

# ALPS

ALPS ELECTRIC CO., LTD.



**ANNUAL REPORT 2002**

FOR THE YEAR ENDED MARCH 31, 2002

# FINANCIAL HIGHLIGHTS

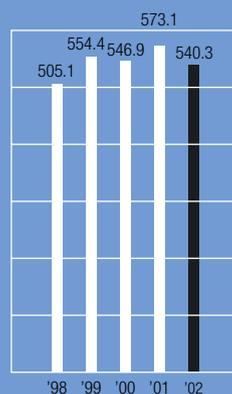
ALPS ELECTRIC CO., LTD. AND CONSOLIDATED SUBSIDIARIES  
Years ended March 31, 2002, 2001 and 2000

	Millions of yen			Thousands of U.S. dollars (Note 1)	Percentage
	2002	2001	2000	2002	
<b>For the year:</b>					
Net sales	¥540,268	¥573,064	¥546,941	\$ 4,054,544	-5.7
Operating income	13,249	24,554	23,871	99,430	-46.0
Income (loss) before income taxes	8,695	24,931	(10,133)	65,254	-65.1
Income taxes	3,415	4,210	8,351	25,629	-18.9
Net income (loss)	1,902	18,111	(20,611)	14,274	-89.5
Capital expenditures	31,832	31,403	35,337	238,889	1.4
<b>At the year end:</b>					
Current assets	¥293,636	¥289,283	¥308,258	\$ 2,203,647	1.5
Current liabilities	190,878	230,288	223,033	1,432,480	-17.1
Working capital	102,758	58,995	85,225	771,167	74.2
Stockholders' equity	137,513	131,901	122,485	1,031,993	4.3
Total assets	484,831	479,032	499,836	3,638,507	1.2

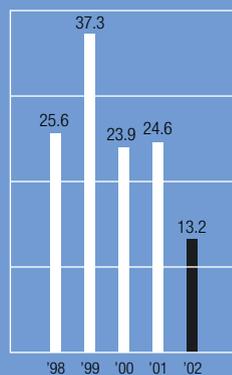
	Yen			U.S. dollars	Percentage
	2002	2001	2000	2002	
<b>Amounts per share of common stock:</b>					
Net income (loss)	¥10.53	¥100.21	¥(114.41)	\$ 0.08	-89.5
Cash dividends applicable to the year	5.00	12.00	10.00	0.04	-58.3
Stockholders' equity	760.96	729.84	679.72	5.71	4.3
Price earnings ratio (times)	152.42	12.25	—	—	1,144.2
Price book value ratio (times)	2.11	1.68	3.14	—	25.4

Note: For convenience only, the accompanying Japanese yen amounts for 2002 have been translated into U.S. dollars at ¥133.25 = \$1.00, the exchange rate prevailing on March 31, 2002.

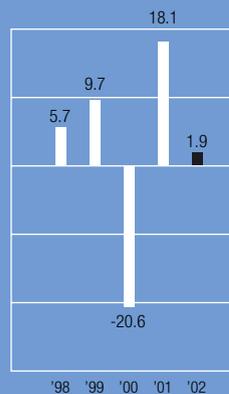
**NET SALES**  
(Billions of ¥)



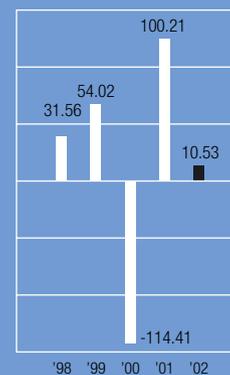
**OPERATING INCOME**  
(Billions of ¥)



**NET INCOME (LOSS)**  
(Billions of ¥)



**NET INCOME (LOSS)  
PER SHARE (¥)**



# AIMING TO BE A TECHNOLOGY ORIENTED **ALPS**



## **ALPS SHOW**

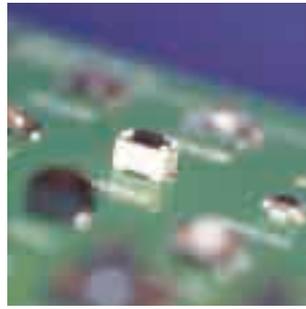
ALPS Electric held a three-day private showing entitled ALPS Show 2002 in Tokyo beginning May 15, 2002. The show was a product exhibition featuring a variety of new products that employed unique and core technologies, as well as presentations of pioneering technologies in the electronics field and various efforts made by ALPS to outstrip the market. Under the slogan of "FIND! FINE ALPS," the Company displayed numerous, new technologies and development successes to promote business as an effective business partner capable of adapting to the volatile market and consistently providing superior products and services.

The show featured 1) a Corporate Information Stage presenting an outline of the Company, product lineups, and new approaches and successes in environmental protection, 2) a Message Stage introducing successes made in nanotechnology, 3) a Ubiquitous Network Stage detailing initiatives across the entire communications spectrum and new high-speed networkable product lines, 4) a Product Exhibition Zone promoting the wide array of ALPS products, and 5) an ITS Zone displaying numerous interfaces essential to safe, comfortable automobile control.

The exhibition was able to successfully provide a lucid introduction of new ALPS technologies through an assortment of interactive demonstrations for visitors to try out recently introduced products and services, as well as with graphical presentations. Roughly 6,500 visitors turned out for the show, enabling the Company to share with them its committed technology-oriented stance toward technological development.

ALPS TACT switches boast roughly 40% of the world market share, representing the largest volume of production in the world. Cumulative production of TACT switches exceeded 40 billion at the end of October 2001. The Company displayed a variety of switches at the ALPS Show, including a dust-proof thin surface-mounted TACT switch that features the industry's smallest occupied surface, a heavy operating-force middle-stroke TACT switch and a compact side switch.

## MECHATRONIC DEVICES



## MAGNETIC DEVICES

The storage capacity of hard disk drives (HDDs) over the past three years has increased an astonishing tenfold, and the magnetic heads employed on them are achieving ever-greater levels of recording density.

At ALPS Show 2002, the Company displayed GMR thin-film heads that realize 30Gb/inch<sup>2</sup> (40GB/PL) recording capacity, which are already in mass production, and provided samples of its new 60Gb/inch<sup>2</sup> (80GB/PL) GMR thin-film heads scheduled for mass production.



## PROFILE

The core companies of the ALPS Group are ALPS Electric Co., Ltd., one of Japan's foremost general manufacturers of electronic components; ALPINE Electronics, Inc., a general manufacturer of such mobile media devices as car audio, car navigation and AV systems; and ALPS Logistics Co., Ltd., an integrated logistics company specializing in electronic-components handling. As of March 31, 2002, the ALPS Group included 83 consolidated and affiliated companies in Japan and overseas. ALPS harnesses its comprehensive powers as a group to carry out truly global business development.

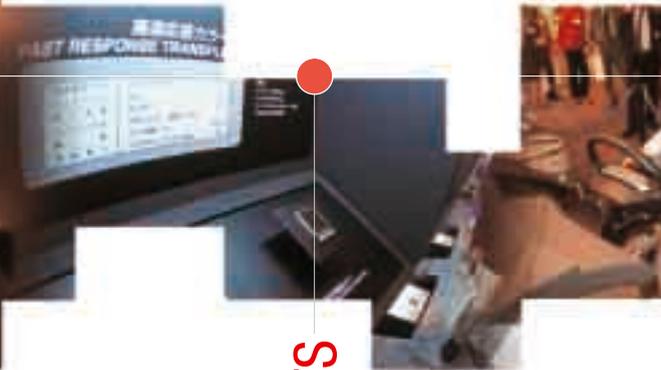
## COMMUNICATIONS DEVICES

At ALPS Show 2002, the Company exhibited its Bluetooth™-compatible module, which is garnering considerable attention in personal area network (PAN) wireless communications field for use in mobile phones, home appliances and automotives. The series on displays at the show offered an over 80% reduction in outer dimensions compared with the previous model and roughly 50% reduction in energy consumption.



ALPS displayed numerous interfaces necessary for safe, comfortable car control based on the three themes of human machine interface, onboard and external. The Company introduced the ITS center module equipped with a Haptic Commander™.

## AUTOMOTIVE PRODUCTS



## PERIPHERAL PRODUCTS

Since the arrival of notebook PCs, glide points have entered the spotlight owing to thin, flat dimensions that make them a powerful pointing device in place of mouses, as well as smooth control that links the movement of the finger across the screen to the cursor. At the show, the Company displayed a thin body engineered through employment of film substrates and a film glide point that enables mounting on curved surfaces.



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### CONSOLIDATED RESULTS

**M**anufacturing in the Japanese electronics market dipped more than 16% in 2001, marking the first time in seven years this figure fell below ¥22 trillion. Although efforts were made to address this trend by bolstering internal measures such as aggressive marketing activities, inventory adjustments and cost reductions, consolidated results were still considerably below totals for the previous fiscal year.

In fiscal 2002, ended March 31, 2002, consolidated net sales declined 5.7% to ¥540,268 million (US\$4,055 million), operating income fell 46.0% to ¥13,249 million (US\$99 million) and net income was ¥1,902 million (US\$14 million).

Looking at market conditions by segment, despite a recovery for magnetic device parts in the second half of the period due to the popularity of 30Gb/inch<sup>2</sup> (40GB/PL) GMR heads among customers because of their performance and quality, total sales for this segment declined owing to poor performance in the first half. While sales expanded rapidly for Bluetooth™ modules, lauded as the next generation in wireless communications technology, sales for the communications devices segment as a whole declined considerably due to the impact of inventory adjustments on sales of voltage-controlled oscillators (VCOs) for mobile

phones and reduced demand for digital broadcasting-related products. In products related to peripheral products, sales of keyboards declined in association with declining PC sales and printer sales as a whole fell despite the release of compact photo printers for use with digital cameras. Super twisted nematic (STN)-type LCD sales also declined as the mobile phone market suffered from inventory adjustments and the switchover to thin-film transistor (TFT)-type LCDs. In contrast, we were able to bolster sales in automotive products by acquiring new customers domestically and overseas, expanding the application of products to a greater number of lines and employing emergency sales promotion measures in the United States. As a whole, the electronic components segments faced an extremely difficult year.

In audio equipment, car audio equipment recorded solid sales in both the brand-name and aftermarket markets of Europe and the United States. Though there were negative effects from the fall in retail prices of all audio products, sales revenue increased due to strong sales of integrated audio-visual products to European automakers. Our logistics business recorded increased sales stemming from the robust performance of the consumer logistics business and a dramatic increase in the consignment business, despite reduced handling of freight for electronics components.

### STRUCTURAL REFORMS

**I**n the second half of the fiscal year under review ALPS began exploring structural reform of management in Japan. The details were announced in January 2002, and we began operating under the new system in April. While the weakening performance of the electronic components segments was a factor in the decision to restructure, the primary motivation was the sense of crisis that followed the massive structural changes in the entire electronic components industry.

Of these structural changes, the most significant is the end of the age of mass manufacturing for mass consumption. The entire industry is now entering an era of market saturation. Another dramatic change in the market is the emergence of China as an economic power. Capitalizing on low wages and a young workforce, China has risen to become a major global production base whose growth appears unstoppable. Thirdly, the current age's demand for greater lightness and compactness in electronic components has affected the structure of the industry. The prices of electronic components tend to decrease as they become lighter in weight, more compact,



The plan is formulated around the key concept of “evolution and speed,” and aims to promote rapid adaptation to the ever-changing market environment and a shift toward an operating structure that can perpetually develop competitive products.

and incorporated into integrated circuits.

Being aware that the limitless growth in sales and profit experienced thus far in Japan is no longer sustainable given these structural changes, we formulated a structural reform plan at the end of December 2001.

The plan is based around the key concept of "evolution and speed," and aims to promote rapid adaptation to the ever-changing market environment and a shift toward an operating structure that can continually develop competitive products. In the short term, the plan aims to secure profits despite poor growth prospects, while building an earnings structure in the medium and long term that can continue to secure profits.

The structural reforms comprise a set of structural reorganization and cost-improvement measures. As part of the structural reorganization, we have reduced the number of divisions from seven to five, thus matching divisions and business segments one-to-one to enable more rapid adaptation to changes in the market. Reinforcement of this new operating structure will involve establishment of a Business Unit (BU) Sales Department, in addition to the Customer Sales Department. This BU Sales Department will work closely with individual divisions to quickly identify customer needs. Other initiatives included the establishment of a Business Development Headquarters at

corporate headquarters with enhanced marketing functions to identify technological trends at the headquarters level as well as to accelerate the rate of technological development and the introduction of new products. In addition, we have also established the Process Technology Development Center and the Production Engineering Development Center for elemental technology development.

Our focus on structural reforms to reduce costs resulted in the integration of the previous Systems Devices Division with the Peripheral Products and Magnetic Devices Divisions, which led to the closing in May 2002 of the Morioka Plant of the former Systems Devices Division. In terms of personnel, we introduced a new employment system for employees

based in distinct regions, expanded the application of the early retirement system and implemented measures to cut wages and suspend a portion of raises.

#### **TRENDS IN AND OUTLOOK FOR TECHNOLOGICAL DEVELOPMENT**

To survive in the fiercely competitive global market, we will encourage a development- and technology-oriented mindset throughout the Company and shift to a development-centered corporate structure that merges marketing and engineering functions.

We currently have three important objectives in the area of technological development.

The first objective is to continue to improve our nanoprocessing technolo-

**MASATAKA KATAOKA**  
President





gies. We have progressed from the micron and submicron level to the nanometer level in processing technologies. Nanotechnology is actively employed on ALPS' GMR heads, thin-film for optical communications and diffraction gratings for use in DVD pickups.

The second objective involves refining our radio-frequency (RF) technologies. We aim to pursue expansion of the RF business into the IT market, where ALPS' Bluetooth™ modules, IEEE 802.11a for wireless LAN and RF units for electronic toll collection (ETC) are experiencing growth. In tandem, efforts will be made to further refine our RF technologies while

aggressively branching out into the many fields that comprise the IT network market, including optical communications and power line communications.

The third objective is to utilize our capabilities in human media interactive technologies throughout our product range. A society powered by ubiquitous networks strives for a smooth flow of communication between humankind and machines, and requires a multitude of devices designed for maximum intuitive control by users. ALPS' Haptic Commander™ employs haptic technologies that ensure directional handling and touch control in applications, with intuitive control for car audio, air conditioning, navigation and other systems all housed within a single knob. Plans call for expanding the range of applications for this technology in such products as the Haptic Commander™ series, functionally composite switches and touch panels.

#### **STRENGTHS AND MAINSTAY PRODUCTS OF OUR FIVE BUSINESS DIVISIONS**

The five reorganized divisions were linked with the newly established Sales and Marketing Headquarters during the process of structural reform to more effectively draw on the strengths of each division, and are currently focusing on expanding their operations.

#### **1. MECHATRONIC DEVICES DIVISION**

The Mechatronic Devices Division has exploited numerous technologies and now boasts a vast product line. While the division has achieved steady sales growth in such traditional mainstay products as switches and potentiometers, it will also target the development of card connectors created using our proprietary contact and mechanical technologies, and sensors that employ volume and carbon printing technologies as mainstay products.

#### **2. AUTOMOTIVE PRODUCTS DIVISION**

In response to the demands associated with the increased computerization of car components, such as the demand for intelligent transport system (ITS)-compatible products, safety and environmental preservation, and the incorporation of functions such as onboard entertainment and other devices into products, we will continue to provide new proposals to automobile manufacturers around the globe and promote the Automotive Products Division as a mainstay business of the Company. While we continue to introduce products such as passive remote keyless entry and the Haptic Commander™, which capitalize on unparalleled technologies in the area of human media interaction, we are also launching development of a tire pressure monitoring

**To survive amid future global competition, we have worked to encourage a development- and technology-oriented mindset throughout the Company.**

system (TPMS) in preparation for its mandatory employment in U.S. automobiles, a potential area for future business expansion.

### **3. COMMUNICATIONS DEVICES DIVISION**

The Communications Devices Division was the product of integrating the RF and Optoelectronics divisions in response to the current expansion in applications for RF technologies. The division has added optical communication devices to a product lineup already built on a wealth of RF technologies, and is set to expand its business to include various markets involving a combination of these technologies.

In preparation for the coming ubiquitous society, we are contributing to further stimulation of the market by introducing a wide range of customers to ALPS' Bluetooth™ modules and their rapidly expanding applications, and to newly developed IEEE 802.11a modules. We are also actively participating in this growing field through such initiatives as expanding product lines in the optical communications market and participating in the power line communications business.

### **4. PERIPHERAL PRODUCTS DIVISION**

This Division's expertise lies in proprietary mechatronics technologies and concentrates primarily on the computer peripherals (input/output devices) busi-

ness comprising a lineup of keyboards, Floppy disk drives (FDDs) and LCDs. Structural reforms resulted in the integration of the System Devices Division and the addition of the printer business to this division. Future initiatives will focus on products such as compact photo printers that enable instant printing of digital still images and color LCDs with solid growth potential in the European and U.S. markets.

### **5. MAGNETIC DEVICES DIVISION**

This division, a leader in thin-film technology, aims to promote audio heads, video heads and GMR heads for hard disk drives (HDDs) as its three mainstay businesses while fortifying the printer head business transferred from the Systems Devices Division into a thin-film processing technology base.

Expanding on such competitive technologies and products will enable us to reinforce our position in the current market while developing new markets.

