

ANNUAL REPORT 1997/98

*Schaffner Holding AG*



**SCHAFFNER**

Your number one name for EMC

## KEY FIGURES AT A GLANCE

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	1997/98	1996/97	Change
Sales	149,885	133,618	+12.2%
Operating income (EBIT)	17,449	16,190	+7.8%
Net profit	8,054	3,427	+135.0%
Free cash flow	5,379	9,839	-45.3%
Capital expenditure	5,270	3,456	+52.5%
Shareholders' equity	35,163	-33,520	n.c.
Equity ratio	29.2%	n.c.	n.c.
Headcount (annual average)	1,226	1,117	+9.8%
Earnings per registered share	12.74	n.c.	n.c.
Dividend per share	3.00*	0	

*Amounts in CHF 1,000 (except for per-share figures). N.c.: not properly comparable due to the IPO. \* Proposal to the General Meeting of Shareholders on 12 January 1999.*

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## WHY ELECTROMAGNETIC COMPATIBILITY IS SO IMPORTANT ...

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If it were not for electromagnetic compatibility (EMC for short), a great deal in our modern world would fail to function as it should – from lifts to machine tools, from aircraft to trains and from mobile phones to CAT scanners. In its simplest terms, electromagnetic compatibility ensures that there is no electromagnetic interference between electrical and electronic appliances and systems. There is potential for electromagnetic interference wherever current flows and electromagnetic fields are created. The interference occurs either through power lines or through radiation.

Electromagnetic interference can manifest itself in a variety of ways:

- your television picture breaks up as soon as your next-door neighbour starts using his electric drill.
- on a flight from Düsseldorf to Zurich a mobile phone sets off the fire alarm in the baggage hold.
- in police cars in the United Kingdom, the central locking mechanism is knocked out by radio emissions.

- in Japan slot machines can be “cracked” with the help of piezo-electric gas lighters.
- in “tilting” trains in Finland, using a mobile phone causes the toilets to flush.

Think of the hundreds of millions of electrical or electronic appliances and systems in everyday use around the world and it becomes clear that the potential for electromagnetic interference is huge – and rising. According to independent estimates, the potential for electromagnetic interference actually doubles worldwide every three years. For some years now, manufacturers of electric and electronic appliances and systems have had to comply with various laws and technical standards requiring them to assure and certify the electromagnetic compatibility of their products. This is mainly done by incorporating special filters which limit the amount of electromagnetic interference produced and at the same time improve immunity to interference from other devices. High-precision EMC test equipment, able to simulate or measure interference very accurately, is used to test for electromagnetic compatibility.



## SCHAFFNER – THE WORLD NUMBER ONE NAME FOR EMC

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The Schaffner Group is the world leader in the electromagnetic compatibility (EMC) market. The Group is controlled by Schaffner Holding AG, whose shares have been listed on the Swiss stock exchange since 1998.

The Schaffner Group is active in three core business units:

### **Components**

Schaffner is the world's foremost supplier of components for protecting electrical and electronic appliances and systems and their environment from electromagnetic interference. The product range includes EMC power line filters and power line chokes manufactured in standard configurations or to client specifications. The client base is made up of several thousand companies across a wide variety of industries, including industrial electronics, telecommunications, process engineering, EDP, office automation and medical technology.

### **Test Equipment**

Schaffner is the world's biggest supplier of test instruments for simulating and measuring electromagnetic interference and is among the

leading manufacturers of automated test systems for electronic sub-assemblies. The product range of the business unit is rounded out by a variety of advisory and testing services covering all aspects of EMC. Schaffner test equipment is used throughout the world by manufacturers of instruments, appliances and systems as well as by independent EMC test laboratories for the purposes of development, quality assurance and production.

### **Trading**

In addition to supplying its own components and test equipment, Schaffner also distributes various EMC products and electronic components produced by other manufacturers.

The Schaffner Group is a truly global concern, with production plant in Switzerland, the United Kingdom, Ireland and Thailand, more than 10 sales and service companies of its own in Europe, North America and Asia and distribution agents in over 70 countries. In the 1997/98 business year the Schaffner Group recorded sales of CHF 149.9 million and employed 1,230 people. Since 1980 sales have grown at an average rate of 12.5% a year.

