



# Corporate Profile

AccuRay Corporation's computer-based automation and management information systems are designed to save energy and raw materials, increase productivity, lower production costs and improve product quality in basic manufacturing processes. Marketed in 52 countries, these systems utilize the latest in micro-processor and minicomputer technologies to control processes in the forest products, tobacco, metals, plastics and other industries. In addition, AccuRay products provide information to higher level AccuRay production management systems and other factory or corporate management information systems.

Of the Company's 1,845 employees, about 1,000 are involved in research and development, manufacturing and administrative functions at the Com-

pany's Columbus, Ohio worldwide headquarters. The remainder are employed at AccuRay's new manufacturing facility in the Republic of Ireland and in marketing and customer service functions throughout the world.

## Financial Highlights

Dollars in Thousands except per share data	1981	1980*	1979*
Operating Revenues	<b>\$108,533</b>	\$102,910	\$ 91,658
Net Income	<b>3,170</b>	2,232	1,079
Net Income per Share	<b>0.90</b>	0.64	0.31
Backlog	<b>50,000</b>	43,500	32,600

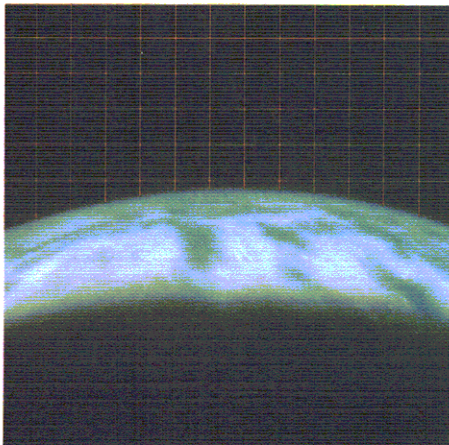
\*Restated — Refer to Notes to Consolidated Financial Statements (Note 12)

## Form 10K Available

A copy of the Company's 1981 Annual Report (Form 10K) filed with the Securities and Exchange Commission is available to stockholders on request by writing to the Corporate Secretary.

*The cover illustration depicts the ever-increasing presence of AccuRay computer-based process management systems and highly accurate sensors throughout the industrial world.*

# Introduction



Around the world, management has recognized the key strategic role quality plays in business success or failure. What these managers have realized is that quality cannot be dictated by manufacturers or government agencies. It is dictated by the purchasing power of the customer.

AccuRay realizes that the surest path to success and future growth is through a total dedication to customer satisfaction. That is why AccuRay has been turning its customers' perceptions of quality into reality since the Company instituted its initial Corporate Quality programs in the latter part of the seventies. The result is a corporate-wide commitment to manufacturing products that meet the present and future needs of our diverse base of customers whose products have a daily impact upon consumers.

AccuRay systems facilitate highly printable newsprint in Norway, soft tissue products in Belgium, precisely trimmed dimensional lumber in the United States, consistently uniform rolled metal products in Denmark, top quality cigarettes in England and food wrappings that ensure an unrefrigerated shelf life of several years for perishable items in Japan.

This concept of quality manufacturing for superior results permeates the design, engineering, manufacturing, software programming, marketing and servicing of each AccuRay process management system to meet customer needs for consistently high product uniformity with reduced production costs.

AccuRay systems achieve these goals by continuously scanning the product via on-line sampling. In turn, AccuRay MICRO™ systems utilize these samples along with proven control strategies and sage human experience to control the process and product to tighter specifications than manually possible, yielding comprehensive automated quality assurance and an economic payback that averages one year or less.

The MICRO family of products is designed upon a proven technology that allows users to add new capabilities as they are developed. These

future customer needs are addressed by AccuRay's EVERGREEN™ program. This program of evolving products permits customers to preserve prior capital expenditures in an AccuRay system while absorbing new technological advancements in a planned, cost-effective manner. That is why AccuRay systems cost the customer less and provide a higher rate of return over the life of the product.

This rate of return is also enhanced by the user-oriented design of MICRO systems. As customers increasingly recognize the value of computer control systems, they also recognize a need to adapt the system to their particular needs. MICRO systems are easily accessible by customer personnel and the self-documenting software in each system records all modifications for future reference by both customer and AccuRay personnel.

The fact that AccuRay systems are the quality measurement and assurance device in many production facilities attests to the claim that AccuRay is the Quality Company.



## Forest Products

### Pulp and Paper

On the paper machine, the AccuRay 1180 MICRO™ System measures and controls the weight, thickness, moisture content and other vital characteristics of the paper product. Computer control can never be better than the measurements it is based upon. That is why AccuRay has historically invested one-third of its annual research and development budget in sensor design and development. The result is a family of MicroTec™ sensors that are known for their reliability and measurement accuracy.

Simultaneously, the system is constantly performing quality measurement and assurance functions that enhance the production process. Prior to process management systems, the quality of hundreds of thousands of

square feet of paper was evaluated through laboratory samples of a few square feet of finished product.

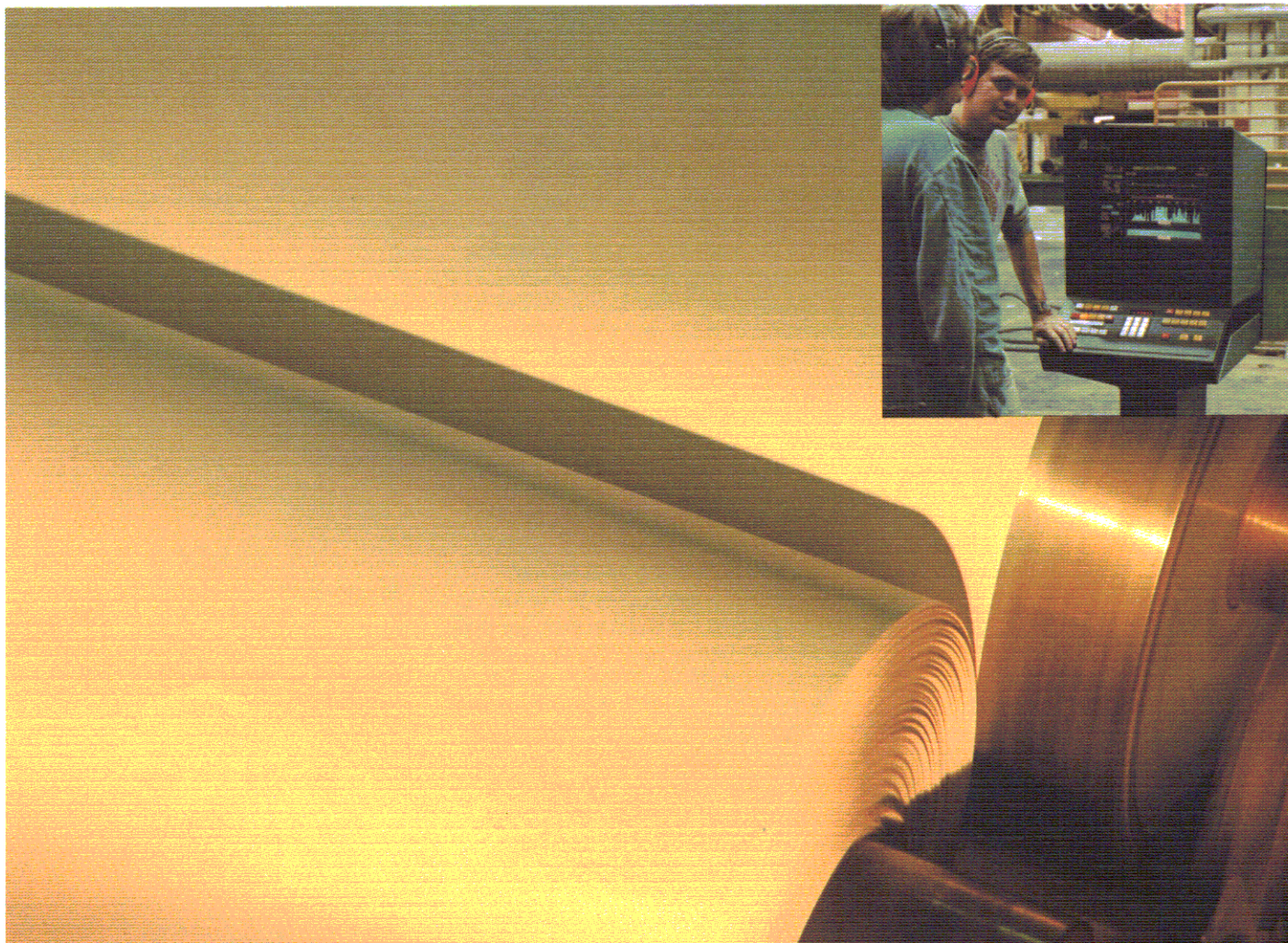
AccuRay systems provide production information and control of the paper as it is being produced, allowing manufacturers to instantly diagnose and prevent problems. With the 1180 MICRO System, the paper product is monitored virtually 100 percent of the time to assure that the customer gets an acceptable product and management has production information for more efficient use of resources and control of the process.

Additional production cost savings are gained through the 1180 MICRO System's ability to optimize the application of considerable amounts of energy used in several critical areas of the papermaking process.

AccuRay systems provide similar controls in other areas of a typical pulp and paper mill such as coating preparation for printing papers and the blending of various raw materials to achieve a stock possessing special paper characteristics. In the pulping operation, AccuRay 4200 MICRO™ systems manage the digestion process where wood chips are cooked with chemicals to create a brown unbleached pulp used to manufacture cartons and grocery bags. The 4200 MICRO also controls bleach plants where the brown unbleached pulp is mixed with bleaching chemicals to create the raw material used for the manufacture of writing and printing papers.

The modular design of the 4200 MICRO System ensures both long system life and continued economic