### **GROUP PERFORMANCE**

**S**trong performance in the automobile market at the ALPINE group during the term under review and groupwide efforts to implement reforms in earnings and cost structures produced results that exceeded initial targets. To keep pace with the increasing prevalence of

onboard IT, ALPINE aims to conduct aggressive ongoing investment in R&D to maintain its presence as a leader in the mobile multimedia industry while increasing the global range of its operations.

The ALPS Logistics Group plans to concentrate efforts on developing logistics products that address the supply chain management (SCM) needs of customers, while augmenting, chiefly, Chinese bases and networks to achieve greater globalization.

April 2002 saw the start of ALPS' new organization and structure, and we aim to make a companywide effort in executing these structural reforms to enhance performance for the current fiscal year.

We offer our sincerest thanks to our stockholders and ask for their continued support as we move forward in the current fiscal year.

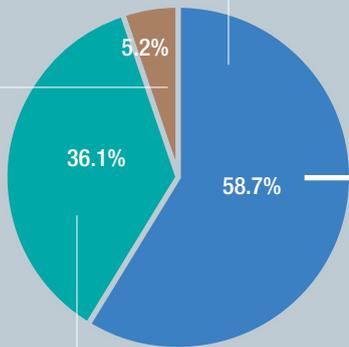
June 2002



**MASATAKA KATAOKA**

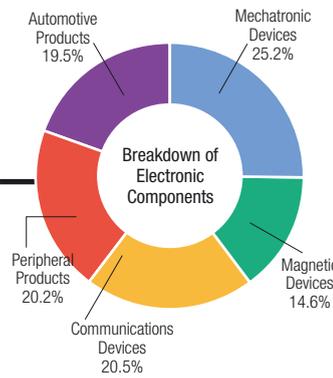
President

# ELECTRONIC COMPONENTS

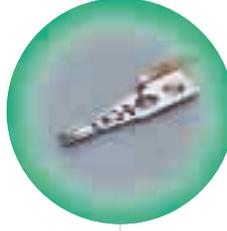


# AUDIO EQUIPMENT

# LOGISTICS AND OTHERS



Mechatronic Devices



Magnetic Devices



Communications Devices



Peripheral Products

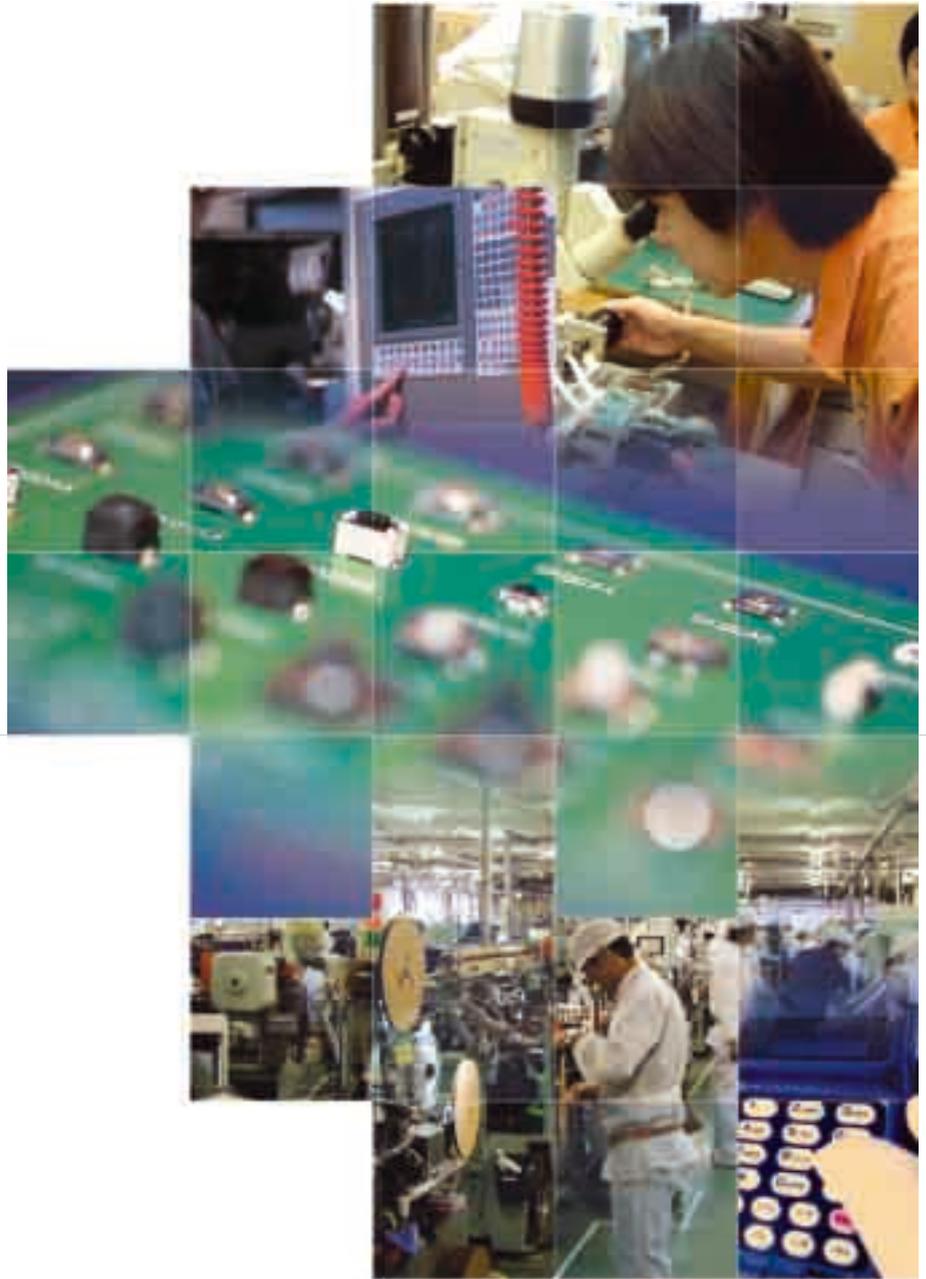


Automotive Products



KEY PRODUCTS	BUSINESS OUTLINE AND TOPICS
<ul style="list-style-type: none"> <li>•Switches</li> <li>•Potentiometers</li> <li>•Sensors</li> <li>•Connectors</li> </ul>	<ul style="list-style-type: none"> <li>•This segment is one of ALPS' core businesses, and carries a wide lineup of electronic components such as switches and potentiometers.</li> <li>•Promising products include connectors for PC cards in notebook computers and connectors for small memory cards</li> </ul>
<ul style="list-style-type: none"> <li>•GMR thin-film heads for HDDs</li> <li>•Magnetic heads for audio applications, VCRs</li> </ul>	<ul style="list-style-type: none"> <li>•This segment's GMR thin-film heads for HDDs are winning high regard for advanced technological features that enable higher recording density.</li> </ul>
<ul style="list-style-type: none"> <li>•Voltage-controlled oscillators (VCOs) for mobile phones</li> <li>•Bluetooth™-compatible modules</li> <li>•Tuners for digital broadcasting</li> <li>•BS and CS converters for digital broadcasting</li> <li>•Analog tuners for TVs and VCRs</li> <li>•Aspherical molded glass lenses for optical communications</li> </ul>	<ul style="list-style-type: none"> <li>•VCOs have gained a high reputation for enabling more advanced functions, more compact dimensions and lighter weight.</li> <li>•Inquiries have been overwhelming for the Bluetooth™-compatible module, which has gained the world's first certification as a general-use module.</li> <li>•ALPS' aspherical molded glass lenses for optical communications hold 70% of the world market share, and enable high-speed communications networks.</li> </ul>
<ul style="list-style-type: none"> <li>•Small and medium-sized super twisted nematic (STN) LCDs</li> <li>•Game controllers</li> <li>•Photo printers</li> <li>•Keyboards for notebook PCs</li> <li>•Glide points</li> </ul>	<ul style="list-style-type: none"> <li>•Fully reflective color LCDs for mobile phones are receiving favorable attention.</li> <li>•Plans call for the development of the world's smallest high-definition card-sized photo printer.</li> </ul>
<ul style="list-style-type: none"> <li>•Door/sheet modules</li> <li>•Steering modules</li> <li>•RF remote keyless entry systems</li> <li>•Clock springs for air bag systems</li> </ul>	<ul style="list-style-type: none"> <li>•ALPS has launched the Haptic Commander™, employing force-feed back technology.</li> <li>•Sales are brisk for door and steering modules that employ multiplex (MPX) technology.</li> <li>•The remote keyless entry system supplements passive-type systems.</li> </ul>
<ul style="list-style-type: none"> <li>•CD and MD car audio systems</li> <li>•Car navigation systems</li> <li>•Car AV systems</li> </ul>	<ul style="list-style-type: none"> <li>•Composite products that integrate radios and cassette and CD players have won the first place award for quality from J.D. Power and Associates two years running.</li> <li>•Plans call for launching advanced multifunctional DVD car navigation systems and car DVD players.</li> </ul>
KEY BUSINESS	
<ul style="list-style-type: none"> <li>•General logistics services</li> </ul>	<ul style="list-style-type: none"> <li>•Plans call for pursuing business development and marketing activities that make use of accumulated technology and expertise in general logistics centered on electronic components to address supply chain management (SCM).</li> </ul>

MECHATRONIC DEVICES



**TACT SWITCHES**  
A wide variety of thin, compact products achieved through pursuit of high-density mountings. High reliability realized through adoption of dust-proof construction



**CONNECTORS FOR SMALL MEMORY CARDS**  
A single combined-type connector compatible with multimedia cards, SD memory cards and Memory Stick™

In terms of having access to comprehensive corporate, technological, developmental and production capabilities, ALPS' mechatronic devices products are a step or two ahead of anything the competition can produce. The Company's unparalleled products have even encouraged copycat products by competitors.

With competition from moderately priced products manufactured in China, an initial recovery in sales at the outset of 2002 was followed by a significant backslide. One reason for the regression was problems involving quality. The sensitivity in some machinery contacts gradually degrades, for example, and contact resistance rises. By contrast, the superior quality of ALPS' products becomes

apparent upon comparing the 100 thousand cycles of useful life available in ALPS products with the lower durability available in competitors' products.

ALPS has commercialized a wide variety of products and has the development capabilities to produce and generate diverse technologies. For example, ALPS' current monthly production of TACT switches. Cumulative production of this product has surpassed 40 billion units (as of October 2001), which could circle the earth six times if laid side by side. ALPS is the undisputed leader in TACT switch production with its roughly 40% market

share worldwide, and it is this mass-production capacity that has earned the Company the respect it enjoys from customers.

Additionally, in compact memory card connectors, which are rapidly spreading in application to such recording media devices as digital cameras and personal digital assistants (PDAs), accumulated mold and precision-processing technologies are being employed to develop a 3-in-1 connector compatible with SD memory cards, multimedia cards and the Memory Stick™. Resources are also being channeled to development of sensors for automobiles.

ALPS aims to expand with full confidence into a wide range of fields that include AV devices, as well as automobile markets.



**DETECTOR SWITCHES**

Thin, compact design contributes to set space conservation. High reliability achieved through sliding contact construction



**LONG LIFE ROTARY SENSORS (STANDARD MODEL)—IDEAL FOR CAR-HEIGHT SENSORS**

Realizes durability of 10 million cycles of total rotation and 100 million cycles of dither operations with a waterproof structure

## MAGNETIC DEVICES



### **GMR THIN-FILM HEADS FOR HDDS**

GMR head compatible with 45Gb/inch<sup>2</sup> (60GB/PL) HDDs. Uses a bottom spin valve/hard bias for the basic structure of the reproduction head. Boasts the industry's top-class high recording density



### **MR HEADS FOR HELICAL SCANNERS**

Realizes a 10 times higher output in read head with MR elements than inductive type

The Magnetic Devices Division got its start as a business specializing in magnetic heads for audio applications. The business has expanded to include magnetic heads for VCRs and GMR thin-film heads for hard disk drives (HDDs) as pillars of its corporate activities.

Giant magneto resistive (GMR) heads are magnetic heads that write and read the recording signal on HDDs. The recording density of HDDs has shown great progress in increasing approximately ten times in density in 3 years owing to the rapid proliferation of applications, such as the Internet and video software data.

ALPS' GMR head technologies are unparalleled throughout the world. The greatest feature of this technology lies in its use of a platinum-manganese (PtMn) alloy, which was developed in house as an elemental GMR material to meet the need for superb heat and corrosion resis-

tance, and which was commercialized well ahead of the competition in 1998. The alloy is currently employed by nearly all manufacturers and has become a standard material within the industry.

In the future, HDDs will increase in importance not only as devices for recording data in PCs but also for applications in various types of home electronic appliances, including video recorders, set-top boxes, and home-use servers.

As it strives to realize even larger-capacity HDDs, ALPS will introduce GMR heads that enable even high-density recording and provide products of exceptional quality through the refinement of such production technologies as thin-film, sputter-deposition, and ultra-precision processing technologies.

Owing to the Company's advanced magnetic recording technology and accumulated technology for the manufacturing of materials, the GMR head business has become a pillar of the Company's operating activities. Building on this strength, the division will make efforts to produce new products and gain larger market share in the long-standing magnetic heads for audio applications business, as well as the magnetic heads for VCRs business.

The magnetic devices business is positioned as a core element of the Company's thin-film technology development. This technology holds the key to enabling further cultivation of new products, and may well enable the expansion of the division's business beyond the limits of magnetic head devices.

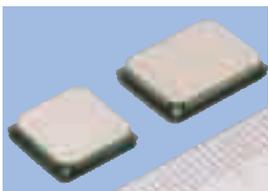
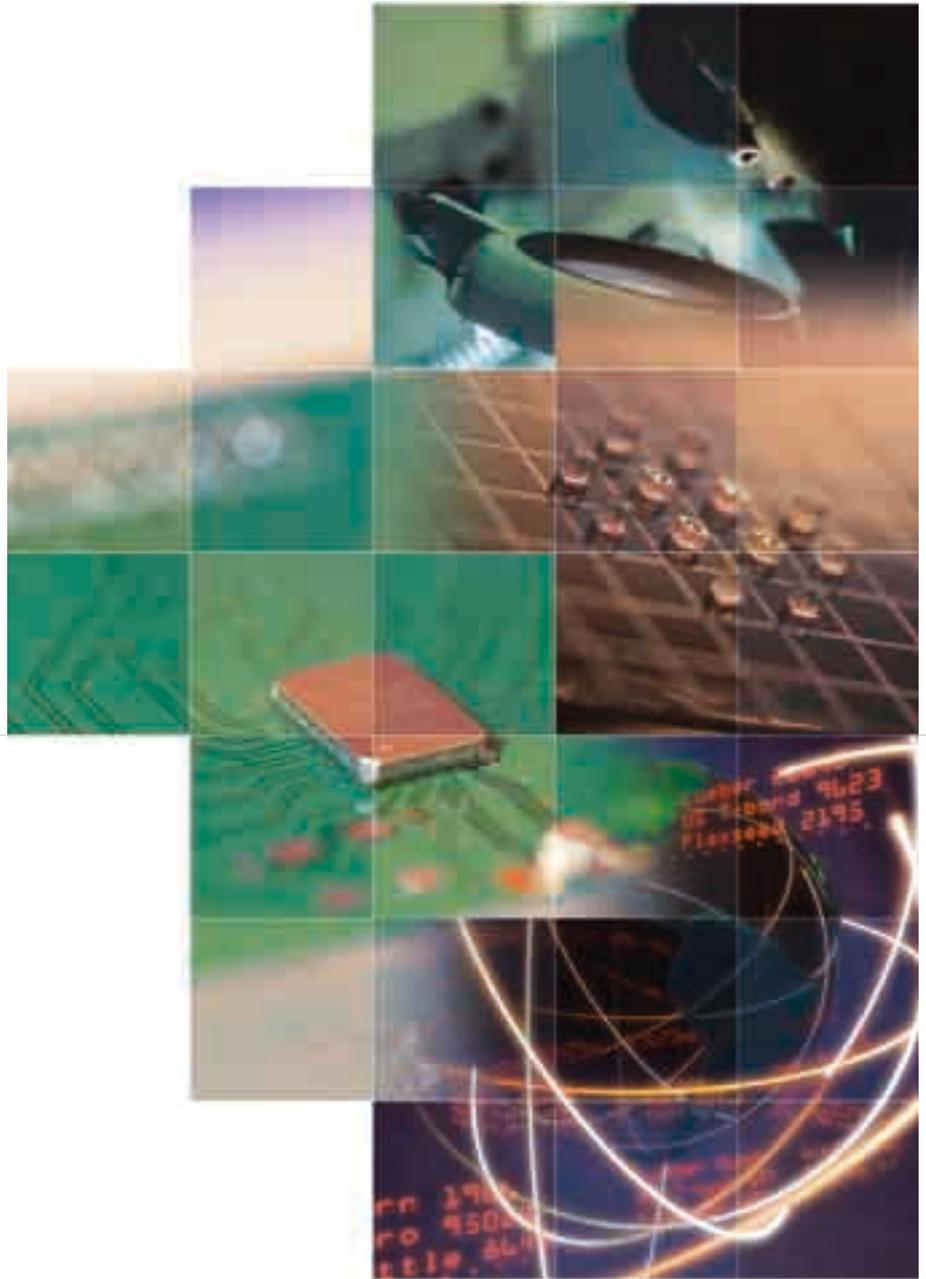


**HEADS FOR AUDIO APPLICATIONS**

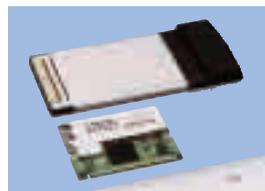


**MAGNETIC HEADS FOR VIDEO APPLICATIONS**

## COMMUNICATIONS DEVICES



**BLUETOOTH™ MODULES**  
New small, thin, low power consumption type: Applicable to classes 1 through 3



**RF MODULES FOR IEEE 802.11a**  
Mini-PCI type III B size has been realized with single-surface mount on the circuit board.

