has had seven straight years of strong company growth. This was one more.

Sales outside the US were excellent; but then, US sales also were very good. Those of test and measurement products increased strongly; but that increase was more than matched by information-display products.

The industrialized countries again proved an excellent market; but they were outdone in growth rate by the "developing" countries (as they always seem to be called.) Our market in China looks a bit better; our market in Iran seems to have vanished; but neither was a big part of this year's business.

In this year of excellent performance, highlighted by nothing, one strong factor once again was our international business. This report talks mostly about that activity and, by doing so, applauds the many men and women whose dedication and talent make Tektronix, in many countries, one company in reputation and spirit.

Separated as we are by borders and oceans, some of us know one another only as names — not as faces and personalities, which we much prefer. But the contribution of our multinational people is noticed; it is important; it is appreciated. It has expanded our vision, and immeasurably enriched our organization — *their* organization.

The year's financial results, broken down for you in all sorts of predictable ways, begin on page 7.

YOU'D EXPECT, wouldn't you, as you cruise the hundreds of acres of Tek industrial parks in Oregon, that you'd see *some* sign of something as important as "International Operations"? But you don't. You might conclude that they must be

Highlights: Zero

somewhere else; across the ocean, most likely.

No; the bulk of that activity is right there, so integrated into our total business as to be nearly invisible. Even US employees may be only dimly aware of it, and of how much it affects their well-being.

But it does:

One of every three Tektronix jobs depends on business outside the US.

We manufacture overseas, selectively, and market there, aggressively. We're a corporate resident of 17 countries, and our distributors live in 50 others. About one in seven Tek people is a non-US citizen. Of our total building space, 14 per cent is in other countries, or about 10 per cent of our facilities investment.

But the major international activity is in Oregon: For we're a very busy exporting company. This year 65 per cent of our products sold outside the US were produced *in* the US – \$195 million worth.

Thanks largely to this bustling export business, the US each year gets a strong boost to its balance of payments. Over the last 10 years, Tek's BOP contribution totaled \$805 million.

In a given year you can count on well over one-third of Tektronix sales (nearer 40 per cent some years) going to customers outside the US.

OCTOBER 1978 – Tektronix Guernsey, our first European operation, marked its 20th anniversary. As part of the affair, employees and management combined to donate a

portable oscilloscope to the Channel Island's ambulance service.

March 1979 – President Earl Wantland headed a three-man Tek delegation as guests of the People's Republic of China, to get better acquainted with the people there.

We'd already been trading with China, in a limited way. With Sino-American relationships warming, we and they took the opportunity to personalize what had been an arm's-length relationship.

May 1979 – Members of Tektronix board of directors paid a call on some of our major French and Swedish customers. The directors were in Europe taking part in our second board meeting to be held there.

(One customer remembered he'd once expressed the desire to get to know us better, but said he hadn't expected *this* kind of response.)

None of these occurrences shook the world, nor was any of them more than a passing Tek milestone. But they reflected two things: The long and pervasive *international* nature of our enterprise; and the close *personal* quality that matters to us in our business relationships.

The China trip is discussed on page 29; the board meeting, on that page also. Our voyage to Guernsey and beyond is described beginning on page 15.

THE USES of Tektronix products are universal, so it was natural that we become an international company; technology is a world traveler. There

were specific reasons we first set up operations outside the US, and a somewhat different set of reasons we expanded them. The original benefits and the current (and future) ones are discussed, starting on page 11.

DECADES OF global business experience convince us that the world is sort of a differenceburger, with a large chunk of difference sandwiched in between two layers of sameness.

The top layer is the surface similarities between one people and another; dressing ever more alike; drinking, eating, driving and using the same products.

The middle layer comprises those thousands of cultural and linguistic differences that give nationalities their unique character.

And the bottom layer is made up of the basic, deep, shared human values that make the Family of Man just that.

(As with most sandwiches, the middle layer provides the flavor, the zest. The outside layers hold it all together.)

Some further thoughts on differences and samenesses, and how they affect business activity, begin on page 19.

WHAT DOES our international company look like today?

An updated summary beginning on page 23 gives you a lot of facts about product line, markets and facilities – with a few extra words devoted to a state-of-the-art product, the 7104 oscilloscope, and a state-of-the-art building, our automated warehouse.



TEKTRONIX' engineering staff has a strong international flavor. Hans Springer, from The Netherlands, was project engineer for the pace-setting 7104, the world's first 1-Gigahertz oscilloscope, introduced this year.

Address: World

NOT BEING a very event-oriented company, we've typically used our annual report not as a chronicle but to focus each year on some specific aspect of Tektronix.

There's a bit of risk in doing so. That is, any one report could give a lopsided picture; they should be taken together to produce a true composite.

It's like the blind men in the fable, each trying to decide what an elephant looked like by random-sampling its anatomy. Grasping the tail, side, leg or trunk, each concluded the animal is like a rope, wall, tree or snake. Each was right; each, in a sense, "wrong."

Last year we noted in passing that many of our top-management people were born in Oregon towns. That was meant only as a quaint statistic, one sign of our lanky, informal Pacific Northwest management style; it was *not* to suggest provincialism, or that we have a bumpkin view of the world beyond us as nothing more than Greater Beaverton.

This year's report looks at Tektronix as an established *international* company, cosmopolitan in scope and world-wide in reputation.

The same management team pictured (accurately) last year as mostly home-grown is also one that has earned its Tek credentials overseas. It's a team not only global in perspective (common in large companies today) but also rich in personal operating experience abroad (which isn't common at all.)

Our president, three of our five group vice-presidents, two of our five vice-presidents, our corporate

secretary, our treasurer and one of our five division managers together represent nearly 50 years of hands-on operating experience in other countries.

The man who set up our first overseas manufacturing plant, Tektronix Guernsey, and then became the first manager of Tektronix Holland is now president of our company, Earl Wantland.

A successor as manager of Tek Holland, Larry Mayhew, is now group vice-president, responsible for all Tektronix products and marketing.

When people say 'multinational,' they include Tek

Group vice-president Lew Kasch used to be manager of Tektronix Australia and later European Marketing manager in London. Les Stevens, group vice-president, Finance, was our International Finance manager. Treasurer Ken Knox came from our International headquarters, too.

Two of our vice-presidents saw service with Tek overseas. One, John Landis, was European Marketing manager on Guernsey. The other, Frank Doyle, is an Englishman; in his long career with us, his "overseas" experience was at Tektronix Beaverton.

The first manufacturing manager of SONY/Tektronix and our Benelux manager for three years, Howard Mikesell, now heads our Information Display activity. Our corporate secretary, Allan Leedy, spent four years in Brussels with an international law firm. The di-

rector of Tektronix Laboratories is Dutch born and educated: Vice-president Wim Velsink.

This is a hard-to-match set of credentials. It indicates a strong multinational influence on Tektronix policies, strategies and view of the world community.

No matter how the dictionary tries, some words just can't help taking on snide overtones. Such terms as "politician," "bureaucracy," "propaganda" and "fifth-grade English teacher" don't describe so much as evoke negative stereotypes.

Might as well add to that list "multinational corporation."

The term should mean — *does* mean — an enterprise operating in more than one country. But it's gotten so much bad press, it's now used almost exclusively as a tarbrush suggesting corporate bigness and badness: Size, power, wealth and the irresponsible if not greedy use of them all.

When people say "multinational", they probably mean us. We fit much of the definition: We're quite large, fast-growing, successful. We're a corporate citizen of 17 nations; we employ thousands of non-US people. And we see the world as a single market.

This report will tell you a bit of why we became international; recap some of our early steps; describe the extent of our global presence, and summarize some of the benefits to our host countries, to our company — and to you — of our having made that decision and stuck with it.

And if it doesn't jibe with popular stereotypes... well, we don't much like stereotypes anyway.



THE TEKTRONIX 4014-1 graphic terminal provides fine detail, enabling realistic molecular stick models (Plot courtesy Hunter College chemistry computer laboratory.)

Performance

GROANING AWAY in the background, like organ music in a spook movie, there was talk about economic recession. But Tektronix was too busy to be flustered. Nothing much receded this past year — except the expected recession itself, which kept being postponed.

Our year was excellent, both in the US and abroad. Electronics markets grew faster than their respective national economies. This was — is — a very good industry to be part of.

And, in it, our relative performance was good. Tektronix moved up 54 notches on *Fortune* magazine's list of the top 500 US companies in gross sales. We went from 423rd to 369th place.

And in earnings as a percentage of sales, our ranking was 45th.

Back in the hard winter of '71 we saw our last decline in earnings or sales — 30 fiscal quarters ago. Then began a growth trend that grew stronger as it went. It continued this year.

Our earnings, sales, incoming orders and just about everything else that mattered went up in substantial increments.

Sales were up 31 per cent from those of a year earlier, moving to \$787 million from \$599 million; the *international* portion was again very strong, increasing 38 per cent, to \$300 million from \$217 million. The *US segment* grew by 28 per cent, to \$487 million from \$381 million.

Sales of *test and measurement* products increased 31 per cent, to \$617 million from \$470 million. They represented 78 per cent of total Tektronix business.

Information display sales showed a 33 per cent increase, reaching \$170 million, compared with \$129 million. They accounted for 22 per cent of our business.

Here are the contributions to recent years' net sales of the two product areas:

Test and Measurement		
1975	\$289,375,000	86%
1976	303,021,000	83%
1977	356,289,000	78%
1978	470,377,000	79%
1979	616,541,000	78%

Information Display		
1975	\$ 47,270,000	14%
1976	63,624,000	17%
1977	98,669,000	22%
1978	128,509,000	21%
1979	170,395,000	22%

Earnings were up 36 per cent, moving to \$77 million compared with \$57 million the year before. *Earnings per share* were \$4.28, up from \$3.19.

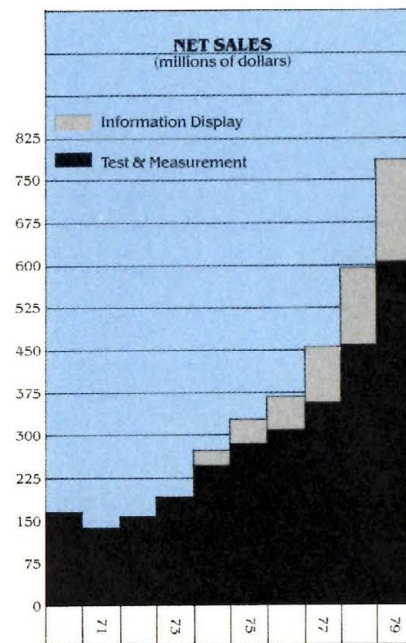
Incoming orders continued strong, totaling \$847 million, compared with \$650 million the year before. That's an increase of 30 per cent.

Backlog of unfilled orders, high when the year began, increased further to \$239 million from \$179 million.

Raw numbers (or, for that matter, refined ones such as you find in financial statements) aren't easy for non-accounting types to digest. Several things affected this year's earnings figures that had lit-

tle to do with how well we operated as a company.

They were inflation; a weak US dollar; changing taxation rates, and (this year only) payoff settlement of our long patent-infringement lawsuit against the US Government.



Other than for the last one of these, the direction in which they push earnings may not be obvious.

Let's take the four factors separately:

Inflated Inventory Can Be Deceptive

One big effect of inflation is that items in inventory become worth more every day. To remove these spurious inventory "profits" from our assets figure, we switched four years ago to a valuation method called LIFO (Last In, First Out). It assumes that the cost of a part



BELGIUM — Tektronix equipment in use at European Broadcasting Union, Brussels. The EBU coordinates all incoming European TV programs.

when used is the cost of an identical part bought or built that very day.

Its sound-alike counterpart, FIFO (First In, First Out) looks at it the other way, reckoning that the cost of the part when used is the cost of the identical inventory part bought longest ago. You can make either assumption. Some companies do it one way, some another.

Under FIFO, as you may be figuring out, things in inventory gather not only dust but also dollar value as inflation pushes the price of everything up. LIFO culls this inflationary element from earnings. By so doing, it gives a conservative and, we think, a truer picture of how your company performed.

Dollar Has Its Ups (so to speak) and Downs

The US dollar ranged from weak to weaker — actually the other way around, regaining some strength as the fiscal year waned. A feeble

dollar is nothing to brag of, and a cause of national concern. Yet it can have positive effect on company earnings when the assets in strengthening foreign currencies outweigh the liabilities. As those assets are converted into dollars at year-end, there's a *translation gain*; the weaker the dollar, the more dollars a franc or guilder becomes on the books.

This year, due to the dollar's partial recovery in the final months (and because we try to have our foreign assets and liabilities offset each other), the total effect on our earnings was negligible . . . very slightly in our favor.

Once Again, Tax Rates Helped Earnings

Changes in our effective tax rate this year helped our earnings figure, although they don't every year. Remove their effect, and you still have a husky *pre-tax earnings* increase: 32 per cent.

Lengthy Suit Over at Last

Our patent-infringement suit against the US Government in the Court of Claims was completed after over 17 long years. It accounted for about 8 cents per share — 1.9 per cent of the year's earnings. It's included as non-operating income.

(It should be noted that the costly process of litigation has contributed to the other side of the ledger for 17 years.)

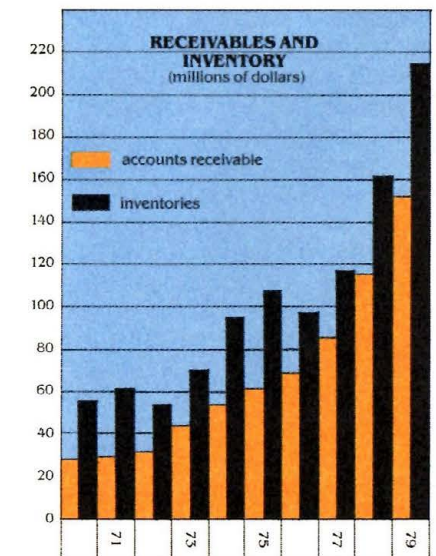
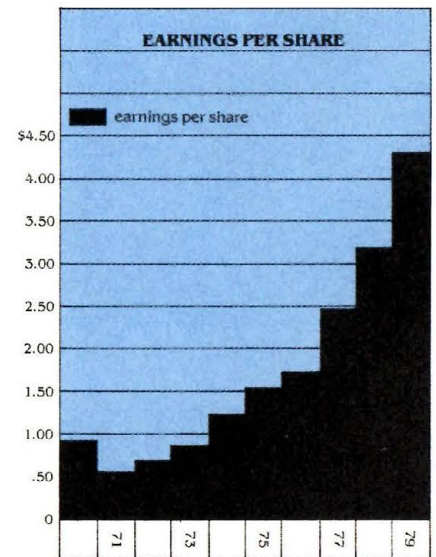
This next part should come under the heading, "Economic Education". But, if it did, who would read it?

If you shout loudly enough, you can get people stirred up over just about anything. For instance, the statement (true at any time) that half the population is below average in intelligence, if you deliver it in a shocked tone, will excite a crowd to demand that "something be done" about the situation.

Big numbers can be particularly inflammatory. This year a lot of fuss was stirred up when some US companies reported large profit increases. On the heels of Presi-

dential wage- and price-increase guidelines of just a few percentage points, the profit announcements drew headlines and a great deal of public grumbling.

It's just a manifestation of the A-Haaa! (or Dirty Rat) Theory, which holds that somebody is always getting by with something. "The feeling seems to be," comments President Earl Wantland, "that somewhere there's a bushel basket filling up with money." The logical extension of the Rat theory may be that the only moral corporate behavior is to operate at a loss.





THROUGHOUT THE WORLD, technical education and individual self-growth are emphasized at Tektronix.

It might be instructive to see where Tektronix' earnings (up 36 per cent) went.

Of the \$4.28 earnings per share, 60 cents was paid back to shareholders as dividends.

All the rest of our \$77 million earnings, plus \$24.4 million of surplus cash — plus \$43.6 million we borrowed — went as partial payment for new facilities, equipment and additional inventory. That's an investment in present and future jobs.

We stayed well within the presidential price guidelines, incidentally, increasing our prices an average of 5.3 per cent.

It might take George Orwell ("War is Peace") to pull off a convincing explanation of our past two years' dividend reporting. Our financial statements may suggest a decline this year in dividends from 60 cents to 48 cents. What there actually was, was an *increase* from 48 cents to 60 cents — 25 per cent more paid out.

The awkwardness resulted from our conversion from semi-annual to quarterly dividends, and from having to satisfy both accounting rules and SEC rules on how we must report such things. They don't jibe.

In fiscal 1978, after our semi-

annual 24-cent dividend in September, we declared three quarterly dividends of 12 cents each. That was 60 cents; but the last-quarter dividend (*declared* in May) wasn't *paid* until July — that is, in fiscal 1979. Shareholders in fiscal 1978 received 48 cents.

This year we completed the conversion to a quarterly basis by skipping the first quarter (in which shareholders were paid the 12-cent dividend declared in May), and declaring 16-cent dividends in each of the three remaining quarters. That 48 cents, plus the 12 cents paid in July, meant 60 cents paid to shareholders this year.



A global commitment

MAYBE TEK qualifies as a multinational. Maybe not. In any case, our world presence has made us a far better, far stronger company in the US – and in every country of which we're a citizen.

In setting up shop abroad we've had several goals:

1. At first, to get past foreign governmental barriers against outside companies, including high tariff walls in Europe. Although the import duties that prompted our European manufacturing have lessened, they haven't gone away. And, should there ever be a recurrence of trade-war economics, those tariff walls could rise again. It would then be costly, and maybe impossible, for us to set up local operations. It's good to be in place there now.

2. By becoming a local company, to compete on a cost rather than only a quality basis against domestic manufacturers. Without our competition, we felt, those companies might become strong enough someday to invade others of our markets. Those might include the US itself, as happened with foreign automobiles.

Today, despite competitors in many countries, our major challenger just about everywhere is American.