## FOREWORD

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*Dear Shareholders*

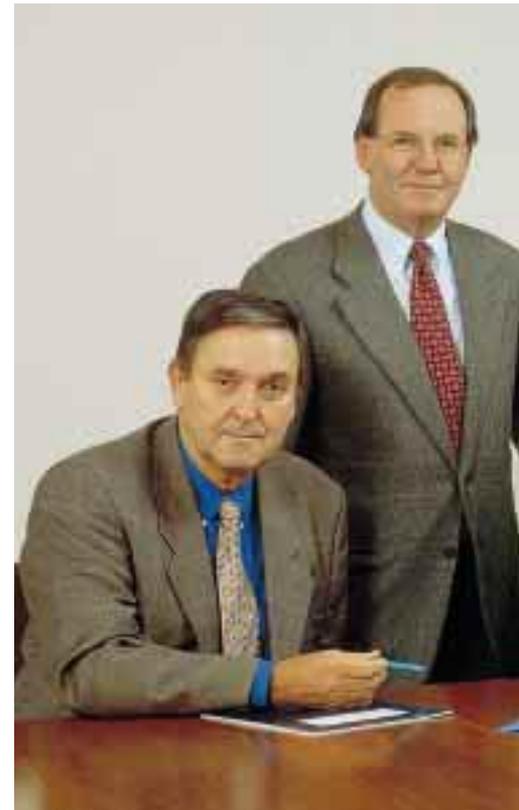
The Schaffner Group achieved a number of goals during the past financial year which are crucially important for the progress of our company. Foremost among them was undoubtedly the public placement of 495,000 registered shares of Schaffner Holding AG in June 1998, as a result of which Schaffner was transformed into a public limited company with approximately 1,000 shareholders. The share issue helped us achieve three objectives: first, it enabled us to keep Schaffner independent, a very important factor for many of our customers, as Schaffner, in its role as EMC problem-solver, is frequently involved in confidential development projects. Second, the IPO meant that we have been able to reduce our borrowings substantially, significantly strengthening our equity base in the process. Finally, the IPO gave us direct access to the capital market for the first time, broadening our range of options if in future we need to finance special investments or acquisitions.

### **Expanding our leadership position in the EMC market**

With the acquisition of PowerTest and Chase EMC and the cooperation agreement concluded with MEB Messelektronik Berlin, we achieved a further important strategic milestone in the 1997/98 financial year. The close ties we now have with these three companies will enable Schaffner to selectively expand its already leading position in the EMC market. Our Group is now able to provide a uniquely comprehensive range of EMC-related products and services around the world. The product line ranges from standard or customized EMC power line filters to test equipment for conducted and radiated electromagnetic interference and to the calibration of EMC test instruments. It is clear that more and more clients are choosing Schaffner precisely for its ability to provide a full range of EMC solutions professionally and from a single source.

### **Growth trend continues**

During the 1997/98 financial year, Schaffner resumed its growth trend, following a temporary inter-



*The new Board of Directors of Schaffner  
Robert Scherer, Peter E. Rüd, Alex Oechsli*

ruption in the previous year. We are pleased to report that the market for EMC has experienced renewed growth in importance throughout the world, and Schaffner as the foremost supplier of EMC products and services has benefited significantly from this development. Sales grew by 12.2% to a new record of CHF 149.9 million. Over the last five years, our sales have risen at an average 10.5% a year, i.e. more than the long-term growth rate of 8% to 9% p.a. for the EMC market as a whole.

### **Expansion in all business units**

All three business units contributed to Schaffner's growth in the 1997/98 financial year with Test Equipment expanding the strongest, partly as a result of the acqui-



*Holding AG (from left to right):  
Slin, Robert F. Spoerry, Prof. Peter Leuthold*

sitions. It benefited from the fact that the uncertainty regarding the enforcement of the new EMC standards within the European Union – which in the previous year had resulted in new investments in EMC test equipment being postponed – has in the meantime been largely dispelled. The Components Business Unit also made good progress, growing in line with the long-term market trend. However, the high growth rates experienced in the first half unexpectedly slowed down in the second half as the Asian crisis led to reduced sales expectations in a number of client industries and meant that stocks of EMC components were kept at lower levels as companies adopted more cautious inventory policies. In the Trading Business

Unit growth was very satisfactory and exceeded expectations.

#### **Profit growth outstrips sales growth**

During the year, the Schaffner Group earned a substantially higher profit and achieved a significant improvement in profitability. Operating income (EBIT) was up 7.8% and almost reached the record level of 1995/96. Since 1993/94, Schaffner has managed to increase operating income by an average 21.8% per year, widening its operating margin from 7.9 to 11.6%. Net profit more than doubled year-on-year, and over the past five years has risen by an average of 21.1% a year. The increase in profits, however, did not fully meet our expectations: we had originally

anticipated somewhat stronger growth and correspondingly higher profits from our Components Business Unit, as well as a larger earnings contribution from our new acquisitions.