The Communications Devices Division incorporated in fiscal 2001 the former RF Devices Division and the Optoelectronics Division. The technologies and customers of the two former divisions were integrated into the Communications Devices Division.

The field of applications for RF technology is in the midst of expanding. Despite analog technology being considered obsolete at one point, ALPS has focused on its development in both analog and digital technologies and are winning worldwide attention by pursuing new products that combine analog, digital and software technologies.

Newly developed products for the "ubiquitous" age include a Bluetooth™ module and IEEE802.11a module for

accessing wireless networks at any location or time. In particular, the Company acquired the world's first Bluetooth™ certification in November 2000 for its Bluetooth™ modules, which include RF circuits and baseband circuits, and developed the industry's most compact Bluetooth™ module (as of February 2002). As the leader in Bluetooth™ module development, ALPS aims to build off these successes to expand into a wide range of markets that include mobile phones, PDAs and car modules, thereby contributing to more prolific expansion of Bluetooth™ mobile information-equipped products in the market.

In addition, ALPS established a joint venture company, Preminet Co., Ltd., in November 2001, which will specialize in technologies for power line communication (PLC) networks through an alliance with partners, and has commenced development of PLC-modems and modules.

Optoelectronics is in essence based on radio frequencies. Despite the current stagnation of the market, such Optoelectronics-related business as ultra-compact aspherical molded glass lenses used in fiber optic networks—the core of data networks—and optical communications modules will show an upturn in time.

The Company is intent on concentrating resources in the communications broadcasting field include tuner and converter product lines for enjoying digital broadcasts.

As the importance of wireless communications technology rises in automotive electronics and PCs, ALPS aims to expand business in the communications devices field, including RF technology, analog technology, digital technology and software fields.



**ASPHERICAL GLASS LENSES FOR OPTICAL COMMUNICATIONS**

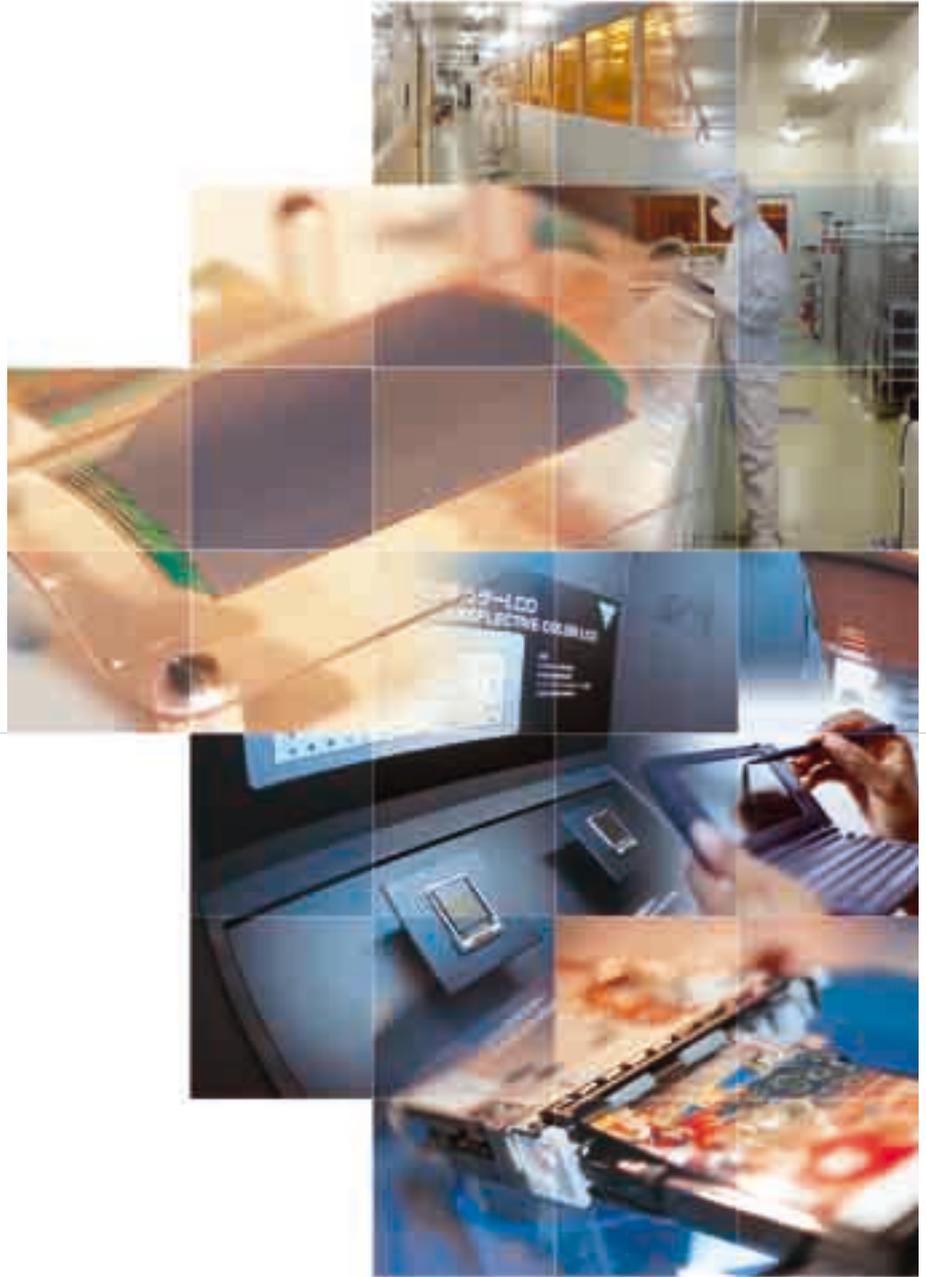
Various aspherical glass lenses supporting optical communications networks designed on the basis of ALPS' original optical-design technology



**TUNERS FOR SATELLITE DIGITAL AUDIO RADIO SERVICE (SDARS)**

Two waves including those for satellite and terrestrial broadcasting are received simultaneously. Two ANT inputs and two double-conversion tuners are built in.

## PERIPHERAL PRODUCTS



### PORTABLE KEYBOARDS

Low-profile keyboard with a scissor mechanism ensures excellent operation by providing soft tactile feedback



### COMPACT PHOTO PRINTERS WITH STANDARD INTERFACE

Compatible with almost all digital still cameras having USB interface. Photo quality achieved by adopting our original thermal-transfer method with variable-dot technology

The Peripheral Products Division absorbed the System Devices Division in Iwate Prefecture, as well as the unit variety and remote control businesses of the Mechatronic Devices Division to form a new-look division in fiscal 2002.

Although operating in a field experiencing fierce competition, ALPS can ensure continued expansion if it capitalizes on its strength in the Company's unparalleled mechanical technology. ALPS' keyboards, for example, enable a comfortable strokes when pressure is applied to the key because their construction includes such features as pantograph springs and rubber materials. This applies to printers as well, which achieve sophisticated movement with a minimal number of components. The same is also true of FDDs, which integrate numerous functions into one component. If one component moves, the other components move in tandem. ALPS would like to foster the developing of such mechanical technologies.

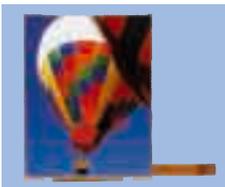
The Peripheral Products Division has been given the important responsibility of maintaining the target technologies of ALPS' mechanical technologies, which include software and electronic circuit technologies. Essentially the division aims to be oriented toward products and markets that rely heavily on mechanical technologies.

In particular, a compact photo printer capable of printing images taken on a digital still camera without being routed through PCs is expected to open a promising new market.

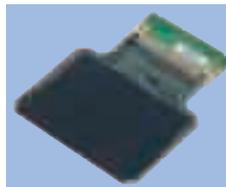
Compared with TFT-LCDs, STN-LCDs can be manufactured with less cost and feature lower power consumption, and are widely used in displays for mobile phones and mobile communications terminals, primarily in the European

and North American markets. ALPS' transfective color STN-LCDs (2-inch) provide high brightness, space conservation and a 65,536-dot color display through the employment of LCD-drive technologies and high-efficiency reflector panels developed based on the Company's unique technologies, including its opto-design technologies, simulation technologies, ultra-precision processing technologies, and mold-forming technologies

The division plans to concentrate development on such core components as frontlights used as an auxiliary light source for reflective LCDs that provide high brightness, uniformity and transmissivity, as well as tablets (with a transparent-touch panel surface used for data entry on PDAs) that provide the industry's highest transmittance of 88% and the thinnest trim design allowing for a wider monitor screen (as of April 2002).



**REFLECTIVE/TRANSFLECTIVE COLOR LCDS FOR MOBILE PHONES**  
STN-LCD with 65,536-color display. Uses LCD-drive technologies and a high-efficiency reflector panel developed based on ALPS' unique technologies, such as its opto-design technologies and ultra-precision processing technologies



**FILM GLIDE POINTS**  
Film structure contributes to a thin set and versatility of design, including round shape

## AUTOMOTIVE PRODUCTS



**PASSIVE ENTRY SYSTEMS**  
No need to take out the keys.  
Enables door locking/unlocking as well as starting the engine



**MULTIPLEX SYSTEMS FOR DOOR MODULES**  
Central control of the electric signal by multi-communication method achieves safe and convenient system

Electronics has become an increasingly significant feature in cars. Results of the division's valiant efforts to address harsh conditions have been emerging over the past ten years, and it has built a structure capable of maintaining brisk sales. By drawing on its unique wireless high-frequency technologies accumulated over many years as an electronic components manufacturer, ALPS has developed such products as remote keyless entry systems and Electronic Toll Collection (ETC)-use RF modules. Moreover, ALPS boasts numerous achievements in the field of automotive electronics, including a deep understanding of the safety requirements in automotive components through its development of such products as clock springs for air-bag systems.

ALPS also developed the Haptic Commander™ for applying revolutionary technologies in automotive devices. The unique operational features of such electronic components as car audio, air conditioning, power mirrors and power seats are combined to enable control through a single knob. ALPS previously made a joint development contract with Immersion Corporation (California, U.S.A.) in July 2000 to apply haptic technology on automotive devices and carried out development under it. On March 31, 2002, ALPS contracted a licensing agreement to use the core haptic technology patents and over 150 application patents developed by Immersion Corporation in its automotive product area. This cooperative endeavor is proliferated in the development of the recently released BMW 7 Series.

The Company will expand products lines that apply haptic technologies on a global scale, and continue advanced development in various automotive products currently undergoing computerization, as well as advanced safety concepts.

The Company has also begun joint technological cooperation with Schrader Electronics Ltd. (Northern Ireland, U.K.) to commence development of a tire pressure monitoring system (TPMS). TPMS complies with coming law in the United States requiring all new vehicles sold in North America to incorporate tire pressure detection systems within a three-year period beginning November 2003. This requirement will likely contribute to safer driving and improvement of fuel economy.

ALPS' incessant marketing efforts to global automobile manufacturers have resulted in increased sales of ALPS' automotive electronics devices and components. The Company prepares a wide lineup of products to meet the demands for unconditional reliability in the automotive electronics field, and intends to continue developing automotive electronics as a mainstay business.



**HAPTIC COMMANDER™**  
Simple and easy-to-recognize operation with built-in force-feedback function.



**TIRE PRESSURE MONITORING SYSTEM (TPMS)**  
Changes in the air pressure of each tire are monitored through radio communication. Compliant with radio control laws in various countries



## ALPS' ENVIRONMENTAL PROTECTION CHARTER

### ALPS' PHILOSOPHY

ALPS, as a member of the global community, is committed to protecting the beauty of nature and to safeguarding our precious resources through the use of technologically advanced business practices and the efforts of its employees, in order to promote sustainable development.

### ACTION PROGRAM

Putting a priority on environmental protection, we at ALPS will:

1. Develop products in light of environmental concerns
2. Engage in environmentally friendly production and sales
3. Conserve our natural resources
4. Reduce or eliminate waste
5. Increase recycling activities

## ACHIEVING THE GOALS OF THE THIRD MEDIUM-TERM VOLUNTARY ACTION PLAN

The 21st century has been called the "century of the environment." However, although worldwide efforts are being made to protect the environment, there remain innumerable issues that must be addressed. Each one of us must take even more action than before based on an awareness that takes into consideration the environment. Environmental issues are a major part of the management policy at ALPS. The medium-term voluntary action plan includes provisions for minimizing the environmental impact of products at all stages from the procurement of parts and materials to manufacturing, use, and disposal. At the manufacturing stage, the Waste Elimination Campaign, a new zero emission policy, was instituted in fiscal 2001 to contribute to the realization of a "recycling-oriented society," with regard to environmental measures directed at the use and disposal stages, ALPS is aggressively pursuing a policy of making its products lead free. In addition, we will integrate and expand the "green procurement" program developed at the divisional level to encompass the entire company, starting in fiscal 2002. ALPS is currently in the final year of its third medium-term voluntary action plan. Goals have already been met in some areas and the Company is continuing to work toward the attainment of goals that remain to be met.

In addition to continuing to post information on its homepage, ALPS will strive to increase the quality and quantity of information it provides and deepen the level of communication, thereby allowing it to better meet the needs of society. We hope that the public will continue to take an interest in the environmental activities of ALPS and provide the Company with candid feedback and advice.

## ISO14001 AND ENVIRONMENT AUDITS

ALPS believes that obtaining ISO 14001 certification—the international standard for environmental management systems—is a useful means for progressing with environmental management activities and is working to secure this certification throughout the Company. ALPS has already obtained this certification at all domestic divisions and is steadily working to gain it at its overseas operations. Internal environmental audits based on ISO 14001 are carried out once or twice per year at those bases that have obtained ISO 14001 certification.

## PROMOTION OF A REDUCTION IN AND THE RECYCLING OF INDUSTRIAL WASTE—"ZERO EMISSIONS"

In light of the increasingly serious shortage of sites for the final disposal of waste products, ALPS drafted its third medium-term voluntary action plan in fiscal 2000 and has stepped up its efforts to increase the recycling of waste products. These activities have supported steady progress, and the plan's targets have already been attained.

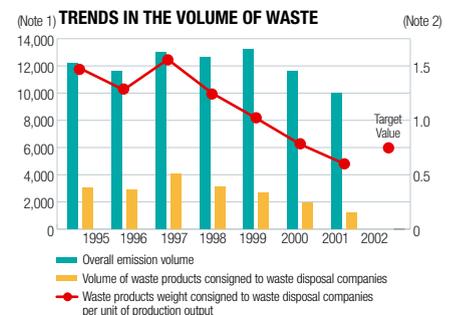
In April 2001, ALPS began the Companywide implementation of a zero emission campaign that is designed to achieve the goal by the end of fiscal 2004. To realize this goal, the entire company is working to increase information sharing through the organization of study groups and other initiatives.

## ALPS' APPROACH TO THE PREVENTION OF GLOBAL WARMING

An increase in the diversity of a company's products tends to lead to needs for a greater variety of manufacturing equipment along with a larger energy consumption and a larger manufacturing space to install the equipment. In view of this, ALPS is working to minimize growth in its manufacturing space by improving the manufacturing equipment it uses and increasing the efficiency of its installation layouts. The Company has also boosted the efficiency of manufacturing operations by introducing high-efficiency transformers and inverters for pumps. In addition, certain facilities have switched from using fuel oil to use of natural gas.

Cooperation between manufacturing and facilities administration departments has enabled the complete shutdown of unused equipment on holidays, and efforts are being made to minimize the amount of energy used for applications that do not contribute to manufacturing.

Plans call for all ALPS manufacturing plants to set energy saving management standards, to identify additional problem issues, and devise countermeasures and additional enhancement measures.



Notes: 1. Overall emission volume: Total waste for disposal and for resale discarded externally as unneeded material (thousand t)  
 Volume of waste products consigned to waste disposal companies: The volume of waste products consigned to waste disposal companies for purposes other than recycling into resources (thousand t)  
 2. Waste products weight consigned to waste disposal companies per unit of production output: The volume of waste consigned to waste disposal companies divided by the value of production output (t/100 million yen)

## INTERIM REPORT ON THE THIRD MEDIUM-TERM VOLUNTARY ACTION PLAN

The following is a report on the progress of the Third Medium-Term Voluntary Action Plan (fiscal 2000 through fiscal 2002), which was formulated in 2000.

