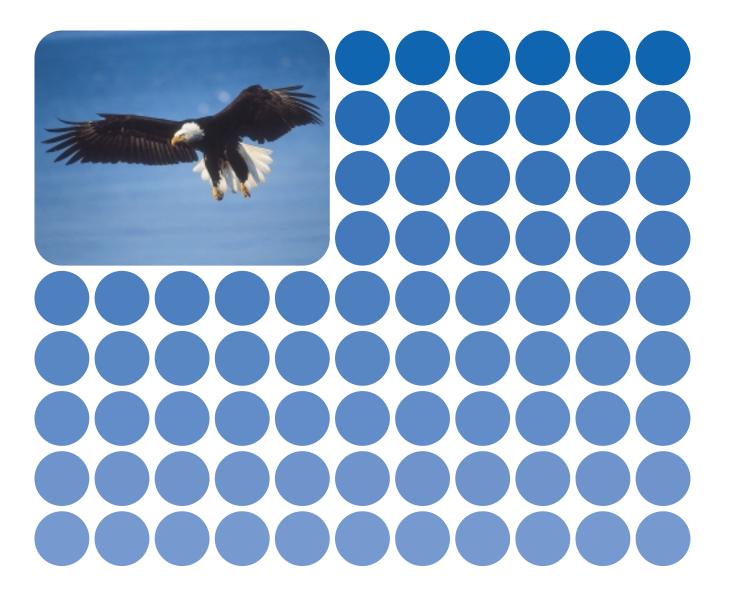
# Environmental Report 2003

Aiming to become a responsible and environmentally friendly corporate citizen





# Message from the CEO

Presently, Omron is promoting management practices in conformance with our long-term corporate vision, "Grand Design (GD) 2010," and, accordingly, my key task as the CEO of Omron is to ensure the achievement of GD2010 goals. The key concepts of GD2010 are self-reliance, coexistence, and creativity. In particular, for the second concept of coexistence we are fully aware that one of the most important objectives of corporate management is to maintain harmony not only with other countries but with the global environment as well. Omron was quick to show its commitment to reduce the environmental impact of its corporate activities and has consistently pioneered our industry's environmental conservation efforts. As our operations rapidly become global, the proportion of production outside Japan is increasing every year. For the future, along with continued promotion of environmental activities in Japan, it is essential to concentrate more effort on environmental conservation outside Japan.

Stemming from EC directives, the trend to strictly control the use of hazardous chemicals in the automotive and electronics industries is not only affecting business operations in Europe but also spurring on the reinforcement of regulations globally. Today, when products made in Asia are sold and used everywhere in the world, environmental regulations established in a certain region may eventually become a global standard with major implications for our business activities. Accordingly, we aim to further strengthen our response to increasingly globalized environmental regulations.

In 2002, Omron formulated its environmental vision, "Green Omron 21," to reinforce corporate-wide endeavors to improve the environment. The objectives of this vision are to contribute to the sustainable development of society, while maximizing Omron value on a long-term basis. Knowing that effectively addressing environmental issues is one of our most important corporate responsibilities, we will continue committing ourselves to strengthen Omron's environmentally conscious management practices.

I believe that the entire process of our corporate activities should be fully backed by advanced technology. I see technology as an especially important resource for Omron. In fact, Omron's growth will be impossible without technological breakthroughs. This also applies to environmental matters. It is vital for Omron to develop and possess all necessary technologies to create environmentally sound products and help improve the environment. While promoting management as a global company, it is also necessary to establish a solid technological foundation as quickly as possible and reinforce technology-focused management.

As Omron's CEO, I aim to demonstrate leadership in guiding Omron toward a sizable contribution for the sustainable development of our society as specified by the "Green Omron 21" vision. At the same time, more transparency in our environmentally conscious management should be attained through a greater dissemination of information.

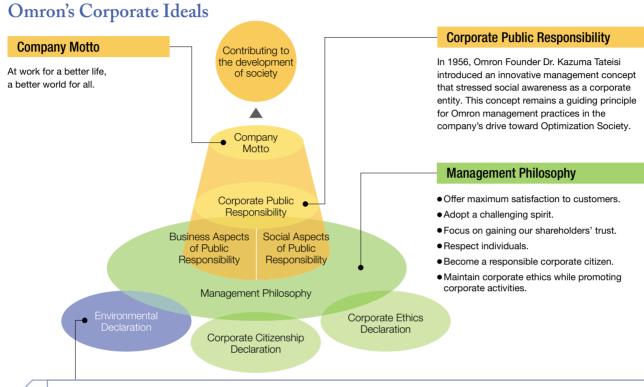
Your continued support and guidance will be greatly appreciated.



July 2003

Hisao Sakuta Representative Director and Chief Executive Officer OMRON Corporation

Hisao Sakuta



# **Environmental Declaration**

We pledge to aspire to harmonize with nature and work for a better environment through activities showing a strong sense of public responsibility.

# **Environmental Policy**

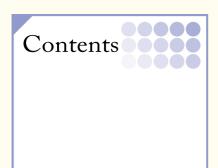
In accordance with our environmental declaration, we have made environmental issues one of our most important management concerns. All corporate activities, services and products of the Omron Group, including our microelectronics and service operations, will be subject to our environmental policy, as outlined below.

Specific

Basic Law Observance	Observances of the Environmental Basic Law and all related laws as well as maximum response possible prior to the enactment of such legislation and provision of voluntary standards to encourage preservation of the environment.
Response to Environmental Issues	Any environmental issue raised by an interested party will be responded to in good faith.
Support Structure	Appointment of Senior Environment Officer and establishment of a specialized corporate organization at Omron headquarters. Establishment of overall corporate organization, factory organizations and promotion of cooperative efforts among these organizations.
System	Establishment of Environmental Management System (EMS) compatible with ISO 14001.

Goals	relevant goals from listed priorities and promote continual improvement of EMS and reduction of the burden our activities place on the environment.
	Development of technology and products that contribute to a reduction of the burden our activities place on the environment for our customers.
	<ol><li>Purchase of environmentally friendly materials, fixtures, fittings.</li></ol>
	3) Activities to improve resource productivity.
	4) Energy conservation to cut CO2 emissions.
	<ol><li>Pollution reduction and prevention in regional environments.</li></ol>
Determination and Review	Environmental improvement objectives and targets to be fixed, environmental audits to be conducted over fixed time frames, and environmental management to be reviewed, improved and maintained.
Instruction and Training	All staff to receive instruction on environmental policy and participate in related training activities.
Social Contribution	Active participation.
Disclosure	Environmental policy and strategies to be made available for public use in the appropriate form.
	(Enacted: April 1, 1996; Reviewed: October 1, 1999)

Each environment-related organization to select



#### OMRON

Environmental Report 2003

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# EDITORIAL POLICY

Published in accordance with Ministry of the Environment (MOE) guidelines (2000) and also referring to the Global Reporting Initiative (GRI)\*2 guidelines (2002), Omron's Environmental Report 2003 is more extensive in information coverage than previous years, including more complete environmental impact data of overseas facilities and activities at the distribution stage. For the first time, Omron organized a factory tour for stakeholders to encourage them to evaluate our ongoing activities and use their input for further improvements. This event is featured at the end of this report along with stakeholder comments. Our editorial policy is to introduce Omron's environmental contribution activities through its technologies and products in an easy-to-understand manner.

- \*1 Numbers in the Guidelines chart on the left show item numbers of the MOE and GRI guidelines that correspond to each section of this report.
- \*2 GRI was established in 1997 to develop globally-applicable guidelines for reporting on economic, environmental and social performances of corporations and other organizations. GRI Sustainability Reporting Guidelines represent the first global framework for comprehensive sustainability.

# Scope of this Report

Period: April 2002 to March 2003

# Data covered in this report:

Data collected from Omron Corporation and 11 major affiliates in Japan (listed below):

- Omron lida Co., Ltd.
  Omron Takeo Co., Ltd.
  Omron Nohgata Co., Ltd.
- · Omron Sanyo Co., Ltd. · Omron Matsuzaka Co., Ltd.
- · Omron Okayama Co., Ltd. · Omron Izumo Co., Ltd.
- Omron Aso Co., Ltd.
   Omron Kurayoshi Co., Ltd.
- · Omron Relay and Devices Corporation

# 15 major overseas affiliates:

- · 3 companies in North America
- · 3 companies in Europe
- · 5 companies in China
- · 4 companies in Asia-Pacific



Environmental performance data for domestic and overseas sites can also be accessed on Omron's website:

http://www.omron.com

# Omron's Environmental Commitment

Addressing environmental issues is a key management objective for Omron, and environmental commitment is a major public responsibility of the company. Accordingly, our Environmental Declaration specifies the guiding spirit behind our environmental activities. To embody this philosophy, in May 2002, Omron established an environmental vision, "Green Omron 21," which outlines a well-defined environmental action plan for creating a leading "21st century company." In line with this vision, we are currently concentrating corporate-wide efforts to promote environmentally conscious management.

Upon taking on the new responsibility of supervising Omron's environmental activities, let me express my personal goals. I firmly believe that it is Omron's responsibility to reduce CO2 emissions and waste generated through our business activities, and abolish use of regulated chemical substances. It is therefore essential that we thoroughly implement our action plan and fully meet targets specified in our "Green Omron 21" vision. Toward this end, we will aggressively promote use of natural energy sources such as wind, solar and biomass energy, and tree-planting campaigns along with our conventional energy-saving measures to reduce CO2 emissions. We will also work to minimize waste and maximize productivity by making more effective use of limited resources. Our focus as a manufacturer will also be placed on accelerating the creation of environmentally sound products to further lessen the load that our social system places on the environment.

Along with the growing trend toward globalization, all Omron business activities are expanding outside Japan, and this includes not only sales but also production and development. To promote reduction of CO2 emissions and waste as well as recycling at a global level, we aim to strengthen the environmental activities at our overseas facilities. We are also striving to create abroad more environmentally friendly products that consume less energy and resources and are free from hazardous chemicals. Our goal is to expand Omron's environmentally sound management practices conventionally focused on activities in Japan to reach every corner of the world.

Compared to previous years, Omron's Environmental Report 2003 more extensively covers environmental load data and improvements at Omron Group sites and other related information to strengthen information disclosure. We hope this report helps to provide a better understanding of Omron's environmental activities. Any comments regarding

this report and suggestions for future activities will be gratefully received.



Yoshifumi Kajiya Senior Managing Officer in charge of Environmental Activities

# Environmental Vision "Green Omron 21"

# Development of society Contributing to the sustainable development of society Maximizing Omron value on a long-term basis Eco-Logistics Eco-Communication Eco-Factories/ Laboratories/ Offices Eco-Management Eco-Mind

# Eco-Mind

Activities: Promotion of ecological awareness and environmental education

## Eco-Management

Activities: Management system emphasizing environmental commitment

# **Eco-Products**

Activities: Creation of environmentally sound products

# Eco-Factories/Laboratories/Offices

Activities: Environmentally responsible factories, laboratories and offices

# Eco-Logistics

Activities: Environmentally conscious distribution

# **Eco-Communication**

Activities: Information disclosure, contributions to local communities, partnership

# Targets and Fiscal 2002 Results

Centering around "Eco-Mind," Omron's environmental vision, "Green Omron 21," is designed to promote environmental conservation in five key areas: Eco-Management, Eco-Products, Eco-Factories/Laboratories/Offices, Eco-Logistics and Eco-Communication. For each area, specific programs and well-defined targets have been specified for each year up to fiscal 2005.

Theme		FY2002 Targets	FY2002 Results	Rating
Eco-Mind Environmental education (corporate-wide)		Clarify and launch environmental education system/program.  Prepare environmental education materials for engineers/development staff.  Launched environmental education programs (some propending).  Prepare denvironmental education materials for engineer development staff.		<b>A</b>
	Promotion of environmental awareness	Invite ecology suggestions and share exemplary ideas throughout company.	Suggestions submitted: 592	•
Eco- Management	Environmental accounting	Introduce environmental accounting to major non-manufacturing sites in Japan.	Implemented environmental accounting at 9 major non- manufacturing sites in Japan (already implemented at 15 manufacturing sites in Japan in FY2001).	•
	Pollution control/ environmental risk management	No cases of law infringement, environmental accidents, claims or complaints.  Establish environmental risk report system.	No cases of law infringement, environmental accidents, claims or complaints.  Established environmental risk report system.	•
	ISO 14001 certification	Acquire and maintain ISO 14001 certification.	Omron Field Engineering received ISO 14001 certification.  Maintained certification with external auditor inspection.	•
Eco-Products	Development/supply of Eco-Products	Accelerate creation of Eco/Eco-label products.	Created 26 Eco-Products and 21 Eco-label products (accumulated total: 119).	•
	Creation of products with less or no hazardous chemical substances	Establish lead-free production system. Release 26 lead-free products.	Completed lead-free production system. Released 26 lead-free products.	•
	Promotion of green procurement	Complete evaluation of major suppliers in Japan based on Omron green procurement standards.	Completed evaluation of 527 major suppliers in Japan (502 certified for green procurement).	•
	Product recycling/reuse	Expand ATM recycling system target areas.  Maintain ATM recycling rate of 98% or higher.	ATM recycling conducted in western Japan. ATM recycling rate: 98% or higher (1,400 ATMs recycled).	•
Eco-Factories/ Laboratories/ Offices	Promotion of CO <sub>2</sub> emission reduction	CO <sub>2</sub> emissions: 45,239 tons-CO <sub>2</sub> (5% reduction from FY1995).	Survey results: 42,486 tons-CO <sub>2</sub> (11% reduction from FY1995)	•
	Waste reduction/ recycling	Waste recycling rate: 94.0% or higher Final disposal rate: 4.0% or lower	Recycling rate: 95.1%/final disposal rate: 2.0% Zero emissions achieved at 10 manufacturing sites in Japan (accumulated total: 12 sites).	•
	Promotion of green procurement (indirect materials)	Launch SLIM system for indirect material purchase management.	Omron green procurement guidelines established and SLIM activated.	•
Eco-Logistics Environmental impact reduction for logistics operations		Promote CO <sub>2</sub> emission reduction at distribution stage.	Continued mixed-cargo transportation/joint distribution. Implemented modal shift to railway transport between Kyushu and Tokyo.	•
	Resource conservation for logistics operations	Promote elimination of cardboard use.	Completed introduction of returnable containers to 140 main distributors in Japan (cardboard use reduced by 30%).	•
Eco- Communication	Environmental communication (environmental report, site report)	Publish environmental report yearly.	Published environmental report (Japanese: 10,000 copies, English: 1,000 copies).  Strengthened response to Ministry of the Environment guidelines.	•
		Promote site information disclosure (major manufacturing sites in Japan).	Ayabe Factory published site report. Introduced reports of major manufacturing sties in Japan through environmental activity website.	•
	Environmental communication	Update environmental activity website regularly.	Regularly renewed environmental activity website.	•
	(pubic relations, exhibitions, etc.)	Participate in environmental exhibitions.	Shiga Environmental Business Messe (Nov.) Eco-Products (Dec.)	•
	Environmental/ social contribution activities	Continue environmental and social contribution activities at major sites.	Carried out Omron Day social contribution activities.  Volunteer participation in forest preservation campaigns two times (Kyoto).	•