#### **Growth set to continue in new financial year**

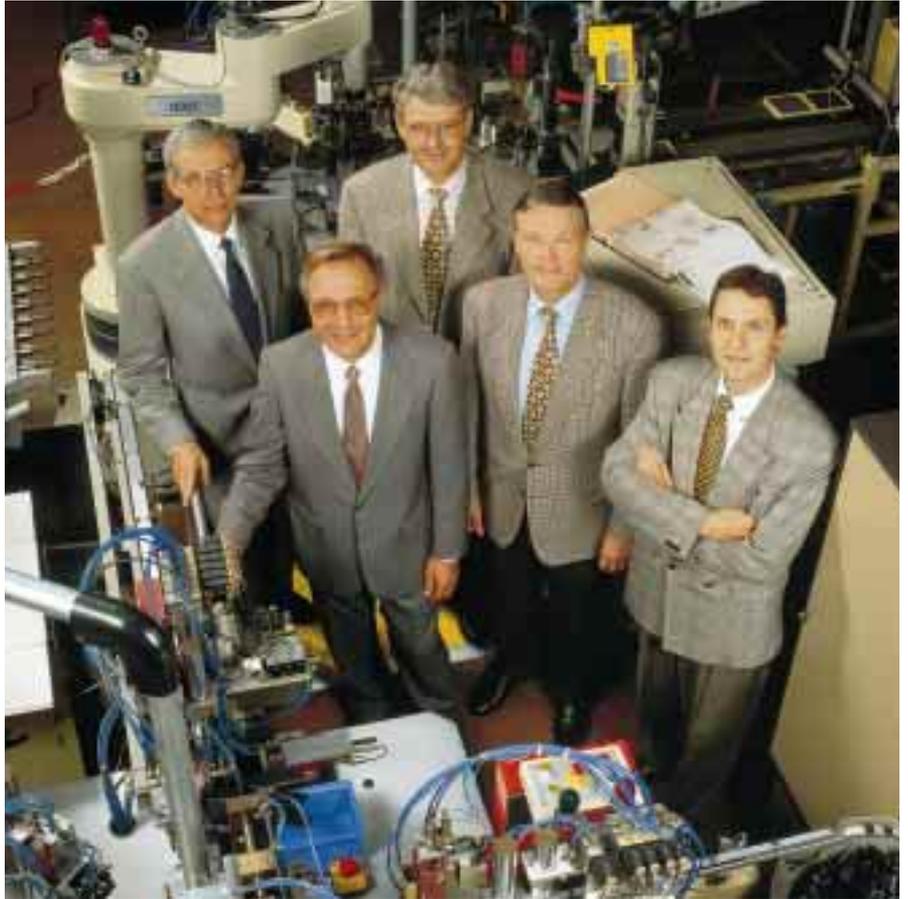
The Board of Directors and the Group Management are confident that the Schaffner Group is on track to achieve gratifying growth in the 1998/99 financial year. We expect sales to increase in line with the long-term market growth, provided there is no further deterioration in the economic environment and the Swiss franc exchange rate remains largely stable. Under these assumptions we expect further growth in operating income and net profit, exceeding again sales growth. The growing percentage of sales generated by our test equipment business, a stronger contribution to profits from the companies we have acquired, cost savings and efficiency gains will all have a positive impact on Schaffner's profitability. Another significant factor has been the marked drop in financial expense as the

IPO has enabled us to reduce our borrowings substantially.

I should like to thank you, on behalf of the Board of Directors, for the confidence you have placed in the Schaffner Group during the past year, and hope we can continue to number you among our shareholders. A special word of thanks goes to all our employees. It was their hard work and personal commitment that once again determined the success of our company in 1997/98.



Dr. Alex Oechslin  
Chairman of the Board of Directors



*Schaffner's Executive Board (from left to right): Dr. Alex Oechslin, Thomas Grichting, Richard Müller, Heinrich Kunz, Daniel Hofer*

## REPORT ON THE FINANCIAL YEAR

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During the 1997/98 financial year (to 30 September 1998) the Schaffner Group achieved sales of CHF 149.9 million, 12.2% higher than in the previous year. Factoring out the sales contributions from the newly acquired companies, growth in sales would have been 8.9%. After a strong first-half performance, sales growth was significantly slower in the second half of the year. In the previous year, the second half had been much stronger than the first half so the basis for comparison was considerably higher than for the first half. Sales also suffered from the slowdown in growth in the market for EMC components as an indirect result of the crisis affecting a large number of Asian countries.

