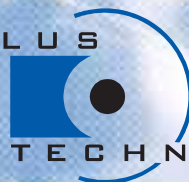


ANNUAL REPORT 1999

SINGULUS



TECHNOLOGIES





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## AT A GLANCE

### SINGULUS TECHNOLOGIES CONSOLIDATED

	1996 KDM	1997 KDM	1998 KDM	1999 KDM
Gross Revenues	88.225	174.701	198.046	346.686
Profit before Tax	20.469	45.620	47.123	88.977
Net Income	7.846	20.037	22.057	46.511
Total Shreholders' Equity	-1.585	38.720	60.452	110.585
Balance Sheet Total	36.147	111.257	121.512	252.687
DVFA-Cash Flow	9.452	21.426	24.041	49.793
R & D Expenses	3.966	5.046	6.855	8.525
Employees (31.12.)	90	135	157	212
DVFA/SG Earnings per Share (EURO)*	-	0,59	0,63	1,32

\* based on 18.101.448 shares at 1 EURO per value

# SUPERVISORY BOARD AND MANAGING BOARD

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## SUPERVISORY BOARD

**Alexander von Engelhardt**

Kronberg  
Chairman

**William Slee**

London  
Vice Chairman

**Thomas Geitner**

Cologne

## MANAGING BOARD

**Roland Lacher**

Gelnhausen  
Chief Executive Officer

**Reiner Seiler**

Hanau

**Dr. Erich Bischoff**

Burgdorf  
(effective February 1, 2000)



# SUPERVISORY BOARD REPORT

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The Supervisory Board convened six meetings in fiscal 1999, at least one held each quarter. During these sessions and via regular written reports, the Board was apprised in detail of the status of the corporation and current and fundamental issues. The Supervisory Board also met with the Managing Board in executive session to address the corporation's long-term strategic planning. The Supervisory Board promptly and comprehensively addressed the status and business development of SINGULUS TECHNOLOGIES AG and the consolidated group and conducted a management review.

The Managing Board informed the Supervisory Board of proposed business policies and fundamental corporate planning issues. Numerous additional discussions were held by the Chairmen of the Supervisory and Managing Boards concerning specific significant issues. The Supervisory Board's activities centered on fundamental resolutions and measures concerning strategic corporate planning, the organization's management of corporate growth, the implementation of cost reduction measures, and the development of risk management. Capital expenditures (new plant construction), markets and their development in Asia, South America and the United States, and product developments were the primary topics discussed.

The Supervisory Board reviewed significant business events and resolved issues which, based on legal or statutory regulations, were submitted to them for approval. The Supervisory Board consists of only three persons; therefore, the formation of a committee was waived.

The public accounting firm Arthur Anderson Wirtschaftsprüfungsgesellschaft-Steuerberatungsgesellschaft mbH, audited the 1999 year-end and status reports submitted by the Managing Board and approved both without objection. The year-end, status, and auditor's reports were submitted for the Supervisory Board's review in a timely manner.

As in years past, the auditor participated in the Supervisory Board meeting in which the year-end documents and audit results were extensively reviewed and also participated in the Supervisory Board's Financial Meeting. During these board meetings, results of their audit were presented and questions posed by members of the Supervisory Board were answered.

The consolidated year-end, status and auditor's reports were also submitted to the Supervisory Board for review. No objections were noted following the closing results of this review and the Supervisory Board concurred with the results of the audit. The Supervisory Board approved the Dec 31, 1999 annual accounts submitted by the Managing Board which were adopted in accordance with § 172, Par. 1, Sec. 1 of the AktG. The Supervisory Board concurs with the Managing Board's recommendation for the utilization of earnings.

The Supervisory Board elected Dr. Erich Bischoff to the Managing Board effective February 1, 2000; as a full member of the board he will be responsible for Finance, Personnel and Administration.

The Supervisory Board extends its thanks and appreciation to the Managing Board and all employees of SINGULUS TECHNOLOGIES AG for their accomplishments and dedicated efforts on behalf of the company.