3. To overcome "buy-local" or other nationalistic procurement practices. We have two defenses: One, we are a local company in many countries. Two, we offer technically advanced products, much in demand; customers tend to have reasons for buying them anyway.

4. To be near the customer.

"A company who ignores half the

market will fall behind the ones who don't ignore it; that's arithmetic," observes Lew Kasch, group vice-president. A good salesperson, he notes, is a problem-solver; and you don't solve problems through intermediaries, or at a distance. You also need to provide fast local service should it be needed. If you don't do these things, an aggressive competitor will.

Tektronix' physical presence in 17 countries is a sign of our commitment to the whole world as a market. We're seen in each country as a local company, operated and managed by local people; not distant; a neighbor.

Those who ignore half of the market will fall behind

Who knows for sure what kind of company Tek would be today had we ignored markets outside the US – or tried to serve them entirely *from* the US? Smaller, for sure, but how much smaller? We'd be contributing less to the economy; paying fewer taxes. And providing fewer jobs.

In the US, for instance, a quarter of our employees owe their jobs to foreign business.

Sales to customers in other countries run about 38 per cent of our total business (not to mention the inestimable, but large, number of Tek products bought by US companies and exported as components of their electronic systems.)

In addition to the earnings of our non-US operations, Tektronix

earns manufacturing profit on products built in the US and sold to customers elsewhere – typically about 60 per cent of our non-US sales.

Headlines this year fretted about the sagging dollar. One big cause for the sag is the deteriorating US balance of payments.

Each year Tektronix is a positive influence on balance of trade, thus BOP. In the last 10 years Tek's contribution totaled \$805 million. This year it was \$167 million.

For the host countries, there also are benefits. Tektronix is a desirable citizen. We provide stable long-term employment of local people. We offer training not only in technology but also in management and administrative skills. We feel our programs are enlightened and progressive. And we try hard to be a good neighbor, carrying on in much the same low-key way that typifies our behavior in Oregon; not pushy.

We believe our relationship with host countries and with the communities in which we live is excellent.

Our management in almost all cases is made of local people who've come up through the ranks. The manager of Tektronix Guernsey used to work in the Test department there; its manufacturing manager began in Shipping 20 years ago; both are Guernseymen. The operations manager of our new European Marketing Center began at Heerenveen as materials manager. And so it goes.

Less than 1 per cent of our employees outside the US are Americans.

Having multiple geographic markets, operating on different economic cycles, is a great advantage. It has enabled our growth curve to be smoother, with fewer spikes and potholes.

It may be true, as economic jokesters say, that when the US sneezes, Europe catches cold (and Asia looks for a Kleenex.) Still, there's typically some delay between a US recession and its echo elsewhere. That's been our experience, anyhow; commonly our international sales have held strong during US market lulls.

And within the "European market" are many national economies. They typically don't all rise and sink in unison, but at differing times.

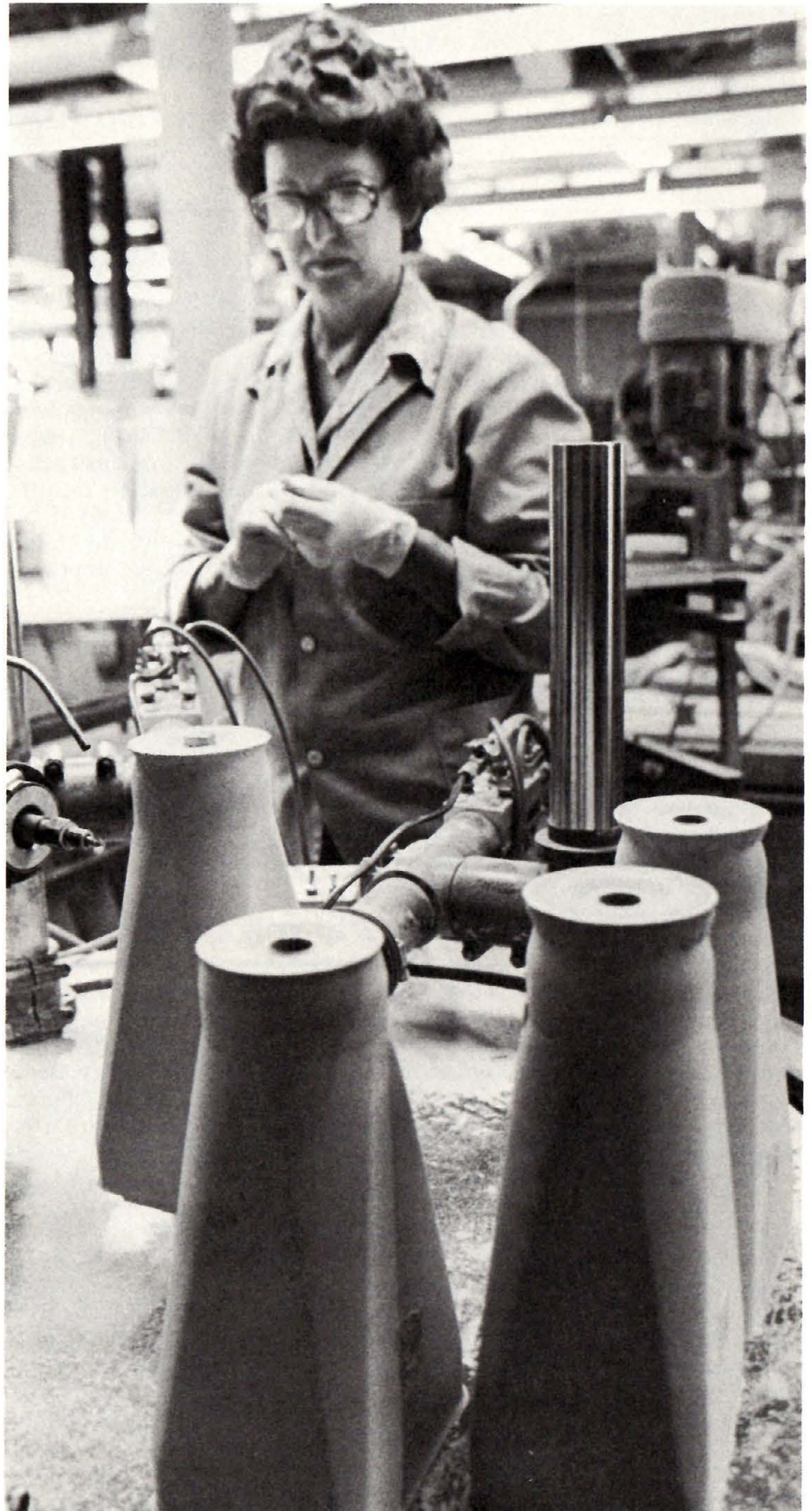
There's more radical fluctuation in the smaller, less-industrialized countries. The longer-established geographic markets tend to show less variation from year to year.

(Of course, the price of oil, and shortage of energy, could be a blanket depressant on *all* national economies; but even there our diversity of markets helps out. Oil consumers would suffer and their markets for our products might diminish; but oil suppliers would prosper, and those of our markets probably strengthen.)

And within each country we serve a wide range of technologies and businesses, each providing its own "sub-economy."

The United Kingdom is an interesting case; England's habit of "muddling through" one economic crisis after another, always seemingly on or near the ropes, has been well publicized. Yet the UK remains a popular place for corporations to invest. Our own market position there is very strong; this year the UK moved to second in our list of overseas customers, first in test and measurement products.

One reason for our strong business there is that many British customers are themselves exporting companies; their success in external markets may have nothing to do with the state of the British



CATHODE-RAY TUBES are among the specialized Tektronix components supplied to our overseas manufacturing from the US.

economy. Also, the UK government is enlightened and innovative in its use of electronics.

Industrial electronics itself lags other economic segments into and out of recessions.

All the above add up to a very complex but very effective buffering system that rounds off the peaks and fills in the gullies of our sales and (importantly) our employment curves.

It may be that total Tektronix business would be the same if all economic segments slumped and rose as one. But imagine the disruptive effect of trying to tool up and staff for feast-and-famine cycles.

The way to get good at skiing is to start at age 6. Trying to learn in middle age is much harder. The old bones are brittle; your muscle patterns resist change. Also, the ground is farther away than it used to be, and gravity much more of a concern. You can get awfully tentative — or panic and do all the wrong things.

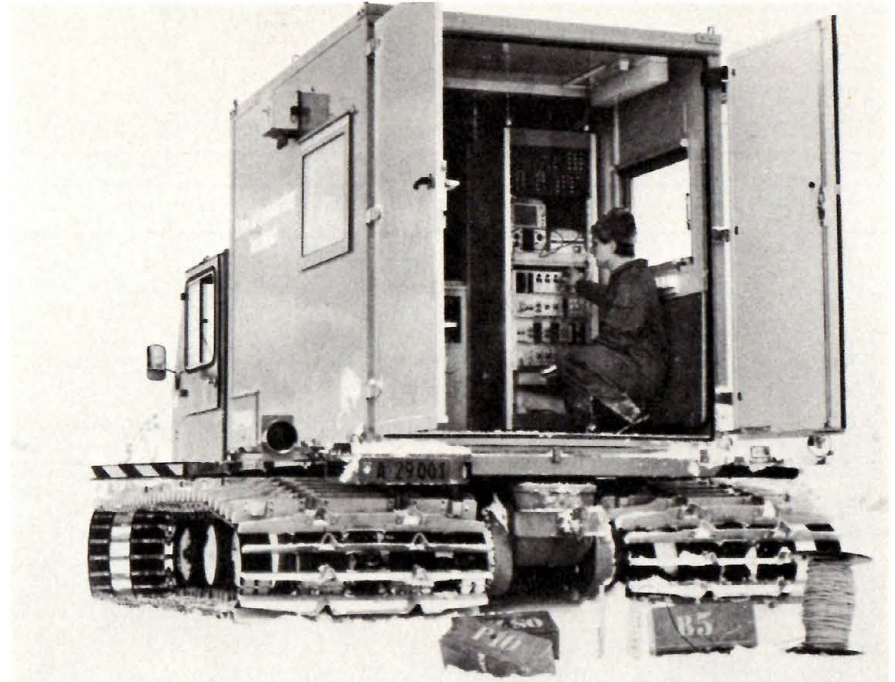
For that sort of reason, it's good that Tek was so young when we became international. It gave us the chance to grow up with and gradually mature not only our international functions but also our multinational attitudes. We've learned the ropes. We don't rattle easily.

"Being international," says Earl Wantland, "gives us the desire to find out about the laws, values and cultures of different countries. Our surveillance patterns and field of interest *must* be broader, covering more countries and understanding their interrelationships."

"'Chapeau' means 'hat'. 'Oeuf' means 'egg'," confides comedian Steve Martin. "It's like those French have a different word for *everything!*"

It's as provincial to be over-awed by the mystique of things foreign as it is to believe that the whole world is just like Podunk, Ohio.

Without the broadening effect of



SWITZERLAND — Tektronix oscilloscopes are part of this mobile test station for avalanche research in the Swiss Alps.

our long international exposure, Earl notes, it would be easy to fall into one of two similar extremes of thinking: Either that there are no problems overseas — or, just as bad, that there are nothing *but* problems.

A philosophical point: Tektronix' position has always been squarely in favor of unfettered trade among peoples, and against protectionist attitudes — anywhere, including US governmental protection of American industry.

A free-trade atmosphere, group vice-president Larry Mayhew comments, forces you to keep looking at the fundamentals of your business. If you're failing in a free market, it must be that you're not doing something or other well enough to succeed. You need to change.

But a protected trade environment is anesthetic. Your "success" may be your doing; or not. It could be only that you're being sheltered from the rude world. So you tend to retain your bad habits, and not make the needed changes.

(Of course, our viewpoint is built

on self-confidence: We believe Tektronix products are of a quality that will stand up to the toughest free competition.)

Free trade works against narrow nationalism (which Albert Einstein called "the measles of mankind.") Thus it fights isolationism and the retributive behavior that can bring on.

In a volatile world whose residents fear they may yet blame to bits, it's worth mentioning the stabilizing effect of trade among peoples.

There has to be an alternative to war. And of the range of workable peaceful options, none seems to offer as much mutual benefit and cohesion as commercial interchange.

Each year, war seems an increasingly horrible option. Each year, despite obstacles, the free marketplace offers more and more benefits to more and more people in more and more nations. The broader the vested interest in peace, the less attraction an armed showdown will hold.

At least that's how it seems from here.



Pages of history

THERE IS one thing to be said for peeking at the answers in the back of the book, a student observes: It gives you a better perspective on the questions.

Similarly, it's always easier to explain your past behavior if you know how it came out. The person who lives to be 100 is asked usually for his or her "secret;" feeling obligated, he/she manages to come up with *something*: Abstinence from alcohol; a daily slug of booze; prayer; jogging; not jogging... whatever. The truth is that these habits may well have merely accompanied longevity, not caused it.

In this section we've tried to recall our first steps abroad, and the reasons we took them. It needs to be prefaced with the admission that not every move was brilliant; not everything worked out just as we'd planned; and luck played some part in the story.

But little has had to be re-done, almost nothing *undone*. The moves, all in all, were solid. And the long-term results are substantial: A global Tektronix presence, and international sales that this year totaled \$300 million.

We manufacture in Europe and Asia as well as in the United States, have marketing subsidiaries in 17 countries and product representatives in 50 others. One way or another, our technology serves the whole world.

Beyond the Valley of the Tualatin: Tektronix Goes Abroad

St. Peter Port, on the island Bailiwick of Guernsey, is rich in history and Old-World in appearance. It's a small place. Guernsey itself

isn't big; you could jog across it. The whole island goes no more than six miles any which way, and is home to just over 50,000 people.

To this picturesque English Channel island in late 1958 came a Tektronix man hot on the trail of a reported good deal on an Austin-Healey sports car. (That quest was incidental; he had been in nearby England scouting out a site for Tek's first overseas manufacturing branch.)

The visit to Guernsey paid off. The tiny island met our company needs very well, and we theirs. They spoke English. The government was stable – and autonomous. The bailiwick was seeking a permanent local industry, a place where Guernsey young folk could



ZUG, SWITZERLAND (above).
ST. PETER PORT, GUERNSEY (left),
Tektronix plant in foreground.

find work without having to go "overseas."

Importing and exporting were easy there; Guernsey imposed almost no duties. The tax rate also was low, they having little need for such income; there was, for example, no army – and almost no crime.

And the size of the place set well with us. Our background and preferences were small-town. Being close to employees, suppliers, citizens and government can foster understanding and cooperative, helpful relationships. We'd found that in Beaverton; we saw signs (correctly) that it could also happen on Guernsey.

So we made our home there, in a remodeled weaving shed. Come last September we'd been a Guernsey citizen for 20 mutually rewarding years, as the strong third "T" in the island's economy. The other two are Tomatoes and Tourism.

There's a Peter-Sellers-movie quality about tiny Guernsey. Physical signs of its feudal Norman heritage are much in evidence. The local idiom is pre-Chaucerian laced with current English. Nestled into the coastline of France, just a short hydrofoil ride from the mainland, it claims French as its "official" language. But its heart and political ties lie with England, which represents it in external affairs.

British laws don't bind Guernsey, however; it makes its own, issues its own money, is its own state (somewhat parallel in autonomy to Puerto Rico).

Up to 1959 our market was essentially the US, selling products

overseas as requested by commercial distributors there.

But to make inroads into the growing European markets would take more than that. In an attempt to bootstrap their war-mauled economies, two groups of nations had formed supranational trading associations, giving preferences to members and setting up barriers to outsiders.

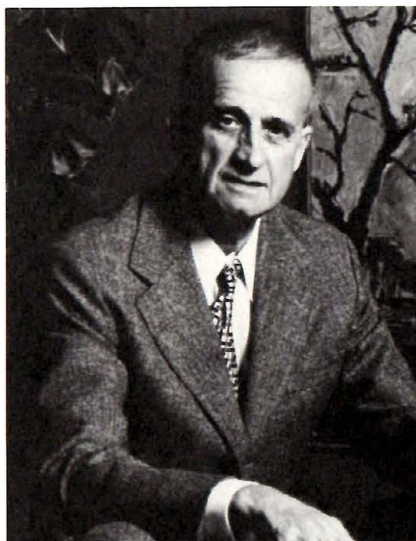
The more ambitious of the two was the European Economic Community, the so-called "Common Market", which sought ultimately to establish a single European nation. Germany, France, Italy and the Benelux nations were members. Some other countries, perhaps skittish of political integration, stayed out. Seven of them formed a looser trading coalition, the European Free Trade Association. Its original members were Portugal, Sweden, Norway, Denmark, Great Britain, Austria and Switzerland.

The two blocs were encouraged by the US under President Kennedy, who felt that world stability would be served by the US having strong trading partners. They also were expected to anchor Europe against the spread of communism.

Tariff walls faced US seekers after European markets

Outside nations trying to sell products into the trading blocs slammed into solid tariff walls. At first these varied from country to country. For instance, for Tektronix in 1959 to sell its domestically popular line of oscilloscopes to customers in the United Kingdom meant facing a punishing 33 per cent import duty.

Four UK manufacturers were then offering copies of our plug-in scopes. They weren't making much headway; still, the handwriting was on the wall: Either we gave up the UK market; tried to compete on technical perform-



CHARLES BILLET, operations manager, Tektronix France.

ance alone and with a severe pricing handicap; or became a local company ourselves, and manufactured within the tariff walls.

We chose the third option. (This move, we should add, meshed with EFTA's goals of encouraging outside investment and building new local industry.)

Tektronix Guernsey opened in September 1958. Products on which at least half the cost was contributed on Guernsey were given "Commonwealth preference," which enabled them to be imported without duty into the UK. Tek Guernsey at the same time gave us duty-free entry into EFTA.

The same process had to be repeated to get inside the Common Market tariff barrier. Once again, we settled in a small town: Heerenveen, in the northern Dutch province of Friesland. The government of The Netherlands, seeking to move industry away from the large population centers, supported a long-term low-interest mortgage offered us by the municipality of Heerenveen. Tektronix Holland N.V. became a reality in 1961.