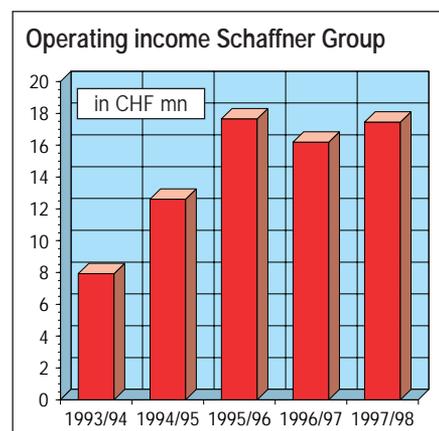
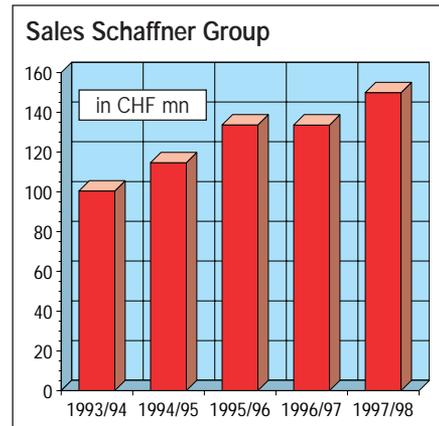
### Marked improvement in profitability

During the year, growth in the financial results outstripped growth in sales. Gross profit rose 15.5% to CHF 60.2 million, with the gross margin increasing from 39.0% to 40.2%. This improvement was chiefly the result of further gains in efficiency and the growing proportion of sales generated by higher-margin products. Operating income was up 7.8% to CHF 17.4 million,

with the operating margin slightly decreasing from 12.1 to 11.6%. The sharp drop in financial expense by 47.3% to CHF 5.7 million meant that net profit grew much more strongly by 135.0% to CHF 8.1 million. One factor contributing to the reduction in financial expense was that exchange-rate losses on foreign currency loans were much lower than in the previous year. Interest expense in the fourth quarter was also considerably lower as the share issue by Schaffner Holding AG enabled bank borrowings to be sharply reduced.

### First dividend payout

The Board of Directors of Schaffner Holding AG will propose to the Annual General Meeting of Shareholders on 12 January 1999 the first-time payment of a dividend. The proposal will be to distribute a dividend of CHF 3.- per registered share, all of which rank fully for dividend for the 1997/98 financial year. The dividend proposed will amount to 23.5% of net per-share earnings of CHF 12.74. The Board of Directors intends to fix this payout ratio at between 20 and 30% in future.



## Business units

### Components

The Components Business Unit achieved a new sales record during the reporting year. Sales rose 7.6% year-on-year to CHF 97.5 million, which is consistent with the long-term growth rate of the EMC market as a whole. The year began with a heavy flow of incoming orders, continuing the trend we had experienced in the second half of the previous year.

Initially, the financial crisis which hit several South-East Asia countries had a positive impact overall. On the one hand, the devaluation of the Thai baht meant that production costs at our plant in Thailand were lower. On the other, we succeeded in boosting sales to export-oriented clients in Asia who had found themselves suddenly more

competitive on the world market as a result of the currency movements. As the year wore on, however, the emerging slowdown in the world economy led many companies and industries in Europe and North America to revise their sales projections downwards. From the



summer months onwards, this showed up in an unexpected drop in growth in the market for EMC components. Schaffner as market leader was not immune to this development.

### Test equipment

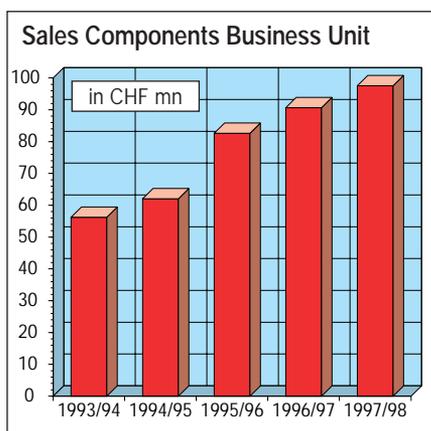
The 1997/98 financial year was a successful one for the Test Equipment Business Unit which was able to resume its growth trend which had been temporarily interrupted in the previous year. The unit managed to increase its sales by 27.0% to CHF 30.7 million – adjusted for acquisitions, growth would have been 13.8%. The business unit benefited during the year from the progressive return to more normal

