



Friendly to people, Friendly to nature.

2005

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# *Social & Environmental Report*

**ALPS ELECTRIC CO., LTD.**

For The Year Ended March 31, 2005



**ALPS<sup>®</sup>**

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## Editorial Policy

Is Alps contributing toward the sustainability of "Spaceship Earth"? It was from this perspective that we reflected on the company's activities and prepared this report. This year, a social report is combined with the usual Environment Report, focusing on relations between we and a group of its stakeholders. The combined report is now called the "Social & Environmental Report". This is our 7th publication of a non-financial annual report.

We have written this report in keeping with the GRI's Sustainability Reporting Guidelines 2002 and the 2003 version of the Environment Reporting Guidelines of the Ministry of the Environment; some contents were also presented in response to reader comments\*.

We hope this will be a useful tool for facilitating valuable communication with all those interested in Alps and its activities. Your reactions and comments from our questionnaires will be useful in guiding our future social and environmental activities.

\*Results of the questionnaire relating to the FY 2004 publication are recorded at the back of the questionnaire inserted at the end of this report.

- Period Covered : April 1, 2004 - March 31, 2005
- Published : June 2005 (The next publication of Alps' Environment Report is planned for June 2006.)
- Scope of this report : Social and environmental activities of Alps Electric Co., Ltd. and overseas production companies.
- Organizations covered : Alps Electric Co., Ltd. only. The environmental performance report presents data from 12 domestic businesses. Some portions include data from manufacturing companies outside of Japan (13 sites).

The environmental symbol shown in the upper right of the front page consists of three major elements of the environment: air, water and soil. This symbol was chosen among many entered by Alps members.

## Company profile

Alps Electric Co., Ltd. has made great advances as a comprehensive manufacturer of electronic components since its establishment in 1948. Alps purchases materials and components that have undergone primary processing from suppliers and further processes them into components and sub-components which are sold to set makers. For this reason, although we don't sell products to end-users, we contribute to people and society through the set makers.

At present, Alps designs and manufactures products in five main business fields—Components, Magnetic Devices, Communications, Peripheral Products and Automotive Electronics. We pursue innovations in technology and production methods at 22 manufacturing bases in 9 nations and at 57 sales bases in 14 nations across the five major regions of Japan, America, Europe, ASEAN/Korea and China.

Alps also counts 94 affiliates in Japan and abroad, including the car audio and car navigation manufacturer Alpine Electronics, Inc. and Alps Logistics Co., Ltd. Alps Logistics has expanded its services well beyond its original specialty of electronic components.

Name of company	Alps Electric Co., Ltd.
Established	November 1, 1948
Capital stock	22,913 million yen
Number of issued shares	180,727,015
Number of employees	6,290 *
Fiscal year ending	Annually on March 31

\* April 2005

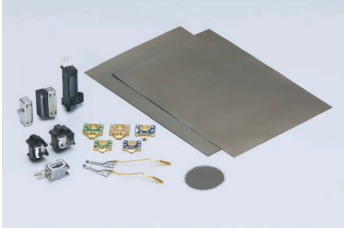
Financial Data (Year ending March 31, 2005)	(Millions of yen)	
	Consolidated	Non-consolidated
Net Sales	643,630	345,379
Operating Income	31,077	6,165
Ordinary Income	30,958	8,465
Net Income	16,315	6,269

## Business Fields



### Components

Potentiometers  
Encoders  
Switches  
TACT Switches  
Sensors  
Connectors  
Cassette Mechanisms



### Magnetic Devices

Magnetic Heads for Audio Applications  
Magnetic Heads for VCR  
Magnetic Heads for Digital Disk  
Electromagnetic Suppression Sheet



### Communications

TV/VCR Tuners  
FM/AM Tuners  
Broadcasting Satellite Tuners  
Transceiver Units for Communication  
Communication Network Modules  
Voltage Controlled Oscillators  
Optical Communication Lens  
Optical Communication Modules  
Camera Module



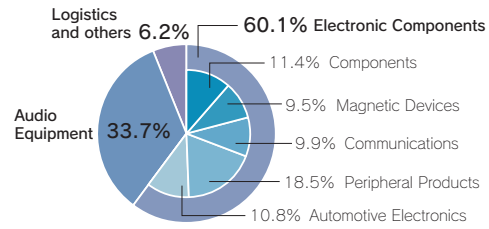
### Peripheral Products

Floppy Disk Drives  
Data Input Devices (Keyboards, etc.)  
Strapcontroller™  
Remote Control Units  
Liquid Crystal Displays  
Low-Profile Operation Units  
Printers



### Automotive Electronics

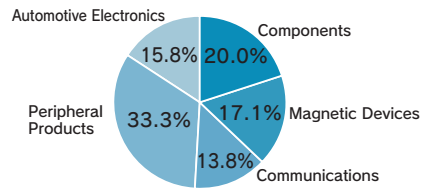
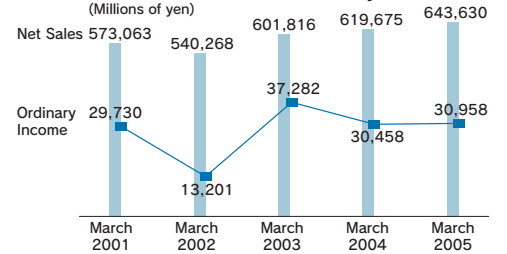
Control Units for Car-Use Mechatronic  
Door Modules  
Steering Modules  
Smart Remote Keyless Entry Systems  
Haptic Commander™



## Breakdown of Consolidated Sales

### Consolidated Sales/Ordinary Income

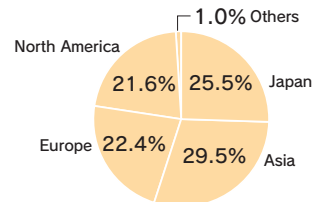
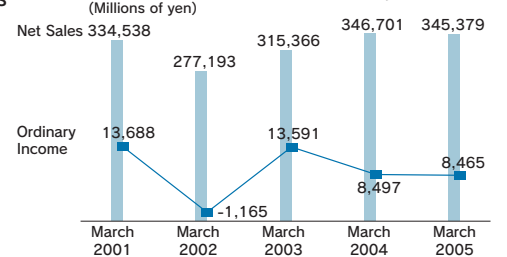
(Millions of yen)



## Breakdown of Non-Consolidated Sales

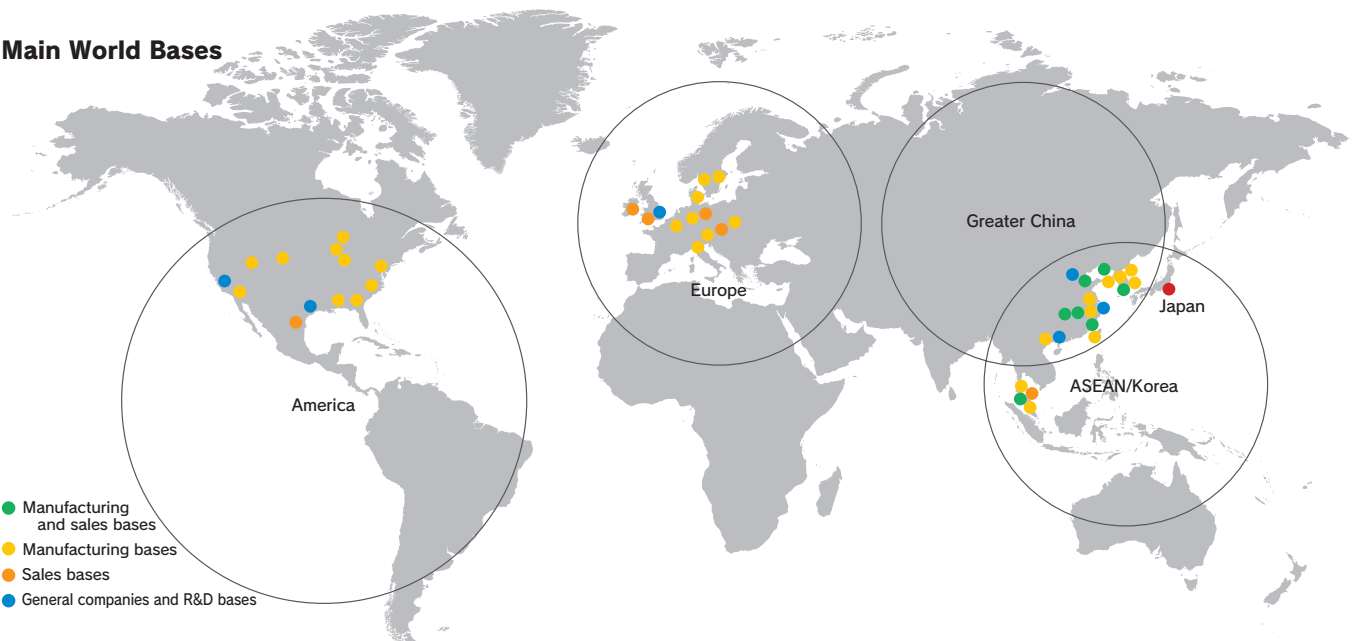
### Non-Consolidated Sales/Ordinary Income

(Millions of yen)



## Comparison of Consolidated Sales Composition by Region

## Main World Bases



# Alps fulfills its responsibilities to society by taking a “Spaceship Earth” approach

President



### Contributing to Society through Products with High “Environmental Value”

In recent years, concerns about the advance of global warming as well as the depletion of energy and resources have grown into serious issues affecting the entire world. Since the oil shocks of the 1970's, Japanese companies have worked steadily to reduce their energy consumption. In 1997, the Kyoto Protocol was drafted setting goals to reduce CO<sub>2</sub> emissions across Japan by 6% compared to 1990 levels. A culmination of efforts since has seen Japan produce and spread more energy-saving products than any other country around the world. Furthermore, energy efficiency at production plants has improved substantially.

Our company's global warming prevention measures have achieved a degree of success in terms of efficiency as a result of various ongoing efforts that include improving production processes and converting spent energy. Nonetheless, we have not been able to improve overall CO<sub>2</sub> emissions due to increased production and changes to product mix.

As a company, we must continue to grow. However, if we aim for growth based on past production methods, it will be very difficult to restrict CO<sub>2</sub> emissions. Addressing the problem of how to maintain a balance between economic growth and CO<sub>2</sub> emissions requires wisdom and ingenuity.

Alps must maintain its policy of using the company's unique technologies to create products with high “environmental value”, that conserve both energy and resources. Specifically, we believe this requires enhanced cooperation with finished good manufacturers and continuous our efforts to develop products that have a lighter impact on the environment.

### Fulfilling Social Responsibility through Greater Internal Awareness

I believe that a company's “social responsibility” goes beyond environmental activities like controlling emissions of CO<sub>2</sub> and hazardous materials to include seizing every opportunity to contribute to society and the local community. To achieve this, a company must work to increase the level of employee awareness by disseminating information within the company. We must communicate with everyone in the company and make them aware of the company's fundamental policies. I believe the ideal situation is when it becomes natural for people to act independently to fulfill their individual responsibility to society.

In addition, when employees return to their homes, they are both consumers and citizens. The efficiency of curtailing corporate CO<sub>2</sub> emissions to prevent global warming is self-evident, but given that the household sector accounts for about 15% of total CO<sub>2</sub> emissions in Japan, it is also important that people work to conserve energy in their own homes.