# Overview of FY2002 results

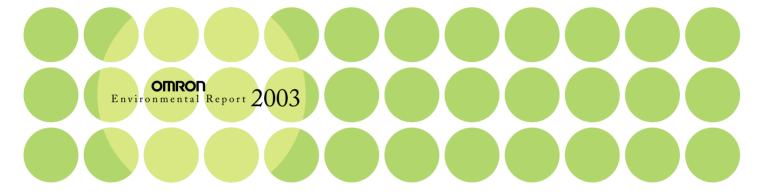
Although some programs in "Eco-Mind" did not meet fiscal 2002 expectations, Omron did attain its targets for programs in the other areas of Eco-Management, Eco-Products, Eco-Factories/Laboratories/Offices, Eco-Logistics and Eco-Communication, a clear indication of Omron's overall success in environmental conservation.

We will further accelerate environmental management practices by expanding environmental activities, currently focused on Japanese sites, to include the entire Omron Group.

Rating : Targets met : Targets not completely met

FY2003 Targets FY2003 Plan		FY2005 Targets
Implement environmental education programs.	Implement all environmental education programs.	Promote implementation of environmental education programs throughout company.
Conduct Environmental Conservation Month activities (June). Release environmental information.	Implement measures to enhance ecological awareness (June). Invite ecology suggestions and share exemplary ideas throughout company.	Conduct Environmental Conservation Month activities (June).
Review and strengthen environmental accounting rules. Expand environmental accounting system globally.	Launch environmental accounting indicators on a trial basis and establish in-house usage rules.  Prepare for system launch at overseas manufacturing sites and conduct test-runs.	Expand use of environmental accounting data globally.
No cases of law infringement, environmental accidents, claims or complaints.	Minimize risk through group-wide environmental audits.  Collect and share risk information through environmental risk report system.	No cases of law infringement, environmental accidents, claims or complaints.
Acquire and maintain ISO 14001 certification.	Acquire ISO 14001 certification at new sites. Acquire ISO 14001 certification at new Chinese companies.	Maintain ISO 14001 certification.
Percentage of new Eco-Products: 50%	Clarify each internal company Eco-Products/Eco-label Products creation plans.	Percentage of new Eco-Products: 100%
Specify range of items subject to complete elimination of lead, cadmium, hexavalent chromiun, mercury and bromine-based nonflammable materials (PBB and PBDE) in new products and work to eliminate them.	Identify range of items subject to total abolition for new and existing products.	Totally abolish use of lead, cadmium, hexavalent chromiun, mercury and bromine-based nonflammable materials (PBB and PBDE) in all products.
Japan: Continue implementation.  Overseas: Complete preparatory steps to launch green procurement targeting major overseas suppliers.	Japan: Conduct follow-ups.  Overseas: Build green procurement promotion system.	Japan: Continue implementation.  Overseas: Complete evaluation of main suppliers based on Omron green procurement standards.
Maintain end-of-life ATM recycling rate of 98% or higher.	Continue ATM recycling in western Japan.	Maintain end-of-life ATM recycling rate of 98% or higher.
CO <sub>2</sub> emissions: 44,902 tons-CO <sub>2</sub> (5.7% reduction from FY1995). * Based on anticipated considerable increase in production.	Introduce or continue use of energy-saving equipment/machines.  Specify long/medium-term targets for overseas manufacturing sites and major Japanese non-manufacturing sites.	CO2 emissions: 44,227 tons-CO2 (7.1% reduction from FY1995).
Waste recycling rate: 96.0% or higher. Final disposal rate: 0.5% or lower. Achieve zero emissions at all manufacturing sites in Japan.	Implement reinforced emission reduction measures.  Explore recycling routes.	Waste recycling rate: 100% Final disposal rate: 0%
Percentage of green products registered in SLIM: 100%.	Strengthen green product registration.	Maintain 100% registration of green products in SLIM.
Promote CO <sub>2</sub> emission reduction at distribution stage.	Clarify CO <sub>2</sub> emission reduction targets. Expand modal shift target areas.	Promote CO <sub>2</sub> emission reduction at distribution stage.
Accelerate efforts to discontinue use of cardboard.	Expand discontinuation of cardboard use.  Launch returnable bands that prevent cargo from coming apart.	Promote discontinuation of cardboard.
Publish environmental report yearly.	Strengthen economic and social performance reporting. Include extensive global data.	Publish environmental report yearly. Strengthen report contents to more exactly meet sustainability reporting standards.
Expand site information disclosure to include major overseas manufacturing sites and major non-manufacturing sites in Japan.	Introduce reports of major overseas manufacturing sites and major non-manufacturing sites in Japan through environmental activity website.	Introduce all site reports in and outside Japan (all ISO 14001 certified sites) in environmental activity website.
Update environmental activity website regularly.	Reinforce web function to complement environmental report.  Promote use of website to facilitate 2-way communication.	Update environmental activity website regularly.
Continue participating in environmental exhibitions.	Strengthen exhibition tools. Hold events designed to allow visitor participation.	Hold environmental forums targeting external audiences.
Continue environmental and social contribution activities at major sites.	Conduct Omron Day social contribution activities (May 10). Continue volunteer participation in forest preservation campaigns.	Continue environmental and social contribution activities at major sites.

# Environmental Performance

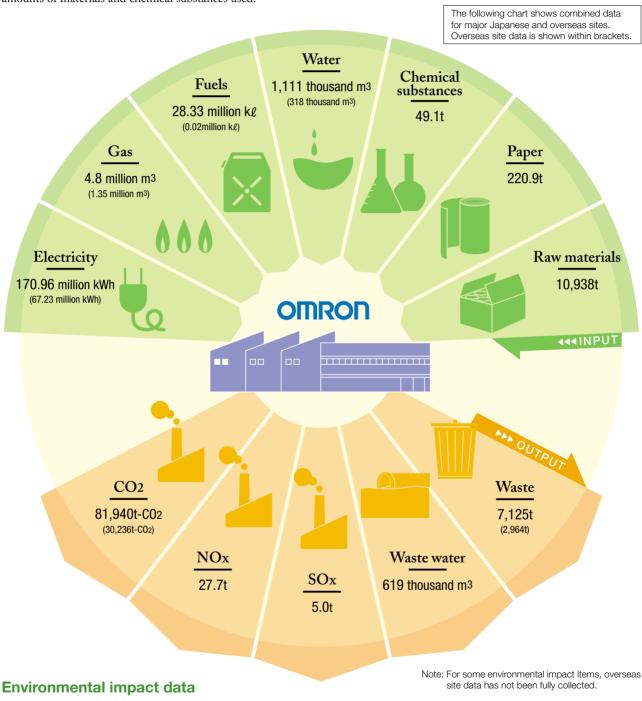


To accelerate a shift from mass production, consumption and disposal to a cycle that recirculates resources, Omron is actively pursuing a program that lessens the environmental impact of its business activities. Omron has racheted up environmental concern for its entire business process from procurement of raw materials to disposal of products by promoting resource conservation, purchasing environmentally sound materials, reducing waste and recycling, as well as reducing the use of hazardous chemical substances and seeking alternative materials.

# Environmental Impact Mass Balance

Environmental Report 2003

Due to an unceasing commitment to environmental conservation at production facilities, offices and laboratories, Omron was able to reduce the environmental impact of most items during fiscal 2002. However, increased production resulted in increased amounts of materials and chemical substances used.



**INPUT** 

Electricity: Electricity purchased from electric power companies for production facilities, offices, etc.

Gas: Utility gas as energy source

Fuels: Kerosene, light oil and heavy oil as energy sources

Water: Service water, industrial water, groundwater

Chemical substances: Regulated chemical substances for production

Paper: Copy paper at production facilities, offices, etc. Raw materials: Molding materials and metals for production

# OUTPUT

CO2: Carbon dioxide emissions from electricity, gas and fuels (Unit of CO2 emissions was changed to t-CO2 in 2003.)

NOx: Nitrogen oxide emissions from gas and fuels SOx: Sulfur oxide emissions from gas and fuels

Waste water: Waste water discharged from production facilities, offices, etc.

Waste: Industrial and general waste from business activities

# Omron Products in Society

Model E5ER

This controller maintains temperature, pressure

and flow at constant

levels for semiconductor

manufacturing equip-

ment and sterilizers.

Conventional

Model KP500C

Converts power of a co-

generation system into commercial power by

adjusting frequency and

E5ER

(VA) 15

10

5

Found virtually everywhere in society, Omron products are wide-ranging, from components embedded in various industrial equipment and manufacturing lines to train ticket vending machines, ticket gates, traffic control systems, homeuse blood pressure monitors and digital thermometers, as well as electronic components for cars and home appliances. By making a diverse range of products that are more environmentally friendly, Omron helps reduce environmental impact of the entire social system. Below are just some examples of typical Omron products and major Eco-Products and Ecolabel products developed during fiscal 2002.

Resource conservation

Main material usage

Down 45%

Resource conservation

Mass Down **68**%

Resource conservation

Down **67**%

At manufacturing facilities

**Fiber Sensor** Model E3X-MDA

Designed to detect the

objects, this sensor is

used for semiconductor

manufacturing equip-

Conventional E3X-MDA model

For programmed con-

trol of assembly, food-

processing and pack-

Conventional CJ1M model

Model G6L Used in modems, facsimiles and other telecommunications equipment, this relay opens, closes to control the signal transmission

Surface-mounted Relay

aging machines

(cm<sup>3</sup>) 2000

1500

1000 500

1.0

0.8 0.6

0.2

**Programmable Logic** 

**Controller Model CJ1M** 

ment and

robots (cm<sup>3</sup>)

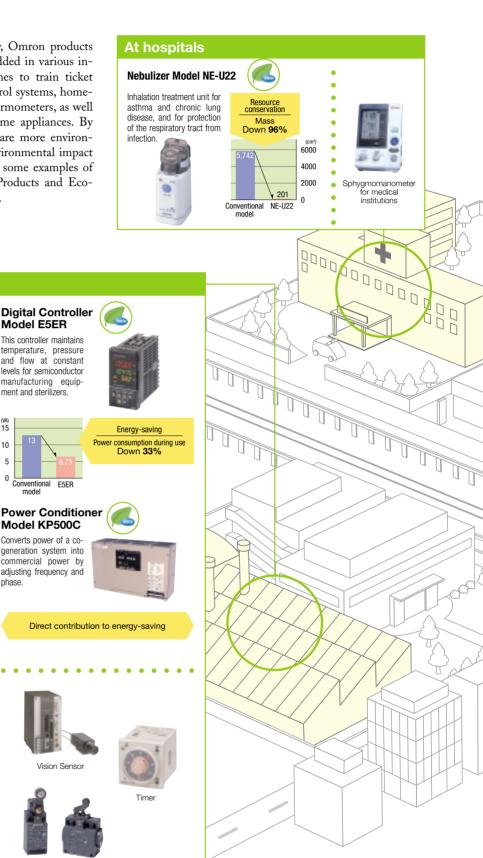
40

30

20

10

industrial

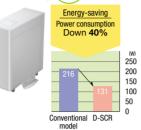




Safety Limit Switch

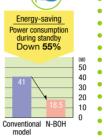
#### **ATM Surveillance Server** (D-SCR: Duplex-Solution Collaborator)

Used to control data transfer between the host computer and terminals. Installed at bank branches, this unit incorporates Omron's duplex middleware technology to eliminate shutdown of automated teller machines.



# **Bank Note Feeder Model N-BOH**

Incorporated in cash dispensers, this unit can feed bank notes of different sizes.





