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ANNUAL REPORT 2001

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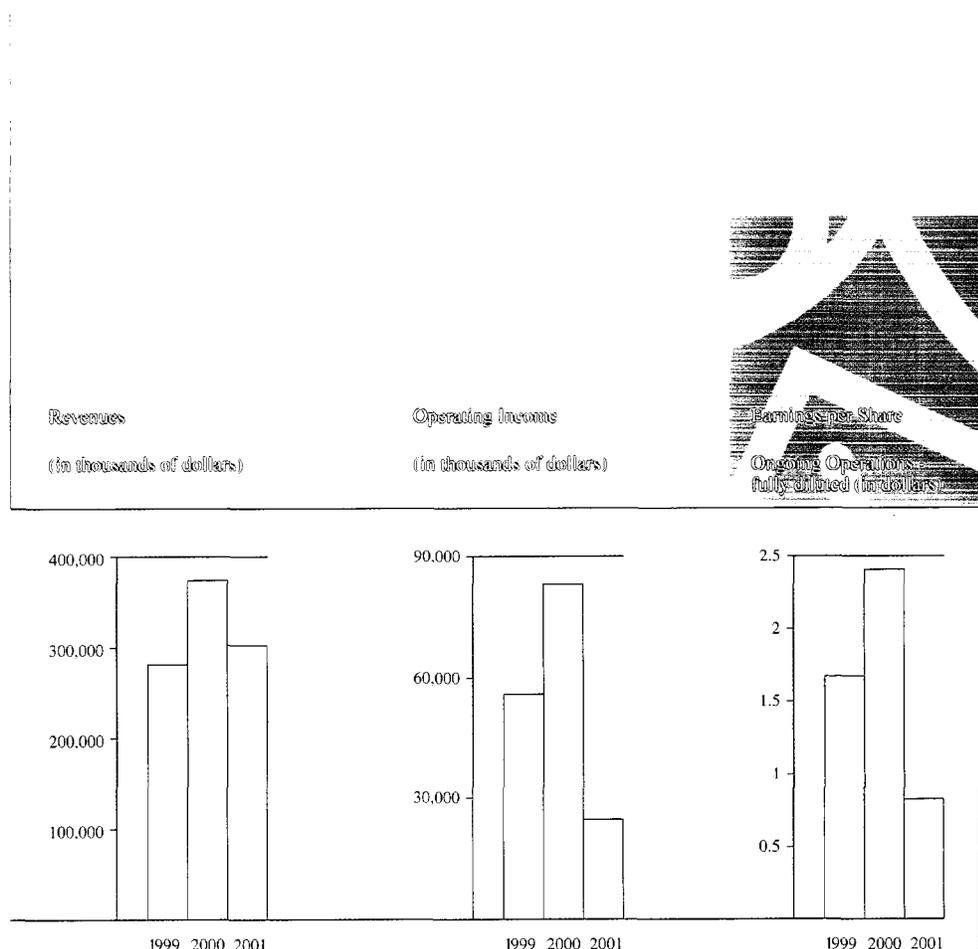
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 **Orbotech**®

## ABOUT THE COMPANY

Orbotech is a world leader in providing advanced technology solutions used by electronics manufacturers to facilitate the highest quality production of both bare and assembled printed circuit boards (PCBs), flat panel displays (FPDs) and integrated circuits. The Company's innovative automated optical inspection (AOI), imaging and computer-aided manufacturing (CAM) technologies enable customers to achieve the increased yields and throughput essential to remaining at the forefront of electronics production. Of Orbotech's employees, more than one quarter are scientists and engineers, who integrate their multi-disciplinary knowledge, talents and skills to develop and provide hi-tech solutions and technologies designed to meet customers' long-term needs. Orbotech maintains its headquarters and its primary research, development and manufacturing facilities in Israel, and more than 50 offices worldwide. The Company's extensive network of marketing, sales and customer support teams throughout the Pacific, Japan, North America and Europe, deliver its knowledge and expertise directly to customers the world over.

For more information visit  
[www.orbotech.com](http://www.orbotech.com).



	2001	2000	1999
<b>Income Statement</b> (in thousands of dollars, except earnings per share data)			
Revenues	301,904	372,341	278,426
Operating income – ongoing operations	24,896	82,720	56,016
Net income – ongoing operations	26,852	79,073	53,140
Net Income – as reported	1,862	79,073	53,140
Earnings per share – ongoing operations – fully diluted	0.82	2.40	1.66
Earnings per share – as reported - fully diluted	0.06	2.40	1.66
<b>Financial Position</b> (in thousands of dollars)			
Working capital	255,654	248,866	187,921
Total debt	14,173	723	1,797
Total stockholders equity	308,596	300,021	231,695
Number of employees at year end	1,642	1,747	1,396

## **To Our Shareholders and Friends:**

2001 was a particularly difficult and challenging year, not only for Orbotech but also for electronics component and production equipment manufacturers generally, as the global electronics industry continued to contend with the effects of depressed economic activity, resulting in further uncertainty and unsettled business confidence worldwide.

For the Company, this translated into sharply reduced revenues and gross margins, as well as an operating loss, for the year. Our revenues for the fiscal year ended December 31, 2001 totaled \$301.9 million compared with \$372.3 million in 2000—a decrease of 19%. Net income for 2001, excluding certain special charges totaling \$25.0 million, net of taxes, was \$26.9 million, or \$0.82 per share (diluted) under U.S. GAAP, compared with net income of \$79.1 million, or \$2.40 per share (diluted), for 2000. Including special charges, net income for 2001 was \$1.9 million, or \$0.06 per share (diluted).

Faced with this testing economic reality in 2001 that has extended into the second quarter of 2002, the Company has implemented a number of expense containment measures designed to align its cost structure to the lower level of demand for its products. These have included a reduction in the Company's worldwide workforce, from a peak of about 1,900 employees in August 2001 to approximately 1,500 employees at the end of April 2002, the freezing of management salaries at their 2000 levels in March 2001, followed by two subsequent management salary reductions of 10% each, in August 2001 and February 2002, a Company-wide reduction in employee salaries in February 2002, the rationalization of certain manufacturing and operational activities and generally lower discretionary spending. As always, the Company continues to monitor its inventory levels very closely.

At present, the Company is continuing to experience reduced revenues and profit margins from sales of its PCB-AOI equipment. This is due primarily to the product mix, the current trend of which is toward less expensive, lower-end and lower profit margin systems, rather than the Company's more sophisticated, high-end, more expensive products. The Company is also adversely affected by the general decline felt by our customers in their own businesses and profitability, which is characterized by capacity underutilization, excess inventories and the accompanying difficulty which they are experiencing in predicting the levels of future orders for their products. This is reflected in the Company's own significantly reduced "visibility" in receipt of orders.

On a more positive note, revenues from the sale and service of FPD equipment in 2001 increased to \$69.4 million from \$65.1 million in 2000, reflecting a limited increase in capital expenditures, mainly by FPD manufacturers investing in new technologies such as Low Temperature Polysilicon and so-called "fifth generation" glass sizes. These additional capital investments served, in part, to offset reduced demand for some of the Company's other FPD-AOI products caused by excess FPD production as a result of the extensive investments made by manufacturers during 2000, especially in FPDs for desktop monitor applications. Revenues from the sale and service of AOI systems for assembled PCBs rose to \$24.5 million from \$23.4 million in 2000. Though relatively modest, this increase reflects a still growing recognition of the importance of AOI in the assembled board manufacturing process, tempered by some hesitancy on the part of manufacturers in making additional capital investments under prevailing economic conditions. Furthermore, during 2001 the Company's direct imaging manufacturing equipment continued to gain wider acceptance throughout the PCB industry, demonstrating the significant benefits which this enabling technology offers to the PCB manufacturing process. Geographically, the Company experienced relative stability in Europe and Japan, but a significant reduction in revenues from North America and Taiwan.

During 2001, as part of Orbotech's systematic approach to long-term diversification and growth, the Company established a corporate venture fund, Orbotech Technology Ventures Limited Partnership, to develop and expand opportunities for growth and further strengthen the Company's overall position within the electronics industry. The fund will provide financing to companies that have technologies or products complementary to ours and which may, therefore, provide benefits to the Company's long-term business strategy, and has already made several investments.

Although overall demand for the Company's PCB-AOI equipment has slowed significantly in the last year, reflecting economic conditions prevailing during 2001 and the first part of 2002, certain of the Company's customers are expressing a cautious optimism in respect of the second half of 2002 and slightly more confidence in respect of 2003, particularly concerning the FPD industry. Nevertheless, the large number of underutilized systems held by bare PCB manufacturers, combined with the Company's position as a producer of support solutions for the supply chain of the electronics industry, can be expected to mean that even when overall business and economic conditions do improve there will still be some delay before the effects of such improvement begin to be felt in parts of the Company's business.

Electronics component manufacturers have always been keenly aware of the need for yield-improving manufacturing process efficiencies, and have for many years relied strongly upon our sophisticated technologies and comprehensive customer support services. We believe that as these manufacturers strive to meet the considerable challenges posed in an increasingly demanding, and economically difficult, business environment, our strengths will be more germane than ever. We remain confident that Orbotech's products and services will continue to be of significant value to these industries and, above all, that our core technologies, our ongoing emphasis on research and development, our worldwide customer support network and our strong financial condition will stand us in good stead during this difficult period and enable us to emerge from it in an even stronger position.

Amidst challenging economic and other conditions affecting Orbotech and the environments in which it operates, we are especially grateful this year to our employees, their families, our colleagues and our shareholders for their ongoing support.



Dr. Shlomo Barak  
Chairman of the Board



Mr. Yochai Richter  
President and Chief Executive Officer

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
WASHINGTON, D.C. 20549

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**FORM 20-F**

REGISTRATION STATEMENT PURSUANT TO SECTION 12 (b) OR (g) OF THE  
SECURITIES EXCHANGE ACT OF 1934

OR

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2001

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934

For the transition period from                      to

Commission File Number 2-92065

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**ORBOTECH LTD.**

(Exact name of Registrant as specified in its charter and translation of Registrant's name into English)

ISRAEL

(Jurisdiction of incorporation or organization)

SANHEDRIN BOULEVARD, NORTH INDUSTRIAL ZONE, YAVNE 81102, ISRAEL

(Address of principal executive offices)

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Securities registered or to be registered pursuant to Section 12(b) of the Act:

NONE

Securities registered or to be registered pursuant to Section 12(g) of the Act:

ORDINARY SHARES, NIS 0.14 NOMINAL (PAR) VALUE

(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

NONE

As of December 31, 2001, the Registrant had outstanding 31,751,560 Ordinary Shares(1), NIS 0.14 Nominal (par) Value(2)

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark which financial statement item the Registrant has elected to follow. Item 17   
Item 18

(1) Does not include a total of 7,645,589 Ordinary Shares, 5,160,746 of which were subject to outstanding stock options granted pursuant to the Company's stock option plans (777,363 of which had vested) and 2,484,843 of which (including 344,481 that had been designated but not yet priced) remained available for future option grants pursuant to such plans, both as of December 31, 2001, comprised of:

- (a) 1,163,537 Ordinary Shares issuable pursuant to options under the Company's Israeli Key Employee Share Incentive Plan (1992) (As Amended, 1994, 1996, 1997, 1998, 1999) (the "1992 Plan"), of which:
  - (i) 1,079,481 Ordinary Shares were subject to options that had been granted to employees (of which 362,244 had vested); and
  - (ii) 84,056 Ordinary Shares remained available (none of which had been designated) for future option grants pursuant to the 1992 Plan;
- (b) 3,157,677 Ordinary Shares issuable pursuant to options under the Company's 1995 Incentive Stock Plan for Key Employees of Orbotech Ltd.'s Subsidiaries (As Amended, 1997, 1998, 1999, 2000, 2001) (the "1995 Plan"), of which:
  - (i) 1,856,903 Ordinary Shares were subject to options that had been granted to employees (of which 399,181 had vested); and
  - (ii) 1,300,774 Ordinary Shares (including 126,588 that had been designated but not yet priced) remained available for future option grants pursuant to the 1995 Plan;
- (c) 24,375 Ordinary Shares issuable pursuant to an option granted to a consultant to the Company under the Stock Option Plan for Consultants of Orbotech Ltd. (1998) (the "1998 Plan"), which had vested as to 15,938 Ordinary Shares; and
- (d) 3,300,000 Ordinary Shares issuable pursuant to options under the Company's Employee Share Ownership and Option Plan (2000) (the "2000 Plan"), of which:
  - (i) 2,199,987 Ordinary Shares were subject to options that had been granted to employees (of which none had vested); and
  - (ii) 1,100,013 Ordinary Shares (including 217,893 that had been designated but not yet priced) remained available for future option grants pursuant to the 2000 Plan.

Also does not include 483,000 Ordinary Shares purchased by the Company during 2000 and held as treasury shares under Israeli law. For as long as such Ordinary Shares are owned by the Company they have no rights and, accordingly, are neither eligible to participate in or receive any dividends nor are they entitled to participate in, be voted at or be counted as part of the quorum for any meetings of shareholders of the Company.

(2) Unless otherwise stated, all earnings per share, share and option data presented in this Annual Report on Form 20-F have been adjusted to give effect to the issues of bonus shares (equivalent to three-for-two splits) undertaken by the Company in November 1999 and September 2000 (see Item 4—Information on the Company—History and Development of the Company).

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## **Introduction**

This Annual Report on Form 20-F relates to the Ordinary Shares New Israeli Shekels 0.14 nominal (par) value ("**Ordinary Shares**") of Orbotech Ltd. (the "**Company**" or "**Orbotech**"). In this Annual Report, references to the Company are, unless the context otherwise requires, intended to be to the Company and its consolidated subsidiaries.

Orbotech is engaged in the design, development, manufacture and marketing of production support solutions for the supply chain of the electronics industry, principally for printed circuit boards ("**PCB**")s and flat panel displays ("**FPD**")s). The Company's products include automated optical inspection ("**AOI**") systems for bare and assembled PCBs and for FPDs, and imaging solutions for PCB production. In addition, the Company markets computer aided manufacturing ("**CAM**") solutions for PCB production and is continuing to develop its proprietary technologies for use in other applications both within and outside the electronics industry. The Company also derives a significant portion of its revenues from the service and support of its systems.

## **Cautionary Statement Regarding Forward-Looking Information**

This Annual Report may contain certain forward-looking statements and information with respect to the business, financial condition, results of operations, plans, objectives and competitive position of the Company, which statements can often be identified by the use of forward-looking terminology such as "believes", "expects", "may", "will", "should" or "anticipates", the negatives thereof or other variations thereon or comparable terminology, or by discussions of strategy. Such statements include, but are not limited to, certain statements appearing in Item 3D—Key Information—Risk Factors; Item 4—Information on the Company and Item 5—Operating and Financial Review and Prospects regarding trends in the electronics and other industries relevant to the Company, revenues, net income, industry size, competitive position, market demands, volumes, prices, margins, research and development, capital expenditures, patents, the effect of technological developments, strategy and management objectives, opinions and outlook for 2002 and beyond, and are derived from beliefs and assumptions of the Company's management based, in part, upon information currently available to the Company. Such statements reflect the present views of the Company with respect to market conditions and future events and are inherently subject to various risks, uncertainties and other factors which may affect the ability of the Company to implement its business strategy and/or may cause actual results to differ materially from those contemplated by the statements expressed herein. These risks, uncertainties and factors include, but are not limited to, the timing and strength of new product offerings, pricing strategies of the Company and its competitors, mix of product and service revenues, introduction of competing products by other companies, lack of acceptance of new products and services by the Company's targeted customers, changes in the Company's business strategy or those of its competitors, the Company's ability to continue to receive adequate raw materials from its suppliers on acceptable terms (or at all) or to continue to meet its liquidity needs, changes in the political and regulatory framework in which the Company operates or in economic or technological trends or conditions, including currency fluctuations, inflation and consumer confidence, on a global, regional or national basis.

Many of the above factors are beyond the control of the Company and almost all of them are difficult or impossible to predict with accuracy. Therefore, the Company wishes to caution each reader of this Annual Report to consider carefully these, as well as any other specific factors discussed with each forward-looking statement in this Annual Report and as may be disclosed in the Company's other filings with the Securities and Exchange Commission (the "**SEC**"). For more information regarding some of the above factors, see Item 3—Key Information—Risk Factors.

To the extent that this Annual Report contains forward-looking statements (as distinct from historical information) the Company desires to take advantage of the safe harbor provisions of the United States Private Securities Litigation Reform Act of 1995 and is therefore including this statement for the express purpose of availing itself of the protections of the safe harbor with respect to all forward-looking statements. Furthermore, the Company does not assume any obligation to update any forward looking statements contained herein.

PART I

Item 1. *Identity of Directors, Senior Management and Advisers*

*1.A Directors and Senior Management*

Not applicable in Annual Report on Form 20-F.

*1.B Advisers*

Not applicable in Annual Report on Form 20-F.

*1.C Auditors*

Not applicable in Annual Report on Form 20-F.

Item 2. *Offer Statistics and Expected Timetable*

*2.A Offer Statistics*

Not applicable in Annual Report on Form 20-F.

*2.B Method and Expected Timetable*

Not applicable in Annual Report on Form 20-F.

Item 3. *Key Information*

*3.A Selected Financial Data*

(in thousands except per share data)

The consolidated statement of operations data set forth below with respect to the years ended December 31, 1999, 2000 and 2001, and the consolidated balance sheet data as of December 31, 2000 and 2001, have been derived from the Consolidated Financial Statements listed in Item 18, which have been prepared in accordance with generally accepted accounting principles ("GAAP") in Israel and audited by Kesselman & Kesselman ("Kesselman"), independent certified public accountants in Israel and a member of PricewaterhouseCoopers International Limited. As applicable to the Company's financial statements, Israeli GAAP vary in certain aspects from U.S. GAAP as described in Note 14 to the Consolidated Financial Statements listed in Item 18. The consolidated statement of operations data for the years ended December 31, 1997 and 1998, and the consolidated balance sheet data at December 31, 1997, 1998 and 1999, have been derived from other consolidated financial statements not included herein. The selected consolidated financial data set forth below should be read in conjunction with Item 5—Operating and Financial Review and Prospects, and the Consolidated Financial Statements listed in Item 18.

### Statement of Operations Data:

	Year Ended December 31,				
	1997	1998	1999	2000	2001
Revenues .....	\$190,803	\$231,827	\$278,426	\$372,341	\$301,904
Cost of revenues:					
Cost (1) .....	95,451	114,823	135,622	175,143	159,461
Write down of inventories .....	—	—	—	—	7,013(2)
Total cost of revenues (1) .....	95,451	114,823	135,622	175,143	166,474
Gross profit (1) .....	95,352	117,004	142,804	197,198	135,430
Research and development costs:					
Expenses incurred .....	27,130	30,468	32,584	42,237	50,047
Less—government participations (3) .....	5,681	4,542	601	140	—
Net research and development costs .....	21,449	25,926	31,983	42,097	50,047(4)
Selling, general and administrative expenses (1) .....	34,555	43,200	51,031	67,823	61,444
Amortization of goodwill and other intangible assets .....	1,986	2,794	3,774	4,558	7,291
Restructuring costs .....	—	—	—	—	6,149(5)
Settlement with the Government of Israel in respect of research and development grants received (1) .....	—	—	—	—	14,173(3)
Operating income (loss) .....	37,362	45,084	56,016	82,720	(3,674)
Financial income—net .....	1,664	4,207	4,584	7,957	4,533
Other income (expense)—net .....	89	(11,992)(6)	51	48	28
Income before taxes on income .....	39,115	37,299	60,651	90,725	887
Taxes on income .....	4,964	4,898	7,879	10,838	(975)
Income from operations of the Company, its subsidiaries and its partnerships .....	34,151	32,401	52,772	79,887	1,862
Minority share in losses (profits) of consolidated partnerships .....	463	(263)	368	(814)	—
Net income under Israeli GAAP .....	34,614	32,138	53,140	79,073	1,862
Earnings per share under Israeli GAAP:					
basic and diluted .....	\$ 1.12	\$ 1.00	\$ 1.63	\$ 2.44	\$ 0.06
Net income under U.S. GAAP .....	34,614	32,138	53,140	79,073	2,031
Earnings per share under U.S. GAAP:					
basic .....	\$ 1.17	\$ 1.07	\$ 1.72	\$ 2.51	\$ 0.06
diluted .....	\$ 1.12	\$ 1.02	\$ 1.66	\$ 2.40	\$ 0.06
Weighted average number of shares used in computation of earnings per share under U.S. GAAP:					
basic .....	29,482	30,203	30,866	31,566	31,819
diluted .....	30,845	31,413	31,962	32,932	32,871

Balance Sheet Data:

	December 31,				
	1997	1998	1999	2000	2001
Working capital .....	\$115,113	\$142,894	\$187,921	\$248,866	\$255,654
Total assets .....	189,886	240,336	304,262	410,300	395,442
Long-term debt (net of current maturities) .....	3,073	2,088	770	—	11,338(3)
Capital stock .....	67,032	69,532	75,905	87,482	94,195
Shareholders' equity under Israeli GAAP .....	137,544	169,405	231,695	300,021	308,596
Shareholders' equity under U.S. GAAP .....	137,544	169,405	231,695	300,021	308,969

- (1) In accordance with Israeli GAAP, selling, general and administrative expenses in 1997 through 2001 includes \$3.7 million, \$4.7 million, \$5.9 million, \$7.1 million and \$2.8 million, respectively, of royalties paid to the Government of Israel as described in note (3). Under U.S. GAAP these amounts would instead have been included in cost of revenues. In addition, under U.S. GAAP the amount of \$14.2 million relating to the settlement in 2001 with the Government of Israel in respect of research and development grants would also have been included in cost of revenues. As a result, total cost of revenues under U.S. GAAP in 1997 through 2001 would have been \$99.2 million, \$119.5 million, \$141.5 million, \$182.2 million and \$183.5 million, respectively, and gross profit under U.S. GAAP would have been \$91.6 million, \$112.3 million, \$136.9 million, \$190.1 million and \$118.4 million, respectively.
- (2) The write down of inventories of \$7.0 million in 2001 relates to excess inventories of raw materials for certain of the Company's PCB inspection products.
- (3) A portion of the Company's research and development costs has in the past been funded by the Government of Israel, through the Office of the Chief Scientist, Ministry of Industry and Trade (the "OCS"), in the form of royalty-bearing participations. These amounts were deducted from the related research and development expenditures as incurred. During 1999, the Company decided to phase out Israeli Government participation in its research and development activities. In December 2001, the Company reached an agreement with the OCS pursuant to which it will pay the sum of \$14.2 million to the Government of Israel in settlement of all royalties arising from sales after June 30, 2001 with respect to previous OCS grants to the Company. The Company currently intends to make this payment in equal annual installments over five years commencing in 2002. This agreement will also enable Orbotech to participate in a new OCS program under which it will be eligible to receive future research and development grants without any royalty obligations. See Item 4—Information on the Company; Item 5—Operating and Financial Review and Prospects—Research and Development Policy—Results of Operations and Notes 1j and 7a(1) to the Consolidated Financial Statements listed in Item 18.
- (4) Net research and development costs for the year ended December 31, 2001 included \$1.2 million in consideration for co-operation on joint research and development projects between the Company and Jenoptik AG ("Jenoptik"), a large, diversified German holding company engaged, in part, in high-end optics technology. This was effected by the issuance of 67,500 Ordinary Shares to Deutsche Effecten-und Wechsel-Beteiligungsgesellschaft AG ("DEWB"), an affiliate of Jenoptik.
- (5) The restructuring charge of \$6.1 million in 2001 relates to reductions in the Company's workforce and the rationalization of certain of its manufacturing and operating activities in light of the global downturn in the electronics industry. See Item 5—Operating and Financial Review and Prospects—Year Ended December 31, 2001 Compared To Year Ended December 31, 2000; and note 13d to the Consolidated Financial Statements listed in Item 18.
- (6) Other income (expenses)—net in 1998 includes a one-time charge of \$12.0 million, or \$0.38 per share, diluted (\$0.40 per share, basic), relating to settlement of the patent litigation between the Company and KLA-Tencor Corporation ("KLA") arising out of a suit filed by KLA in 1990 against Orbot Systems Ltd. ("Orbot").

No cash dividends have been paid by the Company in the last five years.

### **3.B Capitalization and Indebtedness**

Not applicable in Annual Report on Form 20-F.

### **3.C Reasons for the Offer and Use of proceeds**

Not applicable in Annual Report on Form 20-F.

### **3.D Risk Factors**

Investors, holders and prospective purchasers of Ordinary Shares and other persons reading this Annual Report should, in addition to having due regard to the Cautionary Statement Regarding Forward-Looking Information noted above, also give consideration to the information set forth below and elsewhere in this Annual Report concerning risks and uncertainties in connection with any investment in the Company's Ordinary Shares:

#### **(a) Dependence on the Worldwide Electronics Industry**

Substantially all of the Company's products are used in manufacturing processes employed in the production of virtually all major electronic products, particularly those associated with the computer and telecommunications industries. As such, the Company depends very significantly upon the strength of the worldwide electronics industry, and in particular upon the need by electronics component manufacturers to make continuing capital investments in systems and products, such as those marketed and sold by the Company, for use in their production and manufacturing processes. This need is a reflection, in turn, of the worldwide level of demand for the products and devices produced by these electronics component manufacturers. Demand for consumer end-products is normally a function of the prevailing global or regional economic environment and is negatively affected in circumstances of a general economic slow-down such as that which began in the late part of 2000.

Demand for the Company's products is also created, in part, by technological developments affecting product functionality or giving rise to new or enhanced products, and which therefore generate an ongoing need on the part of electronics component manufacturers for production solutions of the type which the Company's systems provide. Should changes in these technologies not continue to occur, or if there were to emerge other technologies, such as those which may reduce or even obviate the need for the use of PCBs and FPDs in electronic devices, this could have the effect of reducing overall demand for the Company's products.

There can be no assurance as to the future levels of demand for electronic products and devices and, correspondingly, as to the demand which may exist for PCBs or FPDs and, in turn, for the Company's products. These factors, coupled with the Company's restricted ability to reduce its expenses due to the ongoing need for investment in research and development and to maintain the Company's worldwide customer and support operations, could, in circumstances of reduced overall demand for electronic devices using PCBs and FPDs, have a material adverse effect on the Company's business and results of operations as occurred during 2001.

#### **(b) The Cyclical Nature of the PCB and FPD Industries**

The Company depends significantly upon the PCB and FPD industries which have in the past been, and today remain, cyclical in nature, and which have experienced periodic downturns, most recently in 2001. The Company's business relies in considerable part upon capital investments and the availability of capital resources by manufacturers of bare and assembled PCBs and manufacturers of FPDs, which may vary based on current and anticipated levels of supply and demand for end products using PCBs and FPDs. The strength of the PCB and FPD industries reflects the global or regional economic environment and may be negatively affected in circumstances of a general economic slow-down and, in particular, a slow-down in the computer or communications industries such as has been experienced in 2001 and 2002. There can be no assurance that this demand or such capital resources will exist in the future, or if so at what levels. In addition, in the case of its AOI systems for bare and assembled PCBs, the Company does not normally have a substantial volume of unfilled

orders, and products are generally shipped to customers within a relatively short time after receipt of orders. As a result, the Company's ability to foresee possible future reductions in the total volume of such orders may be limited. Reduced demand for PCBs or FPDs, resulting in reduced demand for the inspection and other systems and products developed and sold by the Company, coupled with the Company's restricted ability to reduce its significant research and development and worldwide customer and support operations expenditures, could have a material adverse effect on the Company's business and results of operations as occurred during 2001 and the beginning of 2002. For further information see Item 4—Information on the Company—Business Overview—The PCB Industry; The FPD Industry; and Item 5—Operating and Financial Review and Prospects—Year Ended December 31, 2001 Compared To Year Ended December 31, 2000; Trend Information.

*(c) The Company's Location in Israel*

The Company is incorporated under the laws of the State of Israel and its headquarters and primary research, development and production facilities are located in Israel. As such, the Company is directly influenced by political, economic and military conditions affecting Israel. Any major hostilities involving Israel, a substantial decline in the prevailing regional security situation or the interruption or curtailment of trade between Israel and its present trading partners could have a material adverse effect on the Company's operations. In addition, the Company benefits from certain Israeli Government programs and tax legislation, particularly regarding its production facilities in Israel. The loss of such benefits could have a material adverse effect on the Company's business, financial condition and results of operations. For further information see Item 4—Information on the Company—Additional Considerations Relating to the Company's Operations in Israel.

*(d) Competition; Rapid Technological Change*

Although the Company is a world leader in the design, development, manufacture and marketing of AOI systems for bare PCBs and for FPDs and of imaging solutions for PCB production, it faces competition from a number of companies which either produce or are developing such systems. In addition, there exist a relatively large number of companies which develop and provide AOI solutions for manufacturers of assembled PCBs, resulting in a strong competitive environment in which the Company's success may be adversely affected by any failure of the Company to develop and market, in a timely manner, AOI solutions offering superiority of performance and handling, or to offer consistent and effective service and support of those systems to its customers.

The Company's competitors in all product lines can be expected to continue to improve the design and performance of their products and to introduce new products with more competitive prices and performance features. Although the Company attempts to maintain its competitive position through its policy of substantial investment in research, development, marketing and operations, there can be no assurance that the Company will be able to continue to make such investments or that the Company will be able to achieve in a timely manner the technological advances necessary to develop new products and product enhancements to meet rapid change in manufacturing technologies required for PCBs and FPDs in order to maintain its current competitive position.

For further information see Item 4—Information on the Company—Business Overview—Competition.

*(e) Operation in International Markets*

The Company anticipates that, as in the past, sales of products and services outside Israel will continue to account for virtually all of its revenues. In 2001, approximately 69% of the Company's revenues from equipment sales were derived from sales in the Far East, including approximately 24% from sales in Taiwan, 20% from sales in Japan and 15% from sales in China. The risks and complexities inherent in doing business in international markets, including those associated with the possibility of a concentration of sales within a particular country or region, the imposition of governmental controls and local standards, the need to comply with a wide variety of foreign and domestic export laws, political and economic instability (including in certain countries in the Far East), trade restrictions, changes in tariffs and taxes, longer payment cycles usually

characteristic of international sales and the general difficulties associated with administering business overseas, as well as overall economic conditions, may operate to have a material adverse effect on the Company's business, financial condition and results of operations (see also Item 4—Information on the Company—Marketing, Sales and Support; and Item 5—Operating and Financial Review and Prospects—Impact of Inflation and Currency Fluctuations; Effective Corporate Tax Rate; Geographical Analysis; Worldwide Economic Situation; Cost of Revenues).

*(f) Ability to Obtain and Retain Qualified Staff*

The Company's success depends, in significant part, upon its continuing ability to attract and retain highly qualified managerial, scientific, technical, sales and marketing personnel. Demographic trends, non-availability of appropriately qualified and skilled employees, competition within Israel for the services of highly specialized computer software programmers and hardware engineers, financial market conditions and future business decisions of the Company and its competitors may all operate in a manner detrimental to the Company, thereby having a material adverse effect on the Company's business and results of operations (see Item 4—Information on the Company—Strategy; Competition; Item 5—Operating and Financial Review and Prospects—Impact of Inflation and Currency Fluctuations; Geographical Analysis; Worldwide Economic Situation; Cost of Revenues; and Item 6—Directors, Senior Management and Employees—Employees).

*(g) Intellectual Property Protection*

The Company's future success and its competitive position are dependent in significant part upon the Company's proprietary technology, and the Company relies on patent, trade secret, trademark and copyright law, as well as technical safeguards and non-disclosure agreements with its employees, subcontractors and potential business associates, to protect its intellectual property. There can be no assurance that the Company will be able to protect its technology, or that others will not develop technologies that are similar or superior to the Company's technology, duplicate the Company's technology, design around the patents or other proprietary rights held by the Company or breach these agreements. For further information see Item 5—Operating and Financial Review and Prospects—Research and Development, Patents and Licenses, etc.

*(h) Foreign Currency Fluctuations*

In 1999, 2000 and 2001, approximately 25%, 27% and 32%, respectively, of the Company's revenues, and approximately 51%, 49% and 48%, respectively, of the Company's expenses, were denominated in currencies other than the United States dollar (the "Dollar" or "\$"). Because the Company's financial results are reported in Dollars, fluctuations in the rates of exchange between the Dollar and non-Dollar currencies may have an adverse effect on the Company's results of operations. Accordingly, an increase in the value of a particular currency relative to the Dollar will increase the Dollar reporting value for transactions in such currency, and a decrease in the value of a particular currency relative to the Dollar will decrease the Dollar reporting value for such transactions. This effect on the Dollar reporting value for transactions is only partially offset by the impact that such fluctuations may have on the Company's non-Dollar costs. The Company may, from time to time, take various measures designed to hedge, in part, its exposure to these effects. There can be no assurance that foreign currency fluctuations will not have a material adverse effect on the Company's financial condition and results of operations. See Item 5—Operating and Financial Review and Prospects—Impact of Inflation and Currency Fluctuations; Liquidity and Capital Resources and Notes 10 and 11 to the Consolidated Financial Statements listed in Item 18 and Item 11—Quantitative And Qualitative Disclosures About Market Risk.

*(i) Dependence upon Key Suppliers*

Certain key components and subassemblies included in the Company's systems are purchased from a single or limited group of suppliers. Should any of these suppliers be unable to meet the Company's requirements in a timely manner, or should the Company otherwise experience an interruption in supply from any of these

sources, the possible resulting late deliveries of the Company's products and services may have an adverse effect on the Company's results of operations. Although the Company generally maintains an inventory of critical components used in the manufacture and assembly of its systems, there can be no assurance that such supplies will be sufficient to avoid potential delays. For further information see Item 4—Information on the Company—Production and Sources of Supply.

#### Item 4. *Information on the Company*

##### *4.A History and Development of the Company*

###### *(a) Corporate History*

The Company was incorporated in Israel, as a company limited by shares, on February 8, 1981 under the name "Optrotech Ltd." pursuant to the provisions of the then current Israeli Companies Ordinance. The legislative framework within which the Company now operates is the Israeli Companies Law, 5759-1999 (the "Companies Law"), which became effective on February 1, 2000, and the Israeli Companies Ordinance (New Version) 1983, as amended (the "Companies Ordinance").

In August 1984, the Company made an initial public offering of its Ordinary Shares in the United States. The Ordinary Shares are listed on the Nasdaq National Market ("Nasdaq") and are traded under the symbol ORBK.

On August 17, 1992, the Company entered into a Share Exchange Agreement and Plan of Merger (the "Merger Agreement") with Orbot, a private Israeli company which was engaged primarily in the design, development, manufacture and marketing of AOI systems for use in the manufacture of bare PCBs, the then principal shareholders of the Company and all of the then shareholders of Orbot (the "Former Orbot Shareholders"), pursuant to which the Former Orbot Shareholders, on October 27, 1992, transferred all of their shares and all outstanding options to purchase or acquire shares in Orbot to the Company in exchange for a sufficient number of Ordinary Shares and options to purchase Ordinary Shares so that, following consummation of the transaction, the Former Orbot Shareholders owned 50% of the issued and outstanding share capital of the Company on a fully diluted basis (giving effect to certain post-closing adjustments). The Merger Agreement also provided for the merger of Orbot with and into the Company, in such manner that the Company would be the surviving entity (the "Merger").

Pursuant to the Merger Agreement the Company changed its name to Orbotech Ltd., effective as of October 27, 1992. The Merger was approved by the Tel Aviv-Jaffa District Court effective as of January 1, 1993.

On November 1, 1999, the board of directors of the Company (the "Board of Directors") approved the allotment as bonus shares, to each shareholder of record entitled thereto at the close of business on November 12, 1999, of one additional Ordinary Share for every two Ordinary Shares held at the close of business on that date. On August 1, 2000, the Board of Directors approved the allotment as bonus shares, to each shareholder of record entitled thereto at the close of business on September 8, 2000, of one additional Ordinary Share for every two Ordinary Shares held at the close of business on that date.

###### *(b) Major Business Developments*

The Company's business initially centered upon the design, development, manufacture, marketing and service of AOI systems for use in the manufacture of bare PCBs, and since the Merger the Company has been the world's leader in providing such systems. However, since 1991, the Company has also been engaged in the design, development, manufacture, marketing and service of AOI systems for use in the manufacture of FPDs and, since 1997, in the design, development, manufacture, marketing and service of AOI systems for use in the manufacture of assembled PCBs.