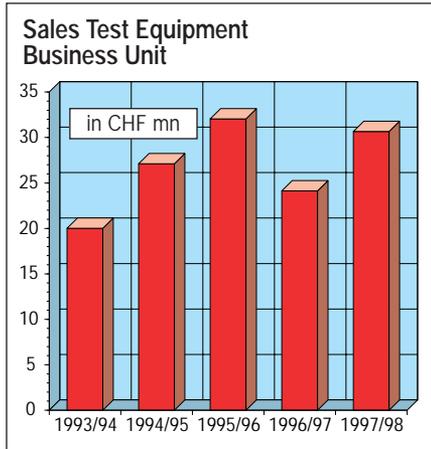
market conditions once action was finally taken within the EU to enforce the new EMC standards introduced in 1996 more rigorously. These norms require all manufacturers of electrical and electronic appliances and systems to assure and certify the electromagnetic compatibility of their products. Widespread uncertainty as to how binding the standards would be had led to a marked drop in demand for EMC test equipment in the previous year. More stringent national controls, closer cooperation between regulators in the EU area, fines and bans on non-compliant products have in the meantime resulted in growing accept-



ance of and compliance with the new EMC standards. Reflecting this development, sales of EMC test equipment began to pick up again.

The return to more normal market conditions was not the only factor to have a beneficial influence dur-





ing the reporting year: the successful launch of new EMC test equipment on the market and the award of a major contract for automated test systems also had a positive impact. New products launched by Schaffner were the versatile BEST*plus* and BEST*emc* and the modular interference generator NSG 2050, developed among other applications, for EMC testing of telecommunications equipment and systems. This new test equipment

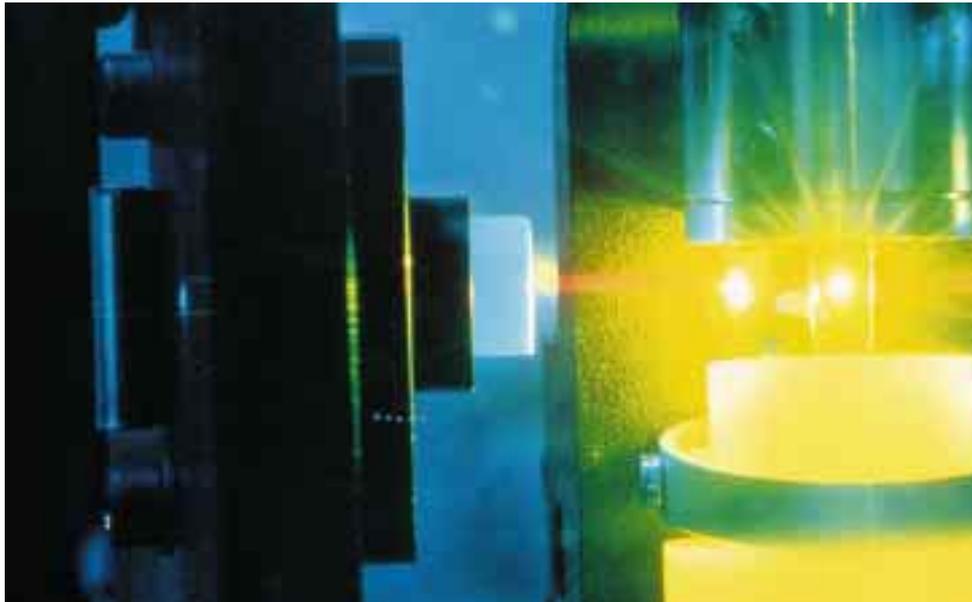
*Modern fitness machines often contain sophisticated electronic control and measurement features. Schaffner supplies EMC filters to numerous manufacturers of treadmills, rowing machines and other fitness equipment.*



will enable Schaffner to consolidate its leading position in EMI immunity testing. The US Naval Air Force has awarded Schaffner a contract for the delivery of 24 automatic test systems for use in the maintenance of generator control units in AV8B aircraft. The contract, worth USD 2.6 million, will run into the 1998/99 financial year.