Alzenau, March 24, 2000  
The Supervisory Board  
Alexander von Engelhardt  
Chairman



WINDOWS 2000 CD WITH EDGE-TO-EDGE HOLOGRAPHIC IMAGES

# STATUS REPORT FOR SINGULUS TECHNOLOGIES

## CONSOLIDATED AND SINGULUS TECHNOLOGIES AG

### Overview

Fiscal 1999 was an extraordinarily successful year for SINGULUS TECHNOLOGIES:

Consolidated net income of 46.5 million DM was more than double that of fiscal 1998 (22.1 million DM). Gross profits for the entire corporation improved slightly to 38.0 % (prior year 37.8 %) underscoring the strength of the company's earnings.

Consolidated gross revenues rose from 198 million DM in 1998 to 346.7 million DM (+75 %). Revenues for CD replication lines rose by 50 % over the previous year, significantly increasing the lead this product segment has over our closest competitor in the world market. This product group was awarded a major order for the worldwide installation of machines to produce CD's with edge-to-edge holographic images applied exclusively to Microsoft® products.

Revenues for DVD replication lines rose by 50.6 % over the previous year, enabling us to markedly strengthen our market position for in-line replication lines. The world market leadership position was attained for DVD replication lines in 1999 forming an excellent foundation for future growth.

In keeping with our established business strategy, one of our primary goals is to augment our systems for pre-recorded discs by entering the market for recordable (write-once) and rewritable (re-recordable) discs. The successful market launch of a new CD-R replication line was another step toward the attainment of this goal.

We have significantly intensified our efforts to develop a metallizer for coating rewritable discs in order to supply the new and very promising rewritable technology markets in the year 2000.



REINER SEILER,  
ROLAND LACHER,  
DR. ERICH BISCHOFF  
(F.L.T.R.)

Our important Asian markets regained their former momentum in 1999. Due to the intense demand for CD and CD-R replication machines, our company's manufacturing capacities were fully utilized, as were our suppliers'. Diminishing office and manufacturing space led to our decision to build a new plant in the neighboring community of Kahl am Main. All employees will move into this optimized facility by the end of June 2000.

This rapid growth was also tied to a significant increase in personnel; 55 employees were hired increasing our worldwide staff to 212. Our expectations for the foreseeable future are for increased line business in the optical disc growth market; consequently, it will be of great importance for the company to recruit a sufficient number of properly qualified new employees. In order to assure the long-term commitment of staff members crucial to the corporation and thus secure our high level of technological know-how, we have utilized the conditional capital at our disposal to its full extent and issued or committed convertible loans to 40 foreign and domestic staff members.

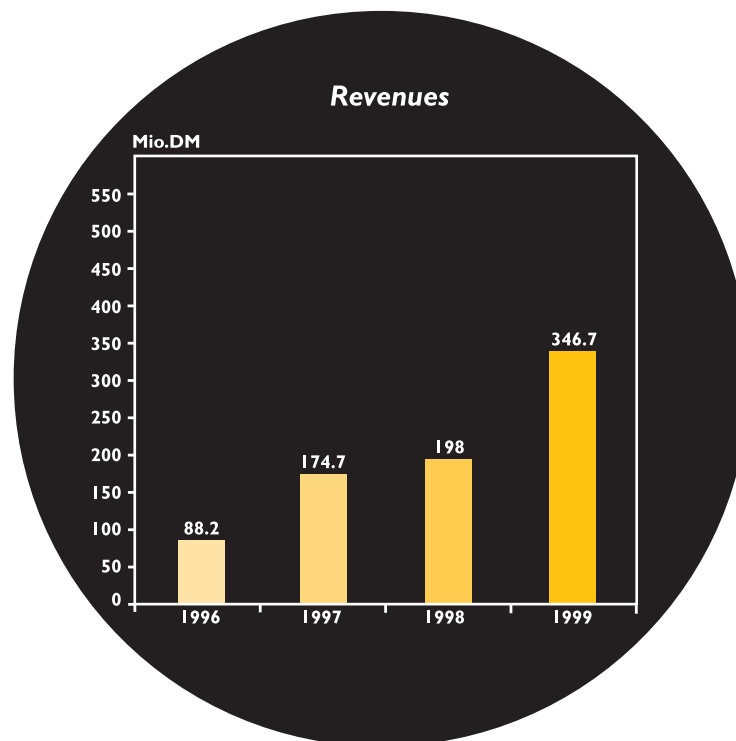
Prospects for the year 2000 appear favorable: the business vitality demonstrated in the last quarter of 1999 continued into early 2000. Renewed growth was also evident in the CD replication line business. Development of the DVD replication line business was explosive now that acceptance of DVD in all major world markets has been assured and interim projections have been made for an annual growth rate of 100%.