This year we have decided to distribute this Social & Environmental Report 2005 to all employees as a catalyst for raising employee awareness.

### Spreading Environmental Activities through the World via Business

Another thing we can do is to plead the urgency of environmental problems at every opportunity and work to raise environmental awareness.

While most people in Japan know about the implementation of the Kyoto Protocol, there are many signatory nations whose citizens are still unaware of the agreement.



Alps deals with companies in these countries as a part of its day to day business. Alps has introduced a system of prioritizing suppliers with advanced environmental management and it is through supply chain management and green procurement, that we can encourage our suppliers in Japan, as well as overseas, to carry out their own environmental activities.

All management, from myself to the officers in charge at each location, have many opportunities to meet high-ranking officials and corporate executives from overseas. We must make the most of these opportunities to directly promote the importance of the environment.

### From the Perspective of “Spaceship Earth”

The concept of “Spaceship Earth” is something I have spoken about repeatedly. The phrase was coined by Buckminster Fuller in his 1969 work “Operating Manual for Spaceship Earth.”

When you live here, Japan seems quite large, but when you go overseas, the world seems even larger. In other words, on a human scale, the Earth seems unlimited in its size. However, viewed from space it is no bigger than a poppy seed. Resources are limited, as is space for emitting greenhouse gases and disposing of rubbish. The effect against global warming if only a single country reduces CO2 emissions is very small.

If you think of the Earth as a sealed spaceship, environmental problems do not seem so far away. Looking at the Earth from the perspective of space may allow us to solve environmental problems as well as various other conflicts.

The Kyoto Protocol, which came into effect in February 2005, takes the name of Japan's ancient capital. Japan also boasts a wealth of environmental solution technologies that are respected around the world, such as our energy conservation technologies.

I believe that it would be a marvelous thing if Japan could become the driving force for environmental activities around the world. Alps Electric looks forward to playing a constructive part in ensuring the sustainability of Spaceship Earth and the society inhabited by its crew though the pursuit of the ultimate in fine electronic devices as set out in the Alps Business Domain.

## Alps Corporate Vision

Alps marked 1998, its 50th anniversary, as the year of its Second Founding and formulated a new corporate vision. The vision is a guide to creating new values in the next era, amid the advanced information revolution, which we consider an era of symbiosis between humans and the earth.

### Corporate Philosophy

Alps creates new values that satisfy stakeholders and are friendly to the earth.

### Business Posture

<b>Pursuit of Values</b>	We pledge to conduct our business in pursuit of creating new values.
<b>Harmony with Nature</b>	We pledge to conduct our business in earth-friendly ways that harmonize with the global environment.
<b>Partnership with Customers</b>	We pledge to conduct our business so as to learn from customers and to respond quickly to their needs.
<b>Fair Management</b>	We pledge to conduct our business fairly, based on a worldwide perspective.
<b>Respect of the Individual</b>	We pledge to conduct our business so as to encourage and take advantage of the enthusiasm of our valued employees.

### Business Domain

Pursuit of the ultimate in fine electronic devices.

Our goal is to build products that facilitate user-friendly communication and relationships between people and media.

Alps seeks the essence of "ultimate in fine electronic devices" in following three basic characteristics.

- Right - The beauty of being highly balanced in terms of aesthetic, price, function, performance and quality.
- Unique - The beauty of containing not only a new and interesting appearance but also the originality that matches with customer needs.
- Green - The beauty of being friendly to the environment through the entire product life cycle.

### Action Guidelines

1. Alps people will realize new values through flexible thinking and bold actions.
2. Alps people will preserve the natural environment and treat precious resources with great care.
3. Alps people will meet customers' expectations by making decisions quickly and implementing them speedily.
4. Alps people will act fairly, working to adhere to world rules and to understand different cultures.
5. Alps people will function as teams of professionals seeking to refine their specialist skills.

# Environmental Management

Alps is pursuing global ISO14001 certification and expanding its environmental preservation activities with the Environment Charter as its foundation.

## Approach to Environmental Preservation

At Alps, we consider it to be our social responsibility not just to limit ourselves to compliance with laws and regulations as has been done in the past, but to undertake more proactive, more preventative activities. This was the basis for our Environmental Charter, which we introduced in 1994.

Today, 10 years after its introduction, Alps' operations

have expanded globally, requiring a global management system both for manufacturing processes and for our products. We are acquiring certification under the international environmental management system standard ISO 14001 and steadily improving our system for protecting the environment.

## 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

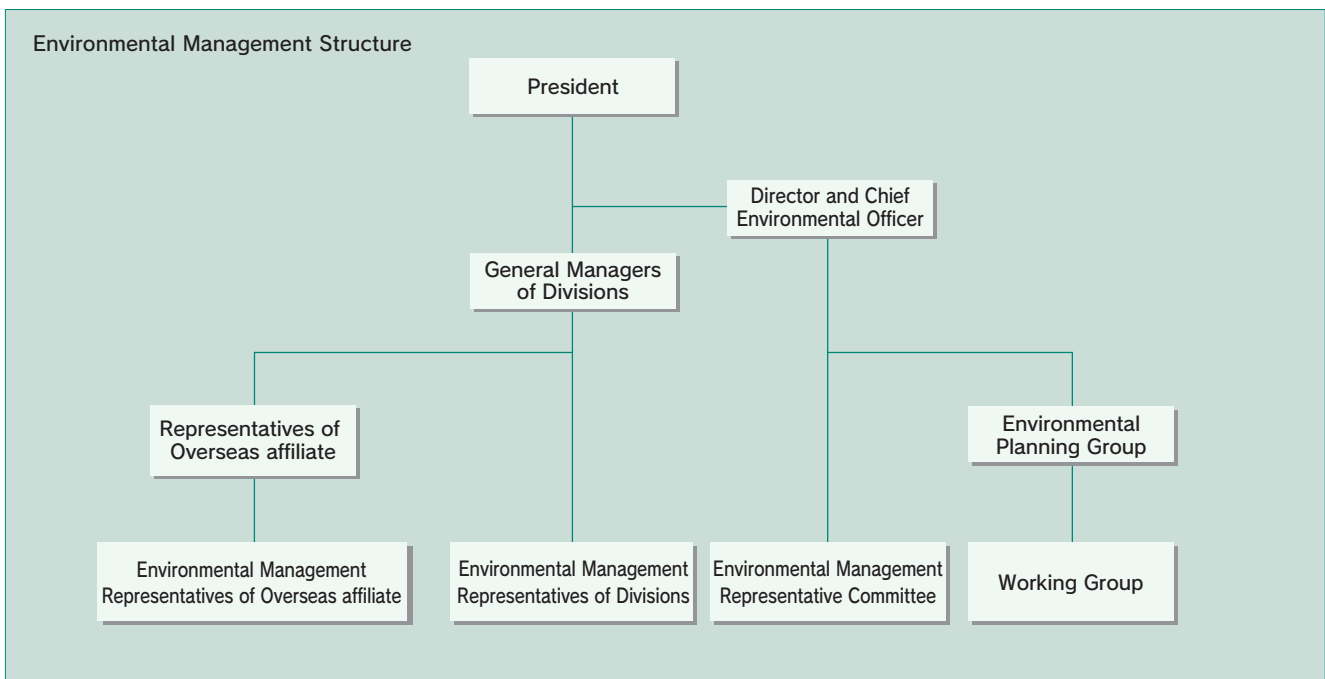
Putting a priority on environmental protection, we at Alps will:

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

## Organizational Structure for Environmental Activities

Our environmental policies and strategies are set by the Environmental Management Representative Committee, the Chairman of which is the Director and Chief Environmental Officer, and also in consultation with the Board of Directors Meeting when necessary. Policies and

strategies decided in this process are put into effect throughout the company through general managers of each business division with the assistance of environmental management representatives.



## ISO 14001 and Environmental Audits

Alps believes that the Environmental Management System of ISO 14001 is a crucial tool and is endeavoring to earn this certification group-wide.

All of our divisions in Japan, including our Process Technology Development Center and 12 of our overseas affiliates have

completed certification so far. Alps UK was certified in FY 2005 and we plan to complete this process at all our manufacturing bases.

Our qualified facilities perform internal environmental audits one or two times a year, in keeping with ISO 14001 regulations.

### ISO 14001 certification status listing

Target bases: 20 Certified bases: 19 Percent certified: 95%

	Business division	Registration date	Business areas
Japan	Communication Devices Division	August 14, 1998	Development and production of communications and broadcasting products
	Mechatronic Devices Division	October 30, 1998	Development and production of mechatronic components and devices
	Automotive Products Division		Development and production of automotive electronics
	Production Engineering Development Center		Production technology development, esp. die design and production, superprecision processing technology and advanced mounting technology
	Peripheral Products Division	November 27, 1998	Development and production of input, output and display devices
	Magnetic Devices Division	December 24, 1999	Development and production of magnetic recording heads
	Process Technology Development Center	March 17, 2000	R&D on new technology and new materials based on established process technologies
Overseas	Alps Electric (Ireland) Limited	April 9, 1997	Production of automotive electronics
	Alps Electric Europa GmbH Dortmund Plant	July 3, 2000	Production of component products, automotive electronics and display devices
	Alps Electric (Malaysia) Sdn. Bhd. Jengka Plant	September 12, 2000	Production of broadcasting products and input devices
	Alps Electric Korea Co., Ltd.	June 18, 2001	Production of automotive electronics, communications/broadcasting products, input devices and magnetic recording heads
	Alcom Electronicos De Mexico, S.A. de C.V.	December 6, 2001	Production of automotive electronics
	Wuxi Alps Electronics Co., Ltd.	March 20, 2002	Production of component products and magnetic recording heads
	Dalian Alps Electronics Co., Ltd.	June 14, 2002	Production of component products and automotive electronics
	Alps Electric (Malaysia) Sdn. Bhd. Nilai Plant	August 12, 2002	Production of component products, magnetic recording heads and input devices
	Alps Electric Czech, s.r.o.	January 15, 2003	Production of broadcasting products and input devices
	Shanghai Alps Electronics Co., Ltd.	January 6, 2004	Production of communications/broadcasting products
	Ningbo Alps Electronics Co., Ltd.	June 1, 2004	Production of magnetic recording heads, cylinder units and TACT switches.
	Tianjin Alps Electronics Co., Ltd.	December 11, 2004	Production of computer keyboards and mobile phone LCDs

## Legal Compliance

Alps seeks to comply with laws and regulations by anticipating them with voluntary standards that are more stringent than the upcoming legal requirements.

In FY 2004, wastewater at the Process Technology Development Center exceeded the sewage standards for pH, BOD, and n-hexane extracts. This is thought to have been caused by part of the build-up and subsequent release of solids on the interior of the canteen wastewater pipes. To prevent recurrence, we have decided to regularly clean the pipes. Also, at the Furukawa factory, the sound level at the boundary with the public road that cuts across the factory was 55dB, exceeding the standard value of 50dB. In FY 2005 we plan to abolish the generators and waste fluid incinerators that were the cause of the noise.

Alps did not experience any environmental accidents in FY 2004, nor was it the subject of any environmental fines, legal action, or complaints from local residents.

## Environmental Education

Alps conducts environmental education for employees that is relevant to their duties, and each division also conducts specialized education such as internal environmental auditor training. Training methods vary, particularly at manufacturers outside of Japan, since legal requirements and customs differ by country or region.