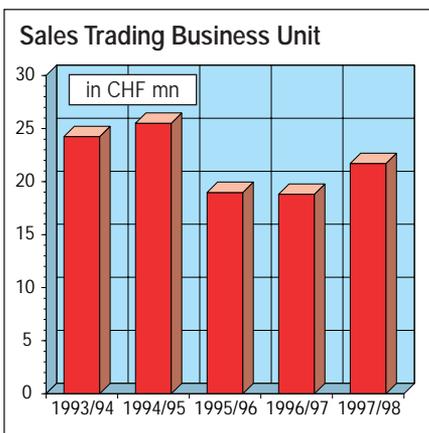
**Trading**

The Trading Business Unit of the Schaffner Group achieved sales of CHF 21.7 million in 1997/98, 15.4% up on the previous year. Net of the Chase acquisition, growth would have been 9.4%. In the unit's two main markets, Switzerland and France, business conditions were favourable, and sales of trading products experienced renewed growth, exceeding expectations. With the acquisition of Chase EMC,

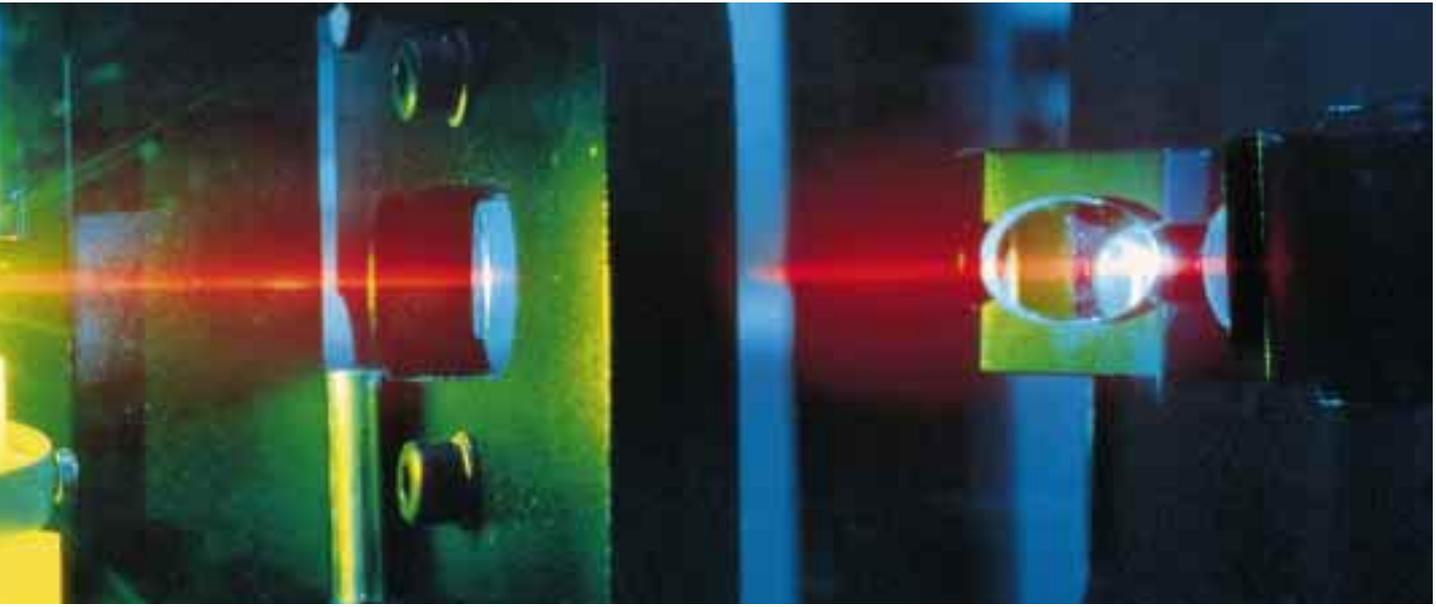


the unit extended its activities to include complementary system integration products, with the new

group company also acting as a general contractor and using products supplied by third parties.



*From coffee machines to electric cookers with induction hotplates – Schaffner power line filters ensure no interference from kitchen or canteen equipment reaches the power supply system or affects radio reception.*



## Sales markets

### Europe

During the 1997/98 financial year, the Schaffner Group achieved sales of CHF 104.8 million in Europe, 8.6% more than in the previous year. In all markets served by the Group's own sales companies, growth was very satisfactory. With growth of 47%, Sweden performed best in components and the United Kingdom, with 41%, in the test equipment sector. In most cases, sales realized through distributors also experienced good growth.