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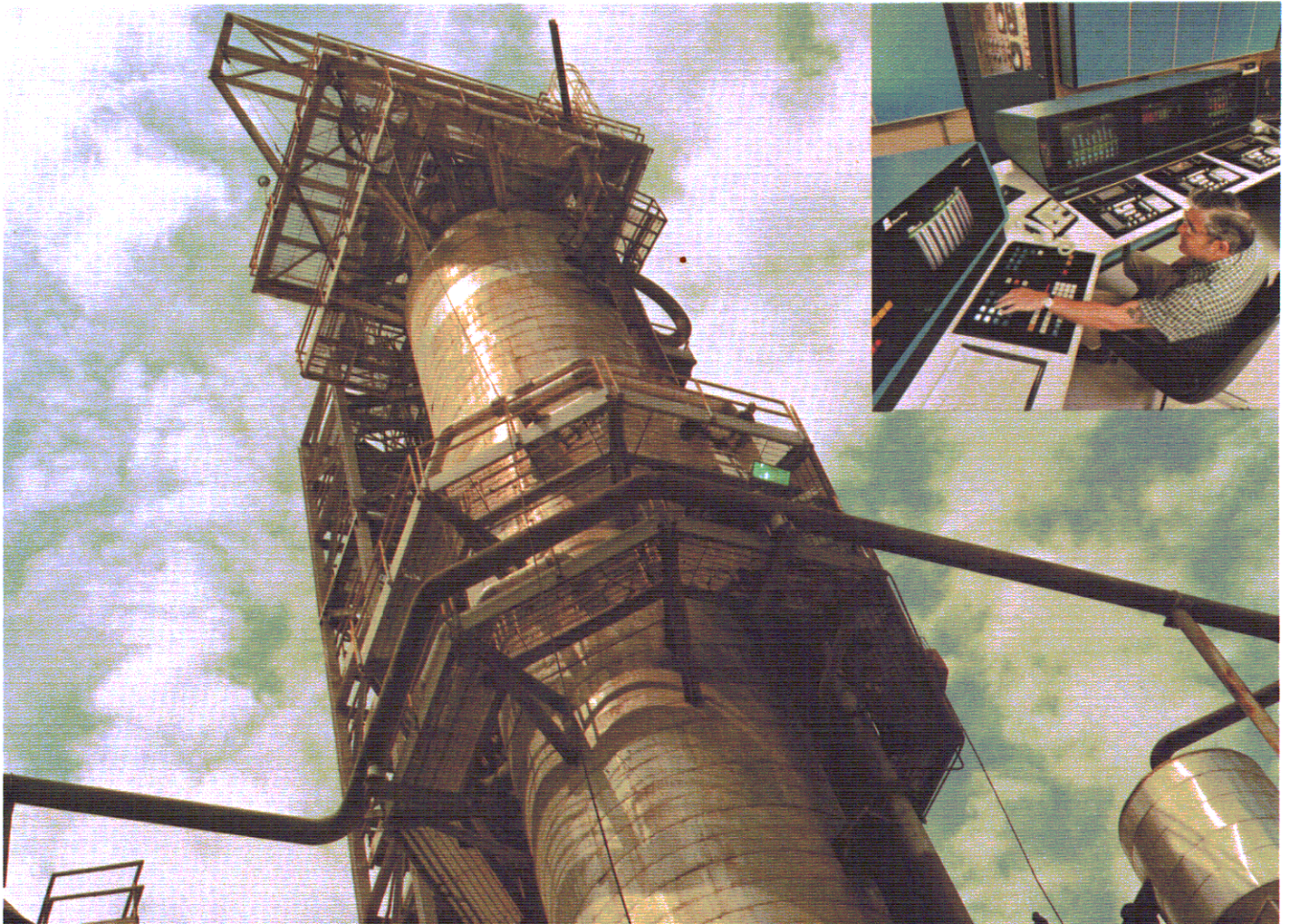


benefits since the system can be shared (multiplexed) among several pulp fiberline processes. Initial installation of a 4200 MICRO System can provide immediate quality and economic benefits in one area of the pulping operation. Later, by adding modules, the same system can be expanded to control the entire pulp fiberline without the added cost of an additional system.

AccuRay provides a unique approach to system development for the pulp and paper industry. Rapid changes in processes, coupled with technological improvements in computers, dictate that a responsible supplier must provide a system designed to permit customers to take advantage of new developments and features without making capital investments that soon become obsolete. AccuRay's EVERGREEN approach to

design extends the useful life of the system by permitting new hardware and software modules to be easily added, making current technology available in a cost-effective manner.

*Process measurement, control and information are provided throughout a modern paper mill complex by AccuRay process management systems. The 1180 MICRO (left) allows paper-makers to achieve better control of paper quality and paper machine profits. The 4200 MICRO (right) helps produce higher quality pulp while optimizing the use of raw materials and cost-intensive chemicals.*





# Forest Products

## Wood Products

The newest addition to AccuRay's forest products segment, the 6000 MICRO™, allows sawmills to go beyond human limitations and enter the age of automation. The economic payback of these systems has been documented to be less than one year. This fulfills the industry's need to optimize production and reduce costs to offset a temporary decline in product demand.

The 6000 MICRO System is composed of several machine center modules that provide localized control and information reporting to a central computer. Machine center modules provide accurate measurement of incoming log volumes, forward this information to saws which convert logs into untrimmed boards and automatically make final trimming decisions based on economic value. A final

quality control module analyzes each board for defects, measures outgoing board volume and compiles summary data on total yield to aid in production and cost analysis.

The 6000 MICRO allows the sawmill to measure and control every board as it comes through the mill. In contrast, prior quality control methods measured less than 1 percent of all boards. This increased control capability allows present-day sawmills to increase the number of boards derived from each log, increase overall production and optimize the dollar value of each board through accurate trimming to the current market's most profitable length.

*One of the 6000 MICRO System's modules, the Green Trimmer Module, has proven to substantially increase throughput and yield by reducing the undertrim and overtrim of boards. It automatically trims off end defects while recovering the maximum length of saleable wood.*

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# Tobacco

As cigarette production speeds approach 8,000 cigarettes per minute, manufacturers have found that higher production speeds must be accompanied by more sophisticated controls if production is to be increased, production costs reduced and product quality consistently maintained. This type of control is best achieved through automatic computer control, on-line inspection and comprehensive production information that is available to all operating personnel.

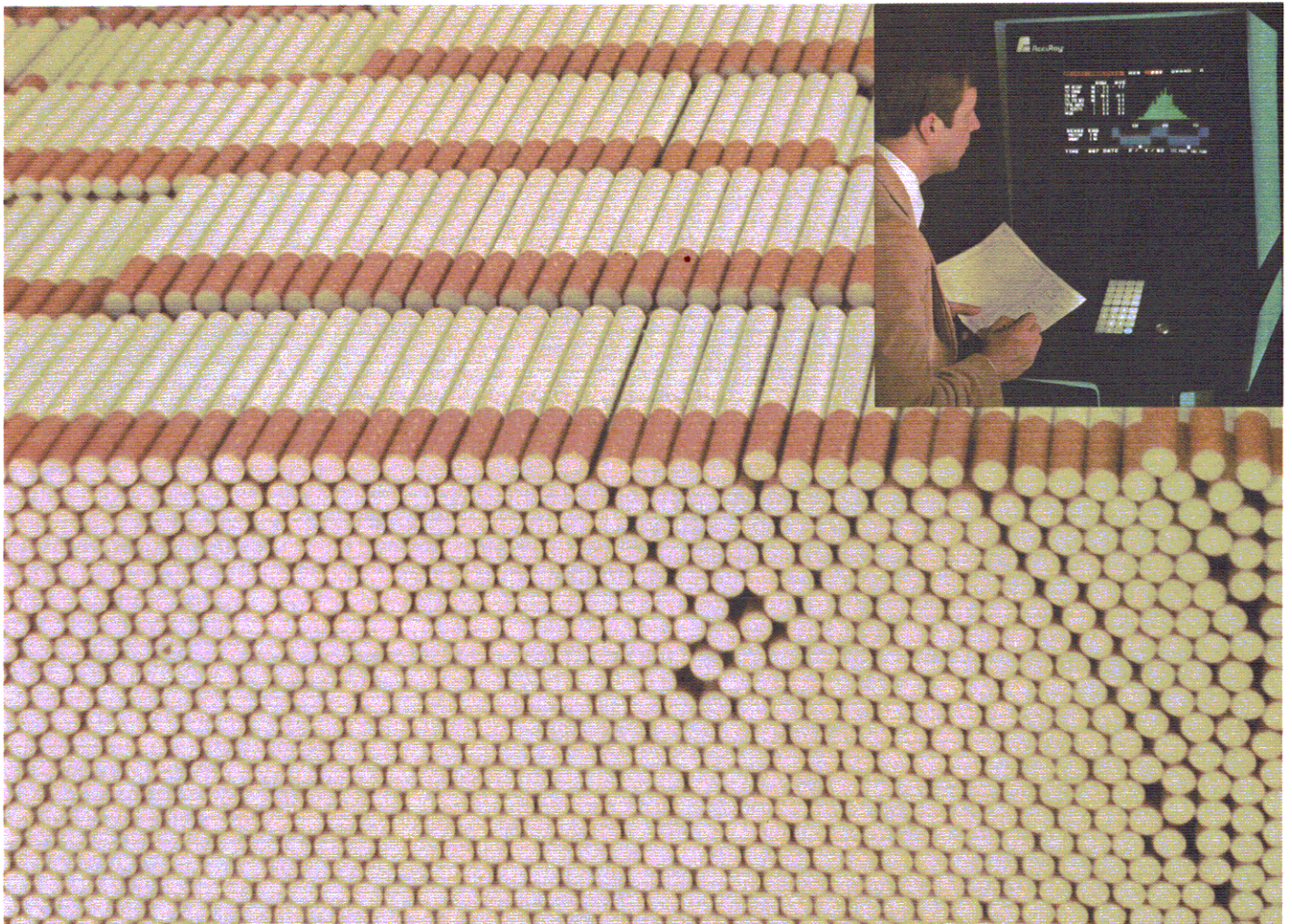
AccuRay systems have been helping cigarette manufacturers meet the dual demands of quality and cost-efficiency since the Company became a supplier to the tobacco industry in 1953. AccuRay's initial cigarette weight measurement and control systems enabled users to produce more uniform weight cigarettes that required

less tobacco overall. Present systems not only measure and control cigarette weight, but simultaneously detect and reject cigarettes that fail to meet stringent quality standards. In addition, up-to-the-second process and production information displayed at each cigarette machine helps manufacturing personnel correct process faults that have grown proportionately more expensive as machine speeds and material costs have increased.

The foundation of AccuRay's current tobacco products is the 7000 MICRO™. Introduced in April 1979, the overwhelming success of the system attests to its ability to counteract the rising costs of materials and labor, and increasing machine speeds and factory complexity — factors that directly affect production costs and overall profitability.

Planning ahead, the communications capability of the 7000 MICRO facilitates cost-effective links with higher level computers to create a factory-wide computer network. This capability, combined with AccuRay's Micro/Manager 8000T™ production management computer system, allows factory and corporate management to effectively plan production, implement strategic plans and direct overall factory operations.

*Providing current and historical production information for more profitable decisions is the concept that makes Micro/Manager 8000T an important tool for cigarette production management.*





# Metals

Like other industries that employ AccuRay process management systems, the metals rolling industry must consistently produce a uniform metal sheet manufactured to an exact thickness in order to ensure customer acceptance. Even slight thickness variations could transform the finished product into a lesser grade product or expensive scrap.

Introduced in 1980, AccuRay's 5000 MICRO™ System helps the metals industry meet meticulous quality demands by measuring and controlling rolling processes to extremely tight tolerances. Besides providing this high measure of quality assurance, these systems typically average less than a one-year payback period due to increased yield, higher productivity, reduced raw material and energy consumption, and more efficient

utilization of operating and maintenance personnel.

As market conditions pressure the metals industry to become more efficient, the high-speed measurement, control and information generating capabilities of AccuRay systems will become increasingly attractive. Additionally, the MICROtechnology system allows users to interface with production management computers to generate plant-wide information for material inventory scheduling, materials and energy use optimization, maintenance reporting and scheduling and compliance with regulatory requirements.