In 1991, the Company commenced the design, development, manufacture, marketing and service of FPD-AOI systems and has since become the leading provider of such systems to FPD manufacturers. FPDs may be based on differing technologies including electroluminescent AC/DC plasma, field emissive and passive and active matrix liquid crystal. To date, the Company has been engaged in the development, manufacture, marketing and service of AOI systems for liquid crystal display (“LCD”), field emissive display (“FED”) and organic light emitting diode (“OLED”) FPDs only.

In 1999, the Company acquired all the outstanding shares of KLA Acrotec Co. Ltd. (which was later renamed Orbotech Display Pacific Ltd. (“ODP”)), a Japanese company then also engaged in the design, development, manufacture and marketing of FPD-AOI systems. ODP has subsequently been merged with and into the Company’s wholly-owned subsidiary, Orbotech Japan Ltd. This acquisition significantly strengthened the Company’s presence in the FPD industry, enabled more efficient deployment of the combined research and development resources of Orbotech and ODP thereby facilitating the development of increasingly sophisticated FPD-AOI systems, increased the Company’s proximity to customers in Japan and throughout the Pacific Rim, and resulted in an overall improvement in service to, and products for, its customers worldwide.

In 1996, the Company entered into an agreement with Jenoptik to establish a joint venture for the development of direct imaging technologies (the “DI Joint Venture”). Jenoptik had previously developed a laser-based direct imaging system suitable for the production process of PCB prototypes and short production runs. In 1998, with the consent of the Company, Jenoptik transferred all of its right, title and interest in and to the DI Joint Venture to DEWB. In June 2000, the Company and DEWB entered into an agreement pursuant to which the Company acquired DEWB’s right, title and interest in and to the DI Joint Venture in consideration for the issuance to DEWB of 90,000 Ordinary Shares, which were issued on June 30, 2000. The agreement also contemplated the issue of up to 67,500 additional Ordinary Shares to DEWB subject to the sale of a certain number of direct imaging systems within agreed time periods. While the original milestone was not met, the Company, Jenoptik and DEWB reached a new agreement pursuant to which 67,500 Ordinary Shares were issued to DEWB on March 15, 2002, in consideration for Jenoptik’s co-operation with the Company on joint research and development projects. For further information on direct imaging see Item 4—Information on the Company—Business Overview—The Imaging Solution Product Line.

In 1997, the Company commenced the design, development, manufacture and marketing of AOI systems for assembled PCBs through a limited partnership (“Orbotech-Schuh”), originally owned 51% by the Company, which acquired the AOI activity of Dipl.- Ing W. Schuh GmbH & Co. KG, a German private limited partnership then engaged in the manufacture of AOI systems for assembled PCBs. At that time the Company received an option to purchase the remaining 49% equity interest in Orbotech-Schuh, as well as certain related know-how, which occurred on January 8, 2001. See Item 4—Information on the Company—Business Overview—Assembled PCB-AOI Products.

In 1998, the Company entered into an agreement with Valor Computerized Systems Ltd. (“Valor”), an Israeli corporation, for the formation of a joint venture with respect to CAM software for PCB fabrication applications. The joint venture, FrontLine P.C.B. Solutions Limited Partnership (“FrontLine”), is owned equally by the Company and Valor and combines the former CAM operations of the Company and Valor. See Item 4—Information on the Company—Business Overview—CAM Solutions.

In June 2001, the Company formed a corporate venture fund, Orbotech Technology Ventures Limited Partnership (the “Fund”), to develop and expand opportunities for growth and further strengthen the Company’s overall position within the electronics industry. The Fund will provide financing to companies which have either technologies or products complementing those of Orbotech and which may therefore provide benefits to the Company’s long-term business strategy. To date, the Fund has committed to equity investments totaling approximately \$4.2 million in two private Israeli companies, and the Company has committed an additional \$2.8 million to equity investments in another private Israeli company.

*(c) Recent Major Expenditures*

During the period from January 1, 2001 to December 31, 2001, the Company's capital expenditures totaled approximately \$9.3 million (compared to \$11.2 million during 2000 and \$8.3 million during 1999), of which approximately \$5.6 million was expended at or upon the Company's facilities in Yavne, Israel, and approximately \$3.7 million was expended upon various facilities of the Company's subsidiaries, primarily outside Israel. Of these expenditures, approximately \$5.3 million was for capital equipment and leasehold improvements and the balance of approximately \$4.0 million was related to information technology. During this period the Company did not make any significant capital divestitures nor are any such divestitures in progress. Other than further capital expenditures of the types and consistent with the amounts described above, there are no significant capital expenditures in progress by the Company.

During January 2001, the Company exercised an option to acquire the remaining equity interest in Orbotech-Schuh and paid approximately \$13.3 million. Also, during March 2001, the Company entered into an agreement for the purchase of certain inspection-related technology, patents and know-how owned by certain subsidiaries of Brown & Sharpe Manufacturing Company, for approximately \$2.5 million (the "SIS Acquisition").

All of the above expenditures were paid from internally generated funds.

*(d) Miscellaneous*

The Company's corporate headquarters, executive and registered offices and principal research and development, engineering and manufacturing facilities are located at Sanhedrin Boulevard, North Industrial Zone, Yavne, Israel. The Company's postal address and its telephone and facsimile numbers at that facility are, respectively, P. O. Box 215, Yavne 81102, Israel, +972-8-9423533 and +972-8-9438769, and its internet site may be accessed at the address: [www.orbotech.com](http://www.orbotech.com).

The Company's agent for SEC matters in the United States is Orbotech, Inc., whose headquarters are located at 44 Manning Road, Billerica, Massachusetts 01821.

There have been no public takeover offers by third parties with respect to the Company or by the Company during the last or current fiscal years.

**4.B Business Overview**

*(a) General*

Orbotech designs, develops, manufactures and markets production support solutions for the supply chain of the electronics industry, principally for PCBs and FPDs. The Company is a world leader in the design, development, manufacture and marketing of AOI systems for bare PCBs and for FPDs and of imaging solutions for PCB production, and is one of a number of leading providers of AOI systems for assembled PCBs. In addition, the Company markets CAM solutions for PCB production and is continuing to develop its proprietary technologies for use in other applications both within and outside the electronics industry. The Company also derives a significant portion of its revenues from the service and support of its systems.

The Company's AOI systems use the Company's proprietary machine vision, electro-optics, precision mechanics, artificial intelligence and imaging technology to detect, automatically, flaws and defects in products being manufactured or assembled by its customers. These systems are designed to increase the yield and cost effectiveness of customers' production processes. In addition, through its AOI systems for bare PCBs and imaging solutions, and the CAM solutions which it markets, the Company provides its PCB manufacturing customers with comprehensive solutions which allow automation and integration of the design, tooling, production data and inspection needs associated with PCB production. The Company believes that its customers generally view AOI as an integral part of the manufacturing process rather than as a "dissociated" post-manufacturing step.

The Company is organized broadly in a manner corresponding to its principal product lines. The PCB Division, which accounts for approximately 66% of the Company's revenues, is responsible for the design, development, manufacture and marketing of the Company's AOI systems and imaging solutions for use in the production of bare PCBs, as well as for the marketing of CAM solutions for PCB production. The Display Division, which accounts for approximately 23% of the Company's revenues, is responsible for the design, development, manufacture and marketing of AOI systems and other solutions for use in the production of FPDs.

Since 1983, the Company has sold over 2,350 AOI systems for bare PCBs to more than 750 customers worldwide, including virtually all major PCB manufacturers, and, since 1997, has sold over 400 AOI systems for assembled PCBs to more than 90 customers worldwide. The various types of the Company's bare and assembled PCB-AOI systems generally sell for between \$150,000 and \$600,000 per unit. In addition, since 1983, the Company has sold approximately 530 laser plotters ("**Plotters**"), and, since 1999, approximately 40 direct imaging systems, to PCB manufacturers.

Through December 31, 2001, the Company has sold approximately 220 FPD-AOI systems to 25 FPD manufacturers. The various types of the Company's FPD-AOI systems generally sell at a cost of between \$1.0 and \$1.5 million per unit. Growth in the FPD industry during recent years has been driven primarily by the information revolution which has generated the need for greater amounts of data to be displayed to the human eye, and has also been a consequence of the continuing and increasing popularity of electronic devices and applications which utilize flat panel display screens to provide information and graphics to end users.

*(b) Strategy*

The Company's business strategy includes the following elements:

*(i) Strengthen and Expand Position in the PCB and FPD Industries*

The Company seeks to strengthen and expand its position in the PCB and FPD industries by: (a) preserving its technological advantages through the continuing enhancement of current generations, and the development of new generations, of PCB-AOI and FPD-AOI systems and imaging solutions to meet the needs of bare and assembled PCB manufacturers and FPD manufacturers as their products become increasingly complex; (b) maintaining its close working relationships with its customers, which include leading electronics manufacturers, to enhance the Company's ability to anticipate technological trends at an early stage and to design products which meet customers' future needs; and (c) maintaining and expanding its worldwide marketing, customer support and service network.

*(ii) Apply Proprietary Technologies*

The Company intends to continue developing its proprietary machine vision, electro-optics, precision mechanics, artificial intelligence and imaging technologies for use in other applications both within and outside the electronics industry. The Company also intends to leverage its technology and expand its technological base through joint ventures with other companies and through acquisitions. For example, the Company has acquired full ownership of the DI Joint Venture and of Orbotech-Schuh, in both of which it had previously held only partial equity interests, and during 2000 it also recorded initial sales of its AOI systems for ball grid array ("**BGA**") substrates, a method used to interconnect semiconductor dies or chips to other components or devices.

*(iii) Leverage Marketing, Distribution and Support Infrastructure*

The Company intends to continue to utilize its extensive worldwide marketing and distribution channels and customer support capabilities, as well as its considerable accumulated experience in the marketing and sale of capital equipment and software, for the introduction and marketing of additional products both within and outside the electronics industry. The Company believes that its worldwide marketing and support network, with more than 700 employees in over 50 locations outside of Israel, and its experience in the marketing and sale of complex systems, afford it advantages over its competitors.

(c) *The PCB Industry*

Virtually all electronic equipment use PCBs, which are the basic interconnecting platforms for the electronic components which comprise most electronic equipment. PCBs contain the electronic circuitry required to interconnect those components which, when operating together, perform a specified function. An assembly of one or more mounted PCBs working together forms an essential part of most electronic products. These include computers, hand-held electronic devices such as cellular telephones, pocket computers and personal communicators, consumer electronic and automotive equipment, telecommunications equipment, industrial and medical equipment and military and aerospace applications.

PCBs are manufactured through a series of complex steps. Generally, a board made of fiberglass (or other material with insulating qualities) is laminated with a conducting material. Holes are then drilled in a specific pattern into the board, either mechanically or by means of a laser beam, and the inner part of each hole is plated with conducting metal. The board is then coated with a thin layer of light-sensitive material ("photoresist"). A transparent film containing the desired circuitry pattern corresponding to the drilled pattern on the board ("production phototool"), which has been either copied from an artwork master or produced directly by a photoplotter connected to a computer-aided design/computer-aided manufacture ("CAD/CAM") data base, is then laid on the photoresist. The board is then exposed to light, which transfers the conductor pattern from the production phototool to the photoresist. Alternatively, the conductor pattern may be transferred directly onto the photoresist without the use of a production phototool, using laser-based direct imaging technologies. Subsequent development of the photoresist and a chemical etching process leave the desired conductor pattern printed on the board after excess conducting material is removed. PCBs may be single-sided or double-sided, and more complex PCBs may be multilayered.

PCBs are susceptible to conductor defects, such as electrical shorts, open circuits and insufficient or off-measure conductor widths, which may impair or interfere with the electrical interconnections between electronic components mounted on the finished boards. Inspection is required throughout PCB production to identify such defects, which are then repaired, if possible. Early detection of these defects increases the possibility of successful repair and reduces the number and cost of unusable boards.

The trend towards more complex electronic components, such as very large-scale integrated circuits, requires the production of high-density PCBs with finer conductor lines, reduced spacing between those lines, smaller holes and multiple layers. For such complex multilayer boards, production yield drops dramatically as the number of likely defects increases. The Company's PCB-AOI products are of particular value to manufacturers of fine line and multilayer PCBs.

Once manufactured, PCBs are mounted with the electronic components needed to perform the specified tasks. There are three main steps in the assembly of surface-mount devices. The first step, solder paste printing, is the application of solder paste on every contact point of the PCB. The solder paste will later be reflowed to form the solder joint. The second step, component placement, is the actual placement of the components on the PCB. The last step, reflow, is the process of melting the solder paste and cooling it to form a solder joint. Inspection, either manual or automated, is performed after certain or all of these steps. As PCB assemblies become smaller and denser, manual inspection becomes increasingly time consuming and inefficient, resulting in higher manufacturing costs, lower yields and more product returns.

(i) *The PCB Division Product Lines*

The products of the Company's PCB Division consist of the PCB-AOI product line, verification and repair stations and the imaging solution product line. In addition, the Company, through its 50% interest in FrontLine, is also engaged in the design, development, manufacture and marketing of CAM systems for PCB production, and has entered into marketing arrangements with FrontLine. The Company's Trion family of products for the inspection of assembled PCBs is not currently part of the Company's PCB Division.

In 2001, the products of the Company's PCB Division accounted for approximately \$198.6 million of revenues (including approximately \$63.6 million related to service and support of those products), representing approximately 66% of the Company's revenues. This compared with approximately \$277.1 million of revenues (including approximately \$66.3 million related to service and support of those products), representing approximately 74% of the Company's revenues, in 2000, and approximately \$235.7 million of revenues (including approximately \$62.9 million related to service and support of those products), representing approximately 85% of the Company's revenues, in 1999.

Since 1983, the Company has sold over 2,350 AOI systems for bare PCBs to more than 750 customers worldwide, including virtually all major PCB manufacturers. The Company's AOI systems for bare PCBs generally sell for between \$200,000 and \$600,000 per unit.

#### *The PCB-AOI Product Line*

PCB-AOI systems are computerized, electro-optical systems for inspection and identification of defects in the artwork design master, production phototools and PCBs at various stages of production.

Each of the Company's PCB-AOI systems consists of an image acquisition unit and an image processing unit. The image acquisition unit is an optomechanical module which includes a moving platform that carries the PCB or artwork being inspected, and a scanning unit which acquires an image of the board, digitizes it and transmits it to the image processor. The image processor enhances and processes the image to allow efficient analysis and interpretation of the acquired images. The proprietary structure of the electronic logic unit enables parallel processing, a requirement for performing defect detection tasks in real time. This real time parallel processing capability is one of the keys to attaining the economical throughput achieved by the Company's systems.

The Company's Vision 300 series, PC-1400 series and InSpire-9000 series of PCB-AOI systems incorporate several parallel methods of inspection, utilizing pre-programmed algorithms and data stored in a CAD/CAM database (such as the CAM workstations of FrontLine or other CAM systems) to maximize the probability of defect detection and minimize the rate of false calls. The Company's systems can easily be integrated into the production processes of most PCB manufacturing facilities. The systems are designed for operational simplicity and ease of maintenance and do not require highly specialized skills or experience to operate.

The Company currently manufactures a variety of AOI systems which can be employed at several stages during bare PCB manufacture to inspect the artwork design master, the production phototools, the photoresist before etching, the etched inner layers before lamination and the outer layers before solder mask lamination and mounting of electronic components. The results of using the Company's AOI systems are a significant increase in product reliability and a significant reduction in overall PCB production costs.

The Company's Vision 300 PCB-AOI, PC-1400 PCB-AOI and InSpire 9000 series differ primarily with respect to the image acquisition technologies they utilize: the Vision series utilizes laser imaging that causes fluorescence of the laminate, while the PC and Inspire series use reflective illumination. Certain types of PCBs, notably those based on inorganic materials, can only be inspected with reflective illumination. Others, particularly those with a matte metal surface or extensive conductor surface contamination, are better inspected using fluorescent technology.

The Company's Vision 300 series Vision 309 system is designed to inspect lines down to 2 mil in width and can inspect more than 1,200 panels per eight hour shift of 18" x 24" PCBs containing lines 5 mil in width. The Company's PC-1400 series PC-14 Micro system is designed for the inspection of ultra fine lines (as small as one mil wide) and complex geometries and can inspect approximately 800 panels per eight hour shift of 18" x 24" PCBs containing lines 2.5 mil in width.

The InSpire-9060, the first system in the InSpire-9000 series, is designed to meet the critical cost, quality and time-to-market challenges of traditional, mid- to high-volume PCB production, by combining superior detection and very high throughput with reliability and significantly reduced labor requirements. The InSpire-9060 integrates advanced technology and innovative design for the achievement of maximum inspection performance, and its fully automated panel handling, combined with a unique single scan line approach, results in extremely fast scan speeds of up to 210 sides per hour on an 18" x 24" panel. The system employs pioneering color image acquisition which is designed to reduce significantly the number of false calls and ensure accurate classification even when dealing with the most challenging inspection tasks. An integral component of the InSpire-9060 system is its powerful image processor, which runs advanced morphological algorithms, implemented on application specific integrated circuits (ASICs) and custom designed by Company engineers for rapid and highly accurate topological analysis. Containing relatively few moving parts and electronic components, the InSpire-9060 offers a combination of both high reliability and minimum maintenance requirements. The system's flexibility also offers customers the option of selecting either the Company's integrated automation solution, or individual automation modules compatible with the InSpire-9060 system and which are available from both the Company and third party suppliers.

The Company's PC-Micro II series of PCB-AOI systems combines innovative technology and broad flexibility to enable the high-volume inspection of advanced packages (e.g., chip carriers), ultra fine-line designs (down to 15 micron line widths) and advanced mainstream PCBs. The PC-Micro II series employs specialized morphology based algorithms, dynamic inspection sensitivity and user-selected inspection modes to facilitate the detection of extremely fine defects in critical, hard-to-inspect areas, including wire and flip chip bonding pads. This results in highly accurate detection with a low rate of false calls on even the most complex design patterns. The PC-Micro II series comprises the Model S, for line widths between 25 and 100 microns, the Model F for line widths between 15 and 65 microns and the Model X for line widths between 17 and 100 microns.

The Company's SK-75, which was introduced in the fourth quarter of 2000, provides particularly cost-effective inspection for process sampling and mid-volume mainstream applications. The system utilizes enhanced image processing hardware designed to furnish significantly improved inspection throughput on complex PCB designs. The SK-75 also features dual-side panel inspection, as well as an enhanced vacuum scan table which ensures that panels are held in a precise, secure position along the scan area. The system's integrated verification support makes it especially effective for small batch or in-process sampling inspection. By using a new, built-in pen-style ink marker, in combination with the system's charge coupled device ("CCD") video camera, the user is able to view, verify, mark, re-classify and sort panels in an on-line mode prior to sending them for repair, thereby resulting in more efficient use of system and operator time, verification cost savings and reduced panel handling.

#### *Verification and Repair Stations*

Verification and repair stations enable manufacturers to obtain an accurate picture of the defects occurring at various stages of production and to repair them without interrupting the inspection process.

PCBs with detected defects must be either scrapped or repaired, depending upon the nature of the flaw. Since the verification process involves sorting of critical defects from false alarms and repair of the panel, it is generally performed separately from inspection. The Company's current series of verification and repair stations is the VRS-5 series.

The VRS-5 verification and repair station provides the operator with a crisp and magnified color image of the possible defect, as well as the image of the reference, which is essential for verification of high-density PCBs. It has been designed to maximize accuracy and throughput and to minimize floor space and operator fatigue and error. The operator defines critical defects, to which the VRS-5 automatically allocates priority so as to avoid repairing other defects on a panel that will later be scrapped. The VRS-5 communicates with the Company's SK-75 and InSpire-9000, Vision 300 and PC-series of PCB-AOI systems, from which it directly and automatically

retrieves defect data files of the panel being inspected. The output of the VRS-5 can then be used by the customer for statistical analysis.

#### *The Imaging Solution Product Line*

The imaging solution product line includes: (i) laser plotters/scanners which provide PCB manufacturers with the capability to transform, within a few minutes, circuit designs on electronic media or design data retrieved from CAM databases into accurate, reliable "artwork" (production phototools); and (ii) direct imaging systems which enable the direct transfer of the digital image data for the circuit pattern onto the photoresist, eliminating the need for a production phototool.

The latest generation of laser plotters, introduced in 1997, is the Image LP7008 family which constitutes the Company's offering of external drum Plotters.

The 48-beam imaging technology incorporated in the LP7008 affords it greater speed than other external drum Plotters. The main advantages of external drum Plotters are the short distance between the laser optics and the media, which results in more accurate features, higher resolution and geometric accuracy, and the ability to accommodate large size films.

The Image LP7008 Plotter is also capable of plotting in three resolutions: 4,000 dots per inch, 8,000 dots per inch and, for jobs requiring even greater fineness and accuracy, 16,000 dots per inch. It allows the operator to enter data for a number of plotting jobs, while leaving the Plotter unattended to load films of different sizes and types on to the drum automatically and to plot and unload the finished artwork, all under light-tight, dust-free conditions. As with all of its products, the Company has designed the LP7008 laser Plotter for flexibility and easy upgradability.

The Company's initial direct imaging project, originally conducted through the DI Joint Venture, relates to the development of an advanced laser-based direct imaging system for use in the manufacture of PCBs at full production rates. Direct imaging technology eliminates the need for exposing photoresist through a production phototool. Instead, the digital image data from the electronic media is transferred directly onto the photoresist. This results in fewer manufacturing steps, lower material costs and greater accuracy and layer-to-layer registration. The Company anticipates that direct imaging will reduce manufacturing costs significantly, by eliminating artwork costs and scrap created by contact printing, thereby enabling the manufacture of denser, more sophisticated PCBs.

The resulting DP-100, a production-ready, direct imaging solution which enables high-volume production of fine feature PCBs, was introduced by the Company in 1999. The DP-100 is capable of exposing 120 sides per hour in manual operation mode and meets extremely high throughput standards. Its innovative design incorporates a sophisticated optical system, which allows the DP-100 to expose an entire panel in one scan, thereby saving time and increasing yields. The DP-100 utilizes advanced digital techniques to enable wider process latitudes, digital image scaling and precise side-to-side registration. The single scan-line technique, used to image the entire panel, provides uniform exposure even on large panel surfaces. Sophisticated filtering mechanisms and fewer process steps reduce external contaminants and handling defects. By combining the optical system with a very fast data rate, the DP-100 is able to provide a rapid and effective imaging rate of 18 seconds per layer for panel sizes of 18" x 24" and, as a result, the DP-100 enables the production of fine-feature PCBs in significantly less time than is achievable by the use of other available technology.

#### *CAM Solutions*

FrontLine, the Company's joint venture with Valor with respect to CAM software for PCB fabrication applications, supports the pre-existing installed base of CAM products of both the Company and Valor, and focuses on continuing development and marketing of advanced CAM and pre-production engineering solutions

for PCB production. Its products include the Xplan package, an engineering tool designed to control, schedule and feed the data flow throughout the PCB shop; the Genesis 2000, a CAM software application which enables the system operator to perform a wide range of operations such as reading various input data, translating the data into a vector format and performing highly compressed storage and various editing tasks; the Genesis Analysis Module, comprised of a netlist analyzer which checks the PCB design data for netlist deviations and a fabrication analyzer which checks the design data for deviations in spacing, annular ring and solder mask according to user-defined tolerances; the "DFM" package which uses the analysis results and the manufacturer-defined criteria for automatic correction of PCB designs; the Electrical Testing Manager software package which is designed to simplify the creation of electrical testing tools and the Star 1000, an engineering information archiving system designed for the PCB industry, which automatically collects the electronic data generated by shop floor systems.

The Company's interest in FrontLine is presented in the Company's financial statements by the proportionate consolidation method. See Note 2c to the Consolidated Financial Statements listed in Item 18. Non-financial information presented herein, such as number of employees and properties utilized by the Company in its operations, does not include information as to FrontLine.

(ii) *Assembled PCB Product Lines*

The Company's products relating to assembled PCBs consist of AOI solutions for each production stage of assembled PCBs, verification and repair stations and process control tool solutions.

In 2001, the Company's products relating to assembled PCBs accounted for approximately \$24.5 million of revenues (including approximately \$1.7 million related to service and support of those products), representing approximately 8% of the Company's revenues. This compared with approximately \$23.4 million of revenues (including approximately \$0.9 million related to service and support of those products), representing approximately 6% of the Company's revenues, in 2000, and approximately \$13.8 million of revenues (including approximately \$0.5 million related to service and support of those products), representing approximately 5% of the Company's revenues, in 1999.

Since 1997, the Company has sold over 400 AOI systems for assembled PCBs to more than 90 customers worldwide. These systems generally sell for between \$150,000 and \$225,000 per unit.

*Assembled PCB-AOI Products*

The Company's assembled PCB-AOI products consist of computerized electro-optical systems comprising either two or three dimensional image acquisition methods for the identification and inspection of defects and process deviations at various stages of the manufacture of assembled PCBs. Each of these AOI solutions is designed to work in either in-line or off-line mode.

The Company's principal products for the inspection of assembled PCBs are in-line and off-line, post-paste, post-placement and post-solder inspection systems, the Trion 2000 family, introduced in 1999. This family is comprised of inspection systems varying in throughput, inspection stage at the surface mount technology ("SMT") line and price. These systems all provide high level defect detection and repair cycles and highly accurate process data for fault prevention at the critical stages of post-paste, post-placement and post-solder inspection, thereby improving yields of even the most complex SMT, through-hole and mixed technologies. The sophisticated image acquisition techniques and advanced image processing algorithms are designed to deliver very high quality performance for detection of visual process defects. The systems are able accurately to identify a broad range of faults, regardless of variations in solder paste or component and board coloration. Purpose designed optics using multiple CCD cameras and light sources provide a series of multi-angle snapshots of each board segment as it is inspected, acquiring detailed images for three dimensional edge detection and shape analysis. Advanced image processing is designed to facilitate high speed detection for consistent performance at full production line speed.

In the first quarter of 2002 the Company introduced two new members of the Trion 2000 series, the Trion 2000 Xpress and the Trion 2000 HD (high density), both of which are based on technology developed for the Company's Trion-2000 AOI system. The new systems incorporate a number of additional features and enhancements designed generally to improve upon the speed and resolution offered by the earlier Trion 2000 systems and to provide pre- and post- reflow inspection capabilities, enhance the scalable optics architecture and facilitate rapid programming, improved library management and fewer false alarms.

The Trion 2000 Xpress has been developed to meet the requirements of manufacturers of medium to large sized, complex, assembled PCBs, such as those used in personal computers, notebook motherboards or telecommunication transmission stations. In these manufacturing environments, where production line speed is a critical issue, manufacturers of assembled PCBs require very high quality AOI which is capable of providing accuracy of detection, consistency of performance and high-volume throughput.

The Trion-2000 HD has been developed, in light of the growing trend within the electronics industry toward miniaturization, to respond to the requirements of manufacturers of small, complex, assembled PCBs such as those used in cellular telephones and personal digital assistants (PDAs). Manufacturers of these assembled PCBs require particularly accurate and consistent detection of fine feature components in order to sustain product quality levels.

#### *Verification and Repair Stations*

The Trion 2000 verification and repair station provides fast and effective repair cycles by means of its clear and easy-to-use graphic user interface, and also offers highly accurate data for process control. The ergonomic design of the repair station facilitates the rapid location of defects either on screen or with a laser pointer that accurately pinpoints failures on the PCB. Software features, in conjunction with a programmable keyboard, enable customized screen messages and defect information to be displayed in the user's own terminology. The verification and repair station also enables reclassification of defects in order to support accurate statistical process control ("SPC") monitoring of the production process. The station operates in either fully automated in-line configuration, or in off-line mode.

#### *Process Control Tool Solutions*

The Company's process control tool solutions, called "Advisor" products, consist of the Quality Process Control ("QPC"), Optigraf™ and Process Control-and-Capability Module ("PC<sup>2</sup>M") packages. The QPC unit is an innovative software tool for real time SPC, which is designed for use in conjunction with the Trion-2000 AOI family of products. QPC processes statistical data and visualizes inspection results, thereby enabling manufacturers to identify undesirable process trends and problems and forestall negative impact on yield. The Optigraf™ is a data analysis application which uses inspection results from the AOI system and the verification and repair station for data input and enables extensive monitoring and reporting of the PCB assembly process. The PC<sup>2</sup>M is a software tool for measuring paste and placement machine capability in post-reflow AOI. PC<sup>2</sup>M automatically assesses and reports machine capability indices for each machine in the manufacturing process and furnishes independent verifications of quality, which provide the user with essential data concerning the overall capability of the process to manufacture to a pre-defined standard. PC<sup>2</sup>M is capable of ignoring inherent variations in the complex PCB manufacturing process and is thus able to provide a more reliable indication of machine capability and performance which is unavailable in conventional AOI systems.

#### *(d) The FPD Industry*

FPDs are presently used as display screens for laptop and desktop computers, digital phones, car navigation, video cameras, projection televisions and a variety of other devices for technical, medical, military, aerospace and consumer electronic applications where physical dimensions and weight are critical and where the use of color cathode ray tubes ("CRT")s is inappropriate. The FPD industry has witnessed a significant increase in the

replacement of desktop CRTs by FPDs for use in computers, and the Company anticipates, in the coming years, a further movement towards the replacement of CRTs by FPDs for computers as well as for mid-size wall television sets for home use and for audio visual applications.

The most common FPD technology currently in use is the thin film transistor (“TFT”) LCD, and the Company believes that this LCD technology will maintain its position of major importance in the foreseeable future. TFT LCDs, which are also known as active matrix LCDs, enable the production of higher resolution displays which provide very high-quality performance, and have to a large extent replaced the “lower-end” passive matrix LCDs for use in mainstream applications such as laptop screens. Desktop monitors for personal computers, which are rapidly becoming the most important application for flat panel display, are, for example, manufactured using only active matrix TFT LCDs.

A typical active matrix LCD consists of two transparent substrates (typically glass) separated by liquid crystal material. On one of the substrates an active array of transistors is built through a complex, multilayer photolithographic deposition process similar in many ways to semiconductor production. On the other substrate a color filter is attached. There are three transistors, one for each of the red, green and blue components of each pixel. In a typical XGA-quality color active matrix LCD there are a total of 2,360,000 transistors with geometric line widths for each transistor of approximately five microns. The color filter enables the display to attain color capability by selectively filtering out the light emissions from each multi-transistor multi-color pixel array to produce the desired color mix on the display.

The technology traditionally utilized in producing the LCD rear panel, and the TFTs incorporated into them, is known as “a-Si” or “Amorphous Silicon”, which refers to the material from which the active portion of the transistors is manufactured. Recently, a new technology, Low Temperature Polysilicon (“LTPS”), has emerged into mainstream LCD manufacturing and is displacing a-Si as the predominant LCD manufacturing process. Although LTPS requires more processing steps, as well as additional and higher resolution inspection, than Amorphous Silicon, it enables significantly better performance of the final LCD product. In addition, it has the advantage of allowing for the integration of non-display components on to the display glass, which can have the effect of reducing the number of parts required to be assembled in the final product. During 2001, approximately 40% of the Company’s FPD-AOI sales were to customers utilizing the LTPS manufacturing process. The Company believes that, due to manufacturers’ very stringent technical requirements with respect to LTPS inspection, Orbotech’s LCD-AOI systems are currently the only such systems in use for LTPS inspection.

FPDs are susceptible to various defects, many of them resulting from the photolithographic and deposition processes described above. Detection of these defects during the production process allows manufacturers to improve that process by enabling them to avoid the expense of further costly materials (which represent a substantial percentage of total costs), to repair defects, if possible, before they become inaccessible due to further manufacturing processes and to improve yields.

The reduction in the manufacturing cost of active matrix LCDs involves three major factors: reducing manufacturing overhead by increasing throughput; reducing the cost of materials used in construction; and improving production yields. The Company believes that optical inspection is required to implement yield improvements successfully in order to achieve these goals.

The inspection of LCDs poses particular technological challenges due to the transparent materials used, their multi-layered structure and high-density features and the fine nature of potential defects. LCD inspection must also match the high production speeds of LCD facilities. These technological challenges are becoming more acute as LCDs become increasingly complex and customer requirements move from existing SVGA displays (800 x 600 lines) to higher resolution XGA displays (796 x 1,024 lines) and, in the future, to SXGA displays (1,280 x 1,024 lines), thereby increasing the number of pixels utilized and the complexity of manufacture.

The FPD inspection process generally consists of engineering and in-line applications. The engineering application, also known as process analysis, takes place during a facility’s ramp-up and process development

phase, as well as during the production process, in order to analyze process failures and correct yield-limiting malfunctions. In-line inspection monitors the production process itself to detect, as early as possible, failures developed in the production equipment, a procedure also known as process monitoring.

### *The Display Division Product Line*

#### *FPD-AOI Systems*

The products of the Company's Display Division are comprised of FPD-AOI systems consisting of inspection systems for LCD, FED and OLED products. Since 1993, the Company has sold a total of 220 such AOI systems to 25 customers worldwide, although it maintains a substantially larger installed base, including systems previously sold by ODP, which was engaged in the design, development, manufacture and marketing of FPD-AOI systems prior to its acquisition by the Company in 1999. The Company's FPD-AOI systems currently generally sell for between \$1.0 million and \$1.5 million per unit.

Over the years, the Company has developed a number of different families of FPD-AOI systems, including the LC-3090, introduced in 1996, which provided both in-line and engineering applications for high speed, real time process monitoring. The LC-3090 matched the speed of the third generation production lines and used advanced defect classification and machine vision algorithms, as well as the Company's proprietary patented optics, for high detection and advanced throughput, leading to effective yield enhancement. The Company also developed the LC-3090S In-Line system to be used in conjunction with the LC-3090 at various in-process stages of active matrix LCD production to provide users with a real time yield enhancement solution by automating panel sorting into satisfactory panels and panels that need rework or repair. In 1998, the Company introduced two new LCD-AOI systems, the LC-3590, which was designed to accommodate increasing substrate size, in order to handle glass substrates of up to 720 x 600 mm (known as the 3.5 generation size), and the FPI-7000, which was designed to meet the greater speed of inspection requirements associated with increased panel sizes and sampling rates, to run process sampling on increased numbers of glass panels and to reduce the time required for process failure detection. In 1999, the Company introduced the FPI-7090, designed to handle glass substrates of up to 920 x 730 mm (known as the fourth generation size). In 2001, the Company introduced the FPI-7590 to support fifth generation glass substrates of up to 1,100 x 1,300 mm in size.

The Company also offers the 6030 LCD-AOI system, which was first introduced by ODP in 1997 and is designed to undertake "go-no go" testing at certain critical stages of panel production with a view to reducing a manufacturer's overall production costs by identifying, as early as possible, those panels whose defects will ultimately render them non-viable. In 1999, the Company introduced the 6090 LCD-AOI system, which is designed to conduct "go-no go" testing for glass substrates of up to 920 x 730 mm (the fourth generation size). These systems complement and expand the Company's existing range of LCD-AOI systems, by broadening the scope of inspection solutions which the Company is able to offer to include engineering tool-process analysis for process setup, process monitoring for early identification of process failures and "go-no go" testing for early scrap, repair or rework. In 2001, the Company introduced the FPI-6590 to support fifth generation glass substrates at a very high resolution of 3 microns.

The Company has also recently announced the introduction of an in-line inspection system, the Invision™ series, which is designed to be integrated into process equipment so as to provide rapid feedback on process failures and which expands and complements the Company's current line of AOI solutions for FPD production. The Invision series is designed to inspect fifth generation glass in less than one minute, thereby enabling use of these systems directly in line with other advanced production tools. The Invision series is initially available in two models—the Invision-8000™ for detection of 10um defects and the Invision-8050™ for detection of 5um defects. Both systems incorporate innovative inspection technology, including a specially designed air-float table for zero backside glass contact and smooth scan motion, as well as a multi-color solid-state LED illumination system.

In 2001, the Company's line of FPD products accounted for approximately \$69.4 million of revenues (including approximately \$9.1 million related to service and support of such products), representing

approximately 23% of the Company's revenues. This compared with approximately \$65.1 million of revenues (including approximately \$6.2 million related to service and support of such products), representing approximately 17% of the Company's revenues, in 2000, and approximately \$27.0 million of revenues (including approximately \$3.1 million related to service and support of those products), representing approximately 10% of the Company's revenues, in 1999.