### North America

In North America, group sales rose 14.0% during the reporting year to CHF 29.6 million. Sales of test

equipment, which now also includes the products of Chase EMC, made particularly good progress. In the components sector, the expansion of the branch office in Irvine, California, helped to strengthen relationships with clients on the West Coast. The trend for production plant to be relocated from North America to lower-cost countries is continuing, however, and this once again had a dampening effect on sales growth.

### Asia

The Schaffner Group succeeded in increasing sales in Asia by 43.4% to CHF 13.1 million despite the economic and financial crisis affecting several important countries in the region. This excellent

*EMC components made by Schaffner also ensure that high-performance lasers function properly.*



*Assembling EMC components in our high-capacity factory in Thailand.*

performance was partly the result of the strengthening of our local presence and partly of more intensive marketing. In Singapore, for instance, a sales company was set up as a joint venture with our long-standing local partner Evox Rifa, and our Japanese sales company and our representative office in China both took on extra staff. The strong growth was also driven by rising demand among export-oriented companies, by European and

North American firms relocating production to the region and by the growing importance of international EMC standards.

## **Operations**

### **Production**

Utilization of the Schaffner Group's production capacities in Switzerland, Ireland and Thailand was good on the whole during 1997/98.

A flexible organization enabled the Group to cope well with fluctuating order flows. The just-in-time manufacturing principle introduced across-the-board the previous year has proved its worth, and the response from our clients has been positive. As a result of the Chase EMC acquisition, a new plant in the United Kingdom was added to the Group's production facilities.

## Development

In 1997/98, the Schaffner Group spent CHF 8.4 million or 5.6% of sales for development (previous year: 5.1%). In the components business, the focus once again lay on the development of EMC components for specific applications in close collaboration with clients. A special power line filter with a current-handling capacity of up to 3,500 amps was, for instance, developed in the space of only two months for a well-known manufacturer of electrical motors. The product is probably not only one of the filters with the highest current-handling capacity in the world but, with external dimensions of 900  $\times$  480  $\times$  250 mm and a weight of 280 kg, also one of the largest and heaviest ever built! Particularly noteworthy was also the development of special power line filters for mobile phone base stations which are scheduled to be launched on the market in the new financial year. In the test equipment sector, two new test instruments belonging to the BEST product family – BEST $plus$  and BEST $emc$  – were developed as well as additional modules for the NSG 2050 interference generator, with which compliance with several EMC standards can be tested at the same time.

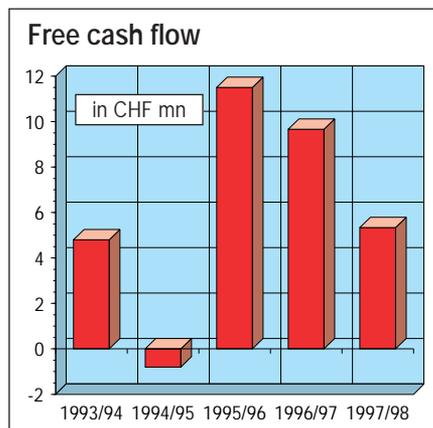
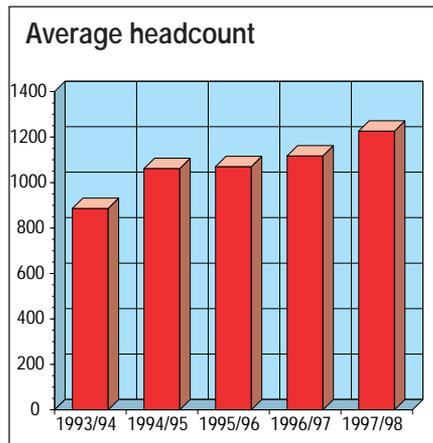


*With the rapid spread of mobile telephones the potential for electromagnetic interference is rising sharply in telecommunications year by year. Schaffner has developed special power line filters for mobile phone base stations which many well-known manufacturers now integrate in their equipment.*

## Personnel

As a result of the growth in our business activities and the acquisition of Chase EMC and PowerTest Electronics, the average number of employees rose from 1,117 to 1,226 (+9.8%). At the end of the financial year, the Schaffner Group employed a total of 1,172 people,

0.9% more than at the start of the year. Approximately half of them were based in Thailand and just over a fifth at the Luterbach works in Switzerland. The system of flexible working hours introduced at the Luterbach plant in 1997 once again proved its worth during the reporting year.