*The 5000 MICRO applies the experience of over 350 prior metals system installations to the latest state-of-the-art MICROtechnology. The system provides high economic returns through accurate measurement and control of roll thickness and improved productivity, quality, energy and material usage.*

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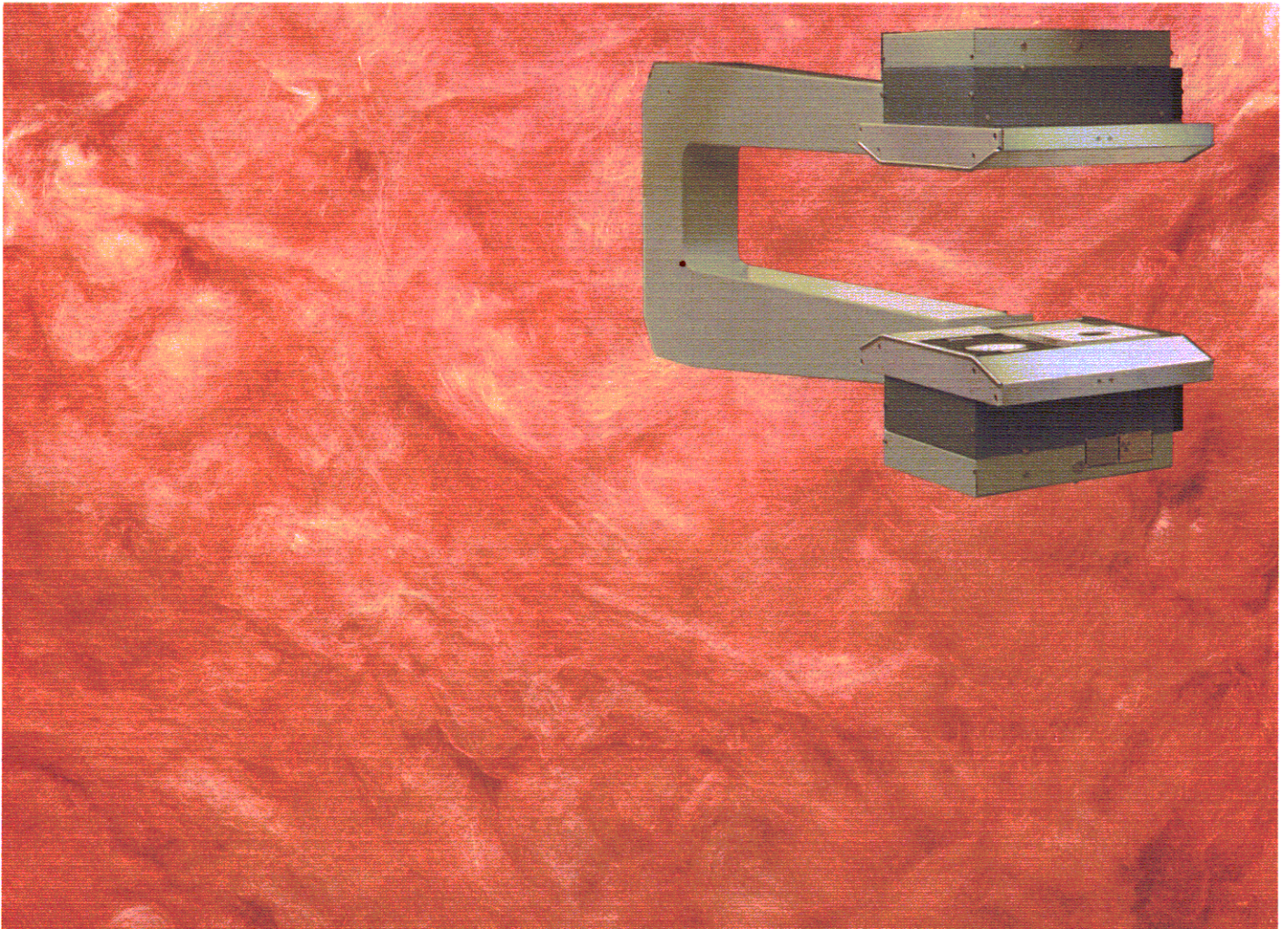
## Specialty Markets

Energy-saving fiberglass insulation, a product in popular demand by consumers seeking to beat the high cost of fuel, is created through a sophisticated, energy-intensive process. Capitalizing on the expansion of fiberglass insulation production, AccuRay introduced a fiberglass measurement and control system for controlling fiberglass insulation to exact specifications. The system achieves this objective by regulating the amount of glass and the material used to bind the glass into a continuous sheet. This unique ability to precisely control the fiberglass insulation manufacturing process provides manufacturers with an economic payback of a year or less.

For years, AccuRay systems have been integrally involved in measuring and controlling the thickness of extruded plastic sheet. AccuRay's

proprietary sensors and controls are also used for specialized extrusion coated aseptic packaging — a new application already popular in Europe and thought to have an expansive market in the U.S. as well. Still an infant technology, AccuRay systems measure and control the individual layers of plastics and other materials included in a complex multi-layer extruded sheet. This capability is extremely important to multi-layer plastics manufacturers because if any one of the components is not tightly controlled, the entire product becomes expensive nonrecyclable scrap. The high visibility of consumer goods packaging makes AccuRay's quality assurance function highly important to this industry segment.

*AccuRay introduced a measurement and control system for controlling fiberglass insulation to exact specifications. Unavailable prior to AccuRay's entrance into the market, this system controls the manufacturing process to provide fiberglass of consistently high quality and an economic payback of one year or less.*





## Decision Support Systems

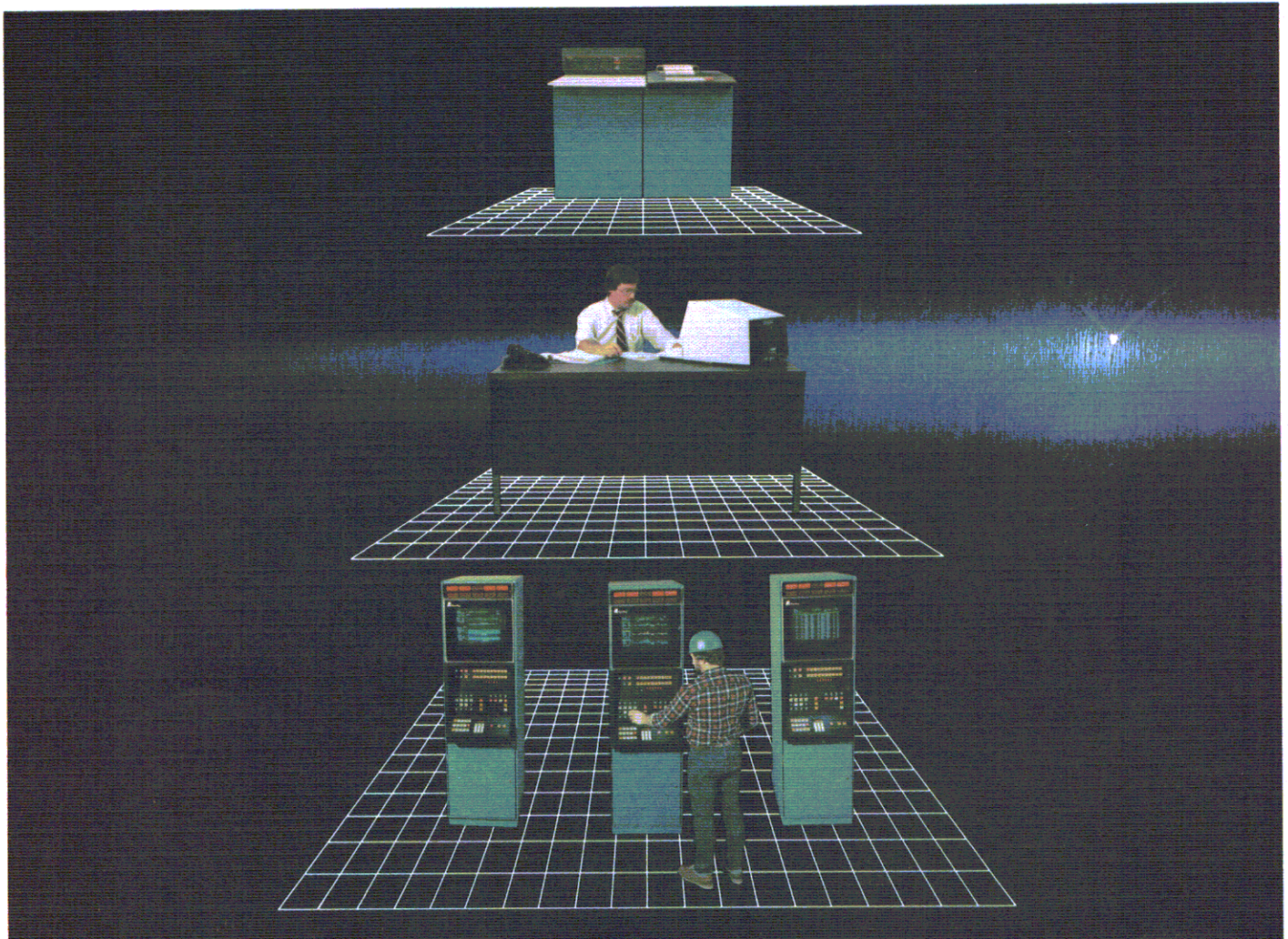
During 1981, AccuRay formally introduced the Micro/Manager 8000™, a major step towards the decision support system of the future. This product marks the culmination of several years of planning and design to create a cost-effective information system that focuses on the unique needs of production management. The Micro/Manager 8000 also represents a significant stage in the evolution of AccuRay's MICRO process management systems for all industries.

Raw material intensive industries have been looking for a computerized production management system capable of providing current and historical production information — information that gives management a clear look at today's operations in light of past performance and current production goals.

To meet this need, the Micro/Manager 8000 takes full advantage of important data automatically collected by AccuRay MICRO process management systems, combines this with information from business computers and then presents the data in concise reports tailored to management's information needs. With profit and loss information constantly at their disposal, management can make consistently accurate judgements to optimize the efficiency, quality, productivity and profitability of all operations.

*The decision support system of the future is a step closer with the introduction of Micro/Manager 8000. Micro/Manager 8000 takes full advantage of important data already collected by AccuRay MICRO systems, combines this with information from business computers and then presents the data in concise reports tailored to production management's information needs. Now for the first time, everyone in a production complex can make decisions based on the same accurate historical information that brings the present into clearer focus.*

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## Service

One of the truest measures of quality is how a product performs over time. Since the MICRO family of products was introduced in 1975, AccuRay has documented system up-time in excess of 99 percent.

AccuRay service starts well before the system is installed through highly reliable system design and manufacturing quality. This backbone of reliability is supported by a worldwide service and parts distribution network. The modular design and built-in diagnostics available in all MICRO systems simplify maintenance, allowing AccuRay to offer a variety of installation, application and maintenance service programs tailored to the specific needs of each customer.

At one end of the spectrum, smaller facilities with limited in-house cap-

abilities can contract an AccuRay field engineer for full maintenance and application services. Those production facilities with larger in-house staffs can completely assume the MICRO maintenance program, utilizing AccuRay field engineers for performance audits and control and application enhancement. In between lies an assortment of shared program options which combine the capabilities of in-house organizations with AccuRay expertise to achieve high system availability, more useful management information and increased control utilization at a reasonable cost.

The user-oriented design of MICRO systems, coupled with an extensive customer training program and thorough documentation, all unique to the industry, allows AccuRay to offer an on-going service program that will

ensure maximum system utilization for the life of the system.

*AccuRay provides the most complete documentation in the industry to help customers get the most benefit from their AccuRay systems. Each manual is written in simple language and amply illustrated to clarify the information presented. Additionally, AccuRay has invested over \$5 million in its training facility located in Columbus, Ohio. Laboratory training (hands-on) is emphasized along with theoretical training in an extensive curriculum. Operator training is also available at the customer location, including short courses for supervisors and managers.*





# To Our Stockholders And Employees:

1981 was the most successful year in the history of AccuRay Corporation as record levels of operating revenues, net income and ending backlog were achieved. Total operating revenues from sales, service and leasing increased to \$108.5 million from \$102.9 million in 1980. Net income was \$3,170,000, or 90 cents per share, in 1981 compared with \$2,232,000, or 64 cents per share, as restated, a year earlier.

For the fourth quarter of 1981, total operating revenues were \$28.8 million versus \$27.8 million for the same period of 1980. Net income rose to \$1,010,000, or 29 cents per share, contrasted with \$661,000, or 19 cents per share, as restated, for the fourth quarter of 1980.