To coordinate the two subsidiaries we set up Tektronix International A.G. in a small Alpine lakeside town, Zug, Switzerland.

We chose Switzerland because



STEN ARKSTEDT, operations manager, Tektronix Sweden.

of its political stability; good tax treaties with most European countries, and the ease of movement of currency in and out (at least under international laws at that time.)

We were the first major US electronic-instrument manufacturer to take the step and begin manufacturing in Europe.

In the early 60s, we were being squeezed out of the expanding Japanese market by subtle but effective pressures exerted by that country's government. Chief among them was control of foreign exchange. A Japanese company wishing to import products had to obtain governmental approval to use foreign currency. The resulting administrative dawdling and cost (and uncertainty of approval) skewed the market strongly in favor of domestic suppliers.

As in the UK earlier, some Japanese companies were copying our bread-and-butter line of scopes. We saw the need to establish ourselves as a local company. The only allowable way to do that was to form a joint venture with a Japanese business.

A company strikingly similar to us — not only in history and reputation, but even in management philosophy — was SONY Corporation, then making a world name with its

mini-TV sets. In March 1965 we jointly formed SONY/Tektronix, in Tokyo, to build and market both Tek scopes and a future line of SONY/Tektronix portables.

SONY's skills in miniaturization carried over into scope design. SONY/Tek portables, smaller and lighter when introduced than anything then available, are superbly crafted high-performance instruments. The first of those was marketed in 1967.

SONY/Tek was the first joint venture to be owned 50/50 by American and Japanese companies. Government policy until then was for at least 51 per cent control to remain in Japanese hands.

Besides the three new companies, Tek gained one manufacturing operation through acquisition. Telequipment, Ltd., a successful British producer of oscilloscopes in a lower price and performance range than ours, was acquired in January 1967, with facilities in London.

Our goal was to serve the lower end of the scope market. Telequipment has over the years done

this, with high-volume sales of less-expensive instruments. In any given year it probably sells more oscilloscopes than any other UK manufacturer.

We Begin to Market Directly

We'd been in business in Oregon just two years when our first overseas order came in — from Ericsson Telephone Company of Sweden for a 511 oscilloscope. Other orders followed from that country; our first contract with a foreign distributor was signed in December 1948 with a Swedish company.

By 1963 we had more than 30 distributors. But some market areas by then had grown so large, or looked like they would, that we needed our own sales and service organizations.

Our distributors were doing a fine job. But we realized that, to really understand the markets and customers' needs, and to establish Tektronix as a company name, we needed to provide our own direct sales and service.

Within two years we had mar-

keting operations in the United Kingdom, Australia and Canada, plus our administrative company in Switzerland.

These transitions went very well; all our former distributors, we believe, have remained our friends. Many people now working for Tektronix were employees of our distributors, expert in our products. (We thus have a "25-year Tek European employee," yet have been in Europe only 20 years.)

In addition to those mentioned above, we added operations in France, Belgium, Denmark, Sweden, The Netherlands and Brazil; Finland and Norway this year — and, just after the year closed, Spain. Two joint-venture companies exist: SONY/Tektronix, which markets as well as manufactures; and Rohde & Schwarz/Tektronix GmbH, in Vienna. The latter company, its ownership shared by our longtime German distributor, markets both companies' products into Eastern Europe.

In geographic areas where we have no subsidiary, 48 distributors serve 50 countries in 71 locations.



GUERNSEY — Increasingly, our Guernsey manufacturing operation specializes in the manufacture of laboratory oscilloscopes.



JAPAN – Both Tektronix and SONY/Tektronix products are built and marketed by SONY/Tek, a joint-venture company.

A world of difference, a world of sameness

A STREET CROWD in France looks about like a street crowd in America, what with so many people carrying Japanese cameras and wearing Italian shoes. A Tektronix plant in Heerenveen resembles one in Beaverton; and you can't tell our Guernsey oscilloscopes from our Dutch oscilloscopes without a scorecard...

In a world shrunk, in time and distance, from the size of a basketball to the size of a pea, technology and commerce have had a homogenizing effect.

But beneath the surface similarities are countless differences – deep cultural influences reflecting in thousands of subtle distinctions that make a German a German, a Frenchman French.

On the world stage, differences can erupt, enabling an Ayatollah to supplant a shah, or causing nuclear superpowers to quibble about how many times, if push comes to shove, they should be allowed to overkill each other.

But social development, the ties of friendship, the harmony of cooperation, the growth of the marketplace – and possibly the continued residence of mankind on earth – depend on shared *samenesses*.

Most phenomena are universal. People's hearts beat in all countries. Electrical signals are the same in Khartoum and Kansas City. Heat, speed, pressure, acceleration, biological and chemical changes are not unique to any country. The need or desire to measure, study, understand, monitor and control these phenomena is worldwide.

Tektronix builds the kind of in-

struments that make these measurements possible: Universal products, meeting universal needs.

And, even more broadly, basic human values don't differ geographically. People everywhere respond to truth, fairness, respect, dependability; and, in the realm of commerce, to service, value received, courtesy, honesty, reliability. These universal human values (or "business values;" we never could see that the two differ) have mattered to Tektronix since the very first. It's been gratifying to us, in nearly 30 years of doing business overseas, that they also matter there.

Our market in Iran (such as it was) came to a sudden halt this year, as did the old regime and much of the nation's civil stability. While the dust settles, we'll serve the remains of that market, should any fragments be discerned, from our distributor in Tehran.

Global business operation amounts to more than just taking the same problems faced in the US – competition, taxation, regulation, energy, inflation – and multiplying them by the number of countries we serve. You also must add in things uncommon here – political upheavals, growing nationalistic pride – and problems caused by relationships among nations; like unstable currency rates; East/West geopolitics; language barriers and vast distances.

Plus the thousands of subtle distinctions that make each country unique in cultural values or commercial practices.

We learned much of this through experience, sometimes by trial

and error. It helps even more that our non-US offices are staffed by nationals. They know the cultural subtleties without having to learn them. (Of course, they do have the task of learning to communicate with the American "parent". And we may be the "differentest" people of all – not the least of which differences, a former Chinese ambassador noted, is the unusual slant of our eyes.)

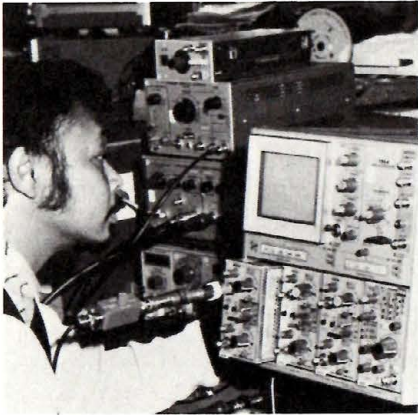
These differences subtly affect the Tektronix character in each country in which we operate. Not every one of our US characteristics can be transplanted. Some work better than others; profit share, for instance, is popular.

Our participative management style suits Tek Guernsey well. Visitors from here see a mirror of the Tektronix they knew in the US 15 years ago. Calling one another by first names fits naturally there. At Tek Holland, we use first names too, though more-formal language is the norm outside the plant. At SONY/Tek, first names are reserved for immediate family.

We admire our typical operations manager, who must wrestle daily with problems of currency, inflation, language, tariffs, legal restrictions and import and export licenses. Some days he may feel like a conductor fending off hornets with his baton while trying to lead the symphony.

Currency Values Don't Hold Still

Currency fluctuations are, in the lingo of the financial community, a pain in the neck: How many US dollars are equal to how many kojacs, or what the kojac is worth today in



HEERENVEEN

yings or simoleons. For companies serving world markets, these daily changes make pricing, budgeting and bookkeeping extra hard.

Pricing is especially difficult. The manager in each market must take into account currency trends, inflation rate, length of time until delivery, customer resistance, competing prices – and make the decision. Just how to do this isn't specifically covered in the book; he must learn "to read the cards". Our people have become very good at it.

Another effect of unstable currency is the risk of dollar loss should a sudden shift make, say, the franc worth fewer dollars. We try to protect against large fluctuations by keeping a reasonable balance between our assets and our liabilities in a given currency.

Governments of all Kinds

The Government doesn't mix in our business much.

Of course, we're talking about the government of Guernsey, and our business there. There, if you have something on your mind, you just walk down the street and talk to them about it.

In the US, just to mention the other extreme, some days you can't seem to make a move without having first filled in every box of the right federal form(s), and filed several copies.

In between, Tektronix interacts with a variety of governments, who govern us in varying degrees.

It costs more all the time to do business internationally. Government regulations work in a ratchet fashion, ever increasing, seldom reverting. The US Government is at once the "worst" and "best". It does get into just about everything we do; on the other hand, we've lived with it longer, understand it better.

Other countries regulate companies for much the same reasons our own does: Tax revenue, clean environment, worker and product safety, balance of payments. . . .

There's always bound to be some dissonance, probably, between a domestic government and a foreign company, because of the shared economic sovereignty involved. (About the same relationship, in some cases, as with rich Uncle Bennie who comes to dinner. You like him all right, and want him to like you – but not to spoil your kids, puff on stogies or re-decorate your den.)

We've often maintained that the goals of a company and those of the individual employee do not conflict. We believe the same to be broadly true of company and government. Thus it's our intent that our role in every country be one of working toward shared goals: Long-term, productive employment; higher standard of living; stable society. . . .

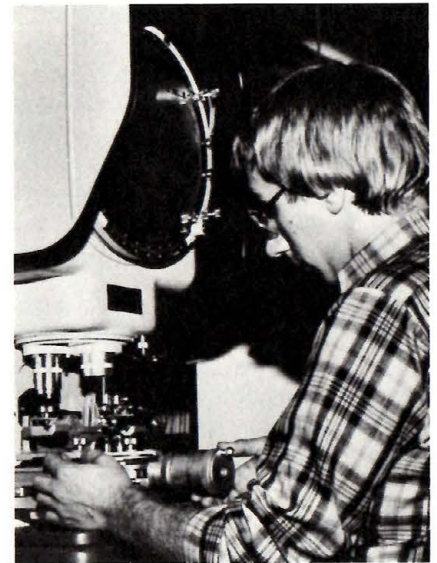
That doesn't mean we and governments always see things exactly the same. They have their



GOTEMBA

shop to run, too, just as we do.

- In Algeria, laws stipulate that we may not sell through a middleman. The opposite is true of sales to Russia; there we're required to deal almost *solely* with a middleman – a government agency representing all Russian customers. Both arrangements (each in its own way) lessen our ability to fully serve the end user (whoever that may be.)



HEERENVEEN

- Our sales to Russia and its socialist neighbors are made by Rohde & Schwarz/Tektronix GmbH, Vienna. Those sales have steadily increased each year. But the US Government says certain products may not be sold there, typically those with military or advanced research applications. Scopes with more than 100MHz bandwidth and terminals with over 11-inch screens are off limits. So are logic analyzers.

Further, Tek is obligated to watch for spurious "customers" who appear to be engaged in shady re-sales of our products into these restricted markets. Now and then we catch somebody at it, and refuse to sell to them.

Our Government's restrictions merely reduce the availability of such products; sales may be freely made by competitors from other countries whose governments

have no rules against selling these kinds of products to Eastern European markets.

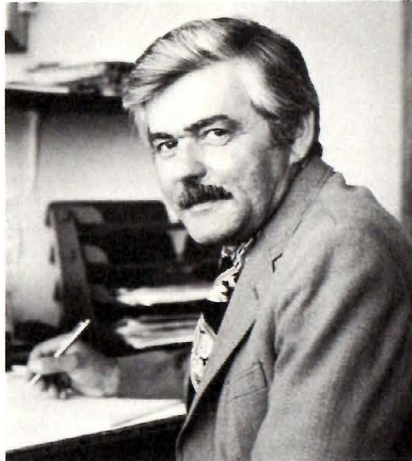
- In Brazil, inflation plus concern over balance of trade combine to make it rough. To import a Tek product, we must place money in the national bank equal to the product's value, and leave it there a year. No interest is paid on the deposit, nor any adjustment made for the high-double-digit inflation.

- At Tektronix Holland, governmental involvement is continuous; for instance, you need a permit to work overtime. You never saw more participative management in your life: Many company decisions there are made jointly by management, employee work councils, unions and government monitors. The results? "Amazingly objective", comments Earl Wantland, who was our first manager there.

- In Japan, the government is clearly on the companies' side. "A cooperator, not an umpire as in the US," says Takashi Kumakura, SONY/Tektronix operations manager. That island nation's lifeblood is its exports. To help out, the government supports cooperation among industries that in some countries is considered an illegal cartel.



GOTEMBA



GUERNSEYMAN HAROLD Guilbert is operations manager of Tektronix Guernsey Limited.

It's a Long Way to Perth from Anywhere

In short order you can reach 80 per cent of our European markets from Amsterdam. But just to travel from Tek Australia's headquarters in Sydney to its field office in Perth is a journey of 2500 miles. (Australia is a thin, populated doughnut with a large, large hole; 80 per cent of its people live in six coastal cities; the rest, under 3 million, are scattered about a giant area two thirds the size of the US.)

Distances like this are a daily factor in our sprawling Americas/Pacific operation, which encompasses two-thirds of the globe. Communications there are more difficult. And being on the customers' premises to sell or, importantly, to service our products in remote areas takes a lot of doing.

We seek to work – in all countries – for shared goals

Changing of the Guard, Revolution, etc.

Changes in a country's political complexion can affect business there, but usually in subtle and gradual ways. Iran was an exception, not subtle at all, but abrupt.

Short of an upheaval, a sudden shift toward anti-Westernism or

the nationalization of industry, political changes have little dramatic effect on the business community.

As an example: In Italy, governments have come, governments have gone – some 40-odd times since the war, ranging from left to right. Yet international business has invested and prospered there.

In most industrialized countries, the civil service and business community provide an experienced infrastructure that keeps things running through changes in political leadership.

Even in smaller, less-stable countries, where political adjustments can be more wrenching, new leaders must rely on economic continuity as a support for whatever social changes they have in mind.



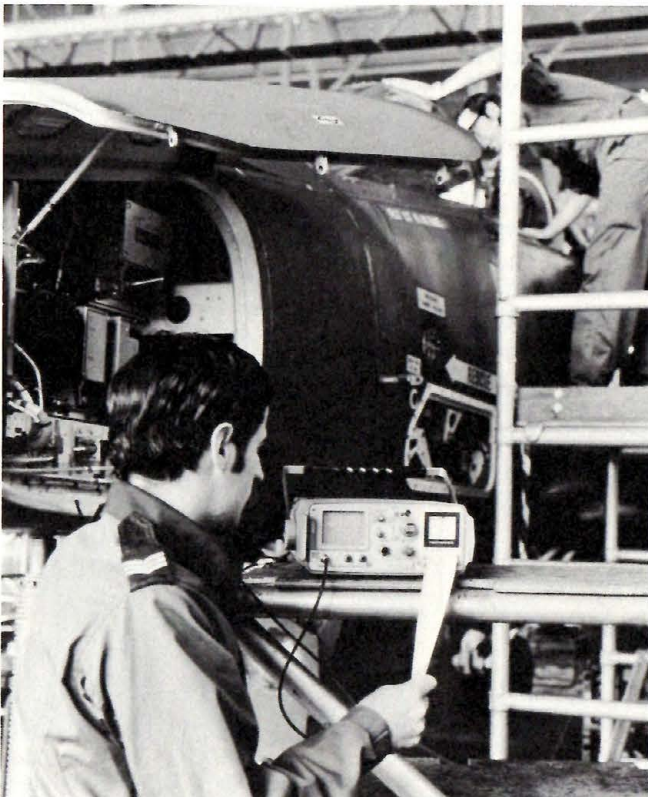
CANADA – Knowledge of more than one language is required of Tek field engineers in most countries. Harold Cameron and Mike Brown make a service call to the Canadian parliament buildings.



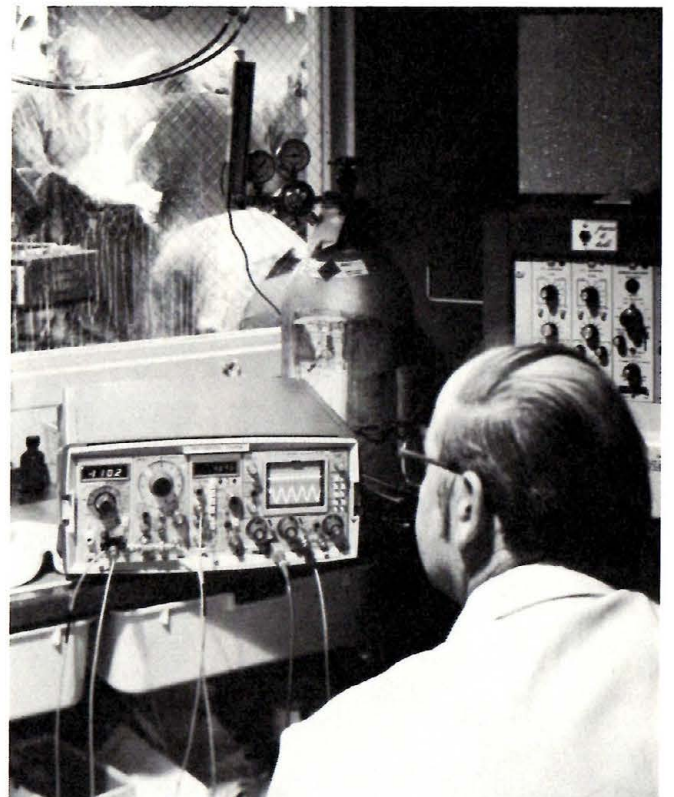
AUSTRALIA – Customer checks out a Tektronix digital plotter.



EUROPE – Eurocontrol, which regulates air traffic, uses a Tek 4081 graphics terminal.



ENGLAND – Tek cable tester is used by the Royal Air Force.