### THE THIRD MEDIUM-TERM VOLUNTARY ACTION PLAN, AND RESULTS OF ACTIVITIES IN FISCAL 2001

OBJECTIVE	ACTION TARGET (FISCAL 2000—FISCAL 2002)	RESULTS OF ACTIVITIES IN FISCAL 2001
Work toward the building of an EMS (Note 1) globally	Work toward obtaining ISO 14001 certification at overseas production bases	ISO 14001 certification was newly obtained overseas for the three ALPS Group companies.
Prevent global warming	Reduce fiscal 2002 energy consumption per unit of output (Note 2) to 2% below the fiscal 1998 level	Energy consumption per unit of output: 26.8 kJ/¥100 million The ratio was up 20.5% from the fiscal 1998 level (up 22.9% from the fiscal 2000 level). <i>*This deterioration reflects such factors as a decline in the value of production output.</i>
Promote to reduce and recycle industrial waste	(1) Reduce waste products per unit of output (Note 3) by fiscal 2002 to 40% below the fiscal 1998 level (2) Improve the waste-into-resources recycling rate (Note 4) to 84% by fiscal 2002	(1) Waste products per unit of output: 0.60 t/¥100 million The ratio was down 51.8% from the fiscal 1998 level (down 23.1% from the fiscal 2000 level). (2) Recycling ratio: 87.8% (up 4.4% from the fiscal 2000 level) <i>*In line with ALPS's zero emission campaign, the volume of waste products consigned to waste disposal companies was reduced, and the share of such products recycled was increased.</i>
Progress with the Chemical Substance Reduction Voluntary Plan	(1) Completely eliminate the use of organochloride compounds such as dichloromethane by the end of fiscal 2000 (2) Completely eliminate the use of ozone-depleting substances such as HCFCs by the end of fiscal 2003 (Note 5) (3) Reduce the use of greenhouse effect gases such as PFCs and HFCs by fiscal 2010 to 60% below the fiscal 1998 level (Note 6)	(1) Dichloromethane use: totally discontinued as of march 2001 (2) HCFC use: 152 tons (down 35.8% from the fiscal 2000 level) (3) PFC/HFC use (GWP conversion basis): 91,300 tons. The usage level was down 2.4% from the fiscal 1998 level (down 23.5% from the fiscal 2000 level).
Promote green procurement	Give preference to procurement from business partners that give consideration to the environment	Began drafting and compiling Companywide standards
Respond to demand for lead-free products	Begin offering lead-free products from April 2001	Electrode terminals/frame terminals: Distribution of lead-free products begun in April 2001 <i>*Internal connection solder: Technology development has been completed, and distribution of lead-free products scheduled to begin in the latter half of fiscal 2002.</i>

#### Notes:

- EMS: Environmental Management System
- Energy consumption per unit of output: The volume of energy used through the consumption of electric power and heavy fuel oil (collectively expressed on a crude oil-equivalent basis) divided by the value of production output
- Waste products per unit of output: The volume of waste products consigned to waste disposal companies (expressed in terms of weight, less the portion intended to be recycled) divided by the value of production output
- Waste-into-resources recycling rate: The volume of waste recycled into reusable resources as a proportion of the total volume of emissions
- HCFCs: Hydrochlorofluorocarbons
- PFCs/HFCs: Perfluorocarbons and Hydrofluorocarbons

## ALPS, APPROACH TO PRODUCTS

ALPS aims for the creation of products that maintain harmony with the environment and that contribute to environmental protection. These activities were commenced with the establishment of the Products Working Group, which has engaged in such activities as product assessments in each product division. ALPS focuses on the creation of smaller, lighter-weight products, products that consume less electric power during usage, and products that enable reductions in the use of toxic materials, especially in regard to product disposal. ALPS is placing special emphasis on totally eliminating the use of lead.

## PRODUCT ASSESSMENTS

The Mechatronics Devices Division and other divisions are engaged in prod-

uct assessment, focusing their efforts on newly developed and designed products.

These product assessments involve evaluations based on standards set in various assessment categories, including compactness ratio, weight ratio, and safety.

## APPROACH TO LEAD-FREE PRODUCTS

When the printed circuit boards used in household electronic products and other products are discarded, the lead contained in the solder and gilding used on these circuit boards is made soluble, leading to concerns about the pollution of the environment. To respond to these concerns, ALPS formed an in-house Companywide organization in 1998 and formulated a policy for supplying lead-free products. At the same time, ALPS began making efforts to eliminate the use of lead in accordance with the

characteristics of each product in every division.

ALPS' efforts to develop lead-free products are focused on the development of lead-free technologies for electrode plating as well as for soldered connections for various electronic components. ALPS has already begun shifting to the use of lead-free products. For electrode plating, ALPS began using various switches in May 2001 and potentiometers in November 2001. For soldered connections for various electronic components, there is a trend in the industry for unifying standards for lead-free solder, and ALPS is making preparations for the use of lead-free solder. In 2003, ALPS plans to steadily introduce models that conform with these standards.

### ALPINE

Since its establishment in 1967, the core businesses of ALPINE have been car audio devices and such IT devices as car navigation and AV systems, and it has created new mobile media markets and businesses.

ALPINE F#1 Status, the flagship products of ALPINE, have garnered numerous awards throughout the world for their superior sound performance and have gained a reputation as the best mobile media products in the industry. High-precision DVD car navigation systems that chart an optimal course in real time and car AV systems that transform the cabin environment into an entertainment zone have also earned high praise in the market.

The digitization of products recently in the electronics industry has accelerated, while trends have included expanded demand for CD products in the audio market, inroads achieved for ITS products and growth in the IT portion of the European and U.S. markets. Moreover, structural changes have been observed in products and markets as integrated products that merge the functions of sound, audio and IT have made their appearance.

To respond to such developments, the ALPINE Group will augment its technological proposal capabilities for automobile manufacturers as well as its development capabilities through aggressive investment in research and development of system products. Moreover, ALPINE will continue reforms toward realizing a global earnings and cost structure. To improve business speed and operational efficiency, the Company established ALPINE Marketing, Inc. in April 2002 as a domestic aftermarket sales affiliate, as well as created a new aftermarket business organization that merges the functions of development, manufacturing and marketing. Additionally, ALPINE will expand its Chinese manufacturing bases and consolidate the local procurement of components at overseas manufacturing bases to reinforce price competitiveness.



### ALPS LOGISTICS

ALPS Logistics was established in 1964 as an integrated logistics company specializing in electronic-components freight handling. The company operates the functions provided in its transportation, storage and forwarding divisions within an integrated system. Logistics bases total 17 in Japan, five in China and two in ASEAN. ALPS Logistics is involved in logistics contracts from over 70% of the 1,600 electronic components companies in Japan, and provides ser-



vices tailored specifically to the logistics needs of customers.

Demand has risen in the electric machinery industry, which comprises ALPS Logistics' core customer base, for the overseas relocation of bases, chiefly to China, as well as supply chain management (SCM) measures to reduce inventory and lead times.

To meet this demand, the ALPS Logistics Group will develop a logistics system in Japan compatible with customers' needs and pursue proposal activities and expanded sales. Overseas, the Group will reinforce and expand its Chinese bases and related networks while building a logistics structure rivaling that of its Japan network. Moreover, efforts will be directed toward further strengthening functions at the operational logistics level, raising operational efficiency and improving performance.

## SIX-YEAR FINANCIAL SUMMARY

ALPS ELECTRIC CO., LTD. AND CONSOLIDATED SUBSIDIARIES  
Years ended March 31, 2002, 2001, 2000, 1999, 1998 and 1997

	Millions of yen, except per share data					
	2002	2001	2000	1999	1998	1997
<b>For the year:</b>						
Net sales	¥540,268	¥573,064	¥546,941	¥554,446	¥505,134	¥456,338
(Overseas sales)	382,252	373,883	338,136	346,115	314,312	283,315
Cost of sales	451,210	476,910	449,456	440,619	403,584	373,771
SG&A expenses	75,809	71,600	73,614	76,488	75,952	64,118
Operating income	13,249	24,554	23,871	37,339	25,598	18,449
Income (loss) before income taxes	8,695	24,931	(10,133)	24,624	17,131	13,687
Income taxes	3,415	4,210	8,351	12,237	9,586	5,808
Net income (loss)	1,902	18,111	(20,611)	9,677	5,654	4,846
Cash flows (*)	33,197	46,860	11,467	37,379	28,338	25,226
Amounts per share of common stock:						
Net income (loss)	¥ 10.53	¥ 100.21	¥(114.41)	¥ 54.02	¥ 31.56	¥ 27.05
Cash dividends applicable to the year	5.00	12.00	10.00	12.00	10.00	6.00
<b>At the year end:</b>						
Current assets	¥293,636	¥289,283	¥308,258	¥280,405	¥313,428	¥316,139
Current liabilities	190,878	230,288	223,033	200,682	224,615	217,514
Working capital	102,758	58,995	85,225	79,723	88,813	98,625
Long-term debt due after one year	87,851	54,789	108,818	115,885	101,752	105,302
Stockholders' equity	137,513	131,901	122,485	143,106	135,401	133,016
Total assets	484,831	479,032	499,836	499,639	497,904	489,876
<b>Sales by product category:</b>						
Components	¥126,237	¥154,299	¥155,601	¥151,824	¥133,880	¥121,984
	23.4	26.9	28.4	27.4	26.5	26.7
Mechatronic devices	79,949	99,516	92,018	88,205	88,599	86,345
	14.8	17.4	16.8	15.9	17.5	18.9
Magnetic devices	46,288	54,783	63,583	63,619	45,281	35,639
	8.6	9.5	11.6	11.5	9.0	7.8
Communications devices	65,101	89,737	81,427	83,041	84,155	72,438
	12.0	15.7	14.9	15.0	16.7	15.9
Peripheral products	63,967	73,711	78,522	95,315	84,824	77,522
	11.8	12.9	14.4	17.2	16.8	17.0
Automotive Products	62,037	49,848	42,117	35,459	28,310	22,653
	11.5	8.7	7.7	6.4	5.6	5.0
Audio equipment (**)	194,845	179,663	168,833	174,359	165,727	153,567
	36.1	31.3	30.9	31.4	32.8	33.6
Logistics and others (**)	28,081	25,806	20,441	14,448	8,238	8,174
	5.2	4.5	3.7	2.6	1.6	1.8
Total	¥540,268	¥573,064	¥546,941	¥554,446	¥505,134	¥456,338
Percentage of sales	100.0	100.0	100.0	100.0	100.0	100.0
<b>Sales by destination:</b>						
Japan	¥195,587	¥199,181	¥208,805	¥208,331	¥190,822	¥173,023
	36.2	34.8	38.2	37.6	37.8	37.9
North America	133,446	129,880	118,671	115,441	97,132	93,471
	24.7	22.7	21.7	20.8	19.2	20.5
Europe	121,170	112,569	110,445	113,637	95,051	78,755
	22.4	19.6	20.2	20.5	18.8	17.2
Asia	87,847	124,436	106,072	110,120	113,038	103,452
	16.3	21.7	19.4	19.9	22.4	22.7
Others	2,218	6,998	2,948	6,917	9,091	7,637
	0.4	1.2	0.5	1.2	1.8	1.7
Total	¥540,268	¥573,064	¥546,941	¥554,446	¥505,134	¥456,338
Percentage of sales	100.0	100.0	100.0	100.0	100.0	100.0

\*"Cash flows" is calculated by subtracting "cash dividends paid" and "bonuses to directors" from the total of "net income (loss)" and "depreciation and amortization".

\*\*Sales of "audio equipment" were included in "logistics and others" until fiscal 1996 (inclusive).

# FINANCIAL REVIEW

## ANALYSIS OF OPERATIONS

### Net Sales

In fiscal 2002, consolidated net sales declined 5.7% to ¥540,268 million (US\$4,055 million).

### 1. Electronic Components

In the electronic components segment, the performance resulted in a 13.7% decrease in net sales to ¥317,342 million (US\$2,382 million), and a 87.3% drop in operating income to ¥2,036 million (US\$15 million).

#### Mechatronic Devices

Although brisk performance was recorded in connectors for PCs and potentiometers for amusement equipment, the lackluster sales of switches for AV and other markets forced sales down 19.7% to ¥79,949 million (US\$600 million) in the magnetic devices category.

#### Magnetic Devices

In the magnetic devices category, GMR heads faced slumping results in the first half of the fiscal year, and while a rapid recovery in the second half was achieved with the launch of 30Gb/inch<sup>2</sup> (40GB/PL) HDD products, weak performance in the first half of the period could not be overcome. Demand for magnetic heads for consumer electronics fell considerably, forcing down sales of the magnetic devices category 15.5% to ¥46,288 million (US\$347 million).

#### Communication Devices

In the communications devices field, sales of VCOs for mobile phones slumped drastically on the back of prolonged inventory adjustment in the mobile phone market, and in optical communications aspherical glass lenses grew sluggish. Nonetheless, Bluetooth™ modules made rapid gains in sales, albeit small in scale. In the broadcasting field, digital broadcasting-related products and analog tuners faced heavy sales declines to produce a 27.5% fall in net sales to ¥65,101 million (US\$489 million).

#### Peripheral Products

Keyboard sales dropped off markedly as unit sales of desktop PCs fell below figures for the previous fiscal year. Moreover, production scale as a whole was curbed in compact photo printers for digital still cameras, printer operations were shifted to other divisions in line with the structural reform and the decision to close

the Morioka Plant was made. The LCD segment resulted in lower sales of STN reflective color LCDs owing to a downturn in the mobile phone market and the shift toward the TFT standard. The amusement equipment category was able to maintain sales comparable to those in the previous fiscal year. In aggregate, net sales for the computer peripherals category declined 13.2% to ¥63,967 million (US\$480 million).

### Automotive Products

In the automotive products category, acquisition of new customers domestically and abroad, increased presence of products on automobile lines and implementation of emergency sales promotion initiatives in the United States enable the section to avoid sales declines and achieve minor expansion in sales in line with the previous fiscal year. In particular, expanded sales of air conditioner control panels for popular car lines and bolstered demand for door modules that provide centralized control for power windows and door mirrors contributed to increased sales. In aggregate, net sales for this category jumped 24.5% to ¥62,037 million (US\$466 million).

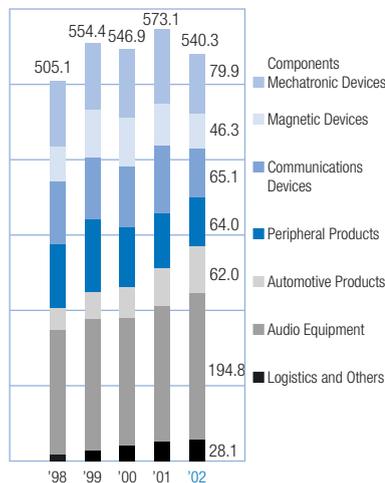
### 2. Audio Equipment

In car audio products, brand and aftermarket sales remained brisk for such products as CD players for the European and U.S. automobile markets.

In the information and communications equipment, sales fell owing to intensified price competition in the Japanese aftermarket, despite increased sales for audio/visual composite products for the European market and audio/navigation composite products for the domestic market. In aggregate, net sales for the audio equipment segment rose 8.5% to ¥194,845 million (US\$1,462 million) and operating income jumped 58.0% to ¥7,022 million (US\$53 million).

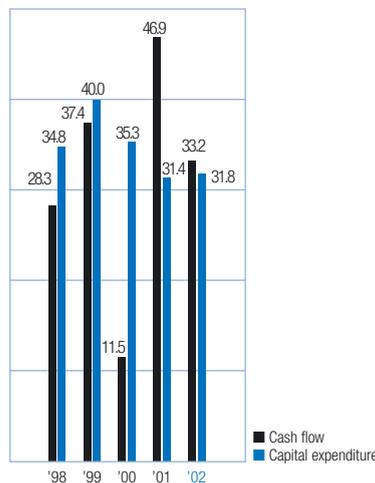
### 3. Logistics and Others

Electronic components-related freight handled declined following a drop-off in demand for IT-related products, but a substantive increase in volume of commissions in the consumer logistics field owing to efforts to address customer needs produced an overall rise in sales for the logistics category. In aggregate, net sales of logistics and others rose 8.8% to ¥28,081 million (US\$211 million), while operating income edged down 7.7% to ¥3,381 million (US\$25 million).

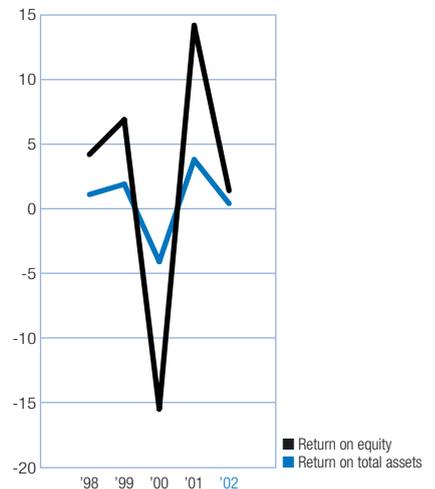


**SALES BY PRODUCT CATEGORY**  
(Billions of ¥)

Note: Sales of Audio Equipment were included in Logistics and Others until fiscal 1996 (inclusive).



**CASH FLOW AND CAPITAL EXPENDITURE**  
(Billions of ¥)



**PROFITABILITY RATIOS**  
(%)

## Cost and Expenses

Cost of sales was ¥451,210 million (US\$3,386 million), and the cost of sales ratio increased only 0.3 percentage point to 83.5%. Selling, general and administrative (SG&A) expenses increased 5.9% to ¥75,809 million (US\$569 million) to represent 14.0% of net sales, 1.5 percentage points higher than the previous fiscal year. R&D expenses increased 6.8% to ¥26,373 million (US\$198 million), representing 4.9% of net sales.

## Operating Income

Operating income decreased 46.0% to ¥13,249 million (US\$99 million). The ratio of operating income to net sales fell 1.8 percentage points to 2.5%. The primary factors behind this decrease were lower income due to lower sales of electronic components despite the depreciated yen, as well as an increase in SG&A expenses.

## Other Income (Expenses)

Net other expenses of ¥4,554 million (US\$34 million) was recorded compared with net other income of ¥377 million in the previous fiscal year. The main reasons behind this were other, net in other expenses of ¥2,669 million (US\$20 million) compared with other, net in other income of ¥2,234 million in the previous fiscal year.