ATM (Thailand)

# Massage Chair Model HM-601

Home-use massage lounger Main unit mass Down 23% (kg) 60 40 20 0 Conventional HM-601



# **IC Coin System**

Installed at game centers, this system uses IC coins instead of prepaid





\*Average number of cards used by each facility over the past three years

# Relay Module Model G8C-400H

Compact onboard module for automobiles provides integrated control over headlights, intermittent wiper, etc.



Resource conservation

Number of harnesses halved by multiplex communications technology

## Ticket Vending Machine V7, Model 3S2VT

This machine features a Universal Design concept to assure easy use for the aged and physically challenged.





(Taiwan)



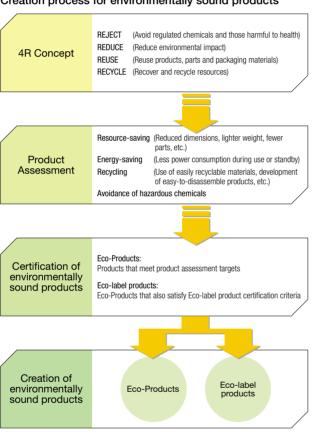
Automated Ticket Gates (Philippines)

# Environmental contribution by supplying ecological products

Our industrialized society has caused critical ecological problems including global warming and the depletion of fossil fuels and other resources. To help solve these problems, it is essential to transform our social structure to one that recirculates resources and achieves sustainable development. One of Omron's major tasks is to reduce the environmental impact of the social system as a whole through the supply of environmentally sound products. Accordingly, our "Green Omron 21" vision specifies the creation of Eco-Products as one of its key activities.

In creating Eco-Products, Omron's efforts center around the key concept of 4Rs (Reject, Reduce, Reuse, Recycle). This concept accelerates the development of environmentally sound products that help prevent global warming, conserve resources and prevent pollution.

# Creation process for environmentally sound products



## Omron Eco-label



ISO has three types of Eco-labels: Type I labels are awarded to certified products or environmental performance approved by a third party (conformity assessment body) such as the Japanese Eco-Mark and German Blue Angel; Type II labels are selfselected, self-certified labels; and Type III labels depend on data sheets, etc. to provide

environmental performance information. As no Omron products correspond to publicly-established evaluation criteria, Omron uses Type II labels in accordance with its own environmental standards (based on ISO 14021).

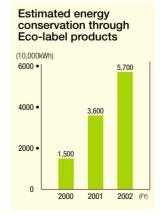
#### Eco-label certification criteria

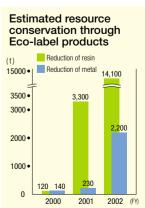
Environmental impact reduction factor	Requirements
Power consumption during use or standby	30% reduction or more in energy consumption when compared to previous models
Use of main materials	30% reduction or more of main materials in a way that provides customers with added benefits
Recycling	The industry's leading recycling rate
Reuse	The industry's leading reuse rate
Direct contribution	Products originally developed for their contribution to environmental conservation (such as solar inverters), provided that the degree of contribution can be clearly demonstrated and quantified
Avoidance of hazardous chemicals	Total elimination achieved ahead of other companies

# Estimated energy- and resource-saving effects of Eco-label products

Omron Eco-label products developed over the past three years (2000 - 2002) are estimated to conserve 108 million kWh of energy (equivalent to 39,996 tons of CO2 emissions). This corresponds to the energy consumption of approximately 29,000 average four-person families in one year\*. Use of metal was also cut by 2,570 tons and resins by 17,520 tons, contributing to resource conservation.

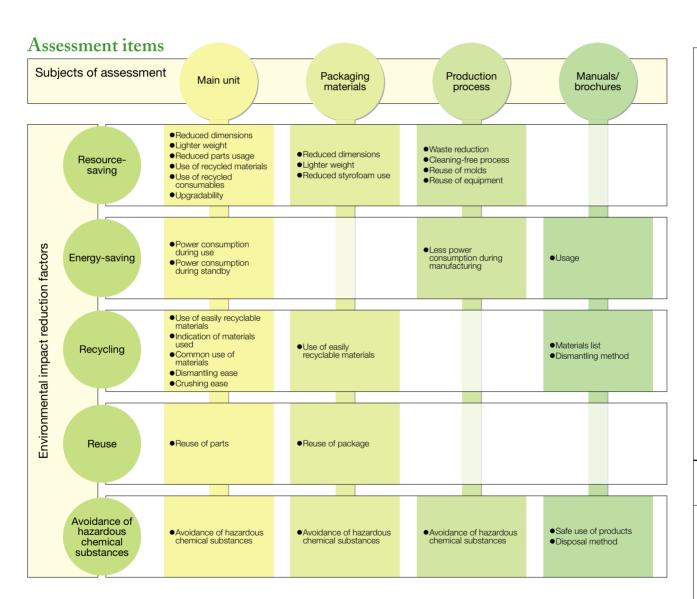
\* Estimation based on assumption that yearly power consumption of average fourperson family is 3,720kWh (Kansai Electric Power Co., Inc. model case).



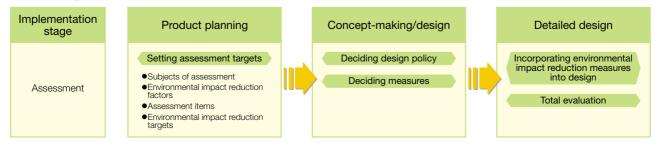


# Implementation of product assessment

Omron is promoting product assessment in order to lessen the environmental impact of its products as much as possible in each stage of manufacturing, distribution, use, maintenance, recovery, disposal and recycling. Items for assessment are selected for each environmental impact reduction factor, namely, (1) resource-saving, (2) energy-saving, (3) recycling, (4) reuse, and (5) avoidance of hazardous chemical substances. Environmental impact reduction targets are then set for each assessment item to promote the development of products that are less environmentally harmful.



# Flow of product assessment



# Implementation of Life Cycle Assessment (LCA)

Life Cycle Assessment

At Omron, LCA is implemented to quantitatively assess and evaluate the impact of Omron products on the environment during their entire life span and to incorporate the assessment results into the development process to assure the creation of products that are less environmentally harmful.

# LCA (Life Cycle Assessment)

LCA is a methodology for identifying and quantifying resource/ energy requirements and emissions for a product's entire life span (from materials procurement to manufacture, distribution, usage, recycling and disposal) while objectively and quantitatively evaluating its impact on the environment.

# FY2002 LCA results

# **Ethernet Unit for the CJ1 Series Model CJ1W-ETN11**



Communications unit that allows data exchange between Ethernetcapable PCs/workstations and programmable logic controllers

# Breakdown of CO2 emissions by life stage



Reduced environmental impact during use and manufacturing (materials/parts)

- •Use of parts that consume less power
- Energy-saving circuit design
- Less parts

# Bank Note Processing Unit for V7 Ticket Vending Machine



Embedded processing unit for V7 ticket vending machine capable of handling four different kinds of bank notes

# Breakdown of CO2 emissions by life stage



Reduced environmental impact during use and material production

- Energy-saving design including reduced power consumption during standby
- Switch from metal to resins

# Long-distance Wireless Modem Model WM51-SLP



Wireless modem capable of longdistance (1km to 3km) communications used in outdoor installations for supervisory applications

# Breakdown of CO2 emissions by life stage



# Reduced environmental impact during use and manufacturing (materials/parts)

- •Use of highly efficient RF transmitter power amplifier
- Smaller transmission antenna and casing

# **Compact Safety Limit Switch Model D4F**



# Product outline

Limit switch featuring two or four direct-drive contacts

# Breakdown of CO2 emissions by life stage



Environmental Report 2003

# Purchasing green parts and materials

Omron's green procurement policy gives purchasing preference to parts and materials that are less harmful to the environment from suppliers who show an active commitment to environmental conservation. In line with this policy, Omron has conducted surveys on the volume of hazardous chemical substances in purchased parts and materials and evaluated the environmental management systems (EMS) of suppliers in Japan.

Since Omron products are marketed worldwide, we plan to expand our green procurements to cover parts/materials purchased outside Japan and from overseas suppliers as well.

# FY2002 results

In May 2001, Omron established its green procurement standards for evaluating the EMS-based environmental conservation activities of suppliers. Evaluation of all 527 major suppliers was completed by the end of fiscal 2002. As a result, 502 suppliers met Omron's green procurement standards. This accounts for 91% of Omron's total purchasing cost of all items subject to green procurement. Omron will give preference to these certified suppliers and will not place orders with the 25 suppliers yet to be certified.

A survey was also conducted to investigate the volume of hazardous chemical substances in parts and materials to be purchased. This led to a database containing survey results.

Omron will continue strengthening information on the use of hazardous chemical substances to select greener parts/materials for promoting the development of more environmentally sound products.



Chemical substances database

# Purchasing green indirect materials

Aiming to increase the purchase of green products and cut costs, Omron initiated its SLIM (Strategic Linkage for Intelligent procurement Management) system targeting indirect materials in April 2002. By registering office supplies, copy paper and other indirect materials that conform to the Green Purchasing Law or those with Eco-Mark, the SLIM system helps Omron promote green purchasing.

During fiscal 2002, the green product purchase rate for

office supplies and copy paper reached 82% on a value basis. For the future, Omron strives to strengthen its green purchase efforts even further by expanding target items to include office automation equipment and furniture.



SLIM system for management of indirect material purchase

#### Evaluation items for Omron green procurement

Environmental policy		
Contingency plan   Contingency plan		(1) Establishment of an environmental policy
targets  (3) Specifying environmental objectives and targets  (4) Identification of means for achieving environmental objectives and targets  (5) Establishment of a management-led organization system/ intended to promote environmental conservation  (6) Appointment of personnel in charge of environmental management  (7) Education and promotion of environmental awareness among employees  Information disclosure  (8) Communication of environmental activities and disclosure of related information  (9) Control and evaluation of emissions in accordance with the Water Pollution Control Law  (10) Control and evaluation of of noise and vibration levels  (12) Control and reduction of Noise and vibration levels  (12) Control and reduction of waste  (14) Control of chemical substances used (or purchased)  (15) Resource conservation activities  (16) Implementation of a product assessment system for creating environmental impact at the distribution stage  (18) Establishment of contingency plans for accidents and		
Organizational system/ responsibility  Education/training  Information disclosure  (5) Establishment of a management-led organization system intended to promote environmental conservation  (6) Appointment of personnel in charge of environmental management  (7) Education and promotion of environmental awareness among employees  Information disclosure  (8) Communication of environmental activities and disclosure of related information  (9) Control and evaluation of emissions in accordance with the Air Pollution Control Law  (10) Control and evaluation of of environmental work of Sewage Law)  (11) Control and evaluation of noise and vibration levels  (12) Control and reduction of CO2 emissions (energy consumption)  (13) Control and reduction of waste  (14) Control of chemical substances used (or purchased)  (15) Resource conservation activities  (16) Implementation of a product assessment system for creating environmentally friendly products  (17) Reduction of environmental impact at the distribution stage		(3) Specifying environmental objectives and targets
System   S	Action plans	
Information disclosure  (8) Communication of environmental activities and disclosure of related information  (9) Control and evaluation of emissions in accordance with the Air Pollution Control Law  (10) Control and evaluation of emissions in accordance with the Water Pollution Control Law (or Sewage Law)  (11) Control and evaluation of noise and vibration levels  (12) Control and reduction of CO2 emissions (energy consumption)  (13) Control and reduction of waste  (14) Control of chemical substances used (or purchased)  (15) Resource conservation activities  (16) Implementation of a product assessment system for creating environmentally friendly products  (17) Reduction of environmental impact at the distribution stage	system/	system intended to promote environmental conservation  (6) Appointment of personnel in charge of environmental
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	Contingency plan	

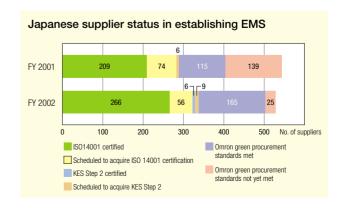
# Requirements of suppliers given purchasing preference

1	ISO 14001 certified or currently undergoing ISO 14001 certification procedures by an authorized auditing body and scheduled for examination within a year.
	Has acquired certification from a local government original environmental

2 management certification system (e.g., KES\* Step 2), or examination by an authorized auditing body scheduled within a year.

If the above requirements are not satisfied, Omron's own evaluation standards must be fully met.

\* KES: Environmental Management System Standard established in Kyoto.



# Development of technologies that are less harmful on the environment

Environmental Technologies

Recently, growing concern for environmental pollution caused by discarded electronic products and automobiles has been spurring manufacturers toward totally abolishing hazardous substances from products in Europe and other parts of the world. In conformance with electronics and automotive industry regulations (including European RoHS and ELV directives), Omron has committed itself to eliminate the use of hazardous chemicals such as lead, mercury, cadmium, hexavalent chromium and bromine-based nonflammable materials, in accordance with clearly specified plans.

For lead, in particular, used in solder for electronic equipment manufacturing, Omron has set up a corporate-wide working group to select lead-free solder materials with the reliability required for each product line and accelerated the shift to lead-free materials.

#### Lead-free Proximity Sensor

Released in January 2003, Omron's new cylindrical proximity sensor incorporates one of the most advanced environmental technologies among our many Eco-Products. Essential for the automation of manufacturing facilities, cylindrical proximity sensors assure the smooth flow of products on assembly and processing lines by controlling their positioning

and detecting the retention of items. This new sensor has reduced the content of lead by 99% and bisphenol A (a kind of endocrine disruptor) by 80% when compared to a conventional model, significantly lessening its environmental impact.