At the Jengka Plant of Alps Electric (Malaysia), we undertake induction training for new employees every month, and conduct training for vendors once a year. Employees of Alps Electric Korea receive specialized training, such as environmental impact assessment and waste management for environmental officers. At Alcom Electronicos De Mexico, 1,801 employees have received training in environmental safety. A yearly education plan has been drawn up at Dalian Alps; in addition to training for all employees, there is also specific training for managers, administrative department staff, new employees, and internal auditors. The training implementation rate so far is 100%. About 3,100 employees have been given environmental education at Tianjin Alps as well.

# Fiscal 2004 Plan and Results

This report presents the FY2004 results of the Fourth Medium-Term Voluntary Action Plan for Environmental Protection.

## Midterm report on the Fourth Medium-Term Voluntary Action Plan for Environmental Protection

In FY2002 Alps established its Medium-Term Voluntary Action Plan for Environmental Protection, covering the 2003-2005 fiscal years and applicable to its bases in Japan. This plan sets concrete, numerical targets for continuous reductions of CO<sub>2</sub>, greenhouse gases and wastes.

In FY2004 we achieved our zero-emissions goal for waste.

As for pursuing green product designs, we are promoting green procurement to eliminate hazardous substances from our products.

The table below sums up results of activities in FY2004 and our self-assessment of them.

## The Fourth Medium-Term Voluntary Action Plan for Environmental Protection and FY2004 Results

Objective	Action target (FY2003-FY2005)
<b>Management</b> Develop an appropriate organizational structure and foster environmental awareness in each employee to achieve effective environmental management.	<b>Environmental Management System</b> 1. Acquirement of ISO 14001 certification at overseas bases 2. Promotion of information exchange with overseas operations
	<b>Environmental communication (External)</b> 1. Periodical publication of environmental reports 2. Information distributions on the website
	<b>Environmental education</b> Enhancement of environmental education programs for managers/engineers
	<b>Environmental accounting</b> Establishment of environmental accounting
<b>Environmental initiatives through our products</b> Reduce the environmental load with environmentally conscious development and engineering.	<b>Design for environment</b> 1. Promotion of environmentally conscious engineering and development 2. Development of chemical substance database
	<b>Reduction of hazardous substances</b> 1. Complete elimination of banned substances Completely eliminate the use of lead, cadmium and hexavalent chromium by the end of 2004 2. Reduction of restricted substances
	<b>Green procurement</b> Prioritizing purchases from environmentally conscious business partners
<b>Environmental initiatives in our plants and offices</b> Reduce the environmental load in production process and office operation.	<b>Prevention of global warming</b> 1. Reduction of CO <sub>2</sub> emissions Reduce FY2005 CO <sub>2</sub> emissions from energy consumption per unit of output <sup>(Note 1)</sup> by 20% from FY2001 level 2. Reduction of greenhouse gas (aside from CO <sub>2</sub> ) emissions Reduce the use of PFCs and HFCs <sup>(Note 2)</sup> at the end of FY2010 by 60% from FY1998 level
	<b>Recycling</b> 1. Complete achievement of zero-emissions Completely achieve zero-emissions by FY2004 2. Reduction of total amount of waste Reduce the amount of waste per unit of output <sup>(Note 1)</sup> in FY2005 by 20% from FY2001 level
	<b>Management and reduction of chemical substances</b> 1. Management of chemical substances Reduce the risk of contamination by promoting appropriate management of chemical substances 2. Complete elimination of ozone-layer depleting substances Completely eliminate the use of HCFCs <sup>(Note 3)</sup> by the end of 2003
	<b>Green purchasing</b> Promotion of green purchasing for office supplies and companyowned cars
	<b>Logistics</b> Promotion of environmentally conscious logistics
	<b>Social service activities</b> Promotion of activities in society supporting environmental protection

Notes: 1 Amount per unit of output: A value found by dividing the amount of CO<sub>2</sub> emissions or waste emissions by the value of production

2 PFCs and HFCs: Perfluorocarbons and Hydrofluorocarbons

3 HCFCs: Hydrochlorofluorocarbons

4 GWP: Global Warming Potential. Index describing the relative warming of a unit mass of a greenhouse gas in comparison to the same mass of CO<sub>2</sub>.



## Progress report on the Fourth Medium-Term Voluntary Action Plan for Environmental Protection



Progress toward meeting the targets of the Fourth Medium-Term Voluntary Action Plan for Environmental Protection is good overall, but Alps is behind schedule on a few items.

Alps began its efforts to earn ISO 14001 certifications in 1995; presently, we have earned it at all sites except one overseas base. We anticipate that all bases will be certified by the end of FY2005.

Alps is assessing its suppliers as green procurement sources to meet its goal of eco-friendly design, and is constantly updating and expanding its Database for Chemical Substance Management. We have successfully removed all the substances targeted for elimination in 2004, except for some, for which replacements still face technical problems.

The results of our efforts to prevent global warming have been set back by our expansion of energy-intensive manufacturing processes (especially in clean rooms), production cutbacks, and

very hot weather.

However, thanks to the efforts of each division, the whole company was able to achieve zero-emission targets. At the same time, we have reduced the total amount of waste discharged.

Alps reached its goal of eliminating HCFCs in 2003 by switching to alternatives. We were also able to reach our FY2010 targets for PFCs and HFCs.

We will step up our efforts, not only for the targets where Alps is behind schedule, but also for those we have nearly accomplished.

Senior Managing Director  
Takahide Sato

Results of activities in FY2004	FY2004 self-evaluation	page
1. Two overseas bases newly acquired ISO 14001 certification. Twelve out of 13 bases have been certified Ningbo Alps Electronics (June 2004), Tianjin Alps Electronics (December 2004)	B	6
2. Head office staff used e-mail to exchange information with production bases	B	—
1. Environmental Report published (June 2004)	B	—
2. Information distributions on the website	B	—
Held chemical control study sessions (Japan)	B	6
Aggregated costs and effects. Ran trial evaluation on overall environmental performance	B	9
1. Continued performing product assessment	B	14
2. Began using the Database for Chemical Substance Management (October 2003)	B	21
We have successfully abolished all use of cadmium and hexavalent chromium. We have also completed the abolition of lead, except for surface treatment of narrow pitches in line with measures to deal with whiskers.	B	14
Performed evaluations on vendors. Gave training sessions to concerned departments overseas	B	21
1. CO <sub>2</sub> emissions per unit output: 44.7t/100 million yen 7.4% reduction from FY2001 level (progress) 13.3% increase from FY2003 level (fallback)	C	10
2. PFCs/HFCs Purchases (GWP (Note 4) conversion bases) per unit output: 35,000t 62.6% reduction from FY1998 level (progress) 3.2% reduction from FY2003 level (progress)	A	10
1. Zero-emissions achieved domestically	A	13
2. Waste emissions per unit output: 4.16t/100 million yen 16.0% reduction from FY2001 level (progress) 12.6% reduction from FY2003 level (progress)	B	13
1. Learned emergency risks, installed equipment to prevent leaks and gave training	B	11
2. HCFCs Purchases: 0t Completely eliminated usage in December 2003	A	11
Prepared for green purchasing of office supplies in head office area and some divisions	B	—
Reduced hazardous substances in packaging materials. Made shipping systems more efficient	B	14
Performed cleanups around various work sites	B	22

Self-evaluation  
A: Achieved  
B: Efforts proceeding well  
C: Efforts behind schedule

# Status of Environmental Load, and Environmental Accounting

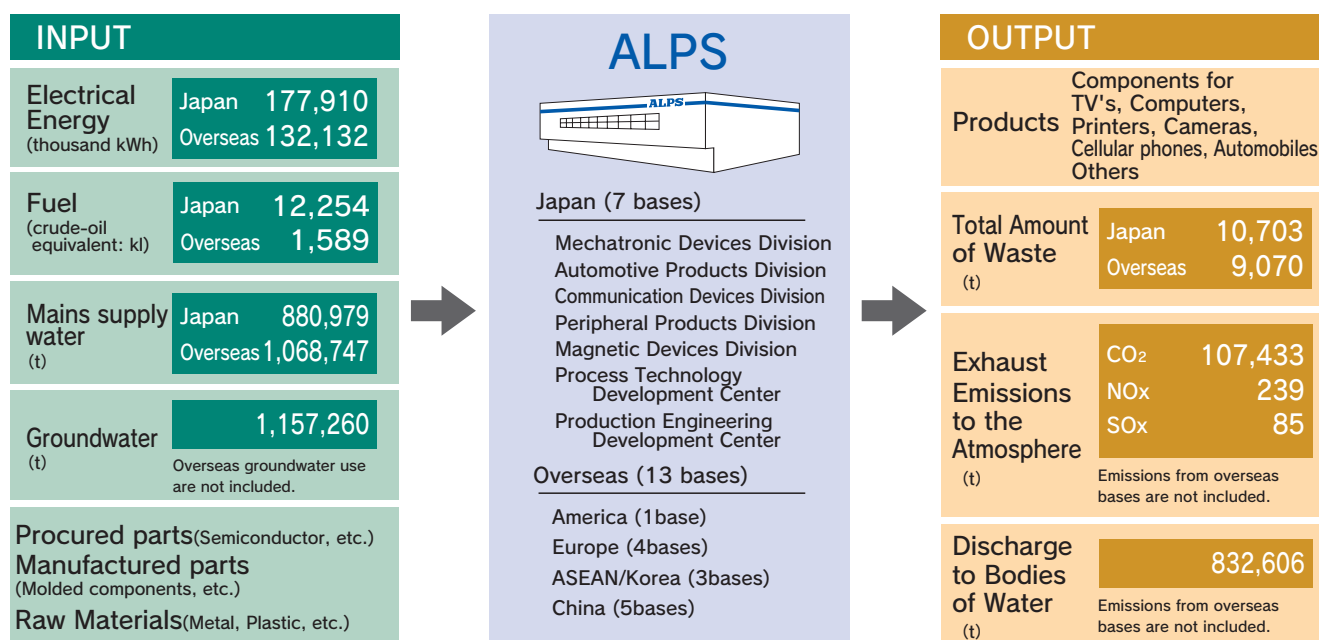
Along with the global expansion of our operations, Alps is advancing in quantitative understanding of the environmental loads at our overseas manufacturing bases.

## Material Balance (Inputs and Outputs Diagram)

We have been reporting our material balance (inputs and outputs), including overseas information, since FY 2003.

However, the laws and environmental assessment procedures vary overseas, so it has taken longer to get quantitative data than it does in Japan. For this reason, it is presented separately to the Japanese information, of which we have a compre-

hensive understanding. The overseas environmental load generated by our activities will become more significant as we expand abroad. We will continue our efforts by increasing the range of categories for which we collect data and using this data to reduce environmental load.



## Environmental Accounting

Alps introduced our environmental accounting (Note 1) system in 2000, following the guidelines of the Ministry of the Environment, to monitor our environmental costs and associated economic benefits.

The investment expenditure on FY 2004 environmental costs (Note 2) was in line with last year's, and the cost expenditure has fallen slightly. This drop was due to the completion of

green procurement and the Database for Chemical Substance Management systems. The economic benefits (Note 3) derived in FY 2004 were roughly the same as in FY 2003.