UNITED STATES – Tektronix instruments find increasing medical applications in hospitals as well as research.

Currently...

EACH YEAR, at about this place in the report, a section summarizes the current state of Tektronix: Our facilities, our markets, our product activity. It's a stop-action photo, invalid the instant after it's snapped; markets expand, new products appear, buildings continue to rise, the work force grows...

As the year ended, here's how your company looked:

International Facilities

Tektronix owns facilities in seven foreign countries representing an investment of \$18.6 million. Owned and leased quarters together total 827,000 square feet, in 15 countries.

The year was one of substantial expansion of leased space, with 65,000 square feet added. The largest new area is 36,000 square feet in Amstelveen, near Amsterdam, home of our European Marketing Center. In all, we lease some or part of 44 separate buildings, totaling 339,000 square feet, in 15 countries.

Our permanent off-shore roots are in 15 Tek-owned buildings in seven countries. The 488,000-square-foot total includes new administrative space at Heerenvveen and Alsmeer, The Netherlands.

Ground was broken at Tokyo this year for an eight-story, 123,000-square-foot building to adjoin SONY/Tektronix' existing structure.

United States Facilities

As our three industrial parks continue to rapidly fill up with buildings, it's become obvious that their 588 acres won't hold us for long. So Tek has continued to look

around for suitable new land, room to grow in.

We've acquired a 270-acre tract just east of Vancouver, Washington, a half hour's drive from our Beaverton park, and plan to break ground there this year for a general-purpose building of about 300,000 square feet. We expect it to be ready for about 800 employees by early 1981.

We've also offered to purchase 253 acres adjoining the small city of Lebanon, 80 miles south of Portland; and have expressed interest in acquiring 100 acres in the high prairieland of Central Oregon near the community of Redmond.

This year Tek expanded its general-purpose building at Wilsonville by 101,000 square feet; a separate 229,000-square-foot structure also was begun there and is pretty well completed. Wilsonville is the home of our Information Display products.

A 214,000-square-foot gen-

eral-purpose building was finished on our Walker Road tract, headquarters of our laboratory-instruments product activity.

Additions to our CRT and Ceramics buildings at Beaverton – 75,000 and 53,000 square feet respectively – are under way and should be ready for occupancy in early 1980.

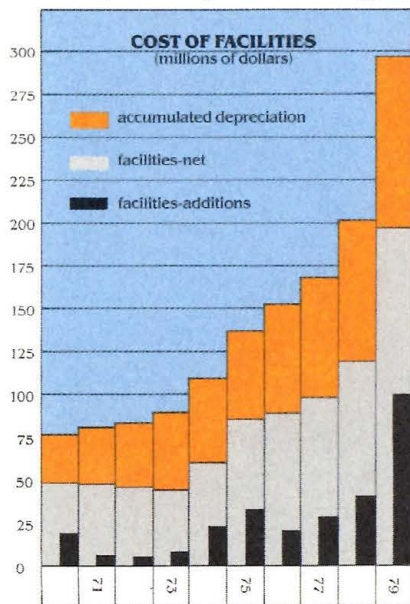
Nearing – or nearer – completion on our main Beaverton industrial park are two large buildings, each with unique "state of the art" features: A 299,000-square-foot warehouse, notable for its extensive automated storage; and a 250,000-square-foot building that will house all our microelectronic circuitry manufacturing and development.

Although the latter building is not one huge "clean room", the production of integrated circuits does require a contamination-free environment, and explicit control over its many processes. Two of the microcircuitry building's four stories are interstitial space devoted to very sophisticated process-related equipment – for air handling, exhaust and power.

New Warehouse Will be Pretty Much Automated

It looks like the warehouse of the future – and it is, but not very far in the future. Come next February, our 299,000-square-foot, \$21 million automated warehouse will give us total computer management of all our parts and materials. They now fill two Tek warehouses and spill over into all the local storage buildings within rental distance.

Robot vehicles will scuttle along between 30- to 60-foot canyon





AUTOMATED CRANES serve small-parts storage area in new warehouse.

walls of stored materials and parts, stacking and fetching, under the control of a dozen Tek 4024 terminals and a PDP11/70 computer.

It will be the largest "miniload" warehouse in the US. The term refers to the small-parts storage area, which represents the great bulk of the eventual 19,000 daily transactions. The miniload segment, 860,000 cubic feet, contains 35,000 bins in 30-foot storage racks along 24 aisles, and is served by mobile automated cranes.

The largest storage area, nearly 3 million cubic feet, is for pallets of bulk materials, such as ceramic powders. Human beings get into the act there, riding aboard storage retrieval trucks, which carry terminals with computer instructions for delivery onto 60-foot-high storage racks.

All materials will be stored automatically, by driverless tractors

on floor-mounted tracks, towing two trailers each. They are directed by storage instructions punched in on their keyboards. Actual unloading, however, is done by human hands.

When incoming materials arrive at one of the about a dozen loading docks, they'll be entered on a 4024 terminal. From that point, the material is under continuous computer surveillance until it's used in a product.

The building itself is not only large — stretching a tenth of a mile and the second tallest Tek structure — but also unusual in that the storage racks are themselves the support for walls and ceilings. The structure includes also some 91,000 feet of office space. Its automated portions will cost \$7 million.

Its high rise, twice that of our existing warehouses, helps us save needed land. The fact that the robot cranes work just fine in the dark represents energy saving; there are no lights in the miniload area. And our warehouse security will be tightened; it's next to impossible for non-employees to get into the closed system.

The building is unique in that it will maintain on-line (continuously

updated) computer records of such a large and complex inventory — about 50,000 Tektronix part numbers already. In similar miniload warehouses the records have proven accurate enough that the IRS has accepted them without the necessity of inventory audits.

Our 300-acre park at Beaverton contains 25 buildings comprising about 2.3 million square feet. The 40-acre tract along Walker Road now has 404,000 square feet of space in two buildings.

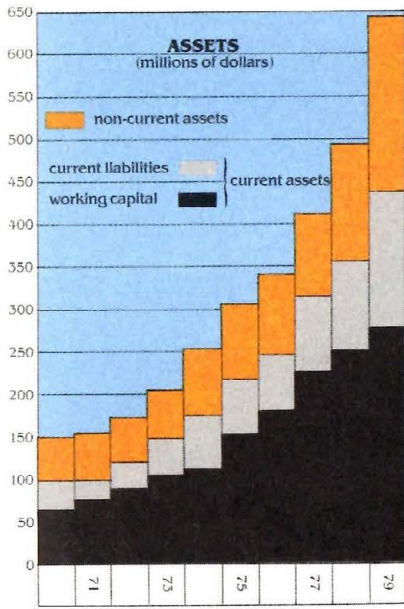
The 250-acre Wilsonville park, with its recent addition, has 358,000 square feet in its expanded complex.

This year, to ease the overload on our space, we've leased 133,000 square feet in six Beaverton-area buildings. We also use a 138,000-square-foot leased structure in Vancouver for component manufacturing.

Outside Oregon, Tek owns seven field offices, containing service centers and comprising 190,000 square feet. We lease another 278,000 square feet, for a total of 468,000. The Grass Valley Group has 93,000 square feet of buildings.



AUSTRALIA — Building plans are studied by manager Graham Williams (right).



Products

Tektronix became known for its oscilloscopes, which remain our primary products. The most common electronic instrument, it enables study of electrical events or phenomena convertible into voltage (heat, sound, pressure, strain, velocity, nuclear events and biochemical changes), by displaying their waveforms for study and analysis. The waveform is a graph written by a focused electron beam on the sensitive phosphor screen of the scope's cathode-ray tube (CRT).

Scopes range from handheld to benchtop size. Some are self-contained; others vary their performance characteristics by accepting a number of Tek-made

plug-in units, including multi-meters and counters. Some are coupled to computers for additional analysis of waveform information. We say they have "intelligence." Some scopes have storage CRTs, that can retain the graphed waveform after the event it depicts has ceased.

Test and measurement products also include modular plug-in instrument systems; spectrum analyzers, which allow analysis of complex signals by separating them into their component frequencies; pulse generators, amplifiers, logic analyzers, microprocessor development aids, cable testers, power supplies and physiological monitors. Tek also produces a variety of accessories including probes, attenuators and waveform cameras.

Specialized products for use in the television industry are waveform and picture monitors, signal generators and vectorscopes, all of which test and display the quality of video transmission. The Grass Valley Group, Inc., our California subsidiary, manufactures TV production and routing switchers and special-effects systems. Both Tektronix and Grass Valley television products are the leading ones.

Information-display products include graphic computer terminals, that display not only words and numbers but also maps, charts, diagrams and other pictorial content, in black and white or color; graphic computing systems, which can function as desktop computers or interact with a host computer; hard-copy units, which make paper copies of the CRT screen contents; display monitors, and digital plotters.

Most of these terminals, monitors and computing systems use storage CRTs like those in a scope, retaining the images after they've been "written" only once.

Product Development

Tektronix' investment in engineering, research and development (excluding profit share) is



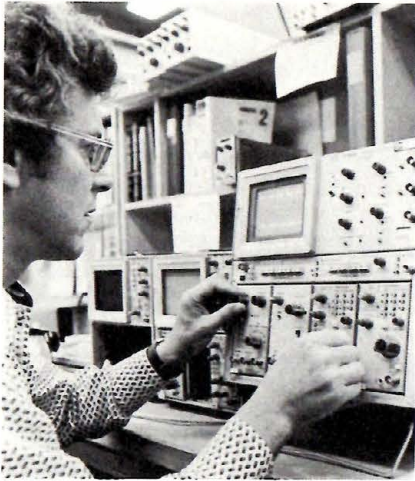
BELGIUM – Tektronix leases part of this modern office building in Brussels.



THE NETHERLANDS – Home of Tektronix Holland, Heerenveen.



JAPAN – Shinto rites accompanied ground-breaking for SONY/Tektronix building in Tokyo. Manager Takashi Kumakura is shown.



about 7.7 per cent of revenues. Roughly 10 per cent of our employees work in those areas; about a third of them have degrees in either engineering or scientific fields.

So that neither our technological development nor product delivery will founder on lack of components that meet our specialized needs and high quality standards, we've taken to producing a large number of them ourselves.

The big plus of such great vertical integration is that it lets us tailor the components to the instrument – and the instrument to the components – to achieve optimum performance.

We produce our own CRTs (other than some TV-type raster-scan tubes), some semiconductors, integrated circuits, transformers, chassis and cabinets, ceramic hybrid circuits, ceramic CRT envelopes, etched circuitry, potentiometers, switches, precision capacitors and resistors, inductors, relays and oscillators, coaxial cables and a wide array of plastic parts. We supply many of these parts to our overseas manufacturing plants also.

Shedding Light on the Subnanosecond World

It's officially called the 7104, but around here it goes by the name of "The Gigahertz Scope" after its unprecedented 1GHz bandwidth. A gigahertz is one billion cycles per

second, and breaking that barrier is akin to breaking the four-minute mile.

This scope is so very advanced in so many of its elements that it deserves mention as one of our year's milestones, a showcase of the best of Tek technology. It not only surpasses the previous fastest (widest-band, highest-frequency) scope, the Tek 7904, but does so in giant leaps best described by ad-type superlatives.

For instance, it improves your ability to view once-only electrical events by about 1000 times.

In normal room light, you can see, on the 7104's screen, electrical changes as small as 10 thousandths of a volt and those occurring as fast as a third of a billionth of a second.

In that sliver of time, light travels only four inches.

You didn't used to be able to do that. Most subnanosecond single-shot signals (those occurring only once and lasting less than a billionth of a second) could be captured only on film, with enhanced photographic techniques. Even then, images of the fastest signals were often dim.

The eye, if it gets enough help, can respond to extremely short visual stimuli. The brighter the light, the shorter the stimulus that can be detected. (Vision is a function of light level. The same person who can't read headlines under a dim lamp can make out the finest print in bright sun.)

The 7104's display brightness is achieved with a very complex Tek-built cathode-ray tube, one crammed with innovations.

The tube uses an electron-multiplier device. Electrons fired from the CRT gun pass through thousands of angled channels in a glass plate near the phosphor screen. They knock loose other, secondary, electrons from the channels' walls; these in turn jar loose still others, and so on... By the time this avalanche is over, the number of electrons has been multiplied by as much as 10,000. These are accelerated against the

phosphor, producing a sharp, vividly bright trace.

This tube overcomes the trade-offs inherent in CRT design. An ideal tube would produce a very bright trace, have a very small spot, and be very sensitive, able to respond to extremely short-lived signals. The problem is, these three characteristics fight each other.

That is, if you diminish spot size by boosting the gun voltage, the resulting beam becomes stiff, hard to move and thus less sensitive. If you make the trace brighter by increasing beam current, the beam spreads out and the spot becomes too large, a crayon rather than the fine-tip pen you need.

The 7104 tube uses its micro-channel plate to provide most of the brightness. This frees the electron beam to be operated at very low current and low gun voltage. Thus it produces a fine spot; has three times the sensitivity of our 7904, and has 350 times its X-Y bandwidth. (X-Y displays have no time base, but plot one signal



ABOUT 10 per cent of our employees work in engineering or R&D.



against another. They're very useful for comparing the signals' phase difference or frequency difference.)

The high-speed CRT promptly outran most existing Tektronix components; it required frequencies well above any we'd ever come up with. In response, we designed Super High III, an integrated-circuit process that yields probably the fastest linear (nondigital) ICs anywhere.

Packaging was especially important. In any circuit, there are many junctions between electrical elements: Between hybrid ICs and circuit boards, between two circuit boards, and between the main-frame and plug-ins. Traditionally, each junction degrades the signal somewhat: Shunting off some frequencies, or perhaps causing unwanted bumps or overshoot in the displayed waveform.

An important step was to develop a unique connector system to attach hybrid IC packages to printed circuit boards. Making the gold contacts part of the transmission line that connects these elements has given us an electrically "clean" signal path, with negligible signal distortion.

The 7104 is a sophisticated instrument; but neither temperamental nor esoteric. It's a

general-purpose oscilloscope, just like the rest of our 7000 series. It has the same wide range of applications (varied by mixing and matching plug-ins.) And it's just as smooth and easy to operate. It's also simple to maintain; to replace any of its integrated circuits, for example, takes only a few turns of a screwdriver.

No one will casually purchase a 7104. Its price will make prospects ask if they *need* all that performance. For people engaged in fast-pulse work, typical of laser fusion and radar; in computer design, often plagued by fast, "invisible" random-error transients, and in investigation of nuclear events, the answer will be "yes."

The benefits of having built this product run far beyond its immediate sales. Spinoffs, further extensions of the new technology it contains, are beyond prediction, but our history says they'll be substantial.

And this state-of-the-art product is one more reaffirmation of leadership. It's the sort of pace-setting product that an industry leader is expected (and, indeed, obligated) to develop.

(There was little challenge to our leadership in fast scopes, anyway. The previous fastest was ours. The next fastest? That's ours, too.)

Markets

Our markets, in science, industry and education, are (in order of contribution to this year's total sales):

Electronic and electrical equipment: Makers of electric motors, industrial controls, radio and television sets, telephone equipment and radar systems.

The computer industry.

US, state and local government. They buy our standard commercial products.

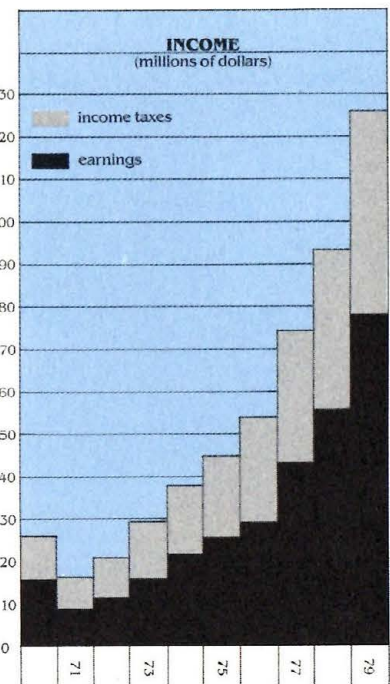
Education – in medical schools, vocational/technical institutions, graduate labs – and, increasingly, in classrooms.

Broadcast television and other TV.

The instrumentation industry, of which we're a part.

Our other sales are widely spread, including petroleum, chemicals, transportation, printing and publishing and the medical field.

Our products are sold in most countries. Primary foreign markets are Germany, the United Kingdom, France and Japan; they're followed by Canada, Australia, Switzerland, The Netherlands and Sweden.





AMSTERDAM — Tektronix' European Marketing Center opened this year in leased portions of this building. At right is its software-development area. Bottom, Mike Brand, Test and Measurement products manager for Europe, makes a presentation to Tektronix board of directors, meeting in Amsterdam in May.

Newsreel

Tek Turns Twenty on Guernsey

Twenty years is older than many of our Guernsey employees, Vice-President Frank Doyle remarked during our celebration there of our first two decades, held October 28.

In that time Tek has been very productive, he said. In a period which saw assembly wages there increase 700 per cent, balcony tickets at the Odeon 960 per cent and beer 500 per cent, the price of a portable Tek oscilloscope is only 30 per cent above that of a scope with somewhat less performance 20 years ago.

President Earl Wantland presented a 20-year pin to Norm Gardner, Manufacturing manager, who's been with us there from the start. On Guernsey, as in the US, Earl said, Tek prides itself on long-term employees. Of the nearly 700 Tek people on the island, he noted, 95 have been with us over 15 years, 190 over 10 years, 375 over five years.

In appreciation for "enjoying Guernsey's hospitality" those 20 years, Tek presented St. John Ambulance Service with a portable oscilloscope for servicing its electronic equipment. Employees had raised £1000 toward the scope's price; the rest was donated.

Another £500 from employees was matched by the company as a gift to the National Trust of Guernsey, to help preserve fine buildings and natural beauty.