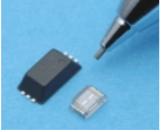
# Examples of eco-friendly developments

Ultra-miniature RF Relay

MEMS (Micro Electro-Mechanical Systems) technology can configure a miniaturized structure with sensor or motor functions on a tiny base by using a semiconductor process. By taking advantage of this advanced technology, Omron has succeeded in perfecting an ultra miniature RF relay which is 1/10th the size of Omron's former model and reduces power consumption to 1/1,000th.

This device is designed to switch between external and internal antennas and change the frequency band of the radio wave to be received or transmitted. This lengthens the use and increases the speed of wireless communications networks such as next-generation wireless LAN, ultra-high-speed mobile networks and wireles Internet. By sandwiching a silicon base between two glass bases, this relay uses statistic electricity to allow the signal line formed on one of the glass bases to adhere to or separate from the silicon base, in order to control on/off switching of RF signals. By employing an Omron pro-

prietary high-efficiency actuator (EAGLE) and highfrequency, low-loss configuration (HF structure), a no-compromise combination of the world's smallest design and quick response has been achieved.



Ultra-miniature RF relay

# High-brightness LED Backlight

Omron's ongoing R&D efforts in the area of lightwave control are focused on micro lens arrays (MLAs). MLAs can control lightwave properties such as light flux, polarization and wavelengths, contributing to miniaturization of devices and offering greater added value through hybrid integration of application-specific functions.

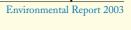
As mobile phone content resources advance from voice and text to include pictures and videos, backlights for display illumination are increasingly in demand to reduce power consumption. Omron's newly developed backlight combines two proprietary technologies - MLA and Vector Radiation Coupling. This method directly projects light on a pattern without light path divergence, allowing light to be output from the lightguide surface. As a result, this thin, lightweight backlight

for mobile phones and terminals features three times more efficiency compared to a conventional product, and it also saves power. Along with the anticipated international growth in popularity for color LCD mobile phones, Omron plans to expand backlight sales worldwide.



LED backlight

# Energy Conservation/ Reduction of CO<sub>2</sub> Emissions



OMRON

# Prevention of global warming

To reduce the emissions of greenhouse gases, including carbon dioxide, a main cause of global warming, Omron is proactively working on energy conservation.

In 1997, the third session of the United Nations Framework Convention on Climatic Change was held in Kyoto. In conformance with the CO2 emission reduction target which Japan accepted at the convention, Omron is striving to reduce total CO2 emissions from all domestic manufacturing sites 11% below 1995 levels by the end of fiscal 2010. This goal also meets Japan's reduction target specified in the Kyoto Protocol (reducing CO2 emissions between 2008 and 2012 by 6% on average below 1990 levels).

To achieve this target, strict control has been implemented for daily use of electricity by appropriately adjusting air conditioner settings, switching off PC monitors when not in use, and turning off lights whenever unnecessary. At the same time, Omron is promoting the implementation of high-efficiency equipment and devices for heat sources, air conditioning and lighting to save energy. To boost energy efficiency (reducing CO<sub>2</sub> emissions-to-unit production ratio), further improvement of productivity and yield has been targeted.

Non-manufacturing sites are also on course to acquire ISO 14001 certification and promote EMS-based energy-saving activities.

# FY2002 results

Although production increased 6.9% from fiscal 2001, Omron's continued energy-saving measures proved productive, resulting in a 4.6% reduction in total energy consumption for domestic manufacturing sites. CO<sub>2</sub> emissions totaled 42,486 tons, meeting Omron's target of 45,239 tons (5% below the fiscal 1995 level). The CO<sub>2</sub> emissions-to-unit production ratio also improved nearly 10% when compared to the previous year.

Continued efforts for energy conservation also helped non-manufacturing sites reduce CO2 emissions by 10% when compared to fiscal 2001.

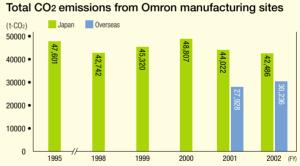
# Future measures

Omron will continue to introduce more energy-efficient manufacturing systems and equipment. It will also promote the use of new energy sources such as photovoltaic and wind power generation systems. Four domestic sites have already put a photovoltaic power generating system into operation, which alone resulted in a CO2 reduction of 26 tons during fiscal 2002.

Along with the shift of production abroad, Omron's overseas manufacturing sites will also concentrate on implementing energy-saving measures.



Note: In addition to the above, total energy consumed by 9 offices and laboratories in Japan during fiscal 2002 amounted to 235 TJ (equivalent to 6,098ke of crude oil).



Note: The national average power receiving end coefficient value for the corresponding year, reported by the Federation of Electric Power Companies, was used as the CO<sub>2</sub> conversion coefficient.

In addition to the above, CO<sub>2</sub> emissions from 9 offices and laboratories in Japan totaled 9,218 tons-CO<sub>2</sub> during fiscal 2002.

# Energy conservation case report

Established in 1992 in the suburbs of Stuttgart, Germany, the leading nation in environmental commitment, Omron Electronics Manufacturing of Germany GmbH (OMG) develops and manufactures proximity switches, photoelectric sensors and other factory automation control components. In 1997, OMG received ISO 9002 certification, followed by ISO 14001 certification in 1999. Upon the ISO certification renewal in December 2000, the company achieved integrated ISO 9001:2000 and ISO 14001 certification. In 1999, a new factory featuring complete ecological considerations was built on an adjoining site. Here, the company is strengthening its commitment to environmental conservation.

# Creating green areas on rooftop



Factory building rooftop is covered with greenery during summer. In winter, due to the short duration of sunshine, the skylight is covered for protection against cold weather.

#### Energy-saving illumination thorough the use of sensors and timers



A pedestrian detection sensor installed at the entrance. Lighting goes off automatically when a certain period of time has elapsed after the last person leaves the office to save electricity.

Natural lighting



Natural light entering from rooftop helps conserve energy for

Environmental Report 2003

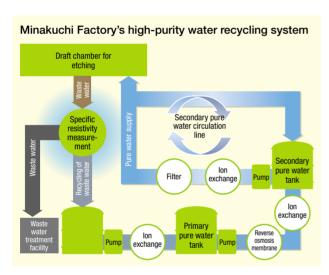
# Resource Conservation

# Effective use of resources

To achieve a society that recirculates what it employs, limited resources must be used as efficiently as possible. Omron is strengthening its resource-saving design of products, improving productivity and promoting reuse and recycling of waste to reduce the use of water, paper and raw materials.

# Water resources

During fiscal 2002, water used by the Omron Group as a whole amounted to 793,000m3, or 16,000m3 less than fiscal 2001. Our Minakuchi Factory which specializes in semiconductor production uses almost 400m3 of pure water per day to clean wafers. As cleaning water requires an exceptionally high degree of purity, recycling of waste water is extremely difficult. The Minakuchi Factory implemented a high-purity water recycling system in 1997. This system allows reuse of approximately 100m3 a day of pure cleaning water which, in turn, resulted in waste water reduction of 35,000m3 per year.

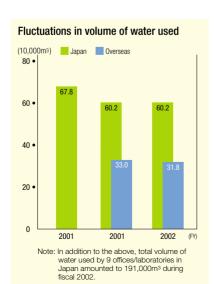


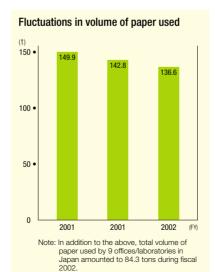
# Paper resources

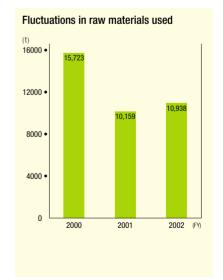
In fiscal 2002, office automation paper used by the Omron Group totaled 220.9 tons, a 12.2 ton decrease from fiscal 2001. To save paper, Omron is promoting use of information systems for paper-less documentation while also encouraging all employees to use duplex and reduced-size photocopy/printing.

# Raw materials

During fiscal 2002, the Omron Group purchased 10,938 tons of raw materials (molding materials and metals) in total, an increase of 779 tons (7.1%) from fiscal 2001. The main cause of this increase was a 6.9% increase in production. To reduce raw materials, Omron is concentrating on the development of resource-saving Eco-Products, minimizing production losses through yield improvement and promoting in-process recycling. As a result, the volume of in-process recycled molding materials increased 50% in fiscal 2002 over the previous year, amounting to 130 tons. We will continue strengthening measures to save raw materials in order to use resources more effectively.







# Topics

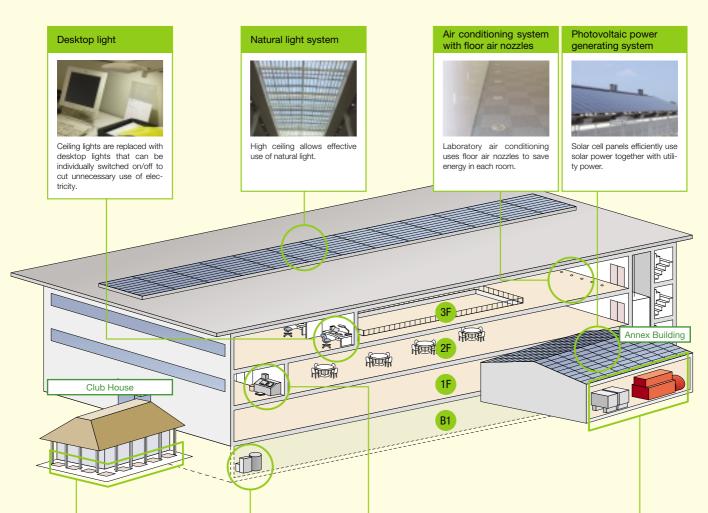
# Environmentally Conscious Keihanna Technology Innovation Center

March 2003 saw the completion of Omron's Keihanna Technology Innovation Center in Kansai Science City. Intended to serve as the heart of Omron global R&D activities, this center is Omron's largest R&D facility and is tasked with developing new key technologies that support Omron core competencies of "Sensing & Control."

For environmental considerations, the center is equipped with a photovoltaic power generating system, a co-generation system and a facility for rainwater utilization. To blend well with the surrounding landscape, its low-profile design consists of three above-ground stories and one below ground and boasts a touch of traditional Japanese design for its exterior.

As the core R&D facility driving Omron's growth in the 21st century, the Keihanna Technology Innovation Center is positioned to coexist with the local community, while also contributing to society.





#### Eco bricks



Bricks of recycled sludge from Kyoto waste water treatment facility are used as building materials for the Club House.

#### Use of rainwater



10,000m² roof area collects rainwater which is stored in underground tank and filtered for general chores.

# Biodegrading waste



Organic fertilizer from raw food refuse is supplied to sub-contracted tea firm. Omron then purchases the tea for closed-loop recycling.

# Co-generation system and chilled/hot water storage system





As clean rooms and lab facilities consume large amounts of energy, the latest heat source equipment, such as a co-generation system and a chilled/hot water supply system, is employed for added efficiency.

# Zero emissions challenge

As part of a worldwide effort to build a recycling society that is committed to resource recovery, Omron has taken on a zero emissions challenge. To meet this challenge, Omron has targeted 15 sites where incineration and landfill disposal will be completely eliminated. In doing so, Omron intends to recycle and reuse 100% of discharged waste resulting from business activities at these sites. Two of the 15 targeted sites are already operating at a 100% recycling rate, and 10 other sites achieved zero emissions during fiscal 2002. The remaining three sites are expected to attain zero emissions by the end of fiscal 2003.

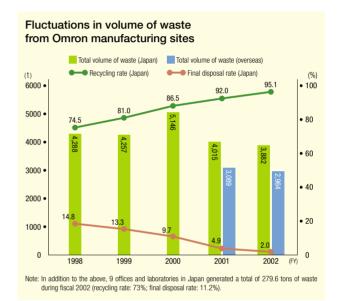
# FY2002 Results

During fiscal 2002, Omron achieved a recycling rate of 95.1% and a final disposal rate of 2.0%, successfully meeting its initial recycling and disposal targets of 94.0% (minimum recycling rate) and 4.0% (maximum final disposal rate). Total waste volume amounted to 3,882 tons, a 3% decrease from the previous year. Through a concerted corporate-wide effort to promote a recycle/reuse approach, Omron was able to reduce its disposed waste by 60% (a total volume of 78 tons).

In terms of categories, waste plastics, wood scraps and iron scraps together represented 80% of the total volume of generated waste, while waste plastics accounted for 90% of disposed waste.

# **Future Measures**

Omron will continue to concentrate on waste minimization by accelerating its in-process recycling program while improving productivity and yield. In regards to future zero emission endeavors, Omron intends to expand its efforts to include overseas manufacturing sites and non-manufacturing sites in Japan.



#### Waste reduction case report

Omron Electronic Components (Shenzhen) Ltd. (OMZ) generates several different types of waste, and each has its own requirements for handling. OMZ General Affairs Section keeps regular statistics on each waste type, such as composition, quantity sent for disposal and quantity recycled. Shown to the right are some examples.

OMZ, like many developing places, has seen its waste load grow as the economy grows. Municipal waste has increased approximately 100% every year since 2001, mirroring OMZ's rapid company development over the same period.

OMZ General Affairs Section along with other sections operated under the ISO 14001 Committee and Environment Management System, and our Engineering Section plans to abolish all environmentally harmful substances. We have entered the Sony Green Partner ORG to help preserve the environment and have also provided all employees with environmental protection information.