- Notes
- 1: Environmental accounting covers only Alps Electric Co., Ltd. in Japan, and not the Group as a whole.
  - 2: Environmental costs are the total of all investments and costs whose chief purpose is protection of the environment. The total of each such investment or cost is used; the total is not allocated between environmental purposes and other purposes.
  - 3: Economic benefits include sales of wastes that have been separated, recovered and recycled, and electric, fuel and other cost savings resulting from energy conservation. Economic benefits do not include expected effects, e.g. increases in sales resulting from making products lead-free.

## Environment Costs in FY2004 (Japan)

Classification	Main Objective	Investment (Note1) (FY2003)	Cost (Note2) (FY2003)
Operation costs	Pollution prevention, waste product recycling	216.3 (164.2)	537.3 (531.0)
Upstream and downstream production costs	Green Procurement, Database for Chemical Substance Management	12.2 (15.1)	135.2 (270.8)
Management activities costs	ISO 14001-certified maintenance	0.0 (0.3)	131.3 (160.1)
R&D costs	Developing lead-free products	10.0 (0.0)	32.3 (22.2)
Social activity costs	Community cleanup activities	0.0 (0.0)	11.4 (17.4)
Cost of rehabilitating environmental damage	Groundwater remediation	12.0 (66.3)	180.0 (190.2)
Others	-	0.0 (0.0)	0.0 (0.0)
Total		250.4 (245.8)	1,027.6 (1,191.6)

Unit: Millions of yen

## Economic Benefits of Environmental Protection Measures in FY2004 (Japan)

Classification	Value (FY2003)
Profit on sales of resources with monetary value	1,163.0 (1,239.4)
Cost reduction as a result of energy saving	49.4 (41.3)
Total	1,212.3 (1,280.7)

Unit: Millions of yen

- Notes:
1. Investment includes both capital investment and total leasing expenses.
  2. Costs include maintenance and administration costs, depreciation and amortization costs, and lease costs for relevant fiscal year.

# Global Warming Prevention Energy Conservation

like saving energy day to day and upgrading equipment are ways that Alps as a whole works to prevent global warming.

## Initiatives to Save Energy and Reduce Greenhouse Gas Emissions.

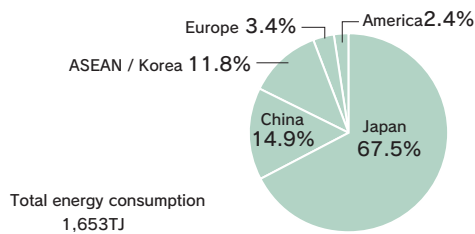
Reducing the release of CO<sub>2</sub> and other greenhouse gases to the atmosphere is critical to preventing global warming.

We are endeavoring to conserve energy across the board to reduce CO<sub>2</sub> emissions by improving the efficiency of manufacturing equipment and adjusting hours of operation, as well as continuing to conserve energy used in buildings and equipment. We are also continually introducing more energy-saving equipment.

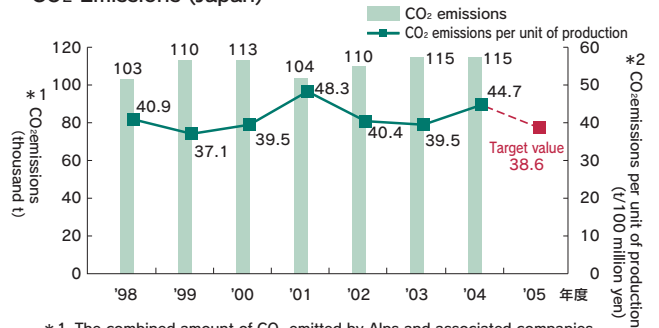
The other greenhouse gases with which Alps is primarily concerned are PFCs\*. Alps is actively studying alternatives to these substances in order to reduce the volume used.

\*PFCs: Perfluorocarbons. CFC with a strong greenhouse effect, although they do not contain chlorine and do not attack the ozone layer.

## Energy Consumption (Joule conversion bases) (global)

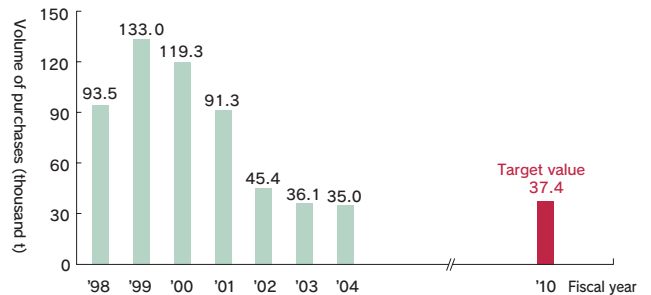


## CO<sub>2</sub> Emissions (Japan)



\* 1 The combined amount of CO<sub>2</sub> emitted by Alps and associated companies.  
 \* 2 CO<sub>2</sub> emissions per unit of production: Total CO<sub>2</sub> emissions divided by the value of production.  
 ※ We have corrected and replaced the data from last year's report.

## Purchased Volume of PFCs (GWP\* conversion bases) (Japan)



\* GWP : Global Warming Potential. Index describing the relative warming by a unit mass of a greenhouse gas in comparison to the same mass of CO<sub>2</sub>.

## Initiatives around the world

### Japan

Our goal is to reduce CO<sub>2</sub> emissions resulting from energy consumption by 20% per unit of production by FY2005 as compared to FY2001. Emissions in Japan for FY2004 were 44.7 tons of CO<sub>2</sub> for every 100 million yen in production value, representing a 7.4% reduction since FY2001. This does, however, represent a 13.3% increase since FY2003. This resulted from the reduced utilization rate due to decreased production and the aftermath of the earthquake in Niigata Prefecture.

In FY2004, the Ministry of Economy, Trade and Industry conducted a Type-1 on-site energy management study for selected plants; we received plaudits for many of our factories. We will maintain our sophisticated management system, and undertake even more energy conservation initiatives.

In 2004 we introduced high-efficiency transformers and improved a range of equipment including lighting, motor inverters, and air compressor controllers. In the Peripheral Products Division, we held an Energy Conservation Contest, with 784 energy conservation proposals submitted. These included ideas for saving power in printing batch furnaces, for changes in press control circuits, and for integration of servers.

We had set the goal of reducing use of PFCs to 60% of the FY1998 level by the end of FY2010. We have already achieved this goal in FY2003, and have further cut use by another 3% in FY2004. We plan to further reduce the remaining few tons used per year. In FY2005, we will continue investigating substitute products

### China

Shanghai Alps had separate soldering equipment (reflow furnaces) set up for each of the two production lines. We were able to save space and energy by sharing one between the two.

We were also using drying furnaces to dry the adhesive after the soldering process; we have eliminated the furnaces and have changed to a process of drying with waste heat alone.

With this new process, we were also able to eliminate the second reflow furnace and the 7 drying furnaces, and save 186kWh of power.

Dalian Alps used the heat generated by the production equipment for internal heating and was able to reduce energy consumption for annual heating by an equivalent of 270 tons of coal, from the FY2003 level of 810 tons to 540 tons in FY2004. This was made possible by rearranging equipment in the factories so that heat from molding machines, which produce a lot of heat, is channeled to buildings with no molding machines.

### ASEAN / Korea

At Alps Korea, we substituted the turbo freezer used until April 2005 with an inverter-powered style that uses 26.5% less energy. We also changed the coolant to an ozone-neutral substance, completing our full abolition of ozone-depleting substances.



Lines that have implemented energy conservation

# Environmental Risk Management

Alps is working to prevent accidents and reduce the risk of pollution by strictly managing chemicals and waste emissions.

## Chemical Substance Management

Chemicals are indispensable to industry, but they also bear the risk of serious environmental damage if improperly used or managed. Alps has established Alps Environmentally Hazardous Substance Control Standard governing chemicals that the Group uses in products and processes in Japan and abroad. To this it has added the intranet-based Supporting System for Managing Chemical Substances Contained in Products, which allows our bases around the world to share information through our Database for Chemical Substance Management (See page 21).

Alps has worked to replace ozone-depleting HCFCs\*1 with water-based solvents. Through these efforts, all of our bases around the world have reached our goal of eliminating HCFC usage by the end of FY2003.

Integral to our system for complete management of end-of-life devices is a plan for sequential treatment for PCBs\*2 as processing begins in each country. We are also undertaking studies on the amounts of trace PCB levels in high-voltage transformers currently in use.

Alps will continue to report the use of chemical substances to the government in accordance with the PRTR\*3 Law, and will store and manage chemicals properly.

\*1 HCFCs: Hydrochlorofluorocarbons. This class of fluorocarbons is used as a substitute for chlorofluorocarbons (CFCs), but is subject to the regulations of the Montreal Protocol and is to be taken out of production by 2020.

\*2 PCB: Polychlorinated biphenyl. Japan's Law for the Special Treatment of PCBs, in effect since July 2001, requires businesses to report on their storage and disposal of these chemicals and to dispose of them appropriately. We have found that traces of PCBs exist in the insulation oil of some heavy electric machinery, even after the prohibition of production of PCBs. This issue remains unresolved.

\*3 PRTR: The scheme by which we determine the point(s) where these various hazardous substances are emitted, calculate how much of each is released into the environment and how much is transported off-site in waste material, and then disclose these data publicly. This scheme is now in place in several nations. Businesses that manufacture or use the target chemicals must collect these data for themselves and report them to a government organization.

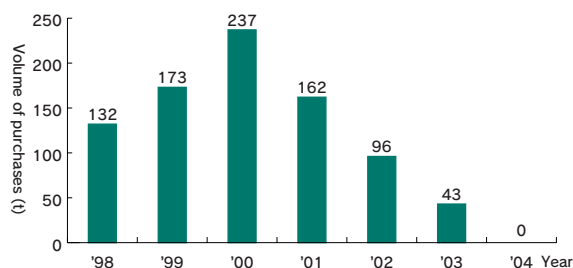
## Results of Survey of PRTR Substances (Japan).

Unit: t/year (except for dioxins)  
μg (Microgram; 10<sup>-6</sup>g) for dioxins.

Objective Volume	Volume	Emission volume		Transferred volume	
		Air	Water	Waste	Sewage
Inorganic cyanide compounds	7.1 (8.1)	0 (0)	0 (0)	0.5 (0.5)	0 (0)
Nickel	10.9 (11.7)	0 (0)	0 (0)	0.1 (0.1)	0 (0)
Nickel compounds	10.8 (5.8)	0 (0)	0 (0)	7.1 (2.4)	0 (0)
Silver and its water-soluble compounds	9.3 (9.7)	0 (0)	0 (0)	0.1 (0.1)	0 (0)
Dioxins	— (—)	100 (74)	0 (0)	0.0 (0.0)	0 (0)
Lead and its compounds	1.5 (2.8)	0 (0)	0 (0)	0.3 (0.3)	0 (0)
Ethylene glycol	6.5 (6.0)	0 (0)	0 (0)	6.5 (6.0)	0 (0)
1,1-Dichloro-1-fluoroethane	0.0 (28.6)	0 (25)	0 (0)	0.0 (3.6)	0 (0)

Data in parenthesis are from FY2003

## Volume of HCFCs Purchased (Japan).



## Initiatives around the world

### Japan

Substances subject to the PRTR Law, which went into effect in 1999, are reported to the government. The reason for the doubled consumption of nickel compounds since FY2003 is that use in the Magnetic Devices Division has increased.