Backlog at December 31, 1981 increased to \$50.0 million compared with \$43.5 million a year earlier. This backlog includes equipment and

related commitments for services. New orders for equipment and initial services received in 1981 were \$71.9 million versus \$75.3 million in 1980.

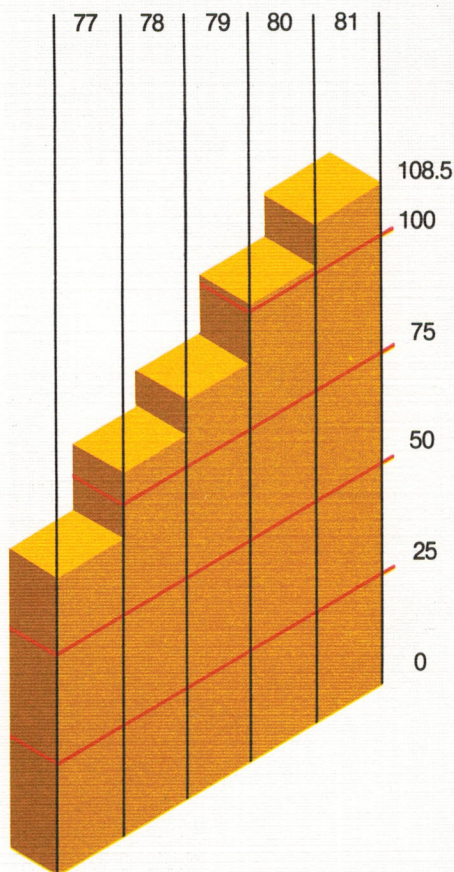
The following is a summary of financial highlights for the fiscal year ended December 31, 1981:

- Gross profit margins on total operating revenues were 40.2% compared with 41.2% in 1980. In reviewing the sales and service segments of our business, margins on sales revenues — representing primarily new equipment shipments — decreased to 51.3% compared with 55.1% a year earlier. A portion of this decline is due to the special start-up charges of approximately \$460,000 expensed during the year for our new factory in Dundalk, Republic of Ireland and the remainder to lower selling prices recorded on shipments during the period, caused by increased competitive conditions in the marketplace.

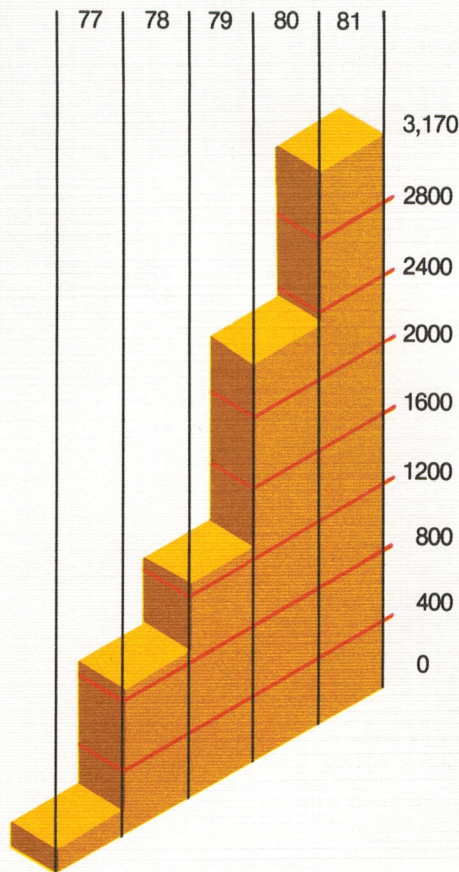
The decline in sales margins was offset by an improvement in margins on service and leasing which increased to 30.3% compared with 28.4% a year earlier.

- Selling, administrative and other expenses were reduced to \$24.5 million from \$25.3 million in 1980.
- Research and development expenses increased 28.5% to \$7.8 million versus \$6.1 million in 1980. This R & D investment represented 15.4% of sales revenues in 1981.
- Total interest expense was \$7.5 million compared with \$7.8 million in 1980. Interest expense, however, was partly offset by earned financing income of \$1.6 million in 1981 and \$2.0 million in 1980 for systems installed under long-term lease agreements and installment sales. Therefore, net interest costs were \$5.9 million in 1981, as compared to \$5.8 million in 1980.

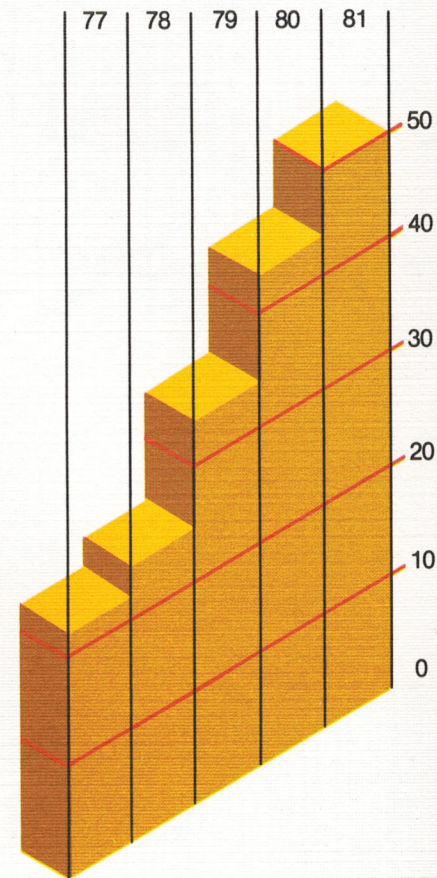
**Operating Revenue**  
(Millions)



**Net Income**  
(Thousands)



**Backlog-End of Year**  
(Millions)





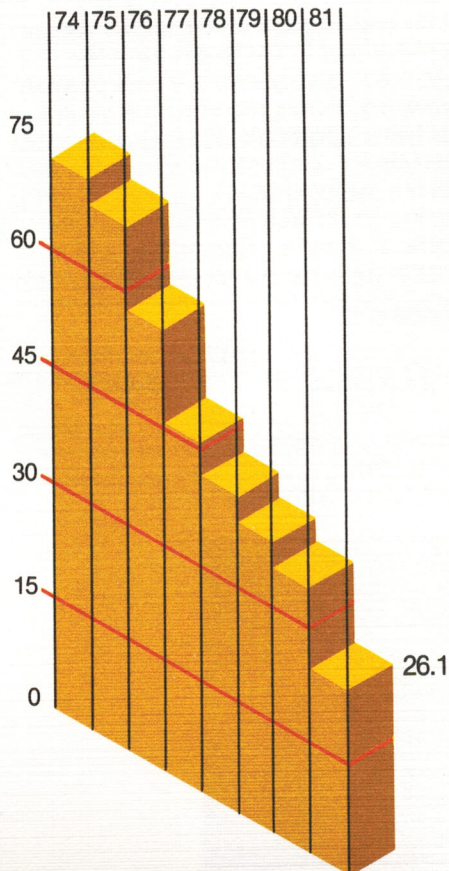
## The Quality Company

■ A foreign currency gain of \$109,000 was recorded in 1981 compared with a loss of \$510,000 a year earlier. The Company's continuing policy is to minimize its exposure position in each foreign currency and an annual budget is provided for the cost of hedging transactions. In spite of incurring these costs for foreign exchange contracts relating to major transactions and currency exposure positions in the current year, the strengthening dollar resulted in an overall gain in translating fluctuating balance sheet positions in overseas subsidiaries.

■ Total bank debt was reduced an additional \$8.3 million in 1981 to \$26.1 million at year-end compared with \$34.4 million at December 31, 1980. In addition, \$1.0 million of 5½% convertible subordinated debentures were retired during 1981, reducing the aggregate amount outstanding to \$13.0 million and providing for the annual sinking fund installment of \$900,000 due June 1, 1982.

■ As a result of improved operating results and the financial position of the Company as of December 31, 1981, the Company's revolving credit and term loan agreement with five domestic banks was substantially

### Bank Debt (Millions)



modified effective February 28, 1982. In view of the decreasing credit needs of the Company, the amount of the commitment was reduced from \$18.0 million to \$14.0 million. The interest rate and balance requirements were reduced. In addition, considerable flexibility was given the Company to use alternative financing methods when availability and/or terms make other funds more advantageous. Further, the Company will be able to continue the payment of semi-annual dividends instituted in 1981. Annual payments are limited to 15% of net income for the preceding four quarters.

■ Total operating revenues per employee increased to \$57,900 in 1981, contrasted to \$54,100 in 1980 and \$47,700 in 1979. At year-end 1981, total employment was 1,845, compared with 1,905 in 1980 and 1,900 in 1979.

### “AccuRay - The Quality Company”

In our last annual report to stockholders and employees, we defined the AccuRay corporate objective “to create a well-managed growth company with special emphasis on quality leadership in the process automation industry”. The reasons for our very strong emphasis on improving quality were particularly well stated in the current Research Report 658 “Managing Quality: A Strategic Perspective” released through the Business Intelligence Program of SRI International (formerly Stanford Research Institute) in December 1981. As noted by SRI:

■ Quality has become a key strategic factor in business management, and managing quality effectively in products and services often spells the difference between success and failure.

■ Strategic quality management in manufacturing industries identifies the levels of quality a company needs in its products to support its competitive strategy, and the managerial and technical steps it must take to achieve those levels. Quality management as an element of corporate strategy has emerged only recently in most firms in the United States and Western Europe, and dates only from the 1950's for many Japanese enterprises.

■ During the 1980's, companies that incorporate quality improvement as a key element of competitive strategy will be better able to increase market share, differentiate their products from competitors and achieve a dominant position in segments of the market that emphasize high product quality.

The following is a brief progress report on specific action steps being taken by AccuRay Corporation to attain quality improvement:

■ Corporate management has incorporated quality improvement as an essential element in our long range competitive strategy. Action steps which began in 1979 include: creating a new senior executive position of Director of Corporate Quality Management reporting directly to Christopher Campbell, our Executive Vice President and Chief Operating Officer; holding a major worldwide seminar for senior management to review the concept of quality as a strategic management tool; and establishing a corporate Quality Steering Committee supervised directly by the Chief Operating Officer. This committee has been a major factor in educating our senior managers about quality management techniques. Eleven managers meet twice each quarter to review corporate progress toward our quality goals. Since 1979, twenty-two senior managers have served as members of this committee for varying periods of time.

■ Special quality audit teams based in Columbus were created to perform detailed audits of the installation and service history of installed AccuRay systems. Customer inputs were solicited concerning all possible problem areas. The audits included field visits to twelve countries outside the United States including a significant visit to Japan.

■ The improved atmosphere within the Company has enhanced communication and employee participation at all decision making levels to achieve product quality improvements. There are currently 23 work force teams or quality circles in operation. This effort will be expanded in 1982 to 36 groups - representing approximately 25% of our research and development, manufacturing, administrative and finance, and Columbus-based marketing personnel. Partly because of this, a participative management style has evolved where team members are trained in problem-solving techniques and group dynamics. These efforts have contributed to the following examples of quality improvement within the Company over the past several years:

■ Purchase order specification paperwork has been reduced by 40%.

■ Product Engineering standard hours to release a system to manufacturing have been reduced by 50%.

■ Finished software costs in



manufacturing have been reduced by 40%.

■ Backorders in manufacturing for field replacement parts have been reduced by 79%.

■ Delivery time of emergency orders to customers in the United States has improved by 38%.

■ Delivery time of replacement parts orders to our European customers has improved by 60%.

■ Average monthly rate of failures in hardware "Optimum Replacement Units" (ORU's) has been reduced by 64%.