	туре	Item	Method of Disposal		
	MSW Handling	Municipal Solid Waste	Collecting/Transport		
		Waste from Employees' Dining Room	Collecting/Transport		
	Manufacturing Waste Handling	Production Waste Materials	Transport Back to HK & Disposal		
		Parts Waste Materials	Collecting/Transport/ Recycling		
		Dangerous Chemical Waste	Uniform Control/Transport		
		Waste Oil from Electrical Machines	Uniform Control/Transport		
	Purchase Ratio Control	Purchase Ratio/Reduction Ratio	Cancel Using Chrome and Other Dangerous Chemical Materials		
	Energy Source Recycling	e Recycling Water from Reusing as Clean Electrical Machines			



Disposal of parts waste materials



Disposal of manufacturing waste



Dangerous chemical waste storage



Method of Disposal

Reusing recycled water from electrical machines

# Control of Chemical Substances

# Regulating the use of hazardous chemicals

Conforming to related laws and regulations both in and outside Japan, and in view of industrial trends, Omron has established in-house regulations for hazardous chemical substances. These regulations are also incorporated into in-house guidelines for product development so as to strictly control the use of hazardous chemicals. For manufacturing processes, the company completely eliminated the use of chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs) and organochlorine solvents in 1998. Currently, Omron is working to reduce the amount of chemicals specified by its in-house regulations. Regarding the use of lead, cadmium, hexavalent chromium, mercury, bromine-based nonflammable materials and other chemicals subject to regulations of the European End of Life Vehicle (ELV) and Restriction on Hazardous Substances (RoHS) directives, we have either completely eliminated or are presently working diligently to minimize the volume of usage by setting a schedule for total aboli-

Omron's chemicals database, effective since fiscal 2002, specifies the amount of chemical substances present in main parts and raw materials to be purchased. This provides a useful tool for product assessment during the development stage, and helps to reduce the amount of hazardous chemical substances used in Omron products.

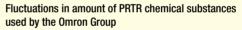
## Specifications of chemicals subject to regulated use Omron has specified the following in-house regulations for the use of chemicals.

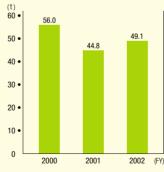
Category	Definition	Action		
Substances prohibited (category A)	119 chemical categories prohibited by laws and regulations both in and outside Japan	d Usage to be terminated		
Substances subject to switching to alternative materials (category B)	5 chemical categories currently in use but expected to be prohibited in five years	Use allowed until related laws and regulations are put into effect (alternative materials to be studied/developed)		
Substances subject to voluntary regulations (category C)	123 chemical categories, use of which is allowed but whose environmental impact is noted	Reduction and switch to alternative materials to be promoted voluntarily wherever technically and financially possible, according to specified priorities		

# Pollutant Release and Transfer Register (PRTR)

Omron regularly conducts PRTR\* surveys on the 354 chemical substances specified by the PRTR Law. Accordingly, measurement is calculated for all specified substances, released and transferred by each site that total 0.1 tons or more. During fiscal 2002, Omron reported ten such substance categories (see table below). For the Omron Group as a whole, 49.1 tons of chemical substances subject to PRTR control were handled during fiscal 2002, a 4.3 ton increase from the previous year. The major cause for this rise was an increase in the use of molding materials and solvents needed to meet a rapid growth in production.

To reduce usage of hazardous chemicals even further, we intend to strengthen our in-house control system and accelerate the shift to alternative substances.





## (Pollutant Release and Transfer Register) A PRTR is an environmental database or inventory of potentially harmful releases to air, water, and soil as well as wastes transported to treatment and disposal sites. Facilities releasing one or more of the substances must report on what was released, the quantities involved and to which environmental media

PRTR survey results Unit: ton

Substance name	Amount used	Amount released to the environment	Amount transferred as industrial waste	Amount consumed	Amount removed and treated	Amount recycled
Antimony and antimony compound	3.67	0.00	0.00	3.67	0.00	0.00
Bisphenol A epoxy resin (liquid)	6.76	0.00	0.00	6.65	0.00	0.11
Ethylbenzene	0.77	0.77	0.00	0.00	0.00	0.00
Xylene	2.83	1.01	0.00	0.00	0.00	1.82
Silver and water-soluble compounds	0.14	0.00	0.00	0.13	0.00	0.01
1,3,5-trimethylbenzene	0.44	0.01	0.00	0.00	0.00	0.43
Toluene	4.29	4.21	0.00	0.00	0.00	0.08
Lead and lead compound	28.81	0.01	2.12	19.13	0.00	7.55
Nickel	0.69	0.00	0.00	0.35	0.00	0.34
Hydrogen fluoride and water-soluble salts	0.67	0.00	0.30	0.00	0.00	0.37
Total	49.07	6.01	2.42	29.93	0.00	10.71

# Environmental Risk Management

# Minimizing environmental risks

Omron ensures complete compliance with laws and regulations through effective use of ISO 14001, while also establishing and conforming to in-house regulations that are even stricter than these laws and regulations. Risk resulting from irregular equipment operation, accidents and other situations that cause standard value violations are identified and preventive measures are taken. In addition, regular monitoring and measuring are carried out along with training sessions to minimize risk. Omron has also established a system so that, in the event of a crisis, conditions will be immediately reported to top executives and thorough measures put in place to prevent a recurrence.

During fiscal 2002, no violation of environmental laws and regulations occurred. There were no complaints associated with the environment nor fines or penalties resulting from failure to abide by laws and regulations.

# Response to soil and groundwater contamination

In December 2000, Omron's voluntary soil and groundwater surveys identified groundwater pollution sources (volatile organochlorine compounds) that exceeded environmental standard values at the former grounds of our Shijo Factory and on the premises of our affiliate, Omron Sanyo. These findings were immediately reported to the respective municipal governments. As a remedy, appropriate cleanup measures are being implemented by combining groundwater pumping and high-vacuum extrac-

tion. At the Shijo site, a new bio-purification technique was also introduced to accelerate the cleanup process. This has lowered the concentration of trichloroethylene to below the standard value and cleanup was completed in June 2003. The same technology is also being implemented at Omron Sanyo to facilitate cleanup. Omron abolished the use of trichloroethylene in March 1994.



New bio-purification

#### Trichloroethylene concentration changes at the former Shijo Factory grounds (mg/ℓ) 10.00 • 2.30 Implementation of new technology 1.00 0.85 0.10 Less than 0.003 Less than 0.003 Standard value (0.03mg/ ℓ 0.01 Less than 0.003 01/5 01/11 02/11 03/4 03/6 (Year/month)

# Storage and control of devices containing PCBs

In July 2001, the PCB Waste Special Measures Law was enacted. Conforming to this law, all concerned Omron sites have reported the storage and disposal status of polychlorinated biphenyl (PCB) waste to respective municipalities. Omron strictly controls storage of end-of-life equipment containing PCBs and monitors conditions on a regular basis to prevent PCB leakage. Along with the upcoming construction of PCB disposition facilities in Japan, we plan to investigate specific measures for disposition in more detail.

#### PCB storage status for the Omron Group

Device	Quantity
Capacitors	64
Transformers	9
Ballasts for fluorescent lights	728



Chain used to prevent PCB bottles from tipping over, anti-corrosive metal tray to eliminate leakage

# Risk prevention case report

At Omron's Kusatsu Factory, two 2m-wide streams run through the premises. The factory building is equipped with more than 100 rainwater drain ports, and rainwater flowing from these drain ports to side ditches was directly discharged into the streams. Should solvents or oil be discharged from the side ditches or road surface into the streams, this could cause environmental pollution. To control this risk, in August 2002, new ditches were constructed on both sides of the streams and the drain ports were integrated and reduced to 10. An emergency shutoff valve was also installed to pre-

To appropriately respond to chemical substance leakage, the Kusatsu Factory also organizes drills for oil fence installation and other measures.



Concentrated rainwater channels and valve for leak-



Drills organized for oil fence installation to handle kerosene leakage from damaged tank



Drills using absorbents for stemming leakage of combustible materials from warehouse

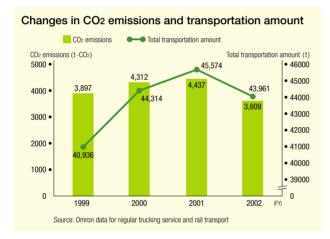
# Reducing environmental impact at distribution stage

To lessen environmental impact at the distribution stage, Omron strives to reduce CO2 emissions by improving transportation efficiency, reviewing transportation routes and by modal shifting to railway transport. Efforts are also focused on reducing packaging materials for product transportation.

# FY2002 results

During fiscal 2002, Omron launched rail transport using JR containers between Kyushu (southern Japan) and Nagoya and between Kyushu and Tokyo. The company also shortened travel distances by reviewing the routes of transportation. In addition to decreasing overall transportation, these measures enabled Omron to reduce total CO<sub>2</sub> emissions in the distribution stage by 18.6% (828 tons-CO<sub>2</sub>\*) compared to fiscal 2001, to 3,609 tons-CO<sub>2</sub>.

\*Of this total, CO<sub>2</sub> emission reduction by rail transport amounted to 296 tons-CO<sub>2</sub> and reduction by shortened travel distance amounted to 41 tons-CO<sub>2</sub>.



# Main measures for reducing CO2 emissions

- 1. Shift from truck to rail transport (using JR containers) between Kyushu and Tokyo
- 2. Review of product stock allocation
- Review of transportation routes and number of delivery vehicles
- 4. Improvement of load-carrying efficiency and optimization of the number of vehicles by mixed-cargo transportation and joint distribution with other companies

# Future measures

We are determined to further reduce environmental impact at the distribution stage by introducing regularly scheduled trucking service. This will be realized by integrating im-

ported cargo currently transported by trucks to individual factories after being unloaded from ships. Along with continued reviewing of delivery routes, expansion of modal shifting will also be investigated.



Logistics center for Western Japan region

# Case report of resource-saving measures at logistics center

To reduce the use of cardboard for product packaging, Omron's logistics center launched returnable containers for delivery to distributors. During fiscal 2002, this system was introduced to 140 networked distributor offices within the Kanto, Chubu and Kansai areas. Consequently, use of cardboard declined 30% (46.2 tons) compared to fiscal 2001.

The logistics center will continue to expand the use of returnable containers and facilitate smoother system management. Other plans to reduce the use of stretch film include the launch of returnable bands that prevent cargo from coming apart.



Container packaging



With the rapid globalization of Omron's business operations and progressively more production occurring overseas, environmental conservation activities at Omron Group facilities outside Japan have become increasingly important. Accordingly, all overseas facilities will now be required to incorporate the Omron Group's environmental action plan (formulated as part of its environmental vision "Green Omron 21") into all conservation activities in addition to following the ISO 14001 Standard. All Omron manufacturing sites outside Japan, excluding newly established ones, are ISO 14001 certified.

#### Europe (3 sites) No. of employees: 429

		1 2 16
Energy	Electricity	3,130,000kWh
consumption	Gas	980,000m <sup>3</sup>
	Total amount of waste	499t
Waste	Amount recycled	198t
	Recycling rate	40%
Water used		6,000m <sup>3</sup>
Solder used	7	10t

# Omron Manufacturing of the Netherlands (OMN)

In 1996, OMN was among the first Omron factories to receive ISO14001 certification and we have been working continuously on keeping the environmental impact of our factory to a minimum. In line with "Green Omron 21," our current three focus areas are: The European RoHS directive, especially the introduction of lead-free soldering, defining a Company

Energy Plan aiming at further reductions of CO2 emissions, and waste reduction activities such as further improving of the recycling rate.



Hugo Sintnicolaas

# China (5 sites)

Energy	Electricity	14,250,000kWh
consumption	Gas	170,000m³
	Total amount of waste	1,068t
Waste	Amount recycled	948t
	Recycling rate	89%
Water used	7 4	169,000m <sup>3</sup>
Solder used	14	22t

# Omron (Dalian) Co., Ltd. (OMD)

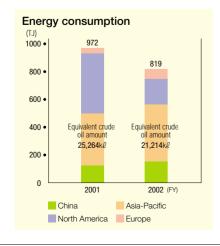
In order to become a more peopleoriented company, OMD has worked to raise the awareness and skills of all employees through vocational training. Meanwhile, to actively respond to the call for a lead-free globe, we have set about acquiring in 2003 information on lead-free techniques, and plan to forcefully spread the use of lead-free soldering in the future. In addition to inner management activities, we are also imposing on related external parties such as contractors and suppliers steps to save energy and resources in order to reduce environmental impact. In gener-

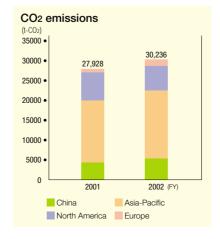
al, we have committed ourselves to environmental improvement and will actively seek harmony between people and the environment.

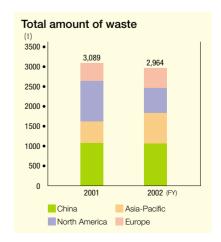


Xiaobo Shi

# Environmental performance data of overseas manufacturing sites







# Asia-Pacific (4 sites) No. of employees: 3,886

Energy	Electricity	32,800,000kWh		
consumption Gas	Gas	10,000m <sup>3</sup>		
Waste	Total amount of waste	515t		
	Amount recycled	408t		
	Recycling rate	79%		
Water used		108,000m <sup>3</sup>		
Solder used		53t		

# Omron Mechatronics of the Philippines Corporation (OSP)

OSP is one of the few companies in Subic Bay Freeport Zone (SBFZ) that is ISO 14001 certified. One of the main activities of OSP is waste segregation. To date, we have increased our recyclable waste to almost 90% compared to the total waste generated. Much of our effort is focused on making sure that materials used in the company are recyclable. Proper segregation of wastes is also strictly controlled.