*(e) Other Products*

Other products designed, developed, marketed and sold by the Company outside the framework of its PCB and Display Divisions include AOI systems for the final inspection of BGA substrates and character recognition products.

*(i) Interconnecting Devices for Silicon Chips*

After the production of silicon chips, the finished silicon die must be interconnected and incorporated with other electronic components in order to perform their desired functions. This process of interconnection may be performed by various technologies and through various substrates and methods, such as wire bonding to BGAs, or direct bonding to the desired circuit pattern on PCBs or multichip or other modules.

BGA substrates are small PCB components on which silicon dies are interconnected through a process in which the input-output points of the silicon chip are connected to pads by ultrasonic wire bonding or by small solder bumps on the package substrate. BGAs are prepared using the same processes employed in the manufacturing of PCBs. Through these processes conducting lines, or leads, are etched in predetermined patterns designed to correspond to the desired function and requirements of the specific silicon die.

The pattern and the connecting pads are susceptible to various defects such as plating defects, off-measure lead dimensions or surface defects which, if undetected prior to interconnection to the silicon die, may result in scrapping of the package together with the silicon die.

In general, BGA substrate production currently requires complete visual inspection, particularly at the final production stage before shipping to the customer. The Company therefore believes that a significant need, and corresponding opportunity, exists for AOI systems for BGAs and, accordingly, has applied its machine vision and related technologies to the development of such systems.

During 2001, the Company recorded revenues of approximately \$3.4 million from sales of the first of such systems, the ICP-8060, including sales to several leading BGA substrate manufacturers.

*(ii) Character Recognition*

Through its subsidiary, Orbograph Ltd. ("Orbograph"), the Company is developing and offering handwritten and machine printed character recognition solutions. This represents the first application of the Company's machine vision and image processing technologies outside the electronics industry.

Orbograph's first product, OrboCAR, enables automated check processing by recognizing the "courtesy amount" (the numerical characters, as distinct from the alphabetical letters in the "legal amount") handwritten or printed on checks. Banks, utility companies and other entities that process large numbers of checks currently employ human operators who visually read and manually key the courtesy amounts into automatic processing systems. OrboCAR is used in conjunction with the high speed check imaging systems currently employed by such institutions. OrboCAR receives the image of the check acquired or "captured" by the imaging system, locates the courtesy amounts and translates the captured image data into a computer readable digital number, thereby substantially reducing the associated costs of manual labor.

During 2000, Orbograph introduced Super Trinity, which makes additional use of the Legal Amount Recognition (LAR) by further improving read rates and accuracy. Orbograph also introduced a new feature known as Automatic Layout Recognition (ALR), which identifies most internal banking documents within the stream of check images. This feature enables users to automate the handling of these documents without on-site customization.

During 2001, Orbograph introduced OrboCAR Apex, an innovative product that provides a highly efficient solution to check data entry by using a combination of artificial intelligence and human intervention. This product is based on Orbograph's Key-Pay™, a patent-pending technology for web-based distributed processing. OrboCAR also comprises a data-mining module which is capable of reading various data (in addition to the amount) contained in personal and commercial checks. This module is used for fraud-detection and customer relation management applications.

According to information published in November 2001 by the United States Federal Reserve, in the United States alone, approximately 49 billion checks are currently processed annually, compared with approximately 32 billion in 1979.

Since its establishment, Orbograph has recorded total revenues of approximately \$15 million (including nearly \$6 million in 2001) with more than 500 successful installations of operational units processing millions of checks each day. Orbograph markets the OrboCAR product line to end users through major system integrators and check transport system manufacturers.

*(f) Marketing, Sales and Support*

The Company markets its products and provides customer support through its wholly-owned subsidiaries in the United States, Europe, the Pacific Rim and Japan. Each subsidiary employs local marketing, sales and customer support personnel. Worldwide marketing efforts are coordinated by the responsible Corporate Executive Vice Presidents, who are based at Company headquarters in Israel.

Approximately 160 people are engaged in the Company's worldwide sales and marketing efforts, which include participation in various trade shows and conventions, publications and trade press, demonstrations performed in Company facilities and daily contact with customers by sales personnel.

The Company installs, services and provides training to customers on all its systems. After a minimum amount of site preparation by the customer, installation of a typical system can normally be completed at the customer's site in approximately four to five days. The Company's customer support representative installs and checks the system. As part of the installation procedure, the Company provides system documentation and simple training in maintenance and use to customers. In addition, for a fee, the Company offers customers service and maintenance contracts commencing after the expiration of the warranty period. Software, whether contained in optional features or forming an integral part of the functioning capacity of the system, is licensed. Software updates are typically included in the service fee.

At December 31, 2001, the Company employed 540 customer support personnel worldwide to ensure prompt and efficient service. 110 persons were stationed at 14 locations in the United States, 102 were stationed at 16 locations in Europe, 221 were stationed at 12 locations in the Pacific Rim, 53 were stationed at one location in Israel and 54 were stationed at three locations in Japan.

*(g) Production and Sources of Supply*

The Company's manufacturing activities consist primarily of the assembly and testing of components and subassemblies which are acquired from third party vendors and subcontractors and then integrated into a finished system by the Company.

The Company utilizes subcontractors in Israel, the United States, Europe and Japan for the production of mechanical parts, optical components, castings and casings, electronic cabinets, PCB fabrication and a portion of the required electronic assembly.

Most electronic components are imported from the United States, Europe and Japan. The Company's production capacity is sufficient for its level of sales and permits the Company, in most cases (other than with respect to its FPD products where a longer lead time is typically required), to ship products within three to six weeks of receipt of customer orders.

Certain key components and subassemblies included in the Company's systems are purchased from a limited group of suppliers. The Company currently purchases certain key components from single sources of supply—including one in the United States for the high precision positioning systems incorporated in some of its AOI products. To date, the Company has been able to obtain sufficient units to meet its needs and does not foresee any short-term supply difficulty in obtaining timely delivery of any parts or components. However, an interruption in supply from any of these sources could disrupt production, thereby adversely affecting the Company's results. The Company generally maintains several months' inventory of critical components used in the manufacture and assembly of its systems.

*(h) Competition*

Although the Company is a world leader in AOI systems for bare PCBs and for FPDs, it faces competition from a number of companies which either produce or are developing such systems. Most AOI systems for PCBs available in the marketplace use a varying combination of inspection methods, as do the AOI systems of the Company. The Company has responded to the competition with continued enhancements of its AOI product lines and it anticipates continuing to do so. The Company believes that its acquisition of ODP in 1999 enhanced its product offerings of FPD-AOI systems and improved its competitive position.

A comparatively large number of companies offer inspection solutions for assembled PCBs, some of which are significantly larger in size, and have access to substantially more capital and other resources, than does the Company. The Company anticipates that this number will decrease, and that those companies which are able to develop inspection solutions furnishing superiority of performance and ease of handling, and to offer consistent and effective service and support of those systems to customers, will prove most successful.

The Company believes that, based upon their respective characteristics, such as automation, throughput, ease-of-use, image processing, editing capabilities, storage format, accuracy and speed, the performance capabilities of both its imaging solutions and its AOI systems for use in the inspection of bare and assembled PCBs and in the inspection of FPDs are competitive with similar products.

The Company believes that in the future the principal competitive factors for its products will be functionality and performance (e.g., speed, ease of use, accuracy and reliability), the development of improved products through research and development, customer support services, customer relations and price.

The Company's competitors can be expected to continue to improve the design and performance of their products and to introduce new products with more competitive prices and performance features. Maintaining the technological and other advantages of the Company's products over those of its competitors will require a continued high level of investment by the Company in both research and development and operations. The

Company believes it can maintain its competitive position by continuing to supply updated, state-of-the-art system features, by providing comprehensive after-sales support and by continuing to develop improved features for its systems to meet sophisticated customer needs. There can be no assurance that the Company will be able to continue to make such investments or that the Company will be able to achieve the technological advances necessary to maintain its current competitive advantages.

The Company believes that its extensive installed base and widespread network of sales and support offices throughout North America, Europe, the Pacific Rim and Japan, as well as the recognition it has attained in the PCB and FPD industries, place it in a strong competitive position.

(i) *Additional Considerations Relating to the Company's Operations in Israel*

The Company is incorporated under the laws of the State of Israel, and its headquarters and production facilities are located in Israel. Although virtually all of the Company's sales are currently made to customers outside Israel, the Company is nonetheless directly influenced by political, economic and military conditions affecting Israel. Accordingly, any major hostilities involving Israel, a substantial decline in the prevailing regional security situation or the interruption or curtailment of trade between Israel and its present trading partners could have a material adverse effect on the Company's operations. Since the establishment of the State of Israel in 1948, a state of hostility has existed, varying in degree and intensity, between Israel and the Arab countries. Historically, Arab states have boycotted any direct trade with Israel and to varying degrees have imposed a secondary boycott on any company carrying on trade with, or doing business in, Israel. Although Israel has entered into certain agreements with Egypt, Jordan and Palestinian representatives, there have been continued and increasing difficulties in the negotiations with the Palestinians and no prediction can be made as to whether a resolution of past problems will be achieved or as to the nature of any such resolution. In addition, beginning in late September 2000, the overall relationship and security situation between Israel and the Palestinians has deteriorated significantly and it continues to do so, being marked by frequent and escalating violence. To date, this has not had any material effect on the Company's business and results of operations, but there can be no assurance that it will not do so in the future.

Many of the Company's officers and employees in Israel are currently obligated to perform annual reserve duty in the Israel Defense Forces. In addition, virtually all such officers and employees are subject to being called for active military duty at any time under emergency circumstances. No assessment can be made of the full impact of such requirements on the Company in the future, particularly if emergency circumstances occur, and no prediction can be made as to the effect on the Company of any expansion of these obligations.

The Company benefits from certain government programs and tax legislation, particularly as a result of the Approved Enterprise status of substantially all of the Company's existing production facilities in Israel under the Law for the Encouragement of Capital Investments, 1959 ("**Approved Enterprise**"). Pursuant to these programs and legislation a portion of the Company's income is taxed at reduced rates. See Note 9 to the Consolidated Financial Statements listed in Item 18. To be eligible for these benefits, the Company must continue to meet certain conditions. Should the Company fail to meet such conditions in the future, these benefits could be cancelled and the Company might be required to refund tax benefits previously received, if any, together with interest and linkage differences to the Israeli Consumer Price Index (the "**Israeli CPI**"). The Company may also benefit in the future from a new Government of Israel program under which it could be eligible to receive grants from the OCS for the development of generic technologies without incurring any royalty obligations. See Item 5.C(a)—Research and Development, Patents and Licenses, etc.—Research and Development Policy. There can be no assurance that these programs and tax legislation will be continued or implemented in the future or that the available benefits will not be reduced. The termination or reduction of such benefits (particularly those available to the Company as a result of the Approved Enterprise status of the Company's existing facilities in Israel) could have a material adverse effect on the Company's business and financial condition.

Israel is a member of the United Nations, the World Bank Group (including the International Finance Corporation), the European Bank for Reconstruction and Development and the Inter-American Development

Bank. Israel is also a signatory to the General Agreement on Tariffs and Trade, which provides for reciprocal lowering of trade barriers among its members. In addition, Israel has been granted preferences under the Generalized System of Preferences from Japan. These preferences allow Israel to export the products covered by these programs either duty-free or at reduced tariffs.

Israel has entered into preferential Trade Agreements with the European Union, the United States, Canada, the European Free Trade Association and a variety of other countries. In recent years, Israel has established commercial and trade relations with a number of other nations, including Russia and China, with which it had not previously had such relations.

#### *4.C Organizational Structure*

The Company's wholly-owned subsidiary in the United States, Orbotech, Inc., maintains its headquarters in Billerica, Massachusetts, with regional offices in Santa Ana and San Jose, California, and in Minneapolis, Minnesota. The Company's European operations are coordinated from the headquarters of its wholly-owned subsidiary in Brussels, Orbotech S.A., and from regional offices in Paris, Manchester, Stuttgart, Dusseldorf and Milan. Orbotech Pacific Ltd. and Orbotech Asia Ltd., also wholly-owned subsidiaries of the Company, operate through their offices in Hong Kong and Orbotech Pacific Ltd. also operates from regional offices or subsidiaries in Korea, Taiwan, Singapore and China. The Company's wholly-owned subsidiary in Japan, Orbotech Japan Ltd., maintains its headquarters and other offices in Tokyo and a regional office in Osaka.

#### *4.D Property, Plants and Equipment*

The Company's administrative, manufacturing, research and development, corporate sales, marketing and customer support operations are conducted in and from leased premises located in Yavne, Israel, comprising a total area of approximately 264,000 square feet with an option to lease additional space. The lease is for a ten year period commencing in July 1997, and the Company has a right of first refusal to purchase the facility.

Additionally, the Company, generally through its subsidiaries, leases approximately 276,000 square feet of floor space outside Israel, which is used primarily in connection with sales, marketing and customer support. These leases expire on various dates from 2002 to 2011. Also, the Company, through its Belgian subsidiary, Orbotech S.A., owns an interest in real property which is used as its European headquarters.

The aggregate annual net rental for all of the Company's facilities in and outside Israel in 2001 was approximately \$5.7 million (compared to approximately \$4.8 million and \$4.6 million in 2000 and 1999, respectively). For further information, see Note 7a(2) to the Consolidated Financial Statements listed in Item 18.

The Company has invested substantial sums in improving the leased properties which it occupies in order to adapt them to its various engineering and production activities. The majority of these improvements have been integrated into the leasehold facilities. At the present time the facilities available to the Company in Yavne, Israel, which include a new building completed and occupied during 2000, are approximately 70% utilized, generally on a one shift basis, in the course of the Company's normal operations and are considered to be adequate for such operations. The Company is not presently engaged in the construction or material expansion of any additional building at its Yavne facilities and has no present plans to relocate its facilities. The Company is not aware of any environmental issues that may affect its ability to use its facilities.

During 1997, the Company entered into negative pledge agreements with certain banks pursuant to which the Company has undertaken not to register certain charges on its assets in favor of third parties without the prior consent of such banks. See Note 7c to the Consolidated Financial Statements listed in Item 18. The Company's Belgian subsidiary has pledges recorded on approximately 745,000 Euros (approximately \$0.66 million as of December 31, 2001) of cash and receivables as collateral for approved lines of credit, none of which was utilized as of December 31, 2001.

## **Item 5. Operating and Financial Review and Prospects**

### **5.A Operating Results**

#### **(a) General**

The Company is an Israeli corporation which is engaged in the design, development, manufacture, marketing and/or service of production support solutions for the supply chain of the electronics industry. The Company's products are primarily AOI systems and CAM and imaging solutions, principally for application in the production of PCBs and FPDs.

The Company derives revenues from two sources: (i) sales of the Company's products; and (ii) services provided with respect to the Company's products. In 1999, 2000 and 2001, revenues derived from sales of products constituted approximately 76%, 80% and 75%, respectively, of the Company's revenues and the remaining revenues were from service for product support. During those periods, approximately 90%, 81% and 74%, respectively, of revenues from both product sales and service related to the Company's PCB product lines. The Company expects that revenues from PCB products and services will continue to account for a significant portion of the Company's sales and service revenues in the near future. Most of the Company's sales revenues are derived from repeat sales to existing customers, and the Company expects that repeat sales will continue to account for a significant portion of its revenues in the future.

The currency of the primary economic environment in which the operations of the Company are conducted is the Dollar. Virtually all of the Company's sales are made outside Israel in non-Israeli currencies, mainly the Dollar, and most of its purchases of materials and components are made, and most marketing and service costs are incurred, outside Israel in non-Israeli currencies, primarily the Dollar. Thus, the functional currency of the Company is the Dollar.

On October 27, 1992, the Company acquired all the ordinary shares of Orbot and subsequently merged with Orbot on January 1, 1993. The Merger was accounted for using the purchase method. In connection with the acquisition, goodwill was recorded and, through December 31, 2001, was amortized over a period of ten years. The rate of amortization arising from the Merger was \$402,000 per calendar quarter. At December 31, 2001, \$1.3 million remained unamortized. See Notes 1h and 5 to the Consolidated Financial Statements listed in Item 18. As a result of the Schuh acquisition in 1997, the acquisition of the Japanese PCB sales and marketing operations of Toyo Ink Mfg. Co., Ltd. in 1998, the ODP acquisition in 1999, the LIS acquisition in 2000 and the exercise of the Schuh option and the SIS acquisition in 2001, the Company has recorded intangible assets of approximately \$5.7 million, \$500,000, \$5.6 million, \$2.4 million, \$12.5 million and \$2.5 million, respectively, which, until the end of 2001, were being amortized over a period of five years from the respective dates of acquisition in an aggregate amount equal to approximately \$1.9 million per calendar quarter. For further information on the accounting treatment of goodwill and other intangibles and its anticipated effect on the financial results of the Company for 2002, see New Accounting Standards under U.S. GAAP.

#### **(b) Adoption of U. S. GAAP**

For each of the years up to and including the year ended December 31, 2001, the Company prepared its primary financial statements in accordance with Israeli GAAP, with a reconciliation to U.S. GAAP presented in a note to those financial statements. However, the Company has elected, as from the first quarter of 2002, to change the basis of accounting used in its primary financial statements from Israeli GAAP to U.S. GAAP. The Company believes that since its shares are traded only in the United States and the majority of such shares are held by United States persons, investors and other users of its financial statements would benefit if the primary financial statements were prepared in accordance with U.S. GAAP, rather than in accordance with Israeli GAAP. Accordingly, the Company's financial statements as from the first quarter of 2002 will reflect U.S. GAAP including the revised accounting treatment for goodwill and other intangible assets and business combinations referred to below under New Accounting Standards under U.S. GAAP. Nevertheless, having been advised by the

SEC that its staff will not object to the Company's so doing, the Company intends to continue to account for FrontLine using the proportionate consolidation method, including summarized footnote disclosures of the amounts so proportionately consolidated, rather than the equity method as is called for under U.S. GAAP pursuant to APB 18. As a result of the change to U.S. GAAP, royalty expenses previously included as selling, general and administrative expenses will now be included among cost of revenues. See Item 3.A—Key Information—Selected Financial Data (note (1)).

For information as to material differences between U.S. GAAP and Israeli GAAP, see Note 14 to the Consolidated Financial Statements listed in Item 18.

*(c) Critical Accounting Policies*

To improve understanding of the Company's financial statements, it is important to obtain some degree of familiarity with the Company's principal or significant accounting policies. These policies are described in Note 1 to the Consolidated Financial Statements listed in Item 18. The Company, in conjunction with its external auditors, reviews its financial reporting, disclosure practices and accounting policies annually to ensure that the financial statements developed, in part, on the basis of these accounting policies provide complete, accurate and transparent information concerning the financial condition of the Company. As part of this process, the Company has reviewed the selection and application of its critical accounting policies and financial disclosures as at December 31, 2001, and it believes that the Consolidated Financial Statements listed in Item 18 present fairly, in all material respects, the consolidated financial position of the Company as at that date.

In preparing the Company's financial statements in accordance with GAAP, the Company's management must often make estimates and assumptions which may affect the reported amounts of assets, liabilities, revenues, expenses and related disclosures as at the date of the financial statements and during the reporting period. Some of those judgments can be subjective and complex, and consequently actual results may differ from those estimates. For any given individual estimate or assumption made by the Company, there may be alternative estimates or assumptions which are also reasonable. However, the Company believes that, given the facts and circumstances before it at the time of making the relevant judgments, estimates or assumptions, it is unlikely that applying any such other reasonable judgment would cause a material adverse effect on the Company's consolidated results of operations, financial position or liquidity for the periods presented in the Consolidated Financial Statements listed in Item 18.

The Company is also subject to risks and uncertainties that may cause actual results to differ from estimates and assumptions, such as changes in the economic environment, competition, foreign exchange, taxation and governmental programs. Certain of these risks, uncertainties and assumptions are discussed under the heading Cautionary Statement Regarding Forward-Looking Information and in Item 3.D—Risk Factors.

The Company considers its most significant accounting policies to be those relating to revenue recognition and inventory valuation, both of which, as well as the Company's accounting policy relating to service fees, are discussed below.

*(i) Revenue Recognition*

The Company recognizes revenue from sale of systems to end users upon delivery, provided that appropriate signed documentation of the arrangement, such as a signed contract, purchase order or letter of agreement, has been received, the fee is fixed or determinable and collectibility is reasonably assured. The Company does not, in the normal course of business, provide a right of return to its customers.

*(ii) Inventory Valuation*

Inventories are valued at the lower of cost or market value. If actual market conditions prove less favorable than those projected by management, additional inventory write-downs may be required. Inventories are written down for estimated obsolescence based upon assumptions about future demand and market conditions.

Likewise, favorable future demand and market conditions could positively impact future operating results if inventory that has been written down is sold.

(iii) Service Fees

The Company grants its customers a warranty on systems sold. Upon revenue recognition, the Company defers a portion of the sale price and recognizes it as service revenue ratably over the warranty period. Other service revenues are recognized ratably over the contractual period or as services are performed. Annual service fees are generally based on the list price of the Company's products. It has been the Company's experience that most of its customers elect to receive maintenance services from the Company on a continuing contractual basis after the conclusion of the warranty period.

*(d) New Accounting Standards under U.S. GAAP*

In June 2001, the Financial Accounting Standards Board of the United States (the "FASB") issued Statement of Financial Accounting Standards ("FAS") No. 141, "Business Combinations" ("FAS 141"), and FAS No. 142, "Goodwill and Other Intangible Assets" ("FAS 142").

FAS 141 supersedes Accounting Principles Board Opinion ("APB") No. 16, "Business Combinations", and FAS 142 supersedes APB No. 17, "Intangible Assets".

The most significant changes made by FAS 141 are: (i) requiring that the purchase method of accounting be used for all business combinations initiated after June 30, 2001; (ii) establishing specific criteria for the recognition of intangible assets separately from goodwill; and (iii) requiring unallocated negative goodwill to be written off immediately as an extraordinary gain (instead of being deferred and amortized).

The most significant changes made by FAS 142 are: (i) goodwill and indefinite intangible assets will no longer be amortized; (ii) goodwill will be tested for impairment at least annually at the reporting unit level; (iii) intangible assets deemed to have an indefinite life will be tested for impairment at least annually; and (iv) the amortization period of intangible assets with finite lives will no longer be limited to 40 years. In addition, FAS 142 contains certain transitional provisions, which may affect the classification of intangible assets as well as the balance of goodwill. The provisions of FAS 141 are effective for acquisitions consummated after June 30, 2001. The provisions of FAS 142 are effective for fiscal years beginning after December 15, 2001 (fiscal year 2002 for the Company).

The Company is currently in the process of performing the necessary assessments and allocations and has not yet determined the effect on earnings, if any, from potential transition adjustments. Currently, the Company incurs amortization expense related to goodwill of approximately \$7.3 million per year that is expected, upon application of FAS 142, to be reduced to approximately \$2.3 million in 2002.

In July 2001, the FASB issued FAS No. 143, "Accounting for Asset Retirement Obligations". FAS 143 prescribes the accounting for retirement obligations associated with tangible long-lived assets, including the timing of liability recognition and initial measurement of the liability. FAS 143 requires that an asset retirement cost should be capitalized as part of the cost of the related long-lived asset and subsequently allocated to expense using a systematic and rational method. FAS 143 is effective for fiscal years beginning after June 15, 2002 (January 1, 2003 for the Company). The Company does not expect the adoption of FAS 143 to have a material effect on its financial statements.

In August 2001, the FASB issued FAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets", which is effective for fiscal periods beginning after December 15, 2001 (January 1, 2002 for the Company), and interim periods within those years. FAS 144 establishes an accounting model for impairment or disposal of long-lived assets to be disposed of by sale. The Company does not expect the adoption of FAS 144 to have a material effect on its financial statements.

(e) *Geographical Analysis; Worldwide Economic Situation; Cost of Revenues*

(i) *Geographical Analysis and Worldwide Economic Situation*

The following table sets forth the Company's sales and service revenues by geographic area for the periods indicated:

	Year Ended December 31,					
	1999		2000		2001	
	in thousands	% of total	in thousands	% of total	in thousands	% of total
<b>Sales</b>						
North America	\$ 59,500	28	\$ 65,600	22	\$ 40,000	18
Europe	30,300	14	32,000	11	30,200	13
Japan	18,500	9	45,500	15	45,400	20
Taiwan	53,300	25	88,400	30	53,600	24
China	15,500	7	22,200	8	33,500	15
Far East*	33,600	16	44,000	14	23,000	10
Other	1,000	1	700	—	600	—
<b>Total Sales</b>	<u>\$211,700</u>	<u>100</u>	<u>\$298,400</u>	<u>100</u>	<u>\$226,300</u>	<u>100</u>
<b>Service</b>						
North America	\$ 26,000	39	\$ 26,900	36	\$ 23,600	31
Europe	14,800	22	12,800	17	12,900	17
Japan	6,500	10	8,600	12	10,000	13
Taiwan	8,600	13	11,400	16	14,600	19
China	2,500	4	2,600	4	5,900	8
Far East*	8,000	12	11,300	15	8,200	11
Other	300	—	300	—	400	1
<b>Total Service</b>	<u>\$ 66,700</u>	<u>100</u>	<u>\$ 73,900</u>	<u>100</u>	<u>\$ 75,600</u>	<u>100</u>
<b>TOTAL</b>	<u>\$278,400</u>		<u>\$372,300</u>		<u>\$301,900</u>	

\* other than Japan, Taiwan and China.

See Note 13a to the Consolidated Financial Statements listed in Item 18.

Approximately 64% of the Company's revenues from equipment sales and service revenue during 2001 (compared to 63% during 2000 and 53% during 1999) were derived from the Far East, including approximately 23% from revenues in Taiwan, 18% from revenues in Japan and 13% from revenues in China. The Company monitors developments in the financial markets and economies, including banking and currency difficulties, of all countries and regions, including Far Eastern countries, in which it markets its products and their possible impact upon the Company. The decrease in sales and service revenues generated from the United States during 2001 as compared with 2000 reflects, in part, the migration during the year of PCB manufacturing activities from the United States to the Far East, and in particular to China, as manufacturers sought to take advantage of lower costs prevailing in the Far East. The Company believes that this decrease also reflects the underutilization of capacity experienced by, and the corresponding reduction in service revenues received from, United States PCB manufacturers. By contrast, the Company believes that the decrease in sales revenues generated from Taiwan during the year was a function of the general slowdown throughout the electronics industry worldwide.

The global electronics industry is continuing to contend with the effects of depressed economic activity which has extended into 2002, resulting in further uncertainty and unsettled business confidence worldwide. Consequently, the Company's ability to foresee future changes in the total volume of orders for its products and services remains limited. The worldwide economic slowdown had a substantial impact upon the Company's

results for the last nine months of 2001, and the continuing uncertainties associated with both the economic situation and the financial markets and economies of those countries in which the Company markets its products, and the related possible reduction in demand for its products, means that past operating results may not necessarily be indicative of the future. Accordingly, the Company is not currently able to anticipate how such matters will affect its results during 2002, and no assurances as to future developments in respect of such matters can be given. See Item 5.D—Trends.

(ii) Cost of Revenues

	Year Ended December 31,		
	1999	2000	2001
	in thousands		
Cost of Sales . . . . .	\$ 79,600	\$109,200	\$101,400(1)
Cost of Service . . . . .	56,000	65,900	65,100
Total Cost of Revenues . . . . .	<u>\$135,600</u>	<u>\$175,100</u>	<u>\$166,500</u>

(1) Includes the write-down of inventories of \$7.0 million in 2001 relating to excess inventories of raw materials for certain of the Company's PCB inspection products. See Item 3—Key Information—Selected Financial Data (note (1)).

*(f) Effective Corporate Tax Rate*

The Company's income tax obligations consist of those of the Company in Israel and those of each of its subsidiaries in their respective taxing jurisdictions. To date, the Company has chosen not to elect the option available to it under Israeli tax laws as a Foreign Invested Company to calculate its taxes in Dollars. As a result, the Company's income tax obligations in Israel are based upon its earnings determined in Israeli currency on a real basis (having regard to the changes in the Israeli CPI) and not in Dollars, the functional currency of the Company's financial statements. The effective tax rate in the Company's financial statements is influenced mainly by the following: (a) the split of taxable income between the various tax jurisdictions; (b) the availability of tax loss carryforwards and the extent to which deferred tax assets have been recorded; (c) the difference between the change in the exchange rate of the Dollar to New Israeli Shekels ("NIS") and the change in the Israeli CPI; and (d) the portion of the Company's income which is entitled to tax benefits due to those of its production facilities which are Approved Enterprises. The combination of these factors produced an effective tax rate of 13.0%, 11.9% and 8.7% (net of special charges) for 1999, 2000 and 2001, respectively. See Item 4.B—Business Overview—Additional Considerations Relating to the Company's Operations in Israel and Note 9 to the Consolidated Financial Statements listed in Item 18.

*(g) Impact of Inflation and Currency Fluctuations*

The Dollar cost of the Company's operations in Israel is influenced by the differential between the rate of inflation in Israel and any change in the value of the NIS in relation to the Dollar. The Company's Dollar costs will increase if this "gap" widens and the devaluation rate fails to keep pace with the rate of inflation in Israel, and, conversely, the Company may benefit if the rate at which Israeli currency devalues against the Dollar exceeds the rate of inflation in Israel. In the years ended December 31, 1997, 1998, 1999, 2000 and 2001, the annual inflation rate in Israel as adjusted for the devaluation of the Israeli currency in relation to the Dollar was (1.8)%, (9.0)%, 1.5%, 2.7% and (7.8)%, respectively. The closing representative exchange rate of the Dollar at the end of each such period, as reported by the Bank of Israel, was NIS 3.536, NIS 4.160, NIS 4.153, NIS 4.041 and NIS 4.416, respectively. As a result, the Company experienced increases in the Dollar costs of operations in Israel in 1999 and 2000, and decreases in 1997, 1998 and 2001. The increase in the Dollar cost of the Company's operations in Israel relates primarily to the cost of salaries in Israel, which are paid in, and constitute a substantial portion of, the Company's expenses in NIS. These NIS related expenses constituted approximately 27%, 26% and 24% of the total expenses of the Company for 1999, 2000 and 2001, respectively. There can be no assurance that the Company will not be materially adversely affected if inflation in Israel exceeds the devaluation of the NIS against the Dollar or if the timing of such devaluation lags behind increases in inflation in Israel.

In addition, the Company receives most of its European revenues in Euros, and expenses in Euros are generally less than revenues. The management of balances in Euros is conducted mainly through hedging agreements in Euros in an effort to reduce the effects of fluctuations in the exchange rate. See Item 11—Quantitative and Qualitative Disclosures about Market Risk. The Company's cash reserves are held almost entirely in Dollars.

The representative exchange rate for converting NIS into Dollars, as published by the Bank of Israel on April 23, 2002, was NIS 4.787 = \$1.00.

*(h) Results of Operations*

The following table sets forth certain financial data as a percentage of revenues for the periods indicated.

	Year Ended December 31,		
	1999	2000	2001
	%	%	%
Revenues .....	100.0	100.0	100.0
Cost of revenues:			
Cost .....	48.7	47.0	52.8
Write down of inventories .....	—	—	2.3
Total cost of revenues .....	48.7	47.0	55.1
Gross profit .....	51.3	53.0	44.9
Operating expenses			
Research and development costs:			
Expenses incurred .....	11.7	11.3	16.6
Less—government participations .....	0.2	0.0	—
Net research and development costs .....	11.5	11.3	16.6
Selling, general and administrative expenses .....	18.3	18.2	20.4
Amortization of goodwill and other intangible assets .....	1.4	1.2	2.4
Restructuring costs .....	—	—	2.0
Settlement with the Government of Israel in respect of research and development grants received .....	—	—	4.7
Total operating expenses .....	31.2	30.7	46.1
Operating income (loss) .....	20.1	22.3	(1.2)
Financial income—net .....	1.7	2.1	1.5
Other income—net .....	0.0	0.0	0.0
Income before taxes on income .....	21.8	24.4	0.3
Taxes on income .....	2.8	2.9	(0.3)
Income from operations of the Company, its consolidated subsidiaries and its partnerships .....	19.0	21.5	0.6
Minority share in losses (profits) of consolidated partnerships .....	0.1	(0.2)	—
Net income .....	19.1	21.3	0.6

*(i) Year Ended December 31, 2001 Compared To Year Ended December 31, 2000*

The Company's financial results for 2001 reflect a very difficult year, characterized predominantly by the ongoing, severe slowdown throughout the electronics industry worldwide. This was evidenced by the sharp reduction in revenues and gross margins as well as in an operating loss for the year. The materially lower demand

for the Company's PCB-AOI equipment was offset, in part, as a result of the successful realization over the last few years of Orbotech's policy of diversification into additional AOI and manufacturing applications. This enabled the Company to maintain its solid financial position in a challenging year despite the prevailing harsh economic environment. During 2001, the Company implemented a number of expense containment measures designed to align its cost structure to the lower level of demand for its products. These included: a reduction in the Company's worldwide workforce, from a peak of approximately 1,900 employees in August 2001 to approximately 1,650 employees at the end of December 2001; the freezing of management salaries at their 2000 levels in March 2001 followed by a 10% reduction in management salaries in August 2001; the rationalization of certain manufacturing and operational activities; and generally lower discretionary spending. The Company continued during the year to monitor its inventory levels closely.

During 2001, the Company recorded special charges totaling \$28.5 million (\$25.0 million net of taxes), comprised of \$6.1 million (\$5.5 million net of taxes) in restructuring costs related to employee dismissals and operational rationalizations, \$7.0 million (\$6.2 million net of taxes) related to the write down of inventories, \$1.2 million (\$1.1 million net of taxes) in respect of research and development co-operation between the Company and Jenoptik and \$14.2 million (\$12.2 million net of taxes) arising out of the agreement reached with the OCS with respect to royalty payments.

Revenues in 2001 totaled \$301.9 million compared with \$372.3 million in 2000. This decrease of 18.9% resulted principally from the worldwide economic downturn and specifically its effect of reducing overall demand for electronic equipment, including manufacturing components such as PCBs. The Company's revenues from service activities grew at a slower rate than in the previous year due to underutilization of capacity in the installed base of the Company's products and declining sales of new systems.

Revenues from the sale and service of PCB-related equipment decreased to \$223.1 million from \$300.5 million in 2000. Of these revenues, approximately \$198.6 million, representing approximately 66% of the Company's revenues, was attributable to sales and service of systems for bare PCBs, and approximately \$24.5 million, representing approximately 8% of the Company's revenues, was attributable to sales and service of AOI systems for assembled PCBs. In 2000, approximately \$277.1 million of revenues, representing approximately 74% of the Company's revenues, was attributable to sales and service of systems for bare PCBs, and approximately \$23.4 million of revenues, representing approximately 6% of the Company's revenues, was attributable to sales and service of AOI systems for assembled PCBs.

The decrease in revenues arising from sales of AOI systems for bare PCBs reflected the reduction in manufacturing activity and capacity underutilization experienced by many of the Company's large PCB customers, who reduced capital expenditures due both to a decline in their own businesses and profitability and to overall uncertainty as to the projected length and severity of the global economic downturn. The relatively small increase in revenues arising from sales of AOI systems for assembled PCBs reflects, on the one hand, the growing recognition by manufacturers of the importance of AOI in the assembled board manufacturing process coupled with the low overall level of penetration of AOI within this industry but, on the other, the widespread hesitancy on the part of contract manufacturers in making additional capital investments under prevailing economic conditions. By contrast, during 2001 the Company's Direct Imaging manufacturing equipment continued to gain broader acceptance throughout the PCB industry, demonstrating the significant benefits which, the Company believes, this enabling technology offers to the PCB manufacturing process.

Revenues from the sale and service of FPD equipment increased to \$69.4 million from \$65.1 million in 2000, reflecting a limited increase in capital expenditures, mainly by FPD manufacturers investing in new technologies such as Low Temperature Polysilicon and so-called "fifth generation" glass sizes. These additional capital investments served, in part, to offset reduced demand for certain of the Company's other FPD-AOI products arising from the excess capacity created in the FPD industry as a result of the extensive investments made by manufacturers during 2000, especially in FPDs for desktop monitor applications.