■ Software failures both during manufacturing and in later field use have been reduced by 65%.

■ Permanent sensor calibration for AccuRay systems installed on customer manufacturing processes has become a reality. Through our method of system architecture and proprietary measurement algorithms, we have been able to differentiate between permanent head calibration constants and a limited number of process coefficients. If a sensor has to be replaced, the only calibration procedure is entering the head constants that are stamped on the new sensor into the system computer. This allows us to transfer calibration without the need for a lengthy sampling period to verify the original calibration. We estimate that this has reduced the time to reconfirm calibration after a sensor has been exchanged in the field by over 80%.

In addition to the internal action steps to attain quality improvement, we are re-emphasizing quality issues with our suppliers. Direct purchased materials utilized in AccuRay systems in 1981 represented approximately \$20 million, which means we are highly dependent upon our supplier relationships in attaining quality improvement. This is especially important in complex technology products where our goal is to use the latest in state-of-the-art technology consistent with quality specifications. Long-term relationships with our suppliers are established in order to review and adjust quality goals far beyond traditional performance specifications, warranties, and trade practices.

As an example of supplier support, our field audits of customer sites in the paper industry disclosed an increasing problem with cable breakage as systems become more complex and require more interconnecting cables for our Precision Multi-Sensor Scanners used in paper machines and coaters. Direct assistance from one of our

major suppliers, Belden Corporation, resulted in a special 60-conductor single-jacket cable known as the "unicable" which is connectorized for quick installation and replacement. The cable is designed for a service life of 2 to 4 years mean-time-between-failure at a 24-hour per day duty cycle. Field performance in 1981 has confirmed that the new cable is meeting these specifications, thus effectively solving a critical quality problem in the field.

Since the ultimate reason for quality improvement is to provide greater tangible economic benefits to our customers worldwide from the use of our AccuRay process automation systems, we have initiated a semi-annual performance review procedure for our customers. Our field engineers conduct a performance audit of all processing lines equipped with AccuRay systems every six months to analyze both system availability and system utilization on a month-by-month basis. The audit is reviewed both at individual mills and at the customer corporate headquarters in a meeting attended by a member of AccuRay senior management. We are currently holding such reviews with twelve major companies in North America and these reviews are now being introduced in Europe. The program will be expanded to cover an increasingly wide portion of our customer base throughout the world during the next few years. The results can be summarized as follows:

■ **System Availability** - Initial efforts with each customer were to improve system uptime or the time the system is actually available for use by the customer. This is very important because earlier technology systems required increased parts usage, longer times to repair and reduced practical system availability to the range of 96-98%. The following table summarizes questionnaire responses obtained during customer seminars held over the last several years to introduce our Micro/Manager 8000 System for mill-wide communications and control. The data represents 354 installed process control systems from all suppliers to the industry.

Reported Industry Experience for System Availability	Cumulative % of Industry Responses
Above 99.5%	20.9%
Above 99.0%	42.1%
Above 98.0%	73.7%
Above 95.0%	90.7%

The results of our semi-annual customer performance reviews document that our latest AccuRay

MICROtechnology systems achieve system availability of 99.8% when properly installed. As another example of the importance of these figures, one of our competitors introduced a new system to the market in January, 1982 with many redundant features in order to offer uptimes of approximately the same level now being routinely achieved by AccuRay systems.

■ **System Utilization** - The emphasis of these performance reviews is gradually shifting from system availability to greater system utilization to improve the customer's return on investment. This includes a higher level of utilization of the advanced controls such as automatic grade change, speed optimization control and automatic target management, which work together in a coordinated manner to maximize production and minimize cost at a desired quality level. In addition to control utilization, greater system utilization involves more extensive customer training in the use of production reports generated by the system, increased process analysis, automatic data collection and interfacing to millwide networks.

Our 1982 Corporate Strategic Plan stresses that a "well managed growth company" means annual corporate operating plans designed to achieve a return on stockholders' equity of 20% and a return on revenues of 10%. The 1981 return on equity of 14.2% improved from 11.6% in 1980. We believe that in the longer term the AccuRay quality improvement program reviewed in this report will allow us to achieve a higher level of economic results for our customers from the use of our systems which will lead, in turn, to improved profitability from operations at AccuRay Corporation and a better return to our stockholders.

Sincerely,

*David L. Nelson*

David L. Nelson  
President  
AccuRay Corporation





# Consolidated Financial Statements

## Consolidated Statements of Operations

	Year Ended December 31,		
	1981	1980 (Restated- Note 12)	1979 (Restated- Note 12)
	(\$ Thousands)		
<b>Operating Revenues</b>			
Sales	\$ 51,027	\$ 49,311	\$ 44,613
Service and Leasing	57,506	53,599	47,045
Total Operating Revenues	108,533	102,910	91,658
<b>Cost of Sales</b>			
Sales	24,828	22,128	20,240
Service and Leasing	40,092	38,383	34,065
Total Cost of Sales	64,920	60,511	54,305
Gross Profit	43,613	42,399	37,353
<b>Deductions</b>			
Selling, Administrative and Other Expenses	24,471	25,347	20,933
Research and Development Expenses	7,847	6,108	6,303
Interest Expense	7,513	7,765	7,976
Foreign Currency Loss (Gain)	(109)	510	492
Gain on Redemption of Debentures	(444)	(427)	—
	39,278	39,303	35,704
<b>Income Before Income Taxes</b>	<b>4,335</b>	3,096	1,649
<b>Provision for Income Taxes</b>	<b>1,165</b>	864	570
<b>Net Income</b>	<b>\$ 3,170</b>	\$ 2,232	\$ 1,079
<b>Net Income per Share</b>	<b>\$ .90</b>	\$ .64	\$ .31
<b>Dividends per Share</b>	<b>\$ .10</b>	\$ —	\$ —

The accompanying notes are an integral part of these statements.



# Consolidated Balance Sheets

Assets	December 31,	
	1981	1980 (Restated— Note 12)
	(\$ Thousands)	
<b>Current Assets</b>		
Cash	\$ 2,415	\$ 2,615
Accounts Receivable — Trade less allowances of \$1,606 and \$1,089	37,210	37,941
Contracts Receivable — Current	2,443	3,538
Inventories	29,900	31,518
Prepayments	2,432	2,893
Total Current Assets	74,400	78,505
<b>Contracts Receivable</b>	3,490	5,527
<b>Equipment Under Lease/Rental Agreements</b>	266	376
<b>Property, Plant and Equipment, at cost</b>		
Land and Improvements	1,145	1,094
Buildings and Improvements	11,902	10,283
Machinery and Equipment	16,482	14,540
	29,529	25,917
Less — Accumulated Depreciation	12,772	11,374
	16,757	14,543
<b>Other Assets, principally goodwill</b>	1,757	1,830
Total Assets	\$ 96,670	\$100,781



**Liabilities and Stockholders' Equity**

December 31,  
1981                      1980  
(Restated—  
Note 12)  
(\$ Thousands)

**Current Liabilities**

Notes Payable — Banks	\$ 13,513	\$ 15,960
Accounts Payable	6,589	6,224
Accrued Interest, General Taxes and Other	6,104	6,845
Accrued Payroll	4,197	4,299
Income Taxes	933	156
Total Current Liabilities	<b>31,336</b>	33,484

**Long-Term Debt**

12,546                      18,441

**Mortgage Payable**

7,959                      6,812

**Lease Purchase Obligations**

2,761                      1,567

**Deferred Income Taxes**

1,902                      2,369

**Deferred Income** — Installation and Service Contracts

4,953                      4,784

**5½ % Convertible Subordinated Debentures**

12,959                      14,000

**Commitments** (Note 11)

**Stockholders' Equity**

Preferred Stock, no par value — Authorized 2,000,000 shares, none issued	—	—
Common Stock, \$1 par value — Authorized 6,000,000 shares, issued 3,693,277 in 1981 and 3,673,012 in 1980	3,693	3,673
Paid-in Capital	4,203	4,108
Retained Earnings	15,566	12,751
	<b>23,462</b>	20,532
Less — Treasury Stock, 150,881 common shares, at cost	1,208	1,208
Total Stockholders' Equity	<b>22,254</b>	19,324
Total Liabilities and Stockholders' Equity	<b>\$ 96,670</b>	\$100,781

The accompanying notes are an integral part of these statements.



# Consolidated Statements of Changes in Financial Position

	Year Ended December 31,		
	1981	1980 (Restated- Note 12)	1979 (Restated- Note 12)
	(\$ Thousands)		
<b>Source of Funds</b>			
Net Income	\$ 3,170	\$ 2,232	\$ 1,079
Depreciation and Amortization	1,844	1,729	1,709
Increase (Decrease) in Reserve for Equipment Returns and Doubtful Accounts	274	(690)	(609)
Deferred Income Tax Provision	538	609	177
Gain on Redemption of Debentures	(444)	(427)	—
Funds Provided from Operations	5,382	3,453	2,356
Decrease in Contracts Receivable	1,763	4,970	5,935
Increase (Decrease) in Deferred Income Taxes	(1,005)	365	394
Additional Long-Term Mortgage and Lease Purchase Obligations	3,560	—	—
Increase (Decrease) in Deferred Income	169	847	(76)
Lease/Rental Equipment Returned or Converted	40	65	399
Property Retirements	228	29	344
Exercise of Stock Options	90	425	—
Other — Net	7	(31)	271
Total Source of Funds	10,234	10,123	9,623
<b>Use of Funds</b>			
Decrease in Long-Term Borrowings	7,114	5,433	2,115
Capital Expenditures	4,125	1,442	1,285
Cash Dividends	355	—	—
Redemption of Debentures	597	573	—
Restatement to Reflect Accrual of Vacation Pay (Note 12)	—	—	535
Total Use of Funds	12,191	7,448	3,935
<b>Increase (Decrease) in Working Capital</b> (Note 10)	<b>\$ (1,957)</b>	<b>\$ 2,675</b>	<b>\$ 5,688</b>

The accompanying notes are an integral part of these statements.



# Consolidated Statements of Stockholders' Equity

(\$ Thousands)	Common Stock	Paid-in Capital	Retained Earnings	Treasury Stock	Total
<b>1979</b>					
Balance, January 1, as previously reported	\$ 3,585	\$ 3,727	\$ 9,975	\$ (1,208)	\$16,079
Restatement to reflect accrual of vacation pay, net of income taxes of \$456 (Note 12)			(535)		(535)
Balance, January 1, as restated	3,585	3,727	9,440	(1,208)	15,544
Net income, as restated			1,079		1,079
Balance, December 31, as restated	3,585	3,727	10,519	(1,208)	16,623
<b>1980</b>					
Net income, as restated			2,232		2,232
Common stock issued under stock option plan	88	337			425
Tax reduction related to stock option plan		44			44
Balance, December 31, as restated	3,673	4,108	12,751	(1,208)	19,324
<b>1981</b>					
Net income			3,170		3,170
Cash dividends (\$.10/share)			(355)		(355)
Common stock issued under stock option plan	20	70			90
Tax reduction related to stock option plan		25			25
<b>Balance, December 31</b>	<b>\$ 3,693</b>	<b>\$ 4,203</b>	<b>\$15,566</b>	<b>\$ (1,208)</b>	<b>\$22,254</b>

The accompanying notes are an integral part of these statements.

## Auditors' Opinion

ARTHUR ANDERSEN & CO.