The recently developed Sony Playstation II launched in Japan in March 2000 will be introduced in the USA in the Fall of 2000 and is likely to accelerate the growth of the fledgling DVD-ROM market.

Only the demand for CD-R replication lines was tempered at the beginning of 2000 due to plummeting recordable disc prices. Taiwan, the country with the largest installed base of CD-R systems to date and an 80% share of the world's production, was particularly affected. Once the current glut in this region is relieved by an increase in demand, the system business should be reinvigorated.

Our multi-cathode metallizer for rewritable discs will be completed by the summer of 2000 to serve the extremely promising CD-RW, DVD-RW/RAM markets. We expect that this new development will provide our customers with innovative solutions which, as a result of superior technologies and exceptional productivity, should bring us rapid market acceptance.

The successful growth of our company's revenues and earnings was also acknowledged by investors in the Neuer Markt of the Frankfurt Stock Exchange: our shares rose from 31.96 EURO at the beginning of the year (adjusted by an increase in share capital from corporate funds and stock split) to 61 EURO, a 91% increase. Both institutional and private investors acknowledge ours as a growth stock with continued growth potential.



## Economic Climate

The Asian markets so important to our industry regained their former purchasing power in 1999: surmounting the 1997/1998 crisis, the total Asian share rose from 52% in 1998 to 57% in 1999. For the first time, the export of our machines and lines to the People's Republic of China became possible after local authorities lifted long-term import bans imposed on American and European companies for unresolved software copyright issues. Since then, production licenses for CD, DVD and CD-R equipment have been issued to select companies now permitted to import needed replication machinery. This will permanently open China as our third largest market in Asia, after Taiwan and Hong Kong. Further market growth in China will most likely depend on how financing for future line purchases is secured.

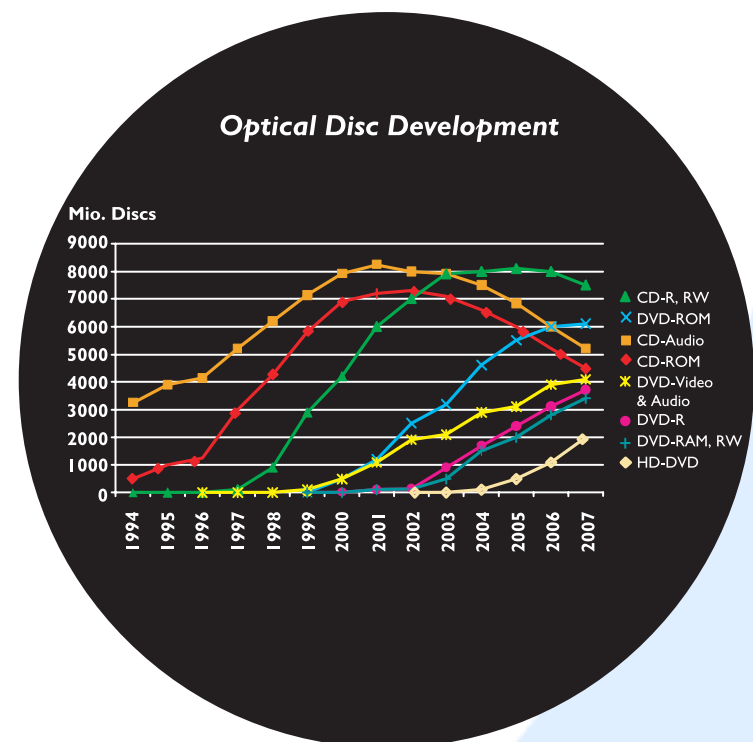
The development of the line business in North America was very positive for CD/CD-ROM and especially so for DVD. For the first time, we performed more installations of CD lines than any other supplier and were able to capture demonstrable market share from our competitors.