Geographically, the Company experienced relative stability in Europe and Japan, but a significant reduction in revenues from North America and Taiwan. For additional information see *Geographical Analysis; Worldwide Economic Situation; Cost of Revenues*.

Gross profit for 2001 was \$135.4 million, or 44.9% of revenues. Excluding a special charge of \$7.0 million recorded for the write down of inventory, gross profit for 2001 was \$142.4 million, or 47.2% of revenues, as compared to \$197.2 million, or 53.0% of revenues, in 2000. The decline in gross profit margin was primarily attributable to the sale of a larger percentage of low-end PCB inspection equipment in 2001 as compared to the previous year, a decrease in capacity utilization resulting from lower unit volume and a higher proportion of service (as distinct from equipment) revenues as a percentage of total revenues in 2001 as compared with 2000. The charge recorded for excess inventory was in respect of raw materials related to the Company's high-end and mainstream PCB-AOI products, which were those principally affected by the overall slowdown in business.

The 15.9% increase in net research and development expenditures from \$42.1 million in 2000 to \$48.8 million in 2001 (excluding \$1.2 million for Jenoptik's contribution to research and development projects) primarily reflected the Company's increased research and development efforts directed toward expanding into and developing new technologies, developing products which address new applications and enhancements to existing products. During 2001, the Company received no Israeli Government participation in its research and development expenditures.

Selling, general and administrative expenses totaled \$61.4 million in 2001 as compared to \$67.8 million in 2000. This 9.4% decrease reflects, in part, reduced worldwide sales and marketing activity due to the downturn in the global electronics industry, which in turn resulted in lower sales commissions and payments required to be made to in respect of OCS grants. Nevertheless, the Company has continued to expand its sales and marketing activities in China in view of the continuing migration to the Far East region, principally China, of high-volume PCB manufacturing operations from other parts of the world.

The amortization of goodwill and other intangible assets during 2001 totaled \$7.3 million as compared to \$4.6 million in 2000. The increase was attributable to the exercise of the Schuh option and the SIS acquisition in 2001. For information regarding the effect of FAS 142 on the Company's financial results for 2002, see *New Accounting Standards under U.S. GAAP*.

Restructuring costs of \$6.1 million were recorded in 2001 in connection with the Company's ongoing and anticipated review of its operations in light of the effects on the Company of the economic downturn. The measures taken included reducing the Company's worldwide workforce from approximately 1,900 in August 2001 to approximately 1,650 in December 2001. In addition, as part of its efforts to rationalize certain of its operations so as to align production capacity with current and anticipated reduced levels of demand, the Company consolidated its Japanese operations.

The Company also recorded a one-time charge of \$14.2 million arising out of an agreement reached with the OCS for the discounted pre-payment of future royalties due with respect to previous participation by the Government of Israel in funding research and development by the Company. Pursuant to this agreement, the Company currently intends to pay this amount to the Government of Israel commencing in 2002 over five years at an interest rate of 4%, thereby settling all outstanding issues between it and the OCS relating to past grants received. This will also enable the Company to participate in a new OCS program under which it could be eligible to receive research and development grants from an OCS funded program for the development of generic technologies without incurring any royalty obligations.

Net financial income totaled \$4.5 million in 2001 as compared to \$8.0 million in 2000. The decrease in interest income from \$9.0 million to \$7.5 million was due to the continuing reduction in applicable interest rates, which declined by several hundred basis points during 2001. The Company also recorded exchange rate losses totaling approximately \$2.2 million during the year, compared with an exchange rate gain of \$0.4 million in 2000.

Taxes on income, before the effect of the abovementioned special charges, were \$2.6 million in 2001, as compared to \$10.8 million in 2000. The Company's effective tax rates with respect to 2001 and 2000, before the effect of these special charges, were 8.7% and 11.9%, respectively. Generally, the Company's effective tax rate varies largely as a function of benefits received from the State of Israel relating to Approved Enterprises. See Effective Corporate Tax Rate. The tax benefits recorded as a result of these special charges were \$3.6 million, and the Company's net 2001 tax position reflected a credit of \$1.0 million.

Net income for 2001, excluding the special charges totaling \$25.0 million, net of taxes, was \$26.9 million, or \$0.82 per share (diluted) under U.S GAAP (\$0.81 per share (diluted) under Israeli GAAP), compared with net income of \$79.1 million, or \$2.40 per share (diluted), for 2000 under U.S GAAP (\$2.44 per share (diluted) under Israeli GAAP). Including special charges, net income for 2001 was \$1.9 million, or \$0.06 per share (diluted) under U.S GAAP (\$0.06 per share (diluted) under Israeli GAAP).

*(j) Year Ended December 31, 2000 Compared To Year Ended December 31, 1999*

The Company's financial results for 2000 reflected a very strong year with solid growth in all principal businesses. The Company's continued diversification into AOI applications in additional sectors of the electronics industry, combined with ongoing technological shifts and greater PCB complexity giving rise to customers' needs for increasingly sophisticated products, created further demand for the Company's core inspection and imaging solutions. Generally, during 2000, the Company was able to benefit from this continued shift towards more sophisticated electronics devices, driven in turn by end product technological enhancements, and the global expansion in the electronics industry.

Revenues in 2000 totaled \$372.3 million compared with \$278.4 million in 1999. This 33.7% increase was primarily a function of the overall expansion throughout the electronics industry during the year. PCB equipment revenues rose 20.5% to \$300.5 million from \$249.5 million in 1999. Of these revenues, approximately \$277.1 million, representing approximately 74% of the Company's revenues, was attributable to sales and service of AOI systems for bare PCBs, and approximately \$23.4 million, representing approximately 6% of the Company's revenues, was attributable to sales and service of AOI systems for assembled PCBs. In 1999, approximately \$235.7 million of revenues, representing approximately 85% of the Company's revenues, was attributable to sales and service of AOI systems for bare PCBs, and approximately \$13.8 million of revenues, representing approximately 5% of the Company's revenues, was attributable to sales and service of AOI systems for assembled PCBs.

This growth in revenues arising from sales of AOI systems for bare and assembled PCBs was due partially to the substantially increased demand for the Company's high-end, technologically advanced PCB inspection systems which, the Company believes, are essential tools in enabling PCB manufacturers to meet the formidable challenges associated with the continuing industry shift towards increasingly complex PCBs. The Company believes that the increase was also due partly to what it perceived as a growing recognition on the part of manufacturers of assembled PCBs of the crucial importance of AOI in enabling them to meet their goals of more expeditious delivery of more reliable and lower cost products to their customers, as evidenced by the Company's receipt during the year of a number of large system orders from several prominent manufacturers.

During 2000, the Company's direct imaging product continued to gain industry acceptance, and the Company believes that its products are now widely recognized as the leading solution in this area. Revenues from the sale and service of FPD equipment rose 241.1% to \$65.1 million from \$27.0 million in 1999, as FPD fabricators in Japan, Korea and Taiwan increased their capital expenditures to support the overall growth in demand for FPDs. The Company believes that these higher levels of demand were the result of the ongoing shift from CRT to LCD monitors, increased electronic notebook production and continued utilization of LCD screens in portable devices. In 2000, the Company also recorded initial sales of its AOI system for BGA substrates. Geographically, the Company experienced very high revenue growth rates (68% and 46%, respectively) in the Pacific Rim and Japan, which regions remained at the forefront of the global electronics industry expansion.

Gross profit for 2000 was \$197.2 million, or 53.0% of revenues, as compared to \$142.8 million, or 51.3% of revenues, in 1999. This increase in 2000 was due primarily to greater capacity utilization resulting from higher unit volume, faster growth of certain products having higher gross margins and a larger proportion of product revenues as a percentage of total revenues during the year.

The 31.6% increase in net research and development expenditures during 2000 to \$42.1 million (from \$32.0 million in 1999) was primarily attributable to the Company's continuing efforts in expanding into new technologies, developing products designed to address new market applications and providing enhancements to existing products. During 2000, Israeli Government participation in research and development expenditures decreased to \$0.1 million as the Company pursued its policy (initially adopted in 1999) of phasing out such participation.

Selling, general and administrative expenses totaled \$67.8 million in 2000 as compared to \$51.0 million in 1999. This increase of 32.9% was due partially to the continued expansion by the Company of its sales of products for the inspection of assembled PCBs, increased investment in its sales and marketing infrastructure in China, higher royalty payments to the Government of Israel on past research and development participations and increased commission payments resulting from the overall growth in sales volume.

The amortization of goodwill in 2000 totaled \$4.6 million, as compared to \$3.8 million in 1999. This increase was attributable to the full year amortization of goodwill resulting from the Company's acquisition of ODP and the initial goodwill amortization of approximately \$0.5 million arising from the Company's acquisition of Jenoptik's interest in the DI Joint Venture.

Net financial income in 2000 totaled \$8.0 million, as compared to \$4.6 million in 1999. This increase was principally from interest income earned due to the higher level of cash, cash equivalents and investments generated from operations and the continued increase during 2000 in the applicable interest rates.

Taxes on income increased to \$10.8 million in 2000, as compared to \$7.9 million in 1999. The Company's effective tax rates with respect to 2000 and 1999 were 11.9% and 13.0%, respectively. Effective tax rates in Israel vary largely as a function of changes in the level of benefits received from the State of Israel relating to the Company's Approved Enterprises.

Net income for 2000 was \$79.1 million, or \$2.40 per share (diluted) under U.S GAAP (\$2.44 per share (diluted) under Israeli GAAP), compared to \$53.1 million, or \$1.66 per share (diluted), in 1999 under U.S GAAP (\$1.63 per share (diluted) under Israeli GAAP).

#### *5.B Liquidity and Capital Resources*

The Company's financial position remained strong during 2001 despite the decrease in cash, cash equivalents and marketable investments to \$165.9 million at the end of 2001 from \$188.8 million a year earlier. This decrease occurred primarily as a result of cash used in investing activities, including capital expenditures of \$9.3 million and investments in Schuh and SIS totaling \$15.8 million, which was partially offset by positive cash flow generated from financing activities, including the exercise of stock options by employees which generated approximately \$3.6 million in cash.

Although inventories declined from \$84.1 million as at December 31, 2000 to \$80.1 million as at December 31, 2001, inventories as a percentage of revenues, taking into account the write-down of excess inventories of \$7.0 million, rose to 26.5% as at December 31, 2001, as compared to 22.6% as at December 31, 2000, reflecting reduced demand for the Company's PCB-AOI products as a result of the continued slowdown in the electronics industry worldwide. The decrease of \$3.3 million in net trade accounts receivable was principally due to a lower level of sales in 2001 compared with 2000. The period trade receivables were outstanding (calculated by dividing trade receivables at year end into annual revenues) increased to 101 days on December 31, 2001 (from 85 on December 31, 2000), reflecting the Company's granting of additional credit and extended payment terms to certain of its bare and assembled PCB manufacturing customers in view of the difficult economic environment in

which they were operating. The Company did not realize any significant bad debts during 2001. The decrease in accounts payable and accruals of \$35.0 million as compared to 2000 reflected the reduction in the overall business of the Company during 2001, offset, in part, by restructuring costs not yet paid.

Capital expenditures during 2001 totaled \$9.3 million compared with \$11.2 million in 2000, as the Company expended reduced amounts in equipping its manufacturing facilities and in upgrading its management information systems, in light of the ongoing economic slowdown and as part of its program of cost containment measures.

As at December 31, 2001, the Company's total debt outstanding was \$14.2 million, compared to total debt outstanding as at December 31, 2000 of \$0.7 million, and it had unutilized credit lines totaling \$50 million. Outstanding indebtedness consists entirely of amounts due to the Government of Israel pursuant to the agreement described in Item 5.C(a)—Research and Development, Patents and Licenses, etc.—Research and Development Policy. \$2.8 million of this indebtedness is payable in 2002. In addition, as at December 31, 2001, the Company had off-balance sheet commitments for equity investments totaling approximately \$6.7 million and for minimum lease obligations during 2002 of approximately \$6.4 million.

The Company is not aware of any material commitments for capital expenditures in the future and believes that its currently available cash and cash equivalents and funds generated from operations will be sufficient to meet its working capital requirements for the next twelve months.

The Company uses financial instruments and derivatives in order to limit its exposure to risks arising from changes in exchange rates. The use of such instruments does not expose the Company to additional exchange rate risks since the derivatives are held against an asset (for example, excess assets in Euros). See Item 11—Quantitative and Qualitative Disclosures About Market Risk. The Company's policy in utilizing these financial instruments is to protect the Dollar value of its cash and cash equivalent assets rather than to serve as a source of income. For information as to monetary balances in non-Dollar currencies see Note 11 to the Consolidated Financial Statements listed in Item 18.

The Company does not use off-balance sheet arrangements or transactions with unconsolidated, limited-purpose entities to provide liquidity, financing or credit support or to engage in leasing, hedging or research and development activities or which would expose the Company to liability that is not reflected on the face of its financial statements.

### *5.C Research and Development, Patents and Licenses, etc.*

#### *(a) Research and Development Policy*

The Company places considerable emphasis on research and development projects designed to upgrade its existing product lines and to develop new industrial and service applications of its technologies. As of December 31, 2001, 387 employees were engaged primarily in research and development for the Company.

A decreasing portion of the Company's research and development expenses has been funded through third-party participations, principally from the Government of Israel which have been royalty-bearing. Following the formation of the DI Joint Venture in 1996, and until 1998, this entity received non-royalty-bearing participations from the Provincial Government of Thuringia in Germany. The following table shows the total research and development expenditures of the Company and participation in such expenditures by such governmental entities for the periods indicated:

	Year ended December 31,		
	1999	2000	2001
	(in thousands)		
Internally-funded research and development expenditures .....	\$31,983	\$42,097	\$50,047
Governmental participations .....	601	140	0
Total outlay for research and development .....	<u>\$32,584</u>	<u>\$42,237</u>	<u>\$ 50,047(1)</u>

- (1) Net research and development costs for the year ended December 31, 2001 included \$1.2 million in consideration for co-operation on joint research and development projects between the Company and Jenoptik. This was effected by the issuance of 67,500 Ordinary Shares to DEWB.

Prior to 2001, the Company took advantage of certain Israeli Government programs which provided for participation in research and development expenses. The extent and payment terms for the Company's overall royalty obligation to the Government of Israel in respect of products in the research and development of which the Government has previously participated were resolved during 2001 by an agreement reached with the OCS pursuant to which the Company will pay to the Government of Israel the sum of \$14.2 million in settlement of all royalty obligations arising from sales after June 30, 2001 with respect to previous OCS grants to the Company. The Company currently intends to make this payment in equal annual installments over five years commencing in 2002. During the years ended December 31, 1999, 2000 and 2001, the Company's royalty expenses to the Israeli Government with respect to such participations were approximately \$5.0 million, \$7.1 million and \$2.8 million, respectively. See Note 7a(1) to the Consolidated Financial Statements listed in Item 18. During 1999, following the Company's determination that the conditions imposed upon Israeli Government participation in the Company's research and development (including the royalty repayment provisions) were no more attractive than other financing opportunities, the Company decided to reduce such participation. However, the Company anticipates that it may in the future participate in a new, royalty free OCS funded program for the development of generic technologies, for which the Company may be eligible following the settlement agreement with the OCS.

Israeli Government consent is required to manufacture products developed with such participations outside of Israel and to transfer to third parties know-how developed through projects in which the Government participates. Such restrictions do not apply to the export from Israel of the Company's products developed with such know-how.

*(b) Intellectual Property*

To safeguard its proprietary product design and technology, the Company relies, in part, on patent, trade secret, trademark and copyright law, as well as technical safeguards. Proprietary software is generally protected under copyright law. Additionally, the Company relies upon trade secrets and regularly enters into non-disclosure agreements with its employees, subcontractors and potential business associates. As of March 31, 2002, the Company held 93 patents covering 43 different inventions and had 162 pending patent applications.

Notwithstanding the above, there can be no assurance that any patent owned or licensed by the Company will not be invalidated, designed around, challenged or licensed to others, that any of the Company's pending or future patent applications will be issued with the scope of the claims sought by the Company, if at all, or that non-disclosure agreements will not be breached. In addition, patent coverage may not be extended to all countries, and effective copyright and trade secret protection may be unavailable or limited in certain countries. There can also be no assurance that the steps taken by the Company will prevent misappropriation of its technology. It is also possible that technology developed by the Company may be infringing on patents or other rights held by others.

The Company has, in a limited number of cases, agreed to indemnify certain of its customers against intellectual property claims arising from the purchase and use of the Company's products. Some customers of the Company that use certain of its products have received notices of infringement alleging that methods carried out on

equipment supplied by the Company and used in the inspection of PCBs in the course of manufacture infringe patents issued to others relating, among other things, to "machine vision i.e., computer image analysis". Certain of these customers have notified the Company that they may seek indemnification from the Company for damages and expenses which may result from this matter; however the Company believes that the risk of its having to make payment in this regard is remote. To date, no claims have been filed against the Company in this regard.

Although the Company continues actively to pursue the protection of its intellectual property in the belief that its patents have significant value, it also believes that rapid technological improvement and factors such as the knowledge and experience of the Company's management personnel and employees and their continued ability to define, develop, enhance and market new products and services afford additional protection which may, in some instances, exceed patent protection.

Pursuant to a Spin-Off and License Agreement dated as of August 17, 1992 (the "Spin-Off Agreement"), entered into in connection with the Merger, Orbot Instruments Ltd. ("Instruments"), formerly a subsidiary of Orbot which was subsequently acquired by Applied Materials, Inc. ("Applied"), and merged into an Israeli subsidiary of Applied, was granted the perpetual worldwide right and license to continue using, free of royalties, any and all know-how and intellectual property which was in the possession of Orbot prior to July 1, 1992 (including, inter alia, any and all intellectual property protected by patents, copyrights or other registered or non-registered rights), for the purpose of research and development, manufacturing, marketing, sale, lease or service of products for use in the manufacture or inspection of semiconductor devices. Instruments was engaged in the business of designing, developing, manufacturing, marketing and servicing AOI systems for use at various stages in the manufacture of semiconductors and produced automated optical systems for the inspection of wafers and for the inspection of "masks" and "reticules", master products used in the manufacture of semiconductors. Similarly, Instruments granted the Company (as successor to Orbot) the perpetual worldwide right and license to continue using, free of royalties, any and all know-how and intellectual property which was in Instruments' possession prior to July 1, 1992, for the purpose of research and development, manufacturing, marketing, sale, lease or service of products of the Company.

The Spin-Off Agreement contains a non-competition agreement (the "Non-Competition Agreement") pursuant to which Instruments agreed not to engage, directly or indirectly, at any time prior to October 27, 2002, in any research and development, design, manufacture, production, marketing, sale, lease or service of: (i) products for use in the manufacture or inspection of PCBs; (ii) CAD/CAM products for use in the manufacture of PCBs or multi-chip modules ("MCM's"); (iii) FPD devices or products for use in the manufacture or inspection of FPD devices; (iv) products for use in the manufacture or inspection of MCMs, including products relating to thin film and multi-layered ceramics; or (v) character recognition products. Pursuant to the Non-Competition Agreement, the Company agreed not to engage, directly or indirectly, at any time prior to October 27, 2002, in any research and development, design, manufacture, production, marketing, sale, lease or service of products for use in the manufacture or inspection of semiconductor devices.

#### **5.D Trend Information**

The global electronics industry is continuing to contend with the effects of depressed economic activity which has extended into 2002, resulting in further uncertainty and unsettled business confidence worldwide. Electronics component manufacturers have experienced a decline in their own businesses and profitability, characterized by capacity underutilization and an excess of inventories, as well as difficulty in predicting the levels of future orders for their products. Consequently, and in view also of the inherent uncertainty as to the projected duration and severity of prevailing conditions, the extent of reported stabilization and the strength of prospective recovery, these manufacturers continue to delay capital expenditures, including those associated with the purchase of capital equipment such as the systems supplied by the Company.

As a result, the Company is continuing to experience reduced revenues and profit margins from sales of its PCB-AOI equipment, due primarily to the nature of the product mix, the current trend of which is toward less

expensive, lower-end and lower profit margin systems supplied by the Company, rather than the more sophisticated, high-end, more expensive products which the Company also develops, markets and sells. In addition, the Company has, in response to market conditions, provided pricing incentives in respect of certain of its high-end PCB-AOI products. Geographically, the Company continues to record lower revenues from both sales and service activities in the United States and Europe, reflecting the ongoing migration of PCB manufacturing activities to the Far East, and in particular to China.

Although overall demand for the Company's PCB-AOI equipment has slowed significantly, reflecting economic conditions prevailing into the second quarter of 2002, certain of the Company's customers are expressing cautious optimism in respect of the second half of 2002 and somewhat greater optimism in respect of 2003, particularly as respects the FPD area. These views are also reflected in the media and reports of certain financial and industry analysts. Nevertheless, as the Company is a producer of support solutions for the supply chain of the electronics industry, and in view of the number of underutilized systems in the hands of bare PCB manufacturers, it is anticipated that when the overall business and economic situation does improve there could be a delay before the effects of such improvement begin to be felt in some parts of the Company's business. However, the Company remains optimistic that in the long term the demand for its products will recover and that its continuing emphasis on research and development and its strong financial condition will provide a sound base for future growth.

Because the Company's ability to foresee future trends in the flow of orders for its systems (colloquially referred to as its "visibility") remains highly restricted, it anticipates that effects on the Company of the current conditions will prevail at least through the first half of 2002 and it is not currently able to predict the extent to which those conditions will affect its income, profitability or capital resources for the whole of 2002. Accordingly, the Company is continuing to implement previously announced cost containment measures which, during the first and second quarters of 2002, have included: further reductions in the Company's worldwide workforce; a reduction in employee salaries; a further reduction of 10% in management salaries; and the continued rationalization of certain of its operating and marketing activities.

**Item 6. Directors, Senior Management and Employees**

**6.A Directors and Senior Management**

As at March 31, 2002, the Directors and Executive Officers of the Company were as follows:

<u>Name</u>	<u>Date of Birth</u>	<u>Director Since</u>	<u>Position with the Company</u>
Dr. Shlomo Barak (1),(2) .....	November 19, 1938	1981	Chairman of the Board of Directors
Yochai Richter (3),(4) .....	September 17, 1942	1992	President, Chief Executive Officer and Director
Dr. Michael Anghel (1),(5),(6) .....	January 13, 1939	1986	Director and Chairman of the Audit and Remuneration Committees of the Board of Directors
Yehudit Bronicki (7) .....	December 29, 1941	2000(8)	Director
Dan Falk (3),(5) .....	January 12, 1945	1997	Director
Uzia Galil (2) .....	April 27, 1925	1981	Director
Gideon Lahav (1),(5),(6) .....	December 12, 1929	1998	Director
Dr. Jacob Richter (4),(7) .....	December 24, 1945	1997(9)	Director
Dr. Shimon Ullman (2) .....	January 28, 1948	1992	Chief Scientist and Director
Raanan Cohen .....	April 1, 1955		Executive Vice President; and President, Printed Circuit Board Division
Eyal Harel .....	May 2, 1957		Executive Vice President for Products and Technology
Jaron Lotan .....	November 1, 1957		Executive Vice President for Business and Strategy
Ofer Sandelson .....	December 1, 1954		Executive Vice President; and President, Printed Circuit Board Division
Arie Weisberg .....	October 19, 1950		Executive Vice President for Global Resources
Amichai Steinberg .....	May 25, 1962		Corporate Vice President for Finance and Chief Financial Officer
Adrian Auman .....	December 16, 1954		Corporate Vice President for Investor Relations and Director of Finance
Michael Havin .....	December 14, 1958		Corporate Secretary

- (1) Member of the Remuneration Committee of the Board of Directors (the "Remuneration Committee").
- (2) Class II Director. See Item 6.C(a).
- (3) Class I Director. See Item 6.C(a).
- (4) Yochai Richter and Jacob Richter are brothers.
- (5) Member of the Audit Committee of the Board of Directors (the "Audit Committee").
- (6) External Director.
- (7) Class III Director. See Item 6.C(a).
- (8) Mrs. Bronicki served as a director of the Company between August 15, 1993 and February 27, 1994.
- (9) Dr. Richter served as a director of the Company between October 27, 1992 and August 15, 1993.

Dr. Shlomo Barak has been the Chairman of the Board of Directors since August 1996 and served as Co-Chairman of the Board of Directors from October 1992 to November 1994. Dr. Barak is an industrial promoter and was a founder, as well as the President, Chief Executive Officer and a director of the Company, from its formation in 1981 until October 1992. Prior to the Company's formation, Dr. Barak was Vice President for Research and Development and Engineering for four years at Israel Electro-Optical Industries Ltd., an Israeli manufacturer of electro-optical systems for military and commercial applications, where he was employed for ten years. Dr. Barak holds a bachelor's degree in mathematics and physics and a master's degree and a doctorate in physics, all from the Hebrew University of Jerusalem (the "Hebrew University").

Yochai Richter has been the President and Chief Executive Officer since November 1994. He has been a member of the Board of Directors since October 1992 and was a joint Managing Director and Chief Executive Officer from October 1992 to November 1994. Mr. Richter was a member of the board of directors and a managing director of Orbot from its organization in 1983 until the acquisition by the Company, in 1992, of all of the outstanding shares of Orbot. He received his degree in mathematics from the Technion-Israel Institute of Technology (the "Technion") in Haifa in 1972.

Dr. Michael Anghel is the founder and managing director of CAP Ventures Ltd., an Israeli company operating and investing in the area of Israeli advanced technology ventures, specializing in the field of communications. From 1977 to May 1999, he served as director and senior manager of Discount Investment Corporation Ltd. ("DIC"), an Israeli corporation, and as managing director of DIC Communication and Technology Ltd., a wholly owned subsidiary of DIC. In addition, during this period he served on the boards of directors of a number of Israeli Nasdaq listed companies connected with DIC and PEC Israel Economic Corporation, a Maine corporation, including Elron Electronic Industries Ltd. ("Elron"), Elscint Ltd., Elbit Medical Imaging Ltd., Nice Systems Ltd. ("Nice") and Gilat Satellite Networks Ltd. Dr. Anghel has been instrumental in founding several major Israeli communications operating companies including the principal Israeli cable television company (Tevel Israel International Communications Ltd.) and the Israeli cellular telephone company Cellcom Israel Ltd., as well as a variety of other advanced technology ventures. Dr. Anghel was formerly a member of the faculty of the Graduate School of Business Administration of Tel Aviv University, with which he is still affiliated. Dr. Anghel received his bachelor's degree in economics from the Hebrew University and his master's degree in business administration and a doctorate in finance and business from Columbia University.

Yehudit Bronicki has, since 1991, been the Managing Director of Ormat Industries Ltd. ("Ormat"), an Israeli manufacturer and developer of renewable energy power plants, which she co-founded in 1965. Mrs. Bronicki is a member of the boards of directors of Ormat Technologies, Inc. and its subsidiaries and Bet Shemesh Engines Ltd. She is also a member of the Advisory Board of the Bank of Israel. Mrs. Bronicki received her bachelor's degree in social sciences from the Hebrew University, followed by advanced studies in management, finance and marketing.

Dan Falk serves as the chairman of the board of directors of Atara Technology Ventures Ltd., an Israeli company engaged in investment in advanced technology enterprises. He is also a member of the boards of directors of Visionix Ltd., Ramdor Ltd., Medcon Ltd., Advanced Vision Technology Ltd., Nice and Orad Ltd., all

of which are Israeli companies, and is a member of the board of directors of Netafim Irrigation Equipment & Drip Systems, which is an Israeli co-operative society. From July 1999 to November 2000, he served as the president and chief operating officer of Sapiens International Corporation N.V., a Netherlands Antilles company engaged in the development of software solutions for large-scale, cross-platform systems. He was Executive Vice President of Orbotech from August 1995 to July 1999, and between June 1994 and August 1995 served as its Executive Vice President and Chief Financial Officer. Prior thereto he was Vice President and Chief Financial Officer of the Company from October 1992 until June 1994. He was director of finance and chief financial officer of Orbot from 1985 until consummation of the Merger. He received a master's degree in business administration in 1973 from the Hebrew University School of Business and had 15 years experience in finance and banking, including senior positions at Israel Discount Bank Ltd. ("IDB"), prior to joining Orbot.

Uzia Galil was the Chairman of the Board of Directors from the Company's formation until October 1992. Mr. Galil currently serves as the president and chief executive officer of Uzia Initiatives and Management Ltd., an Israeli company specializing in the promotion and nurturing of new businesses associated with electronic commerce and medical information media, which he founded in November 1999. From 1962 until November 1999, Mr. Galil served as the president and chief executive officer of Elron, an Israeli advanced technology holding company, where he also served as chairman of the board. From January 1981 until leaving Elron, Mr. Galil also served as chairman of the board of directors of Elbit Ltd., an electronic communication affiliate of Elron, and as a member of the boards of directors of Elbit Systems Ltd., a defense electronic affiliate of Elron, and all of the other private companies held in the Elron portfolio. Mr. Galil currently serves as chairman of the board of directors of Zoran Corporation and as a member of the boards of directors of NetManage Inc. and Partner Communications Company Ltd., an Israeli cellular telephone company. From 1980 to 1990, Mr. Galil served as Chairman of the International Board of Governors of the Technion. Mr. Galil received a bachelor of science degree from the Technion and a master's degree in electrical engineering from Purdue University. Mr. Galil has also been awarded an honorary doctorate in technical sciences by the Technion in recognition of his contribution to the development of science-based industries in Israel, an honorary doctorate in philosophy by the Weizmann Institute of Science (the "**Weizmann Institute**"), an honorary doctorate in engineering by Polytechnic University, New York, and an honorary doctorate from the Ben-Gurion University of the Negev in Israel. Mr. Galil is also a recipient of the Israel Prize.

Gideon Lahav serves as a member of the boards of directors of Delta Galil Ltd., Israel Petrochemical Industries Ltd., The Israel Phoenix Assurance Co. Ltd., DIC and Paz Oil Company Ltd. From 1991 to 1997 he served as the chairman of the boards of directors of IDB and its major banking subsidiaries, Israel Discount Bank of New York, Mercantile Discount Bank Ltd. and Discount Mortgage Bank Ltd. From 1986 to 1991 he served as the managing director of IDB and, from 1979 to 1986, as its deputy general manager. From 1974 to 1979 Mr. Lahav held the position of general manager of Barclays Discount Bank Ltd. (subsequently renamed Mercantile Discount Bank Ltd.). Between 1953 and 1974 he served in various capacities with the Government of Israel, including with the Ministry of Finance and the Ministry of Foreign Affairs, and, from 1969 to 1974, as the Director General of the Ministry of Industry and Trade. Mr. Lahav received his bachelor's degree in economics from the Hebrew University in 1953.

Dr. Jacob Richter serves as the chairman of the board of directors of Medinol Ltd., an Israeli company that designs, manufactures and sells stents, and has been a director of that company since 1993. He was managing director of Marathon—Capital Development Fund Ltd., an Israeli venture capital fund, from 1992 to 1994 and was director of marketing of Orbot from January 1992 until consummation of the Merger. Previously, he was director of new product development of Orbot from January 1990 until 1992 and director of product development of Orbot from 1986 until 1990. Prior to joining Orbot he was head of research and development of the Israeli Air Force. He holds a doctorate in brain research from Tel Aviv University and has worked as a post-doctoral and research fellow at the Artificial Intelligence Laboratory of The Massachusetts Institute of Technology ("**MIT**").

Dr. Shimon Ullman is employed on a part-time basis as the chief scientist for new products development in the process diagnostic and control product business group of Applied. He has been Chief Scientist of the

Company since October 1992 and was chief scientist of Orbot from its organization in 1983 until consummation of the Merger. Dr. Ullman is currently head of the Applied Mathematics Department of the Weizmann Institute and was previously a full professor at the Artificial Intelligence Laboratory of MIT.

Raanan Cohen has been Executive Vice President and President of the Printed Circuit Board Division since January 1, 2000, prior to which he had, since September 1997, been the president and chief executive officer of Orbotech, Inc., the Company's wholly-owned subsidiary in the United States. From January 1994 to September 1997 he was the Vice President for the PCB-AOI Product Line and, from 1991 to January 1994, was the PCB product line manager of Orbot and, after consummation of the Merger, of the Company. He joined Orbot in 1984, where he held various programming and product and project management positions until 1991. Prior to joining Orbot he held positions as a programmer at Telrad Networks Ltd. He received a bachelor's degree in computer science from the Hebrew University.

Eyal Harel has been Executive Vice President for Products and Technology since January 1, 2000, prior to which he had, since November 1997, been Vice President and General Manager of the Printed Circuit Board Division. From September 1994 to November 1997 he was Vice President for the Image Product Line. Previously he was the LCD Product Manager. He joined Orbot in 1988. Mr. Harel received a bachelor's degree in physics and computer science from Bar-Ilan University and a master's degree in computer science from the Weizmann Institute.

Jaron Lotan has been Executive Vice President for Business and Strategy since January 1, 2000, prior to which he had, since November 1997, been Vice President and General Manager of the Printed Circuit Board Division. From August 1995 to August 1997 he was President of the Company's wholly-owned Belgian subsidiary, Orbotech S.A., and from January 1993 to August 1995 served as its co-general manager. Previously he was general manager of Rosh Intelligent Systems, Inc. and, prior to that, was co-founder, and vice president for marketing and sales, of Rosh Intelligent Systems Ltd., both of which companies are involved in the development and marketing of software designed to enable computerization of troubleshooting and service information for the assistance of service engineers in the field. Mr. Lotan received a bachelor's degree in mathematics and economics and a master's degree in economics from the Hebrew University.

Ofar Sandelson has been Executive Vice President and President of the Printed Circuit Board Division since January 1, 2000, prior to which he had, since November 1997, been Corporate Vice President for Operations and Customer Support. From April 1996 to November 1997 he was Vice President of Operations and Customer Support. Prior thereto he was Vice President of Operations between July 1994 and April 1996. Previously he was vice president for customer support of Orbotech, Inc. and Orbot Inc. from 1990. Prior to joining Orbot, Mr. Sandelson held the position of general manager of Mytronics Ltd. He studied at Dawson College in Montreal, Canada.

Arie Weisberg has been Executive Vice President for Global Resources since August 2000, prior to which he had, since January 2000, been Corporate Executive Vice President for Global Resources and Chief Financial Officer. From November 1997 to January 2000 he was Corporate Vice President for Finance and Administration and Chief Financial Officer. From August 1995 to November 1997 he was Vice President for Finance and Administration and Chief Financial Officer. From January 1993 to August 1995 he was co-general manager of Orbotech S.A. and from July 1991 to January 1993 he was director of finance and operations of Orbot's subsidiary in Belgium. Prior to joining Orbot he was, from 1988 to 1991, general manager of Sinus Ltd., a manufacturer of internal combustion valves, and from 1984 to 1988 a regional general manager of Solcoor Inc. He received his bachelor's degree in agricultural economics from the Hebrew University.

Amichai Steinberg has been Corporate Vice President for Finance and Chief Financial Officer since August 2000. From January 1997 to July 2000 he served as the Executive Vice President of Orbotech, Inc., and from 1995 to January 1997 he served as that company's Vice President Finance and Operations. Prior to joining Orbotech, Mr. Steinberg was Chief Financial Officer of Instruments. Mr. Steinberg obtained his bachelor's degree in economics and business administration from the Hebrew University.

Adrian Auman has been Corporate Vice President for Investor Relations and Director of Finance since January 1, 2000, prior to which he had, since July 1997, been Director of Finance. He was financial controller of the Company from October 1992 to July 1997 and was the financial controller of Orbot from 1988 until the Merger. Prior to joining Orbot, he was an audit supervisor at Kesselman from 1986 to 1988 and a tax manager at Goldstein, Golub, Kessler & Co., certified public accountants, from 1979 to 1985. He is a certified public accountant both in Israel and the United States and has a master's of science degree from Pace University in New York.

Michael Havin has been Corporate Secretary since August 1996. Prior to joining the Company he practiced as a commercial attorney in Jerusalem from 1991 to 1995 and in Melbourne, Australia, from 1983 to 1989. He is qualified to practice law both in Israel and in Australia and holds bachelor of laws and bachelor of arts degrees from Monash University in Melbourne, Australia.