### China

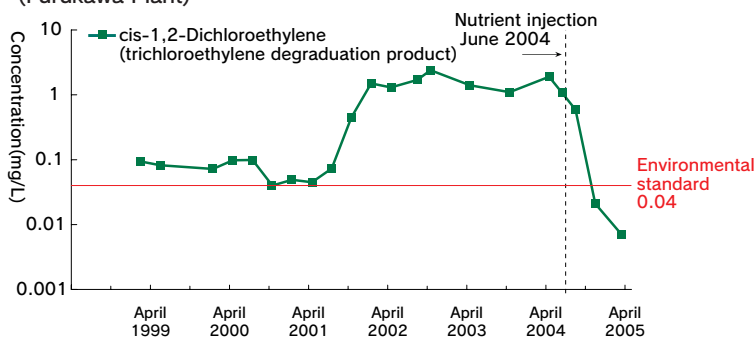
We have completely abolished use of copper cyanide at Dalian Alps. In the past, copper plating has been commonly used as an undercoat for lead-tin plating, but after a full year of repeated testing we have developed a lead-free nickel plating technology. With this we have completely abolished use of copper cyanide (about 5kg a month), sodium cyanide (about 150kg a month), and lead and tin electrodes (about 460kg a month), which were necessary in copper plating. We have also been able to reduce use of sodium chlorite, used to treat wastewater, from about 500kg per month to 250kg per month.

## Cleansing of Soil and Groundwater

In 1999, Alps discovered that an organochloride compound from four of its plants in Japan had caused soil and groundwater contamination. In response, we immediately began cleaning up the pollution by implementing a process in which groundwater is pumped up and activated carbon filters capture the pollutants.

We introduced an anaerobic biological method in FY2003 to the Miyagi prefecture Furukawa plant as a way of promoting more efficient cleansing. In FY2004, we introduced the method in the Wakuya and Kakuda Plants, also in Miyagi prefecture, as well. Key to this process is varieties of anaerobic soil microorganisms that can break organochloride compounds down to ethane and ethylene. By injecting nutrients directly into the groundwater, the process cultures microorganisms native to

Concentration of organochloride compounds in groundwater (Furukawa Plant)



## Risk Management (Prevention of Environmental Pollution)

Alps operates a comprehensive risk management system at each plant in order to prevent environmental pollution by accidents such as leakage of chemicals.

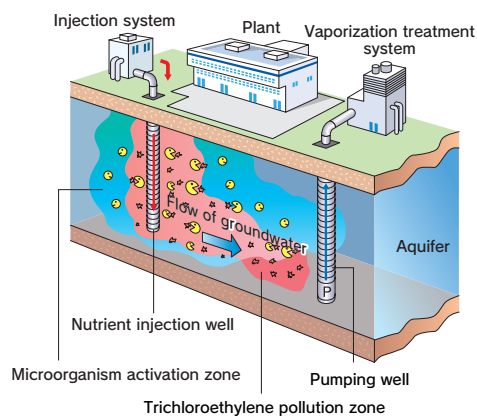
Some examples of the components of these systems: Dikes for containment of substances such as heavy oil; systems to

manage, analyze, and detoxify effluent from plating plants; replacing underground pipes with above-ground pipes; distributing emergency instructions; and restricting admission into chemical storage depots.



Nutrient injection equipment (Kakuda Plant)

Diagram of Anaerobic Bioremediation Process



manage, analyze, and detoxify effluent from plating plants; replacing underground pipes with above-ground pipes; distributing emergency instructions; and restricting admission into chemical storage depots.

## Initiatives around the world

### Japan

Some shortcomings were discovered during the environmental accident response training at the Peripheral Products Division. They are now being corrected. Firstly, we prevented leaks of machine oil into rainwater drains by raising the dike to prevent oil leaking from the machine room. Next, we changed the shape of the dikes around the tanks that hold acids and alkalis. This stopped leakage outside the site.



Dikes

We also changed the boiler fuel from heavy oil to kerosene to reduce emissions of sulfur oxides. At the same time, since kerosene contains little sulfur, we were able to use flue gases to pre-heat the feed water to the boiler, improving energy efficiency.

### Europe

Prior to introducing coating processes at Alps Ireland, we received approval for a license for gaseous emissions from the Irish government in April 2004. This system imposes rules, according to boilers and coatings, for each type of vent for SO<sub>x</sub>, NO<sub>x</sub>, particulate matter, VOCs, and so on. To retain this license, regular inspections must be undertaken and workplace air must be monitored for the occupational health and safety of employees. In the January 2005 inspection, it was found that the vents had exceeded standards in one section; we are working to resolve this at present.



# Environmental Report

## Waste Reduction

In Japan, Alps has achieved the goal of zero-emissions, not only of industrial waste, but also of ordinary waste. In overseas, we promote recycling and reduce wastes.

### Waste Reduction

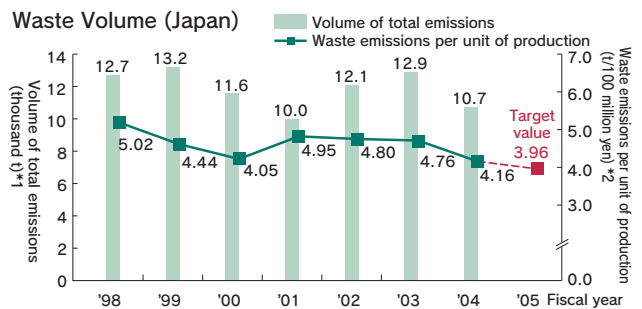
All of Alps' divisions in Japan have implemented zero-emissions\* programs and have successfully achieved the goal of recycling all emissions they release by the end of FY2004. At Alps, as a basic principle, "emissions" means everything released (see note) by the company that is not a product. This includes ordinary wastes from our offices, cafeterias, and so on, as well as those from production lines.

Additionally, by FY2005 we aim to reduce total waste emissions per unit of production by 20% from the figures for FY2001. We have directed our production bases to exchange information about their activities so that we can address the issue in unison.

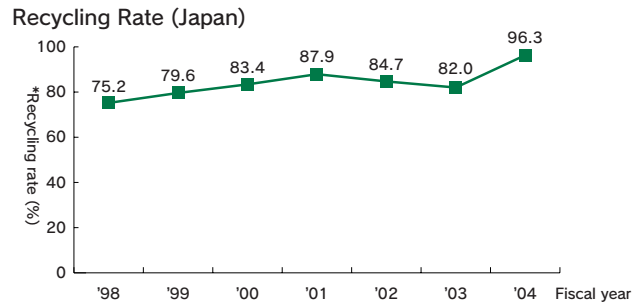
Overseas, the rate of recycling is still rather low at some bases because of various problems, such as the lack of established recycling routes. All production bases, however, are sorting their emissions and initiating recycling, starting with those materials that are the easiest to recycle.

\*Zero-emissions: Reducing emissions to the very minimal amount within a system of linked industries as a whole. This is done by building new industry links so that the waste of one industry can be used as a resource (feedstock) by another industry. The United Nations University has advocated this idea.

Note: Certain types of emissions are exempt from this initiative, such as emissions for which currently known processing methods would actually lead to greater environmental burdens and those that are technically difficult to recycle. Exempt substances make up about 2% of the total; they mainly are general waste products, such as sludge from the cleansing tank.

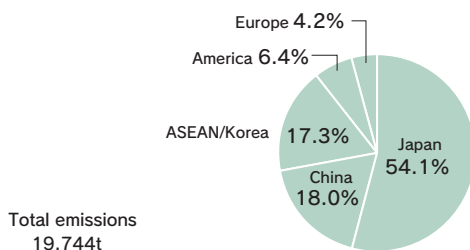


\*1 Volume of total emissions: Total waste for disposal and resale, discarded externally as unneeded material.  
 \*2 Waste emissions per unit of production: Total waste emissions divided by the value of production.



\* Recycling rate: Proportion of recycled waste to the total volume of emissions

### Total Emissions (global)



### Initiatives around the world

#### Japan

All divisions in Japan achieved zero-emissions by the end of FY2004. The monthly recycling rate of March 2005 achieved 98.7%. At the Soma Plant of the Communication Devices Division, sorting of waste products into 80 different classes was greatly improved by posting easy signs and preparing a "Classification Guide".



Signs for Sorting

The Magnetic Devices Division's total waste output was affected by the Niigata Earthquake, which left considerable amount of debris. Even so, total wastes were 2,151 tons, a reduction in total waste emissions by 31% per unit of production. This is due to introduction of the neutralization treatment facility with an investment of about 100 million yen, which treats plating waste fluids. Previously, these were treated by evaporative drying, or treatment was contracted out. We reuse sludge from the treatment process for roadbeds.

By changing the amount of cleansing chemicals used for boards to suit the size of the glass substrates, instead of the previous method of using a fixed amount regardless of substrate size, the Peripheral Division have reduced the amount of waste liquid generated from 30 to 40 tons to less than 10 tons per month.

#### ASEAN/Korea

Alps Malaysia's Nilai Plant generates close to 4,000 litres of a solution containing mercaptan every month. Discharge of this solution without treatment would violate emission standards; the contractor previously treating this waste was mixing it with other solutions before disposing of it. Now, we are using heat generated by the compressor dryers to evaporate the water from the solution, forming a solid. This reduces the volume by a factor of about 10. Then, we dispose of it. With this process we prevented pollution and saved greatly on disposal costs.

#### Europe

The Dortmund Plant of Alps Electric Europa utilizes reusable packing containers when they ship steering wheel modules (the mounting for the components around the steering wheel). They have been using these packing containers since they began production in December 2003, and have been able to hold down use of cardboard boxes for packing.



A packed module

# Development, Design and Logistics

Alps reduces environmental burdens, from the design and development stages to shipping.

## Stance on Design and Development

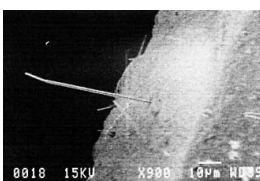
Our Corporate Philosophy is, "Alps creates new value that satisfy stakeholders and are friendly to the earth." This underlies our effort to create products in harmony with the global environment. We are continuing to pursue product designs that reduce hazardous substances, taking the period of use and the timing of disposal into consideration, and that allow for easy recycling. We are also improving product designs, reducing size, weight and power consumption during manufacture and use.

## Status of our Response to RoHS Directives

Alps published the first version of the Green Procurement Standards in July 2002 and has been working towards complete abolition of substances prohibited in the RoHS Directives\*1 by the end of 2004. Thanks to the cooperation of our customers and suppliers, we have almost completed this goal.

With just a few exceptions, we have been able to complete the process of elimination of lead, primarily from our solder. This was the result of technological developments by the company-wide lead free committees. The components in which lead is still used are those prone to formation of tin 'whiskers'\*2, so we must continue development of surface treatment for tin.

We have successfully and completely abolished all other uses of lead, as well as of mercury (which was almost never used), hexavalent chromium used for rust proofing, and cadmium used in the contact points of some resistive elements and switches. We have already abolished use of poly brominated biphenyls and poly brominated diphenyl ethers.



Electro microscopic photograph of a whisker formed on a surface.

\*1 RoHS Directives: A directive banning use of 6 substances (lead, mercury, cadmium, hexavalent chromium, poly brominated biphenyls and poly brominated diphenyl ethers) used in electronic products in the European Union. It is to go into effect in July 2006.

\*2 Whiskers: Needle-shaped crystals that spontaneously form on the surface of tin and grow to a diameter of a few  $\mu\text{m}$  and a length of a few mm. They induce electrical short-circuits. In the past the general method of preventing them was by mixing lead into the tin.