DVD-Video was the catalyst for the strong growth of DVD replication lines in the USA. Approximately 5000 DVD titles are available there now and DVD player sales in 1999 were quadruple those of the year before. Industry projections for the market include annual growth rates of 100% for the next 5 years. Rapid acceptance of DVD-ROM could result in even higher growth rates.

A distinct expansion of our CD line business was also achieved in Europe. The development of the markets in France and Spain was very gratifying. DVD line sales were attributable primarily to key customers who are forerunners in the industry. Overall, demand for DVD still lags significantly behind the U.S. market. Initial European orders for CD-R lines were also secured.

In 1999, the worldwide optical data storage market was once again characterized by fierce competition among our customers. This situation has compelled replicators to implement cost reduction efforts that have led to investments in new systems. Our customers in Taiwan and Hong Kong in particular conduct a "high volume-low margin" business which can only be successfully operated with extremely efficient lines.

Replication line cycle time, availability and product quality are the most critical factors for our customers' success and consequently the criteria by which line manufacturers are selected.



## Revenues and Income

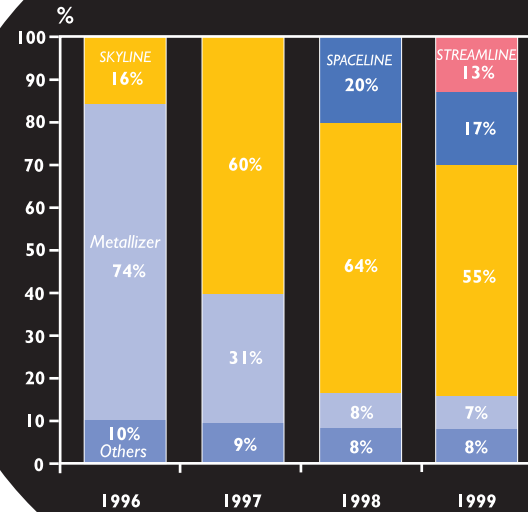
While our 13.4 % increase in 1998 revenues over the previous year was affected by the economic crisis in Asia, the growth in 1999 revenues was a remarkable 75 %. Growth displaying similar vitality has also been apparent in the year 2000. In addition to our metallizers and CD and DVD lines, the introduction of our new CD-R line created a fourth market segment for SINGULUS TECHNOLOGIES, notably expanding and stabilizing our overall portfolio. The CD line product group recorded the largest share of total revenues at 55 %, followed by DVD lines at 17 %, CD-R lines at 13 %, service and spare parts at 8 %, and metallizers at 7 %.

Despite intense competition among line manufacturers, our gross profits rose slightly to 38.0%, a result of the better margins achieved for DVD and CD-R lines compared to CD lines. Our gross profits demonstrate a distinct lead over our closest competitor.

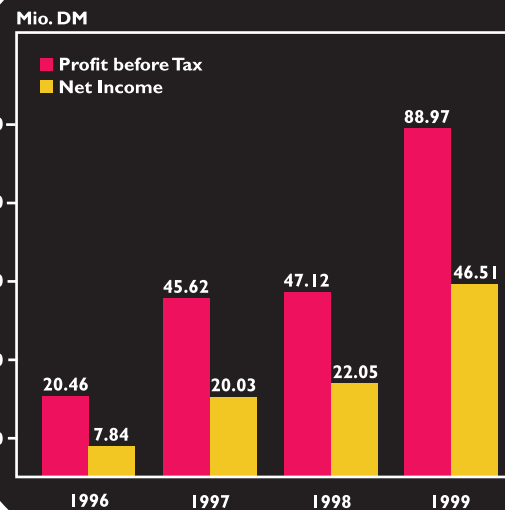
Profits before tax for all of fiscal 1999 totalled 88.97 million DM (1998: 47.12 million DM). Net income rose by 111 % to 46.51 million DM (1998: 22.05 million DM) comprising 14.2 % of net revenues (1998: 11.7 %).