Tek People Were Guests in China

Thawing US-Chinese relationships this year enabled a three-man group from Tektronix to accept an invitation to that ancient

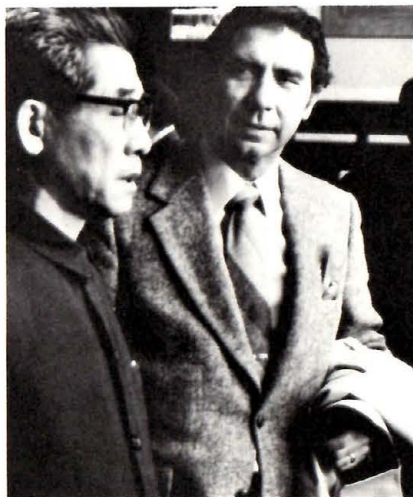
country, to become acquainted and to discuss trade prospects.

The question isn't whether to trade with China. We've been doing that, in a modest way, for several years. Last year our sales there quadrupled; but still the resulting number wasn't very big. Our lower-priced Telequipment line did have a pretty good year there.

Government officials who were our hosts showed evident desire for China to industrialize. But trade there isn't likely to see a fast build-up.

Our business growth there will be limited by China's lack of dollars – and of trading goods with which to generate them; by their priorities in using those dollars; and, probably, by the same kinds of US Government restrictions as apply to our sales into Russia and its Eastern European neighbors.

Our delegation, which included President Earl Wantland, found the Chinese officials receptive and the people, in a variety of contacts, most cordial.



Tektronix vs. US Ended

A dragged-out, costly and attritive legal contest ended in late December when the US Government paid us \$4.5 million for three of its supply contractors having infringed eight Tektronix patents back in our early days.

The case took over 17 years, and had to straddle a Government countersuit that made legal history. It required 10 years to reach a decision in our favor, and eight more for the court to compute what the infringement would be worth.

In the late '50s, the Government, seeking a second supplier for Tektronix-quality oscilloscopes, accepted bids from three other companies whose products, to qualify, had to infringe our patents. (This was not an uncommon Government procurement practice at the time.)

We objected, and asked for compensation; the Government refused. We filed suit March 2, 1961, in the US Court of Claims, asserting that our patents had been infringed. The Government brought in the three contractors as third-party defendants: LaVoie Laboratories, Hickok Electrical Instrument Company and Jetronic Industries.

The US Counterpunches

The suit didn't get off the ground; the Government, in a tit-for-tat move, pointed out that our scopes contained two of *their* patents, and in November 1962 countersued *us* for infringement. The Government had never before contested use of its patents by any private company.

As soon as the counterclaim was

announced, we were swamped by advice from inside and outside our industry. Some offered financial help, if needed; some, moral support, should we lose our nerve.

But others warned, Don't take on the Government; the odds favor Goliath. (Tek was a little outfit then, with less than \$100 million in sales; and the Government seemed about as big as it does now – a formidable opponent, with resources for a long, tough legal fight.)

On the face of it, the Government had a good point: Our products did use their patents (as did the products of many US companies.) But we argued that, throughout the century-old history of the US Patent Office, the government had not merely allowed but actively encouraged free use of patents assigned to it.

The court went along with us, and on October 15, 1965, denied the countersuit.

The main trial began in February 1965 and, after adjournments for this reason and that, ended on March 4, 1966.

Tek Wins

It was four years later that the trial commissioner issued his opinion. A year after that, the Court adopted it (June 11, 1971) and gave *its* opinion: That our patents were valid and had been infringed. We'd won.

But then came the accounting trial, to see what "reasonable and entire compensation" meant in dollars. It began December 10, 1973; then came the commissioner's opinion, the Court's memorandum of opinion; oral arguments ... Judgment was finally entered April 19, 1978 for \$4,238,307 plus \$491.66 per day interest from July 1, 1977 until paid.

That was the end of it – almost. The Government made noises about seeking Supreme Court review, but must have thought better of it. (In a dying twitch, Hickok, one of the third-party defendants, did take that step, but the Supreme

Court refused to consider the case.)

The payment, received Dec. 29, 1978, was for \$4,506,753.36. Although not the precise number we had in mind, we feel it did compensate us to some degree.

Here's the real importance of the case:

The US Government has now changed some of its procurement practices, and is less free in its use of privately held patents. That's the real benefit, and the whole of US industry shares it.



AMSTERDAM – Customer demo area, European Marketing Center.

European Marketing Center Opens

A wide range of support for customers, and for distributor and subsidiary marketing efforts, is now clustered in Tektronix' European Marketing Center, new this year near Amsterdam.

Marketing-support activities from elsewhere now are centralized there, providing services that single subsidiaries couldn't justify, or doing things on a coordinated basis that subs have been doing individually.

The 108-person staff is diverse in nationality. Operations man-

ager Jan Gielesse is Dutch; he's been manager of Tektronix Holland. The T&M and Information Display product managers are American and French, respectively; the Marketing Services manager, British.

Our European product managers are stationed in the 36,000-square-foot leased quarters. Support provided by the center includes product training for customers, Tek field engineers and distributors' technical staff; demo instrument pools; a large central customer facility; and specialist FEs, on call to help with specific troublesome situations.

Strategic direction for all of Europe, the Middle East and Africa now emanates from Amsterdam, including coordination of advertising, to assure that Tek "looks like Tek" to readers in all countries; and placement of marketing resources.

New Vice-President, Corporate Secretary Elected

James B. Castles was elected vice-president by the Tektronix board of directors in April.

At that time R. Allan Leedy, Jr. was elected corporate secretary. He had been assistant secretary.

Jim, 63, had held the secretary post since 1960, a year before he actually joined Tek. But he has been a key figure from the start here, having drawn up our articles of incorporation back in 1946 as our outside legal counsel.

He was named to our board of directors in 1953, then became secretary in 1960, succeeding Jack Murdock, one of Tektronix' founders. It was 1961 that he joined Tektronix as both corporate secretary and general counsel.

He'll continue as general counsel and on the board.

Allan, 37, joined Tektronix in 1976, from a position overseas with a New York legal firm. He's been international counsel all the while, which duties he'll retain as well as those of corporate secretary.



LARRY MAYHEW (left) and Bill Walker.

**Product Groups Merge:
Executive Vice-president
Named**

A realigned Tektronix organization was announced in January, with the consolidation of our two major product groups and naming of an executive vice-president.

Bill Walker, who was group vice-president, Test and Measurement, is now executive vice-president and chief operating officer. He reports to President Earl Wantland, chief executive officer, who retains responsibility for Finance and Administration and for corporate legal functions.

Naming Bill chief operating officer will provide more daily attention to both short- and long-range issues, Earl said. The two men will function as The Office of the President.

Larry Mayhew, group vice-president, formerly responsible for Information Display, has been given a broadened responsibility, in charge of our new Operations and Marketing group. It consolidates the marketing functions of Test and Measurement, and Information Display.

Larry reports to Bill, as do Tektronix Labs, headed by vice-president Wim Velsink; Sales and

International, under group vice-president Lew Kasch; and Central Manufacturing, headed by group vice-president Bill Polits.

As our product lines have expanded, they have begun to overlap, both in technology (particularly digital) and the markets they serve.

The change should help us make the best use of our resources, reduce overlapping functions and, by centralizing our marketing, make it work even better. And it will enable a cohesive product-line and market strategy for information-display and test and measurement products.

**For the Second Time, the Board
Meets in Europe**

As they first did in 1975, Tektronix directors traveled to Europe in May for their board meeting. The session covered five days and three countries: Sweden,

France and The Netherlands.

A main purpose was to enable our directors, particularly the outside directors, to learn first-hand from our overseas managers the challenges and prospects in their countries – the sort of thing you can't get from a book.

A second purpose was for those managers to get to know the directors as people. It all went very well.

As is usual at our board meeting, our group vice-presidents also attended. Emphasis this year was on our marketing companies; the 1975 session focused on manufacturing operations.

In addition, the board paid calls on several major Tektronix customers in Stockholm and Paris. That was an unprecedented event for the companies – and for the board, too, which had restricted its prior customer visits to companies in the United States.



AMSTERDAM – Group vice-presidents Les Stevens (left) and Lew Kasch (right) at Tektronix board meeting in Amsterdam.



TEKTRONIX signal-processing system monitors a repetitively pulsed ND:YAG laser and frequency doubler, at Oregon Graduate Center for Study and Research.

Running start

ECONOMIC FORECASTERS, among other things, don't guarantee their work, so it's hard to put your full weight down as you enter a new year. The US upturn *has* finally made its downturn, with even a speedup in the slowdown. Or so we read in the papers.

But things here look pretty good.

That's said advisedly. It's a pretty nervous time everywhere, not the most comfortable year we've ever eased into. It bids fair to wring out the US economy a bit, and maybe those of other countries in the bargain. It having been "officially" acknowledged by the President of the United States (length and duration to be announced later), the recession can no longer be doubted.

Also, price increases for petroleum are a reality, more of them a possibility and curtailed oil supply a threat that must be considered.

But, two months into our new year, Tektronix' momentum is great. Product demand has shown no weakening to speak of. Unfilled orders are at a record high, if not the kind of record we prefer; we'd rather have been able to fill more of them. (Backlog cushion isn't always as big as it looks, however, tending in a recession to shrivel as some customers have second thoughts.)

But Tektronix products are much in demand, highly competitive – and *essential* in many vital areas. One of growing importance is the search for new energy sources.

We serve every country, reach into all economic and scientific fields. Barring a concerted collapse, at one time, of all industries,

all governments, all national economies and all our buildings, the year ahead – if we manage it thoughtfully – should be one of reasonable growth.

History shows it takes time for economic doldrums to be felt by the industrial electronics sector. If the recession is brief enough, shallow enough, our growth is typically hardly affected; before we hit the trough, there's been an upturn in the downturn; and all we show for it is a residual dimple in our growth line.

For the longer run, too, we like Tektronix' prospects. Our continuing facilities expansion reflects our confidence. This year we added about 300,000 square feet in the



US alone; next year we'll complete another 900,000 square feet.

So we won't run out of real estate, we've purchased or offered to purchase 623 acres in three Oregon and Washington locations for future industrial parks. That would more than double our land holdings.

Ed Willigenburg, Norm Gardner and Betty Lou Duffield each marked a major anniversary.

Ed (Tektronix Holland) is our first 25-year European employee. Part of that association with our products was on the staff of our former Dutch distributor. Ed recalls seeing the first Tek scopes imported into Holland.

Norm (Tektronix Guernsey) is also a "first:" The first person to have been employed by Tek in Europe 20 years. He's Manufacturing manager at Tek Guernsey.

Betty Lou (Wilsonville) completed 20 years with Tek, too – the 1000th employee to have received a 20-year award.

Board Chairman Howard Vollum made the 1000th presentation. He praised our long-time employees for enabling Tektronix to maintain its unique set of corporate values over the years, despite the addition of many new people.

Tek, Howard added, attracts above-average people; and even those who aren't perform above-average work. A lot of that performance is due to an atmosphere that encourages people to exceed their own expectations.

We sense that feeling in all our operations, in all countries. In the old days it was commonly spoken of as the "Tektronix spirit."

We still like how that sounds.



SWEDEN – Test and calibration area, Tektronix Sweden.

Tektronix International Facilities

Tektronix Export Corporation, Beaverton, Oregon—

A Domestic International Sales Corporation

Tektronix International, Inc.—

European Marketing Center, Amstelveen, The Netherlands

MANUFACTURING COMPANIES

Tektronix Guernsey Limited, Guernsey;

Tektronix Holland N.V., Heerenvveen, The Netherlands;

Tektronix U.K. Ltd., London, England—Telequipment instruments;

SONY/Tektronix Corporation, Tokyo, Japan.

SALES/SERVICE COMPANIES

Australia—Tektronix Australia Pty. Limited, Sydney, Melbourne, Adelaide and Perth;

Austria, Rohde & Schwarz-Tektronix GmbH, Vienna;

Belgium—Tektronix S.A., Brussels;

Brazil—Tektronix Industria e Comercio Ltda., Rio de Janeiro and Sao Paulo;

Canada—Tektronix Canada Ltd., Montreal, Toronto (Barrie), Ottawa, Calgary, Vancouver, Dartmouth, Edmonton and Winnipeg;

Denmark—Tektronix A/S, Copenhagen;

Finland—Tektronix Oy, Helsinki;

France—Tektronix, Paris, Toulouse, Lyons, Rennes, Strasbourg and Aix-en-Provence;

Japan—SONY/Tektronix Corporation, Tokyo, Osaka, Nagoya and Fukuoka;

Norway—Tektronix Norge A/S, Oslo;

Republic of Ireland—Branch of Tektronix U.K. Ltd., Dublin;

Spain—Tektronix Espanola S.A., Barcelona and Madrid;

Sweden—Tektronix A.B., Stockholm and Gothenburg;

Switzerland—Tektronix International A.G., Zug and Geneva;

The Netherlands—Tektronix Holland N.V., Badhoevedorp;

United Kingdom—Tektronix U.K. Ltd., Harpenden, Maidenhead, Manchester, Scotland.

SALES/SERVICE REPRESENTATIVES

Serviced by Tektronix, Inc., Beaverton.

Argentina, Coasin S.A., Buenos Aires, Cordoba, Rosario;

Bolivia, Coasin Bolivia S.R.L., LaPaz;

Chile, Equipos Industriales, S.A.C.I., Santiago;

Colombia, Selectronica, Ltda., Bogota;

Costa Rica, Electro-Impex, S.A., San Jose;

Ecuador, Proteco Coasin Cia. Ltda., Quito;

El Salvador, Electronica Cuscatleca, S.A. de C.V., San Salvador;

Hong Kong, Gilman & Co., Ltd., Causeway Bay;

India, Hinditron Services Private Ltd., Bombay, Bangalore, New Delhi;

Indonesia, P.T. Dwi Tunggal Jaya Sakti, Jakarta;

Korea, M-C International, Ltd., Seoul;

Malaysia, Mecomb Malaysia Sdn. Bhd., Selangor;

Mexico, Tecnicos Argostal S.A., Mexico D.F., Monterrey, N.L., Guadalajara, Jal;

New Zealand, W & K McLean, Ltd., Auckland, Wellington, Christchurch;

Pakistan, Pak-Land Corporation, Karachi;

Panama, Executive Marketing Corp., Panama;

Peru, IRE Ingenieros, Lima;

Philippines, Philippine Electronics Industries, Inc., Rizal;

Singapore, Mechanical & Combustion Engineering Co., Pte., Ltd., Singapore;

Sri Lanka, Maurice Roche Ltd., Colombo;

Surinam, Wong Sang Tsoi Co., Parimaribo;

Taiwan, Heighten Trading Co., Ltd., Taipei;

Thailand, G. Simon Radio Company Ltd., Bangkok;

Uruguay, Coasin Uruguaya S.R.L., Montevideo;

Venezuela, Equilab, C.A. Caracas.

SALES/SERVICE REPRESENTATIVES

Serviced by Tektronix Limited, Guernsey, Channel Islands.

Egypt, Giza Systems Engineering Co., Cairo;

Federal Republic of Germany, Rohde & Schwarz Vertriebs-GmbH, Cologne, Hamburg, Karlsruhe, Munich, Nuremberg, Stuttgart;

West Berlin, Rohde & Schwarz Handels-GmbH;

Greece, Marios Dalleggio Representations, Athens and Thessaloniki;

Iceland, Kristjan O. Skagfjord Ltd.;

***Iran**, Irantronics Co. Ltd., Tehran;

***Iraq**, Al Manar Engineering WLL, Baghdad;

Israel, Eastronics Limited, Tel Aviv;

Italy, Silverstar Ltd., Milan, Rome, Turin;

***Ivory Coast**, Sitel, Abidjan;

***Jordan**, Consult-Tel, Amman;

***Kenya**, Engineering & Sales Co. Ltd., Nairobi;

***Kuwait**, Tareq Co.

***Lebanon**, Projects S.A.L., Beirut;

***Morocco**, SCRM, Casablanca;

Portugal, Equipamentos de Laboratorio Lda., Lisbon;

***Qatar**, Business Communications Qatar;

Republic of South Africa, Protea P.N.I.(Pty) Ltd.,

Bramley, Cape Town, Durban;

Saudi Arabia, Electronic Equipment Marketing Co. Ltd., Riyadh;

***Syria**, General Trading Company, Damascus;

***Sudan**, Cine & Photo Supply Co., Khartoum;

***Tanzania**, Engineering & Sales Co., Ltd., Nairobi, Kenya;

***Tunisia**, El Eslek, Tunis;

Turkey, Erkman Elektronik Aletler, Istanbul;

***Uganda**, Engineering & Sales Co., Ltd., Nairobi, Kenya;

***Zambia**, Baird & Tatlock (Zambia) Ltd., Ndola, Lusaka.

*Does not include Information Display products.

Tektronix United States Facilities

UNITED STATES

Tektronix, Inc., Beaverton, Oregon—Headquarters and Main Plant

FIELD OFFICES AND SERVICE CENTERS

Albany, N.Y.
Albuquerque, N.M.
Atlanta, Ga.
Baltimore, Md.
Boston, Mass.
Chicago, Ill.
Cleveland, Ohio
Concord, Calif.
Dallas, Texas
Dayton, Ohio
Denver, Colo.
Detroit, Mich.
Fort Lauderdale, Fla.
Newport News, Va.
Houston, Texas
Huntsville, Ala.

Indianapolis, Ind.
Irvine, Calif.
Kansas City, Kan.
Knoxville, Tenn.
Long Island, N.Y.
Los Angeles, Calif.
*Los Gatos, Calif.
Milford, Conn.
New Orleans, La.
Oklahoma City, Okla.
Orlando, Fla.
Pensacola, Fla.
Philadelphia, Pa.
Phoenix, Ariz.
Pittsburgh, Pa.
*Portland, Ore.