## Initiatives in Logistics

Alps is pushing to improve packaging and other aspects of logistics in order to mitigate the environmental burden of shipping.

The size of pallets used to carry merchandise conform to the world standards set according to the ISO standard. We are striving to improve the rate of reuse and loading efficiency. We are also standardizing the sizes and materials of our packaging to suit the pallet size and are reducing the number of varieties of boxes as well as the amount we use.

Foam has a large environmental impact, so we have banned its use in our packaging. In addition we have substituted clear tape for all the colored tape to remove toxic substances from our packaging material. We are reducing and eliminating excess packing material such as cardboard to cushion packing boxes and reinforcing straps. At the same time, we are endeavouring to improve quality in our logistics system, which con-

tinues to improve in efficiency.

Until recently, products from our Japanese divisions were sent from the factories to regional distribution centers, where they were stored before being distributed to customers. This has been revised into a system of shipping direct from the factory, resulting in reduced transport distances from shipping to delivery. Inturn, this saves truck fuel and reduces emissions.

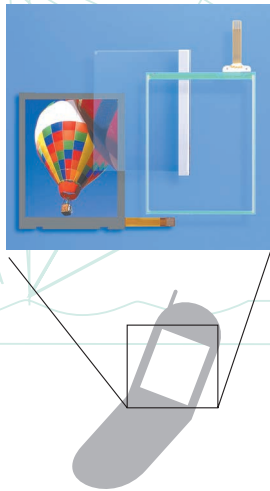
## Timeline of environmental activity

April 1989	Establishment of a Committee for CFCs
April 1991	Establishment of Environmental Protection Committee and working groups
July 1993	Elimination of the use of specified CFCs
October 1993	Elimination of the use of trichloroethane Establishment of Environmental Planning Department
December 1993	Elimination of the use of specified brominated flame retardants
May 1994	Formulation of Environmental Protection Charter and First Voluntary Action Plan for Environmental Protection
May 1995	Started employee educational programs using company-produced videotapes and pamphlets
April 1996	Establishment of Environmental Management Representative Committee (reformed from Environmental Protection Committee)
November 1996	ISO 14001 certification of the System Devices Division (later merged with Peripheral Products Division)
February 2001	"Zero-emissions" designated as a company-wide policy in Japan
March 2001	Elimination of the use of organochloride compounds
July 2002	Establishment of Green Procurement Prescript
July 2003	Production and distribution of Green Procurement Standard in three languages
December 2003	Elimination of use of HCFCs in manufacturing processes at bases around the world
December 2004	Near complete elimination of the 6 substances in the RoHS directives
March 2005	Complete achievement of "zero-emissions" in Japan

# Environmentally Sound Products

Alps contributes to the environment through products that maximize our proprietary technology.

## Reflective LCD



### Easier to view and Consuming 1/20 of the Power

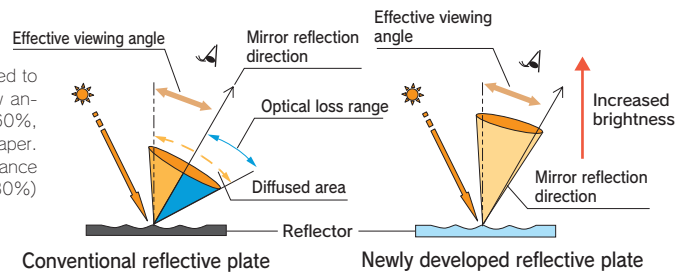
There are, undoubtedly, many people disappointed with the short battery life of their cell phones. Liquid crystal displays, which are rapidly increasing in size, consume particularly large amounts of power. Can we cut their energy use?

Most mobile terminals such as cell phones and PDAs currently use a back light to illuminate the screen. Besides using a lot of power, the brightness of the light strains the eyes when used in dark places and the black parts appear to stand out. These displays are also difficult to see outdoors, in bright places.

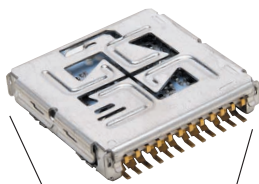
The reflective LCDs we have developed contain a plate inside the screen that gathers and reflects light from the outside. This consumes just 1/20 the power needed by backlit LCDs. It is easy to see both indoors and outside and doesn't strain the eyes. Of course, in dark places, the user uses the front light.

Watching TV on your mobile for hours may not be too far away.

Alps' unique reflective plate is shaped to gather light within the effective view angle and achieves a reflectance of 60%, about the same as that of a newspaper. We are aiming to achieve reflectance equal to high-quality paper (70-80%) by the end of 2005.



## RF Modules for ETC

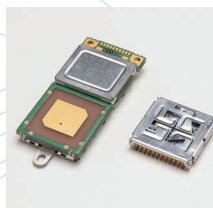
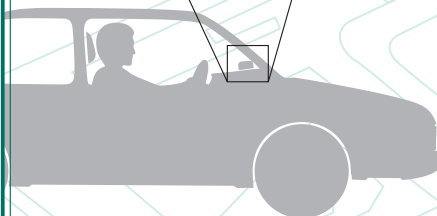


### 1/3 the size of Existing Products. Contributing to Size Reduction of On-board ETC Devices

In 2000, an Electronic Toll Collection (ETC) system was launched to ease part of the annoyance of paying expressway tolls. Not only is this technology more convenient, it also helps reduce traffic congestion and in turn reduces fuel consumption and the environmental load of exhaust gases.

The system consists of wireless communication of toll amount and location between toll booth antennas and vehicle-mounted terminals.

Alps has succeeded in reducing the size of its RF (radio frequency) module for the on-board equipment to under one third of its previous size. This saves resources and reduces the power consumption, and price for the on-board system.



In January 2002, our existing product on the left was reduced to a volume of 8.16 ml (50 x 23 x 7.1mm), or half the previous volume, making it the smallest in the world. This year we have again decreased the volume, this time to 2.31ml (22.4 x 22.4 x 4.6mm), or a third of what it was previously.

In the previous product, the antenna-section, a molded copper foil pattern, was separate from the rest of the device; now, the cover of the base plate doubles as the antenna. We are also using a multi-purpose base plate equipped with a single core bare chip, rather than an IC molded package item. This miniaturization utilizes Alps high-density installation technology and circuit simulation technology.

## New Semiconductor Connection Method Reduces Defect Losses

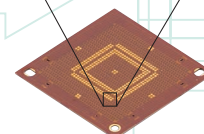
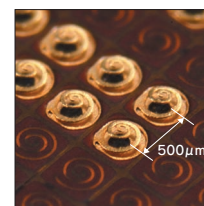
### Micro Contacts

Semiconductor chips are used as the central components in PCs and cell phones. Usually, they are soldered to the base plate. Multifunctional semiconductors are sometimes defective. Once soldered on, components are difficult to detach, so some completed base plates with a single defective component are simply thrown out.

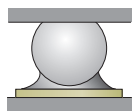
Alps designers realized that if components could be more easily attached and detached from the base plate, without affecting the quality of contact, then they could be tested without causing damage and defective parts could be easily replaced.

It was Micro Contacts that made this possible. These contacts are shaped in a spiral and can currently be made with gaps as small as  $500\ \mu\text{m}$  ( $0.5\text{mm}$ ). This extremely small spiral acts like a spring, holding the semiconductor chip in place and providing firm contact.

We will continue to create versatile mounting arrangements of Micro Contact that meet customers' needs and we will also further reduce their size.

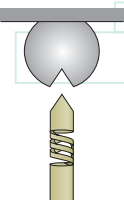


#### Conventional connection



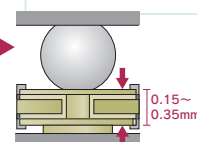
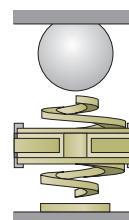
For semiconductor chips, this kind of ball-shaped connections are common; we have soldered in this way in the past.

There is a connection method, primarily for use in tests, wherein needle-shaped pins are used. Each pin must have 20 to 30g of pressure applied. This results in scratches on the ball-section and other kinds of damage to the unit.



#### Micro Contacts

Using Micro Contacts, only 3 to 7g of pressure is necessary to obtain excellent contact; damage to the unit is avoided. Also, in the past, we have used a mechanical manufacturing method, where the shape is cut out and pressed. Now, we have changed over to a process method, facilitating the creation of objects without scrap. This reduces losses during production.



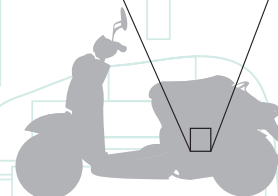
## Engines efficiency, fuel efficiency, and cleaner exhaust

### Throttle position sensor for 2-wheel vehicles

In order for an engine to run efficiently, the ideal amount of fuel and air must be injected into the cylinder. When running under ideal conditions, fuel efficiency improves and exhaust gas is cleaner.

Therefore, it is necessary to detect the rate of air intake, the throttle position, the engine speed, the coolant temperature, the engine load, and any changes in the speed. This data is sent to a computer to calculate the right amount of fuel and air to inject; the appropriate signals are then sent to the injector. The throttle position sensor is an extremely important component in this process.

This kind of electronic control is common in 4-wheel vehicles, but due to the difficulty of reducing the size of the components, so far, it has only come into partial use in 2-wheel vehicles. With the increase in concern over environmental problems, people also want 2-wheel vehicles to have these controls. Our new, compact throttle position sensor is contributing to the spread of this technology in 50cc motorcycles and scooters.



Electronic fuel injection equipment that includes a throttle position sensor leads to a reduced amount of toxic substances in exhaust gas, including carbon monoxide, nitrogen oxides, hydrocarbons, and particulate matter. So we can expect easing of air pollution. Also, improved fuel efficiency reduces CO<sub>2</sub> emissions, helping to prevent global warming.

# Corporate Governance

Alps is determined to manage our operations with transparent and rapid decision-making that will increase the value of the corporation for all of our stakeholders.

## Fundamental Approach to Corporate Governance

### — Corporate governance

At Alps, corporate governance is defined as the establishment and operation of structures and processes that provide motivation for, and encourage, management-level decision making and expeditious reporting to stakeholders, with the objective of enhancing corporate value.

### — Relationship with stakeholders

Alps exists for the sake of shareholders and all other stakeholders (employees, customers, suppliers, local communities, administrative bodies, the environment, etc.). We endeavor to return benefits to all stakeholders, both directly and indirectly, by maximizing corporate value and satisfying stakeholder interests in a balanced way.

## Internal Control Systems

Alps has always obeyed the law and participated in activities to protect the environment, contribute to communities, and manage crisis. The company now faces diversifying risks and greater expectations from society. Acknowledging once more the importance of compliance, Alps established the Risk Management & Compliance Committee (RC Committee) in October 2004, as well as an independent compliance office in May 2005.