### To the Stockholders and Directors of AccuRay Corporation:

We have examined the consolidated balance sheets of ACCURAY CORPORATION (a Delaware corporation) AND SUBSIDIARIES as of December 31, 1981 and 1980, and the related consolidated statements of operations, stockholders' equity and changes in financial position for each of the three years in the period ended December 31, 1981. 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 consolidated financial statements referred to above present fairly the financial position of AccuRay Corporation and Subsidiaries as of December 31, 1981 and 1980, and the results of their operations and the changes in their financial position for each of the three years in the period ended December 31, 1981, in conformity with generally accepted accounting principles applied on a consistent basis after giving retroactive effect to the change (with which we concur) in the method of accounting for compensated absences, as explained in Note 12 to the Consolidated Financial Statements.

Columbus, Ohio,  
February 26, 1982.

ARTHUR ANDERSEN & CO.



# Notes to Consolidated Financial Statements

## 1. SIGNIFICANT ACCOUNTING POLICIES

### Principles of consolidation

The consolidated financial statements include the accounts of the Company and all of its wholly-owned subsidiaries, after elimination of all significant intercompany accounts and transactions.

### Foreign currency translation

Current assets and all liabilities except deferred taxes are translated from foreign currencies at year-end exchange rates. Other assets and deferred taxes are translated at rates current at the time these items were recorded. Amounts included in the Statements of Operations have been translated, principally, at average exchange rates prevailing during the year. Included in foreign currency losses (gains) are exchange gains and losses, the cost of forward exchange contracts and unrealized translation losses (gains) of \$462,000 in 1981, \$534,000 in 1980 and \$379,000 in 1979.

### Revenue recognition

Revenues from the sale of systems are recorded when the manufacturing process is completed and the systems are shipped. Systems are generally subject to an evaluation period (normally six months) during which time the customer may return the system and cancel the contract without penalty. Reserves have been provided for losses which may be incurred as the result of such returns.

Revenues related to the installation of the Company's systems are deferred and recognized ratably over the installation and evaluation period.

### Inventories

Inventories are stated at the lower of cost or market. Cost is determined using the first-in, first-out method.

Inventories consist of:

	1981	1980
	(\$ Thousands)	
Raw Materials and Supplies	<b>\$11,186</b>	\$12,067
Work-in-Process	<b>18,714</b>	19,451
	<b>\$29,900</b>	\$31,518

### Methods of depreciation

For financial reporting purposes, depreciation of property, plant and equipment (including equipment under lease/rental agreements) is recorded on the straight-line basis by charges to operations at rates based upon the estimated service lives of the properties. Leasehold improvements are being amortized over the estimated service lives or terms of the leases, whichever are shorter. Expenditures for maintenance and repairs are expensed as incurred. Expenditures for additions and improvements are capitalized in the property accounts. The cost and accumulated depreciation of assets disposed of are relieved from the accounts and any gain or loss is credited or charged to operations.

The annual rates of depreciation and amortization are substantially as follows:

Land improvements	5%
Buildings and improvements	2½ - 3½%
Machinery and equipment	10 - 25%
Equipment under lease/rental agreements	10%

### Product development costs

Engineering costs related to the design and development of new products and improvements to existing products are expensed as incurred.

### Retirement plans

The Company and its subsidiaries have several non-contributory pension plans covering substantially all employees. The total pension expense under all plans was approximately \$1,037,000 in 1981, \$652,000 in 1980 and \$617,000 in 1979. The Company's policy is to fund pension costs accrued.

As of January 1, 1981, the Company's principal plan, the AccuRay Corporation Employees' Pension Plan, covering the U.S. employees, was amended to provide more liberalized benefits to retirees.

The following summarizes plan benefits and plan net assets for Domestic and Canadian employees as of the actuarial valuation dates:

	January 1,	
	1981	1980
	(\$ Thousands)	
Actuarial present value of accumulated plan benefits:		
Vested	<b>\$3,282</b>	\$1,570
Nonvested	<b>989</b>	626
	<b>\$4,271</b>	\$2,196
Net assets, at market value, available for benefits	<b>\$3,322</b>	\$2,461

These actuarial determinations assumed an annual rate of return of 6% and included amortization of pre-1981 prior service costs over a 40-year period. An amortization period of 30 years was adopted for 1981 and future years.

### Net income per share

Primary net income per share was computed by dividing net income by the weighted average number of common shares outstanding during the year. The weighted average number of common shares outstanding was 3,535,000 during 1981, 3,483,000 during 1980 and 3,434,000 during 1979. Fully diluted net income per share is not shown because the effect of common stock equivalents is antidilutive or not material.



## 2. SEGMENT AND GEOGRAPHICAL INFORMATION

The Company is a vertically integrated producer of process control equipment.

Transfers between geographic areas, consisting principally of completed systems, are based on the price charged to unaffiliated customers with a provision for the marketing effort provided by foreign operations.

Operating profit is revenue less related cost and operating expenses, excluding interest and the unallocated portion of corporate expenses.

Information about the Company's operations and assets by geographic area follows:

	1981	1980*	1979*
	(\$ Thousands)		
<b>Revenues from Customers</b>			
United States	\$ 49,833	\$ 44,426	\$ 45,306
Export sales	9,970	12,520	8,738
Europe	40,159	37,488	32,082
Other foreign	8,571	8,476	5,532
	<b>108,533</b>	102,910	91,658
<b>Transfers between geographic areas</b>			
Europe	18,564	17,387	13,760
Other foreign	2,508	3,159	1,172
	<b>21,072</b>	20,546	14,932
	<b>129,605</b>	123,456	106,590
Eliminations	(21,072)	(20,546)	(14,932)
Consolidated revenues	<b>\$108,533</b>	\$102,910	\$ 91,658
<b>Operating Profits</b>			
United States	\$ 7,531	\$ 13,174	\$ 10,429
Export sales	3,138	3,715	2,621
Europe	5,931	1,597	2,784
Other foreign	1,607	717	1,096
Corporate expense	(6,359)	(8,342)	(7,305)
Interest expense	(7,513)	(7,765)	(7,976)
	<b>\$ 4,335</b>	\$ 3,096	\$ 1,649

\*Restated - Note 12

	1981	1980*	1979*
	(\$ Thousands)		
<b>Identifiable Assets</b>			
United States	\$ 56,352	\$ 59,412	\$ 62,828
Europe	34,616	32,724	31,631
Other foreign	2,051	3,574	2,600
Corporate assets	3,651	5,071	5,012
Total assets	<b>\$ 96,670</b>	\$100,781	\$102,071

\*Restated - Note 12

## 3. CONTRACTS RECEIVABLE

Contracts receivable are summarized as follows:

	1981	1980
	(\$ Thousands)	
<b>Long-Term Leases</b>		
Minimum lease payments	\$ 4,847	\$ 6,437
Unearned financing income	(901)	(940)
Residual value of equipment under lease	611	586
Net Long-Term Leases	<b>4,557</b>	6,083
Net Installment Sales	<b>2,260</b>	3,292
Other Notes Receivable	—	300
Total Contracts Receivable	<b>6,817</b>	9,675
Less Reserves (non-current)	<b>(884)</b>	(610)
	<b>\$ 5,933</b>	\$ 9,065

The \$6,817,000 balance in "Contracts Receivable" as of December 31, 1981 will be recovered as follows:

1982 - \$2,443,000  
 1983 - \$1,758,000  
 1984 - \$ 908,000  
 1985 - \$ 584,000  
 1986 - \$ 326,000  
 thereafter - \$798,000



#### 4. INCOME TAXES

Components of pretax income are as follows:

	1981	1980*	1979*
	(\$ Thousands)		
Income before translation gain and loss			
Domestic	\$2,430	\$2,811	\$1,329
Foreign	1,796	795	812
	<b>4,226</b>	3,606	2,141
Translation gain (loss)			
Domestic	420	267	(129)
Foreign	(311)	(777)	(363)
	<b>109</b>	(510)	(492)
Income before income taxes			
Domestic	2,850	3,078	1,200
Foreign	1,485	18	449
	<b>\$4,335</b>	\$3,096	\$1,649

\*Restated - Note 12

The provision for income taxes consists of:

	1981	1980*	1979*
	(\$ Thousands)		
Currently Payable			
United States	\$ 60	\$ 114	\$ 100
Foreign	545	210	151
State and local	22	(69)	142
	<b>627</b>	255	393
Deferred			
United States	496	685	61
Foreign	42	(76)	116
	<b>538</b>	609	177
	<b>\$1,165</b>	\$ 864	\$ 570

\*Restated - Note 12

The reconciliations between the United States statutory rate and the effective provisions are as follows:

	1981	1980*	1979*
	(\$ Thousands)		
Income taxes at the U.S. statutory rate of 46%	\$1,994	\$1,423	\$ 757
Tax benefit related to income of Irish subsidiary	(826)	—	—
Tax benefit from the operation of a Domestic International Sales Corp. (DISC)	(425)	(550)	(400)
Tax on intercompany eliminations	609	—	—
Tax effect of losses related to foreign subsidiaries for which there is no current income tax benefit	—	389	114
Tax benefit from change in U.K. stock relief deferral	(92)	(239)	—
Income taxed at capital gain rates	(80)	(77)	—
Other	(25)	(45)	22
State and local (net of federal benefit)	10	(37)	77
Provision for income taxes	<b>\$1,165</b>	\$ 864	\$ 570

\*Restated - Note 12



The major components of deferred income taxes included in the income tax provisions resulted from the following timing differences:

	1981	1980*	1979*
	(\$ Thousands)		
Tax accounting for contracts receivable	\$ 370	\$ 10	\$(310)
Tax accounting for inventory, bad debt and other reserves	(166)	(52)	141
Tax accounting for depreciation	104	(33)	193
Unrealized foreign exchange adjustments	(209)	231	—
Utilization of investment tax credit	404	292	174
DISC dividend	(24)	242	—
Vacation expense accrual —Note 12	—	(111)	(112)
Other, net	59	30	91
	<b>\$ 538</b>	<b>\$ 609</b>	<b>\$ 177</b>

\*Restated - Note 12

The Company has investment tax credit carryforwards of approximately \$941,000 expiring in 1990 through 1996. At December 31, 1981, \$421,000 of the investment tax credit carryforward has been recorded as a reduction of previously recorded deferred taxes. The realization of these amounts so recorded will not impact future provisions for income taxes.

No deferred taxes have been provided on the undistributed earnings of the Company's Domestic International Sales Corporation (DISC) subsidiary since the Company believes such undistributed DISC earnings will be permanently invested. The undistributed earnings of the DISC as of December 31, 1981 are \$10,829,000.

Under tax legislation of the government of the Republic of Ireland, income earned as a result of export of equipment produced at the Company's Irish manufacturing facility is relieved from taxation for years through 1990. In 1981, the first year of operation, the Consolidated Statement of Operations included \$1,822,000 of income earned for which no tax provision has been made.

## 5. BORROWING ARRANGEMENTS

Long-term debt at December 31, 1981 and 1980 consisted of:

	1981	1980
	(\$ Thousands)	
Borrowings under a revolving credit and term loan agreement with five domestic banks, with interest currently at prime rate, payable in twenty equal quarterly installments commencing March 31, 1985	\$ 9,900	\$14,100
Borrowings under international revolving credit agreements, denominated in various currencies, with interest at December 31, 1981 ranging from 8.5% to 28.3%, payable over various terms through 1988	7,104	8,557
Other long-term debt	272	1,103
	<b>17,276</b>	<b>23,760</b>
Less current installments (included in "Notes Payable-Banks")	(4,730)	(5,319)
	<b>\$12,546</b>	<b>\$18,441</b>

The Company's revolving credit and term loan agreement with five domestic banks permits the Company to borrow at any time through December 31, 1984, up to \$14,000,000 with interest at the prime rate. The agreement provides for a commitment fee of ½% per year payable on the unused portion of the commitment and an agency fee of up to ¼% per year. The amount borrowed at any time cannot exceed the total borrowing base, which is calculated based upon stated percentages of domestic trade accounts receivable, installment sales receivable, lease agreements and rental agreements. The agreement requires maintenance of consolidated tangible net worth as defined of \$20,000,000 at December 31, 1981, with scheduled increases through December 31, 1985. The agreement also contains restrictive covenants relating to quick asset ratio, debt to tangible net worth ratio, assumption of debt and other matters.