Net other expenses resulted from an increase of ¥8,460 million (US\$63 million) in Restructuring charges, a decrease of ¥5,524 million (US\$41 million) in exchange gains, despite an increase of ¥6,505 million (US\$49 million) in gains on settlement of lawsuit involving Princeton bonds and a decrease of ¥5,022 million (US\$38 million) in amortization of net retirement benefit obligation at transition. (See Note 7 to the consolidated financial statements for more details).

## Net Income

Income before income taxes was ¥8,695 million (US\$65 million) compared with income before income taxes of ¥24,931 million in the previous fiscal year, and income taxes fell 18.9% to ¥3,415 million (US\$26 million).

As a result, net income of ¥1,902 million (US\$14 million) was posted compared with net income of ¥18,111 million in the previous fiscal year. Net income per share was ¥10.53 (US\$0.08) compared with net income per share of ¥100.21 in the previous fiscal year.

## FINANCIAL CONDITION AND LIQUIDITY

### Financial Condition

Total assets were ¥484,831 million (US\$3,639 million).

Cash and time deposits increased ¥42,588 million to ¥77,252 million (US\$580 million) due to an increase in loans principally from banks and insurance companies for implementing structural. Inventories declined ¥13,296 million to ¥79,818 million (US\$599 million), owing to a decrease of ¥6,609 million in finished products.

Total current liabilities decreased ¥39,410 million to ¥190,878 million (US\$1,432 million) due to a decrease of ¥31,005 million (US\$233 million) in long-term debt due within one year, of which ¥41,938 million (US\$315 million) became due.

Long-term debt due after one year increased ¥33,062 million to ¥87,851 million (US\$659 million) due to an increase in loans principally from banks and insurance companies and the issue of 0.0% domestic convertible debenture bond of consolidated subsidiary due 2007 (see Note 5 to the consolidated financial statements for more details).

Total stockholder's equity increased ¥5,612 million to ¥137,513 million (US\$1,031 million) owing to an increase in retaining earnings of ¥1,857 million and a decrease in the repositioning of foreign currency translation adjustment of ¥3,808 million.

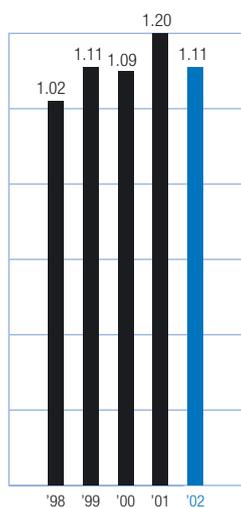
Consequently, return on equity (ROE) was 1.4% and return on assets (ROA) was 0.4%. Equity per share of common stock increased to ¥31.12 to ¥760.96 (US\$5.71).

## Cash Flows

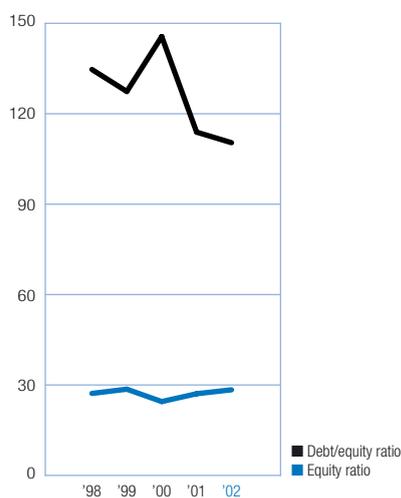
In the fiscal year under review, net cash provided by operating activities totaled ¥58,346 million (US\$438 million) owing to lower notes and accounts receivable and reduction in inventories, resulting in net cash used in investment activities of ¥34,893 million (US\$262 million). Free cash flow was consequently ¥23,453 million (US\$176 million). The Company redeemed convertible bonds worth ¥41,938 million (US\$315 million), issued ¥10,000 million (US\$75 million) in debentures and borrowed roughly ¥20,000 million (US\$150 million) in loans to pay for expenses incurred in redeeming convertible bonds and implementing structural reforms, and issued ¥12,000 million (US\$90 million) in convertible bonds to invest in software for the audio equipment business. As a result, net cash used in financing activities totaled ¥2,060 million (US\$15 million).

In aggregate, the net increase in cash and cash equivalents was ¥24,245 million (US\$182 million) and cash and cash equivalents at end of year were ¥76,608 million (US\$575 million).

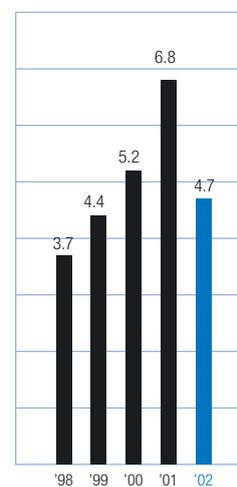
In the current fiscal year ALPS aims to pursue a cash flow-centered management style, as well as steady reduction in interest-bearing debt.



**ASSET TURNOVER**  
(Times)



**CAPITAL STRUCTURE**  
(%)



**INTEREST COVERAGE**  
(Times)

# CONSOLIDATED BALANCE SHEETS

ALPS ELECTRIC CO., LTD. AND CONSOLIDATED SUBSIDIARIES  
March 31, 2002 and 2001

ASSETS	Millions of yen		Thousands of U.S. dollars (Note 1)
	2002	2001	2002
<b>Current assets:</b>			
Cash and time deposits	¥ 77,252	¥ 34,664	\$ 579,752
Investment securities (Note 3)	152	17,584	1,141
Notes and accounts receivable:			
Unconsolidated subsidiaries and affiliated companies	318	3,058	2,386
Trade	96,717	101,289	725,831
Allowance for doubtful accounts	(1,277)	(933)	(9,583)
Inventories (Note 4)	79,818	93,114	599,009
Deferred income taxes (Note 9)	9,932	9,834	74,537
Other current assets	30,724	30,673	230,574
<b>Total current assets</b>	<b>293,636</b>	<b>289,283</b>	<b>2,203,647</b>
<b>Property, plant and equipment, at cost (Note 5):</b>			
Land	30,203	31,282	226,664
Buildings and structures	106,875	101,372	802,064
Machinery and equipment	271,959	265,763	2,040,968
Construction in progress	3,042	3,410	22,829
	412,079	401,827	3,092,525
Less accumulated depreciation	(273,695)	(258,840)	(2,053,996)
<b>Property, plant and equipment, net</b>	<b>138,384</b>	<b>142,987</b>	<b>1,038,529</b>
<b>Investments and advances:</b>			
Investments in and advances to unconsolidated subsidiaries and affiliated companies	8,148	8,637	61,148
Investment securities, other (Note 3)	14,375	13,340	107,880
Other investments	3,700	4,433	27,768
<b>Total investments and advances</b>	<b>26,223</b>	<b>26,410</b>	<b>196,796</b>
Deferred income taxes (Note 9)	15,287	12,315	114,724
Deferred income taxes on land revaluation (Note 9 and 10)	582	—	4,368
Other assets	10,719	8,037	80,443
<b>Total assets</b>	<b>¥484,831</b>	<b>¥479,032</b>	<b>\$3,638,507</b>

See accompanying notes.

LIABILITIES AND STOCKHOLDERS' EQUITY	Millions of yen		Thousands of U.S. dollars (Note 1)
	2002	2001	2002
Current liabilities:			
Bank loans (Note 5)	¥ 40,875	¥ 41,334	\$ 306,754
Long-term debt due within one year (Note 5)	23,114	54,119	173,463
Notes and accounts payable:			
Unconsolidated subsidiaries and affiliated companies	164	1,020	1,231
Trade	68,926	81,055	517,268
Accrued income taxes	4,476	5,431	33,591
Accrued expenses	29,095	28,246	218,349
Deferred income taxes (Note 9)	301	269	2,259
Other current liabilities	23,927	18,814	179,565
Total current liabilities	190,878	230,288	1,432,480
Long-term debt due after one year (Note 5)	87,851	54,789	659,295
Employees' severance and retirement benefits (Note 8)	13,069	11,273	98,079
Deferred income taxes (Note 9)	2,745	2,521	20,600
Other long-term liabilities	3,661	3,553	27,475
Minority interests	49,114	44,707	368,585
Contingent liabilities (Note 11)			
Stockholders' equity (Note 6):			
Common stock:			
Authorized—500,000,000 shares			
Issued—180,727,015 shares in 2002 and 2001	22,913	22,913	171,955
Additional paid-in capital	44,876	44,876	336,781
Land revaluation reserve (Note 10)	(378)	—	(2,837)
Retained earnings	72,570	70,713	544,615
Unrealized gains on investment securities	3,005	2,664	22,552
Foreign currency translation adjustments	(5,456)	(9,264)	(40,945)
	137,530	131,902	1,032,121
Less treasury stock, at cost—16,863 shares in 2002: 527 shares in 2001	(17)	(1)	(128)
Total stockholders' equity	137,513	131,901	1,031,993
Total liabilities and stockholders' equity	¥484,831	¥479,032	\$3,638,507

# CONSOLIDATED STATEMENTS OF OPERATIONS

ALPS ELECTRIC CO., LTD. AND CONSOLIDATED SUBSIDIARIES  
Years ended March 31, 2002, 2001 and 2000

	Millions of yen			Thousands of U.S. dollars (Note 1)
	2002	2001	2000	2002
Net sales (Note 15)	¥540,268	¥573,064	¥546,941	\$4,054,544
Costs and expenses (Note 15):				
Cost of sales	451,210	476,910	449,456	3,386,191
Selling, general and administrative	75,809	71,600	73,614	568,923
	527,019	548,510	523,070	3,955,114
Operating income (Note 15)	13,249	24,554	23,871	99,430
Other income (expenses):				
Interest and dividend income	1,193	1,717	1,553	8,953
Interest expense	(3,090)	(3,851)	(4,932)	(23,189)
Equity in earnings (losses) of affiliated companies	12	277	(606)	90
Other, net (Note 7)	(2,669)	2,234	(30,019)	(20,030)
	(4,554)	377	(34,004)	(34,176)
Income (loss) before income taxes	8,695	24,931	(10,133)	65,254
Income taxes (Note 9):				
Current	6,590	9,592	18,556	49,456
Deferred	(3,175)	(5,382)	(10,205)	(23,827)
	3,415	4,210	8,351	25,629
Income (loss) before minority interests	5,280	20,721	(18,484)	39,625
Minority interests in income of consolidated subsidiaries	(3,378)	(2,610)	(2,127)	(25,351)
Net income (loss)	¥ 1,902	¥ 18,111	¥ (20,611)	\$ 14,274

	Yen			U.S. dollars (Note 1)
	2002	2001	2000	2002
Amounts per share of common stock:				
Net income (loss)	¥10.53	¥100.21	¥(114.41)	\$0.08
Diluted net income	—	93.12	—	—
Cash dividends applicable to the year	5.00	12.00	10.00	0.04

See accompanying notes.

# CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

ALPS ELECTRIC CO., LTD. AND CONSOLIDATED SUBSIDIARIES  
Years ended March 31, 2002, 2001 and 2000

	Millions of yen						
	Shares of common stock	Common stock	Additional paid-in capital	Land revaluation reserve	Retained earnings	Unrealized gains on investment securities	Foregin currency translation adjustments
<b>Balance at March 31, 1999</b>	179,159,292	¥21,189	¥43,846	¥ —	¥ 78,170	¥ —	¥ —
Decrease due to inclusion of consolidated subsidiaries					(2,210)		
Cumulative effect of adopting deferred income tax accounting					63		
Decrease due to exclusion of companies accounted for by the equity method					(709)		
Net loss					(20,611)		
Cash dividends paid (¥7.00 per share)					(1,254)		
Bonuses to directors					(76)		
Shares issued upon conversion of convertible debentures	1,565,451	1,722	1,722				
Transfer from additional paid-in capital of prior year constructive gain on sale of subsidiary's securities			(694)		694		
Constructive gain on capital increase of affiliated company					666		
Other					(31)		
<b>Balance at March 31, 2000</b>	180,724,743	22,911	44,874	—	54,702	—	—
Increase due to inclusion of consolidated subsidiaries					851		
Net income					18,111		
Cash dividends paid (¥16.00 per share)					(2,892)		
Bonuses to directors					(53)		
Shares issued upon conversion of convertible debentures	2,272	2	2				
Change in unrealized gain on investment securities						2,644	
Change in foregin currency translation adjustments							(9,264)
Other					(6)		
<b>Balance at March 31, 2001</b>	180,727,015	22,913	44,876	—	70,713	2,664	(9,264)
Increase due to inclusion of consolidated subsidiaries					1,162		
Net income					1,902		
Cash dividends paid (¥6.00 per share)					(1,084)		
Bonuses to directors					(111)		
Revaluation of land				(378)			
Change in unrealized gain on investment securities						341	
Change in foregin currency translation adjustments							3,808
Other					(12)		
<b>Balance at March 31, 2002</b>	180,727,015	¥22,913	¥44,876	¥(378)	¥ 72,570	¥3,005	¥(5,456)

	Thousands of U.S. dollars (Note 1)						
	Common stock	Additional paid-in capital	Land revaluation reserve	Retained earnings	Unrealized gains on investment securities	Foregin currency translation adjustments	
<b>Balance at March 31, 2001</b>	\$171,955	\$336,781	\$ —	\$530,679	\$19,993	\$(69,523)	
Increase due to inclusion of consolidated subsidiaries				8,720			
Net income				14,274			
Cash dividends paid (¥0.13 per share)				(8,135)			
Bonuses to directors				(833)			
Revaluation of land			(2,837)				
Change in unrealized gain on investment securities					2,559		
Change in foregin currency translation adjustments						28,578	
Other				(90)			
<b>Balance at March 31, 2002</b>	\$171,955	\$336,781	\$(2,837)	\$544,615	\$22,552	\$(40,945)	

See accompanying notes.

# CONSOLIDATED STATEMENTS OF CASH FLOWS

ALPS ELECTRIC CO., LTD. AND CONSOLIDATED SUBSIDIARIES  
Years ended March 31, 2002, 2001 and 2000

	Millions of yen			Thousands of U.S. dollars (Note 1)
	2002	2001	2000	2002
<b>Cash flows from operating activities:</b>				
Income (loss) before income taxes	¥ 8,695	¥24,931	¥(10,133)	\$ 65,254
Depreciation and amortization	32,490	31,694	33,408	243,827
Amortization of goodwill	(286)	(231)	(353)	(2,146)
(Decrease) increase in allowance for doubtful accounts	(29)	(454)	966	(218)
Increase in allowance for employees' severance and retirement benefits	1,771	5,430	1,527	13,291
Increase in allowance for directors' retirement benefits	410	1,364	413	3,077
(Decrease) increase in allowance for guarantees	(481)	(3,102)	5,436	(3,610)
Interest and dividend income	(1,193)	(1,717)	(1,553)	(8,953)
Interest expense	3,090	3,851	4,932	23,189
Equity in (earnings) losses of affiliated companies	(12)	(277)	606	(90)
Gain on sale of property, plant and equipment	(205)	(80)	(1,129)	(1,538)
Loss on sale and disposal of property, plant and equipment	1,741	1,391	1,140	13,066
Gain on sale of investment securities, other	(299)	(1,388)	(21,762)	(2,244)
Write-offs of investment securities, other	467	161	23,956	3,505
Loss on Tokkin specified money in trust ("Tokkin")	—	449	16,340	—
Restructuring charges	8,697	—	—	65,268
Increase (decrease) in notes and accounts receivable	12,499	(146)	(5,815)	93,801
Increase (decrease) in inventories	14,881	(14,830)	(8,808)	111,677
(Decrease) increase in notes and accounts payable	(14,236)	(20,150)	8,905	(106,837)
Other, net	(611)	374	1,769	(4,585)
Subtotal	67,389	27,270	49,845	505,734
Proceeds from interest and dividend income	1,755	2,350	1,415	13,171
Payments for interest expense	(3,101)	(4,191)	(5,493)	(23,272)
Payments for income taxes	(7,697)	(19,409)	(11,038)	(57,764)
Net cash provided by operating activities	58,346	6,020	34,729	437,869
<b>Cash flows from investing activities:</b>				
Proceeds from sale of investment securities	—	355	4,693	—
Payments for purchases of property, plant and equipment	(31,257)	(30,795)	(33,284)	(234,574)
Proceeds from sale of property, plant and equipment	556	662	4,222	4,173
Payments for purchases of intangible assets	(3,093)	(2,112)	(2,957)	(23,212)
Payments for purchases of investment securities, other	(777)	(734)	(1,080)	(5,831)
Proceeds from sale of investment securities, other	286	8,603	49,268	2,146
Proceeds from sale of specified money in trust ("Tokkin")	395	2,284	5,971	2,964
Other	(1,003)	821	697	(7,527)
Net cash (used in) provided by investing activities	(34,893)	(20,916)	27,530	(261,861)
<b>Cash flows from financing activities:</b>				
Net decrease in bank loans	(1,617)	(8,393)	(705)	(12,135)
Proceeds from issuance of long-term debt	57,363	2,294	1,450	430,492
Repayment of long-term debt	(55,340)	(17,817)	(21,734)	(415,310)
Cash dividends paid	(1,084)	(2,892)	(1,254)	(8,135)
Cash dividends paid to minority interests	(723)	(564)	(533)	(5,426)
Other	(659)	146	48	(4,946)
Net cash used in financing activities	(2,060)	(27,226)	(22,728)	(15,460)
<b>Effect of exchange rate changes on cash and cash equivalents</b>	2,852	1,215	(1,104)	21,403
<b>Net increase (decrease) in cash and cash equivalents</b>	24,245	(40,907)	38,427	181,951
<b>Cash and cash equivalents at beginning of year</b>	51,488	91,052	52,190	386,402
<b>Increase in cash and cash equivalents resulting from inclusion of consolidated subsidiaries</b>	875	1,343	435	6,567
<b>Cash and cash equivalents at end of year (Note 13)</b>	¥76,608	¥51,488	¥ 91,052	\$574,920

See accompanying notes.