As a result, 1999 DVFA/SG earnings per share rose from 0.63 to 1.32 EURO.

### Salesplit by Product Group



### Financial Results 1996 - 1999



## **Balance Sheet and Earnings Utilization**

By year-end closing, the consolidated balance sheet rose from the previous year's 121.5 million DM to 252.7 million DM. As a result of the net income of 46.5 million DM, 110.6 million DM in shareholders' equity was generated (previous year 60.5 million DM), declining from 49.8 % to 43.8 % of the balance sheet total.

Total accounts receivable rose from 40.5 million DM to 84.9 million DM and of this figure, trade accounts receivable totalled 76.5 million DM. This is due primarily to the increased volume of business, in particular increased deliveries during the final quarter of the year. Revenues of 75.3 million DM were realized in December alone. Total current liabilities rose from 57.9 million DM last year to 138.7 million DM in 1999; at 39.5 million DM (prior year: 2.3 million DM) progress payments were most prominent.

Total long term loans exist only as a result of the transfer of 0.75 million DM in convertible loans (1st tranche) to management, 0.4 million DM of which have remaining terms exceeding one year.

Total fixed assets rose from 4.3 million DM to 5.9 million DM, accounting for only 2.4% of total assets by the year-end closing date. The increase is primarily due to the acquisition of the new property in Kahl. The 1999 expansion of spatial capacity is not reflected in the balance sheet as all floorspace has been leased. Due to our approaching relocation in the summer of 2000, all leases were terminated in accordance with their respective expiration dates.

Cash flow development remained positive. At 49.8 million DM it was 108 % higher than last year. Due to the strong growth in business in the fourth quarter, substantial resources were tied up in current assets; nevertheless, liquid assets on 12/31/99 increased by 25.8 million DM over the prior year-end closing date.

On the basis of an existing draft issued by German tax authorities, the corporate use of loss carryforwards could be limited. This draft reflects the views of the tax authorities but has not been enacted into law, and may either be approved or rejected by tax courts in the future. Based on this draft, SINGULUS TECHNOLOGIES AG could be denied the use of tax loss carryforwards as of 1997.

Should this draft be upheld as legally binding, a tax liability for the year 1997 could ensue. The results of the ongoing deliberations cannot be assessed at present. The Managing Board and our auditors consider the tax authorities' legal interpretation to be erroneous and intend to oppose it by all legal means available should the said draft be adopted by the tax authorities and enacted into law. Based on this situation, a decision was made at the close of fiscal 1998 to forgo the creation of a reserve fund for this potential liability.

The recommendation for the utilization of earnings is based on the individual year-end closing of SINGULUS TECHNOLOGIES AG provided for by German law: up to half of the remaining 32.28 million DM in retained earnings is to be incorporated into other capital reserves in accordance with § 16.3 of our statutes. The remaining 16.14 million DM in retained earnings is to be incorporated into capital reserves by a resolution at the General Shareholders' Meeting.

The capital reserves thus created are to be utilized for a 1:1 increase in share capital with corporate funds. Due to these retained earnings, increased share capital will be available for the necessary financing of future growth.



WORLDWIDE SALES AND SERVICE NET  
RIGHT PICTURE: SINGULUS-HOUSE IN SINGAPORE

## **Sales and Service**

Successful customers in our global market for optical disc lines grow at a rate equal to or exceeding that of the market. It therefore becomes imperative that we establish lasting bonds with our existing customers and secure repeat business. In order to achieve this important goal, an effective sales and support organization must be established and continually enhanced.