Last year, SBFZ started studies on a new sanitary landfill. As a developing country, attention to environmental con-

cerns is not being addressed as vigilantly as in first-world countries, but here is proof that in the commercial progress of SBFZ, the environment is also benefiting.



Lyn Amor Doble

# North America (3 sites) No. of employees: 818

Energy	Electricity	17,070,000kWh
consumption	Gas	140,000m <sup>3</sup>
	Total amount of waste	882t
Waste	Amount recycled	549t
	Recycling rate	62%
Water used		35,000m <sup>3</sup>
Solder used	2	38t

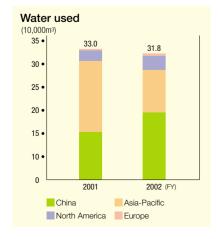
# Omron Dualtec Automotive Electronics, Inc. (ODI)

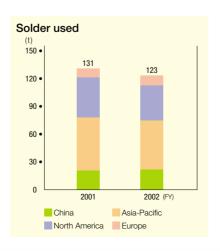
ODI is active in a number of environmental initiatives. In FY2002 we made a significant step forward in the use of plastic returnable containers for supplied raw materials. Now, 90% of all parts received by the Relay manufacturing facility is in returnable containers, resulting in a significant reduction in cardboard usage. ODI, like other Automotive operations, is currently being challenged by EU initiatives to improve the recyclables of automotive components through "End of Life Vehicle" legislation (ELV). This has requirements for the elimination of cadmium, lead and

other materials from automotive components. There are also new requirements for monitoring the use of recycled materials in cars.



Steve Hemphill





# Access Our Site

For information on the conservation activities of overseas manufacturing sites please visit:

http://www.omron.com

Note: Although total energy consumption decreased, an increase in the use of electricity resulted in an increase in CO2 emissions.

Environmental Report 2003

# Environmental management promotion system

To implement environmental management practices that enhance both ecology and economy, Omron has built a group-wide system centering on the Corporate Environmental Activity Committee. This committee is chaired by the managing officer in charge of environmental matters and consists of members representing internal companies and head office administrative divisions.

The Corporate Environmental Activity Committee is tasked to draft environmental strategies, policy and vision in accordance with decisions reached at the Top Executives Environmental Meeting. It is the responsibility of that committee to coordinate corporate-wide environmental strategies with those of each internal company. In 2002, an internal review was conducted on the committee and the group-wide environmental conservation promotion system. Findings from this review led to the creation of an environmental taskforce made up of working groups. It is the responsibility of these groups to investigate environmental issues that concern the entire Omron Group. With the establishment of this taskforce Omron aims to further accelerate its environmental activities.

# Acquisition of ISO 14001 certification Basic policy

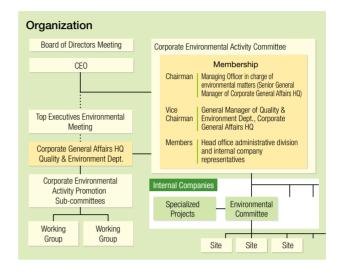
Omron believes that the development of a full-fledged environmental management system is a must for the company to effectively implement environmental management practices. Based on this belief, Omron in September 1995 established a policy to acquire ISO 14001 certification as early as possible. Our ISO 14001 acquisition effort was first concentrated on manufacturing sites with operations that generally impact heavily on the environment, steadily expanding the scope to include non-manufacturing sites such as offices and laboratories as well.

# FY2002 results

All Omron Group manufacturing sites including affiliated production companies (excluding newly built facilities) as well as major non-manufacturing sites have already been ISO 14001 certified. Accordingly, during fiscal 2002 Omron reinforced ISO 14001 acquisition efforts for major non-manufacturing affiliates. As a result, our affiliate Omron Field Engineering Co., Ltd. achieved 7-site integrated acquisition of ISO 14001 certification.

## **Future measures**

Omron's newly opened Shijo Office in Kyoto and Omron Software Co., Ltd. (an Omron non-manufacturing affiliate), along with a new factory in Shenzhen, China are now working toward ISO 14001 certification. All of these sites expect to receive certification by March 2004.



#### ISO 14001-certified Omron Group sites

As of April 2003

(Japan) Manufacturing: 17 sites, R&D: 3 sites, Offices: 13 sites; (Overseas) Manufacturing: 15 sites, Total: 48 sites

Japan/ Overseas	Category	Site	Auditing body	Date of certification
Japan	Omron	Ayabe Factory	BVQI	1996/11/16
	Corporation	Mishima Factory	BVQI	1997/9/15
		Kusatsu Factory	BVQI	1998/12/25
		Minakuchi Factory	BVQI	1997/6/12
		Offices & Labs (9 sites*1)	BVQI	2001/4/3
	Affiliates	Omron lida Co., Ltd.	JQA	1998/10/2
		Omron Ichinomiya Co., Ltd.	BVQI	1996/12/8
		Omron Takeo Co., Ltd.	JAC0	1998/2/23
		Omron Nohgata Co., Ltd.	BVQI	1997/7/26
		Omron Sanyo Co., Ltd.	JQA	1999/1/8
		Omron Matsuzaka Co., Ltd.	BVQI	1998/2/21
		Omron Okayama Co., Ltd.	BVQI	1997/8/2
		Omron Izumo Co., Ltd.	JAC0	1998/1/26
		Omron Aso Co., Ltd.	BVQI	1997/9/15
		Omron Kurayoshi Co., Ltd.	JAC0	1997/9/29
		Omron Relay and Devices Corporation	JACO	1997/8/26
		Omron Kyoto Taiyo Co., Ltd.	BVQI	1998/3/31
		Omron Taiyo Co., Ltd.	BVQI	2000/9/30
		Omron Field Engineering Co., Ltd. (7 sites*2)	BVQI	2002/9/30
Overseas	Shanghai	Shanghai OMRON Automation System Co., Ltd.	SCEMS	1998/11/27
	Shanghai	OMRON (Shanghai) Co., Ltd.	SCEMS	1998/12/8
	Shanghai	Shanghai OMRON Control Components. Co., Ltd.	EIQA	1999/2/5
	Dalian	OMRON (Dalian) Co., Ltd.	CCEMS	1998/12/14
	Taiwan	OTE Engineering Inc.	SGS	1999/2/10
	Korea	OMRON Automotive Electronics Korea Co., Ltd.	KMA-QA	1999/3/26
	Malaysia	OMRON Malaysia Sdn. Bhd.	SIRIM	1998/12/18
	Indonesia	PT OMRON Manufacturing of Indonesia	BVQI	1997/8/26
	The Philippines	OMRON Mechatronics of the Philippines Corporation	BVQI	2000/8/9
	Germany	OMRON Electronics Manufacturing of Germany G.m.b.H.	LRQA	1999/4/16
	The Netherlands	OMRON Manufacturing of The Netherlands B.V.	LRQA	1996/11/28
	UK	OMRON Electronic Components Ltd.	BSI	1998/2/9
	U.S.A.	OMRON Automotive Electronics, Inc.	SGS	1999/3/31
	U.S.A.	OMRON Manufacturing of America, Inc.	TUV	1999/5/6
	Canada	OMRON Dualtec Automotive Electronics, Inc.	SGS	1999/4/23

AEC Office, Osaka Office, Kyoto-Ekimae Office, Kyoto Laboratory and Tsukuba Laboratory. Due to closure on August 2002, Kumamoto Laboratory has been deregistered. Kyoto and Tsukuba Laboratories were integrated into the Keihanna Technology Innovation Center in May 2003 and scheduled for reacquiring ISO 14001 certification by March

<sup>\*2</sup> OFE Tokyo Office, OFE Sendai Office, OFE Nagoya Office, OFE Osaka Office, OFE Huteck Office, OFE Sapporo Office, OFE Fukuoka Office (OFE: Omron Field Engineering Co., Ltd.)

# Environmental audit system

Omron's in-house environmental audit system for each site consists of self-auditing and corporate-wide auditing. In conjunction with ISO 14001 certification inspections, Omron's in-house system determines whether an environmental management system has been implemented correctly at each factory or affiliate. Through these internal audits Omron is able to ascertain the achievement levels of each site in regards to environmental objectives and targets; ensure that related laws and in-house regulations are followed at each site; and verify that all sites are equipped with appropriate response measures to environmental risks. The same auditing practices used in Japan are also in force at overseas manufacturing sites.

# FY2002 results

During fiscal 2002, in-house divisional or function-specific auditing sessions were carried out at all ISO 14001 certified sites.

#### Audit system

Category	Audit items
Environmental management system auditing	Conformity with ISO 14001 requirements Conformity with site-specific manuals, regulations, procedures and other standards
Environmental performance auditing (including observance of laws)	Level of environmental objective/target attainment and progress of environmental management programs
	Measures taken to minimize environmental risks





Auditing for each site

# Training of internal auditors

In fiscal 2002, a 2-day training seminar was held for new auditors tasked with conducting corporate-wide inspections. Additional training sessions were also carried out at each site. In total, the seminar succeeded in training 93 auditors who are qualified to carry out in-house environmental inspections for the Omron Group in Japan.

(as of March 31, 2003)		Number of Internal auditors for the Omron Group in Japan (as of March 31, 2003)	410
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## Environmental audit results and issues identified for FY2002

The environmental audit results for fiscal 2002 confirmed that all equipment and facilities had been reported to the appropriate legal bodies and that no infringement of laws and regulations had occurred. Additionally, nothing that could cause or lead to environmental damage was found. However, while no major issues were identified, several minor problems, such as a delayed or insufficient response to internal rules were discovered. Though each site varied, all sites displayed to some extent a lack of awareness of internal rules. Countermeasures have already been taken for all points requiring improvement.

# Points requiring improvement

- Environmental impact assessment not strictly conforming to evaluation standards
- Delayed implementation of scheduled environmental educational programs
- Insufficient checks for energy-saving activities
- Insufficient review of action plans to compensate for potential delays in meeting environmental objectives
- Delayed reviews of waste disposal contractors
- Incorrect marking for waste dump area (insufficient response to marking changes)
- Incorrect use of forms
- Insufficient review of necessary documentation
- Inappropriate marking for outdated documentation
- Others: Insufficient environmental documentation, inaccurate recording of data, missing information, etc.

# Issue identification status

Category	Total number of issues identified	Average per site
Major (serious/urgent issues)	27	1.1
Minor (minor issues)	142	5.9
Note (requiring attention)	166	6.9

Note: The above table shows total number of issues identified at 24 manufacturing and non-manufacturing sites in Japan, and the average number of issues identified at

# Future measures

As for corporate-wide audits, we are currently reviewing the system to put greater emphasis on improving environmental performance and minimizing environmental risks. During fiscal 2003, we will continue to conduct audits for each site in order to upgrade the environmental management system of each site and foster environmental activities.

# Omron's environmental accounting system

Environmental Accounting

Omron believes that to effectively implement environmental management, surveying and quantifying the costs associated with environmental activities and resulting benefits are essential. Based on this belief, Omron launched environmental accounting practices for domestic manufacturing sites in fiscal 2001 in accordance with "A Guideline for Developing an Environmental Accounting System" published by the Ministry of the Environment. The scope of practice was then expanded in fiscal 2002 to include non-manufacturing sites in Japan as well. However, the current system is still limited to collection and calculation of costs and monetary benefits data. Regarding indicators to evaluate environmental performance and other non-monetary benefits we are still in a trial-and-error stage. We aim to strengthen environmental accounting practices even further to cover data of overseas manufacturing sites as well, while also establishing appropriate indicators to make more effective use of environmental accounting as a useful environmental management tool.

# FY2002 results

# (1) Environmental costs

During fiscal 2002, environmental costs totaled 2,190 million yen, an 83% increase over the previous year. This figure was made up of 570 million yen in investments and 1,620 million yen in expenses. When broken down, pollution prevention costs represented 30% of total costs, and environmental management costs 19%. As for pollution prevention costs, those for water pollution prevention showed a considerable increase while for management activity costs, personnel costs grew due to the expanded scope of activity.

# (2) Economic benefits

Economic benefits amounted to 110 million yen, which includes only direct benefits, not assumed benefits. When broken down, savings from reduced energy consumption, which amounted to 100 million yen, represented 90% of total economic benefits.

# (3) Environmental performance benefits

Regarding environmental performance, CO2 emissions decreased 1,796 tons, or 3.5% from the previous year. Although production increased 6.9%, energy-saving efforts resulted in reducing CO2 emissions. Due to improved yield and increased use of recyclable materials, volume of waste decreased 219 tons or 5% from the previous year.