## 1. BASIS OF CONSOLIDATED FINANCIAL STATEMENTS

Alps Electric Co., Ltd. (the "Company"), a Japanese corporation, and its domestic consolidated subsidiaries maintain their books of account and prepare their financial statements in Japanese yen in conformity with accounting principles and practices generally accepted and applied in Japan, and its foreign consolidated subsidiaries in conformity with accounting principles generally accepted in their respective countries of domicile. The accompanying consolidated financial statements have been prepared from the accounts maintained by the Company and its domestic consolidated subsidiaries in accordance with the provisions set forth in the Commercial Code of Japan and in conformity with accounting principles and practices generally accepted in Japan, which may differ in certain material respects from accounting principles and practices generally accepted in countries and jurisdictions other than Japan.

In preparing the accompanying consolidated financial statements, certain reclassifications have been made in the consolidated financial statements issued domestically in order to present them in a form which is more familiar to readers outside Japan. In addition, the notes to the consolidated financial statements include information which is not required under accounting principles generally accepted in Japan but is presented herein as additional information.

The consolidated financial statements are stated in Japanese yen. The translation of Japanese yen amounts into U.S. dollar amounts is included, solely for the convenience of readers outside Japan, at ¥133.25 = U.S.\$1.00 the prevailing exchange rate on March 31, 2002. The translation should not be construed as a representation that the Japanese yen could be converted into U.S. dollar at the above or any other rate of exchange.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### **(a) Consolidation**

The consolidated financial statements include the accounts of the Company and substantially all its subsidiaries (together, the "Companies"). All significant intercompany transactions and accounts are eliminated in consolidation.

### **(b) Equity method**

Investments in affiliated companies are accounted for by the equity method.

### **(c) Cash equivalents**

In preparing the consolidated statements of cash flows, the Company considers all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents.

### **(d) Investment securities**

Prior to the year ended March 31, 2001, marketable securities had been valued principally at the lower of cost or market, cost being determined by the moving average method, and investment securities other than marketable securities had been stated at cost determined by the moving average method.

Effective April 1, 2000, the Company adopted a new accounting standard for financial instruments which requires the Company to classify investments in securities into three categories: trading, held-to-maturity or other securities. Under the new standard, trading securities are carried at fair value and held-to-maturity securities are carried at amortized cost. Marketable securities classified as other securities are carried at fair value with any changes in unrealized gains or losses, net of income taxes, included directly in stockholders' equity. Non-marketable securities classified as other securities are carried at cost. Cost of securities sold is determined by the moving average method.

As of April 1, 2000, the Company and its consolidated subsidiaries assessed their classification of investments in securities and determined that no change in the classification of these investments was required in applying the new accounting standard for financial instruments.

### **(e) Allowance for doubtful accounts**

The allowance for doubtful accounts is provided at an amount sufficient to cover possible losses on collection. The allowance consists of the estimated uncollectible amount with respect to specific receivables plus a percentage based on historical credit losses. Prior to the year ended March 31, 2001, the maximum amount deductible for Japanese income tax purposes was provided by the Company and its domestic consolidated subsidiaries instead of an amount based on historical experience. This change in the calculation of the allowance for doubtful accounts was made in accordance with a new accounting standard for financial instruments.

### **(f) Inventories**

Inventories held by the Company, its domestic consolidated subsidiaries and its foreign consolidated subsidiaries in Asia are principally stated at cost determined by the weighted average method. Inventories held by its foreign consolidated subsidiaries in the United States and Europe are stated at the lower of moving average cost or market.

### **(g) Property, plant and equipment and depreciation**

Property, plant and equipment is stated at cost. The Company and its domestic consolidated subsidiaries compute depreciation of property, plant and equipment, except for certain buildings, by the declining-balance method at rates based on their estimated useful lives, while its foreign consolidated subsidiaries apply the straight-line method over the estimated useful lives of the respective assets.

Depreciation of buildings purchased after March 31, 1998 is computed by the straight-line method by the Company and its domestic consolidated subsidiaries.

The estimated useful lives are summarized as follows:

Buildings and structures	2-60 years
Machinery	2-13 years
Equipment	2-20 years

#### **(h) Foreign currency translation**

##### **Foreign currency transactions**

Prior to the year ended March 31, 2001, short-term receivables and payables denominated in foreign currencies were translated into Japanese yen at the exchange rates prevailing at the balance sheet date. Long-term receivables and payables denominated in foreign currencies were translated at their historical exchange rates, except that long-term debt hedged with forward foreign exchange contracts was translated at the contracted forward rate.

Effective April 1, 2000, the Company adopted a new accounting standard for foreign currency translation, which requires that all receivables and payables denominated in foreign currencies be translated into Japanese yen at the exchange rate prevailing at the balance sheet date.

##### **Foreign currency financial statements**

The assets and liabilities of the foreign consolidated subsidiaries are translated into Japanese yen at the rates of exchange prevailing at the balance sheet date, except for investments in and advances to unconsolidated subsidiaries and affiliated companies which are translated at their historical exchange rates. Revenue and expense accounts are translated at the average exchange rate for the year. In accordance with a new accounting standard for foreign currency translation adopted effective the year ended March 31, 2001, the Company has included foreign currency translation adjustments in stockholders' equity and minority interests in consolidated subsidiaries. Prior to the year ended March 31, 2001, foreign currency translation adjustments were included in assets or liabilities.

##### **(i) Accrued employees' bonuses**

Accrued employees' bonuses at the balance sheet date are based on an estimate of the amounts to be paid as bonuses in the future by the Company and certain of its consolidated subsidiaries.

##### **(j) Employees' severance and retirement benefits**

Prior to the year ended March 31, 2001, employees' severance and retirement benefits were accrued at an amount sufficient to cover the liability which would be required to be paid if all eligible employees voluntarily retired at the balance sheet date, less the amounts expected to be covered by outside funds.

Effective April 1, 2000, the Company and its domestic consolidated subsidiaries adopted a new accounting standard for retirement benefits, which requires that the Company and its domestic consolidated subsidiaries accrue employees' severance and retirement benefits at an amount calculated based on the retirement benefit obligation and the fair value of the plan assets as adjusted for the unrecognized net retirement benefit obligation at transition, unrecognized actuarial gain or loss and unrecognized prior service cost. Actuarial gain or loss is amortized by the straight-line method over the average remaining years of service of the eligible employees. Prior service cost is being amortized by the straight-line method over one year.

##### **(k) Accrued directors' retirement benefits**

The Company and its domestic consolidated subsidiaries provide accrued directors' retirement benefits based on their internal corporate policy. In the year ended March 31, 2001, the Company and certain of its domestic consolidated subsidiaries changed their method of accounting for directors' retirement benefits from a cash basis to an accrual basis. The Company and certain of its domestic consolidated subsidiaries established an internal policy for directors' retirement benefits, under which the amount of the directors' retirement benefits will increase in proportion to the length of service of the directors. The Company believes this change provides a better matching of costs and revenues over the period of service and results in an improvement in the financial condition.

The portion of the accrual relating to the current year was included in selling, general and administrative expenses. The corresponding portion for the year ended March 31, 2001 totaled ¥173 million. For the year ended March 31, 2001, the portion of the accrual related to prior years, which amounted to ¥1,011 million, was expensed and was included in other, net.

The effect of this change was to decrease operating income and income before income taxes by ¥174 million and ¥1,184 million, respectively, for the year ended March 31, 2001.

##### **(l) Leases**

Finance leases, except for leases under which the ownership of the leased assets is transferred to the lessee, are accounted for as operating leases.

##### **(m) Income taxes**

Effective April 1, 1999 or 1998, the Company and its domestic consolidated subsidiaries adopted a new accounting standard for income taxes. Deferred tax assets and liabilities are determined based on the financial statements and the tax bases of the assets and liabilities using the enacted tax rates in effect for the year in which the temporary differences are expected to reverse. Deferred tax assets are also recognized for the estimated future tax effects attributable to operating loss carryforwards. A valuation allowance is recorded to reduce deferred tax assets if it is more likely than not that some or all of the deferred tax assets will not be realized.

##### **(n) Bonuses to directors**

Bonuses to directors, which are subject to approval by the stockholders approval at the annual stockholders' meeting, are accounted for as an appropriation of retained earnings.

##### **(o) Amounts per share of common stock**

Net income (loss) per share of common stock is computed based on the weighted average number of shares outstanding during the year.

Diluted net income per share of common stock is computed based on the weighted average number of shares of common stock and the contingent issuance of common stock upon the conversion of convertible debentures.

Cash dividends per share of common stock represent the actual amount applicable to each respective year.

##### **(p) Derivative financial instruments**

In the normal course of business, the Company and certain of its consolidated subsidiaries enter into various derivative transactions to manage their exposure to risk arising from fluctuations in foreign currency exchange rates and interest rates. Effective April 1, 2000, the Company and its domestic consolidated subsidiaries adopted a new accounting standard for financial instruments including derivatives. The new accounting standard requires that, with certain exceptions, the Company and its domestic consolidated subsidiaries recognize all derivatives in the balance sheet at fair value. Derivatives which do not qualify as hedges must be adjusted to fair value and recognized in earnings. If the derivative is a hedge, any change in its fair value is deferred until the underlying hedged item is recognized in earnings.

##### **Forward foreign exchange contracts**

A forward foreign exchange contract is recognized in the balance sheet at fair value. Any change in the fair value of a forward foreign exchange contract designated as a hedge of a recognized asset or liability is recognized in earnings. Any change in the fair value of a forward foreign exchange contract hedging a forecasted transaction is deferred until the transaction is recognized in earnings.

**Interest rate swap agreements**

If the interest rate swap agreement qualifies the exception for recognition as a derivative at fair value, under the new accounting standard for financial instruments, the interest rate swap agreement is not recognized at fair value. The differential to be paid or received relating to the interest rate swap agreement is recognized as interest over the life of the agreement.

**(q) Reclassifications**

Certain prior year amounts have been reclassified to conform to the 2002 presentation. These changes had no impact on previously reported results of operations or stockholders' equity.

**3. INVESTMENT SECURITIES**

Marketable securities classified as other securities at March 31, 2002 and 2001 are summarized as follows:

	Millions of yen			Thousands of U.S. dollars		
	2002			2002		
	Cost	Fair value	Unrealized gains (losses)	Cost	Fair value	Unrealized gains (losses)
Securities whose fair value exceeds their cost:						
(1) Equity securities	¥ 3,184	¥ 12,100	¥ 8,916	\$23,895	\$90,807	\$66,912
(2) Debt securities:						
Government bonds	7	7	0	53	53	0
Corporate bonds	3	3	0	23	23	0
(3) Other	20	20	0	150	150	0
Subtotal	3,214	12,130	8,916	24,121	91,033	66,912
Securities whose cost exceeds their fair value::						
(1) Equity securities	426	323	(103)	3,197	2,424	(773)
(2) Debt securities	—	—	—	—	—	—
Subtotal	426	323	(103)	3,197	2,424	(773)
Total	¥ 3,640	¥ 12,453	¥ 8,813	\$27,318	\$93,457	\$66,139

	Millions of yen		
	2001		
	Cost	Fair value	Unrealized gains (losses)
Securities whose fair value exceeds their cost:			
(1) Equity securities	¥3,424	¥ 11,471	¥ 8,047
(2) Debt securities:			
Government bonds	7	7	0
Corporate bonds	6	6	0
Other	1,030	1,030	0
Subtotal	4,467	12,514	8,047
Securities whose cost exceeds their fair value:			
(1) Equity securities	¥ 339	¥ 264	¥ (75)
(2) Debt securities:			
Corporate bonds	1	1	—
Subtotal	340	265	(75)
Total	¥4,807	¥ 12,779	¥ 7,972

Proceeds from sales of securities classified as other securities totaled ¥286 million (\$2,146 thousand) and ¥7,771 million for the years ended March 31, 2002 and 2001, respectively, with gross realized gains of ¥222 million (\$1,666 thousand) for the year ended March 31, 2002, and gross realized gains of ¥1,393 million and gross realized losses of ¥55 million for the year ended March 31, 2001.

Securities recorded at cost at March 31, 2002 and 2001 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Other securities:			
Non-marketable equity	¥ 1,930	¥ 1,585	\$ 14,484
MMF • FFF	—	5,221	—
Domestic CDs	—	11,000	—
Other	144	339	1,080
Subsidiaries' and affiliates' stocks:			
Unconsolidated subsidiaries and affiliated companies	7,327	7,615	54,987
Total	¥ 9,401	¥ 25,760	\$ 70,551

The redemption schedule for securities classified as other securities at March 31, 2002 and 2001 is summarized as follows:

	Millions of yen			Thousands of U.S. dollars		
	2002			2002		
	Due within one year or less	Due after one year through five years	Due after five years or more	Due within one year or less	Due after one year through five years	Due after five years or more
Government bonds	¥ —	¥ 7	¥ —	\$ —	\$ 53	\$ —
Corporate bonds	3	—	—	23	—	—
Other debt securities	—	—	—	—	—	—
<b>Total</b>	<b>¥ 3</b>	<b>¥ 7</b>	<b>¥ —</b>	<b>\$ 23</b>	<b>\$ 53</b>	<b>\$ —</b>

	Millions of yen		
	2001		
	Due within one year or less	Due after one year through five years	Due after five years or more
Government bonds	¥ —	¥ 7	¥ —
Corporate bonds	4	3	—
Other debt securities	50	—	—
<b>Total</b>	<b>¥ 54</b>	<b>¥ 10</b>	<b>¥ —</b>

#### 4. INVENTORIES

Inventories at March 31, 2002 and 2001 consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Finished products	¥41,418	¥48,027	\$310,829
Work in process	21,311	24,264	159,932
Raw materials and supplies	17,089	20,823	128,248
<b>Total</b>	<b>¥79,818</b>	<b>¥93,114</b>	<b>\$599,009</b>

#### 5. BANK LOANS AND LONG-TERM DEBT

Bank loans consisted primarily of overdrafts with banks at interest rates ranging from 0.50% to 5.58% and 0.15% to 7.57% at March 31, 2002 and 2001, respectively.

Long-term debt at March 31, 2002 and 2001 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Secured:			
Loans principally from banks and insurance companies due through 2017 at interest rates ranging from 0.00% to 5.25% and 0.00% to 5.43% at March 31, 2002 and 2001, respectively	¥ 68,965	¥ 46,970	\$ 517,561
Unsecured:			
2.0% domestic convertible debentures due 2002	—	41,938	—
2.1% domestic straight bonds due 2003	20,000	20,000	150,094
1.07% domestic straight bonds due 2007	10,000	—	75,047
0.0% domestic convertible debentures of a consolidated subsidiary due 2007	12,000	—	90,056
	110,965	108,908	832,758
Less amounts due within one year	23,114	54,119	173,463
	¥ 87,851	¥ 54,789	\$ 659,295

At March 31, 2002 and 2001, the following assets were pledged as collateral for long-term secured debt:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Property, plant and equipment, at book value	¥ 6,950	¥ 7,021	\$ 52,158
Shares of a consolidated subsidiary, at market value	4,675	3,904	35,084

The aggregate annual maturities of long-term debt subsequent to March 31, 2002 are summarized as follows:

Year ending March 31,	Millions of yen	Thousands of U.S. dollars
2003	¥ 23,114	\$ 173,463
2004	28,706	215,430
2005	6,842	51,347
2006	12,028	90,266
2007	33,016	247,775
2008 and thereafter	7,259	54,477
Total	¥ 110,965	\$ 832,758

## 6. STOCKHOLDERS' EQUITY

On October 1, 2001, an amendment to the Commercial Code of Japan (the "Code") became effective. The amendment has eliminated the stated par value of the Company's outstanding shares with the result that all outstanding shares had no par value as of October 1, 2001. The amendment also provides that any share issuances after September 30, 2001 will be of shares with no par value. Before the amendment, the Company's shares of common stock had a par value of ¥50.

Under the Code, at least 50% of the issue price of new shares is required to be designated as common stock. The portion which is not designated as common stock is determined by resolution of the Board of Directors. Proceeds not designated as common stock are credited to additional paid-in capital. The Code provides that an amount equal to at least 10% of the amount to be disbursed as a distribution of earnings be appropriated to the legal reserve until the total of

such reserve and additional paid-in capital equals 25% of the common stock account. The Code also provides that, to the extent that the sum of additional paid-in capital and the legal reserve exceeds 25% of the common stock account, the amount of the excess (if any) is available for appropriation by resolution of the stockholders.

The appropriations of retained earnings for the year ended March 31, 2002 will, in accordance with the Code, be proposed for approval at the annual general meeting of the stockholders to be held on June 27, 2002, and will subsequently be recorded in the Company's statutory books of account.

Under the Articles of Incorporation, the Company may issue 100 million shares of preferred stock.