The number of our foreign subsidiaries grew with the founding of affiliates in Spain and Italy. SINGULUS Asia Pacific's relocation to SINGULUS House in Singapore provides our largest foreign subsidiary with the floor space needed for further growth and will enable them to better serve their Asian customers' needs. In accordance with our philosophy of decentralized responsibility, our employees' technical expertise should be in close proximity to our customer base. In combination with technically advanced products, this concept is best suited for mid-range attainment of high market share and long-term retention of customers in diverse regions.

The language and cultural barriers between Germany and Asia call for additional proficient regional representation. The high cost incurred for continual training of our own and our sales partners' employees is justified because our systems can be installed, commissioned and independently maintained after customer acceptance by expertly trained local personnel. It is incumbent upon the headquarters staff to exercise their special responsibilities in order to establish and sustain this critical transfer of know-how.



## **Staff**

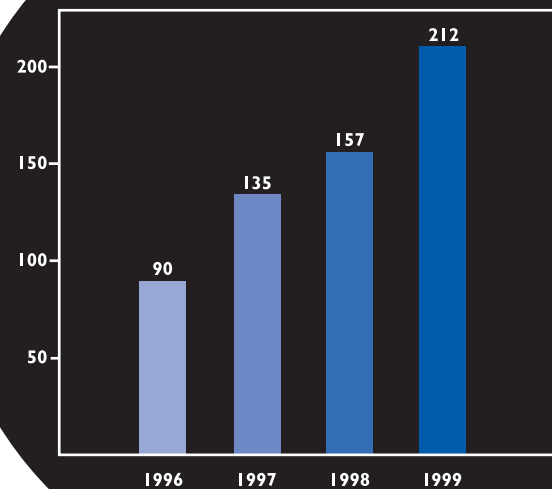
The addition of 55 employees to our workforce increased our worldwide corporate staff level to 212 employees by the end of 1999 (+35 %).

New hires were most heavily concentrated in the Production, R&D /Engineering and Customer Support departments. It became apparent that the number of young graduates of German technical high schools and universities declined last year creating a great demand for talented applicants. One of our primary concerns will be to structure the framework of our positions so that they are attractive to young graduates. The new plant is another important milestone toward this end.

Our efforts to preserve minimally tiered hierarchies are limited by the ever increasing volume of business and our growing employee base. As a result, organizational measures were taken to ensure distinct product responsibilities in spite of our expanded portfolio. The dynamic nature of this process provides talented young employees in our headquarters and foreign subsidiaries with excellent career opportunities.



**Staff 1996 - 1999**



## **Research and Development**

The objective of our interim product strategy is to develop the recordable (write-once) and rewritable (re-recordable) disc technologies to complement our existing machines and lines for pre-recorded CD and DVD formats. The products for these new market segments should be CD and DVD compatible.

The development of the STREAMLINE created an efficient CD-R replication line successfully introduced to the market. Its design is distinguished by innovative dye spin coating and drying modules which are very compact and can be affordably produced. This in-house development provides high yields due to the excellent product quality of the discs and low manufacturing costs.

Considerable effort has been invested into the development of sputter cathodes and coating processes for rewritable CD and DVD media. The new MODULUS multiple-cathode metallizer is characterized by its consistent modular design enabling the configuration of the system to be adapted to customer specifications for layer system and throughput capacity. The MODULUS system can be built to specification with 8, 10, 12 or 14 process stations and is suited for all CD-RW, DVD-RW and DVD-RAM disc formats and coating technologies known to date.

Our high expectations for the future are closely tied to the successful development of this new product sector for rewritable media. High technological entry barriers will presumably restrict future business to a small number of suppliers.





The optimization of our SPACELINE has been ongoing. The proprietary TMD 01 measuring system, which performs in-line inspection of the sputtered layers of both DVD halves for layer thickness and uniformity prior to the bonding process, is continually optimized via a closed loop control to both SMART CATHODES, and has now matured into standard equipment. This as yet unrivaled measuring and control system provides our company with an important competitive advantage for DVD-9 production. This know-how will soon enable us to transfer additional control systems to other critical process steps in order to increase the efficiency of our system technology on all replication lines and improve the quality of our products.