Poughkeepsie, N.Y.
Raleigh, N.C.
Rochester, N.Y.
Rockville, Md.
St. Louis, Mo.
St. Paul, Minn.
Salt Lake City, Utah
San Antonio, Texas
San Diego, Calif.
Santa Clara, Calif.
*Santa Clara, Calif. Annex
Seattle, Wash.
Syracuse, N.Y.
Woodbridge, N.J.

*No Service Center

TEKTRONIX UNITED STATES SUBSIDIARY

The Grass Valley Group, Inc., Grass Valley, California—Headquarters and Main Plant

FIELD OFFICES

Arden Hills, Minn.
Atlanta, Ga.

Dallas, Texas
Elkhart, Ind.

Great Neck, N.Y.
Sherman Oaks, Cal.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF STATEMENT OF CONSOLIDATED INCOME

The tables below set forth the increase in certain items of the Company's Statement of Consolidated Income and Reinvested Earnings for the periods indicated and the ratios of those items to net sales. The following discussion should be read in connection with the information in the tables and the Company's Statement of Consolidated Income and Reinvested Earnings and accompanying notes.

Increase, As Compared to Prior Fiscal Year (amounts in thousands)					Ratio to Net Sales (%)		
1978		1979			1977	1978	1979
Amount	%	Amount	%				
\$143,928	32	\$188,050	31	Net Sales	100.0	100.0	100.0
114,088	32	146,164	31	Test and Measurement Sales	78.3	78.5	78.3
29,840	30	41,886	33	Information Display Sales	21.7	21.5	21.7
70,419	36	93,266	35	Cost of sales	43.1	44.5	45.7
22,805	36	26,611	31	Selling expense	14.1	14.5	14.4
11,175	29	10,729	22	Engineering expense	8.5	8.3	7.7
12,773	32	14,981	28	Administrative expense	8.9	8.9	8.6
9,189	23	15,154	31	Profit share expense	8.6	8.1	8.1
117	3	2,182	51	Interest expense	0.9	0.7	0.8
2,765	84	5,563	92	Non-operating income	0.7	1.0	1.5
20,215	27	30,690	32	Income before income taxes	16.6	16.0	16.1
12,875	29	20,305	36	Earnings	9.7	9.5	9.8

Test and measurement sales were \$356,289,000, \$470,377,000 and \$616,541,000, respectively for the 1977, 1978 and 1979 fiscal years. Information display product sales for the same periods were \$98,669,000, \$128,509,000 and \$170,395,000.

The increases in sales for both 1978 and 1979 reflect primarily increased unit sales of both test and measurement and information display products. To a lesser extent, price increases also contributed to increases in net sales. Sales increases occurred in both domestic and international markets, with domestic sales increasing by 34% and 28% in fiscal years ending in 1978 and 1979, respectively, and international sales increasing, respectively, 28% and 38% in the same periods.

Cost of sales increased by 36% for 1978 and by 35% for 1979, primarily as a function of higher sales levels. Cost of sales also increased in both periods as a percentage of net sales. For the 1978 fiscal year, this increase in the ratio of cost of sales to net sales was attributable primarily to expenses associated with expanding the rate of production. These expenses, including the hiring and training of new manufacturing personnel, continued into the early part of the 1979 fiscal year with a similar effect. Inflationary pressures on both wage and materials costs also contributed to the increase in the ratio of cost of sales to net sales in the 1979 fiscal year.

Operating expenses consist primarily of selling expense, engineering expense, administrative expense and profit-sharing expense. Increases in selling and administrative expenses for 1978 and 1979 result primarily from the increase in levels of business activity for those years, and from inflationary pressures. Engineering expense increases reflect the Company's

continuing program for the development of new products, as well as inflation.

The Company pays cash and retirement profit share based upon the income of participating companies before taxes, profit sharing, executive incentive compensation and charitable contributions. Profit-sharing expense also includes executive incentive compensation. Profit-sharing expense increased for the 1978 and 1979 fiscal years primarily as a function of the increases in operating income before taxes, profit sharing, executive incentive compensation and charitable contributions. The 1979 increase was also attributable to a lesser extent to employee participation through profit sharing in the patent infringement recovery mentioned in the discussion below of "Non-operating income."

Charges to payroll expense for the Company's Employee Pension Plan for fiscal 1977, 1978 and 1979 were \$5,569,000, \$5,714,000 and \$8,475,000, respectively. See Note 7 of Notes to Financial Statements.

"Non-operating income" includes primarily interest income, charitable contributions, the Company's equity in earnings of SONY/Tektronix Corporation and foreign currency gains and losses. The increase in non-operating income for 1978 was primarily the result of increased earnings of SONY/Tektronix Corporation, a 50%-owned, non-consolidated foreign affiliate, and to increased interest income. In the 1979 fiscal year, non-operating income increased principally as the result of receipt by the Company during the period of approximately \$4.5 million in satisfaction of a judgment obtained in a patent infringement action against the United States Government.

Interest expense increases for the 1979 fiscal year

result principally from increases in the utilization of borrowed funds.

Effective tax rates for 1977, 1978 and 1979 were 41.9%, 40.8% and 39.1%, respectively. Changes in tax rates are primarily attributable to fluctuations in the percentage of earnings taxed at rates lower than those applicable to United States earnings, and to additional investment tax credits available to the Company. For 1979, the effective tax rate was also influenced by a lower statutory rate for United States income taxes.

Expenses for maintenance and repairs increased 47% in fiscal year 1979 over the prior year, reflecting primarily additions to personnel and other cost increases associated with the maintenance of the Com-

pany's expanded facilities, both owned and leased. Depreciation and amortization of property and equipment increased 39% for the same period, reflecting primarily additions to fixed assets. Increases in payroll tax expense reflect higher payroll tax rates and wage levels, increases in the Company's work force and taxes paid on increases in profit share. Rental expense increased 44% in fiscal year 1979 as additional space was rented to accommodate the Company's expanded facilities needs.

Earnings increases reflect primarily the increases in net sales and, to a lesser extent, increases in non-operating income and decreases in effective tax rates, as discussed above.

EXPLANATION OF FINANCIAL STATEMENTS

Corporate performance and strength are usually measured by financial figures, although they only tell part of the story. It is hoped the explanation included as part of the financial statements will assist shareowners unfamiliar with financial analysis to a better understanding of Tektronix.

Performance is usually presented on the income statement, which shows how much of the revenue, mostly from sales, can be kept by the company after paying the costs of goods sold and the expenses of running the business.

Strength is pictured by the financial position statement, which shows the cost of the assets or resources used in the business and tells what part of them is owned by the shareowners and what part owed to creditors.

Another statement, Changes in Financial Position, shows the connection between the other two statements. Note that the first item on this statement is the earnings shown on the income statement. The last item is the working capital shown on the financial position statement.

To best serve customers worldwide, Tektronix operates in Australia, Belgium, Brazil, Canada, Denmark, Finland, France, Ireland, The Netherlands, Norway, Spain, Sweden, Switzerland and the United Kingdom through wholly-owned subsidiaries; in Austria and Japan through unconsolidated 50% owned joint ventures; in the United States through the parent company and a wholly-owned subsidiary; and in the remaining markets is represented by independent distributors or by its own export operations. However, a meaningful financial picture of Tektronix is gained only from the consolidated statements.

The figures on the financial statements are rounded to the nearest thousand dollars.

We hope these explanations will contribute to better understanding, and lead to further clarification.

AUDITORS' OPINION

To the Shareowners of Tektronix, Inc.:

We have examined the statements of consolidated financial position of Tektronix, Inc. and subsidiaries as of May 26, 1979, May 27, 1978, May 28, 1977, May 29, 1976 and May 31, 1975, and the related statements of consolidated income and reinvested earnings and of consolidated changes in financial position for each of the five years in the period ended May 26, 1979. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying statements present fairly the financial position of the companies at May 26, 1979, May 27, 1978, May 28, 1977, May 29, 1976 and May 31, 1975, and the results of their operations and the changes in their financial position for each of the five years in the period ended May 26, 1979, in conformity with generally accepted accounting principles applied on a consistent basis.

Deloitte Haskins + Sells

Portland, Oregon
July 18, 1979

Tektronix Consolidated Income And Reinvested Earnings

1975	1976	1977	1978	1979	
\$336,645	\$366,645	\$454,958	\$598,886	\$786,936	NET SALES and rentals to customers and distributors for products, replacement components and services
163,638	169,275	196,055	266,474	359,740	COST OF SALES for the materials, labor and facilities expense directly related to manufacturing goods and providing services
173,007	197,370	258,903	332,412	427,196	GROSS PROFIT remaining from sales revenue after production costs
28,327	29,704	38,657	49,832	60,561	ENGINEERING EXPENSE — for research and the development of products and components
44,657	51,675	64,045	86,850	113,461	SELLING EXPENSE — for the sales effort, marketing programs and the distribution system
26,968	31,666	40,290	53,063	68,044	ADMINISTRATIVE EXPENSE — for the general management, accounting, data processing, facilities, finance, legal, personnel, planning and public affairs services
22,257	26,533	39,339	48,528	63,682	PROFIT SHARING (Note 7) the incentive portion of employee compensation
50,798	57,792	76,572	94,139	121,448	OPERATING INCOME remaining from sales revenue after the costs and expenses of operations
4,766	4,757	4,129	4,246	6,428	INTEREST EXPENSE — the cost of borrowed funds
797	2,204	3,303	6,068	11,631	NON-OPERATING INCOME — interest income, earnings of 50% owned companies, currency fluctuations, disposition of facilities, amortization of intangibles and charitable contributions
46,829	55,239	75,746	95,961	126,651	INCOME BEFORE TAXES remaining from sales revenue after operating costs and expenses and non-operating items
20,500	25,150	31,775	39,115	49,500	INCOME TAXES (Note 9) a provision for income related taxes levied by the many jurisdictions where the Company operates throughout the world
26,329	30,089	43,971	56,846	77,151	EARNINGS remaining from sales revenue for investment in expansion of the business and for dividends
163,966	188,375	216,307	256,219	302,364	REINVESTED EARNINGS at the beginning of the fiscal year
(1,734)	(2,107)	(3,971)	(10,701)	(8,665)	DIVIDENDS declared for payment to the shareowners
(186)	(50)	(88)			OTHER adjustments to reinvested earnings
188,375	216,307	256,219	302,364	370,850	REINVESTED EARNINGS at the close of the fiscal year
17,344	17,547	17,628	17,808	18,031	COMMON SHARES OUTSTANDING as a weighted average number (in thousands) for the year
\$1.52	\$1.71	\$2.49	\$3.19	\$4.28	EARNINGS PER SHARE — the earnings allocated to each of the weighted average common shares outstanding.
\$.10	\$.12	\$.22½	\$.60	\$.48	DIVIDENDS DECLARED per share for payment to the shareowners
\$.10	\$.12	\$.22½	\$.48	\$.60	DIVIDENDS PAID per share and received by the shareowners

Amounts are in thousands of dollars except those stated in dollars per share.
The accounting year is the 52 or 53 weeks ending the last Saturday in May.
The accompanying notes are an integral part of these financial statements.

Tektronix Consolidated Financial Position

1975	1976	1977	1978	1979	
\$217,075	\$248,347	\$310,245	\$357,704	\$428,787	CURRENT ASSETS are cash and assets that should be converted to cash or used in operations within one year
5,182	1,273	3,477	2,523	3,749	CASH (Note 4) in bank demand deposits
31,090	69,178	91,477	63,685	38,039	CASH EARNING INTEREST from bank deposits and securities
61,890	71,093	88,285	116,338	155,320	ACCOUNTS RECEIVABLE due from customers for sales on credit
(621)	(955)	(993)	(1,238)	(1,752)	ALLOWANCE for doubtful receivables
108,893	99,145	118,423	163,523	214,533	INVENTORIES (Note 3) comprised of materials and components, accumulated costs of manufactured items not completed, and those finished products and components awaiting sale
10,641	8,613	9,576	12,873	18,898	PREPAID EXPENSES for supplies and services that have not been used and for deposits that will be refunded
63,623	60,540	84,277	107,556	153,135	CURRENT LIABILITIES are obligations to be paid within one year
12,750	3,055	5,382	10,351	28,997	SHORT-TERM DEBT (Notes 4 and 6) funds borrowed for less than one year and that portion of long-term debt that is repayable within a year
15,505	17,776	24,087	33,108	42,033	ACCOUNTS PAYABLE for materials, services, interest, miscellaneous taxes and dividends declared
12,749	13,565	19,645	18,458	20,444	INCOME TAXES payable to United States and foreign governments
12,572	12,895	18,551	22,750	31,691	INCENTIVES AND RETIREMENT funds for employees
10,047	13,249	16,612	22,889	29,970	PAYROLL and vacations due employees and related payroll taxes
153,452	187,807	225,968	250,148	275,652	WORKING CAPITAL is the current assets in excess of current liabilities
82,620	88,563	95,375	119,533	194,454	FACILITIES represents the cost of buildings and equipment, reduced by depreciation, and land
59,950	75,114	74,574	83,598	102,976	BUILDINGS — the cost of structures, parking, landscaping and improvements to leased structures
60,437	71,091	83,461	102,122	142,257	MACHINERY AND FURNISHINGS — the cost of equipment and furniture used or rented to customers
(57,668)	(66,682)	(73,852)	(85,160)	(100,977)	ACCUMULATED DEPRECIATION reduces the cost for the use, wear and age of buildings, machinery and furnishings
5,473	5,916	6,495	6,511	8,240	LAND at the cost when acquired
14,428	3,124	4,697	12,462	41,958	CONSTRUCTION accumulates the costs for facilities not completed
6,921	7,950	9,708	13,893	19,666	OTHER LONG-TERM ASSETS includes the investment and equity in the earnings of 50% owned companies, accounts receivable due in more than one year and intangible assets
29,835	38,601	39,783	37,086	62,094	LONG-TERM DEBT (Note 6) funds borrowed for more than one year, less that portion due within a year
10,837	13,716	14,103	16,029	19,150	DEFERRED TAX LIABILITY (Note 9) income taxes which have not become payable
		3,043	3,763	5,728	OTHER LONG-TERM LIABILITIES—incentive compensation not payable within one year
202,321	232,003	274,122	326,696	402,800	SHAREOWNERS' EQUITY (Notes 5 and 7) assets less liabilities, or the book value owned by the shareowners
13,946	15,696	17,903	24,332	31,950	COMMON SHARES — the proceeds of shares sold less the cost of shares repurchased
188,375	216,307	256,219	302,364	370,850	REINVESTED EARNINGS accumulates the earnings that have been reinvested in the expansion of the business

All amounts are in thousands of dollars.

The accounting year is the 52 or 53 weeks ending the last Saturday in May.

The accompanying notes are an integral part of these financial statements.

Tektronix Consolidated Changes in Financial Position

1975	1976	1977	1978	1979	
\$39,403	\$44,209	\$58,338	\$70,793	\$96,385	WORKING CAPITAL PROVIDED from operations
26,329	30,089	43,971	56,846	77,151	EARNINGS — the primary source of working capital
9,388	11,635	12,781	15,294	21,258	DEPRECIATION of buildings, machinery and furnishings
(1,043)	(966)	(1,738)	(4,187)	(5,145)	EARNINGS FROM 50% OWNED COMPANIES reduced by cash dividends received
4,385	2,879	388	1,926	3,121	DEFERRED INCOME TAXES not payable within one year
344	572	2,936	914		OTHER sources of working capital from operations
43,600	14,266	7,008	8,673	39,886	WORKING CAPITAL PROVIDED from financing and other sources
2,418	1,700	2,118	6,429	7,618	COMMON SHARES sold to employees
29,910	11,307	1,759		28,096	LONG-TERM DEBT incurred
11,272	1,259	3,131	2,244	4,172	OTHER sources of working capital which include the sale of facilities at depreciated cost
37,472	24,120	27,185	55,286	110,767	WORKING CAPITAL USED for
31,706	18,812	22,174	41,697	100,351	FACILITIES additions of buildings, machinery and furnishings
712	2,541	577	2,697	1,123	LONG-TERM DEBT becoming due for payment within one year
1,734	2,107	3,971	10,701	8,665	DIVIDENDS declared for payment to shareowners
3,320	660	463	191	628	OTHER uses include investment in long-term receivables, affiliates and intangible assets
45,531	34,355	38,161	24,180	25,504	WORKING CAPITAL INCREASE (or decrease) was made up of
17,599	34,179	24,502	(28,746)	(24,420)	CASH AND CASH EARNING INTEREST
6,039	8,869	17,154	27,808	38,468	ACCOUNTS RECEIVABLE
13,644	(9,748)	19,277	45,100	51,010	INVENTORIES 3
3,388	(2,027)	964	3,297	6,025	PREPAID EXPENSES
10,586	9,694	(2,327)	(4,969)	(18,646)	SHORT-TERM DEBT
2,658	(2,271)	(6,311)	(9,021)	(8,925)	ACCOUNTS PAYABLE
(4,503)	(816)	(6,079)	1,187	(1,986)	INCOME TAXES PAYABLE
(4,143)	(323)	(5,656)	(4,199)	(8,941)	INCENTIVES AND RETIREMENT
263	(3,202)	(3,363)	(6,277)	(7,081)	PAYROLL
107,921	153,452	187,807	225,968	250,148	WORKING CAPITAL at the beginning of the fiscal year and the increase in working capital results in
153,452	187,807	225,968	250,148	275,652	WORKING CAPITAL at the close of the fiscal year

All amounts are in thousands of dollars.

The accounting year is the 52 or 53 weeks ending the last Saturday in May.

The accompanying notes are an integral part of these financial statements

Tektronix Consolidated Notes to Financial Statements

1. SIGNIFICANT ACCOUNTING POLICIES:

Principles of Consolidation—The consolidated financial statements include the accounts of Tektronix, Inc. and its subsidiaries (all are wholly-owned) since dates of organization or acquisition. All material intercompany transactions and balances have been eliminated.