## 7. OTHER INCOME (EXPENSES)

The components of "Other, net" in "Other income (expenses)" for the years ended March 31, 2002, 2001 and 2000 were as follows:

	Millions of yen			Thousands of U.S. dollars
	2002	2001	2000	2002
Losses on disposal of property, plant and equipment	¥ (1,536)	¥ (1,311)	¥ (11)	\$ (11,527)
Reversal of allowance for guarantees	481	3,102	—	3,610
Provision for allowance for guarantees	—	—	(5,436)	—
Write-offs of specified money in trust ("Tokkin")	—	—	(14,209)	—
Gains on sales of investment securities, other	222	1,337	18,744	1,666
Write-offs of investment securities, other	(467)	(161)	(23,956)	(3,505)
Write-offs of inventories	(358)	—	—	(2,686)
Prior years' directors' retirement benefits	—	(1,073)	—	—
Exchange gains (losses), net	1,970	7,494	(1,737)	14,784
Amortization of net retirement benefit obligation at transition	—	(5,022)	—	—
Settlement of lawsuit	6,505	—	—	48,818
Restructuring charges	(9,433)	(973)	—	(70,792)
Other	(53)	(1,159)	(3,414)	(398)
	¥ (2,669)	¥ 2,234	¥ (30,019)	\$ (20,030)

## 8. EMPLOYEES' SEVERANCE AND RETIREMENT BENEFITS

The Company and its consolidated subsidiaries have defined benefit pension plans, i.e., welfare pension plans, tax-qualified pension plans and lump-sum retirement plans, covering substantially all their employees who are entitled to lump-sum payments and/or pension payments, the amounts of which are determined by reference to their basic salary, length of service, and the conditions under which termination occurs.

Certain of the foreign consolidated subsidiaries have defined contribution plans.

The following table sets forth the funded and accrued status of the plans and the amounts recognized in the consolidated balance sheets at March 31, 2002 and 2001 for the Company's and its consolidated subsidiaries' defined benefit pension plans:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Retirement benefit obligation	¥ (136,649)	¥ (122,276)	\$ (1,025,508)
Plan assets at fair value	85,195	87,815	639,362
Unfunded retirement benefit obligation	(51,454)	(34,461)	(386,146)
Unrecognized actuarial loss	43,471	25,257	326,236
Unrecognized prior service cost	(4,959)	(1,982)	(37,216)
Amounts recognized in the consolidated balance sheets, net	(12,942)	(11,186)	(97,126)
Prepaid pension cost	127	87	953
Employees' severance and retirement benefits	(13,069)	(11,273)	(98,079)

The government welfare pension benefit plan has been included in the amounts shown in the above table. In the year ended March 31, 2002, the Company and certain of its consolidated subsidiaries amended their welfare pension plans to reflect certain revisions to the Japanese Welfare Pension Insurance Law, resulting in the recognition of prior

service cost (a reduction of their obligation). Certain of the consolidated subsidiaries have adopted the conventional method of calculating their retirement benefit obligation as set forth in the accounting standard for retirement benefits.

The components of retirement benefit expenses for the years ended March 31, 2002 and 2001 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Service cost	¥ 6,023	¥ 4,068	\$ 45,201
Interest cost	3,588	3,686	26,927
Expected return on plan assets	(2,626)	(3,335)	(19,707)
Amortization of net retirement obligation at transition	—	5,022	—
Amortization of actuarial loss	1,699	—	12,750
Amortization of prior service cost	(1,983)	—	(14,882)
Additional retirement allowances	5,702	—	42,792
Other	118	90	886
Total retirement benefit expenses	¥ 12,521	¥ 9,531	\$ 93,967

The assumptions used in accounting for the pension plans for the years ended March 31, 2002 and 2001 were as follows:

	2002	2001
Discount rates	2.5% (3.0% at the beginning of the year)	3.0% (3.5% at the beginning of the year)
Expected rate of return on plan assets	3.0%	3.5%

## 9. INCOME TAXES

The Company is subject to a number of taxes in Japan based on income, which, in the aggregate, resulted in a statutory rate of approximately 41.5% for the years ended March 31, 2002, 2001 and 2000.

The following summarizes the significant differences between the statutory tax rate and the Company's effective tax rates reflected in the consolidated statements of operations for the years ended March 31, 2002, 2001 and 2000:

	2002	2001	2000
Statutory tax rate	41.5%	41.5%	41.5%
Change in valuation allowance	—	(25.0)	—
Losses on investments in unconsolidated subsidiaries and affiliated companies	—	(5.4)	(9.9)
Income taxes for prior years	(4.5)	3.0	—
Subsidiaries' net operating losses	5.4	3.3	(113.5)
Other	3.1	(0.5)	(0.5)
Effective tax rates	39.3%	16.9%	(82.4)%

The significant components of deferred tax assets and liabilities at March 31, 2002 and 2001 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
<b>Deffered tax assets:</b>			
Net operating loss carryforward	¥ 13,984	¥ 12,763	\$ 104,946
Employees' severance and retirement benefits	4,833	3,855	36,270
Elimination of unrealized gain	2,932	3,216	22,004
Write-offs of specified money in trust ("Tokkin")	2,618	2,674	19,647
Depreciation	2,676	2,580	20,083
Accrued employees' bonuses	1,768	1,708	13,268
Write-offs of investment securities	1,030	1,487	7,730
Allowance for guarantees	795	969	5,966
Land revaluation reserve	582	—	4,368
Other	5,435	4,106	40,788
<b>Total deferred tax assets</b>	<b>36,653</b>	<b>33,358</b>	<b>275,070</b>
Valuation allowance	(6,717)	(7,453)	(50,409)
Net of deferred tax liabilities in the same tax jurisdiction	(4,136)	(3,756)	(31,039)
<b>Deferred tax assets, net</b>	<b>25,800</b>	<b>22,149</b>	<b>193,622</b>
<b>Deferred tax liabilities:</b>			
Unrealized gains on investment securities	3,710	3,336	27,842
Tax deductible reserve	1,315	1,528	9,869
Loss on investment in limited partnership at a consolidated subsidiary	667	507	5,006
Accelerated depreciation of tangible fixed assets at a consolidated subsidiary	249	256	1,868
Unrealized losses on consolidation	224	212	1,681
Other	1,016	707	7,625
<b>Total deferred tax liabilities</b>	<b>7,181</b>	<b>6,546</b>	<b>53,891</b>
Net of deferred tax assets in the same tax jurisdiction	(4,136)	(3,756)	(31,039)
<b>Net deferred tax liabilities, net</b>	<b>3,045</b>	<b>2,790</b>	<b>22,852</b>
<b>Net deferred tax assets</b>	<b>¥ 22,755</b>	<b>¥ 19,359</b>	<b>\$ 170,770</b>

## 10. REVALUATION OF LAND

At March 31, 2002, a domestic consolidated subsidiary revalued its land held for business purposes in accordance with the "Law on Land Revaluation." The method followed for this land revaluation was determined in accordance with the "Enforcement Act Concerning Land Revaluation." Differences arising from the land revaluation have been accounted for as

land revaluation reserve under shareholders' equity at the net amount of the tax effect and the allocation to minority interests.

The carrying value of the land before and after the revaluation was as follows:

	Millions of yen
As of March 31, 2002:	
Carrying value before revaluation	¥4,606
Carrying value after revaluation	3,212

## 11. CONTINGENT LIABILITIES

The Company was contingently liable for trade accounts receivable transferred to banks in the amounts of ¥10,140 million (\$76,098 thousand) and ¥13,776 million at March 31, 2002 and 2001, respectively.

The Company and certain of its consolidated subsidiaries

were contingently liable as guarantors for loans of affiliated companies, other companies and employees in the aggregate amounts of ¥896 million (\$6,724 thousand) and ¥1,311 million at March 31, 2002 and 2001, respectively.

## 12. DERIVATIVE FINANCIAL INSTRUMENTS

The Company and certain of its consolidated subsidiaries have entered into forward foreign exchange contracts and currency swaps with banks to hedge transactions and balances denominated in foreign currencies. Certain consolidated subsidiaries have entered into interest rate swap agreements to change the floating interest rates on the principal of their debt to fixed interest rates in order to hedge their exposure to fluctuations in interest rates.

These derivative transactions are utilized solely for hedging

purposes under the Company's internal control rules and are subject to oversight by the Board of Directors. The Company does not anticipate any credit loss from nonperformance by the counterparties to the forward foreign exchange contracts and interest rate swap agreements.

The notional amounts and the estimated fair value of the derivative positions outstanding at March 31, 2002 and 2001 are summarized as follows:

	Millions of yen			Thousands of U.S. dollars		
	2002	2002	Unrealized gains (losses)	2002	2002	Unrealized gains (losses)
	Notional	Fair value		Notional	Fair value	
Forward foreign exchange contracts:						
Sell:						
U.S. dollars	¥ 15,927	¥ 16,053	¥ (126)	\$ 119,527	\$ 120,473	\$ (946)
Euro	777	777	0	5,831	5,831	0
STG. £	55	55	(0)	413	413	(0)
Buy:						
U.S. dollars	281	281	(0)	2,109	2,109	(0)
Yen	93	92	(1)	698	690	(8)
Foreign currency swaps:						
Receipt-U.S. dollars						
Payment-Brazilian real	83	68	(15)	623	510	113

	Millions of yen		
	2001	2001	Unrealized gains (losses)
	Notional	Fair value	
Forward foreign exchange contracts:			
Sell:			
U.S. dollars	¥ 22,120	¥ 23,099	¥ (979)
Euro	6,283	6,626	(343)
Buy:			
U.S. dollars	1,374	1,403	(29)
Euro	66	66	0

Note: With regard to interest rate swap agreements, the notional amounts and the estimated fair value have been excluded since hedge accounting has been applied.

## 13. CASH AND CASH EQUIVALENTS

A reconciliation between cash and time deposits in the consolidated balance sheets and cash and cash equivalents in the statements of cash flows at March 31, 2002 and 2001 is presented as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Cash and time deposits	¥ 77,252	¥ 34,664	\$ 579,752
Investment securities	152	17,584	1,141
Total	77,404	52,248	580,893
Less:			
Time deposits with a maturity of more than three months when purchased	796	710	5,973
Securities with a maturity exceeding three months when purchased	—	50	—
Cash and cash equivalents	¥ 76,608	¥ 51,488	\$ 574,920

### Non-cash transactions

For the year ended March 31, 2001, as a result of the conversion of debentures amounting to ¥5 million, common stock and additional paid-in capital of the Company increased by ¥2.5 million and ¥2.5 million, respectively.

For the year ended March 31, 2000, as a result of the conversion of debentures amounting to ¥4,814 million, common stock and additional paid-in capital of the Company increased by ¥1,722 million and ¥1,722 million, respectively, and the minority interest in the subsidiary increased by ¥1,370 million.

## 14. LEASES

As lessee:

The Company and certain of its consolidated subsidiaries lease certain machinery, vehicles, equipment, tools and other assets.

The following pro forma amounts represent the acquisition

costs, accumulated depreciation and net book value of the leased assets at March 31, 2002 and 2001, which would have been reflected in the consolidated balance sheets if finance lease accounting had been applied to the finance leases currently accounted for as operating leases:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Acquisition costs of machinery and vehicles	¥ 3,901	¥ 5,166	\$ 29,276
Accumulated depreciation of machinery and vehicles	2,186	2,522	16,405
Net book value	¥ 1,715	¥ 2,644	\$ 12,871
Acquisition costs of equipment and tools	¥ 1,668	¥ 3,179	\$ 12,518
Accumulated depreciation of equipment and tools	1,131	2,190	8,488
Net book value	¥ 537	¥ 989	\$ 4,030
Acquisition costs of intangible assets	¥ 571	¥ 812	\$ 4,285
Accumulated depreciation of intangible assets	398	522	2,987
Net book value	¥ 173	¥ 290	\$ 1,298

Future minimum lease payments (including the interest portion thereon) subsequent to March 31, 2002 for finance leases accounted for as operating leases are summarized as follows:

Year ending March 31,	Millions of yen	Thousands of U.S. dollars
	2002	2002
2003	¥1,006	\$ 7,550
2004 and thereafter	1,418	10,642
	¥2,424	\$18,192

Lease payments relating to finance leases accounted for as operating leases in the accompanying consolidated financial statements totaled ¥1,343 million (\$10,079 thousand), ¥1,973 million and ¥2,072 million for the years ended March 31, 2002, 2001 and 2000, respectively. The pro forma depreciation of the assets leased under finance leases accounted for

as operating leases for the years ended March 31, 2002, 2001 and 2000 amounted to ¥1,343 million (\$10,079 thousand), ¥1,973 million and ¥2,072 million, respectively.

Future minimum lease payments subsequent to March 31, 2002 on non-cancelable operating leases are summarized as follows:

Year ending March 31,	Millions of yen	Thousands of U.S. dollars
	2002	2002
2003	¥ 540	\$ 4,053
2004 and thereafter	652	4,893
	¥1,192	\$ 8,946

As lessor:

A domestic subsidiary leases certain item of machinery, vehicles, equipment and tools.

The following amounts represent the acquisition costs, accumulated depreciation and the net book value of the leased assets under finance leases accounted for as operating leases at March 31, 2002 and 2001:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Acquisition costs of machinery and vehicles	¥ 3,124	¥ 3,544	\$ 23,445
Accumulated depreciation of machinery and vehicles	2,269	2,470	17,028
Net book value	¥ 855	¥ 1,074	\$ 6,417
Acquisition costs of equipment and tools	¥ 1,591	¥ 1,636	\$ 11,940
Accumulated depreciation of equipment and tools	1,314	1,269	9,861
Net book value	¥ 277	¥ 367	\$ 2,079

Future minimum lease income subsequent to March 31, 2002 on finance leases accounted for as operating leases is summarized as follows:

Year ending March 31,	Millions of yen	Thousands of U.S. dollars
	2002	2002
2003	¥ 390	\$ 2,927
2004 and thereafter	711	5,336
	¥1,101	\$ 8,263

Lease income (including interest portion thereon), depreciation and interest portion of lease income for 2002 on finance

leases accounted for as operating leases for the years ended March 31, 2002, 2001 and 2000 were as follows:

	Millions of yen			Thousands of U.S. dollars
	2002	2001	2000	2002
Lease income	¥ 601	¥ 849	¥ 1,063	\$ 4,510
Depreciation	440	620	957	3,302
Interest portion of lease income	89	—	—	668

## 15. SEGMENT INFORMATION

The Companies are primarily engaged in the manufacture and sales of (1) electronic components, (2) audio equipment, and (3) logistics and others. The business segment information of

the Companies for the years ended March 31, 2002, 2001 and 2000 is summarized as follows:

Year ended March 31, 2002	Millions of yen				Consolidated
	Electronic components	Audio equipment	Logistics and others	Eliminations	
Net sales					
Outside customers	¥ 317,342	¥ 194,845	¥ 28,081	¥ —	¥ 540,268
Inter-segment sales and transfer	5,838	1,247	21,613	(28,698)	—
Total	323,180	196,092	49,694	(28,698)	540,268
Costs and expenses	321,144	189,070	46,313	(29,508)	527,019
Operating income	2,036	7,022	3,381	810	13,249
Identifiable assets	313,658	147,412	53,069	(29,308)	484,831
Depreciation and amortization	25,132	5,552	1,878	(72)	32,490
Capital expenditures	22,059	6,808	2,965	(0)	31,832

Year ended March 31, 2001	Millions of yen				Consolidated
	Electronic components	Audio equipment	Logistics and others	Eliminations	
Net sales					
Outside customers	¥ 367,595	¥ 179,663	¥ 25,806	¥ —	¥ 573,064
Inter-segment sales and transfers	7,187	1,952	23,727	(32,866)	—
Total	374,782	181,615	49,533	(32,866)	573,064
Costs and expenses	358,732	177,170	45,868	(33,260)	548,510
Operating income	16,050	4,445	3,665	394	24,554
Identifiable assets	353,698	127,772	50,528	(52,966)	479,032
Depreciation and amortization	24,442	5,385	1,939	(72)	31,694
Capital expenditures	23,886	6,307	1,582	(372)	31,403

Year ended March 31, 2000	Millions of yen				Consolidated
	Electronic components	Audio equipment	Logistics and others	Eliminations	
Net sales					
Outside customers	¥ 357,667	¥ 168,833	¥ 20,441	¥ —	¥ 546,941
Inter-segment sales and transfers	6,085	2,251	15,367	(23,703)	—
Total	363,752	171,084	35,808	(23,703)	546,941
Costs and expenses	349,990	164,786	32,636	(24,342)	523,070
Operating income	13,762	6,298	3,172	639	23,871
Identifiable assets	375,229	121,694	41,316	(38,403)	499,836
Depreciation and amortization	25,952	5,338	2,118	0	33,408
Capital expenditures	26,976	5,607	2,756	(2)	35,337

Year ended March 31, 2002	Thousands of U.S. dollars				Consolidated
	Electronic components	Audio equipment	Logistics and others	Eliminations	
Net sales					
Outside customers	\$ 2,381,554	\$ 1,462,251	\$ 210,739	\$ —	\$ 4,054,544
Inter-segment sales and transfers	43,812	9,359	162,199	(215,370)	—
Total	2,425,366	1,471,610	372,938	(215,370)	4,054,544
Costs and expenses	2,410,086	1,418,912	347,565	(221,449)	3,955,114
Operating income	15,280	52,698	25,373	6,079	99,430
Identifiable assets	2,353,906	1,106,282	398,266	(219,947)	3,638,507
Depreciation and amortization	188,608	41,666	14,094	(541)	243,827
Capital expenditures	165,546	51,092	22,252	(1)	238,889

The effects of the changes in accounting policies and procedures on the business segment information are as follows:

In connection with Note 2 (k), the change in accounting for directors' retirement benefits decreased operating income in the "Audio products" and "Logistics and others" by segments ¥167 million and ¥6 million, respectively, for the year ended March 31, 2001.