In cooperation with our customer 3dcd, a joint venture between Technicolor and Applied Holographics PLC, in-line machines were developed for the mass production of CDs with full-surface edge-to-edge holograms. This unique hologram technology was designed to protect CD-ROM software against unlicensed copying. The full-surface holographic image on a CD-ROM represents an unmistakable seal of quality which can be applied to the disc only by the original manufacturer.

Within the framework of a multi-year, mutually exclusive cooperation contract with 3dcd and Microsoft, an initial major order was placed for system installations in the US, Europe and Asia. These machines are used to produce all CD-ROMs for the new Windows 2000 and Office Works software, onto which edge-to-edge holographic images have been applied.



## Capital Expenditures and Financing

In accordance with the fundamental concept and structure of our company, our focus remains on in-house assembly and commissioning with the deliberate exclusion of the manufacturing of individual parts and components. Therefore, capital expenditures were limited to R&D, production infrastructure and foreign sales subsidiaries. New office and assembly space was simply leased in the past.

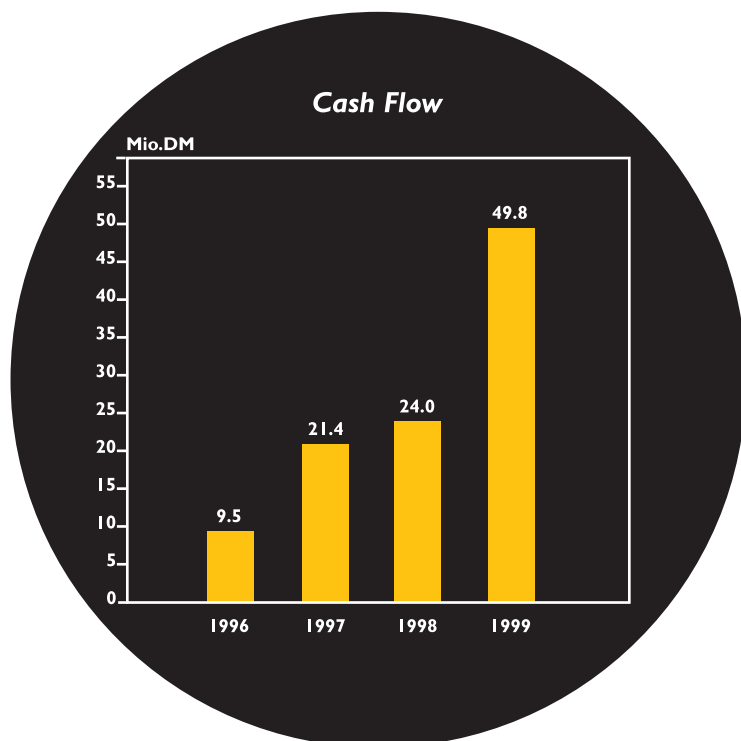
The building investment for the new plant in Kahl am Main was financed for 26.5 million DM for a 18 year term with an option to buy. An activation of our balance sheet was thereby waived. Only the property was purchased outright for 1,9 million DM. This expenditure, along with remaining 2,1 million DM capital expenditures (fixtures, analysis and measuring devices, computers, office furniture, etc.) was effortlessly financed from positive cash flow.

## Corporate Control and Transparency Act

The law for the control and transparency in corporations enacted in May 1998, obliges corporate boards to institute appropriate risk management and internal regulatory systems within their corporations. The objective of this law is the prompt identification (early warning system) of developments with the potential to jeopardize the survival of the corporation.

As a corporation registered on the stock exchange we joined our auditors to examine our instruments for early identification and our internal controlling mechanisms. No developments jeopardizing the survival of the corporation were identified, and it was determined that our early detection system is capable of exposing risks which could potentially threaten the survival of the company.

In conjunction with this, potential problems relating to the Year 2000 change were extensively examined. Appropriate simulation processes allowed us to promptly determine and confirm to our customers that all installed machines and lines in our delivery program were completely Y2K compliant. Our in-house computer systems were promptly analyzed and upgraded and no problems related to the millenium change arose.