*Alternate Directors*

The Articles of Association of the Company (the "Articles") provide that any director may, by written notice to the Company, appoint another person to serve as an alternate director provided such appointment is approved by a majority of the directors then in office, and may remove such alternate. Any alternate director shall be entitled to notice of meetings of the Board of Directors and of relevant committees and to attend and vote accordingly, except that the alternate has no standing at any meeting at which the appointing director is present or at which the appointing director is not entitled to participate as provided in the Companies Law. A person who is not qualified to be appointed as a director, or a person who already serves as a director or an alternate director, may not be appointed as an alternate director. Unless the appointing director limits the time or scope of the appointment, the appointment is effective for all purposes until the appointing director ceases to be a director or terminates the appointment. The appointment of an alternate director does not in itself diminish the responsibility of the appointing director, as a director. An alternate director is solely responsible for his or her actions and omissions and is not deemed an agent of the appointing director. At present, Mr. Yehuda Bronicki serves as the alternate director for his wife, Mrs. Yehudit Bronicki.

The Articles also provide that the Board of Directors may delegate any, or substantially all, of its powers to one or more committees of the Board of Directors, and may entrust to and confer upon a Managing Director such of its powers as it deems appropriate. However, the Companies Law provides that certain powers and authorities (for example, the power to issue shares, to grant options to purchase shares or to approve the financial statements) may not be delegated, and may be exercised only, by the Board of Directors.

**6.B Compensation**

The following table sets forth, with respect to all directors and officers of the Company as a group, all remuneration paid by the Company during the fiscal year ended December 31, 2001:

	<u>Cash and cash equivalent forms of remuneration</u>	
	<u>Salaries, fees, directors' fees, commissions and bonuses</u>	<u>Securities or property, insurance benefits or reimbursement and personal benefits</u>
All directors and officers as a group (consisting of 18 persons, including 1 person who is no longer a director or officer) . . . . .	\$4,260,213	\$754,476

On August 28, 2000, the shareholders of the Company approved the awards of options to purchase a total of 204,000 Ordinary Shares to the directors of the Company, pursuant and subject to the terms of the 2000 Plan. These awards are comprised of an option to the President and Chief Executive Officer of the Company (who is also a director of the Company) to purchase 150,000 Ordinary Shares and options to purchase 6,750 Ordinary

Shares to each of the other eight directors of the Company. These options are all at an exercise price of \$66.42 per Ordinary Share, vest over a four year period and will expire on August 27, 2005. In addition, on November 8, 2001, the shareholders of the Company approved the awards of options to purchase a total of 168,500 Ordinary Shares to those directors of the Company who are not external directors of the Company, pursuant and subject to the terms of the 2000 Plan. These awards are comprised of an option to the President and Chief Executive Officer of the Company to purchase 125,000 Ordinary Shares and options to purchase 7,250 Ordinary Shares to each of the other six non-external directors of the Company (one of whom is an officer of the Company). These options are all at an exercise price of \$22.27 per Ordinary Share, vest over a four year period and will expire on November 7, 2006. None of the directors holds any other options to purchase Ordinary Shares. For information as to options awarded during 2001 to directors and officers as a group, see Item 6.E—Share Ownership. The amounts referred to in the remuneration table above do not include the value of options awarded to the directors or officers of the Company.

### *6.C Board practices*

#### *(a) Membership of Board of Directors; External Directors*

The Board of Directors consists of three classes of directors (not including the two external directors who do not form part of any class), with one class being elected each year by shareholders at the Company's annual general meeting for a term of approximately three years. Directors so elected cannot be removed from office by the shareholders until the expiration of their term of office. At the Company's 2001 annual general meeting held on November 8, 2001, all of the directors of the Company (other than the external directors) were designated into one of the three different classes. The external directors, who currently serve three year terms as required by Israeli law, do not form part of any class and are elected according to the Companies Law.

The three classes of directors are designated Class I Directors, Class II Directors and Class III Directors. The initial term of the Class I Directors will expire at the annual general meeting of shareholders to be held in 2002, the initial term of the Class II Directors will expire at the annual general meeting of shareholders to be held in 2003 and the initial term of the Class III Directors will expire at the annual general meeting of shareholders to be held in 2004. Mr. Dan Falk and Mr. Yochai Richter are the initial Class I Directors, Dr. Shlomo Barak, Mr. Uzia Galil and Dr. Shimon Ullman are the initial Class II Directors and Mrs. Yehudit Bronicki and Dr. Jacob Richter are the initial Class III Directors. In accordance with the Articles, any vacancies on the Board of Directors, including unfilled positions, may be filled by a majority of the directors then in office, and each director chosen in this manner would hold office until the next annual general meeting of the Company (or until the earlier termination of his or her appointment as provided for in the Companies Law or the Articles).

The Articles provide that the minimum number of members of the Board of Directors is three and the maximum number is eleven. The Board of Directors is presently comprised of nine members, seven of whom were re-elected at the Company's 2001 Annual General Meeting of Shareholders, and two of whom were appointed as external directors under the provisions of the Companies Law (discussed below), which appointments were ratified and approved by the shareholders at the Company's 2000 Annual General Meeting of Shareholders.

Under the Companies Law and the regulations promulgated pursuant thereto, Israeli companies whose shares have been offered to the public in, or that are publicly traded outside of, Israel are required to appoint at least two natural persons as "external directors". No person may be appointed as an external director if the person, or a relative, partner or employer of the person, or any entity under the person's control, has or had, on or within the two years preceding the date of the person's appointment to serve as an external director, any affiliation with the company to whose board the external director is proposed to be appointed or with any entity controlling or controlled by such company or by the entity controlling such company. The term affiliation includes an employment relationship, a business or professional relationship maintained on a regular basis, control and service as an office holder (which term includes a director).

In addition, no person may serve as an external director if the person's position or other business activities create, or may create, a conflict of interest with the person's responsibilities as an external director or interfere with the person's ability to serve as an external director or if the person is a member or employee of the Israel Securities Authority or of an Israeli stock exchange. If, at the time of election of an external director, all other directors are of the same gender, the external director to be elected must be of the other gender.

External directors are elected for a term of three years and may be re-elected for one additional three-year term. Each committee of a company's board of directors that has the authority to exercise powers of the board of directors is required to include at least one external director and its audit committee must include all external directors.

External directors are elected at the general meeting of shareholders by a simple majority, provided that the majority includes at least one-third of the shareholders who are not controlling shareholders, who are present and voting, or that the non-controlling shareholders who vote against the election hold one percent or less of the voting power of the company. Notwithstanding the above, regulations under the Companies Law provide that with respect to companies such as the Company, whose shares are traded on a stock exchange outside of Israel, the board of directors may determine that a director appointed prior to February 1, 2000 (the effective date of the Companies Law), who meets the above qualifications, be deemed an external director even if the person served as a director when the Companies Law became effective. In such case shareholder approval is not required.

At its meeting held on June 21, 2000, Mrs. Yehudit Bronicki was appointed as a member of the Board of Directors, and, subsequently, at the same meeting, the Board of Directors designated and appointed Dr. Michael Anghel and Mr. Gideon Lahav (who have served on the Board of Directors since 1986 and 1998, respectively) to serve as external directors in accordance with the provisions of the Companies Law and regulations thereunder, for a term of three years.

Under the Companies Law an external director cannot be dismissed from office unless: (i) the board of directors determines that the external director no longer meets the statutory requirements for holding the office, or that the external director is in breach of the external director's fiduciary duties and the shareholders vote, by the same majority required for the appointment, to remove the external director after the external director has been given the opportunity to present his or her position; (ii) a court determines, upon a request of a director or a shareholder, that the external director no longer meets the statutory requirements of an external director or that the external director is in breach of his or her fiduciary duties to the company; or (iii) a court determines, upon a request of the company or a director, shareholder or creditor of the company, that the external director is unable to fulfill his or her duty or has been convicted of specified crimes.

For information as to directors' service contracts with the Company providing for benefits on termination of employment, see Item 7.B.

***(b) Audit and Remuneration Committees***

The Companies Law requires public companies to appoint an audit committee comprised of at least three directors, including all of the external directors, and further stipulates that the chairman of the board of directors, any director employed by or providing other services to a company and a controlling shareholder or any relative of a controlling shareholder may not be members of the audit committee. The responsibilities of the audit committee include identifying flaws in the management of a company's business, making recommendations to the board of directors as to how to correct them and deciding whether to approve actions or transactions which by law require audit committee approval. An audit committee may not approve an action or transaction with a controlling shareholder or with an office holder unless at the time of approval two external directors are serving as members of the audit committee and at least one of them is present at the meeting in which the approval is granted. The Audit Committee provides assistance to the Board of Directors in fulfilling its legal and fiduciary obligations with respect to matters involving the accounting, auditing, financial reporting and internal control functions of the Company. In carrying out these duties, the Audit Committee meets at least once in each fiscal

quarter at which time, among other things, it reviews the financial results of the Company for the immediately preceding fiscal quarter, paying particular attention to those matters in respect of which management has exercised its discretion in the preparation of such financial results, and makes a recommendation to the Board of Directors concerning the approval or non-approval of such financial results. The Audit Committee also monitors generally the services provided by Kesselman, the Company's external auditors, to ensure their independence, and reviews non-audit services provided by Kesselman. The Company's external and internal auditors also report regularly to the Audit Committee at its meetings, and the Audit Committee discusses with Kesselman the quality, not just the acceptability, of the accounting principles, the reasonableness of significant judgments and the clarity of disclosures in the Company's financial statements, as and when it deems it appropriate to do so.

The role of the Remuneration Committee is to provide assistance and make independent recommendations to the Board of Directors concerning matters related to the compensation of directors and certain executive employees of the Company. In carrying out these duties, the Remuneration Committee meets on an ad hoc basis (usually at least once in each fiscal quarter). The Remuneration Committee is also authorized to administer the Company's employee option plans. Under the Companies Law, the Remuneration Committee may only make recommendations to the Board of Directors concerning the grant of options and may need to seek the approval of the Audit Committee, the Board of Directors and the shareholders for certain compensation decisions.

#### *6.D Employees*

As of December 31, 2001, the Company employed a total of 1,642 people, of whom 834 were based in Israel, 153 in the United States, 225 in Europe, 320 in the Pacific Rim and 110 in Japan. Of these employees, 387 were employed in research and development, 703 in marketing, sales and service, 267 in production and 285 in management and administration.

The Company considers its relations with its employees to be good and has not experienced a labor dispute or strike. Approximately 65% of the Company's employees have advanced technical and academic qualifications.

The Company is not a party to any collective bargaining agreement with respect to its Israeli employees. However, the Company is subject to certain labor related statutes and to certain provisions of collective bargaining agreements between the Histadrut (General Federation of Labor in Israel) and the Coordinating Bureau of Economic Organizations (including the Industrialists' Association) which are applicable to the Company's Israeli employees by virtue of expansion orders of the Israeli Minister of Labor and Welfare. These statutes and provisions cover a wide range of subjects and provide certain minimum employment standards including the length of the work day and work week, minimum wages, contributions to a pension fund, insurance for work-related accidents, procedures for dismissing employees, determination of severance pay, annual and other vacations, sick pay and other conditions of employment. The Company generally provides its employees with benefits and working conditions beyond the required minimum. An additional significant provision applicable to all employees in Israel under collective bargaining agreements and expansion orders is the automatic adjustment of wages in relation to increases in the Israeli CPI. The amount and frequency of these adjustments are modified from time to time.

#### *6.E Share Ownership*

The Company presently administers three employee stock option plans—the 1992 Plan, which was adopted in order to enable the Israeli employees of the Company to obtain the benefit of certain provisions of the Israeli Income Tax Ordinance (New Version), 1961 (the "Tax Ordinance"); the 1995 Plan, which was adopted to provide for the grant of options to employees of the Company's foreign subsidiaries; and the 2000 Plan, which was adopted to provide incentives to employees, officers, directors and/or consultants of the Company and certain other related entities by providing them with the opportunity to purchase shares of the Company. The Company has also granted an option to a consultant of the Company, pursuant to the 1998 Plan.

*(a) The 1992 Plan*

On January 23, 1992, in order to enable the Israeli employees of the Company to benefit from the provisions of Section 102 of the Tax Ordinance, the Board of Directors adopted, and the Company's shareholders subsequently approved, the 1992 Plan, a stock option plan under which, as amended with shareholder approval, options to purchase an aggregate of 3,095,718 Ordinary Shares have, from time to time over the term of the 1992 Plan, been available to be awarded to certain key employees of the Company and/or other entities in Israel in which the Company holds at least a 50% equity interest. The 1992 Plan, which terminated on January 22, 2002 (except as to option awards outstanding on that date), is, subject to the provisions of the Companies Law, administered by the Remuneration Committee.

The exercise prices of options granted under the 1992 Plan were not less than 85% of the fair market value of the Ordinary Shares on the date of the grant. However, in June 2000 the Board of Directors adopted a general policy not to award options at less than the fair market value of the Ordinary Shares at the time of the grant. Unexercised options expire not later than eight years following the date of grant and may expire earlier if so determined at the time of award. The general policy of the Company, adopted by the Board of Directors in June 2000, is that newly awarded options expire not later than five years following their grant. Options also expire when the grantee ceases to be an employee of the Company or any of its subsidiaries.

During 2001, options to purchase a total of 36,625, 48,300 and 188,590 Ordinary Shares (having respective weighted average exercise prices of \$34.58, \$37.21 and \$7.98 per share) were awarded, cancelled and exercised, respectively, under this Plan. As of March 31, 2002, under this Plan, options to purchase a total of 1,051,838 Ordinary Shares, expiring on various dates between May 8, 2002 and September 17, 2008 and having a weighted average remaining life of 4.86 years and a weighted average exercise price of \$26.93 per share, were outstanding (of which 545,477 with a weighted average remaining life of 4.39 years and a weighted average exercise price of \$20.27 per share had vested), and no options to purchase Ordinary Shares remained available for future grants.

*(b) The 1995 Plan*

On June 22, 1995, the Board of Directors adopted, and the Company's shareholders subsequently approved, the 1995 Plan which has been amended from time to time, with shareholder approval when required. Under the 1995 Plan, which is, subject to the provisions of the Companies Law, administered by the Remuneration Committee, options to purchase an aggregate of 3,931,068 Ordinary Shares have, from time to time over the term of the 1995 Plan, been available to be awarded to certain officers, directors, key employees and consultants of subsidiaries of the Company. Options under the 1995 Plan may not be awarded to persons who are also officers, directors or employees of the Company at the time of the award. The 1995 Plan authorizes the granting of "incentive" stock options ("ISO"s) complying with the United States tax provisions for those participants subject to United States tax law, and "nonqualified" stock options which do not comply with such United States tax law provisions. The 1995 Plan will terminate on June 21, 2005 (except as to option awards outstanding on that date).

The exercise price of options awarded under the 1995 Plan may not be less than 100% of the fair market value of the Ordinary Shares on the date the option is granted in the case of ISOs, and not less than 85% of their fair market value for awards that are not ISOs. However, in June 2000, the Board of Directors adopted a general policy not to award options at less than the fair market value of the Ordinary Shares at the time of the grant. Unexercised options awarded under this Plan expire not later than 10 years following the date of grant and may expire earlier if so determined at the time of award. The general policy of the Company, adopted by the Board of Directors in June 2000, is that newly awarded options expire not later than five years following their grant. Options also expire when the grantee ceases to be an employee of, or to provide consultancy services to, any of the Company's subsidiaries or the Company. New options may be granted under the 1995 Plan in respect of the Ordinary Shares previously subject to cancelled or expired options.

During 2001, options to purchase a total of 741,490, 153,143 and 175,553 Ordinary Shares (having respective weighted average exercise prices of \$28.58, \$38.89 and \$12.07 per share) were awarded, cancelled

and exercised, respectively, under this Plan. As of March 31, 2002, under this Plan, options to purchase a total of 1,899,585 Ordinary Shares, expiring on various dates between June 30, 2002 and April 16, 2010 and having a weighted average remaining life of 5.40 years and a weighted average exercise price of \$30.07 per share, were outstanding (of which 471,962 with a weighted average remaining life of 6.34 years and a weighted average exercise price of \$18.23 per share had vested), and options to purchase 1,226,530 Ordinary Shares (including 1,936 that had been designated but not yet priced) remained available for future grants (other than to the Company's directors and officers).

*(c) The 1998 Plan*

On April 7, 1998, an option to purchase 33,750 Ordinary Shares was granted without shareholder approval to an independent consultant of the Company under the 1998 Plan at an exercise price of \$12.55 per Ordinary Share, and otherwise upon the terms and conditions applicable to grants made under the 1992 Plan. This option vests over a four year period and will expire on April 6, 2006.

During 2001, this option was not exercised as to any Ordinary Shares, nor were additional options to purchase Ordinary Shares either awarded or cancelled under the 1998 Plan. As of March 31, 2002, this option remained outstanding as to 24,375 Ordinary Shares (and had vested as to 15,938 Ordinary Shares), and no Ordinary Shares remained available for future grants under the 1998 Plan.

*(d) The 2000 Plan*

On June 21, 2000, in anticipation of the expiration of the 1992 Plan, the Board of Directors adopted, and the Company's shareholders subsequently approved, the 2000 Plan, which is intended to provide incentives to employees, officers, directors and/or consultants of the Company and/or of other companies, partnerships or other entities in Israel in which the Company holds at least a 50% equity interest (each a "Related Company"), by providing them with the opportunity to purchase shares of the Company. Options to purchase an aggregate of 3,300,000 Ordinary Shares may, from time to time, be awarded to any employee, officer, director and/or consultant of the Company or of a Related Company. The 2000 Plan is, subject to the provisions of the Companies Law, administered by the Remuneration Committee, and is designed: (i) to comply with Section 102 of the Income Tax Ordinance or any provision which may amend or replace it and rules promulgated thereunder and to enable the Company and grantees thereunder to benefit from Section 102 and the Commissioner's Rules; and (ii) to enable the Company to grant options and issue shares outside the context of Section 102. The 2000 Plan will terminate on June 20, 2010 (except as to option awards outstanding on that date).

The exercise price of options awarded under the 2000 Plan may not be less than 100% of the fair market value of the Ordinary Shares on the last day immediately preceding the date of the option grant upon which public trading of the Company's Ordinary Shares takes place. Unexercised options expire not later than eight years following the date of grant and may expire earlier if so determined at the time of award. The general policy of the Company, adopted by the Board of Directors in June 2000, is that newly awarded options expire not later than five years following their grant. Options also expire at such time as the grantee ceases to be an employee of, or to provide consultancy services to, the Company or any of its subsidiaries. New options may be granted under the 2000 Plan in respect of the Ordinary Shares previously subject to cancelled or expired options.

During 2001, options to purchase a total of 1,526,213 and 126,076 Ordinary Shares (having respective weighted exercise prices of \$26.82 and \$40.89 per share) were awarded and cancelled, respectively, under this Plan. As of March 31, 2002, under this Plan, options to purchase a total of 2,399,056 Ordinary Shares, expiring on various dates between August 27, 2005 and March 20, 2007 and having a weighted average remaining life of 4.08 years and a weighted average exercise price of \$35.39 per share, were outstanding (of which none had vested), and options to purchase 900,944 Ordinary Shares (including 4,124 that had been designated but not yet priced) remained available for future grants.

For further information concerning stock options see Note 8 to the Consolidated Financial Statements listed in Item 18.

(e) *Certain information concerning options of directors and officers*

The following table sets forth for all directors and officers of the Company as a group, including all persons who were at any time during the period indicated directors or officers of the Company, certain information in respect of each of the 1992 Plan, the 1995 Plan and the 2000 Plan (expressed in terms of Ordinary Shares except where indicated otherwise) concerning: (i) options granted by the Company between January 1, 2001 and December 31, 2001; (ii) options which were exercised and paid between such dates; and (iii) options which were unexercised and unpaid on, and as at, December 31, 2001. The table does not include information concerning options under the 1998 Plan since no options have been granted to any directors or officers of the Company under that plan.

	Plan		
	1992	1995	2000
<b>Granted:</b>			
Number of Ordinary Shares .....	0	0	363,875
Weighted average exercise price per Ordinary Share .....	N/A	N/A	\$ 24.01
Year(s) of expiration .....	N/A	N/A	2006
<b>Exercised/Paid:</b>			
Number of Ordinary Shares .....	79,011	0	0
Weighted average exercise price per Ordinary Share .....	\$ 9.08	N/A	N/A
<b>Unexercised/Unpaid:</b>			
Number of Ordinary Shares .....	265,549	34,875	628,875
Weighted average exercise price per Ordinary Share .....	\$ 22.92	\$ 34.12	\$ 40.63
Weighted average remaining life (years) .....	4.94	7.30	4.24

See Item 6.B—Compensation for information as to options to purchase Ordinary Shares held by each director of the Company.

(f) *Certain information concerning Ordinary Shares owned by directors and officers*

The following table sets forth information as of March 31, 2002, concerning the shareholdings of those directors and officers of the Company known to the Company beneficially to own, on an individual basis, more than 1% of the outstanding Ordinary Shares and of each other director of the Company. Other than as specified in the table below, the Company is not aware of the beneficial ownership by any of its directors or officers, on an individual basis, of more than 1% of the outstanding Ordinary Shares.

<u>Name</u>	<u>Number of Shares</u>	<u>Percentage of Ordinary Shares Outstanding</u>
Jacob Richter .....	1,405,755	4.41%
Yochai Richter .....	1,240,755	3.89%
Michael Anghel .....	0	(1)
Shlomo Barak .....	0	(1)
Yehudit Bronicki (2) .....	0	(1)
Dan Falk .....	11,250	(1)
Uzia Galil .....	10,500	(1)
Gideon Lahav .....	0	(1)
Shimon Ullman .....	113,355	(1)

(1) Less than 1%.

(2) This number does not include 299,122 Ordinary Shares held by Ormat, which Mrs. Yehudit Bronicki, who is a member of the Board of Directors, may be deemed beneficially to own by virtue of her shareholdings in, and position with, Ormat.

Item 7. *Major Shareholders and Related Party Transactions*

7.A *Major Shareholders*

The following table sets forth information as of March 31, 2002 (except as noted below), concerning: (i) the only persons or entities known to the Company beneficially to own more than 5% of the outstanding Ordinary Shares; and (ii) the number of outstanding Ordinary Shares of the Company beneficially owned by all directors and officers as a group.

<u>Identity of Person or Group</u>	<u>Number of Shares(1)</u>	<u>Percentage of Ordinary Shares Outstanding(1)</u>
J. & W. Seligman & Co. Incorporated(2) ..... 100 Park Avenue New York, New York 10017	4,128,625	12.95%
Capital Group International, Inc.(3) ..... 11100 Santa Monica Boulevard, Suite 1500 Los Angeles, California 90025	3,867,250	12.13%
Capital Research and Management Company(4) ..... 333 South Hope Street Los Angeles, California 90071	3,582,500	11.24%
FMR Corp. .... 82 Devonshire Street Boston, Massachusetts 02109 and Fidelity International Limited P. O. Box HM 670 Hamilton HMCX, Bermuda(5)	2,869,700	9.00%
All directors and officers as a group ..... (consisting of 17 persons)(6),(7)	3,030,112	9.44%

(1) The Company had outstanding, on March 31, 2002, 31,877,765 Ordinary Shares. This number does not include a total, as at that date, of 7,502,328 Ordinary Shares, 5,374,854 of which were subject to outstanding stock options granted pursuant to the Company's stock option plans (of which 1,033,377 had vested) and 2,127,474 of which (including 6,060 that had been designated but not yet priced) remained available for future option grants pursuant to such plans, comprised of:

- (a) 1,051,838 Ordinary Shares issuable pursuant to options under the 1992 Plan, of which:
  - (i) 1,051,838 Ordinary Shares were subject to options that had been granted to employees (of which 545,477 had vested); and
  - (ii) No Ordinary Shares remained available for future option grants pursuant to the 1992 Plan;
- (b) 3,126,115 Ordinary Shares issuable pursuant to options under the 1995 Plan, of which:
  - (i) 1,899,585 Ordinary Shares were subject to options that had been granted to employees (of which 471,962 had vested); and
  - (ii) 1,226,530 Ordinary Shares (including 1,936 that had been designated but not yet priced) remained available for future option grants pursuant to the 1995 Plan;
- (c) 24,375 Ordinary Shares issuable pursuant to an option granted to a consultant to the Company under the 1998 Plan, which had vested as to 15,938 Ordinary Shares; and

- (d) 3,300,000 Ordinary Shares issuable pursuant to options under the 2000 Plan, of which:
- (i) 2,399,056 Ordinary Shares were subject to options that had been granted to employees (of which none had vested); and
  - (ii) 900,944 Ordinary Shares (including 4,124 that had been designated but not yet priced) remained available for future option grants pursuant to the 2000 Plan.

Also does not include 483,000 Ordinary Shares purchased by the Company during 2000 and held as treasury shares under Israeli law. For so long as such Ordinary Shares are owned by the Company they have no rights and, accordingly, are neither eligible to participate in or receive any future dividends which may be issued to shareholders of the Company nor are they entitled to participate in, be voted at or be counted as part of the quorum for, any meetings of shareholders of the Company.

- (2) As of December 31, 2001, based on a report filed with the SEC dated February 14, 2002. The report indicated shared voting power as to 4,125,380 Ordinary Shares and shared dispositive power as to all 4,128,625 Ordinary Shares by J. & W. Seligman & Co. Incorporated (“JWS”) and by William C. Morris, the owner of a majority of the outstanding shares of JWS. The report also indicated shared voting power and shared dispositive power as to 3,000,000 of such Ordinary Shares by Seligman Communications & Information Fund, Inc., a fund for which JWS acts as an investment advisor.
- (3) As of December 31, 2001, based on a report filed with the SEC dated February 12, 2002. This report indicated sole voting power and sole dispositive power as to all 3,867,250 Ordinary Shares by Capital Group International (“CGII”), sole voting power and sole dispositive power as to 3,842,100 of such Ordinary Shares by Capital International, Inc. (“CII”), a registered investment advisory subsidiary of CGII, and sole voting power as to 2,845,200 of such Ordinary Shares by Emerging Markets Growth Fund, Inc., a registered investment company for which CII acts as investment advisor. CGII and CII disclaim beneficial ownership as to all Ordinary Shares reported.
- (4) As of December 31, 2001, based on a report filed with the SEC dated February 12, 2002. This report indicated sole dispositive power as to all 3,582,500 Ordinary Shares by Capital Research and Management Company (“CRMC”), a registered investment advisor to various registered investment companies. CRMC disclaims beneficial ownership as to all Ordinary Shares reported.
- (5) As of March 21, 2002, based on correspondence from Fidelity Management & Research Company to the Company dated March 21, 2002. This correspondence indicated that FMR Corp. (“FMR”) and Fidelity International Limited (“FIL”) are the parents of various investment advisors that manage institutional accounts and/or open-end investment companies whose aggregate holdings could be deemed to have exceeded 5% of the issued share capital and 5% of the voting rights of the Company.

A report filed with the SEC dated February 14, 2002, indicated that as of December 31, 2001, FMR had sole voting power as to 1,675 Ordinary Shares and sole dispositive power as to 2,073,925 Ordinary Shares. Edward C. Johnson 3<sup>rd</sup> and Abigail P. Johnson, through relationships with FMR and related entities, were each reported to have sole dispositive power as to all such 2,073,925 Ordinary Shares. FIL was reported to have sole voting power and sole dispositive power as to 61,675 Ordinary Shares.

- (6) Includes Ordinary Shares issuable upon the exercise of vested options referred to in footnote 1 above but does not include Ordinary Shares which may become issuable upon the exercise of those options referred to in footnote 1 above which have not yet vested, except to the extent the options become exercisable within 60 days. The percentage of Ordinary Shares beneficially owned is calculated in accordance with Rule 13d—3(d) promulgated under the Securities Exchange Act of 1934.
- (7) This number does not include: (a) 299,122 Ordinary Shares held by Ormat, which Mrs. Yehudit Bronicki, who is a member of the Board of Directors, may be deemed beneficially to own by virtue of her shareholdings in, and position with, Ormat; or (b) Ordinary Shares issuable pursuant to unvested options outstanding as of March 31, 2002, other than those included pursuant to footnote 6 above.

On March 31, 2002, there were 56 shareholders of record of the Ordinary Shares in the United States, who, among them, held a total of 28,886,743 Ordinary Shares, constituting approximately 90.81% of the outstanding Ordinary Shares as at that date.

The Articles provide that each Ordinary Share shall confer upon its holder the right to vote in general meetings of the Company. All outstanding Ordinary Shares (other than treasury shares) have equal rights.

#### *7.B Related Party Transactions*

Yochai Richter has an employment agreement with the Company pursuant to which he serves as "general manager". The agreement is terminable by Mr. Richter on 60 days' notice and by the Company on 30 days' notice as required by law. Upon termination, Mr. Richter is entitled to a lump sum payment equal to twelve times his previous monthly salary plus certain benefits. He would also receive severance pay equal to 150% of his last monthly salary payment times the number of years employed (commencing with his employment by Orbot in 1982) if he resigns and 200% of such payment times the number of years employed if the Company terminates the agreement other than for cause (in which case his severance payment would be between zero and half such amount).

On the closing date of the Merger, the Company and certain former shareholders of Orbotech and Orbot, including Messrs. Richter and Falk, Dr. Richter and Dr. Ullman, entered into a registration rights agreement (the "Registration Rights Agreement") under which the Company agreed, under certain circumstances, to register for sale under the United States Securities Act of 1933 (the "U.S. Securities Act") the Ordinary Shares owned by such shareholders. All expenses incurred in effecting registrations under the Registration Rights Agreement are to be paid by the Company, other than incremental registration and filing fees, underwriting discounts and commissions and the fees and disbursements of counsel to such shareholders, which are to be paid by such shareholders.

Subject to a certain minimum number of Ordinary Shares to be offered and to certain procedural requirements, such shareholders have the right to require the Company to register Ordinary Shares under the U.S. Securities Act, but the Company will not be required to file more than one registration statement under the U.S. Securities Act each year at the request of such shareholders, nor will it be required to file more than two such registrations during the term of the Registration Rights Agreement at the request of the former shareholders of Orbot. Additionally, subject to certain procedural requirements and marketing restrictions, such shareholders will have the right to participate in registrations otherwise made by the Company under the U.S. Securities Act. The Company has agreed to indemnify the shareholders against certain liabilities, including liabilities under the U.S. Securities Act, in connection with any registered offerings in which they participate. The Registration Rights Agreement will terminate on October 27, 2002.

#### *7.C Interests of Experts and Counsel*

Not applicable in Annual Report on Form 20-F.

### **Item 8. *Financial Information***

#### *8.A Consolidated Statements and Other Financial Information*

##### *(a) Consolidated Financial Statements*

See Item 18—Financial Statements and pages F-1 through F-36.

##### *(b) Export Sales*

See Note 13a to the Consolidated Financial Statements listed in Item 18.

**(c) *Legal Proceedings***

The Company is not currently, nor has it in the past been, party to any legal or arbitration proceedings, including any relating to bankruptcy, receivership or similar matters or any governmental proceedings known to the Company, the resolution of which against the Company would have, in the case of current proceedings, or has had in the past, a material adverse effect on the Company's financial position or profitability.

**(d) *Dividend Policy***

The Company does not have any current plans to pay dividends.

**8.B *Significant Changes***

For information as to any significant change which has occurred since the date of the annual financial statements included in this Annual Report, see Item 5.D—Trend Information.

Item 9. *The Offer and Listing*

9.A *Offer and Listing Details*

Except as set forth below, the information called for in this Item is not applicable in an Annual Report on Form 20-F.

The following table sets forth, in Dollars, the high and low reported sales prices of the Ordinary Shares on Nasdaq during the periods indicated.

<u>Year</u>	<u>Period</u>	<u>High</u>	<u>Low</u>
1997	Full Year .....	27.389	6.333
1998	Full Year .....	21.222	9.333
1999	Full Year .....	54.333	17.444
2000	Full Year .....	77.292	36.000
	◦ First Quarter .....	77.292	42.333
	◦ Second Quarter .....	69.583	43.167
	◦ Third Quarter .....	71.583	49.875
	◦ Fourth Quarter .....	61.125	36.000
2001	Full Year .....	52.563	16.710
	◦ First Quarter .....	52.563	24.250
	◦ Second Quarter .....	40.390	25.688
	◦ Third Quarter .....	36.250	16.710
	◦ Fourth Quarter .....	32.300	18.240
	◦ October .....	23.400	18.240
	◦ November .....	27.151	20.250
	◦ December .....	32.300	25.050
2002	◦ First Quarter .....	33.000	22.800
	◦ January .....	33.000	25.500
	◦ February .....	27.700	22.800
	◦ March .....	31.690	25.870
	◦ Second Quarter (through April 23) .....	31.150	26.490
	◦ April (through April 23) .....	31.150	26.490

\* \* \* \* \*

On December 31, 2001, there were 58 shareholders of record of the Ordinary Shares in the United States who, among them, held a total of 28,834,722 Ordinary Shares, constituting approximately 90.81% of the outstanding Ordinary Shares as at that date. Such holders of record include several who are nominees for certain beneficial owners, the exact number of whom is not known to the Company, but the Company believes there were in excess of 4,500 beneficial holders of the Ordinary Shares as at that date.

9.B *Plan of Distribution*

Not applicable in Annual Report on Form 20-F.

9.C *Markets*

The Company's Ordinary Shares are quoted on Nasdaq under the symbol ORBK.

#### **9.D Selling Shareholders**

Not applicable in Annual Report on Form 20-F.

#### **9.E Dilution**

Not applicable in Annual Report on Form 20-F.

#### **9.F Expenses of Issue**

Not applicable in Annual Report on Form 20-F.

### **Item 10. Additional Information**

#### **10.A Share Capital**

Not applicable in Annual Report on Form 20-F.

#### **10.B Memorandum and Articles of Association**

The Memorandum of Association of the Company (the “**Memorandum**”) and the Articles (each in their original form) were registered on February 8, 1981, under registration number 51-087517-2 with the Israeli Registrar of Companies. In July 1984, the Company became a public company under Israeli company law, under registration number 52-003521-3. At the 2001 Annual General Meeting of Shareholders held on November 8, 2001, the shareholders adopted new articles of association as well as amendments to the Memorandum and the new articles of association.

Set forth below is a summary of certain provisions of the Memorandum, the Articles and the Companies Law. This description does not purport to be complete and is qualified in its entirety by reference to the full text of the Memorandum and Articles and by Israeli law. The Memorandum, in a form which sets forth, integrated into the text, all amendments thereto since the Company’s incorporation, and the Articles, in a form which sets forth, integrated into the text, all amendments thereto since being adopted on November 8, 2001, are exhibits to this Annual Report.

##### **(a) Objects of the Company**

Pursuant to Section 2.A. of the Memorandum the principal object for which the Company was established is to engage in any form in the design, development, production, marketing and servicing of products and systems in the field of electro-optics.

##### **(b) Directors**

The Board of Directors consists of three classes of directors (not including the two external directors who do not form part of any class), with one class being elected each year by shareholders at the Company’s annual general meeting for a term of approximately three years. Directors so elected cannot be removed from office by the shareholders until the expiration of their term of office. Ordinary Shares of the Company do not have cumulative voting rights. As a result, the holders of Ordinary Shares that represent a simple majority of the voting power represented at a shareholders’ meeting and voting at the meeting have the power to elect all of the directors put forward for election, subject to specific requirements under the Companies Law with respect to the election of external directors. Under the Companies Law the Company is required to appoint at least two natural persons as “external directors”; such appointments are to be for a term of three years and may be extended for one additional three-year term. For further information as to these appointments, see Item 6—Directors, Senior Management and Employees.

Under the Articles, a director shall vacate his or her office if that director dies; is declared bankrupt; is declared to be of unsound mind; resigns such office by notice in writing given to the Company; or is not re-elected by the shareholders upon expiration of his or her term at the relevant annual general meeting; or, if the director is a company, is wound-up.

In general, the management of the business of the Company is vested in the Board of Directors which may exercise all such powers of the Company, including the power to borrow or secure the payment of any sum or sums of money for the purposes of the Company, in such manner, at such times and upon such terms and conditions in all respects, as it thinks fit. The directors may, from time to time, appoint any one or more persons, whether or not directors, to be managing director(s), general manager(s), or any similar function with a different title, for such period and upon such terms as the directors think fit, and may entrust to and confer upon such managing director(s) or general manager(s) such of the powers of the Board of Directors as the directors think fit, and such powers may be made exercisable for such period or periods, and for such objects and purposes, and upon such terms and conditions, and subject to such restrictions, as the directors may determine.