**Environmental costs** 

Category		Main areas addressed	Investment	Expenses	Total	Change from the previous year
(1) Costs within business areas			549	612	1,161	398
Wn	(1)-1 Pollution prevention cost	Prevention of air pollution, water pollution and soil contamination	359	293	652	401
Breakdown	(1)-2 Global environmental conservation costs	Energy conservation measures and prevention of global warming	158	71	229	-5
Bre	(1)-3 Resource circulation costs	Recycling and appropriate treatment of waste	32	248	280	1
(2) Upstream/downstream costs		Collection, recycling and proper treatment of end-of-life products and packaging materials	_	31	31	30
(3) Environmental management costs		Promotion of environmental activities, acquisition and maintenance of ISO 14001 certification, survey of environmental impact data	5	412	417	38
(4) Environmental R&D costs		R&D activities for environmentally sound products	_	356	356	325
(5) Social activity costs		Environment enhancement endeavors such as tree-planting campaigns and local clean-up projects	_	19	19	16
(6) Environmental harm costs		Remedy for past soil and groundwater contamination	19	190	209	183
Tot	al		573	1,620	2,193	993

(Unit: millions of ven)

(Unit: millions of ven)

Item	Description	
Total investment for the term under review	3,100 million yen decrease from the previous year due to restricted lease	
Total R&D costs for the term under review	840 million yen decrease from the previous year due to the implementation of a corporate-wide fixed cost-cutting program	39,319

# Environmental performance benefits

Item		Environmental conservation benefit indicator	
item		Indicator (Unit)	Change from previous year
(1) Benefits in relation to costs within business areas	Benefits concerning use of resources for business activities	Energy consumption (TJ)	-55
		Water used (10,000m3)	-1.6
		Volume of resources used (t)	779
		Amount of PRTR substances used (t)	4.3
	2) Benefits concerning the environmental impact of business activities and	Amount released to air (t-CO <sub>2</sub> )	-1,796
	discharged waste	Water discharged (10,000m³)	-3.1
		Total volume of industrial waste discharged (t)	-219
		PRTR substances (t)	4.2
(2) Benefits in relation to upstream/downstream costs	3) Benefits concerning properties and service generated from business activities	Volume of recycled ATMs (t)	35
(3) Other environmental conservation benefits	4) Benefits concerning transportation, etc.	Transportation amount (t)	-1,613

	Economic benefits resulting from environmental conservation measures (direct benefits)			
	Item			
Cost-savings Savings in energy expens		Savings in energy expenses from energy conservation	100	
		Savings in waste disposal expenses from resource conservation and recycling of waste	7	

Basis for calculation Scope: 15 Omron Group manufacturing sites and 9 non-manufacturing sites in Period: April 1, 2002 to March 31, 2003

# Promotion of Environmental Awareness

# Environmental education

With the intention of promoting environmental conservation activities, Omron provides its employees with educational opportunities to enhance ecological awareness.

# FY2002 results

# Educational programs and participants

Category	Type of educational program	Number of participants
Group-wide environmental education	2-day training for internal environmental auditors for the entire Omron Group	32
	Environmental education as a part of new recruit training	86
Rank-specific general education (organized by each site)	Environmental education for new recruits, general employees and managers	All employees*
Job-specific education (organized by each site)	Education for operators handling chemical substances and equipment/machines subject to laws and regulations	1,230
Professional education (organized by each site)	Seminars for internal environmental auditors at each site	61
	Seminars for environmental impact assessment staff	30
Environmental accident/ emergency response education (organized by each site)	Training for preventive measures and response to environmental accidents and emergency situations	1,623

<sup>\*</sup>Employees of all ISO 14001-certified sites in Japan





Environmental education for new recruits

## "Eco Grand Prix" award

Aiming to accelerate environmental activities and motivate employees to conserve the environment, awards are annually presented to individuals and teams who have created innovative Eco-products and made exemplary contributions to environmental conservation. Selection is based on quality (innovation and creativity) and quantity (performance im-

provement levels). At this year's award presentation, held on May 10, 2003 (Omron's foundation day), the NE-U22 nebulizer received the "Eco Grand Prix" award for its environment-conscious design.



"Eco Grand Prix" award-presentation ceremony

# Employee suggestions for ecology

June of each year is environmental conservation month in Japan. During this month employees are encouraged to submit suggestions on possible environmental activities and conservation measures. In 2002, one Grand Prix Award winner, two Award of Excellence winners and five Merit Award winners were selected from among 592 entries. Twenty-four other suggestions were also posted on the environmental activity bulletin board to share ideas among all employees.

# **Eco Life Sheet** (Home-use Environmental Accounting Book)

During environmental conservation month in 2002, Omron published an Eco Life Sheet and distributed it among

its employees. This sheet serves as an environmental accounting book for electricity and gas consumption at home, and also provides useful hints for environmental conservation. For ISO 14001 projects being promoted at each site, the Eco Life Sheet was included as yet another method to advance environmental awareness among employees.



# Environmental activity bulletin board

In 1996, Omron launched an environmental activity bul-

letin board for its in-house network system. This system encourages employees to exchange opinions and information regarding environmental conservation via e-mail and online forums.



# **Omron News**

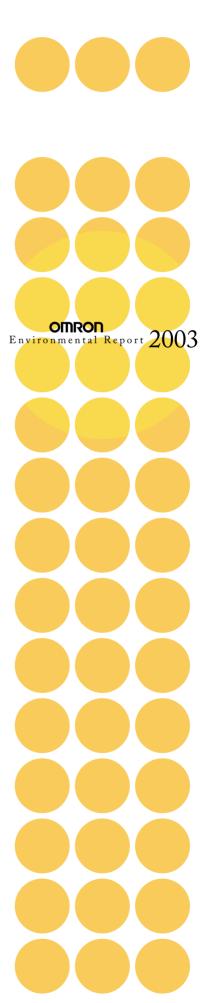
This regular internal publication introduces a full range of corporate information that includes environmental protection and corporate citizenship activities. Omron News ensures that employees stay up-to-date on all management and business strategies. During environmental conservation month,

Omron News featured "Green Omron 21," Omron's environmental vision for the 21st century. This feature article is intended to educate employees on environmental topics so as to improve and augment their understanding of these issues. For overseas employees, e-ONR (Omron News in English) is available online.



# Social Performance

Omron Founder Dr. Kazuma Tateisi had a keen awareness of the significance of a company's existence and its relationship with society and people. He worked diligently on ways to develop social awareness and fulfill public responsibility in corporate executives. This inspired Dr. Tateisi to set forth in 1956 a unique philosophy that stresses the corporate responsibility of serving society as a fundamental pillar supporting Omron activities. Faithful to this corporate philosophy, we continue contributing to society through business operations (business aspects of corporate responsibility) and corporate citizenship activities (social aspects of corporate responsibility).



# Human Resources Management/ Environmental Report 2003 Occupational Health and Safety

# Personnel management policy

In the midst of intense global competition, no management, business or individual can survive and assume a winning role unless there is effective adaptation to surrounding changes. Omron clearly identifies each employee's responsibility and tasks, and it supports their endeavors to take on the challenge of transforming themselves to maximize their own value.

# Challenge-oriented professionals

Omron looks for individuals willing to take on new challenges. The company also seeks to nurture professionals who can think and act independently, are capable of adapting and changing to suit each new situation, and who demonstrate consistent productive results. As part of this endeavor, Omron has specified value criteria for actions based on a challenging spirit. These criteria have been broken down into individual tasks to encourage sustained personnel transformation. They also serve as the basis for Omron's future remuneration system and incentives.

# Management that respects individuals and encourages them to fully show their capabilities

Omron promotes management that respects all its people and encourages them to fully demonstrate their talents and capabilities. By creating a profit-sharing system based on evaluation and achievement levels, we intend to build a corporate mechanism that stimulates the growth and development of individuals as well as the company itself. Omron makes every effort to respect the full spectrum of individual perceptions regarding values and reasons for working. In addition to the sustained business growth of the company, we also aim to establish a solid corporate infrastructure and revitalize the workplace by offering a greater variety of working styles and conditions. At the same time, Omron provides necessary support so that employees can demonstrate self-reliance by taking responsibility for their individual tasks and functioning independently as they pursue self-fulfillment.

# **Partnership**

(Corporate mechanism capable of stimulating mutual growth and company/individual development)



- Employees are the company's most valuable asset. Omron thus respects diversified value perceptions
- . Omron establishes and promotes employee training, evaluation and remuneration programs that stimulate the capabilities and enthusiasm of personnel
- · Employees should assume responsibility for their own lives and careers and not totally depend on the
- · Employees should increase their own value while sharing common values with Omron

# Occupational health and safety Reducing occupational accidents

Omron's manufacturing lines have relatively few hazardous processes, thus resulting in very few serious employee accidents at work. However, minor injuries occasionally do occur during machine repairs, adjustments and transportation. All accidents are reported to the respective facility's occupational health and safety committee and shared among all employees. To prevent any recurrence of the accident, preventive measures are carefully put in place and operation instructions given in order to minimize future occupational accidents and hazard risks.





#### Health management center

To help employees promote health and prevent sickness, Omron provides comprehensive support through its health management center. The center's activities include lifestyle surveys, physical fitness checkups and medical advice. All employees are also provided with do-it-yourself methods for checking their mental health.

# Obtaining OHSAS 18001 certification

In October 2002, Omron Izumo received OHSAS 18001 (Occupational Health and Safety Assessment Series) certification. This made the company the sixth Omron Group site to be OHSAS 18001 certified.

# Corporate Citizenship Activities

# Policy of corporate citizenship activities

With its corporate philosophy underscoring corporate social awareness, Omron has consistently made contributions to society through business operations and corporate citizenship activities. We will remain committed to promoting highly original activities that match each region's culture and customs in five key areas: social welfare, science & technology, art & culture, the global environment and community service.

# Corporate Citizenship Declaration

As a responsible member of society, we pledge to promote corporate citizenship activities toward the goal of creating a better society.

# Social Welfare

To help provide the physically challenged with more work opportunities, Omron, in a joint effort with Japan Sun Industries (a welfare organization), established two factories for the physically challenged - Omron Taiyo (in Beppu, Oita) in 1972 and Omron Kyoto Taiyo in 1985. These were the first such factories in Japan. They help employees with disabilities to work as smoothly and efficiently as possible. Omron also is a regular sponsor of wheelchair marathon races and art festivals for the disabled.





Omron Kyoto Taiyo Co., Ltd

# Science & Technology

Established to increase harmony between people and machines and help society achieve more technological innovation while also increasing the value of individuals, the Tateisi Science and Technology Foundation supports research and international exchanges in electronics and information engineering. During fiscal 2002, the Foundation granted subsides for 20 research projects and five international exchange projects.

Drawing on its proprietary sensing technology, Omron joined hands with an NPO, Japan Alliance for Humanitarian De-mining Support, to develop "Mine Eye," a new mine detector in support of de-mining projects.





Removing land mines Subsidy granting ceremony



Pipe organ concert



Social

Omron Kyoto Cultural Forum



Art and culture play important roles in enriching society. This has inspired Omron to contribute to the development of art and culture by organizing and sponsoring the Omron Kyoto Cultural Forum, pipe organ concerts and traditional performing arts.



# Community Service

# Global Environment

# Global Environment

Along with its commitment to reducing the environmental impact of its business activities, Omron, as a member of the global village, contributes to conserving the environment by participating in forest preservation campaigns.





Thinning forests

# **Community Service**

# 2003 Omron Day activities throughout the world

Omron Day commemorates the founding of our company. On May 10, a variety of volunteer activities has been organized throughout the world, such as neighborhood cleanups and visits to welfare facilities, as tokens of appreciation to regional communities.

# Donating blood, sweat and tears to support the community in Australia

A team of dedicated staff from Omron Electronics Sydney Office assisted the local Council and worked up a sweat in clearing weeds from native bushland near Omron's Sydney Office. The unwanted plant known as Lantana has small prickly thorns, thus resulting in tears when removing it. An

area of 625m² was cleared on the day, leaving the local Council representatives very impressed. Some staff also donated a total of 3 liters of blood to the Australia Red Cross Blood Bank for medical/hospital use.



# Cleaning up park and donating recyclables in Malaysia

A group of 70 volunteers from Omron Malaysia was divided into six teams to clean the Sungai Tekala Waterfall Park in Kajang, Selangor, located 50km away. The teams cooperated and worked together to clean up the park and collect as many recyclable items as possible. They were further motivated by rewards for three teams who collected the most gar-

bage. The company also organized a week-long recycling campaign that encouraged employees to donate useful items from their homes to various charitable organizations.



# Helping orphans in Thailand

Omron Electronic Components Co. employees in Thailand visited the Srakaew Temple that houses orphaned children to hold games and donate stationary and other products. Each game set for the day was intended to foster harmony and teamwork, and had other good meanings. All of the children were delighted to participate in the games and happy to receive gifts. Dealing with as many as 1,500 children was not

an easy task, but seeing smiles on their face gave Omron volunteers great satisfaction. Staff members also donated used clothes and other goods to the temple.



# Environmental Communication

Social Performance

# Communicating Omron's environmental commitment

Aware of its responsibility to inform and educate stakeholders, Omron is committed to disclosing all information regarding its environmental conservation activities and performance as well as the safety and environmental impact of its products. This information is relayed through various channels such as environmental reports and the Internet as well as fairs and exhibitions. We intend to strengthen our communication channels even further by promoting information exchange and two-way communication with our stakeholders.

# Publication of environmental report

Since 1998, Omron has published annually an environmental report that details the company's Environmental Policy and environmental protection activities. These reports are distributed widely to strengthen communication with customers and other stakeholders. Omron's corporate website also includes an environmental activity page that provides the latest

news along with a list of Ecoproducts that are not covered in the environmental report. We intend to expand the environmental activity page to include a "comments and information request" section.