The geographic segment information of the Companies for the years ended March 31, 2002, 2001 and 2000 is summarized as follows:

Year ended March 31, 2002	Millions of yen						
	Japan	North America	Europe	Asia	Other areas	Eliminations	Consolidated
Net sales							
Outside customers	¥195,587	¥133,446	¥121,170	¥87,847	¥2,218	¥ —	¥540,268
Inter-segment sales and transfers	223,154	822	19,200	82,013	7	(325,196)	—
Total	418,741	134,268	140,370	169,860	2,225	(325,196)	540,268
Costs and expenses	406,534	132,590	139,848	164,309	2,145	(318,407)	527,019
Operating income	12,207	1,678	522	5,551	80	(6,789)	13,249
Identifiable assets	379,818	51,733	53,599	89,019	1,385	(90,723)	484,831

Year ended March 31, 2001	Millions of yen						
	Japan	North America	Europe	Asia	Other areas	Eliminations	Consolidated
Net sales							
Outside customers	¥258,743	¥131,889	¥107,133	¥ 74,405	¥894	¥ —	¥573,064
Inter-segment sales and transfers	224,031	1,678	10,031	78,530	0	(314,270)	—
Total	482,774	133,567	117,164	152,935	894	(314,270)	573,064
Costs and expenses	455,961	133,404	116,661	149,204	931	(307,651)	548,510
Operating income (loss)	26,813	163	503	3,731	(37)	(6,619)	24,554
Identifiable assets	408,169	51,769	51,270	75,123	362	(107,661)	479,032

Year ended March 31, 2000	Millions of yen						
	Japan	North America	Europe	Asia	Other areas	Eliminations	Consolidated
Net sales							
Outside customers	¥263,905	¥114,085	¥105,600	¥62,118	¥1,233	¥ —	¥546,941
Inter-segment sales and transfers	195,838	2,993	5,130	64,131	0	(268,092)	—
Total	459,743	117,078	110,730	126,249	1,233	(268,092)	546,941
Costs and expenses	435,282	114,970	109,325	124,442	1,302	(262,251)	523,070
Operating income (loss)	24,461	2,108	1,405	1,807	(69)	(5,841)	23,871
Identifiable assets	454,638	46,040	45,897	61,857	489	(109,085)	499,836

Year ended March 31, 2002	Thousands of U.S. dollars						
	Japan	North America	Europe	Asia	Other areas	Eliminations	Consolidated
Net sales							
Outside customers	\$1,467,820	\$1,001,471	\$ 909,343	\$ 659,265	\$16,645	\$ —	\$4,054,544
Inter-segment sales and transfer	1,674,702	6,169	144,090	615,482	52	(2,440,495)	—
Total	3,142,522	1,007,640	1,053,433	1,274,747	16,697	(2,440,495)	4,054,544
Costs and expenses	3,050,912	995,047	1,049,516	1,233,088	16,097	(2,389,546)	3,955,114
Operating income	91,610	12,593	3,917	41,659	600	(50,949)	99,430
Identifiable assets	2,850,417	388,240	402,244	668,060	10,394	(680,848)	3,638,507

The effects of the changes in accounting policies and procedures on the geographic segment information were as follows:

In connection with Note 2 (k), the change in accounting for directors' retirement benefits decreased operating income in the "Japan" segment by ¥174 million for the year ended March 31, 2001.

Overseas sales of the Companies by geographic area for the years ended March 31, 2002, 2001 and 2000 were as follows:

Year ended March 31, 2002	Millions of yen				
	North America	Europe	Asia	Other areas	Total
I Overseas sales	¥131,759	¥121,767	¥123,029	¥5,697	¥382,252
II Net sales					¥540,268
III Ratio of overseas sales to net sales (%)	24%	23%	23%	1%	71%

Year ended March 31, 2001	Millions of yen				
	North America	Europe	Asia	Other areas	Total
I Overseas sales	¥129,880	¥112,569	¥124,436	¥6,998	¥373,883
II Net sales					¥573,064
III Ratio of overseas sales to net sales (%)	23%	19%	22%	1%	65%

Year ended March 31, 2000	Millions of yen				
	North America	Europe	Asia	Other areas	Total
I Overseas sales	¥118,671	¥110,445	¥106,071	¥2,949	¥338,136
II Net sales					¥546,941
III Ratio of overseas sales to net sales (%)	22%	20%	19%	1%	62%

Year ended March 31, 2002	Thousands of U.S. dollars				
	North America	Europe	Asia	Other areas	Total
I Overseas sales	\$988,811	\$913,824	\$923,294	\$42,754	\$2,868,683
II Net sales					\$4,054,544
III Ratio of overseas sales to net sales (%)	24%	23%	23%	1%	71%



■ Certified Public Accountants  
Hibiya Kokusai Bldg. 17th Floor  
2-2-3, Uchisaiwai-cho  
Chiyoda-ku, Tokyo 100-0011  
C.P.O. Box 1196, Tokyo 100-8641

■ Phone: 03 3503-1191  
Fax: 03 3503-1277

## INDEPENDENT AUDITORS' REPORT

The Board of Directors and Stockholders  
Alps Electric Co., Ltd.

We have audited the consolidated balance sheets of Alps Electric Co., Ltd. and consolidated subsidiaries as of March 31, 2002 and 2001, and the related consolidated statements of operations, stockholders' equity, and cash flows for the years then ended, all expressed in Japanese yen. Our audits were made in accordance with auditing standards, procedures and practices generally accepted and applied in Japan and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. The consolidated statements of operations, stockholders' equity and cash flows of Alps Electric Co., Ltd. and consolidated subsidiaries for the year ended March 31, 2000, were audited by other auditors whose report dated June 30, 2000 expressed an unqualified opinion on those statements.

In our opinion, the accompanying consolidated financial statements, expressed in Japanese yen, present fairly the consolidated financial position of Alps Electric Co., Ltd. and consolidated subsidiaries at March 31, 2002 and 2001, and the consolidated results of their operations and their cash flows for the years then ended in conformity with accounting principles and practices generally accepted in Japan applied on a consistent basis.

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2002 are presented solely for convenience. Our audit also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 1 to the consolidated financial statements.

A handwritten signature in cursive script that reads 'Shin Nihon &amp; Co.' with a small flourish at the end.

June 27, 2002

*See Note 1 to the consolidated financial statements which explains the basis of preparation of the consolidated financial statements of Alps Electric Co., Ltd. and consolidated subsidiaries under Japanese accounting principles and practices.*

## DIRECTORS & AUDITORS

(As of June 27, 2002)



**Masataka Kataoka**  
President



**Shigeo Matsubara**  
Representative Senior  
Managing Director  
General Manager,  
Corporate Planning



**Isao Tanimoto**  
Managing Director  
General Manager,  
Business Development  
Headquarters and  
Quality Control



**Hirokuni Tanabe**  
Managing Director  
General Manager,  
Production and Magnetic  
Devices Division



**Kazuya Yoshikoshi**  
Managing Director  
General Manager,  
Automotive Products  
Division

**Directors**  
Kentarō Kutsuzawa  
Seizo Ishiguro  
Tetsuhiro Kiyono  
Koji Hotta  
Yoichi Yasuma  
Yojo Yasuoka  
Hirotohi Okamura  
Koichi Yamazaki  
Hideharu Kougashira  
Takahide Sato  
Katsumi Tobita

**Auditors**  
Akira Yoneda  
Sadao Kunichika  
Mitsunori Narisako  
Akira Takenouchi

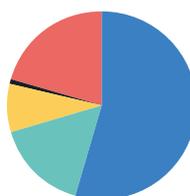
## CORPORATE DATA

### Principal Stockholders

(As of March 31, 2002)

	Percentage of total shares outstanding
Japan Trustee Services Bank, Ltd. (Trust account).....	11.04%
The Mitsubishi Trust and Banking Corporation (Trust account).....	3.90%
Sumitomo Mitsui Banking Corporation .....	3.53%
UFJ Trust Bank, Limited (Trust account)...	3.41%
The Bank of Tokyo-Mitsubishi, Limited .....	3.07%

### Classification of Stockholders



Financial Institutions	54.5%
Foreign Investors	15.9%
Corporations	8.3%
Securities Companies	0.8%
Individual Investors and Others	20.5%

### ALPS ELECTRIC CO., LTD.

(As of June 27, 2002)

#### Head Office/Sales and Marketing

1-7, Yukigaya-otsuka-cho, Ota-ku, Tokyo  
145-8501, Japan  
Phone: +81 (3) 3726-1211  
Fax: +81 (3) 3728-1741

#### Business Development Headquarters

Process Technology Development Center  
Production Engineering Development Center  
Technical Master Training Center

#### Domestic Business Units, Divisions and Sales Branches

Mechatronic Devices Division  
Automotive Products Division  
Communications Devices Division  
Peripheral Products Division  
Magnetic Devices Division  
Kansai Branch

#### Overseas Branch

Hong Kong Branch

#### Domestic Sales Offices: 14

#### Overseas Office

Taipei Representative Office

#### Date of Establishment

November 1, 1948

#### Paid-in Capital

¥22,913 million (US\$172.0 million)

#### Number of Employees

28,181 (As of March 31, 2002)

#### Common Stock

Authorized: 500,000,000 shares  
Issued: 180,727,015 shares  
Number of Stockholders: 19,984

#### Preferred Stock

Authorized: 100,000,000 shares  
Stock Exchange Listings  
Tokyo Stock Exchange  
Osaka Securities Exchange  
Nagoya Stock Exchange

#### Transfer Agent for Common Stock

The Chuo Mitsui Trust & Banking Co., Ltd.  
33-1, Shiba 3-chome, Minato-ku, Tokyo  
105-8574, Japan

ALPS Web Site

<http://www.alps.co.jp>

# OUTLINE OF GLOBAL NETWORK



## 8 ALPS ELECTRIC EUROPA GmbH

European manufacturing and sales base with offices in Düsseldorf, München and Paris

HEAD OFFICE: Hansaallee 203, D-40549, Düsseldorf, Germany  
Phone: +49 (211) 59770 Fax: +49 (211) 5977146



## 13 ALPS ELECTRIC CZECH, s.r.o.

Manufacture of tuners and keyboards for PCs

HEAD OFFICE: Drevarská 17, Boskovice 680 01, Czech Republic  
Phone: +420 (501) 490111 Fax: +420 (501) 455980



## 12 ALPS ELECTRIC (IRELAND) LIMITED

Manufacture of automotive products at two plants in Ireland

HEAD OFFICE & PLANT: Clara Road, Millstreet Town, County Cork, Ireland  
Phone: +353 (29) 70677 Fax: +353 (29) 70603



## ALPS (CHINA) CO., LTD.

An investment company in China that manages financing for production companies in China and supports sales activities

HEAD OFFICE: Nan Yin Bldg., Rm. 2508, No. 2 Dong San Huan Bei Lu, Chaoyang District, Beijing, P.R. of China  
Phone: +86 (10) 64107411 Fax: +86 (10) 64107414



## 23 WUXI ALPS ELECTRONICS CO., LTD.

Manufacture and sale of such mechatronic devices as switches, as well as magnetic heads for computers

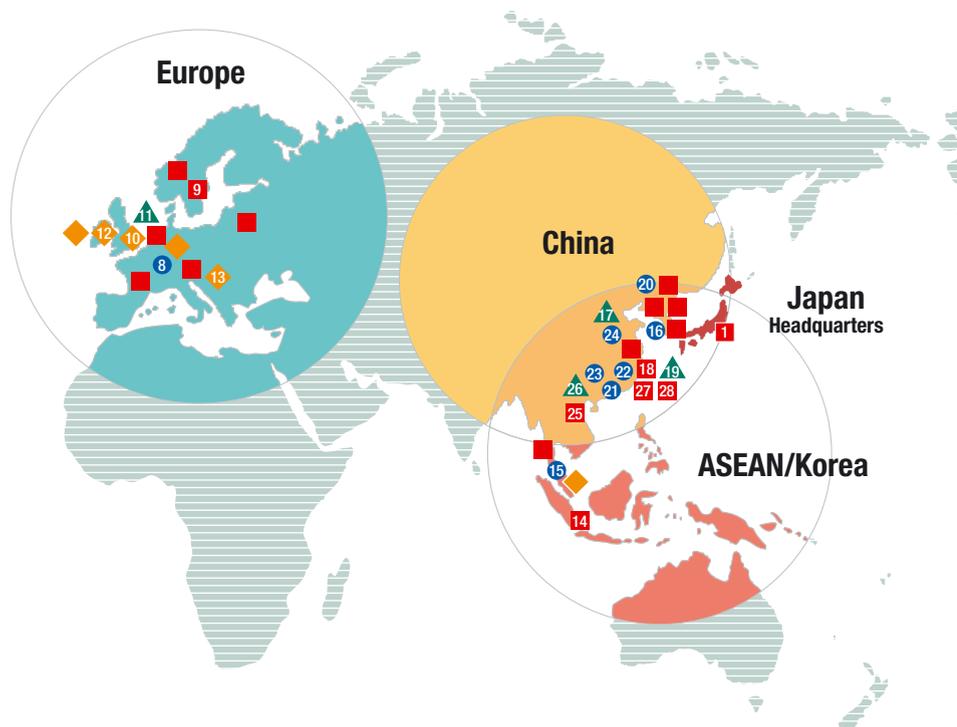
HEAD OFFICE & PLANT: LOT No.135/136, Wuxi-Singapore Industrial Park, Wuxi, Jiangsu, P.R. of China  
Phone: +86 (510) 5281211 Fax: +86 (510) 5280311



## 20 DALIAN ALPS ELECTRONICS CO., LTD.

Manufacture and sale of potentiometers, sensors, automotive products at new plant completed in 2002

HEAD OFFICE & PLANT: No. 6 Hanzheng Road, Jinzhou, Economic Development Zone, Dalian, P.R. of China  
Phone: +86 (411) 7687110 Fax: +86 (411) 7693171





- Manufacturing and Sales Base
- ◆ Manufacturing Base
- Sales Base
- ▲ Holding Company, R&D Center, etc.

1 ALPS Electric Head Office

- ▲ ALPS Electric (North America)
- 3 ALPS Electric (USA)
- 4 ALPS Automotive
- 5 Alcom Electronics
- 6 ALPS do Brasil Indústria e Comércio
- 7 ALPS da Amazonia

- 8 ALPS Electric Europa
- 9 ALPS Nordic
- 10 ALPS Electric (UK)
- ▲ ALPS Electric Technology Center (UK)
- 12 ALPS Electric (Ireland)
- 13 ALPS Electric Czech

- 14 ALPS Electric (S)
- 15 ALPS Electric (Malaysia)
- 16 ALPS Electric Korea

- ▲ ALPS (China)
- 18 ALPS (Shanghai) International Trading
- ▲ ALPS Communication Devices Technology (Shanghai)
- 20 Dalian ALPS Electronics
- 21 Ningbo ALPS Electronics
- 22 Shanghai ALPS Electronics
- 23 Wuxi ALPS Electronics
- 24 Tianjin Alps Electronics
- 25 ALPS Electric Hong Kong Branch
- ▲ ALPS Electronics Hong Kong
- 27 ALPS Electric Taipei Representative Office
- 28 ALPS Electronics Taiwan



**2 3 ALPS ELECTRIC (NORTH AMERICA), INC./ ALPS ELECTRIC (USA), INC.**

Headquarters in San Jose, California; Conducts umbrella control over business in North America as a marketing development and sales base

HEAD OFFICE: 5295 Hellyer Avenue San Jose, California 95138, U.S.A.  
Phone: +1 (408) 361-6400 Fax: +1 (408) 226-7301



**4 ALPS AUTOMOTIVE, INC.**

Headquarters in Detroit, Michigan; manufacture and sale of automotive products; sales offices in Ohio and Indiana

HEAD OFFICE: 1500 Atlantic Boulevard, Auburn Hills, Michigan 48326, U.S.A.  
Phone: +1 (248) 391-9950 Fax: +1 (248) 391-2500



**5 ALCOM ELECTRONICOS DE MEXICO, S.A. de C.V.**

Originally established as a manufacturing base of ALPINE, this subsidiary has served ALPS since 1995 as a production base of automotive products.

HEAD OFFICE: Ave. De Las Misiones Este No. 145, Parque Industrial "Las Californias", Carret. San Luis, Km. 10.5, Mexicali, B.C. C.P. 21600, Mexico  
Phone: +52 (65) 61-77-77 Fax: +52 (65) 61-47-54



**14 ALPS ELECTRIC (S), PTE. LTD.**

Sale of various electronic components throughout the ASEAN region

HEAD OFFICE: 10 Anson Road, #29-15, International Plaza, Singapore 079903  
Phone: +65-62262933 Fax: +65-62207479



**15 ALPS ELECTRIC (MALAYSIA) SDN. BHD.**

Manufacture and sale of various electronic components; holds two plants in Malaysia

HEAD OFFICE & PLANT: Nilai Industrial Estate, Locked Bag No. 3, Nilai Post Office, 71809 Nilai, Negeri Sembilan Darul Khusus, Malaysia  
Phone: +60 (6) 7991515 Fax: +60 (6) 7991654



**16 ALPS ELECTRIC KOREA CO., LTD.**

Manufacture and sale of various electronic components at its comprehensive production facilities that include mold fabrication processes

HEAD OFFICE & PLANT: 970-1, Jangduk-dong, Gwangsan-gu, Kwangju-City, 506-251, Republic of Korea  
Phone: +82 (62) 950-2114 Fax: +82 (62) 951-9722