*(c) Conflict of interest*

*Approval of Related Party Transactions*

The Companies Law requires that transactions between a company and its office holders or that benefit its office holders be approved as provided for in the Companies Law and the company's articles of association. The term office holder as defined in the Companies Law includes a director, managing director, general manager, chief executive officer, executive vice president, vice president, other managers directly subordinate to the managing director and any other person fulfilling or assuming any such position or responsibility without regard to such person's title. The approval of a majority of the disinterested members of the audit committee and of the board of directors is generally required and, in some circumstances, shareholder approval may also be required.

*Disclosure by office holders*

The Companies Law requires that an office holder of a company promptly disclose to the company any personal interest that the office holder may have in an existing or proposed transaction by the company. The office holder must also disclose related material information and documents that the office holder has about the existing or proposed transaction. The office holder must further disclose the interests of any entity in which he is a 5% or greater shareholder, director or general manager, or in which the office holder has the power to appoint one or more directors or the general manager. If the transaction is an extraordinary transaction, the office holder must also disclose any personal interest of his or her spouse, siblings, parents, grandparents, descendants, spouse's descendants and the spouses of any of these people. This disclosure must be made no later than the first meeting of the board of directors at which the transaction is discussed. The disclosure is made to the board of directors and to the audit committee if it must approve the transaction. In those circumstances in which shareholder approval is also required, shareholders have the right to review any documents in the company's possession related to the proposed transaction. However, the company may prohibit a shareholder from reviewing the documents if the company believes the request was made in bad faith, the documents include trade secrets or patents or their disclosure could otherwise harm the company's interests.

*Approval procedure*

After the office holder complies with these disclosure requirements, the company may approve the transaction under the provisions of applicable law and its articles of association. If the transaction is with an office holder or with a third party in which the office holder has a personal interest, the approval must confirm that the transaction is not adverse to the company's interest. If the transaction is an extraordinary transaction, it must be approved as required by the articles of association and must also be approved by the audit committee and the board of directors. An extraordinary transaction is a transaction: (i) other than in the ordinary course of business; (ii) on terms other than on market terms; or (iii) that is likely to have a material impact on the company's profitability, assets or liabilities.

In some circumstances, shareholder approval is required. A director with a personal interest in any matter may not generally be present at any audit committee or board of directors meeting where the matter is being considered, and may not vote on the matter.

#### *Transactions with controlling shareholders*

The Companies Law extends the disclosure requirements applicable to an office holder to a controlling shareholder in a public company. A shareholder that holds 25% or more of the voting rights in a company would be considered a controlling shareholder for the purposes of these disclosure requirements if no other shareholder holds more than 50% of the voting rights. If two or more shareholders are interested parties in the same transaction, their shareholdings are combined for the purposes of calculating percentages. Some transactions between a public company and a controlling shareholder, or transactions in which a controlling shareholder has a personal interest but which are between a public company and another entity, require the approval of the audit committee, the board of directors and the shareholders. If required, shareholder approval must include at least one-third of the shareholders who have no personal interest in the transaction and are present and voting at the meeting. Alternatively, the total shareholdings of the disinterested shareholders who vote against the transaction must not represent more than one percent of the voting rights in the company. The Israeli Minister of Justice may determine a different percentage.

According to Article 73(a) of the Articles, subject to the provisions of the Companies Law, no office holder of the Company (which includes a director) shall be disqualified by such office from holding any office or place of profit within or outside the Company or with any company in which the Company shall be a shareholder or otherwise interested, or with any company which is a shareholder of, or otherwise interested in, the Company, or from contracting with the Company either as vendor, purchaser or otherwise, either on his or her own behalf or as a director of another company or member of a firm or otherwise, nor (unless and to the extent provided otherwise in the Companies Law) shall any such contract, or any contract or arrangement entered into by or on behalf of the Company in which any office holder shall be in any way interested be void or voidable nor shall any office holder be liable to account to the Company for any profit arising from any such office or place of profit or realized by any such contract or arrangement by reason only of such office holder's holding that office or of the fiduciary relations thereby established. An office holder who knows that he or she has, directly or indirectly, a personal interest in any existing or contemplated contract or arrangement of the Company of the type described in Article 73(a) shall disclose to the Company the nature of this interest, as well as any material fact or document, without delay and no later than the meeting of the Board of Directors at which such contract or arrangement is first considered. Should the office holder acquire, or become aware of, such personal interest subsequently, that interest shall be disclosed without delay, and no later than the first meeting of the Board of Directors after the time at which it was acquired.

#### *(d) Dividends*

Dividends may be distributed only out of profits available for dividends as determined by the Companies Law, provided that there is no reasonable concern that the distribution will prevent the Company from being able to meet its existing and anticipated obligations when they become due. Generally, under the Companies Law, the decision to distribute dividends and the amount to be distributed is made by a company's board of directors. The Articles provide that the Board of Directors may from time to time declare, and cause the Company to pay, such dividends as may appear to it to be justified by the profits of the Company and that the Board of Directors has the authority to determine the time for payment of such dividends and the record date for determining the shareholders entitled to receive such dividends, provided the date is not before the date of the resolution to distribute the dividend. Declaration of dividends does not require shareholder approval.

*(e) Ordinary Shares*

The registered capital of the Company is NIS 7,000,000 divided into 50,000,000 Ordinary Shares. All issued and outstanding Ordinary Shares of the Company are fully paid and non-assessable. Holders of Ordinary Shares have one vote for each Ordinary Share held on all matters to be voted on by shareholders, including the election of directors. Ordinary Shares do not entitle their holders to preemptive rights. The Memorandum and Articles and Israeli law do not restrict in any way the ownership or voting of Ordinary Shares by non-residents or persons who are not citizens of Israel, except with respect to subjects of nations which are in a state of war with Israel.

Subject to the rights of holders of shares with special rights (which may be issued in the future), holders of paid up Ordinary Shares are entitled to participate in the payment of dividends and, in the event of a winding-up of the Company, in the distribution of assets available for distribution, in proportion to the amount paid up or credited as paid up on account of the nominal value of the shares held by them respectively and in respect of which such dividend is being paid or such distribution is being made, without considering any premium those holders might have paid in excess of that nominal value.

Shares with preferential rights relating, among other things, to dividends, voting and repayment of share capital can be created by adoption of a resolution of the shareholders at a general meeting of shareholders at which a quorum is present, by a simple majority of the voting power represented at the meeting in person or by proxy and voting thereon. The Company can similarly subdivide issued and outstanding Ordinary Shares. Modification or abrogation of the rights of any class of shares requires the written consent of the holders of 75% of the issued shares of such a class or adoption of a resolution passed by a simple majority of those present in person or by proxy and voting at a separate general meeting of the holders of the shares of that class.

Ordinary Share certificates registered in the names of two or more persons are deliverable to the person first named in the share register and such delivery shall be deemed sufficient delivery to all co-owners. If two or more such persons tender a vote, the vote of the person whose name first appears in the share register will be accepted to the exclusion of any other. Notices may be given only to the person whose name first appears in the register. If two or more persons jointly hold or are entitled to a share any one of them may give effectual receipts for any dividend payable or property distributable in respect of such shares.

*(f) Transfer of Shares*

Ordinary Shares which have been fully paid-up are transferable, by submission of a proper instrument of transfer to the Company or its transfer agent together with the certificate of the shares to be transferred and such other evidence, if any, as the directors may require to prove the rights of the intending transferor in the transferred shares.

*(g) Shareholders' Meetings*

The Articles provide that an annual general meeting must be held at least once in every calendar year, not later than 15 months after the last preceding annual general meeting, at such time and place as may be determined by the Board of Directors. The Board of Directors may, in its discretion, convene additional shareholder meetings and, pursuant to the Companies Law, must convene a meeting upon the demand of two directors or one quarter of the directors in office or upon the demand of the holder or holders of five percent of the Company's issued share capital and one percent of its voting rights or upon the demand of the holder or holders of five percent of its voting rights. All demands for shareholder meetings must set forth the items to be considered at that meeting. Pursuant to the Companies Law, the holder or holders of 1% of the Company's voting rights may request the inclusion of an item on the agenda of a future shareholder meeting, provided the item is appropriate for discussion at a shareholder meeting.

Under the Companies Law, shareholder meetings generally require prior notice of not less than 21 days. The function of the annual general meeting is to elect directors in accordance with the Articles, receive and consider

the profit and loss account, the balance sheet and the ordinary reports and accounts of the directors and auditors, appoint auditors and fix their remuneration and transact any other business which under the Articles or applicable law may be transacted by the shareholders of a company in general meeting.

The quorum required for either an ordinary (regular) or an extraordinary (special) meeting of shareholders consists of at least two shareholders present in person or by proxy holding shares conferring in the aggregate more than 50% of the voting rights of the Company. If a meeting is convened by the Board of Directors upon the demand of shareholders or upon the demand of less than 50% of the directors then in office or directly by such shareholders or directors and no quorum is present within half an hour from the time appointed, it shall be cancelled. If a meeting is otherwise called and no quorum is present within such time, the meeting is adjourned to the same day one week later at the same time and place or at such other time and place as the Board of Directors may determine and specify in the notice of the general meeting and it shall not be necessary to give notice of such adjournment. If a quorum is not present within half an hour from the time stated for such adjourned meeting, any shareholders present in person or by proxy at such meeting shall constitute a quorum. Generally, under the Companies Law and the Articles, shareholder resolutions are deemed adopted if approved by the holders of a simple majority of the voting rights represented at a meeting and voting unless a different majority is required by law or pursuant to the Articles. The Companies Law provides that resolutions on certain matters, such as amending a company's articles of association, assuming the authority of the board of directors in certain circumstances, appointing auditors, appointing external directors, approving certain transactions, increasing or decreasing the registered share capital and approving a merger with another company must be made by the shareholders at a general meeting. A company may determine in its articles of association certain additional matters in respect of which resolutions by the shareholders in a general meeting will be required.

A company such as the Company, incorporated prior to February 1, 2000, is subject to various rules with respect to the transition from being governed by the Companies Ordinance to being governed by the Companies Law. These rules provide, among other things, that any amendment to the Memorandum or Articles will generally require a resolution adopted by the holders of 75% or more of the voting power represented at a general meeting and that the approval of a merger will require a resolution adopted by the holders of 75% or more of the voting power represented and voting at a general meeting, unless and until the Company amends the Articles in such manner to provide for a different majority. The Articles provide that all shareholder resolutions, other than with respect to the amendment or replacement of the Memorandum or Articles and certain other matters which by law require a different majority, but including with respect to certain actions which, pursuant to Israeli law, would otherwise require a majority of 75% of the votes cast, such as a change of corporate name, an increase in authorized share capital, a consolidation or division of the Company's share capital into shares of larger or smaller nominal value, a cancellation of unissued shares, a reduction of share capital, the creation of new classes, or the modification of the rights of classes, of shares and the approval of mergers, require only a simple majority of the votes cast. Subject to the Companies Law, a resolution in writing signed by the holders of all of the Ordinary Shares entitled to vote at a meeting of shareholders or to which all such shareholders have given their written consent will be sufficient to adopt the resolution in lieu of a meeting.

#### *(h) Changes in Control*

Under the Companies Law, a merger is generally required to be approved by the shareholders and board of directors of each of the merging companies. If the share capital of the company that will not be the surviving company is divided into different classes of shares, the approval of each class is also required, unless determined otherwise the court. Similarly, unless the court determines differently, a merger will not be approved if it is objected to by a majority of the shareholders present at the meeting, after excluding the shares held by the other party to the merger, by any person who holds 25% or more of the other party to the merger and by the relatives of and corporations controlled by these persons. Upon the request of a creditor of either party to the proposed merger, the court may delay or prevent the merger if it concludes that there exists a reasonable concern that, as a result of the merger, the surviving company will be unable to satisfy the obligations of any of the parties of the merger. Also, a merger can be completed only after all approvals have been submitted to the Israeli Registrar of

Companies and 70 days have passed from the time that a proposal for approval of the merger was filed with the registrar.

The Companies Law also provides that an acquisition of shares in a public company must be made by means of a tender offer if, as a result of the acquisition, the purchaser would become a holder of 25% or more of the voting power at general meetings. This rule does not apply if there is already another holder of 25% or more of the voting power at general meetings. Similarly, the Companies Law provides that an acquisition of shares in a public company must be made by means of a tender offer if, as a result of the acquisition, the purchaser would become a holder of more than 45% of the voting power of the company. This rule does not apply if someone else already holds a majority of the voting power of the company. These tender offer requirements do not apply to companies whose shares are listed for trading outside of Israel if, under local law or the rules of the stock exchange on which their shares are traded, there is a limitation on the percentage of control which may be acquired or the purchaser is required to make a tender offer to the public.

Under the Companies Law, a person may not acquire shares in a public company if, after the acquisition, he will hold more than 90% of the shares or more than 90% of any class of shares of that company, unless a tender offer is made to purchase all of the shares or all of the shares of the particular class. The Companies Law also provides that as long as a shareholder in a public company holds more than 90% of the company's shares or of a class of shares, that shareholder shall be precluded from purchasing any additional shares. If a tender offer is accepted and less than 5% of the shares of the company are not tendered, all of the shares will transfer to the ownership of the purchaser. If 5% or more of the shares of the company are not tendered, the purchaser may not purchase shares in a manner which will grant him more than 90% of the shares of the company.

In addition, certain provisions of the Memorandum and Articles may have the effect of rendering more difficult or discouraging an acquisition of the Company deemed undesirable by the Board of Directors. Those provisions include: limiting the ability of the Company's shareholders to convene general meetings of the Company (as discussed above); controlling procedures for the conduct of shareholder and Board of Directors meetings, including quorum and voting requirements; and the election and removal of directors.

Moreover, the classification of the Board of Directors into three classes with terms of approximately three years each, which was approved by shareholders of the Company in 2001, and the requirement under Israeli company law to have two external directors, who cannot readily be removed from office, may make it more difficult for shareholders who oppose the policies of the Board of Directors to remove a majority of the then current directors from office quickly. It may also, in some circumstances, together with the other provisions of the Memorandum, Articles and Israeli law, deter or delay potential future merger, acquisition, tender or takeover offers, proxy contests or changes in control or management of the Company, some of which could be deemed by certain shareholders to be in their best interests and which could affect the price some investors are willing to pay for Ordinary Shares.

Israeli tax law treats some acquisitions, including stock-for-stock swaps between an Israeli company and a foreign company, less favorably than U.S. tax law. Israeli tax law may, for instance, subject a shareholder who exchanges Ordinary Shares for shares in a non-Israeli corporation to immediate taxation.

*(i) Duration and Liquidation*

The Articles do not limit the Company's duration.

*10.C Material Contracts*

In June 2000, the Company and DEWB entered into an agreement pursuant to which the Company acquired DEWB's right, title and interest in and to the DI Joint Venture in consideration for the issuance to DEWB of 90,000 Ordinary Shares, which were issued on June 30, 2000. The agreement contemplated the issue of up to an

additional 67,500 Ordinary Shares to DEWB subject to the sale of a certain number of direct imaging systems within agreed time periods. While the original milestone was not met, the Company, Jenoptik and DEWB reached a new agreement in December 2001 pursuant to which 67,500 Ordinary Shares were issued to DEWB on March 15, 2002, in consideration for co-operation between Jenoptik and the Company on joint research and development projects. See Item 4—Information on the Company—History and Development of the Company—Business Overview—The Imaging Solution Product Line.

During January 2001, the Company exercised its option to purchase the remaining equity interest in Orbotech-Schuh, and all rights in certain know-how, for approximately \$13.3 million in return for which the remaining 49% equity interest in Orbotech-Schuh and all rights in such know-how were transferred to the Company on January 8, 2001. See Item 4—Information on the Company—History and Development of the Company—Business Overview—The PCB Industry—Assembled PCB-AOI Products.

#### **10.D Exchange Controls**

Non-residents of Israel who purchase Ordinary Shares of the Company will be able to convert dividends, if any are declared, and liquidation distributions into freely repatriable non-Israeli currencies at the rate of exchange prevailing at the time of conversion, pursuant to a general permit issued by the Israeli Controller of Foreign Exchange at the Bank of Israel under the Currency Control Law, 1978 (the “**Currency Control Law**”), provided that Israeli income tax has been paid (or withheld) on such amounts.

Pursuant to a general permit under the Currency Control Law, Israeli residents are generally eligible to purchase Ordinary Shares.

There are no limitations on the Company’s ability to import and export capital.

#### **10.E Taxation**

##### **(a) Taxation of Capital Gains and Dividends in Israel**

Israeli law generally imposes a capital gains tax on the sale of securities and any other capital assets. Commencing January 1, 1996, the basic tax rate applicable to corporations is 36%. The maximum tax rate for individuals is 50%. These rates are subject to the provisions of any applicable bilateral double taxation treaty. The treaty concerning double taxation between the United States and Israel (the Convention between the Government of the State of Israel and the Government of the United States of America With Respect to Taxes on Income (the “**treaty**”)) is discussed below.

Under existing regulations, as long as the Ordinary Shares are traded on a stock exchange recognized by the Israeli Ministry of Finance (including over-the-counter in the United States) and the Company continues to qualify as an Industrial Company under the Law for the Encouragement of Industry (Taxes), 1969, capital gains on the sale of the Ordinary Shares generally will be exempt from Israeli capital gains tax. This exemption does not apply, however, to a shareholder whose taxable income is determined pursuant to the Income Tax (Inflationary Adjustments) Law, 1985 (the “**Inflationary Adjustments Law**”), nor to a company or individual whose gains from selling or otherwise disposing of the Ordinary Shares are deemed “business income” (in which latter case, such gains will be subject to corporate tax or income tax, respectively). Although the Company intends to maintain such quotation (or listing) and qualification, there can be no assurance that this will be the case, and consequently that the exemption from Israeli capital gains tax will continue to apply.

Under an amendment to the Inflationary Adjustments Law, effective January 1, 1999, non-Israeli corporations may, under some circumstances, be subject to Israeli taxes on the sale of listed securities in an Israeli company subject to the provisions of any applicable tax treaty.

The Israeli Ministry of Finance recently proposed a new economic plan which, if approved, might include cancellation of the exemption from Israeli capital gains tax described above. Instead, subject to any applicable

tax treaty, individuals would be taxed at their marginal rate up to a maximum rate of 25% and companies would be taxed at the company rate of 36%. The Company cannot be certain whether or when the proposed plan will be approved and, if approved, does not know what form it will ultimately take and what effect it may have upon the holders of Ordinary Shares.

Individuals who are non-residents of Israel are subject to a graduated income tax on income derived or accrued from sources in Israel or received in Israel. These sources of income include passive income, including dividends, royalties and interest, as well as non-passive income from services provided in Israel. Upon a distribution of a dividend, other than bonus shares (stock dividends), income tax is generally withheld at the rate 25% (or 15% in the case of dividends distributed from taxable income derived from an Approved Enterprise), unless a different rate is provided in a treaty between Israel and the shareholder's country of residence. The withheld tax is the final tax in Israel on dividends paid to non-residents. See "U.S.-Israel Tax Treaty".

A non-resident of Israel who has dividend income derived from or accrued in Israel, from which tax was withheld at source, is generally exempt from the duty to file tax returns in Israel in respect of such income, provided such income was not derived from a business conducted in Israel by the taxpayer and the non-resident has no other sources of income in Israel.

Residents of the United States generally will have withholding tax in Israel deducted at source. As discussed below, they may be entitled to a credit or deduction for United States federal income tax purposes in the amount of the taxes withheld, subject to detailed rules contained in United States tax legislation.

*(b) U.S.-Israel Tax Treaty*

The Treaty is generally effective as of January 1, 1995. Under the Treaty, the maximum tax on dividends paid to a holder of Ordinary Shares who is a Treaty U.S. Resident (as defined below) will be 25%. However, pursuant to the Law for the Encouragement of Capital Investments, 1959, dividends distributed by an Israeli company and derived from the income of an Approved Enterprise during the applicable benefits period will generally be subject to a reduced 15% dividend withholding tax. The Treaty further provides that a 12.5% Israeli dividend withholding tax will apply to dividends paid to a United States corporation owning 10% or more of an Israeli company's voting shares during, in general, the current and preceding tax years of the Israeli company. The lower 12.5% rate applies only on dividends from income not derived from an Approved Enterprise in the applicable period and does not apply if the company has certain amounts of passive income.

Pursuant to the Treaty, the sale, exchange or disposition of Ordinary Shares by a person who qualifies as a resident of the United States within the meaning of the Treaty and who is entitled to claim the benefits afforded to such residents under the Treaty (a "Treaty U.S. Resident") generally will not be subject to the Israeli capital gains tax unless such Treaty U.S. Resident holds, directly or indirectly, shares representing 10% or more of the voting power of the Company during any part of the 12-month period preceding such sale, exchange or disposition subject to certain conditions. A sale, exchange or disposition of Ordinary Shares by a Treaty U.S. Resident who holds, directly or indirectly, shares representing 10% or more of the voting power of the Company at any time during such preceding 12-month period would be subject to such Israeli tax; however, under the Treaty, such Treaty U.S. Resident would be permitted to claim a credit for such taxes against United States federal income tax imposed on any gain from such sale, exchange or disposition, under the circumstances and subject to the limitations specified in the Treaty. Currently, under Israeli regulations as aforesaid, capital gains on the sale of Ordinary Shares are exempt from Israeli capital gains tax.

Israel presently has no estate or gift tax.

*(c) United States Federal Income Tax*

The following general discussion sets forth the material United States federal income tax consequences that are applicable to the following persons who invest in Ordinary Shares and hold such Ordinary Shares as capital assets ("U.S. Shareholders"): (a) individuals who are citizens or residents (as specifically defined for U.S.

federal income tax purposes) of the United States; (b) corporations (or entities treated as corporations for U.S. tax purposes) created or organized in the United States or under the laws of the United States or of any state thereof; and (c) estates or trusts the income of which is subject to United States federal income taxation regardless of its source. This discussion does not deal with: (i) all aspects of U.S. federal income taxation that may be relevant to particular U.S. Shareholders based on their particular circumstances (including potential application of the alternative minimum tax); (ii) certain U.S. Shareholders subject to special treatment under the U.S. federal income tax laws such as broker-dealers, insurance companies, tax-exempt organizations, financial institutions, taxpayers whose functional currency is not the Dollar, or foreign individuals or entities; (iii) U.S. Shareholders owning directly or by attribution 10% or more of the Ordinary Shares; or (iv) any aspect of state, local or non-United States tax laws. Additionally, the following discussion does not consider the tax treatment of persons who hold Ordinary Shares through a partnership or other pass-through entity.

The summary of United States income tax laws set out below is based on the Internal Revenue Code of 1986, as amended, Treasury regulations, judicial decisions and published positions of the Internal Revenue Service (the "IRS") as of the date hereof and is subject to any changes occurring in the United States law after that date, which changes could be retroactive.

*(d) Dividends Paid on Shares*

Distributions paid on Ordinary Shares (including any Israeli taxes withheld) to a U.S. Shareholder will be treated as ordinary dividend income for United States federal income tax purposes to the extent of the Company's current and accumulated earnings and profits (as computed for U.S. federal income tax purposes). Such dividends, which will be treated as foreign source income for U.S. foreign tax credit purposes, generally will not qualify for the dividends-received deduction available to corporations. Distributions in excess of such earnings and profits will be applied against and will reduce the shareholder's tax basis in the Ordinary Shares and, to the extent in excess of such tax basis, will be treated as gain from a sale or exchange of such Ordinary Shares. The amount of the distribution will equal the Dollar value of the distribution, calculated by reference to the exchange rate in effect on the date the distribution is received (or otherwise made available to the U.S. Shareholders), regardless of whether a payment in Israeli currency is actually converted to Dollars at that time. U.S. Shareholders should consult their own tax advisors concerning the treatment of foreign currency gain or loss, if any, on any Israeli currency received which is converted into Dollars subsequent to receipt.

*(e) Credit for Israeli Taxes Withheld*

Subject to conditions and limitations, any Israeli tax withheld or paid with respect to dividends on Ordinary Shares generally will be eligible for credit against a U.S. Shareholder's United States federal income tax liability. Such limitations include extensive separate computation rules under which foreign tax credits allowable with respect to specific classes of foreign-source income cannot exceed the United States federal income taxes otherwise payable with respect to each such class of income. Subject to the particular circumstances of the U.S. Shareholder, dividends distributed by the Company with respect to Ordinary Shares will generally be classified as "passive income". The availability of the Israeli withholding tax as a foreign tax credit will also be subject to certain restrictions on the use of such credits, including a prohibition on the use of the credit to reduce liability for the United States individual and corporate minimum taxes by more than 90%. Alternatively, a U.S. Shareholder may elect to claim a U.S. tax deduction for such Israeli tax, but only for a year in which a U.S. Shareholder elects to do so with respect to all foreign incomes taxes.

*(f) Disposition of Ordinary Shares*

A U.S. Shareholder will generally recognize capital gain or loss upon the sale or exchange of Ordinary Shares in an amount equal to the difference between the amount realized and the U.S. Shareholder's tax basis in the Ordinary Shares. Such gain or loss will be long-term capital gain or loss if the U.S. Shareholder's holding period exceeds one year, and otherwise will be short-term capital gain or loss. Certain limitations apply to the

deductibility of capital losses by both corporate and non-corporate taxpayers. Gain or loss from the sale, exchange or other disposition of Ordinary Shares will generally be treated as from U.S. sources for U.S. foreign tax credit purposes. However, pursuant to the Treaty, such gain or loss may be foreign source in certain circumstances. See "U.S.-Israel Tax Treaty". U.S. Shareholders should consult their own tax advisors regarding the treatment of any foreign currency gain or loss on any Israeli currency received in respect of the sale, exchange or other disposition of Ordinary Shares.

*(g) Passive Foreign Investment Company*

A "passive foreign investment company" ("PFIC") is defined as any foreign corporation at least 75% of whose consolidated gross income for the taxable year is passive income, or at least 50% of the value of whose consolidated assets is attributable to assets that produce or are held for the production of passive income. For this purpose, passive income generally includes dividends, interest, royalties, rents, annuities and the excess of gains over losses from the disposition of assets which produce passive income. The Company believes that it is not and has not been a PFIC for United States federal income tax purposes, and the Company expects that it will not become a PFIC. If the Company were to become a PFIC, then all U.S. Shareholders would be required either: (i) to include in their taxable income certain undistributed amounts of the Company's income if a qualified electing fund election has been made; or (ii) to pay an interest charge together with tax calculated at maximum ordinary income rates on certain "excess distributions" (defined to include gain on the sale of Ordinary Shares).

*(h) Backup Withholding and Information Reporting*

A U.S. Shareholder may, under certain circumstances, be subject to "backup withholding" at a 31% rate on cash payments in the United States of dividends on, and the proceeds of disposition of, Ordinary Shares. Backup withholding will apply only if a U.S. Shareholder: (a) fails to furnish its social security or other taxpayer identification number ("TIN") within a reasonable time after the request therefor; (b) furnishes an incorrect TIN; (c) is notified by the IRS that it has failed properly to report payments of interest and dividends; or (d) under certain circumstances, fails to certify, under penalty of perjury, that it has furnished a correct TIN and has not been notified by the IRS that it is subject to backup withholding for failure to report interest and dividend payments. U.S. Shareholders should consult their tax advisors regarding their qualification for exemption, if applicable. The amount of backup withholding from a payment to a U.S. Shareholder generally will be allowed as a credit against such U.S. Shareholder's federal income tax liability and may entitle such U.S. Shareholder to a refund, provided that the required information is furnished to the IRS.

*10.F Dividends and Paying Agents*

Not applicable in Annual Report on Form 20-F.

*10.G Statements by Experts*

Not applicable in Annual Report on Form 20-F.

*10.H Documents on Display*

The material documents referred to herein to which the Company is a party, to the extent that their disclosure is not otherwise limited or restricted, may, by prior arrangement, be inspected at the offices of the Company in Yavne, Israel. In addition, the Company believes that all publicly filed documents referred to herein should be available for inspection, upon payment of any prescribed fees and otherwise upon such terms and conditions as may be specified, at the respective public archives or institutions with which they are filed.

*10.I Subsidiary Information*

Not applicable in Annual Report on Form 20-F.

## Item 11 *Quantitative and Qualitative Disclosures About Market Risk*

### (a) *General*

The Company uses financial instruments and derivatives in order to limit its exposure to risks arising from changes in exchange rates. The use of such instruments does not expose the Company to additional exchange rate risks since the derivatives are held against an asset (for example, excess assets in Euros).

The Company's derivative transactions in 2001 were executed through Israeli banks and one United Kingdom bank. The Company believes that the credit risk of such institutions is minimal.

### (b) *Exchange Rate Risk Management*

Since the Company's functional currency and that of its subsidiaries is the Dollar, the Company, including through its subsidiaries, protects itself against exposure arising from the difference between assets and liabilities in each currency other than the Dollar ("**Balance Sheet Exposure**"). The majority of the Balance Sheet Exposure in such subsidiaries is in Japanese Yen, Euros and NIS.

The Company endeavors to limit its exposure through "natural" hedging, i.e., by attempting to maintain a similar level of assets and liabilities in any given currency. The remaining exposure which is not set off "naturally" is limited by the use of derivative instruments. To the extent possible, this is also done on a consolidated basis.

The table below details the Balance Sheet Exposure, expressed in currency and geographical terms, as at December 31, 2001 (at fair value—as explained below). All data in the table have been converted for convenience into Dollar equivalents (in millions).

	<u>Korean Won</u>	<u>Euro</u>	<u>Taiwanese Dollar</u>	<u>Japanese Yen</u>	<u>New Israeli Shekel</u>	<u>Total</u>
Israel:						
Maturing in 2002 .....					(18.3)	(18.3)
Maturing in 2003 - 2006* .....					(11.5)	(11.5)
Europe** .....		18.4				18.4
Japan** .....				24.6		24.6
Pacific Rim** .....	2.1		3.8			5.9
Total .....	2.1	18.4	3.8	24.6	(29.8)	19.1

\* Maturing in equal installments of \$2.8 million in each of the years 2003 - 2006.

\*\* Maturing in 2002.

#### Explanatory notes:

1. Total exposure is the sum of the absolute value figures.
2. In light of the high degree of correlation among the European currencies, the Company does not differentiate among these currencies when assessing its exposure. Therefore, the data in the column headed "Euro" (in both the foregoing and the following tables) include exposures in other European currencies.
3. The data presented in the table reflect the exposure after taking into account the effect of the "natural" hedging.

The table below details the hedging acquired in forward exchange contracts in order to limit the Balance Sheet Exposure. The data are as at December 31, 2001 as recorded in the Company's financial records and are presented in Dollar equivalent terms (in millions).

<u>Currency</u>	<u>Hedging Amount</u>
Euros into Dollars .....	16.8
Japanese Yen into Dollars .....	23.5
Korean Won into Dollars .....	2.0
Taiwanese Dollar into Dollars .....	3.3
Dollars into NIS .....	(19.9)
Total .....	25.7

The Company also acquired forward exchange contracts in order to limit cash flow exposures:

1. Forward transactions are generally limited to three months (see also below).
2. The Company hedged certain Japanese Yen contracts for 2002 in the amount of \$12 million. The Company also hedged certain Euro contracts for the first and second quarters of 2002 in the amount of \$3.8 million.
3. The Company hedged NIS for salary payments for 2002 in the amount of \$30 million.

*(c) Fair Value of Derivatives*

The fair value and the carrying amount of derivatives as of December 31, 2001 and 2000, constituted an asset, net of liabilities, of approximately \$0.3 million and \$2.0 million, respectively. The fair value of the derivatives generally reflects the estimated amounts that the Company would receive or pay upon termination of the contracts at the reporting date.

**Item 12** *Description of Securities Other than Equity Securities*

**12.A** *Debt Securities*

Not applicable in Annual Report on Form 20-F.

**12.B** *Warrants and Rights*

Not applicable in Annual Report on Form 20-F.

**12.C** *Other Securities*

Not applicable in Annual Report on Form 20-F.

**12.D** *American Depositary Shares*

Not applicable in Annual Report on Form 20-F.

**PART II**

**Item 13 *Defaults, Dividend Arrearages and Delinquencies***

None

**Item 14 *Material Modifications to the Rights of Security Holders and Use of Proceeds***

None

**Item 15 *[Reserved]***

**Item 16 *[Reserved]***

**PART III**

**Item 17 *Financial Statements***

***17. Financial Statements***

The Company is furnishing financial statements pursuant to the instructions of Item 18 of Form 20-F.

**Item 18 *Financial Statements***

***18. Financial Statements***

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All schedules for which provision is made in the applicable accounting regulations of the SEC are either included in the notes to the financial statements or, if not required under the related instructions or inapplicable, have been omitted.

**Item 19 *Exhibits***

- (1.1) Memorandum of Association setting forth amendments integrated into the text.
- (1.2) Articles of Association setting forth amendments integrated into the text.
- (2.1) Forms of Stock Certificates Representing Ordinary Shares.\*
- (2.2) The Orbotech Ltd. Israeli Key Employee Share Incentive Plan (1992) (As Amended, 1994, 1996, 1997, 1998, 1999).\*
- (2.3) The 1995 Incentive Stock Plan for Key Employees of Orbotech Ltd.'s Subsidiaries (As Amended, 1997, 1998, 1999, 2000, 2001).
- (2.4) Employee Share Ownership and Option Plan (2000).\*

- (2.5) Letter to the Office of the Chief Scientist of Israel from Orbotech Ltd. respecting indebtedness to the Government of Israel.\*\*
- (4.1) Acquisition Agreement made and entered into as of June 19, 2000 by and between Orbotech Ltd., Orbotech S.A., Laser Imaging Systems GmbH & Co. KG, Laser Imaging Systems Verwaltungs-GmbH, Deutsche Effecten-und Wechsel-Beteiligungsgesellschaft AG and Jenoptik AG.\*
- (4.2) Share Acquisition Agreement entered into as of June 19, 2000 by and among Orbotech Ltd., Orbotech S.A., Jenoptik AG and Deutsche Effecten-und Wechsel-Beteiligungsgesellschaft AG.\*
- (4.3) Agreement made and entered into as of December 17, 2000 by and between Orbotech Ltd., Orbotech S.A., Orbotech Holding GmbH, Orbotech-Schuh GmbH & Co. KG, Orbotech-Schuh Verwaltungs GmbH, Wolfgang Schuh, Hermann Menning, Achim Günther and Dipl.- Ing W. Schuh GmbH & Co. KG.\*
- (4.4) Share Acquisition Agreement entered into as of December 31, 2001 by and among Orbotech Ltd., Jenoptik AG and Deutsche Effecten-und Wechsel-Beteiligungsgesellschaft AG.
- (4.5) Letter dated January 24, 2002 from Jenoptik AG and Deutsche Effecten-und Wechsel-Beteiligungsgesellschaft AG to Orbotech Ltd. and Orbotech S.A.
- (8.1) List of Subsidiaries.

The following are the principal subsidiary entities of Orbotech Ltd.

- Orbotech, Inc.
- Orbotech S.A.
  - Laser Imaging Systems GmbH & Co. KG
  - Orbotech Holding GmbH
  - Orbotech Schuh GmbH & Co. KG
- Orbotech Pacific Ltd.
- Orbotech B.V.
  - Orbotech Asia Ltd.
- Orbotech Japan Ltd.
- Orbograph Ltd.
- FrontLine P.C.B. Solutions Ltd. (owned as to 50% by the Company)
  - FrontLine P.C.B. Solutions Limited Partnership

(10.1) Consent of Independent Public Accountants.

\* Incorporated by reference from the Company's Annual Report on Form 20-F for the year ended December 31, 2000.

\*\* The Company agrees to furnish to the SEC, upon request, a copy of this letter.

## SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this Annual Report on its behalf.

ORBOTECH LTD.

By: /s/ YOCHAI RICHTER

**Yochai Richter**  
**President and**  
**Chief Executive Officer**

Dated: April 24, 2002

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**ORBOTECH LTD.**  
**(An Israeli Corporation)**  
**2001 CONSOLIDATED FINANCIAL STATEMENTS**

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**ORBOTECH LTD.**  
**2001 CONSOLIDATED FINANCIAL STATEMENTS**

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The amounts are stated in U.S. dollars (\$) in thousands.