The Company may not declare or pay dividends in any twelve month period in excess of 15% of earnings of the previous four quarters without the approval of the banks.

The Company has both long-term and short-term lines of credit with financial institutions under which the Company may borrow up to \$26,000,000 domestically and up to \$24,000,000 internationally. These agreements are secured by lease, rental or installment sale contracts and related equipment, and as a result, substantially all the "Contracts Receivable" (including the current portion) on the balance sheet have been assigned to the banks as collateral. In addition, the domestic agreement with five banks is further secured by the trade accounts receivable of domestic subsidiaries. These agreements are reviewed annually and the scheduled repayments may be extended upon the agreement of both parties.



Borrowings under the international revolving credit agreements are normally denominated in the same currency as the underlying accounts receivable in order to minimize overall foreign currency exposure, but borrowings may be made in dollars or other selected currencies if desired.

Pursuant to its domestic credit agreements, the Company has an arrangement with the banks to maintain average compensating cash balances during the year equal to a specified percentage of the commitments and/or outstanding loan balances. At December 31, 1981, the aggregate amount of such compensating balances required (adjusted for average in-transit and unpaid items) was approximately \$3,700,000. The Company is charged interest for balance deficiencies. The Company's operating cash balances were not restricted by these arrangements.

Assuming no further extension of the revolving credit agreements, long-term debt at December 31, 1981, will mature as follows:

1982 - \$4,730,000  
 1983 - \$1,297,000  
 1984 - \$ 546,000  
 1985 - \$2,458,000  
 1986 - \$2,223,000  
 thereafter - \$6,022,000

In addition to the current installments of long-term debt shown in the above table, "Notes Payable-Banks" includes short-term borrowings of \$8,783,000 at December 31, 1981 and \$10,641,000 at December 31, 1980 at average interest rates of 14.81% and 15.68%, respectively.

## 6. MORTGAGE PAYABLE

In March, 1974, the Company signed a mortgage agreement of \$7,600,000 at an interest rate of 8% per annum. The mortgage requires monthly payments, including interest, of \$61,000 with remaining principal due April 1, 1986. The mortgage covers all of the Company's land and buildings in Columbus, Ohio.

In 1981, the Company began manufacturing operations in Dundalk, Republic of Ireland. The land and building in Ireland are subject to a mortgage of \$1,616,000. The principal is payable in five equal annual installments commencing May, 1982, plus interest at the rate of 12.0% per annum.

The current portion of these mortgages, aggregating \$469,000, is included in "Accrued Interest, General Taxes and Other".

## 7. 5½% CONVERTIBLE SUBORDINATED DEBENTURES

Debentures due on June 1, 1991 are convertible into common stock of the Company at \$35.875 per share and are subordinated to all senior indebtedness of the Company as defined in the Indenture. Beginning in 1981, the Company is required to retire \$900,000 in principal amount of the debentures annually and may, at its option, retire up to an additional \$900,000 each year. The debentures are currently redeemable at the option of the Company at 102.5% of the principal amount through June 1, 1982 and at decreasing prices thereafter. In 1981 and 1980, the Company purchased debentures having a principal value of \$1,041,000 and \$1,000,000, respectively, at a cost of \$597,000 and \$573,000. These debentures are being used to satisfy the sinking fund obligations.

## 8. LEASE COMMITMENTS

The Company leases certain of its machinery and equipment and all of its regional offices under lease agreements, most of which are renewable, having varying terms and remaining lives. Certain equipment leases have been capitalized. Minimum rentals under all noncancellable leases in force at December 31, 1981 are:

	Capital (\$ Thousands)	Operating (\$ Thousands)
1982	\$ 1,026	\$ 1,555
1983	958	902
1984	924	399
1985	453	556
1986	303	126
1987-1991	874	86
1992-1996	—	—
Total Minimum Lease Payments	4,538	\$ 3,624
Less Amount Representing Interest	1,123	
Net Minimum Lease Payments	3,415	
Current Portion Included in Accrued Interest, General Taxes and Other	654	
Long-Term Lease Purchase Obligations	\$ 2,761	

Total rental expense for equipment and facilities charged to operations amounted to \$1,653,000 in 1981, \$1,609,000 in 1980 and \$1,616,000 in 1979.



## 9. STOCK OPTION PLANS

The Company has stock option plans for officers and other key employees of the Company. As of December 31, 1981, options to purchase common shares of the Company were outstanding under the 1980 Employee Stock Option Plan (1980 Plan), the 1972 Employee Qualified Stock Option Plan (1972 Plan) and the 1962 Employee Stock Option Plan (1962 Plan). Options under the 1962 Plan are intended as "restricted" stock options; options under the 1972 Plan are intended as "qualified" options; and options under the 1980 Plan are intended as "non-qualified" options under the Internal Revenue Code.

The 1962 Plan has been terminated except for outstanding options shown in the following table, which are all exercisable and expire in 1982 through 1983 if not exercised. The 1972 Plan is for a maximum of 160,000 shares. As of December 31, 1981 and 1980, 3,780 and 7,480 shares, respectively, were available for granting under the 1972 Plan. Options under the 1972 Plan are granted for a period of five years and become exercisable 25% per year after one year from the date of grant and expire earlier in the event of termination of employment. The stock option price under the 1972 Plan is 100% of the fair market value of the shares covered by the option at the time of grant. The 1972 Plan will terminate on November 16, 1982 except for options outstanding as of that date.

The 1980 Plan is for a maximum of 250,000 shares. As of December 31, 1981 and 1980, 121,900 and 136,500 shares were available for granting under the 1980 Plan. Options under the 1980 Plan are granted for a period of ten years, and become exercisable 33% per year after one year from the date of grant and expire earlier in the event of termination of employment. The stock option price under the 1980 Plan is 100% of the fair market value of the shares covered by the option at the time of grant. No individual may be granted options to purchase an aggregate of more than 25,000 shares under the 1980 Plan. The 1980 Plan will terminate May 31, 1990 except for options outstanding as of that date.

The following information for the years ended December 31, 1981 and 1980 relates to options granted under the 1962, 1972 and 1980 Plans:

Stock Options	Shares	Option Price		Market Value at Date of Grant or When Exercisable or Exercised	
		Per Share	Total	Per Share	Total
<b>1962 Plan</b>					
Outstanding at December 31,					
1981	0.3	\$30.52	\$ 8	\$32.13	\$ 8
1980	0.5	\$25.41-34.20	\$ 16	\$26.74-36.00	\$ 17
Exercised during					
1981	—	—	—	—	—
1980	0.5	\$20.90-33.49	\$ 14	\$ 6.00-12.63	\$ 5
Exercisable at December 31,					
1981	0.3	\$30.52	\$ 8	\$ 7.25	\$ 2
1980	0.5	\$25.41-34.20	\$ 16	\$11.50	\$ 6
<b>1972 Plan</b>					
Outstanding at December 31,					
1981	48.7	\$ 4.00-10.13	\$ 297	\$ 4.00-10.13	\$ 297
1980	65.3	\$ 4.00- 5.88	\$ 321	\$ 4.00- 5.88	\$ 321
Became exercisable during					
1981	15.8	\$ 4.00- 5.88	\$ 78	\$ 8.62-11.25	\$ 172
1980	11.1	\$ 4.00- 5.25	\$ 48	\$ 6.50-11.88	\$ 75
Exercised during					
1981	20.3	\$ 4.00- 5.88	\$ 90	\$ 9.50-11.25	\$ 218
1980	87.2	\$ 3.25- 5.00	\$ 410	\$ 6.50-10.88	\$ 723
Exercisable at December 31,					
1981	22.3	\$ 4.00- 5.88	\$ 104	\$ 7.25	\$ 162
1980	25.9	\$ 4.00- 5.25	\$ 110	\$11.50	\$ 298
<b>1980 Plan</b>					
Outstanding at December 31,					
1981	128.1	\$ 7.94-13.88	\$1,503	\$ 7.94-13.88	\$1,503
1980	113.5	\$12.69-13.88	\$1,441	\$12.69-13.88	\$1,441
Became exercisable during					
1981	34.1	\$12.69-13.88	\$ 433	\$ 7.38- 8.38	\$ 252
1980	—	—	—	—	—
Exercisable at December 31,					
1981	34.1	\$12.69-13.88	\$ 433	\$ 7.25	\$ 247
1980	—	—	—	—	—

Outstanding options as of December 31, 1981 expire as follows: 1962 Plan—1982-1983; 1972 Plan—1982-1986; 1980 Plan—1990-1991.

Average per share option prices of all options outstanding as of December 31, 1981 were: 1962 Plan—\$30.52; 1972 Plan—\$6.09; 1980 Plan—\$11.73.

As of December 31, 1981, no shares have been issued under the 1980 Plan and a total of 107,510 have been issued under the 1972 Plan pursuant to exercises of options.



## 10. CHANGES IN WORKING CAPITAL

The components of the changes in working capital are as follows:

	Year Ended December 31,		
	1981	1980*	1979*
	(\$ Thousands)		
Increase (Decrease) in			
Working Capital Due to			
Change in—			
Cash	\$ (200)	\$ 362	\$ (448)
Receivables	(1,826)	(2,401)	530
Inventories	(1,618)	4,298	2,611
Prepayments	(461)	1,036	745
Notes Payable-Banks	2,447	(1,555)	4,227
Accounts Payable and Accruals	478	352	(3,322)
Income Taxes	(777)	583	1,345
Increase (Decrease) in			
Working Capital	<b>\$(1,957)</b>	\$ 2,675	\$ 5,688

\*Restated - Note 12

## 11. COMMITMENTS

The Company sells some of its process control systems to third parties on a non-recourse basis. The Company is contingently liable to repurchase the equipment from the third parties while the equipment is under evaluation. The sales value related to equipment still under evaluation was \$7,571,000 at December 31, 1981, \$9,014,000 at December 31, 1980 and \$6,974,000 at December 31, 1979.

## 12. ACCOUNTING FOR COMPENSATED ABSENCES

To conform with Statement of Financial Accounting Standards No. 43, "Accounting for Compensated Absences", the Company has revised its accounting policy to provide for the accrual of a liability which represents vacation pay earned by all employees, exempt and non-exempt.

The accounting change has been applied retroactively to January 1, 1979. The after tax effect was to reduce January 1, 1979 retained earnings by \$535,000. Net income was reduced by \$128,000 in 1980 and \$127,000 in 1979. Related per share amounts were reduced \$.04 each year.

## 13. ACCOUNTING FOR FOREIGN CURRENCY TRANSLATION

In December 1981, the Financial Accounting Standards Board (FASB) issued Statement No. 52, "Foreign Currency Translation". This statement requires that, beginning in 1983, adjustments for currency exchange rate changes be excluded from net income for those fluctuations that do not impact cash flows and be included for those that do. Had the Company elected to comply earlier than required by the FASB, management believes that the effect in 1981 would have been immaterial to the Statement of Operations.