### — Compliance Office

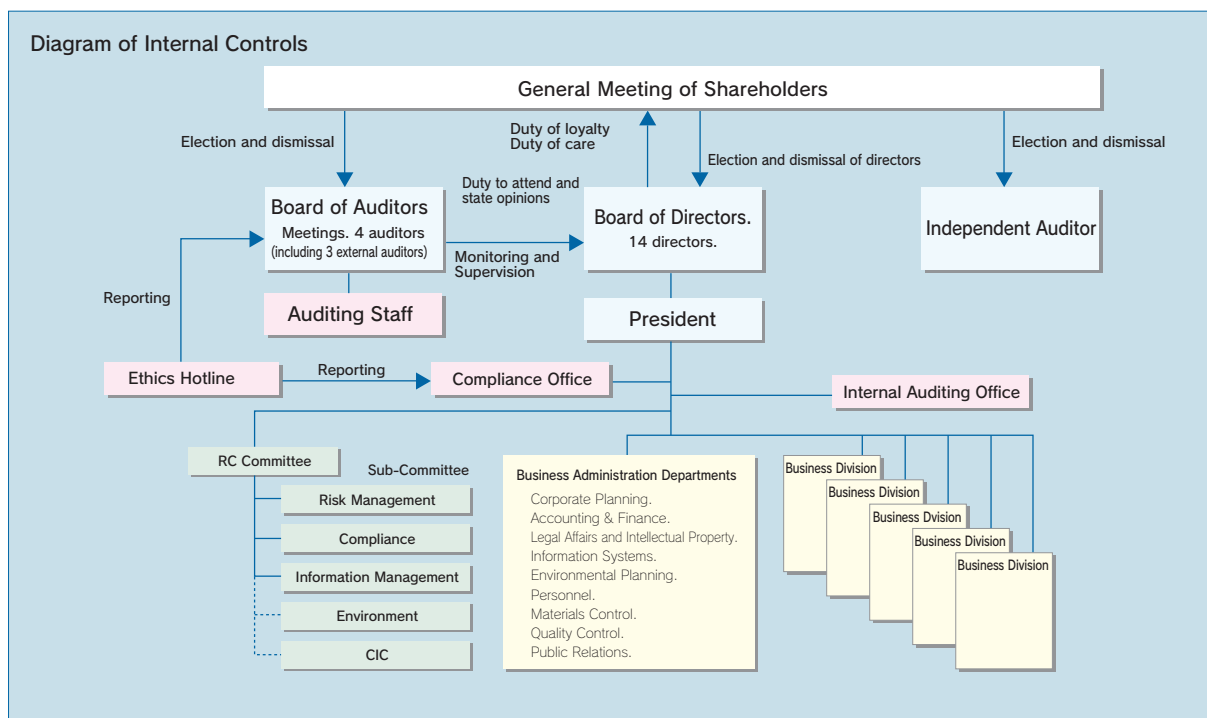
Previously the Compliance Department was positioned under the Corporate Intellectual Property & Legal function,

and promoted internal administration and risk management that complied with laws, regulations and company rules. Now it has been reorganized to fall under the direct supervision of the company president, and its scope expanded to cover all corporate governance activities and society. It promotes compliance with corporate ethics and social norms, as well as conduct in line with the Alps Vision, and it aims to ensure lawful management.

### — Risk Management & Compliance Committee (RC Committee)

The RC Committee is the body that deliberates and decides on fundamental policies and important issues concerning risk management and compliance, focusing on the broad array of risks involved in our corporate activities. The role of chairperson for this committee is filled by the director in charge of Corporate Planning, and the vice-chairperson role is filled by a director in charge of one of the related departments. The activities of each sub-committee are reported to the board of directors when necessary, and are verified against the activities of other sub-committees, which are mutually complementary.

We also plan to consolidate corporate CSR functions by establishing sub-committees to oversee matters relating to the environment and communication with stakeholders.





# Relations with Customers

“Alps provides excellent products that satisfy its customers.”

Alps pursues the satisfaction of our customers and the society based on this fundamental principle of quality management.

## Who are Alps' Customers?

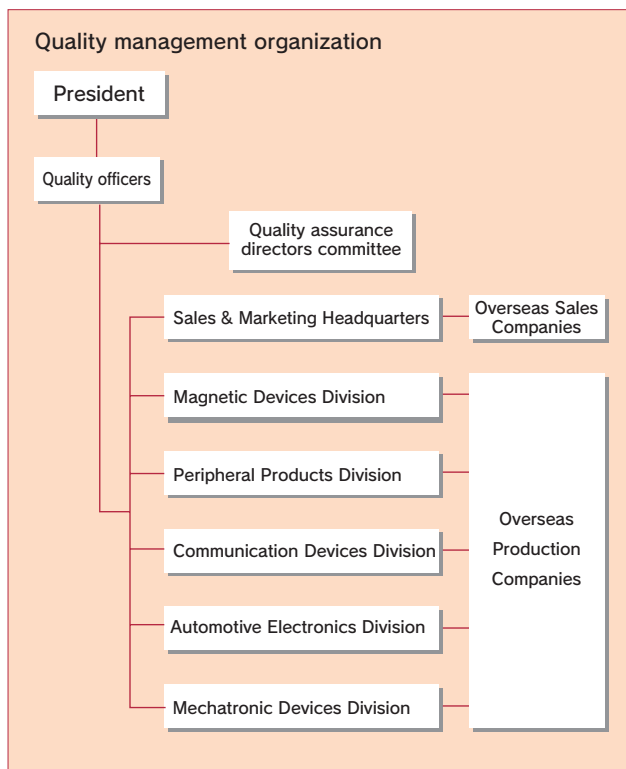
Most Alps customers are what are called set makers. They deliver electronic components to household electrical appliance manufacturers, car manufacturers and so on, and these components form part of the manufacturers' products.

Alps' duty is to satisfy these customers by creating new values through supplying safe, high quality electronic components. And through the products of our customers we hope to satisfy the end-consumers and to make a variety of contributions to society.

## Quality Management System

We have been building the Alps Quality Management (AQM) system since 1992. We have now obtained the international ISO9001 certification for quality management systems, as well as other specialized certifications such as the automobile industry standard TS16949, in all our main manufacturing bases.

In the AQM system, which is spearheaded by the company president, there is a quality assurance committee composed of the quality assurance directors for each division, the general manager of sales strategy, and the quality officers. Customer trends and Alps' quality status are discussed, and the quality officers direct initiatives. For overseas manufacturing bases, assurance and improvement of product quality are strived under supervision of managing divisions in charge.



## Our Approach to Quality and the Responsibilities of Suppliers

Set makers' products are made up of a multitude of electronic components, so they require that all components be of high quality and have low failure rates.

Since its establishment, Alps has adopted the slogans "Customer first," and in 1957, Alps' 10th year, we adopted the motto of "Product quality is exactly what will determine our future". We have always worked to maintain and improve quality. In 1992, we adopted our fundamental policy for quality management; this has been our basis for setting and pursuing quality policy at every manufacturing facility.

Alps also has a responsibility to supply our customers with contracted volumes within contracted timeframes. We are also taking measures that consider prompt handling of accidents or emergency conditions in addition to our standard delivery and logistics plans.

## Raising Customer Satisfaction (CS)

Our sales team members take into account the needs of customers and practices suggestive selling based on a solid knowledge of current technical developments and community trends. Our customers and the end consumers beyond them have made clear their satisfaction with our fine electronic devices based on our core technologies.

### — The ALPS SHOW

Every other year, we put on the ALPS SHOW, an exhibition for our customers introducing new products and technologies that utilize our proprietary and elemental technology.



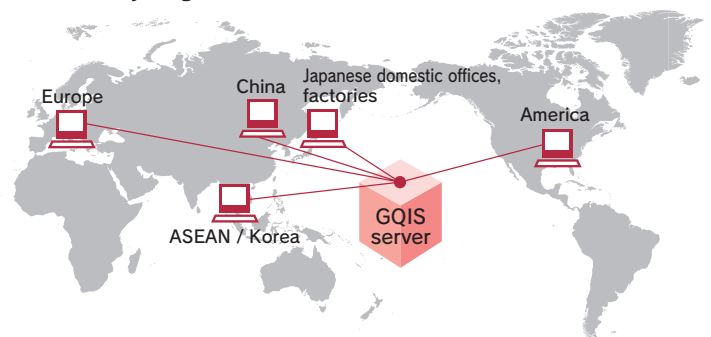
The ALPS SHOW

### — GQIS

Our worldwide sales network quantify customer input through requests and complaints in terms of indicators such as technological capabilities and speed. They enter the results into the intranet for our GQIS (Global Quality Information System) to analyze for customer response capability and quality improvement.

We are strengthening management by centralizing our global product information, providing management visibility, and employing an environment that is comprehensible to our employees everywhere.

### Summary diagram of GQIS



# Relations with Employees

Alps respects the individual personality and aptitude of each of our employees and is determined to create a work environment where they can manifest their abilities.

## Respect for the Individual

A dynamic organization begins with respect for independent individuals. Alps upholds a business posture of respect for the individual, under which employees can be challenged by diverse opportunities, and can help one another to develop as professionals. We acknowledge that each of us is here for a reason, and we owe it to each other to create an environment in which each can interact in a mature and lively manner.

## Global and Group-wide Human Resources Development

### — Skill Development

Alps is implementing various policies for employee skill development, including training at each level from new employees to executives, and education according to function and topic. We encourage our employees to acquire further professional qualifications and provide assistance for fees for correspondence courses to promote self-development.

### — Overseas Manufacturing Training

Since FY2003 Alps has undertaken manufacturing training for new employees at affiliates in China.

The training period is about one month, but includes various other programs apart from manufacturing training such as participation in local community functions and contact with local university students. This benefits all participants in terms of stimulating global awareness.



A training scene in China

### — Dissemination of *Monozukuri* Skills

With the aim of disseminating molding technology manufacturing skills, and nurturing personnel from Alps, overseas affiliates, and other cooperating companies in Japan, we opened the Technical Master Training Center in April 1999. Over 1,100 students have completed courses at the center.

## Creating an Ideal Working Environment

To create a truly comfortable working environment, it is not only principles and systems that are important, but fundamental improvements in the work environment. Alps has launched several initiatives aimed at creating a lively and satisfying work environment.

### — Health and Safety Activities

At every office, we are actively working on a full range of health and safety activities to create a comfortable work environment. Our activities include workplace patrols and health and safety education.

Mental health problems have recently been receiving much attention; health management staff, including industrial physicians, nurses, and industrial counselors, work as a team to promote preventative measures and conduct consultations with employees. In January 2004 we opened the EAP Mental Health Consultation Room. EAP is an acronym for our Employee Assistance Program, which aims to create an environment that is easy to work in, from the perspective of emotional health. All employees at headquarters and sales offices are free to use this program.

### — Disaster Relief Activities

We have built a company-wide risk management system to respond in the case of a disaster such as an earthquake or fire. We have drawn up a Risk Management Manual and we are implementing risk assessments, as well as working to strengthen other risk controls.

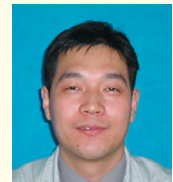


Fire team training

We regularly implement emergency training exercises so that people are always able to act in accordance with the manual. Especially in the event of a fire, the important roles of emergency evacuation of employees, initial fire fighting, and public announcements are taken on by the fire teams. Team members regularly undertake strict training so they can perform each of their duties.

## Tianjin Alps (China) have been certified under the Occupational Health and Safety Management System OHSAS18001.

Tianjin Alps, which has this year reached its tenth year since establishment, is located in the Tianjin Economic and Technological Development Area, 2 hours drive (by expressway) from the capital Beijing. Construction of a new factory began in March 2004 and finished in October. Relocation was undertaken while production continued, and the move to the new factory was completed by February 2005.



Quality control section 3  
Fujian Long

We were approached by European, American and other clients about obtaining OHSAS18001\*, so we initiated the effort to obtain certification. The aim was to raise the safety levels for employees involved in production and to expand business in response to customer needs. We began these activities in June 2004, and were able to obtain certification within the short period of about 6 months.