REPORT OF INDEPENDENT AUDITORS

To the shareholders of  
**ORBOTECH LTD.**

We have audited the consolidated balance sheets of Orbotech Ltd. (the "Company") and its subsidiaries as of December 31, 2001 and 2000 and the related consolidated statements of income, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2001. These financial statements are the responsibility of the Company's Board of Directors and management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in Israel and in the United States, including those prescribed by the Israeli Auditors (Mode of Performance) Regulations, 1973. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by the Company's Board of Directors and management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Company and its subsidiaries as of December 31, 2001 and 2000 and the results of their operations, the changes in shareholders' equity and their cash flows for each of the three years in the period ended December 31, 2001, in conformity with generally accepted accounting principles ("GAAP") in Israel.

Israeli GAAP vary in certain aspects from U.S. GAAP, as described in note 14.

Tel-Aviv, Israel  
February 3, 2002



KESSELMAN & KESSELMAN  
CERTIFIED PUBLIC ACCOUNTANTS (ISR.)



**ORBOTECH LTD.**  
**CONSOLIDATED BALANCE SHEETS—(Continued)**

	December 31	
	2001	2000
	U.S. dollars in thousands	
<b>Liabilities and shareholders' equity</b>		
<b>CURRENT LIABILITIES:</b>		
Current maturities of long-term liabilities .....	2,835	723
Accounts payable and accruals:		
Trade .....	13,776	32,501
Other .....	50,890	67,208
Total current liabilities .....	67,501	100,432
<b>ACCRUED SEVERANCE PAY</b> , net of amounts funded .....	8,007	8,214
<b>LONG-TERM LIABILITY TO THE GOVERNMENT OF ISRAEL</b> , net of current maturities .....	11,338	
<b>COMMITMENTS AND CONTINGENT LIABILITY</b> , see note 7		
Total liabilities .....	86,846	108,646
<b>MINORITY INTEREST IN CONSOLIDATED PARTNERSHIPS</b> .....		1,633
<b>SHAREHOLDERS' EQUITY:</b>		
Share capital—ordinary shares of NIS 0.14 par value ("Ordinary Shares"):		
Authorized—50,000,000 Ordinary Shares;		
Issued and outstanding:		
December 31, 2001—32,234,560 Ordinary Shares;		
December 31, 2000—31,870,417 Ordinary Shares .....	1,603	1,591
Additional paid-in capital .....	93,314	88,372
Deferred stock compensation .....	(722)	(2,481)
Retained earnings .....	236,725	234,863
	330,920	322,345
Less—treasury shares, at cost (483,000 Ordinary Shares) .....	(22,324)	(22,324)
Total shareholders' equity .....	308,596	300,021
	395,442	410,300

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

**ORBOTECH LTD.**  
**CONSOLIDATED STATEMENTS OF INCOME**

	Year ended December 31		
	2001	2000	1999
	U.S. dollars in thousands (except per share data)		
<b>REVENUES</b>	301,904	372,341	278,426
<b>COST OF REVENUES:</b>			
Cost .....	159,461	175,143	135,622
Write-down of inventories .....	7,013		
<b>TOTAL COST OF REVENUES</b> .....	166,474	175,143	135,622
<b>GROSS PROFIT</b> .....	135,430	197,198	142,804
<b>RESEARCH AND DEVELOPMENT COSTS:</b>			
Expenses incurred .....	50,047	42,237	32,584
Less—government participations .....		140	601
<b>NET RESEARCH AND DEVELOPMENT COSTS</b> .....	50,047	42,097	31,983
<b>SELLING, GENERAL AND ADMINISTRATIVE EXPENSES</b> .....	61,444	67,823	51,031
<b>AMORTIZATION OF GOODWILL AND OTHER INTANGIBLE ASSETS</b> .....	7,291	4,558	3,774
<b>RESTRUCTURING COSTS</b> .....	6,149		
<b>SETTLEMENT WITH THE GOVERNMENT OF ISRAEL IN RESPECT OF RESEARCH AND DEVELOPMENT GRANTS RECEIVED</b> .....	14,173		
<b>OPERATING INCOME (LOSS)</b> .....	(3,674)	82,720	56,016
<b>FINANCIAL INCOME—net</b> .....	4,533	7,957	4,584
<b>OTHER INCOME—net</b> .....	28	48	51
<b>INCOME BEFORE TAXES ON INCOME</b> .....	887	90,725	60,651
<b>TAXES ON INCOME</b> .....	(975)	10,838	7,879
<b>INCOME FROM OPERATIONS OF THE COMPANY, ITS SUBSIDIARIES AND ITS PARTNERSHIPS</b> .....	1,862	79,887	52,772
<b>MINORITY SHARE IN LOSSES (PROFITS) OF CONSOLIDATED PARTNERSHIPS</b> .....		(814)	368
<b>NET INCOME</b> .....	1,862	79,073	53,140
<b>EARNINGS PER SHARE UNDER ISRAELI GAAP—</b>			
basic and diluted .....	\$ 0.06	\$ 2.44	\$ 1.63
<b>WEIGHTED AVERAGE NUMBER OF SHARES USED IN COMPUTATION OF EARNINGS PER SHARE UNDER ISRAELI GAAP—IN THOUSANDS—basic and diluted</b> .....	32,983	32,708	33,056
<b>EARNINGS PER SHARE UNDER U.S. GAAP:</b>			
Basic .....	\$ 0.06	\$ 2.51	\$ 1.72
Diluted .....	\$ 0.06	\$ 2.40	\$ 1.66
<b>WEIGHTED AVERAGE NUMBER OF SHARES USED IN COMPUTATION OF EARNINGS PER SHARE UNDER U.S. GAAP—IN THOUSANDS:</b>			
Basic .....	31,819	31,566	30,866
Diluted .....	32,871	32,932	31,962

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

**ORBOTECH LTD.**

**CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY**

	Share capital		Additional paid-in capital	Deferred stock compensation	Retained earnings	Treasury shares	Total shareholders' equity
	Number of shares	Amount					
	In thousands						
BALANCE AT JANUARY 1, 1999	30,394	967	70,365	(1,800)	102,650	(2,777)	169,405
CHANGES DURING 1999:							
Net income					53,140		53,140
Retirement of treasury shares	(231)	(3)	(2,774)			2,777	
Employee stock options exercised and paid	1,102	13	*5,450				5,463
Allotment of bonus shares		234	(234)				
Deferred compensation resulting from options granted to employees and others			885	(885)			
Amortization of deferred compensation related to options granted to employees and others				1,338			1,338
Tax benefits related to employee stock options			2,349				2,349
BALANCE AT DECEMBER 31, 1999	31,265	1,211	76,041	(1,347)	155,790	—	231,695
CHANGES DURING 2000:							
Net income					79,073		79,073
Issuance of share capital as consideration for acquisition of minority rights in a German limited partnership	90	2	*2,130				2,132
Employee stock options exercised and paid	515	10	*5,415				5,425
Allotment of bonus shares		368	(368)				
Treasury shares acquisition						(22,324)	(22,324)
Deferred compensation resulting from options granted to employees and others			3,281	(3,281)			
Amortization of deferred compensation related to options granted to employees and others				2,147			2,147
Tax benefits related to employee stock options			1,873				1,873
BALANCE AT DECEMBER 31, 2000	31,870	1,591	88,372	(2,481)	234,863	(22,324)	300,021
CHANGES DURING 2001:							
Net income					1,862		1,862
Shares to be issued as consideration for co-operation on joint research and development projects			*1,236				1,236
Employee stock options exercised and paid	364	12	*3,552				3,564
Write-off of deferred compensation resulting from options granted to employees and others—net			(221)	221			
Amortization of deferred compensation related to options granted to employees and others				1,538			1,538
Tax benefits related to employee stock options			375				375
BALANCE AT DECEMBER 31, 2001	32,234	1,603	93,314	(722)	236,725	(22,324)	308,596

\* Net of share issuance costs.

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

## ORBOTECH LTD.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year ended December 31		
	2001	2000	1999
	U.S. dollars in thousands		
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>			
Net income	1,862	79,073	53,140
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	14,581	11,258	9,240
Amortization of deferred compensation related to options granted to employees and others	1,538	2,147	1,338
Accrued severance pay—net	(207)	1,695	1,642
Minority share in profits (losses) of consolidated partnerships		814	(368)
Capital gain from disposal of property, plant and equipment	(40)	(48)	(51)
Provision for doubtful accounts	568	541	472
Deferred income taxes	(5,335)	506	248
Royalties in respect of a settlement with the Government of Israel,	14,173		
Shares to be issued as consideration for co-operation on joint research and development projects	1,236		
Provision for restructuring expenses and non-cash expenses in respect of restructuring	2,617		
Changes in operating assets and liabilities:			
Decrease (increase) in accounts receivable:			
Trade (including non-current portion)	2,770	(15,332)	(17,528)
Israeli Government departments and agencies	3,552	(1,425)	2,813
Other	(3,734)	(2,252)	(1,620)
Increase (decrease) in accounts payable and accruals:			
Trade	(18,725)	16,030	834
Other	(18,548)	19,945	(2,042)
Decrease (increase) in inventories	3,996	(25,882)	(13,780)
Tax benefits related to employee stock options	375	1,873	2,349
Net cash provided by operating activities	<u>679</u>	<u>88,943</u>	<u>36,687</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>			
Purchase of property, plant and equipment	(9,304)	(11,209)	(8,325)
Investments in consolidated partnerships	(14,137)		(236)
Acquisition of subsidiary consolidated for the first time*			(9,705)
Acquisition of long-term and short-term investments—net	(18,866)	(47,192)	(33,695)
Acquisition of other intangible assets	(3,092)		
Redemption of short-term investments—net	5,128	24,014	15,992
Proceeds from disposal of property, plant and equipment	454	327	216
Net cash used in investing activities	<u>(39,817)</u>	<u>(34,060)</u>	<u>(35,753)</u>
Subtotal—forward	(39,138)	54,883	934

## ORBOTECH LTD.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year ended December 31		
	2001	2000	1999
	U.S. dollars in thousands		
Subtotal—brought forward .....	(39,138)	54,883	934
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>			
Employee stock options exercised and paid .....	3,564	5,425	5,463
Repayment of long-term bank loans .....	(723)	(1,074)	(1,484)
Acquisition of treasury shares .....		(22,324)	
Decrease in short-term bank credit .....			(77)
Net cash provided by (used in) financing activities .....	<u>2,841</u>	<u>(17,973)</u>	<u>3,902</u>
<b>NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS</b>			
<b>EQUIVALENTS</b> .....	(36,297)	36,910	4,836
<b>BALANCE OF CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR</b> .....	<u>136,196</u>	<u>99,286</u>	<u>94,450</u>
<b>BALANCE OF CASH AND CASH EQUIVALENTS AT END OF YEAR</b> .....	<u><u>99,899</u></u>	<u><u>136,196</u></u>	<u><u>99,286</u></u>
* Acquisition of subsidiary consolidated for the first time:			
Assets and liabilities of the subsidiary as of the date of acquisition:			
Working capital (excluding cash and cash equivalents) .....			3,178
Property, plant and equipment—net .....			1,003
Non-current liabilities .....			(37)
Goodwill arising on acquisition .....			<u>5,561</u>
			<u>9,705</u>
<b>SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION—cash paid during the year for:</b>			
Interest .....	<u>467</u>	<u>394</u>	<u>370</u>
Income taxes .....	<u>4,407</u>	<u>6,808</u>	<u>7,894</u>

## Supplementary information on investing activities not involving cash flows

In June 2000, the Company acquired all the minority rights in a German limited partnership. The acquisition was made in exchange for Ordinary Shares of the Company.

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

## ORBOTECH LTD.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### NOTE 1—SIGNIFICANT ACCOUNTING POLICIES

The significant accounting policies, applied on a consistent basis, are as follows:

**a. General:**

*1) Nature of operations*

Orbotech Ltd. (the "Company") is an Israeli corporation which, together with its subsidiaries, is engaged in the design, development, manufacture, marketing and/or service of production support solutions for the supply chain of the electronics industry. The Company's products are primarily automated optical inspection ("AOI") systems and computer aided manufacturing ("CAM") and imaging solutions, principally for application in the production of printed circuit boards ("PCB"s) and flat panel displays ("FPD"s).

As to the Company's principal markets, see note 13a.

*2) Functional currency*

The currency of the primary economic environment in which the operations of the Company and its subsidiaries are conducted is the U.S. dollar (the "dollar").

Virtually all sales by the Company and its subsidiaries are made outside Israel in non-Israeli currencies, mainly the dollar (see note 13a regarding geographical destination). Most purchases of materials and components are made in dollars or in Israeli currency under contracts linked to the dollar. In addition, most marketing and service costs are incurred outside Israel, primarily in dollars, through the Company's wholly-owned non-Israeli subsidiaries. Thus, the functional currency of the Company and its subsidiaries is the dollar.

Transactions and balances originally denominated in dollars are presented at their original amounts. Balances in non-dollar currencies are translated into dollars using historical and current exchange rates for non-monetary and monetary balances, respectively. For non-dollar transactions and other items (stated below) reflected in the statements of income, the following exchange rates are used: (i) for transactions: exchange rates at transaction dates or average rates; and (ii) for other items (derived from non-monetary balance sheet items such as depreciation and amortization, changes in inventories, etc.): historical exchange rates. The resulting currency transaction gains or losses are carried to financial income or expenses, as appropriate.

*3) Accounting principles*

The financial statements are prepared in accordance with generally accepted accounting principles ("GAAP") in Israel. As applicable to these financial statements, Israeli GAAP vary in certain aspects from U.S. GAAP, as described in note 14.

*4) Use of estimates in the preparation of financial statements*

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions which affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenues and expenses during the reporting years. Actual results could differ from those estimates.

**b. Principles of consolidation**

The consolidated financial statements include the accounts of the Company, its wholly-owned subsidiaries and partnerships.

In addition, the consolidated financial statements include the financial statements of a 50%-owned joint venture, using the proportionate consolidation method.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

These subsidiaries, partnerships and joint venture are collectively referred to in these financial statements as “subsidiaries”.

Intercompany balances and transactions have been eliminated in consolidation.

c. Cash equivalents

The Company considers all highly liquid investments, which include short-term bank deposits (up to three months from the date of deposit) that are not restricted as to withdrawal or use and short-term Israeli Government bonds, the period to maturity of which did not exceed three months at the time of investment, to be cash equivalents.

d. Allowance for doubtful accounts

The allowance is determined for specific debts doubtful of collection.

e. Inventories

Inventories are valued at the lower of cost or market. Cost is determined as follows: components—on the moving average basis; labor and overhead—on the basis of actual manufacturing costs.

f. Investments:

- 1) Short-term investments represent mainly quoted non-Israeli corporate debentures and asset backed securities with a maturity of more than three months but less than one year which the Company intends to hold to maturity and which are stated at amortized cost, and short-term bank deposits.
- 2) Long-term investments represent quoted non-Israeli corporate debentures and asset backed securities with a maturity of more than one year which the Company intends to hold to maturity which are stated at amortized cost, and investments in other companies which are stated at cost.

g. Property, plant and equipment

These assets are stated at cost and are depreciated by the straight-line method over their estimated useful lives.

Annual rates of depreciation are as follows:

	%
Machinery and equipment .....	10-20 (mainly 20)
Building .....	3
Office furniture and equipment .....	6-33
Vehicles .....	15;20

Leasehold improvements are amortized by the straight-line method over the term of the lease or the estimated useful life of the improvements, whichever is shorter.

h. Goodwill and other intangible assets:

- 1) Goodwill arising from the merger between the Company and Orbot Systems Ltd. (“Orbot”), which took place on October 27, 1992, is amortized by the straight-line method over a period of 10 years (ending in 2002).

**ORBOTECH LTD.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

- 2) Goodwill, representing the difference between the cost of the investment in subsidiaries and the fair value of their underlying net assets at the time of acquisition, is amortized over a period of 5 years from the date of acquisition.
- 3) Other intangible assets are being amortized over the estimated useful lives of the assets as follows:  

Intellectual property .....	5 years
Deferred charges related to assembled workforce .....	2 years

**i. Recognition of revenue:**

1) *Sale of systems*

The Company recognizes revenue from sale of systems to end users upon delivery, provided that appropriate signed documentation of the arrangement, such as a signed contract, purchase order or letter of agreement, has been received, the fee is fixed or determinable and collectibility is reasonably assured. The Company does not, in the normal course of business, provide a right of return to its customers.

The Company grants its customers a warranty on systems sold. Upon revenue recognition, the Company defers a portion of the sale price and recognizes it as service revenue ratably over the warranty period.

2) *Service revenue*

Service revenue is recognized ratably over the contractual period or as services are performed. See also (1) above.

**j. Research and development**

Research and development expenses are charged to income as incurred. Government funding for development of approved projects is recognized as a reduction of expenses as the related cost is incurred.

**k. Advertising expenses**

These expenses are charged to income as incurred. Advertising expenses totaled \$432,000, \$717,000 and \$739,000 in the years ended December 31, 2001, 2000 and 1999, respectively.

**l. Income taxes:**

- 1) Deferred taxes are computed in respect of temporary differences between the assets and liabilities as measured in the financial statements and those taken into account for tax purposes, at the tax rates expected to be in effect when these differences reverse.  

As to the main factors in respect of which deferred taxes have been provided, see note 9f.
- 2) The Company may incur additional tax liability in the event of intercompany dividend distribution; however, no additional tax has been provided for since it is the Company's policy not to cause, in the foreseeable future, distribution of dividends which would result in additional tax liability.
- 3) Taxes which would apply in the event of disposal of investments in subsidiaries have not been taken into account in computing the deferred taxes, as it is the Company's policy to hold, and not to realize, these investments.
- 4) Upon the distribution of dividends from the tax-exempt income of approved enterprises (see also note 9a), the amount distributed will be subject to tax at the rate that would have been applicable had the

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Company not been exempted from the payment thereof. The Company intends permanently to reinvest the amounts of tax-exempt income. Therefore, no deferred income taxes have been provided in respect of such tax-exempt income.

**m. Treasury shares**

Treasury shares are presented as a reduction of shareholders' equity, at their cost to the Company.

**n. Derivative financial instruments**

The Company enters into forward exchange contracts and purchases and writes currency options to hedge existing non-dollar assets and liabilities as well as certain anticipated transactions which are probable and which are expected to be denominated in non-dollar currencies. The writing of such options is part of a comprehensive hedging strategy and is designed effectively to swap the currencies relating to existing assets and liabilities. Each of the options written is combined with the purchase of an option for the same period and the same notional amount. The Company does not hold or issue derivative financial instruments for trading purposes.

All of the Company's foreign exchange derivatives are designated, and effective, as a hedge. A derivative qualifies as a hedge if: (i) the item to be hedged exposes the Company to a risk; (ii) the related derivative reduces that exposure and is inversely correlated to the hedged item; and (iii) the derivative is designated at inception for hedging purposes.

Gains and losses on derivatives that are hedging existing assets or liabilities are recognized in income commensurate with the results from those assets or liabilities; balances receivable or payable in respect of such derivatives are included in the balance sheets among other current assets or liabilities, as appropriate. Gains and losses related to derivatives that are hedging anticipated transactions are deferred, and ultimately recognized in income as part of the measurement of the results of the underlying hedged transactions. Cash flows from derivatives are recognized in the statements of cash flows and are in the same category as that of the hedged item.

If a derivative ceases to meet the criteria for hedge accounting, any subsequent gains and losses are recognized as current income or expense.

The net premiums paid for currency options are presented in the balance sheets among prepaid expenses and are charged to financial expenses over the terms of the options.

**o. Impairment of long-lived assets**

The Company reviews its long-lived assets, identifiable intangibles and goodwill related to those assets for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. If indicators of impairment are present, the existence of impairment is identified by comparing the carrying amount of the potentially impaired asset to the undiscounted cash flows from use and eventual disposition of that asset. If the carrying amount of the asset being evaluated is greater than the undiscounted cash flows from use and eventual disposition of that asset, then impairment is measured based on the excess, if any, of the carrying amount over the fair value of that asset.

**p. Stock based compensation**

The Company accounts for employee stock based compensation in accordance with Accounting Principles Board Opinion ("APB") No. 25, "Accounting for Stock Issued to Employees" and related interpretations. Under APB 25, compensation cost for employee stock option plans is measured using the intrinsic value based method

**ORBOTECH LTD.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

of accounting. In accordance with Statement of Financial Accounting Standards ("FAS") No. 123 of the Financial Accounting Standards Board of the United States ("FASB"), "Accounting for Stock-Based Compensation", the Company discloses pro forma data assuming the Company had accounted for employee stock option grants using the fair value based method defined in FAS 123.

Accordingly, the difference, if any, between the quoted market price of the Ordinary Shares on the date of grant of the options and the exercise price of such options is charged to income, on the straight line basis, over the expected service periods (up to four years).

As to options granted to non-employees (employees of the proportionately consolidated company and consultants), the Company applies the provisions of FAS 123. The fair value of such options is charged to income over the expected service period.

**q. Reclassifications**

Certain comparative figures have been reclassified to conform to the current year presentation.

**NOTE 2—CERTAIN TRANSACTIONS:**

- a. In May 1996, the Company, through a European subsidiary, entered into an agreement with Jenoptik AG ("Jenoptik"), a German corporation, to establish a private German limited partnership, 66.7% owned by the Company, to develop direct imaging technologies (the "DI Joint Venture").

In 1998, with the consent of the Company, Jenoptik transferred all of its right, title and interest in and to the DI Joint Venture to a related company of Jenoptik ("DEWB"). In June 2000, the Company and DEWB entered into an agreement pursuant to which the Company acquired DEWB's right, title and interest in and to the DI Joint Venture in consideration for the issuance of 90,000 Ordinary Shares to DEWB. The purchase price of \$2.1 million was based on an average market price of the Company's Ordinary Shares a few days before and after the announcement of the transaction and was attributed to goodwill.

The agreement also contemplated the issuance of up to 67,500 additional Ordinary Shares to DEWB subject to the sale of a certain number of direct imaging systems within agreed time periods. While the original milestone was not met, the Company, Jenoptik and DEWB reached a new agreement in October 2001 pursuant to which 67,500 Ordinary Shares were issued to DEWB on March 15, 2002, in consideration for Jenoptik's co-operation with the Company on joint research and development projects. Research and development expenses for the year ended December 31, 2001 include approximately \$1.2 million which represent the fair value, in October 2001, of the 67,500 Ordinary Shares.

- b. In 1997, the Company commenced the design, development, manufacture, marketing and service of AOI systems for assembled PCBs through a limited partnership, Orbotech Schuh GmbH & Co. KG ("Orbotech-Schuh"), originally owned 51% by the Company, which acquired the AOI activity of Dipl.-Ing W. Schuh GmbH & Co. KG, ("Schuh"), a German private limited partnership then engaged in the manufacture of AOI systems for assembled PCBs. At that time the Company received an option to purchase the remaining 49% equity interest in Orbotech-Schuh as well as certain related know-how. The Company exercised this option during January 2001 for approximately \$13.3 million.

The acquisition resulting from the exercise of the option was accounted for by the purchase method. The Company has allocated the excess of the purchase price over the fair value of the net tangible assets acquired as follows: \$5.8 million was allocated to goodwill and \$6.7 was allocated to intellectual property.

- c. In 1998, the Company entered into an agreement with Valor Computerized Systems Ltd. ("Valor"), an Israeli corporation, for the formation of a joint venture with respect to CAM software for PCB fabrication

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

applications. The joint venture, FrontLine P.C.B. Solutions Limited Partnership ("FrontLine"), a limited Israeli partnership, is owned equally by the Company and Valor and combines the former CAM operations of the Company and Valor.

The Company's interest in FrontLine is presented in the financial statements by the proportionate consolidation method. As a result, the consolidated balance sheets as of December 31, 2001 and 2000 and the consolidated statements of operations for each of the three years in the period ended December 31, 2001 reflect the assets, liabilities and operating result components of FrontLine on the basis of the Company's percentage of holding.

The following FrontLine data are reflected in the Company's consolidated financial statements on the basis of the Company's percentage of holding:

	<u>December 31</u>		
	<u>2001</u>	<u>2000</u>	
	<u>\$ in thousands</u>		
1) Balance sheet data:			
Assets:			
Current assets .....	2,082	2,213	
Property, plant and equipment—net .....	580	380	
Other assets—net .....	483		
	<u>3,145</u>	<u>2,593</u>	
Liabilities:			
Current liabilities .....	549	828	
Accrued severance pay—net .....	192	194	
	<u>741</u>	<u>1,022</u>	
	<u>Year ended December 31</u>		
	<u>2001</u>	<u>2000</u>	<u>1999</u>
	<u>\$ in thousands</u>		
2) Operating results data:			
Revenues .....	8,764	9,823	8,801
Cost of revenues .....	(95)	(128)	(94)
Research and development costs .....	(2,343)	(1,688)	(1,288)
Selling, general and administrative expenses .....	(1,015)	(1,192)	(1,118)
Restructuring costs .....	(35)		
Financial income (expenses)—net .....	14	(64)	23
Other expenses—net .....	(12)		
Taxes on income .....	(10)		
Net income .....	<u>5,268</u>	<u>6,751</u>	<u>6,324</u>
3) Cash flow data:			
Net cash provided by operating activities .....	<u>6,270</u>	<u>1,603</u>	<u>2</u>
Net cash used in investing activities .....	<u>(891)</u>	<u>(103)</u>	<u>(5)</u>

d. In 1999, the Company acquired all the outstanding shares of KLA Acrotec Co. Ltd. (which was later renamed Orbotech Display Pacific Ltd. ("ODP")), a Japanese company which was then engaged in the

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

design, development and marketing of AOI systems for use in the production of FPDs. ODP has subsequently been merged with and into the Company's wholly-owned subsidiary, Orbotech Japan Ltd. The Company paid approximately \$13.6 million for all of the issued and outstanding shares of ODP. The goodwill arising on the acquisition amounts to approximately \$5.6 million.

- e. In March 2001, the Company acquired certain inspection-related technology, patents and know-how for approximately \$2.5 million

**NOTE 3—INVENTORIES:**

	<u>December 31</u>	
	<u>2001</u>	<u>2000</u>
	<u>\$ in thousands</u>	
Components:		
For manufacturing of systems .....	*36,553	40,498
For servicing of systems .....	18,570	15,796
	<u>55,123</u>	<u>56,294</u>
Work in process .....	7,588	9,343
Finished products .....	17,351	18,421
	<u>80,062</u>	<u>84,058</u>

\* In the year ended December 31, 2001, the Company recorded a write-down in the amount of \$7,013,000.

**NOTE 4—PROPERTY, PLANT AND EQUIPMENT:**

- a. Composition of assets, grouped by major classifications, is as follows:

	<u>Cost</u>		<u>Accumulated depreciation and amortization</u>	
	<u>December 31</u>		<u>December 31</u>	
	<u>2001</u>	<u>2000</u>	<u>2001</u>	<u>2000</u>
	<u>\$ in thousands</u>		<u>\$ in thousands</u>	
Machinery and equipment .....	23,143	21,548	17,930	16,496
Leasehold improvements .....	21,867	18,730	9,566	8,032
Building .....	987	987	463	432
Office furniture and equipment .....	22,555	20,714	16,161	14,174
Vehicles .....	1,412	2,075	600	889
	<u>69,964</u>	<u>64,054</u>	<u>44,720</u>	<u>40,023</u>

- b. Depreciation and amortization expenses totaled \$7,290,000, \$6,700,000 and \$5,466,000 in the years ended December 31, 2001, 2000 and 1999, respectively.

The amount for the year ended December 31, 2001 does not include an impairment charge of \$387,000 made in connection with the restructuring plan, see note 13d.

**ORBOTECH LTD.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

**NOTE 5—GOODWILL AND OTHER INTANGIBLE ASSETS:**

a. The amortized balance of goodwill and other intangible assets is composed as follows:

	December 31	
	2001	2000
	\$ in thousands	
Goodwill from the merger between the Company and Orbot .....	16,267	16,267
Acquired goodwill and other assets .....	29,773	14,177
	46,040	30,444
Less—accumulated amortization .....	27,294	20,003
	18,746	10,441

b. Amortization expenses totaled \$7,291,000, \$4,558,000 and \$3,774,000 in the years ended December 31, 2001, 2000 and 1999, respectively.

**NOTE 6—SEVERANCE PAY:**

a. Israeli law generally requires the payment of severance pay upon dismissal of an employee or upon termination of employment in certain other circumstances. The severance pay liability of the Company and its Israeli subsidiaries to their Israeli employees, based upon the number of years of service and the latest monthly salary, is partly covered by regular deposits with recognized pension funds, deposits with severance pay funds and purchases of insurance policies. Under labor agreements, these deposits and insurance policies, as above, are in the employees' names and are, subject to certain limitations, the property of the employees.

The severance pay liability covered by the pension funds is not reflected in the financial statements as the severance pay risks have been irrevocably transferred to the pension funds.

The amounts accrued and the portion funded with severance pay funds and by insurance policies are reflected in the balance sheets as follows:

	December 31	
	2001	2000
	\$ in thousands	
Accrued severance pay .....	18,835	17,729
Less—amounts funded .....	10,828	9,515
Unfunded portion—balance sheet accrual .....	8,007	8,214

The amounts of accrued severance pay as above cover the severance pay liability of the Company and its Israeli subsidiaries in accordance with labor agreements in force and based on salary components which, in management's opinion, create entitlement to severance pay. The Company records the obligation as it was payable at each balance sheet date on an undiscounted basis.

The Company and its Israeli subsidiaries may only make withdrawals from the funds for the purpose of paying severance pay.

Under Israeli GAAP, amounts funded by deposits with severance pay funds and by purchase of insurance policies, as above, are deducted from the related severance pay liability. Under U.S. GAAP, the amounts funded should be presented as a long-term investment among the Company's assets.

**ORBOTECH LTD.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

- b. Most of the Company's non-Israeli subsidiaries provide defined contribution plans for the benefit of their employees. Under these plans, contributions are based on special percentages of pay.
- c. Severance pay expenses were \$3,443,979, \$2,264,000 and \$1,541,000 in the years ended December 31, 2001, 2000 and 1999, respectively. In the year ended December 31, 2001, an additional amount of \$4,397,000 was included in restructuring costs, see note 13d.

**NOTE 7—COMMITMENTS, CONTINGENT LIABILITY AND RESTRICTION PLACED IN RESPECT OF LIABILITIES:**

**a. Commitments:**

*1) Royalty commitments*

The Company was obligated to pay royalties to the Israeli Government relating to research and development grants received from the Office of Chief Scientist of the Israeli Ministry of Industry and Trade (the "OCS"). At the time the participations were received, successful development of the related projects was not assured. Under the terms of the Company's funding from the OCS, royalties of 2%-5% were payable on sales of products developed from a project so funded, up to 100% of the grant received by the Company (in dollar terms). For certain projects, which were approved prior to January 1, 1994, the limit was up to 150% of the grants received.

In the event of failure of a project that was partly financed by royalty-bearing Israeli Government participations, the Company was not obligated to pay any such royalties to the Israeli Government.

In December 2001, the Company reached an agreement with the OCS pursuant to which it will pay the sum of \$14.2 million to the Government of Israel in settlement of all royalties arising from sales after June 30, 2001 with respect to previous OCS grants to the Company, thereby settling all outstanding issues between it and the OCS relating to past grants received. This amount is included in the statement of income for the year ended December 31, 2001 as a separate item among operating expenses.

The Company currently intends to make this payment in five equal annual installments over five years commencing in 2002. The payments will be linked to the Israeli consumer price index (the "Israeli CPI") and bear annual interest of 4%.

This agreement could also enable the Company to participate in a new OCS program under which it will be eligible to receive future research and development grants for the development of generic technologies without incurring any royalty obligations.

Royalty expenses totaled \$2,832,000, \$7,096,000 and \$5,883,000 in the years ended December 31, 2001, 2000 and 1999, respectively. The amount for the year ended December 31, 2001 does not include the prepayment of \$14,173,000.

*2) Lease commitments:*

*(a) Leasing of premises*

Most of the premises occupied by the Company and certain subsidiaries are rented under various operating lease agreements. The lease agreements for the premises expire on various dates between 2002 and 2011.

**ORBOTECH LTD.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

Minimum lease commitments of the Company and its subsidiaries under the above leases, at rates in effect on December 31, 2001, are as follows:

	<u>\$ in thousands</u>
Year ending December 31:	
2002 .....	6,428
2003 .....	4,417
2004 .....	3,631
2005 .....	3,117
2006 .....	2,827
2007-2011 .....	<u>2,315</u>
	<u>22,735</u>

The rental payments for the premises in Israel, which constitute most of the above amounts, are payable in Israeli currency linked to the Israeli CPI.

Rental expenses totaled \$5,686,000, \$4,759,000 and \$4,587,000 in the years ended December 31, 2001, 2000 and 1999, respectively.

- (b) The Company and certain subsidiaries have entered into operating lease agreements for the use of vehicles and office equipment.

**b. Contingent liability**

Some customers of the Company that use certain products of the Company have received notices of infringement, alleging that methods carried out on equipment supplied by the Company and used in the inspection of PCBs in the course of manufacture, infringe patents issued to third parties. Certain of these customers have notified the Company that they may seek indemnification from the Company for damages and expenses which may result from this matter. To the date of issuance of these financial statements, no claims have been filed against the Company in this regard. The Company believes that the risk of its having to make payments in this regard is remote.

**c. Restriction placed in respect of liabilities**

As of December 31, 2001, the Company had unutilized credit lines of approximately \$50 million.

Under arrangements for receipt of such credit lines, the Company entered into negative pledge agreements with certain banks. Pursuant to these agreements the Company has undertaken not to register floating charges on assets in favor of third parties without the prior consent of the banks.

**NOTE 8—SHAREHOLDERS' EQUITY:**

**a. Authorized, issued and outstanding shares:**

- 1) The Company's Ordinary Shares are traded in the United States on the Nasdaq National Market under the symbol ORBK.
- 2) In November 1999, the Company allotted as bonus shares, to each shareholder of record entitled thereto at the close of business on November 12, 1999, one additional Ordinary Share for every two Ordinary Shares held at the close of business on that date.

## ORBOTECH LTD.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

In September 2000, the Company allotted as bonus shares, to each shareholder of record entitled thereto at the close of business on September 8, 2000, one additional Ordinary Share for every two Ordinary Shares held at the closing of business on that date.

All share and option amounts presented in these financial statements have been adjusted to give effect to these issuances of bonus shares.

- 3) During 2000, the Company purchased 483,000 Ordinary Shares for \$22,324,000, which are held as treasury shares under Israeli law. For as long as these Ordinary Shares are owned by the Company, they confer no rights and, consequently, their holders are neither eligible to participate in, or receive, any dividends, nor are they entitled to participate in, vote at, or be counted as part of the quorum for any meetings of shareholders of the Company.
- 4) Under the share option plans (see b. below), options to purchase a total of 364,143, 512,133 and 1,077,097 Ordinary Shares were exercised in the years ended December 31, 2001, 2000 and 1999, respectively.
- 5) As to 67,500 Ordinary Shares issued on March 15, 2002 to DEWB, see note 2a.

#### b. Share option plans:

##### 1) The plans:

- (a) In June 1992, the shareholders of the Company approved the Orbotech Ltd. Israeli Key Employee Share Incentive Plan (1992) (As Amended, 1994, 1996, 1997, 1998, 1999) (the "1992 Plan"). Under the 1992 Plan, as amended with shareholder approval when required, options to purchase an aggregate of 3,095,718 Ordinary Shares have, from time to time over the term of the 1992 Plan, been available to be awarded to employees of the Company and/or of other Israeli entities in which the Company holds at least a 50% equity interest. The 1992 Plan is, subject to the provisions of the Israeli Companies Law, 1999 (the "Companies Law"), administered by the Remuneration Committee of the Board of Directors (the "Committee"). The exercise price of options granted under the 1992 Plan may not be less than 85% of the fair market value of the Ordinary Shares on the date of the grant. However, in June 2000, the Board of Directors adopted a general policy not to award options at less than the fair market value of the Ordinary Shares at the time of the grant.

The 1992 Plan was valid for ten years and expired on January 22, 2002, except as to option awards outstanding on that date.

The 1992 Plan is subject to the rules promulgated under Section 102 of the Israeli Income Tax Ordinance. Section 102 provides, inter alia, that the Company will be allowed to claim as an expense for tax purposes the amounts credited to the employees as a benefit when the related capital gains tax is payable by the employee.