# Five-Year Summary

## Five-Year Comparison of Selected Financial Data

Years Ended December 31,

	1981	1980**	1979**	1978	1977
	(\$ Thousands, except per share amounts)				
<b>FOR THE YEAR:</b>					
Total operating revenues	\$108,533	\$102,910	\$ 91,658	\$ 84,415	\$ 71,851
Net income	3,170	2,232	1,079	433*	148
Net income per share	.90	.64	.31	.13	.04
Dividends per share	.10	—	—	—	—
Weighted average number of shares outstanding (000)	3,535	3,483	3,434	3,434	3,434
<b>AT END OF YEAR:</b>					
Total assets	\$ 96,670	\$100,781	\$102,071	\$105,398	\$107,150
Net investment in property, plant, equipment and lease/rent equipment	17,023	14,919	15,235	16,337	16,719
Working capital	43,064	45,021	42,346	36,658	34,788
Long-term debt	12,546	18,441	23,326	25,200	30,518
Stockholders' equity	22,254	19,324	16,623	16,079	15,646
Current ratio	2.4:1	2.3:1	2.3:1	2.0:1	2.1:1
Number of employees	1,845	1,905	1,900	1,940	1,887

\*Includes extraordinary credit of \$366,000

\*\*Restated - Refer to Notes to Consolidated Financial Statements (Note 12)



# Management Discussion

## Capital Resources and Liquidity

In 1981, the Company continued to make excellent progress in its efforts to reduce its reliance on bank debt through increased cash flow from operations and improved asset management. Bank debt was reduced \$8.3 million in 1981 and \$3.3 million in 1980 to a level of \$26.1 million at December 31, 1981 - \$48.3 million below the peak level of bank borrowing at December 31, 1974. The reduction in bank debt was accomplished primarily through reduced levels of inventory (\$1.6 million), contracts receivable (\$3.1 million) and trade receivables (\$0.8 million), as well as from earnings (\$2.8 million, net of dividends).

The improved debt position was accomplished despite funding an increase in fixed assets of \$3.6 million in 1981. The largest part of this increase (\$2.3 million) was due to the opening of the Company's new manufacturing facility in Dundalk, Republic of Ireland. The land and building associated with the Irish plant have been financed through a five-year \$1.6 million mortgage.

The Company has available borrowing arrangements with banks which can provide up to \$50.0 million of borrowing should it be required for working capital needs. The Company plans to continue its program of reducing bank debt in the next two years and foresees no immediate need to fully utilize these available lines of credit. The Company's current ratio improved to 2.4:1 in 1981 from 2.3:1, as restated for 1980 and 1979. Net working capital was reduced by \$2.0 million in 1981 as a result of the fixed asset additions mentioned above and the significant improvement in long-term debt. It is contemplated that inventory and receivable levels will not change materially in 1982.

The Company's 5½% Convertible Subordinated Debentures due June 1, 1991, require sinking fund payments of \$900,000 annually beginning in 1981. To satisfy the 1982 and 1981 sinking fund requirements, the Company repurchased debentures with face value amounts of \$1,041,000 and \$1,000,000 in 1981 and 1980, respectively. These debentures have been delivered for cancellation as required.

## Results of Operations

Total revenues increased 5.5% in 1981 and 12.3% in 1980 over the comparable revenues for each preceding period. The increases were achieved primarily due to the combined effect of improved selling prices in the services business, increased sales volume and a more favorable product mix. Because of the complexity of the Company's products, the geographical dispersion of its foreign affiliates and the impact of fluctuating foreign exchange rates on its markets, the extent to which increases in total revenues during these years related to changes in volume, product mix or selling price cannot be precisely quantified. However, management believes volume and product mix played an important role as several domestic and international divisions attained higher unit volumes and increased market penetration with respect to major product lines.

Gross profit margins on sales and services were 40.2% in 1981 and 41.2% in 1980 and 1979, respectively. The decrease in the current year was caused primarily by the worldwide recession which has brought about an extremely competitive climate in the world marketplace, and the expensing of \$460,000 of start-up charges for the Company's new factory in Dundalk, Republic of Ireland, during the year. The effect of these factors was partially offset by an improvement in margins on service and leasing which increased to 30.3% compared with 28.4% a year earlier.

Selling, administrative and other expenses decreased 3.5% in 1981 and increased 21.1% in 1980. The 1981 decrease was the result of stringent cost controls and the strengthening of the U.S. dollar against European currencies. In 1980, the higher costs were the result of increased marketing costs due to the expanded order activity and the continued development in new geographic areas.

Research and development costs increased to over \$7.8 million in 1981, as compared to \$6.1 million in 1980 and \$6.3 million in 1979. These investments primarily reflect the Company's commitment to the expansion of its MICROtechnology lines in the wood products and decision support systems. This research and development investment represented 15.4% of sales revenues in 1981 as compared to 12.4% in 1980. Management anticipates that it will maintain this high level of investment in research and development in the future.

The effects of the Company's debt reduction program are reflected in the interest expense incurred. Total bank debt was reduced \$8.3 million in 1981, and a total of \$17.8 million for the three years ended in 1981. Although interest rates were at unusually high levels in these periods, the Company's interest cost decreased 3% in both 1981 and 1980.

The Company's effective tax rate was reduced to 26.9% in 1981 from 27.9% in 1980 and 34.6% in 1979. The 1981 reduction is primarily the result of not being required to provide taxes on the profits of our Irish manufacturing facility due to the tax holiday permitted by the government of the Republic of Ireland. The 1980 reduction was primarily the result of a favorable change in the tax law of the United Kingdom relating to the increases in inventories maintained within that country and the continued growth of our export shipments.

## Interim Financial Information (Unaudited)

The Company's unaudited quarterly results of operations for the years 1981 and 1980 were as follows:

	1981			
	First	Second	Third	Fourth
(\$ Thousands, except per share data)				
Operating revenues	\$25,890	\$26,802	\$26,996	\$28,845
Gross profit	10,999	10,796	10,696	11,122
Net income	603	743	814	1,010
Net income per share	.17	.21	.23	.29
Dividends per share	—	—	.05	.05
Market price range				
High bid	12¼	13¼	10¾	9¾
Low bid	9¼	10½	6¼	7¾

	1980*			
	First	Second	Third	Fourth
(\$ Thousands, except per share data)				
Operating revenues	\$23,316	\$26,035	\$25,808	\$27,751
Gross profit	9,772	11,018	10,158	11,451
Net income	477	482	612	661
Net income per share	.14	.14	.17	.19
Dividends per share	—	—	—	—
Market price range				
High bid	8½	8½	12¾	13¾
Low bid	4¾	4¾	8	10

\*Restated - Refer to Notes to Consolidated Financial Statements (Note 12)

The common stock of the Company is traded over-the-counter (OTC), under the stock symbol "ACRA". As of December 31, 1981, there were 3,376 stockholders of record.



# Directors and Officers

## Directors

**Edward McC. Blair**  
Senior Partner  
William Blair & Co.  
(Investment Banking)

**Christopher J. Campbell**  
Executive Vice President  
AccuRay Corporation

**Gordon B. Carson**  
Vice President  
Michigan Molecular Institute

**Henry R. Chope**  
Consultant

**John Eckler**  
Presiding Partner  
Bricker & Eckler  
(Attorneys at Law)

**William M. McLaughlin**  
President  
Venture Concepts, Inc.  
(Financial Consulting)

**Dr. David L. Morrison**  
President  
IIT Research Institute

**David L. Nelson**  
President  
AccuRay Corporation

**George F. Schlaudecker**  
Consultant

**Robert E. Swenson**  
Vice President - Finance  
AccuRay Corporation

**George B. Young**  
Director & Trustee  
Various Organizations

## Operating Officers of AccuRay Corporation and Subsidiaries

**William L. Adams**  
Senior Vice President

**William D. Bloebaum**  
Vice President-  
International Finance

**Walter H. Canter, Jr.**  
Vice President

**Maxwell L. Close**  
Vice President

**Donald D. Danison**  
Vice President

**Marc F. De Backer**  
Director, European Finance

**John E. DeWitt**  
Vice President

**Mark K. Duyck**  
International Controller

**John E. Eickelberg**  
Vice President

**David J. Foster**  
Vice President

**Ladd R. Grapski**  
Controller

**Herbert J. Kahn**  
Senior Vice President

**James D. Mitchell**  
Senior Vice President

**Dennis A. Orwig**  
Vice President

**Guy T. Pira**  
International Treasurer

**Ronald F. Shuff**  
Secretary and General Counsel

**Robert F. Zust**  
Treasurer

## Auditor

Arthur Andersen & Co.  
Columbus, Ohio 43215

## Transfer Agent

First National Bank of Chicago  
Chicago, Illinois 60670



## In Memorium

AccuRay Corporation deeply regrets the loss of Thomas F. Jones. The late Mr. Jones was a member of AccuRay's Board of Directors for six years.

## Registrar

Harris Trust and Savings Bank  
Chicago, Illinois 60690



William M. McLaughlin

George F. Schlaudecker

Gordon B. Carson



David L. Nelson

Robert E. Swenson

Christopher J. Campbell



Henry R. Chope

John Eckler



Dr. David L. Morrison

George B. Young

Edward McC. Blair



# AccuRay Corporation Principal Offices

## Corporate Headquarters and Manufacturing

650 Ackerman Rd.  
Columbus, Ohio 43202

## Manufacturing

Finnabair Industrial Park  
Dundalk  
County Louth  
Republic of Ireland

## Worldwide Offices

### Argentina:

Maipu 812 Piso 3 Office L  
1006 Buenos Aires

### Australia:

Riverside House  
2 Normanby Road  
South Melbourne VIC 3205

### Benelux Countries:

Genevestraat 10  
1140 Brussels

### Brazil:

Rua Beneficencia Portuguesa, 24  
S/411  
CEP 01033  
Sao Paulo

### Canada:

1890 Beaulac  
Ville St. Laurent  
Quebec H4R 1R9

### Finland:

Salomonkatu 17 B 6  
00100 Helsinki 10

### France:

8, Rue Auguste-Renoir  
78400 Chatou

### Germany:

52 Siegburg  
Holzgasse 29-33

### Italy:

Via A. Volta 16  
20093 Cologno Monzese (Milano)

### Japan:

New Kudan Building No. 7  
3-Chome Kanda-Jimbocho  
Chiyoda-ku  
Tokyo

### Mexico:

Avenida de las Palmas 731-704  
Piso 7  
Lomas de Chapultepec  
Mexico 10 D.F.

### New Zealand:

Suite 2A  
40 Eruera Street  
P.O. Box 1643  
Rotorua

### Singapore:

2316 International Plaza  
23rd Floor, Anson Road  
Singapore 0207

### South Africa:

7th Floor  
Standard Bank Building Arcade  
4th Street Springs  
Johannesburg

### Spain:

C/Milanesado 21-23  
Barcelona 17

### Sweden:

Bergshojden 32  
Box 7102  
S-17207 Sundbyberg

### United Kingdom:

Langwood House  
63-81 High Street  
Rickmansworth (London)  
Hertfordshire WD3 1EQ

### United States:

Suite 180  
2970 Cottage Hill Road  
Mobile, Alabama 36606

Suite 303  
Suffield Center  
Suffield, Connecticut 06078

4800 S.W. Macadam Avenue  
Suite 240  
Portland, Oregon 97201

Piedmont Center Building  
33 Villa Road, Suite 400A  
Greenville, South Carolina 29615

711 North Lynndale Drive  
Appleton, Wisconsin 54914





The Quality Company