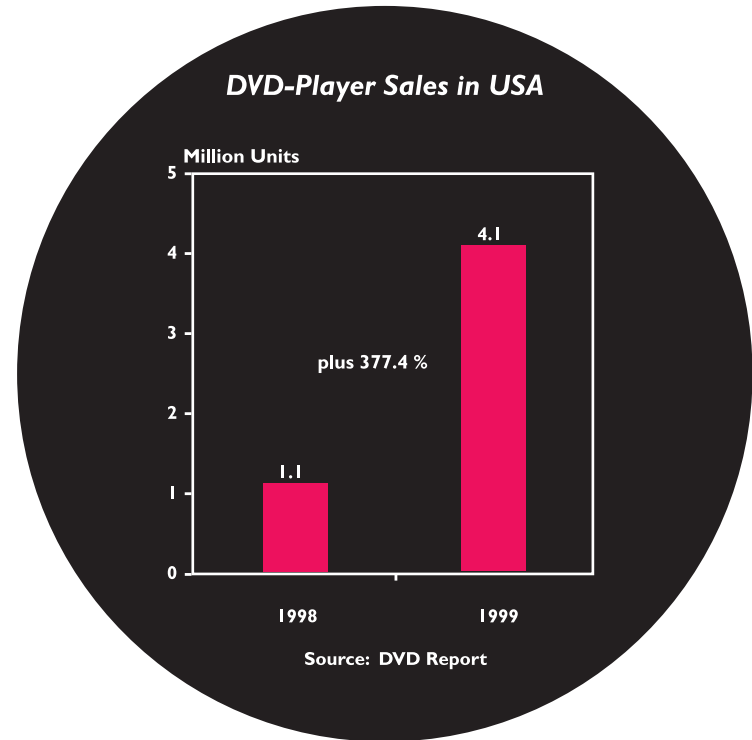
### **Fiscal 2000 Forecast**

With an order backlog of 395 million DM, the new fiscal year enjoyed a very promising start: the intense worldwide demand for our SKYLINE and SKYLINE *Duplex* CD lines completely exhausted our assembly capacity. We expect deliveries for fiscal 2000 to increase substantially over 1999. This market development is especially remarkable in light of frequent media predictions proclaiming the negative impact the internet will have on the CD business. This has not yet been reflected in the sale of our CD lines.

We expect the demand for DVD lines to display the strongest activity for the year. DVD players and discs are being sold in ever increasing numbers, particularly in North America; the size of this primary market in 2000 will be at least double that of last year. Video applications still dominate DVD, however, many PCs purchased in the past 12 months have been equipped with DVD-ROM drives and are awaiting appropriate software media. The introduction of the new Sony Playstation II game console in the spring of 2000 in Japan and in the Fall in the U.S. could trigger a rampup for DVD-ROM. The excellent market position of our SPACELINE affords us the opportunity to achieve a rate of growth proportionally higher than that of the market.

The increased use of the internet has spawned a growing demand for recordable and rewritable discs. Some market predictions assert that the growth in CD-R within the next five years will quadruple. A factor contributing to this increase is the rise in copying of pre-recorded CD/CD-ROM media which has become very popular with the younger generation. Our STREAMLINE CD-R line is clearly positioned in a growth market and will display increased growth rates as soon as the current decline in demand caused by over-capacity is reversed.

The new MODULUS for rewritable (re-recordable) CD and DVD will go through a qualifying phase during initial installations in 2000 before it is sold in larger quantities in years to come. The current ex works price for a rewritable CD is approximately



double that of a CD-R. This difference in price is relatively low and therefore attractive to prospective users. The prospects for future growth in the new CD- and DVD-RW/RAM markets appear to be very favorable.

Our new facility in Kahl will be occupied by the end of June 2000, reuniting all headquarters employees under one roof. The generous office, assembly hall and warehouse layouts will prevent shortages in floorspace for the foreseeable future. Future expansion of manufacturing capacity will therefore be limited to the employment of additional staff and enhancement of our suppliers' potential for increased manufacturing volume.