- (b) In July 1995, the shareholders of the Company approved the 1995 Incentive Stock Plan for Key Employees of Orbotech Ltd.'s subsidiaries (As Amended, 1997, 1998, 1999, 2000) (the "1995 Plan"). Under the 1995 Plan, as amended with shareholder approval when required, options to purchase an aggregate of 3,931,068 Ordinary Shares have, from time to time over the term of 1995 Plan, been available to be awarded to employees and consultants of subsidiaries of the Company. The 1995 Plan is, subject to the provisions of the Companies Law, administered by the Committee. The 1995 Plan authorizes the granting of incentive stock options complying with U.S. tax provisions for those participants subject to U.S. tax law ("ISO"s), and non-qualified stock

ORBOTECH LTD.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

options which do not comply with such U.S. tax law provisions. The exercise price of options granted under the 1995 Plan may not be less than 100% of the fair market value of the Ordinary Shares on the date the option is granted in the case of ISOs, and not less than 85% of their fair market value for awards that are not ISOs. However, in June 2000, the Board of Directors adopted a general policy not to award options at less than the fair market value of the Ordinary Shares at the time of the grant.

The 1995 Plan is valid for ten years and will expire on June 21, 2005, except as to option awards outstanding on that date.

- (c) In May 1998, the Board of Directors approved the Stock Option Plan for Consultants of Orbotech Ltd. (1998) (the "1998 Plan"). Under the 1998 Plan, an option to purchase 33,750 Ordinary Shares, at an exercise price of \$12.55 per Ordinary Share, was granted to an independent consultant of the Company.

This option was granted under the terms and conditions otherwise applicable to grants made under the 1992 Plan (see (1) above), vests over a four year period and will expire on April 6, 2006.

- (d) In August 2000, the Company adopted the Employee Share Ownership and Option Plan (2000) (the "2000 Plan"). Under the 2000 Plan, options to purchase an aggregate amount of 3,300,000 Ordinary Shares may, from time to time, be awarded to employees, officers, directors and consultants of the Company and/or of other companies, partnerships or other entities in Israel in which the Company holds at least a 50% equity interest. The 2000 Plan is, subject to the provisions of the Companies Law, administered by the Committee. The exercise price of options awarded under the 2000 Plan may not be less than 100% of the fair market value of the Ordinary Shares on the last day immediately preceding the date of option grant upon which public trading of the Company's Ordinary Shares takes place.

The 2000 Plan is valid for ten years and will expire on June 20, 2010, except as to option awards outstanding on that date.

Options awarded under the 2000 Plan may, but need not necessarily be, subject to the rules promulgated under Section 102 of the Israeli Income Tax Ordinance.

- (e) As of December 31, 2001, options for the purchase of 2,484,843 Ordinary Shares (including 344,481 that had been designated but not yet priced) were available for future awards under the above plans.

Under these plans, options usually vest as follows: 50%—two years after the effective date of grant; 75%—after three years; and 100%—after four years. The options expire between five to ten years from the date of grant. However, the general policy of the Company, adopted by the Board of Directors in June 2000, is that newly awarded options expire no later than five years following their grant. Options also generally expire when the grantee ceases to be an employee of the Company or any of its subsidiaries or a consultant of the Company.

Ordinary Shares purchased upon the exercise of options have the same rights as other Ordinary Shares, immediately upon allotment.

ORBOTECH LTD.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

2) Options granted to employees:

(a) A summary of the status of the above plans in respect of options granted to employees as of December 31, 2001, 2000 and 1999, and changes during the years ended on those dates, is presented below:

	Year ended December 31					
	2001		2000		1999	
	Number	Weighted average exercise price	Number	Weighted average exercise price	Number	Weighted average exercise price
Options outstanding at beginning of year .....	3,446,805	\$33.32	2,100,145	\$17.42	2,929,756	\$ 8.34
Changes during the year:						
Granted (1)(2)(3) .....	2,252,026	\$27.50	1,981,925	\$49.03	325,125	\$20.11
Exercised .....	(358,518)	\$ 9.92	(491,508)	\$ 8.98	(1,077,097)	\$ 5.40
Forfeited .....	(320,369)	\$39.35	(143,757)	\$16.06	(77,639)	\$10.09
Options outstanding at end of year ....	<u>5,019,944</u>	<u>\$31.99</u>	<u>3,446,805</u>	<u>\$33.32</u>	<u>2,100,145</u>	<u>\$17.42</u>
Options exercisable at year-end .....	<u>744,550</u>	<u>\$12.67</u>	<u>534,380</u>	<u>\$10.09</u>	<u>225,066</u>	<u>\$ 7.05</u>
Weighted average fair value of options granted during the year (4) .....	<u>\$ 12.34</u>		<u>\$ 23.86</u>		<u>\$ 10.19</u>	

(1) Including options granted to:

The Company's President and Chief Executive Officer

(who is a director) .....

Other directors .....

(2) In addition, as of December 31, 2001, options to purchase a total of 337,333 Ordinary Shares had been designated for grant during 2002 pursuant to the 1995 and 2000 Plans, at exercise prices to be determined as the market price of the Company's Ordinary Shares at the designated time of grant in accordance with the applicable option plan. The vesting period of such options will commence upon the designated time of grant. For accounting purposes, until the exercise price is determined, such options are treated under APB 25 as a variable plan, with no effect on the Company's results of operations. Upon determination of the exercise price the options will be treated as a fixed plan, with no deferred compensation cost.

(3) Composed as follows:

	Year ended December 31								
	2001			2000			1999		
	Number	Weighted average exercise price	Weighted average fair value	Number	Weighted average exercise price	Weighted average fair value	Number	Weighted average exercise price	Weighted average fair value
Options granted during the year at the following exercise prices:									
Below market value .....				483,750	\$39.33	\$18.30	325,125	\$20.11	\$10.19
At market value ...	<u>2,252,026</u>	<u>\$27.50</u>	<u>\$12.34</u>	<u>1,498,175</u>	<u>\$52.16</u>	<u>\$23.50</u>			

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

- (4) The fair value of each option granted is estimated on the date of grant using the Black-Scholes option-pricing model with the following weighted average assumptions:

	Year ended December 31		
	2001	2000	1999
Dividend yield .....	0%	0%	0%
Expected volatility .....	44%	43%	16%
Risk-free interest rate .....	3.78%	6.50%	5.50%
Expected life—in years .....	2.75	2.75	2.75

- (b) The following table summarizes certain information about options granted to employees outstanding and exercisable under the above plans as of December 31, 2001:

Range of exercise prices \$	Options outstanding			Options exercisable		
	Number outstanding as of December 31, 2001	Weighted average remaining contractual life	Weighted average exercise price	Number exercisable as of December 31, 2001	Weighted average remaining contractual life	Weighted average exercise price
		Years	\$		Years	\$
3.00-9.99	227,364	3.74	6.18	193,054	3.75	6.06
10.00-19.99	1,308,049	5.11	15.18	442,085	5.30	12.89
20.00-29.99	1,138,800	5.05	24.78	109,411	7.27	23.46
30.00-39.99	411,330	5.73	36.82			
40.00-49.99	917,098	5.64	44.10			
50.00-59.99	813,300	4.00	51.62			
60.00-67.00	204,000	3.66	66.42			
	<u>5,019,944</u>	4.94	31.88	<u>744,550</u>	5.19	12.67

- 3) Options granted to non-employees:

- (a) A summary of the status of the above plans in respect of options granted to employees of FrontLine (a proportionately consolidated company, see note 2c) and to consultants as of December 31, 2001, 2000 and 1999, and changes during the years ended on those dates, is presented below:

	Year ended December 31					
	2001		2000		1999	
	Number	Weighted average exercise price	Number	Weighted average exercise price	Number	Weighted average exercise price
Options outstanding at beginning of year .....	101,275	27.76	90,000	16.65	56,250	12.31
Changes during the year:						
Granted (1)(2) .....	52,302	28.08	31,900	48.66	33,750	23.89
Exercised .....	(5,625)	11.95	(20,625)	12.22		
Forfeited .....	(7,150)	42.19				
Options outstanding at end of year .....	<u>140,802</u>	27.69	<u>101,275</u>	27.76	<u>90,000</u>	16.65
Options exercisable at year-end .....	<u>32,813</u>	18.38	<u>7,500</u>	12.55		
Weighted average fair value of options granted during the year (3) .....	<u>\$ 12.34</u>		<u>\$ 23.86</u>		<u>\$ 10.19</u>	

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

- (1) In addition, as of December 31, 2001, options to purchase a total of 7,148 Ordinary Shares had been designated for grant during 2002 pursuant to the 1995 and 2000 Plans, at exercise prices to be determined as the market price of the Company's Ordinary Shares at the designated time of grant in accordance with the applicable option plan. The vesting period of such options will commence upon the designated time of grant.
- (2) Composed as follows:

	Year ended December 31								
	2001			2000			1999		
	Number	Weighted average exercise price	Weighted average fair value	Number	Weighted average exercise price	Weighted average fair value	Number	Weighted average exercise price	Weighted average fair value
Options granted during the year at the following exercise prices:									
Below market value . . . . .							33,750	\$23.89	\$10.19
At market value . . . . .	52,302	\$28.08	\$12.34	31,900	\$48.66	\$23.86			

- (3) The fair value of each option granted is estimated on the date of grant using the Black-Scholes option-pricing model with the following weighted average assumptions:

	Year ended December 31		
	2001	2000	1999
Dividend yield . . . . .	0%	0%	0%
Expected volatility . . . . .	44%	43%	16%
Risk-free interest rate . . . . .	2.00%	6.50%	5.50%
Expected life—in years . . . . .	2.75	2.75	2.75

- (b) The following table summarizes certain information about options granted to employees of FrontLine (a proportionately consolidated company) and to consultants outstanding and exercisable under the above plans as of December 31, 2001:

Range of exercise prices	Options outstanding			Options exercisable		
	Number outstanding as of December 31, 2001	Weighted average remaining contractual life	Weighted average exercise price	Number exercisable as of December 31, 2001	Weighted average remaining contractual life	Weighted average exercise price
		Years	\$		Years	\$
10.00 - 19.99	44,300	4.67	14.04	15,938	4.26	12.55
20.00 - 29.99	49,377	5.40	24.62	16,875	5.75	23.89
30.00 - 39.99	16,125	4.36	35.29			
40.00 - 49.99	30,800	3.80	48.10			
50.00 - 59.99	200	3.83	53.15			
	<u>140,802</u>	4.70	27.69	<u>32,813</u>	5.03	18.38

ORBOTECH LTD.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

- 4) The amortization of deferred stock compensation in the years ended December 31, 2001, 2000 and 1999, is \$1,538,000, \$2,147,000 and \$1,338,000, respectively.

Had all compensation cost for the Company's option plans in respect of options granted to employees been determined based on the fair value at the grant dates for awards granted as from 1995 under the plans consistent with the method of FAS 123, the Company's net income and earnings per share would have been reduced to the pro forma amounts indicated below:

	Year ended December 31					
	2001		2000		1999	
	As reported	Pro forma	As reported	Pro forma	As reported	Pro forma
Net income (loss)—in thousands of dollars:						
Under Israeli GAAP	<u>1,862</u>	<u>(18,909)</u>	<u>79,073</u>	<u>70,227</u>	<u>53,140</u>	<u>49,328</u>
Under U.S. GAAP	<u>2,031</u>	<u>(18,740)</u>	<u>79,073</u>	<u>70,227</u>	<u>53,140</u>	<u>49,328</u>
Earnings (loss) per share—in dollars:						
Under Israeli GAAP—basic and diluted	<u>0.06</u>	<u>(0.57)</u>	<u>2.44</u>	<u>2.15</u>	<u>1.63</u>	<u>1.49</u>
Under U.S. GAAP:						
Basic	<u>0.06</u>	<u>(0.59)</u>	<u>2.51</u>	<u>2.22</u>	<u>1.72</u>	<u>1.59</u>
Diluted	<u>0.06</u>	<u>(0.59)</u>	<u>2.40</u>	<u>2.13</u>	<u>1.66</u>	<u>1.54</u>

c. Dividends:

- 1) The distribution of cash dividends in the amount of approximately \$141 million out of retained earnings of approximately \$237 million as of December 31, 2001 would subject the Company to a 15%-25% tax on the amount distributed, thereby effectively reducing the dividend distribution by the amount of the tax (see notes 11 and 9a and f(3)).
- 2) In the event that cash dividends are declared by the Company, such dividends would be declared and paid in Israeli currency. Under current Israeli regulations, any cash dividend in Israeli currency paid in respect of Ordinary Shares purchased by non-residents of Israel with non-Israeli currency may be freely repatriated in such non-Israeli currency, at the rate of exchange prevailing at the time of repatriation.

NOTE 9—TAXES ON INCOME:

a. Tax benefits under the Law for the Encouragement of Capital Investments, 1959

Most of the production facilities of the Company and its Israeli subsidiaries have been granted "approved enterprise" status under the above law. The main benefit arising from such status is the reduction in tax rates on income derived from "approved enterprises".

Since the Company is a "foreign investors' company" as defined by the above law, it is entitled to a ten-year period of benefits (instead of a seven-year period).

Income derived from approved enterprises is tax exempt for a period of two or four years out of the ten-year period of benefits. Based on the percentage of foreign shareholding in the Company, income derived during the remaining eight or six years of benefits is taxable at the rate of 15%-25%. The period of benefits relating to the approved enterprises will expire in the years 2004 through 2010.

## ORBOTECH LTD.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

The tax benefits in respect of part of the production facilities of the Company have expired. Consequently, the portion of taxable income to which approved enterprise benefits apply is approximately 87%, 88% and 83% in 2001, 2000 and 1999, respectively.

In the event of distribution of cash dividends from income which was tax exempt as above, the Company would have to pay the 15%-25% tax in respect of the amount distributed. The amount distributed for this purpose includes the amount of the tax that applies as a result of the distribution (see f(3) below and note 8c(1)).

The Company and its Israeli subsidiaries are entitled to claim accelerated depreciation in respect of equipment used by the approved enterprises during five tax years.

The entitlement to the above benefits is conditional upon the Company and its Israeli subsidiaries fulfilling the conditions stipulated by the above law, regulations published thereunder and the certificate of approval for the specific investments in approved enterprises. In the event of failure to comply with these conditions the benefits may be canceled, and the Company may be required to refund the amount of the benefits, in whole or in part, with the addition of linkage differences to the Israeli CPI and interest.

**b. Measurement of results for tax purposes under the Income Tax (Inflationary Adjustments) Law, 1985 (the "Inflationary Adjustments Law")**

Under this law, results for tax purposes are measured on a real basis, having regard to the changes in the Israeli CPI. As explained in note 1a(2), the financial statements are measured in dollars. The difference between the changes in the Israeli CPI and in the exchange rate of the dollar relative to Israeli currency—both on annual and cumulative bases—creates a difference between taxable income and income reflected in these financial statements.

**c. Tax benefits under the Law for the Encouragement of Industry (Taxes), 1969**

The Company and its Israeli subsidiaries are "industrial companies" as defined by this law and as such are entitled to certain tax benefits, consisting mainly of accelerated depreciation as prescribed by regulations published under the Inflationary Adjustments Law and amortization of patents and certain other intangible property.

**d. Other applicable tax rates:**

*1) Income from other sources in Israel*

Income not eligible for approved enterprise benefits mentioned in a. above is taxed at the statutory corporate rate of 36%.

*2) Income of non-Israeli subsidiaries*

Non-Israeli subsidiaries are taxed according to the tax laws in their countries of residence.

**e. Carryforward tax losses**

Carryforward tax losses of certain subsidiaries totaled approximately \$18.3 million at December 31, 2001, of which approximately \$2.3 million will expire in the years 2005-2011 and approximately \$16 million have no expiration date. A full valuation allowance is recorded in respect of deferred tax assets resulting from these losses (see f(1) below).

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

f. Deferred income taxes:

	<u>December 31</u>	
	<u>2001</u>	<u>2000</u>
	<u>\$ in thousands</u>	
1) Provided in respect of the following:		
Provision for vacation pay . . . . .	351	336
Accrued severance pay . . . . .	884	711
Carryforward tax losses . . . . .	7,320	6,160
Research and development costs . . . . .	4,875	3,800
Property, plant and equipment . . . . .	51	(125)
Other . . . . .	<u>780</u>	<u>          </u>
	14,261	10,882
Less—valuation allowance . . . . .	<u>8,360</u>	<u>10,316</u>
	<u>5,901</u>	<u>566</u>
2) Deferred taxes are included in the balance sheets as follows:		
Among current assets among “accounts receivable—other” . . . . .	3,692	336
Among non-current assets . . . . .	<u>2,209</u>	<u>230</u>
	<u>*5,901</u>	<u>*566</u>

\* Realization of this deferred tax balance is conditional upon earning, in the coming years, taxable income in an appropriate amount. The amount of the deferred tax asset, however, could be reduced in the near term if estimates of future taxable income are reduced.

The deferred taxes are computed for the Company and its Israeli subsidiaries at the average tax rate of 13%. For non-Israeli subsidiaries, the deferred taxes are computed at the average tax rate of 40%.

3) As stated in a. above, part of the Company’s income is tax exempt due to the approved enterprise status granted to the Company’s production facilities. The Company has decided permanently to reinvest the amount of the tax exempt income and not to distribute such income as cash dividends. Accordingly, no deferred income taxes have been provided in respect of the tax exempt income.

The amount of tax that would be payable had such exempt income earned through December 31, 2001 been distributed as dividends is approximately \$27.5 million.

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

**g. Taxes on income included in the income statements:**

1) As follows:

	Year ended December 31		
	2001	2000	1999
	\$ in thousands		
Current:			
Israeli .....	3,710	8,019	5,255
Non-Israeli .....	650	2,313	2,376
	4,360	10,332	7,631
Deferred, see f. above:			
Israeli .....	(1,812)	109	645
Non-Israeli .....	(3,523)	397	(397)
	(5,335)	506	248
	(975)	10,838	7,879

2) Following is a reconciliation of the theoretical tax expense, assuming all income is taxed at the statutory corporate tax rate applicable to Israeli corporations (see d(1) above), and the actual tax expense:

	Year ended December 31		
	2001	2000	1999
	\$ in thousands		
Income before taxes on income* .....	887	90,725	60,651
Theoretical tax on the above amount .....	319	32,661	21,834
Less—tax benefits arising from approved enterprises .....	4,973	18,878	12,974
	(4,654)	13,783	8,860
Increase (decrease) in taxes resulting from:			
Income which is tax-exempt or subject to different tax rates .....			(160)
Permanent differences, including difference between the basis of measurement of income reported for tax purposes and the basis of measurement of income for financial reporting purposes—net .....	1,723	(512)	(496)
Decrease in taxes resulting mainly from utilization of carryforward tax losses and other components for which deferred taxes were not provided in previous years (net change in valuation allowance) .....	1,956	(2,433)	(325)
Actual tax expense (benefit) .....	(975)	10,838	7,879
* As follows:			
Taxable in Israel .....	2,251	74,817	53,227
Taxable outside Israel .....	(1,364)	15,908	7,424
	887	90,725	60,651

**h. Tax assessments**

Final tax assessments have been received by the Company through the tax year 1999.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

NOTE 10—FINANCIAL INSTRUMENTS AND RISK MANAGEMENT:

a. General

The Company operates internationally, which gives rise to exposure to market risks, mainly from changes in foreign exchange rates. The Company uses financial instruments and derivatives in order to limit its exposure to risks arising from such changes.

The Company is exposed to losses in the event of non-performance by counterparties to financial instruments; however, as the counterparties are major Israeli banks and a major United Kingdom investment bank, the Company does not expect any counterparties to fail to meet their obligations. The Company does not require or place collateral with respect to these financial instruments. The Company does not hold or issue derivatives for trading purposes.

b. Foreign exchange risk management

As stated in note 1n, the Company enters into various types of foreign exchange derivatives in managing its foreign exchange risk. The notional amounts of these derivatives as of December 31, 2001 are as follows:

	<u>\$ in millions</u>
Forward exchange contracts for conversion of:	
Euros into dollars .....	<u>21</u>
Japanese yen into dollars .....	<u>34</u>
Dollars into Israeli currency .....	<u>48</u>
Korean won into dollars .....	<u>2</u>
Taiwan dollars into dollars .....	<u>3</u>

The terms of all of these currency derivatives are less than one year.

c. Concentrations of credit risks

As of December 31, 2001 and 2000, the Company held cash and cash equivalents and short-term bank deposits, most of which were deposited with major Israeli, European and U.S. banks. The marketable securities held by the Company are mainly corporate debentures. The Company is of the opinion that the credit risk in respect of these balances is remote.

The Company's revenues are derived from a large number of customers. Consequently, the exposure to concentration of credit risks relating to individual customers is limited. The Company performs ongoing credit evaluations of its customers for the purpose of determining the appropriate allowance for doubtful accounts. In respect of sales to customers in emerging economies, the Company requires letters of credit from banks.

d. Fair value of financial instruments

The fair value of financial instruments included in working capital is usually identical or close to their carrying amount. The fair value of non-current trade receivables, long-term investments and long-term liabilities also approximate the carrying amounts, since they bear interest at rates close to prevailing market rates.

The fair value and the carrying amount of derivatives as of December 31, 2001 and 2000, constituted an asset, net of liabilities, of approximately \$0.3 million and \$2.0 million, respectively. The fair value of the

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

derivatives generally reflects the estimated amounts that the Company would receive or pay upon termination of the contracts at the reporting date.

**NOTE 11—MONETARY BALANCES IN NON-DOLLAR CURRENCIES:**

	December 31, 2001		
	Israeli currency(a)		Other non-dollar currencies(c)
	Unlinked	Linked(b)	
	\$ in thousands		
Assets—current .....	3,398	261	61,987
Liabilities:			
Current liabilities .....	11,017	8,299	13,086
Long-term liability to the Government of Israel (including current maturities) .....		14,173	
	11,017	22,472	13,086

- (a) The above does not include balances in Israeli currency linked to the dollar.
- (b) To the Israeli CPI.
- (c) As to hedging transactions entered into by the Company in order to maintain the dollar value of net assets in non-dollar currencies, see note 10.

**NOTE 12—SUPPLEMENTARY BALANCE SHEET INFORMATION:**

**a. Cash and cash equivalents**

The balances as of December 31, 2001 and 2000 include \$91,820,000 and \$130,702,000, respectively, of highly liquid bank deposits. The deposits are denominated in dollars and bear interest. The annual interest rate as of December 31, 2001 was 1.80%-2.13%.

	December 31	
	2001	2000
	\$ in thousands	
<b>b. Short-term investments:</b>		
Quoted non-Israeli corporate debentures .....	15,345	23,808
Israeli Government bonds .....		870
Asset backed securities .....	6,991	
Short-term bank deposits* .....	18,492	2,000
	40,828	26,678

\* The deposits are denominated in dollars and bear interest. The annual interest rate at December 31, 2001 was 2.05%-2.42%

**c. Accounts receivable:**

1) Trade—allowance for doubtful accounts	2,631	2,063
2) Israeli Government departments and agencies:		
Value added tax refundable .....	997	4,177
Royalty-bearing participations receivable .....		372
Income taxes refundable .....	22	22
	1,019	4,571

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

	December 31	
	2001	2000
	<u>\$ in thousands</u>	
3) Other:		
Employees .....	2,967	2,157
Prepaid expenses .....	2,189	3,159
Deferred income taxes, see note 9f .....	3,692	336
Deposits in respect of rent .....	3,280	2,384
Sundry .....	6,600	3,602
	<u>18,728</u>	<u>11,638</u>
c. Long-term investments:		
Quoted non-Israeli corporate debentures* .....	25,151	22,349
Asset backed securities .....		3,547
Investments in other companies .....	333	
	<u>25,484</u>	<u>25,896</u>
* The above securities mature as follows:		
Year ending December 31:		
2003 .....	13,268	
2004 .....	8,383	
2005 .....	3,500	
	<u>25,151</u>	
d. Accounts payable and accruals—other:		
Employees and employee institutions .....	10,185	23,697
Israeli Government departments and agencies .....	19,169	14,464
Deferred revenue relating to installation and warranty commitments, see note 1i(1) .....	8,902	12,898
Deferred service revenue .....	1,108	608
Advances from customers .....	387	719
Accrued restructuring costs, see note 13d .....	2,230	
Sundry .....	8,909	14,822
	<u>50,890</u>	<u>67,208</u>

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

**NOTE 13—SELECTED INCOME STATEMENT DATA:**

**a. Segment information:**

- 1) As described in note 1a(1), the Company, together with its subsidiaries, is engaged in the design, development, manufacture, marketing and/or service of production support solutions for the supply chain of the electronics industry, primarily AOI, CAM and imaging solutions for application in the production of PCBs and FPDs. In view of their overall inter-dependence and the similarity of their long-term economic characteristics, products and services, production processes, classes of customers and methods of distribution, all segments have been aggregated. As to revenues classified by geographical destination, see (2) below:

	Year ended December 31		
	2001	2000	1999
	\$ in thousands		
2) Revenues—classified by geographical area (based on the location of customers):			
Sales:			
North America (mainly the United States) . . . . .	39,969	65,666	59,488
Europe . . . . .	30,198	31,972	30,285
Japan . . . . .	45,460	45,458	18,537
Taiwan . . . . .	53,611	88,402	53,286
China . . . . .	33,546	22,200	15,500
Other Far Eastern countries . . . . .	22,925	44,021	33,618
Other . . . . .	620	699	1,044
Total sales . . . . .	226,329	298,418	211,758
Service:			
North America (mainly the United States) . . . . .	23,603	26,877	25,987
Europe . . . . .	12,878	12,793	14,792
Japan . . . . .	10,043	8,659	6,474
Taiwan . . . . .	14,541	11,400	8,561
China . . . . .	5,925	2,631	2,505
Other Far Eastern countries . . . . .	8,170	11,239	8,051
Other . . . . .	415	324	298
Total service . . . . .	75,575	73,923	66,668
	301,904	372,341	278,426

- 3) Most of the Company's long-lived assets are located in Israel.

**ORBOTECH LTD.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

		Year ended December 31		
		2001	2000	1999
		\$ in thousands		
b.	Cost of revenues*:			
	Cost of sales .....	94,360	109,200	79,600
	Cost of services rendered .....	65,101	65,943	56,022
		159,461	175,143	135,622
	* Excluding write-down of inventories.			
c.	Selling, general and administrative expenses:			
	1) Comprised as follows:			
	Selling .....	47,113	51,315	38,507
	General and administrative .....	14,331	16,508	12,524
		61,444	67,823	51,031
	2) The changes in allowance for doubtful accounts are comprised as follows:			
	Balance at beginning of year .....	2,063	1,522	1,050
	Increase during the year .....	788	780	709
	Bad debt written off .....	(220)	(239)	(237)
	Balance at end of year .....	2,631	2,063	1,522

d. Restructuring costs

The consolidated statement of income for the year ended December 31, 2001 includes restructuring costs in a total amount of approximately \$6.1 million. These costs relate mainly to a workforce reduction of approximately 250 employees and consolidation of certain offices of the Company outside of Israel.

The primary components of the restructuring costs are:

	Total costs	Amount expended in 2001	Balance— presented among accounts payable and accruals— other
	\$ in thousands		
Costs relating to workforce reduction .....	4,579	3,281	1,298
Costs relating to consolidation of the Company's offices .....	1,570	638	932
	6,149	3,919	2,230

e. Financial income—net:

		Year ended December 31		
		2001	2000	1999
		\$ in thousands		
Income:				
Interest:				
	In respect of bank deposits and securities .....	7,511	8,782	4,675
	Other .....	117	177	168
	Non-dollar transaction gains—net .....	388	388	393
		7,628	9,347	5,236
Expenses:				
Interest:				
	On long-term bank loans .....	18	78	147
	On short-term bank credit .....	252	304	175
	Other .....	654	1,008	330
	Non-dollar transaction losses—net .....	2,171		
		3,095	1,390	652
		4,533	7,957	4,584

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

**f. Earnings per share:**

*1) Under U.S. GAAP*

Basic earnings per share are computed based on the weighted average number of shares outstanding during each year (net of treasury shares), after giving retroactive effect to the bonus share issuances in 2000 and 1999. In computing diluted earnings per share, the potential dilutive effect of outstanding stock options was taken into account using the treasury stock method.

Following are data relating to the weighted average number of shares for the purpose of computing earnings per share under U.S. GAAP:

	Year ended December 31		
	2001	2000	1999
	In thousands		
Weighted average number of shares issued and outstanding—used in computation of basic earnings per share (net of treasury shares) . . . . .	31,819	31,566	30,866
Add—incremental shares from assumed exercise of options . . . . .	1,052	1,366	1,096
Weighted average number of shares used in computation of diluted earnings per share . . . . .	32,871	32,932	31,962

*2) Under Israeli GAAP*

As applicable to the Company, the main differences between the Israeli and U.S. GAAP methods of computing earnings per share are: (i) shares to be issued upon exercise of employee stock options are taken into account in the computation of basic earnings per share under Israeli GAAP whereas, under U.S. GAAP, only the weighted average number of shares actually outstanding in the reported year is taken into account in computing basic earnings per share and shares to be issued upon the exercise of options are included in the computation of diluted earnings per share; and (ii) under Israeli GAAP, the effect of including the incremental shares from assumed exercise of options is calculated based on the total number of outstanding options and imputed interest on the assumed proceeds from the exercise of such options, rather than the treasury stock method which is applied under U.S. GAAP.

**NOTE 14—EFFECT OF MATERIAL DIFFERENCES BETWEEN ISRAELI GAAP AND U.S. GAAP**

The Company prepares its financial statements in conformity with Israeli GAAP. As applicable to these financial statements, Israeli GAAP vary in certain aspects from U.S. GAAP as described below:

**a. Proportionate consolidation (note 2c)**

Under Israeli GAAP, joint ventures are accounted for using the proportionate consolidation method. Under U.S. GAAP, investments in joint ventures are accounted for by the equity method. Proportionate consolidation is, however, permitted by the United States Securities and Exchange Commission rules applicable to foreign private issuers, provided that the joint venture is an operating entity the significant financial and operating policies of which are, by contractual agreement, jointly controlled by all parties having an equity interest in the entity, and provided further that summarized financial data relating to the joint venture are provided. These data are presented in note 2c.

**b. Deferred income taxes**

Under Israeli GAAP, deferred income taxes are provided for temporary differences between assets and liabilities as measured in the financial statements and for tax purposes. Unlike Israeli GAAP, however,

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

paragraph 9(f) of FAS No. 109, "Accounting for Income Taxes", allows an exception which prohibits the creation of deferred taxes that arise from differences between the financial reporting and tax bases of assets and liabilities that are translated into dollars using historical exchange rates, and that result from: (i) changes in exchange rates; or (ii) indexing for tax purposes. The difference between these two methods, as applicable to these financial statements, is not material.

c. Severance pay, see note 6.

d. Royalty expenses

Under Israeli GAAP, royalty expenses in the amount of \$2,832,000, \$7,096,000 and \$5,883,000 in the years ended December 31, 2001, 2000 and 1999, respectively, are included in selling expenses. Under U.S. GAAP, such expenses should be included among cost of revenues. In addition, expenses relating to the settlement with the Government of Israel in respect of research and development grants received, in the amount of \$14,173,000, should also be included among cost of revenues under U.S. GAAP.

Consequently, the gross profit under U.S. GAAP would be \$118,425,000, \$190,102,000 and \$136,921,000 in the years ended December 31, 2001, 2000 and 1999, respectively.

e. Accounting for derivative instruments and hedging activities

As to Israeli GAAP, see note 1n.

FAS No. 133, "Accounting for Derivative Instruments and Hedging Activities", introduces a new approach to the accounting treatment of these matters. Under FAS 133, derivative financial instruments are to be included in the balance sheet at their fair value. Any changes in fair value are to be reflected as current gains or losses or other comprehensive gains or losses, depending upon whether the derivative is designated as a hedge and what type of hedging relationship exists.

The effect of applying this pronouncement on the consolidated financial statements is presented in h. below.

Of the amount recorded in other comprehensive income at December 31, 2001, \$282,000 will be reclassified to earnings within the next 12 months (see h. below).

f. Earnings per share, see note 13f and note 8b(4).

g. Comprehensive income

In addition to net income, under U.S. GAAP, other comprehensive income includes gain or loss in respect of derivative instruments designated for cash-flow hedge, see e. above.

h. The effect of differences between Israeli GAAP and U.S. GAAP on net income, shareholders' equity is as follows:

1) Operating results:

	Year ended December 31, 2001
	<u>\$ in thousands</u>
Net income, as reported in the consolidated statements of income . . . . .	1,862
Effect of the treatment of derivatives under U.S. GAAP . . . . .	<u>169</u>
Net income under U.S. GAAP . . . . .	<u>2,031</u>

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

2) *Shareholders' equity:*

	December 31, 2001
	\$ in thousands
Shareholders' equity, as reported in the consolidated financial statements . . . .	308,596
Effect of the treatment of derivatives under U.S. GAAP:	
Increase in net income . . . . .	169
Other comprehensive income . . . . .	204
Shareholders' equity under U.S. GAAP . . . . .	308,969

**i. Recently issued accounting pronouncements in the United States:**

1) *FAS 141 and FAS 142*

In June 2001, the FASB issued FAS No. 141, "Business Combinations", and FAS No. 142, "Goodwill and Other Intangible Assets".

FAS 141 supersedes APB No. 16, "Business Combinations", and FAS 142 supersedes APB No. 17, "Intangible Assets".

The most significant changes made by FAS 141 are: (i) requiring that the purchase method of accounting be used for all business combinations initiated after June 30, 2001; (ii) establishing specific criteria for the recognition of intangible assets separately from goodwill; and (iii) requiring unallocated negative goodwill to be written off immediately as an extraordinary gain (instead of being deferred and amortized).

The most significant changes made by FAS 142 are: (i) goodwill and indefinite intangible assets will no longer be amortized; (ii) goodwill will be tested for impairment at least annually at the reporting unit level; (iii) intangible assets deemed to have an indefinite life will be tested for impairment at least annually; and (iv) the amortization period of intangible assets with finite lives will no longer be limited to forty years. In addition, FAS 142 contains certain transitional provisions, which may affect the classification of intangible assets as well as the balance of goodwill.

The provisions for FAS 141 are effective for acquisitions consummated after June 30, 2001. The provisions of FAS 142 are effective for fiscal years beginning after December 15, 2001 (fiscal year 2002 for the Company).

The Company is currently in the process of performing the necessary assessments and allocations and has not yet determined the effect on earnings, if any, from potential transition adjustments. Currently, the Company incurs amortization expense related to goodwill of approximately \$5 million per year that is expected to be discontinued upon adoption of FAS 142.

2) *FAS 143*

In July 2001, the FASB issued FAS No. 143, "Accounting for Asset Retirement Obligations". FAS 143 prescribes the accounting for retirement obligations associated with tangible long-lived assets, including the timing of liability recognition and initial measurement of the liability. FAS 143 requires that an asset retirement cost should be capitalized as part of the cost of the related long-lived asset and subsequently allocated to expense using a systematic and rational method. FAS 143 is effective for fiscal years beginning after June 15, 2002 (January 1, 2003 for the Company).

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

The Company does not expect the adoption of FAS 143 to have a material effect on its financial statements.

3) *FAS 144*

In August 2001, the FASB issued FAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets", which is effective for fiscal periods beginning after December 15, 2001 (January 1, 2002 for the Company), and interim periods within those years. FAS 144 establishes an accounting model for impairment or disposal of long-lived assets to be disposed of by sale.

The Company does not expect the adoption of FAS 144 to have a material effect on its financial statements.

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Chairman of the Board

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**Yehudit Bronicki**

**Dan Falk**

**Uzia Galil**

**Gideon Lahav**

**Dr. Jacob Richter**

**Yochai Richter**

**Dr. Shimon Ullman**

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Chief Executive Officer

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Corporate Executive Vice  
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Division

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**Jaron Lotan**  
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REPORTS TO THE SEC

The Company files periodic reports with the United States Securities and Exchange Commission. Copies of those reports may be obtained, upon request, from either KCSA Public Relations Worldwide (in the United States) or the Company's corporate secretary (in Israel).

STOCK LISTING

Orbotech's Ordinary Shares are traded on the Nasdaq National Market under the symbol **ORBK**.

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