Foreign Currency Translation—Facilities and related depreciation, inventories, and other non-monetary assets of foreign subsidiaries are translated into U.S. dollars at historical rates of exchange. Monetary assets and liabilities are translated at year-end rates of exchange. Income and expenses, other than cost of sales and depreciation, are translated at rates prevailing at the beginning of each four-week accounting period. Translation and exchange gains and losses, including those resulting from foreign currency forward exchange contracts, are in non-operating income (see Note 2).

Inventories—Inventories of the parent company are stated at the lower of cost, determined on the last-in, first-out basis, or market. Inventories of subsidiaries are stated at the lower of cost, on a first-in, first-out basis, or market.

Facilities and Depreciation—Facilities are carried at cost. Expenditures for maintenance, repairs, and betterments which do not add to the value of the related assets or materially extend their lives are expensed as incurred. Accelerated methods of depreciation are generally used both for financial accounting and tax purposes based on estimated useful lives of the facilities which vary from 10 to 48 years for buildings and grounds and 3 to 15 years for machinery and furniture. Leasehold improvements are amortized on the straight-line basis over the periods of the leases.

Income Taxes—Investment tax credits are accounted for on the “flow-through” method, which recognizes the reduction in tax in the year the related assets are placed in service.

Engineering and Development—Expenditures for plant start-up, engineering, research and development are expensed as they are incurred.

Investments in Joint Venture Companies—Investments in 50%-owned joint venture companies are stated at cost, plus the Company's equity in undistributed earnings since dates of organization. All material intercompany profits have been eliminated.

Common Share Data—On March 31, 1977, the Board of Directors declared a two-for-one share split, effected in the form of a 100% stock dividend, on the Company's outstanding common shares, effective May 9, 1977. All references to the number of shares and per share amounts in the accompanying financial statements and notes to the financial statements have been adjusted to reflect the share split.

2. FOREIGN SUBSIDIARIES AND 50%-OWNED COMPANIES:

Assets and liabilities of foreign subsidiaries in the following amounts are included in the consolidated financial statements:

May 31, 1975	May 29, 1976	May 28, 1977	May 27, 1978	May 26, 1979	
\$76,374,909	\$75,517,482	\$88,255,532	\$106,097,927	\$141,446,178	Current assets
10,093,915	12,682,665	13,273,409	15,337,210	18,585,340	Facilities—net
823,249	584,277	502,515	888,750	1,118,454	Other assets
19,107,933	15,275,072	21,685,256	32,104,519	39,090,178	Current liabilities
4,671,690	3,666,112	4,831,846	2,222,273	6,732,433	Long-term liabilities

Earnings of foreign subsidiaries included in the consolidated financial statements were \$13,371,253 in 1975, \$7,945,738 in 1976, \$13,407,540 in 1977, \$16,713,782 in 1978 and \$22,852,750 in 1979.

Translation and exchange gains (losses) included in other non-operating income were as follows: 1975, \$(369,096); 1976, \$(859,227); 1977, \$(543,644); 1978, \$14,925 and 1979, \$434,651.

The Company's share of the earnings of 50%-owned companies was \$1,076,470 in 1975, \$998,102 in 1976, \$1,772,663 in 1977, \$4,249,427 in 1978, and \$5,221,843 in 1979.

3. INVENTORIES:

Inventories consisted of the following:

May 31, 1975	May 29, 1976	May 28, 1977	May 27, 1978	May 26, 1979	
\$ 33,904,696	\$35,534,485	\$ 36,117,259	\$ 46,977,100	\$ 66,567,127	Finished goods
52,473,441	52,043,550	66,011,363	96,503,967	128,926,270	Work-in-process
29,095,066	21,977,342	27,078,407	32,609,302	43,988,404	Purchased materials
(6,579,572)	(10,409,549)	(10,783,935)	(12,567,205)	(24,949,169)	LIFO reserve
<u>\$108,893,631</u>	<u>\$99,145,828</u>	<u>\$118,423,094</u>	<u>\$163,523,164</u>	<u>\$214,532,632</u>	Total inventories

In 1975, the method of valuing parent company inventories was changed from the first-in, first-out (FIFO) method to the last-in, first-out (LIFO) method because management believes LIFO constitutes a preferable method inasmuch as it more clearly reflects income by matching current costs against current revenues, and thereby minimizes the effects of inventory profits during periods of rising prices. The effect of the change for 1975 was to reduce inventories \$6,579,572, earnings \$2,224,000, and earnings per share 13¢.

It was not practicable to value the inventory at the end of the prior years on the LIFO method and, therefore, it is not possible to determine the pro-forma results of applying the new valuation method to the prior years and the effect on reinvested earnings at the beginning of the 1975 fiscal year.

4. SHORT-TERM BORROWING ARRANGEMENTS:

The Company has short-term borrowing arrangements with domestic and foreign banks which aggregated \$55,000,000 at May 26, 1979, of which approximately \$36,500,000 was unused. Average compensating bank balances of 10% are informally required on \$10,000,000 of said arrangements. In addition, in January 1979, the Company was authorized to issue up to \$50,000,000 in commercial paper of which \$10,000,000 was issued in May 1979 and outstanding at May 26, 1979.

The average interest rates on the May 26, 1979 balances of short-term bank borrowings and commercial paper were 11.1% and 10% respectively. Average short-term bank borrowings during the year, based on period-end balances were \$13,072,000 at an approximate weighted average interest rate of 10%. Maximum period-end aggregate short-term bank borrowings during the year were \$20,415,000. During the years ended May 31, 1975, May 29, 1976, May 28, 1977 and May 27, 1978, average borrowings were \$28,935,000, \$7,586,000, \$4,269,000 and \$6,941,000, respectively, at average interest rates of 12.7%, 10.3%, 9.9% and 9.75%.

5. SHAREOWNERS' EQUITY:

Authorized capital at May 26, 1979 consists of 40,000,000 common shares without par value. Issued and outstanding shares are as follows:

May 31, 1975	May 29, 1976	May 28, 1977	May 27, 1978	May 26, 1979	
17,465,994	17,585,131	17,675,607	17,913,273	18,142,834	Shares issued
8,992	311	311	311		Held in Treasury
<u>17,457,002</u>	<u>17,584,820</u>	<u>17,675,296</u>	<u>17,912,962</u>	<u>18,142,834</u>	Shares outstanding

In connection with the two-for-one share split declared on March 31, 1977, \$88,299 was transferred to the common share account from reinvested earnings.

During the years ended May 27, 1978 and May 26, 1979, the common share account was increased \$6,428,867 and \$7,617,899, respectively, for the issuance of 237,666 shares in 1978 and 229,872 shares in 1979 under employee stock option and share purchase plans.

6. LONG-TERM INDEBTEDNESS:

Long-term indebtedness consisted of the following:

May 31, 1975	May 29, 1976	May 28, 1977	May 27, 1978	May 26, 1979	
	\$35,000,000	\$35,000,000	\$35,000,000	\$35,000,000	(A) 8 $\frac{7}{8}$ % Notes due May 15, 1983
	(214,385)	(183,770)	(153,155)	(122,540)	Unamortized discount
				20,000,000	(A) 9 $\frac{1}{8}$ % Notes due November 15, 1981
				3,261,667	(B) Capital lease obligation
\$28,502,500	1,764,000	1,717,500			(C) Revolving credit notes
1,244,000	2,203,760	3,555,448	3,029,124	1,112,897	(D) Term notes
				3,379,500	(E) 10 $\frac{1}{4}$ % Note due October 31, 1983
618,425	385,673	367,094	208,833	559,925	Other
<u>30,364,925</u>	<u>39,139,048</u>	<u>40,456,272</u>	<u>38,084,802</u>	<u>63,191,449</u>	Total
<u>530,082</u>	<u>537,964</u>	<u>673,688</u>	<u>999,024</u>	<u>1,097,240</u>	Less current maturities
<u>\$29,834,843</u>	<u>\$38,601,084</u>	<u>\$39,782,584</u>	<u>\$37,085,778</u>	<u>\$62,094,209</u>	Long-term debt — net

(A) The 8 $\frac{7}{8}$ % and 9 $\frac{1}{8}$ % Notes may be redeemed at any time at the option of the Company on or after November 15, 1981 and November 15, 1980, respectively, at the principal amount together with accrued interest. The Indentures relating to the Notes contain certain limitations on the amount of additional indebtedness which the Company may incur.

(B) The capitalized lease obligation is due in monthly installments of \$61,125, through 1985, including interest imputed at 9%. At May 26, 1979, facilities includes \$3,605,000 of machinery and equipment and \$383,000 of related accumulated amortization for assets under this lease.

(C) A revolving credit note from a U.S. bank for \$25,000,000 was paid in June 1975. The remaining revolving credit notes were due in Pounds Sterling and were paid in November 1977.

(D) The term notes are repayable in French Francs and Canadian Dollars and are due in annual installments ranging from \$173,000 to \$290,000 through 1982. Interest rates range from 9.95% to 13.25%.

(E) The 10 $\frac{1}{4}$ % Note is repayable in French Francs.

Aggregate long-term debt principal payments for each of the next five years from May 26, 1979 will be as follows: 1980, \$1,097,000; 1981, \$722,000; 1982, \$20,686,000; 1983, \$35,549,000; 1984, \$3,997,000.

7. RETIREMENT AND INCENTIVE PLANS:

Profit-Sharing — Most permanent employees receive cash and deferral profit share amounting to 27 $\frac{1}{2}$ % of income of participating companies before income taxes, profit-sharing, charitable contributions, and executive incentive compensation. Additional profit share of 7 $\frac{1}{2}$ % is contributed to a retirement trust for parent company employees. In lieu of retirement profit-sharing, most subsidiary companies have various governmental and privately insured pension plans.

Incentive — In November, 1974, the Company adopted an Earnings Per Share Growth Plan to provide incentive compensation for executives. The plan provides for compensation based on the improvement in earnings per share over a three-year period. Charges under the plan are included in profit share expense and amounted to \$100,000 for 1975, \$450,000 for 1976, \$2,493,000 for 1977, \$737,000 for 1978, and \$869,000 for 1979.

Pension — Effective December 1, 1974, the parent company adopted a pension plan for its employees to augment the benefits of its retirement profit-sharing plan. Pension plan benefits are integrated with Social Security benefits. The Company's policy is to accrue as pension expense the normal actuarial cost for the year plus amortization of all unfunded actuarial liabilities by the declining balance method using approximately a 20 year life. Charges to payroll expense for the period from plan adoption to May 31, 1975 were \$2,450,000 and for the years ended May 29, 1976, May 28, 1977, May 27, 1978 and May 26, 1979 were \$4,968,000, \$5,569,000, \$5,714,000 and \$8,475,000 respectively. Pension plan expense increased for the year ended May 26, 1979 due to 1978 amendments in the Social Security law. The unfunded past service liability at May 26, 1979 was approximately \$37,000,000 and vested benefits were not in excess of fund assets.

Employee Share Purchase—Under an Employee Share Purchase Plan, 162,626 common shares of the Company were reserved at May 26, 1979 (282,081 at May 27, 1978). During the year ended May 26, 1979, 119,455 shares, with a market value of \$5,763,002, were issued for \$4,610,221 (93,353 shares with a market value of \$3,439,675 were issued for \$2,751,613 in the prior year). The share purchase discount provided in the plan has been charged to income.

Qualified Stock Options—Under qualified stock option plans for employees, 105,592 common shares of the Company were reserved at May 26, 1979. Shares available for options not yet granted were 14,294 at May 26, 1979 (13,494 shares at May 27, 1978). The plans provide that the option price shall not be less than 100% of the fair market value of the shares on the date of grant and that the options are exercisable in four cumulative annual installments beginning one year after the date of grant.

At May 26, 1979, options to purchase 91,298 shares were outstanding for which the option price, ranging from \$12.13 to \$32.33 per share, amounted to \$1,522,479 and options to purchase 68,346 shares were exercisable, for which the option price amounted to \$1,082,395. During the year then ended, options became exercisable for 88,395 shares at option prices per share ranging from \$12.13 to \$32.33 with market price per share at date exercisable ranging from \$43.10 to \$48.35. Options were exercised for 109,932 shares at option prices per share ranging from \$12.13 to \$32.33 and market prices per share at date of exercise ranging from \$40.40 to \$55.40.

Option and market prices for options which became exercisable and for options which were exercised in the five years ended May 26, 1979 were:

Year	Options Which Became Exercisable		Options Exercised	
	Option Price	Market Price	Option Price	Market Price
1979	\$1,336,237	\$4,080,523	\$1,837,044	\$5,164,837
1978	1,937,707	4,260,597	2,916,067	5,013,856
1977	1,500,420	2,395,637	1,246,194	1,867,974
1976	1,364,135	1,386,807	1,519,564	2,532,983
1975	3,872,652	4,544,819	2,200,123	2,626,826

Non-Qualified Stock Options—At May 26, 1979, 667,074 common shares were reserved under the non-qualified stock option plan for employees. Shares available for options not yet granted amounted to 373,875 at May 26, 1979 (509,500 shares at May 27, 1978). The plan provides that the option price must be at least 85% of the fair market value of the shares on the date of grant and that the options are exercisable in four cumulative annual installments beginning one year after the date of grant and expire ten years after the date of grant. Through May 26, 1979, all options granted under the plan have been equal to 100% of the fair market value of the shares at dates of grant.

In September 1977, the non-qualified stock option plan was amended to grant stock appreciation rights to optionees under the plan. These rights allow the optionee to surrender all or part of an option and to obtain payment or shares in an amount equal to the difference between the aggregate exercise price of the surrendered option and the fair market value of the shares subject to the option on the exercise date. The stock appreciation rights are exercisable at the same times and to the same extent as the options to which they relate.

At May 26, 1979, options to purchase 293,199 shares were outstanding for which the option price, ranging from \$12.13 to \$55.00 per share amounted to \$10,594,670 and options to purchase 67,374 shares were exercisable, for which the option price amounted to \$1,334,723. During the year then ended, options became exercisable for 45,500 shares at option prices per share ranging from \$12.13 to \$37.00 with market prices per share at date exercisable ranging from \$40.35 to \$48.35. Options were exercised for 485 shares at an option price per share of \$35.90 and market price per share at date of exercise ranging from \$43.25 to \$49.75. Options for 11,496 shares, at option prices ranging from \$12.19 to \$37.00 per share, were surrendered through exercise of stock appreciation rights. Cash payments of \$250,435 for options surrendered, based upon market values ranging from \$40.63 to \$57.00 per share, are included in profit share expense. In addition, the Company accrued and included in profit share expense \$1,972,737 in 1978 and \$2,115,566 in 1979 representing appreciation of market value over the option price of options outstanding.

Option and market prices for options which became exercisable and for options which were exercised through issuance of shares in the four years ended May 26, 1979, were:

Year	Options Which Became Exercisable		Options Exercised	
	Option Price	Market Price	Option Price	Market Price
1979	\$1,258,125	\$1,891,000	\$17,893	\$ 22,532
1978	231,988	672,475	73,125	223,200
1977	231,988	541,525	60,938	159,700
1976	228,500	325,313	24,375	41,975

8. COMMITMENTS:

The companies are committed under building and equipment leases, which are accounted for as operating leases, in the aggregate amount of \$25,404,000 payable \$5,914,000 in 1980, \$4,357,000 in 1981, \$2,800,000 in 1982, \$2,346,000 in 1983, \$1,330,000 in 1984 and \$8,657,000 thereafter.

Rental expense charged to income under operating leases, including short-term leases, was \$4,678,000 in 1975, \$4,976,000 in 1976, \$5,505,000 in 1977, \$5,699,000 in 1978 and \$8,199,000 in 1979.

At May 26, 1979, contractual commitments under construction programs for additional plant facilities approximated \$30,000,000.

9. INCOME TAXES:

The provisions for income taxes for the five years ended May 26, 1979 consist of the following (in thousands):

1975	1976	1977	1978	1979	
\$12,400	\$17,894	\$21,837	\$28,342	\$33,422	United States
1,625	2,095	3,050	3,855	7,122	State
6,475	5,161	6,888	6,918	8,956	Foreign
<u>\$20,500</u>	<u>\$25,150</u>	<u>\$31,775</u>	<u>\$39,115</u>	<u>\$49,500</u>	Provision for income taxes

The above provisions were less than the amounts which would result by applying the United States statutory rate (approximately 47.2% for 1979 and 48% for earlier years) to income before income taxes. A reconciliation of the differences is as follows (in thousands):

1975	1976	1977	1978	1979	
\$22,478	\$26,515	\$36,358	\$46,061	\$59,779	Computed income taxes based on statutory rate
(3,269)	(706)	(3,067)	(4,591)	(5,879)	Effect of foreign subsidiary earnings taxed below statutory rate
(517)	(479)	(851)	(2,040)	(2,465)	Tax effect of equity in current earnings of 50%-owned Companies
1,225					Provisions for deferred income taxes on undistributed earnings of foreign subsidiaries
845	1,090	1,655	2,013	3,754	State income taxes, net of United States income tax benefit
(1,099)	(957)	(991)	(1,926)	(3,786)	Investment tax credit
837	(313)	(1,329)	(402)	(1,903)	Other — net
<u>\$20,500</u>	<u>\$25,150</u>	<u>\$31,775</u>	<u>\$39,115</u>	<u>\$49,500</u>	Provision for income taxes

Undistributed reinvested earnings of foreign subsidiaries and DISCs amounted to approximately \$147,000,000 at May 26, 1979. Except for accumulated deferred income tax provisions of \$19,110,000 (primarily related to DISCs) relating to approximately \$46,000,000 of such reinvested earnings, no provision has been made for additional United States income taxes which could result from the transfer of undistributed earnings to Tektronix, Inc., because the Company has no present intention of transferring such earnings. If the undistributed earnings were to be transferred to Tektronix, Inc., foreign tax credits would be available to partially offset the amount of United States income taxes otherwise payable.

Equity in undistributed earnings of 50%-owned companies amounted to approximately \$16,750,000 at May 26, 1979. No provision has been made for United States income taxes which could result from the transfer of such earnings to Tektronix, Inc., because foreign tax credits would be available to offset the amount of United States income taxes otherwise payable.