## Investments and financing

In 1997/98, capital expenditure of the Schaffner Group amounted to CHF 5.3 million, 52.5% more than in the previous year. Resources primarily went on expanding and rationalizing production as well as on telecommunications and information technology. The operating free cash flow totalled CHF 5.4 million and was used to finance part of the acquisitions. The Group was able to reduce its long-term debt by roughly CHF 60 million during the year, mainly thanks to the share issue by Schaffner Holding AG. Shareholders' equity stood at CHF 35.2 million or 29.2% of the balance sheet at the end of 1997/98, reaching a new record level.





*Auto makers the world over use EMC test equipment supplied by Schaffner. Following its acquisition of Chase EMC, Schaffner can now also supply complete EMC test chambers.*

## STRATEGIC EXPANSION IN TEST EQUIPMENT

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### Two acquisitions and an alliance open up new perspectives

In 1997, the global market for EMC test equipment was worth an overall CHF 340 million. Around CHF 140 million of this concerns equipment for testing immunity to electromagnetic interference caused by power lines as well as by radiation, and around CHF 200 million equipment and test chambers for testing both conducted and radiated emissions. Among the suppliers of EMC test equipment, no single provider has hitherto been able to offer a comprehensive range of equipment configurable to meet all test requirements. Instead, most suppliers concentrate on a specific segment of the market – for instance, testing immunity to electromagnetic interference through radiation.

#### Acceleration of growth

In the past, the Schaffner Group has primarily specialized in equipment for testing immunity to conducted interference where it is the leading provider with a market share of 20%. To expand this market position further, Schaffner made two acquisitions – Chase

EMC and PowerTest – during the 1997/98 financial year and concluded a cooperation agreement with MEB Messelektronik Berlin. This integration and collaboration involving three highly innovative firms is of major strategic importance for Schaffner and will lend major new impetus to the test equipment business in the years ahead and be a significant growth driver. The integration of the product and service range of the three companies in Schaffner's own worldwide sales and distribution network will create promising new sales potential.

#### Chase EMC – specialist for radiated electromagnetic interference

The U.K. company Chase EMC Ltd. (based in Capel near London), in which the Group acquired a 100% interest from 1 February 1998, is one of the leading suppliers of test equipment and services in the field of radiated electromagnetic interference in Europe and the United States. The firm has made a name for itself in the high frequency sec-



*Schaffner-Chase's EMC testing centre in*

tor which is growing steadily in importance with the spread of mobile telephones. The product line of the company, now renamed Schaffner-Chase EMC, includes a range of EMC test equipment, the development and realization of EMC test chambers, the calibration of EMC measuring equipment and antennas as well as an EMC testing service. Chase EMC reported 1997 sales of approximately CHF 8 million and currently employs 36 people in two locations in the Greater London area.

**MEB – specialist for measuring electromagnetic interference**  
MEB Messelektronik Berlin GmbH,



the Greater London area.

with which Schaffner concluded an alliance in September 1998, manufactures test equipment for high-precision measurement and analysis of electromagnetic interference. MEB's test equipment, which can be used across a broad range of frequencies (from 9 kHz up to 2.6 GHz), enjoys an excellent reputation in trade circles. Under the terms of the cooperation agreement, Schaffner will market the test equipment worldwide, allowing MEB to concentrate on production and further development. MEB will continue to market a number of products and services not covered by the agreement independently. MEB is looking for sales in excess

of DEM 6 million in 1998 and currently has 33 employees.

#### **PowerTest – specialist for EMC testing of power supplies**

From 1 January 1998, Schaffner acquired Dublin-based PowerTest Electronics Ltd. PowerTest specializes in developing and manufacturing electronic equipment for simulating electricity and power supplies, an area where it has built up extensive expertise worldwide. Schaffner was previously the main customer of the firm which was founded in 1993 and currently employs 11 people. The founder and chief executive of PowerTest has now assumed management re-

sponsibility for Schaffner's entire operations in Ireland.

#### **Unique fit**

In partnership with Chase EMC, PowerTest and MEB, Schaffner is now in a position to offer an unmatched global combination of experience and a comprehensive range of products and services in the market for EMC test equipment. In the field of immunity testing, Schaffner's proven strength in conducted interference allied to Chase EMC's strength in radiated interference has resulted in a product range that enjoys clear leadership in the market. MEB's measuring instruments round out this capability with an attractive range of emission testing equipment, enabling Schaffner to cover the entire market for EMC test equipment from a position of leadership. Schaffner's new ability to cater to the full range of needs from a single source has met with a very favourable response from clients. Finally, the acquisition of PowerTest has contributed valuable technological expertise which will strengthen Schaffner's development capabilities.



## **Impressum**

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