This overlapped with our relocation to the new factory so a total of 3 locations were the subject of inspections (Factory 1, Factory 2 and the new factory); in addition, we simultaneously obtained ISO14001. This also overlapped with a period of increased production of every type of product, so it was a very demanding period for everyone.

We also had to prepare documentation including manuals in Chinese as well as Japanese, so a considerable effort was expended translating and editing specialist vocabulary.

In preparation for certification, we chose people to be responsible for managing enforcement and assigned a steering committee to every department. These committees were proactive in "spreading the word", enabling all our employees to understand occupational health and safety issues and the goals of environmental activities. This was undoubtedly one of the reasons why we obtained certification in such a short time.

Since employee turnover is significant, there are difficulties with the penetration of education, but we will continue with guidance, education and patrol checks in order to provide a safe and healthy workplace.

\* OHSAS18001: International standard for Occupational Health and Safety Management Systems.

# Relations with Shareholders

Alps appreciates the importance of its relationship of trust with shareholders and investors. It constantly endeavors to communicate smoothly and to disclose information in a timely and appropriate manner.

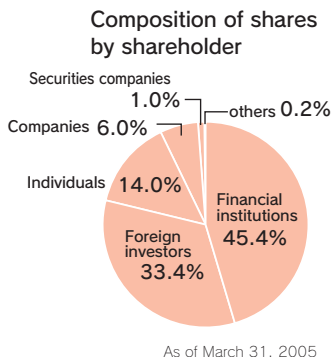
## History of Stock Market Listings

In April 1961, Alps was the first in the electronic components industry to offer stock for public subscription in the Tokyo OTC market; later, in 1967, Alps was upgraded to the First Section of the Tokyo Stock Exchange.

Since going public, we have endeavored to disclose information to shareholders in a timely and appropriate manner, and have worked to enrich communications with all stakeholders.

## Status of shares by Shareholder

Today Alps has about 15,700 shareholders as of 31 March 2005, 45.4% of which are held by financial institutions, 33.4% by foreign investors, and 14.0% by individuals.



## Major shareholders (top 5)

Japan Trustee Services Bank, Ltd. (trust offices)	11.2%
The Master Trust Bank of Japan, Ltd. (trust offices)	8.9%
Nippon Life Insurance Company	2.3%
Mitsui Sumitomo Insurance Company, Ltd.	2.3%
The Sumitomo Trust & Banking Co., Ltd. (trust offices B)	2.2%

As of March 31, 2005

## Disclosure of Information

We have established the Finance Department IR Group to undertake the fast, accurate and fair disclosure of information to all shareholders in a timely and appropriate manner. We are working hard to create loyal investors for Alps by sending out easily understandable information using various media.



## Alps Report

We send out a quarterly business report called the Alps Report to Japanese shareholders. Its contents help readers understand the company, with the latest financial information, as well as the message from the president, topics relating to our operating activities, information on our new products and technologies, descriptions of our places of business, and so on. The current March 2005 issue is the 118th issue. It has become an important tool for communicating with Alps shareholders.

## Annual Report

Each fiscal year we prepare the Annual Report aimed at our foreign investors. In addition to the financial results for the term, we present important events of the year, such as our semi-annual "Alps Show" exhibiting new products and new technologies.

## Home page

We have set up a "To our shareholders" financial information page on our Japanese web site, where investors can peruse timely data and the IR schedule.

Besides the legal announcements and stock price information from our site, we are also working in alliance with Nihon Keizai Shinbun's Nikkei Net web site to make it easy for people to find and read Nikkei Keizai Shinbun headlines concerning Alps.

You will also find a guide to stock-related procedures on the site, as well as the Alps Report and Annual Report mentioned above.



"To our shareholders"  
<http://www.alps.co.jp/zaimu/index.htm>

## Communication with Shareholders

At Alps' regular annual meeting of shareholders, we give an easily understandable audio-visual presentation of our results. We also send out summons notifications in English so that overseas shareholders can understand the resolutions presented at the meeting.

For institutional investors and securities analysts we hold briefings at year-end and mid-year. We endeavor to inform people of our business results.

## Share trading blocks reduced in size

Alps appreciates the importance of a liquid share market and of the participation of a broader range of investors, including individual shareholders. For this reason, in order to make it easier for individual investors to purchase Alps stock, we have decided to change the base trading unit of stock from 1,000 shares to 100 shares as of August 1, 2005.

# Relations with Suppliers

Alps considers suppliers as partners, and practices fair and open procurement. We are promoting green procurement globally in cooperation with our suppliers.

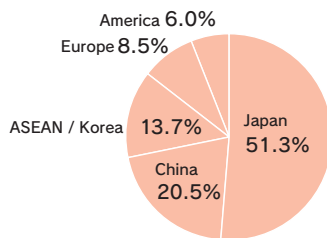
## Fundamental Approach to Choice of Suppliers

We are building an increasingly global network of suppliers as we expand overseas production. For this reason, Alps aims to build a long-term supply system with suppliers who excel in our QCD+E2\* criteria. In day-to-day purchasing activities, Alps endeavors to build deep cooperative relationships with suppliers in compliance with all laws and regulations.

\*QCD+E2

- Quality Stability and improvement of component quality
- Cost Global price competitiveness
- Delivery Flexible supply capability
- E-Commerce E-Commerce capability
- Environment Capability to reduce environmental loads

Breakdown of suppliers by region (Contract value)



## Procurement System and Promotion of Local Procurement

Alps manufactures in the 5 regions of Japan, America, Europe, ASEAN / Korea, and China in accordance with our basic philosophy to suit production location to the locality. We promote local procurement in the spirit of furthering local co-existence and to speed delivery to our customers.

Local procurement rate by region

Region	Local procurement rate
China	55%
ASEAN / Korea	90%
Europe	75%
America	63%

## Green Procurement

In response to the demands of customers and from global society, Alps practices green procurement by specifying products that do not contain toxic substances and buying from suppliers that have environmental management systems in place. We have prepared and distributed to all our suppliers a Green Procurement Standard, which presents the content of environmental evaluation on company and parts evaluation.



Green Procurement Standards

### — Environmental Evaluation on Company

Alps not only evaluates the environmental initiatives of our direct suppliers but also their subcontractors (manufacturing facilities). Based on evaluation, we ask those who fall below Alps' standards for their improvements.

New suppliers and manufacturing bases added to the register are required to comply with Alps' standards.

### — Parts Evaluation

In the event that we employ new parts and materials, Alps requires the supplier to submit forms in line with our procedures, including a chemical analysis affidavit. We only approve materials once we have established that they contain no prohibited substances.

### — Database for Chemical Substance Management

Roughly 2,000 manufacturing bases and 50,000 parts and materials data entries that have passed our corporate evaluation are registered in our Database for Chemical Substance Management. The results of corporate evaluations and the type and quantity of chemical substances contained in parts and materials can be searched and viewed globally by every division.



Green procurement public hearing (Taiwan)



# Interaction with Local Communities

Constructive interaction with the local community is indispensable to our business. Alps strives to be a good corporate citizen while respecting our employees' independence and taking to heart what nations and communities need from us.

## Bringing *Monozukuri* to Future Generations (Japan)

Alps believes that bringing the wonder and joy of *Monozukuri*—the craft of making things—to young people is one of our most important social responsibilities as a manufacturer. At Alps, the whole company organizes workshops and factory tours for children and their parents.

The Board of Education of Ota Ward, Tokyo, where our headquarters are located, holds "The Ota *Monozukuri* Science School" for elementary and middle school students. We contribute by helping and supporting the planning and management as well as sending instructors. In FY2004 over 100 children attended this event, making IC radios and gliders. The children do more than just simple assembly work. Instructors explain the principles and mechanisms and how to use the tools. This imparts the joy of scientific learning to the students.

In a new initiative, high school students undertake factory tours and gain work experience including trial manufacture of products. Alps hopes that this kind of real experience can teach young people to enjoy making things, and we plan to continue with these activities.



Work experience for high school students

## Regional Clean-up Activities (Japan, Korea)

Domestic Alps offices and manufacturing facilities are conducting activities to clean and beautify local environments all over Japan. These were conducted both in the vicinity of our facilities and at seacoasts in FY2004.

Alps Korea is also involved in a river clean-up program in which each company takes responsibility for one river, and removes garbage and other waste from that riverside.



Local clean-up activity (Mechatronic Devices Division)

## Visits to Welfare Facilities (Japan)

The Alps Workers Association, an organization of our employees, arranges regular visits to local facilities for the disabled.

In FY2004, Furukawa plant employees visited a facility that provides support to severely disabled citizens until they become able to live by themselves. The employees performed several songs and put on a magic show. Peripheral Products Division employees also visited a disabled people's facility to participate in various volunteer activities.



Photo taken at end of exchange

## Establishment of the Alps Group Scholarship (China)

Alps has established the Alps Group Scholarship for students of the Neusoft Institute of Information, China, in cooperation with the related companies Alpine and Alps Logistics. We have also established an internship system at the university.

Apart from teaching the students Japanese, the purpose of the system is to provide administrative experience in businesses related to information and communications to people who will contribute to the development of the electronics industry in China in the future.



Scholarship signing ceremony

## Toner recycling for cancer research (Ireland)

Alps Ireland generates about 70 kg of used toner cartridges every year, which it collects and provides to a local charity organization. This organization recycles the toner cartridges and donates all of the proceeds towards cancer research.

## Employee becomes auditor for environmental awards (Malaysia)

In Malaysia the Hibiscus Awards are presented by the prime minister for achievements in environmental conservation that the program was started in 1996 to promote environmental measures and evaluates the environmental measures of private corporations operating in Malaysia. An Alps employee has been chosen as an auditor for this award program.

### Alps should work toward receiving the award next time.

On the recommendation of a consultant, I was appointed as an auditor by the expert committee managing the award. The main reasons were that I am an ISO14001 inspector, and I have a PhD in environmental engineering.



Alps Malaysia's Nilai Plant  
General Affairs Department  
N. Sathia Segaran

The document-based primary inspection was undertaken over two days. Newcomers like myself were handed many hundreds of pages of data over 12 centimeters thick, and each of us given 3 companies. I finished early, so I ended up inspecting 5 companies.

Companies that passed this primary inspection were then visited by an inspector and received a secondary inspection to confirm there were no discrepancies between submitted documents and the actual situation.

I believe that Alps Electric needs to enforce initiatives in the areas of environmental R&D, life cycle assessment, management's involvement in planning, and contributions to the community. I look forward to our preparations so that next time our company may be chosen for this prestigious award.



# ALPS<sup>®</sup>

ALPS ELECTRIC CO., LTD.

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## Editorial Postscript

From this edition onwards, the social report will be included in the environmental report and will be called the Social & Environmental Report. The preparation of the additional section was sometimes difficult, covering areas we have not been accustomed to. On the other hand, more departments were involved, and we were able to publicize the report while benefiting from the cooperation of many people.

A report is, of course, something that announces the present situation. But, in addition to this, it also indicates the direction for the future. This publication, with the addition of the social report was a good opportunity for each person involved to consider the social responsibility of corporations. At the same time, we feel it was also a good opportunity to look over the activities of Alps from a wide viewpoint. We aim to continually improve the report in the future and welcome any opinions and requests.

(Environmental Planning Group)