Omron's environmental activity site

Number of copies published 1998: 32,000 1999: 35,000 2000: 10,000, plus 700 in English

2001: 10,000, plus 1,000 in English 2002: 10,000, plus 1,000 in English



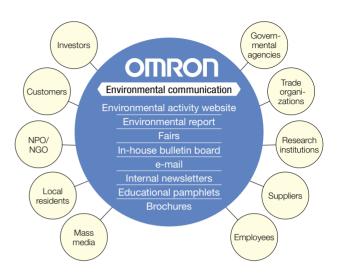
# Fairs and exhibitions

Omron actively participates in environmental fairs and exhibitions and uses this opportunity to introduce its environmentally sound products. In fiscal 2002, Omron exhibited at the Shiga Environmental Business Messe in November and Eco-Products in December. The Omron booth highlighted a range of control components that enhance the energy and space conservation of manufacturing equipment. Also on display were Omron's environmentally conscious healthcare line and a new digital ticket system that uses a mobile phone. All products were developed by drawing on Omron's proprietary technology.





Shiga Environmental Business Messe 2002



# Environmental awards

In 2002, Omron's NE-U22 mesh-type nebulizer received the 13th Chairman's Award from the Energy Conservation Center. Nebulizers are used for inhalation treatment by patients suffering from asthma and chronic lung disease induced by air pollution. They also protect the respiratory tract from post-surgery infection. With Omron's original mesh configuration, the NE-U22 measures a mere 1/25th in size compared to Omron's former compressor-type nebulizer (NE-C16). It

has also reduced weight by five-sixths and cut power consumption by four-fifths. This award was presented in recognition of the NE-U22's extremely compact and energy-saving design.



Nebulizer NE-U22

# Environmental advertising

Using print media, Omron places advertisements to relay the company's environmental commitment and promote its

range of environmentally sound products and technologies. In fiscal 2002, Omron advertisements featured lead-free products.



Omron advertisement in Nikkel

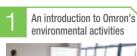
# Stakeholder Factory Tour

Mishima Factory's Environmental Activities

Omron's Mishima Factory, situated in the scenic Prefecture of Shizuoka, enjoys a mild climate and commands a ringside view of Mt. Fuji. The factory employs approximately 800

people (including those from affiliated companies) who produce Omron programmable logic controllers (PLCs) and other factory automation system components. PLCs serve as the "brain" of automated manufacturing lines.

On April 11, 2003, Omron invited environment specialists and local residents to participate in a tour to take an indepth look at the environmental conservation activities underway at the Mishima Factory. Following the tour, a stakeholder meeting was held allowing participants to share their comments and suggestions.





Tour participants listening to a presentation of Omron's environmental commitment along with Mishima Factory's voluntary activities.

2 Recycle center



All waste generated from the factory is collected here and separated for recycling.

# PCB storage warehouse



4 Emergency stock warehouse



In case of an emergency, a three-day food supply for 1,000 people is prepared and stored.





Originally developed energy management system that controls the air conditioning and lighting of all buildings.

# 5 Manufacturing line



Participants compare lead-free solder and solder containing lead.



Emergency response kit. Highwater-absorbing mat prevents leakage of hazardous substances.



A hot/cold water supply pump system that features an inverter control for an 8% saving in energy. In July 2002, an upgraded system for future co-generation use was introduced.



Dr. Takehiko Murayama

Professor, Division of Multidisciplinary Studies, School of Science and Engineering, Waseda University

By taking an in-depth and in-person look at the Mishima Factory, I was able to acquire information that would be difficult to obtain otherwise. On the tour, factory staff provided us with a de-

tailed explanation of the Factory's shift to a lead-free soldering process that I found especially informative. Also enlightening was information relating to the increasing amount of production being transferred overseas. This shift is cause for concern as it adversely affects energy consumption-to-unit production and, in turn, the environmental performance of products marketed in Japan. I would propose that Omron could improve its environmental performance in three areas. First, Omron should develop indicators that better reflect the individual environmental activities of each production site. These indicators could then be incorporated into the company's overall environmental performance. Second, further measures are needed to ensure the elimination of lead and isopropyl alcohol in all areas of production. And third, increased attention to the materials used in Omron products is required, as waste and substances emitted during material production may adversely impact the environment. Also worth noting is the concept of Extended Producer Responsibility (EPR) that has been growing among manufacturers. EPR encourages manufacturers to show a greater commitment to reducing the environmental impact of waste from the products they produce. Companies must ensure that the purchase of raw materials meets environmental standards. Also worthwhile for Omron to consider would be the adoption of "Extended Green Purchase," the counterpart to EPR in the area of procurement.



# Sachiko Takami

Chief Executive, The Natural Step International, Japan

The Mishima Factory is situated in a beautiful location with a breathtaking view of Mt. Fuji. This scenic environment leaves a positive impression as does the Factory and its employees. Well

maintained, the Mishima Factory is bright, clean and staffed by clearly capable people. In terms of environmental activities, I was very impressed with Omron's recycling program and its outstanding results. The company's implementation of a system for employee safety and disaster prevention was also very impressive.

Based on Omron's past achievements, I expect to see the company implement the long-term measures necessary to achieve sustainable development. Conformance with current laws and regulations alone is not enough. Companies must also take proactive and progressive steps based on guidelines for building a sustainable society. Omron, for example, could share its vision and sustainability-oriented strategy with suppliers at the upstream of its business process and join forces with them to develop new environmentally sound materials and technologies. Building a network that includes government units, universities and other companies would also be helpful. Although not easy, I believe that it is Omron's responsibility to be a key player in all areas relating to sustainable development. I wish Omron success in all its future activities.

# History of Omron Environmental Activities

# **Environmental Awards**

# Japan

Site	Date	Award	Recognized for	Sponsor
Omron Ayabe Factory	May 2002	Eco Kyoto 21 Certification (resource-recycling society category)	Waste reduction	Kyoto Prefecture
	May 2002	Eco Kyoto 21 Certification (global warming prevention category)	CO <sub>2</sub> emission reduction	Kyoto Prefecture
Omron lida Co., Ltd.	July 2002	Recycling Promotion Certification	Waste reduction and recycling	Nagano Prefecture Cyclical Society Creation Promotion Conference
Omron Relay and Devices Corporation	Oct. 2002	3R (Reduce, Reuse, Recycle) Promotion Council Chairman's Award	Plastic molding material recycling	3R (Reduce, Reuse, Recycle) Promotion Council

# Overseas

Site	Date	Award	Recognized for	Sponsor
Omron Dalian Co., Ltd. (China)	June 2002	Dalian City Environmental Protection Business Leader Award	Environmental contribution	Dalian Environmental Protection Agency
Omron Electronic Components (Shenzhen) Ltd. (China)	Oct. 2002	Advanced Facilities Award	Environmentally conscious facilities designed for coexistence with local communities	Nihon Keizai Shimbun, Inc.

# History of Omron's Environmental Activities

Year	Environmental activities	Management affairs	
1994	Environmental Charter established.	●Regional management center (OCE) established in China to establish a 5-zone	
	●Omron ends use of CFCs in manufacturing.	global management system.	
1995	●Environmental Conservation Promotion Group established.	KAZ Academy to promote physical and psychological health opened.	
1996	Environmental Policy established.	•Invention awards established.	
	Ayabe Factory and Dutch manufacturing subsidiary receive ISO 14001 (first among Omron Group sites).	Professionals System designed to nurture technology specialists established.	
1997	E2E/E2E2 proximity switch receives Chairman's Award from Japan Machinery Federation for excellent energy-saving features.	Corporate Ethics Declaration established.	
1998	Environmental Activity Committee and sub-committees established to promote environmentally conscious management.	New Corporate Ideals and Management Philosophy established.	
	Environmental Declaration established by renewing Environmental Charter.	Corporate Ethics Action Guidelines formulated.	
	First Environmental Report published.		
	Eco-Product Certification System established.		
1999 •	All Omron manufacturing sites (30) both in and outside Japan obtain ISO 14001 certification.	New management structure designed to promote autonomous operations launched     Internal company system and operating officer system launched.	
	Suppliers notified of Omron's green procurement guidelines.	"Super Patents" incentives introduced.	
	●Environmental policy revised.		
	●Omron Aso receives 1999 Chairman's Award from Recycling Promotion Association.		
	New Environmental Activity Committee founded.		
2000	Omron Takeo receives Director of Kyushu Bureau of International Trade and Industry Award for energy management excellence.	Kyoto Center Building, multi-function center including Omron headquarters, completed.	
	Adoption of green procurement system as a precondition for business disclosed to suppliers.		
●En ●Fir	●ISO 14001 certification simultaneously acquired for nine offices and labs.	●Long-term corporate vision, "GD (Grand Design) 2010," launched.	
	Environmental accounting system launched for all domestic manufacturing sites.		
	◆First "Eco Grand Prix" awards presented.		
	Kyoto Office and Mishima Factory receive Chairman's Award from Recycling Promotion Association.		
2002	Mishima Factory receives Director of Kanto Bureau of Economy, Trade and Industry Award for energy management excellence.	Group-wide productivity reform initiative launched to accelerate achievement of GD2010 goals.	
	Environmental vision "Green Omron 21" established.	Omron (China) Group Co., Ltd. assumes head office functions to expand business in China.	
		Kurnamoto Laboratory and three manufacturing subsidiaries (Hitoyoshi Omron Co., Ltd., Amakusa Omron Co., Ltd., and Omron Nomura Matsuno Co., Ltd.) closed.	

# Corporate Profile

Company name: OMRON Corporation

Established: May 10, 1933 Incorporated: May 19, 1948 Capital:

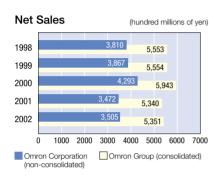
64,081.78 million yen (as of March 31, 2003)

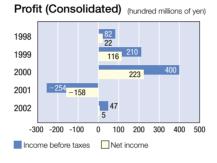
#### Main Omron Group offices and affiliates (as of March 31, 2003)

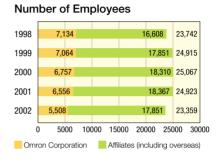
Omron Corporation (offices, factories and laboratories)

Kyoto Office, Tokyo Office, Osaki Office, Nagoya Office, Komaki AEC Office, Osaka Office, Mishima Factory, Kusatsu Factory, Ayabe Factory, Minakuchi Factory, Kyoto Laboratory, Tsukuba Laboratory

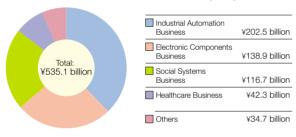
132 subsidiaries (45 domestic, 87 overseas) and 10 associated companies (7 domestic, 3 overseas)







## Breakdown of consolidated net sales by segment







With its corporate philosophy, "To the machine the work of the machine, to man the thrill of further creation," Omron faces the challenge of improving life for future

generations by drawing on its proprietary technology and maximizing its potential.

# **Omron business lines**

(as of April 1, 2003)

#### **Industrial Automation Company** (IAB)

# FA system components

(Programmable logic controllers, mechatronic components, servo motors and drives, etc.)

#### Sensing components and equipment

(Proximity, photoelectric and other sensors, printed circuit board inspection systems, etc.)

#### Industrial devices and components

(Limit and pushbutton switches, solid-state relays, supervisory and monitoring components, temperature controllers, timers, counters, etc.)

# **Social Systems Solutions Business Company (SSB)**

# Financial/retail solutions business

(Banking systems, retail systems, etc.)

# **Public solutions business**

(Train station management systems)

#### Traffic control solutions business

(Traffic control systems, parking systems, etc.)

# **New Businesses**

("goopas" digital content distribution service, face recognition systems, etc.)

# The major products of each business area are described below. **Electronic Components**

# Company (ECB) Electronic and mechanical components

(Micro switches, operation switches, magnet relays, connectors, etc.)

#### Semiconductors

(Custom ICs, micro lens arrays, etc.)

#### Amusement components

(Custom components, devices and subsystems for game machines, etc.)

## **Advanced Modules Business** Company (AMB)

#### Mechatronic components

(Coin/paper bill recognition units, ticket processing units)

#### Sensing components

(Vehicle detectors)

#### Card reader/writer components

(Card readers)

#### **Automotive Electronic Components Company (AEC)**

(Separated from ECB and became ndependent in April 2003)

#### Automotive electronic components

(Power steering controllers, keyless entry systems, etc.)

# **Healthcare Company (HCB)**

#### Healthcare equipment for homes and medical institutions

(Blood pressure monitors nebulizers electronic thermometers, low frequency wave treatment machines, massage chairs, body fat monitors, etc.)

# **Business Development Group**

# PC peripherals

(Modems, fingerprint recognition systems, uninterruptible power supplies, etc.)

# Card-related business

(Card-related products, non-contact ID tag systems, etc.)

# M2M business

(Car anti-theft systems, etc.)

# Amusement systems

(Print seal machines, etc.)

Cover Photo:

# Bald eagles recovering from danger of extinction

Bald eagles, numbering nearly 500,000 during the 17th century, were in danger of extinction due to reckless hunting and the ingestion of DDT (persistent organocholorinated insecticides). However, strict control of development and prohibition of DDT, along with aggressive preservation efforts, have resulted in a steady recovery in numbers. Human activities have considerable impact not only on these majestic birds but on all living creatures as well.

With the aim of helping to attain coexistence with all inhabitants of the Earth, Omron strives to carry out environmentally friendly business activities and develop new products and technologies that are less harmful to the environment by drawing on its proprietary Sensing & Control technology.

Photographer: Michio Hoshino (Minden Pictures)





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# **OMRON Corporation**

Shiokoji Horikawa, Shimogyo-ku, Kyoto, 600-8530 Japan For inquiries, contact the Quality and Environment Department, Corporate General Affairs Headquarters. Phone: (+81)75-344-7033 Fax: (+81)75-344-8214

E-mail: webmaster@omron.com URL: http://www.omron.com