Deferred income taxes included in the provisions for United States income taxes are as follows (in thousands):

1975	1976	1977	1978	1979	
\$1,225					On undistributed earnings of foreign subsidiaries
3,160	\$3,202	\$1,587	\$2,340	\$1,040	On undistributed earnings of DISCs
	(428)	(1,199)	(414)	2,081	Other
<u>\$4,385</u>	<u>\$2,774</u>	<u>\$ 388</u>	<u>\$1,926</u>	<u>\$3,121</u>	Provision for deferred income taxes

10. GEOGRAPHIC SEGMENT DATA:

Tektronix operates predominately in a single industry segment, the manufacture and sale of electronic measurement and display instruments used in commercial, scientific, and industrial activities. Information concerning United States, European, and other operations follows for 1978 and 1979 (in thousands):

1978					
United States	Europe	Other	Eliminations	Total	
\$413,414	\$160,663	\$24,809		\$598,886	Sales to customers
107,590	2,580		\$(110,170)		Transfers between geographic areas
<u>\$521,004</u>	<u>\$163,243</u>	<u>\$24,809</u>	<u>\$(110,170)</u>	<u>\$598,886</u>	Total revenue
<u>\$ 79,952</u>	<u>\$ 21,374</u>	<u>\$ 578</u>	<u>\$ (3,496)</u>	<u>\$ 98,408</u>	Operating income
				(4,269)	General corporate expenses
				4,249	Equity in earnings of 50%-owned companies
				(4,246)	Interest expense
				1,819	Non-operating income
				<u>\$ 95,961</u>	Income before income taxes
<u>\$324,657</u>	<u>\$ 85,942</u>	<u>\$ 9,720</u>	<u>\$ (5,026)</u>	<u>\$415,293</u>	Identifiable assets at May 27, 1978
				12,152	Investment in 50%-owned companies
				63,685	Corporate cash earning interest
				<u>\$491,130</u>	Total assets
1979					
United States	Europe	Other	Eliminations	Total	
\$534,339	\$225,388	\$27,209		\$786,936	Sales to customers
147,414	1,665		\$(149,079)		Transfers between geographic areas
<u>\$681,753</u>	<u>\$227,053</u>	<u>\$27,209</u>	<u>\$(149,079)</u>	<u>\$786,936</u>	Total revenue
<u>\$102,702</u>	<u>\$ 28,506</u>	<u>\$ 1,418</u>	<u>\$ (6,025)</u>	<u>\$126,601</u>	Operating income
				(5,153)	General corporate expenses
				5,222	Equity in earnings of 50%-owned companies
				(6,428)	Interest expense
				6,409	Non-operating income
				<u>\$126,651</u>	Income before income taxes
<u>\$464,330</u>	<u>\$120,525</u>	<u>\$11,554</u>	<u>\$ (8,685)</u>	<u>\$587,724</u>	Identifiable assets at May 26, 1979
				17,144	Investment in 50%-owned companies
				38,039	Corporate cash earning interest
				<u>\$642,907</u>	Total Assets

Inter-area sales of products and services are generally made at arms-length prices between the various geographic segments. The profit on sales between geographic areas (primarily on products manufactured in the United States) is not recognized by the manufacturer until sales are made to unaffiliated customers. The geographic classification of sales is based upon the location of the seller as required by the Statement of Financial Accounting Standard No. 14. The classification of sales as reported elsewhere in this report is based upon the location of the purchaser (United States or International). Export sales to customers, which are included in U.S. Sales above, were \$31,949,000 and \$47,167,000 for 1978 and 1979 respectively.

Operating income includes all directly incurred and allocable costs, except identified corporate expenses.

Identifiable assets are those which are specifically associated with the operations of each geographic segment.

Net sales to U.S. government agencies and foreign government agencies did not separately total as much as 10% of consolidated net sales in 1978 or 1979.

Companies in which Tektronix owns a 50% interest operate predominantly in the same single industry segment as Tektronix and are concentrated geographically in Japan.

11. REPLACEMENT COST INFORMATION (UNAUDITED):

The following replacement cost information for Tektronix, Inc. and its subsidiaries has been prepared in accordance with the requirements of the Securities and Exchange Commission. This information should not be interpreted to indicate that Tektronix has present plans to replace its productive capacity or that actual replacement would take place in the manner assumed in developing the information. Although the replacement cost of facilities is higher than the historical cost, it should be noted that such costs might be somewhat offset by improved productivity of the new assets. Furthermore, the calculations do not give recognition to the effect of price increases which would normally follow cost increases. The imprecise assumptions in the computations, therefore, should cause the users of such data to proceed with caution in making any business judgements from it.

In 1977, the replacement cost of productive capacity was estimated by comparing recently experienced plant construction costs, engineering estimates, and vendor prices with government price indexes. Since they compared with only minimal differences the replacement cost was calculated by applying the appropriate indexes to historical cost data. For 1978 and 1979, the same indexes, adjusted to current prices, were used.

Depreciation for replacement cost purposes was calculated using the straight-line method to the historical depreciation periods currently in use.

Replacement cost of inventories is based on pricing year-end inventories at cost, on a first-in, first-out basis, which approximates replacement cost for such inventories. Since only subsidiary inventories are not based on the last-in, first-out (LIFO) method, the cost of products sold by the subsidiaries was increased by using the indexes of price changes applied to the inventory turnover to determine the cost of sales adjustment.

The estimated replacement cost data for 1978 and 1979 and their historical cost equivalents are as follows (in thousands):

1978		1979		
Estimated Replacement Cost	Comparable Historical Cost	Estimated Replacement Cost	Comparable Historical Cost	
\$ 176,300	\$163,523	\$ 240,500	\$214,533	Inventories
\$ 276,200	\$180,427	\$ 346,000	\$229,641	Facilities
(111,500)	(83,163)	(135,700)	(97,747)	Less accumulated depreciation
\$ 164,700	\$ 97,264	\$ 210,300	\$131,894	Facilities — net
\$ 266,200	\$265,493	\$ 360,600	\$358,521	Manufacturing cost of sales
\$ 4,300	\$ 3,491	\$ 5,500	\$ 4,641	Depreciation in manufacturing cost of sales above
12,200	10,732	16,300	14,748	Other depreciation
\$ 16,500	\$ 14,223	\$ 21,800	\$ 19,389	Total depreciation

The following table reconciles the 1979 historical cost amounts for which replacement cost data are provided to the related totals shown in the consolidated financial statements (in thousands):

Inventories	Facilities	Accumulated Depreciation	Manufacturing Cost of Sales	Depreciation	
\$214,533	\$295,431	\$100,977	\$359,740	\$21,258	Totals as shown in the accompanying consolidated financial statements
	(8,240)				Less amounts for which replacement cost data have not been provided at cost:
	(41,958)				Land
	(5,796)	(2,102)	(1,219)	(1,219)	Construction in progress
	(9,896)	(1,128)		(425)	Rental instruments
	100			(225)	Leasehold improvements
					Other
\$214,533	\$229,641	\$ 97,747	\$358,521	\$19,389	Historical amounts for which replacement cost data have been provided

12. QUARTERLY FINANCIAL INFORMATION (UNAUDITED):

The following is selected quarterly financial data for 1978 and 1979. In the opinion of management, the quarterly data includes all adjustments necessary to present fairly the results of operations for the periods presented (in thousands except Earnings per Share).

Quarter Ended	Net Sales	Gross Profit	Income before Income Taxes	Earnings	Earnings Per Share
1978:					
August 20, 1977	\$120,412	\$ 68,104	\$ 21,543	\$11,958	\$.67
November 12, 1977	140,287	76,813	23,870	13,570	.76
March 4, 1978	178,345	96,862	26,431	16,651	.93
May 27, 1978	159,842	90,633	24,117	14,667	.83
	<u>\$598,886</u>	<u>\$332,412</u>	<u>\$ 95,961</u>	<u>\$56,846</u>	<u>\$3.19</u>
1979:					
August 19, 1978	\$158,850	\$ 84,140	\$ 24,958	\$14,164	\$.79
November 11, 1978	179,786	99,455	31,987	18,296	1.02
March 3, 1979	237,799	129,190	38,612	23,162	1.28
May 26, 1979	210,501	114,411	31,094	21,529	1.19
	<u>\$786,936</u>	<u>\$427,196</u>	<u>\$126,651</u>	<u>\$77,151</u>	<u>\$4.28</u>

The quarters ended March 4, 1978 and March 3, 1979 consist of sixteen week periods; all other quarters consist of twelve week periods.

COMMON SHARES — DESCRIPTION:

The authorized capital of Tektronix was increased from 20,000,000 to 40,000,000 common shares without par value on September 24, 1977. All references to numbers of shares, share prices, dividends and earnings per share have been adjusted to reflect the 2-for-1 share split on May 9, 1977.

PRICE RANGE OF COMMON SHARES:

Common shares are traded on the New York and Pacific Stock Exchanges. The table below shows the range of sale prices and closing prices of the Common Shares for the calendar quarters indicated. Prices through January 23, 1976 are for transactions on the New York Stock Exchange. Prices after that date reflect composite prices reported by the Wall Street Journal for transactions on all exchanges where the Common Shares are traded and for reported transactions not on an exchange.

High	Low	Close	1976	High	Low	Close	1978
30 ¹ / ₄	22 ¹ / ₈	30	1st Quarter	37 ⁵ / ₈	32 ¹ / ₂	34 ⁵ / ₈	1st Quarter
32 ¹ / ₈	28	32	2nd Quarter	45 ¹ / ₂	32 ³ / ₄	41 ¹ / ₂	2nd Quarter
34 ¹ / ₄	29	32	3rd Quarter	50 ¹ / ₂	40 ¹ / ₈	47 ¹ / ₄	3rd Quarter
34 ⁷ / ₁₆	28 ⁷ / ₈	34 ¹ / ₄	4th Quarter	49	39	47 ¹ / ₈	4th Quarter
1977				1979			
34 ¹ / ₄	28 ¹ / ₈	29 ⁵ / ₈	1st Quarter	57	47 ¹ / ₈	54 ¹ / ₄	1st Quarter
36 ⁵ / ₈	28 ¹ / ₄	35 ⁷ / ₈	2nd Quarter	56	46 ⁷ / ₈	52	2nd Quarter
38 ¹ / ₂	33 ⁷ / ₈	38	3rd Quarter	55	51 ³ / ₄	54 ¹ / ₄	3rd Quarter
40	35	37 ⁵ / ₈	4th Quarter				through July 31, 1979

CASH DIVIDENDS:

After paying cash dividends on a semi-annual basis from October 20, 1972 through October 24, 1977, quarterly payments were initiated January 16, 1978. The table below shows the dividend payment on each outstanding Common Share on the date shown.

Semi-Annual Dividends		Quarterly Dividends		Quarterly Dividends	
6¢	April 27, 1976	12¢	January 16, 1978	16¢	January 15, 1979
7 ¹ / ₂ ¢	November 1, 1976	12¢	April 10, 1978	16¢	May 7, 1979
15¢	May 9, 1977	12¢	July 5, 1978	16¢	August 6, 1979
24¢	October 24, 1977	16¢	October 23, 1978		

Payment of future dividends by Tektronix is within the discretion of the board of directors. Whether future dividends are paid will depend, among other things, on Tektronix' earnings, capital requirements and financial condition.

Tektronix Consolidated Financial Statistics

1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
168,939	149,442	167,482	202,855	271,428	336,645	366,645	454,958	598,886	786,936	NET SALES
107,007	86,816	101,310	122,137	155,764	196,323	217,931	284,527	381,465	487,172	United States
61,932	62,626	66,172	80,718	115,664	140,322	148,714	170,431	217,421	299,764	International
15,005	9,904	11,764	16,739	21,353	26,329	30,089	43,971	56,846	77,151	EARNINGS
\$.88	\$.58	\$.69	\$.97	\$ 1.23	\$ 1.52	\$ 1.71	\$ 2.49	\$ 3.19	\$ 4.28	Per Share
8.9%	6.6%	7.0%	8.3%	7.9%	7.8%	8.2%	9.7%	9.5%	9.8%	% of Sales
13.0%	7.8%	8.5%	10.8%	12.2%	13.0%	13.0%	16.0%	17.4%	19.2%	% of Year-end Equity
26,398	16,806	21,008	30,479	38,497	46,829	55,239	75,746	95,961	126,651	INCOME BEFORE TAXES
15.6%	11.2%	12.5%	15.0%	14.2%	13.9%	15.1%	16.6%	16.0%	16.1%	% of Sales
43.2%	41.1%	44.0%	45.1%	44.5%	43.8%	45.5%	41.9%	40.8%	39.1%	Effective Income Tax Rate
169,000	145,000	174,000	232,000	297,000	329,000	376,000	513,000	650,000	847,000	ORDERS RECEIVED
19,000	15,000	21,000	53,000	74,000	61,000	70,000	128,000	179,000	239,000	Unfilled Customer Orders
9,957	9,091	8,334	10,580	12,693	12,664	12,970	14,637	19,147	21,291	Number of Employees
17.0	16.4	20.1	19.2	21.4	26.6	28.3	31.1	31.3	37.0	Sales per Employee
60,281	56,338	58,609	70,949	94,258	116,511	121,404	150,106	202,722	269,626	PAYROLL BEFORE PROFIT SHARE
13,144	8,275	10,462	14,875	18,706	22,257	26,533	39,339	48,528	63,682	PROFIT SHARE
2,111	2,329	2,429	2,612	2,940	3,420	3,705	3,906	3,987	4,935	Facilities in Use (Sq. Ft.)
80.0	64.2	69.0	77.7	92.3	98.4	99.0	116.5	150.2	159.2	Sales per 1000 Square Feet
76,146	81,381	84,947	89,681	111,302	140,288	155,245	169,227	204,693	295,431	COST OF FACILITIES
17,289	6,047	4,915	7,075	23,530	31,706	18,812	22,174	41,697	100,351	INVESTED IN FACILITIES
4,904	5,898	6,394	6,834	7,525	9,388	11,635	12,781	15,294	21,258	DEPRECIATION
26,789	32,140	37,726	43,514	49,947	57,668	66,682	73,852	85,160	100,977	ACCUMULATED DEPRECIATION
155,619	157,808	173,743	206,599	251,061	306,616	344,860	415,328	491,130	642,907	TOTAL ASSETS
29,165	27,113	32,833	44,417	55,230	61,269	70,138	87,292	115,100	153,568	ACCOUNTS RECEIVABLE
57,051	61,158	54,918	71,429	95,249	108,893	99,145	118,423	163,523	214,533	INVENTORIES
101,506	101,991	120,539	151,033	176,405	217,075	248,347	310,245	357,704	428,787	CURRENT ASSETS
38,674	28,963	31,802	46,644	68,484	63,623	60,540	84,277	107,556	153,135	CURRENT LIABILITIES
62,832	73,028	88,737	104,389	107,921	153,452	187,807	225,968	250,148	275,652	WORKING CAPITAL
306	1,732	1,120	959	637	29,835	38,601	39,783	37,086	62,094	LONG-TERM INDEBTEDNESS
17,144	17,176	17,204	17,302	17,302	17,458	17,585	17,675	17,913	18,143	Year-end Shares Outstanding
115,841	126,338	138,488	155,630	175,488	202,321	232,003	274,122	326,696	402,800	SHAREOWNERS' EQUITY
8,309	8,871	9,302	11,490	11,522	13,946	15,696	17,903	24,332	31,950	COMMON-SHARE CAPITAL
107,532	117,467	129,186	144,140	163,966	188,375	216,307	256,219	302,364	370,850	REINVESTED EARNINGS

Amounts are in thousands of dollars, square feet or shares except those stated in percent or dollars per share.

BOARD OF DIRECTORS

HOWARD VOLLUM, *Chairman of the Board*
PAUL L. BOLEY, *Partner, Davies, Biggs, Strayer, Stoel and Boley*
JAMES B. CASTLES, *Vice President and General Counsel*
JOHN D. GRAY, *Chairman, Omark Industries*
LOUIS B. PERRY, *President, Standard Insurance Company*
EARL WANTLAND, *President*
FRANK M. WARREN, *Chairman, Portland General Electric Co.*

OFFICERS

HOWARD VOLLUM, *Chairman of the Board*
EARL WANTLAND, *President and Chief Executive Officer*
WILLIAM D. WALKER, *Executive Vice President*
LESLIE F. STEVENS, *Group Vice President—Finance*
LEWIS C. KASCH, *Group Vice President*
LAWRENCE L. MAYHEW, *Group Vice President*
WILLIAM J. POLITIS, *Group Vice President*
JAMES B. CASTLES, *Vice President and General Counsel*
LARRY N. CHORUBY, *Vice President*
FRANCIS DOYLE, *Vice President*
DON A. ELLIS, *Vice President*
JOHN L. LANDIS, *Vice President*
WILLEM B. VELSINK, *Vice President*
R. ALLAN LEEDY, JR., *Secretary*
KENNETH H. KNOX, *Treasurer*
ELWELL E. SWANSON, *Controller and Assistant Secretary*
N. ERIC JORGENSEN, *Assistant Secretary*

SHAREOWNERS' MEETING

The annual meeting of shareowners of Tektronix, Inc., will be held on Saturday, September 22, 1979, at 9 a.m. Pacific Daylight Time, in the Assembly Cafeteria Building, S.W. Karl Braun Drive, Tektronix Industrial Park, near Beaverton, Oregon.

Transfer Agents

United States National Bank
of Oregon, Portland, Oregon

Morgan Guaranty Trust
Company of New York
New York, New York

Registrars

First National Bank
of Oregon,
Portland, Oregon

Citibank, N.A.
New York, New York

Mailing Address:

TEKTRONIX, INC., Beaverton, Oregon 97077
Telephone (503) 644-0161

Tektronix®

COMMITTED TO EXCELLENCE

