

JVCケンウッドグループ  
**社会・環境報告書**

Social & Environmental Report

**2011**



## About this report

This report was created as a communications tool to deepen understanding by disclosing easily understandable information to all stakeholders regarding the JVC Kenwood Group's activities as a responsible member of society and their results.

Detailed information on our financial status is available in our Annual Report.

### ● Online publications

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You can also access this report from our homepage.

<http://www.jvckenwood.co.jp/csr/index.html>

### ● Scope of this report

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This report covers the activities of the JVC Kenwood Group around the world.

### ● Period covered by this report

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This report is for the period from April 2010 to March 2011, but includes some details for FY2011.

### ● Published

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August 2011 (Next publication scheduled for August 2012.)

### ● Reference materials

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GRI Sustainability Reporting Guidelines 2006

Environmental Reporting Guidelines from the Japanese Ministry of the Environment (FY2007)

### ● Cover design

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Shows the complete cooperative circle of social and environmental activities teaming four business groups.



### ● Major organizational changes during the target period

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① In accordance with the intermediate business plan established in May 2010, JVC Kenwood Holdings and group company Victor purchased the Victor Yokohama Plant, the main office of Victor and moved to the adjacent Victor Irie Plant in December, and named the "Head Office and Yokohama Business Center" as the Group headquarters.

② To further strengthen our capabilities and establish our new position as the Japanese manufacturer dedicated to audio visual technology, we changed our name on August 1, 2011 from "JVC KENWOOD Holdings Incorporated" to "JVC KENWOOD Corporation."

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Corporate vision

# Creating excitement and peace of mind for the people of the world

Course of action

Every individual to take charge and strive for never ending reform

JVC Kenwood concentrates on strong business as a world-leading specialized manufacturer to achieve profitable growth. To do this over the years, JVC and Kenwood have refined the “excitement” that they bring to the world, and together we are going to raise the bar even further and produce the “peace of mind” that is demanded by new generations. Each and every one of our employees will take initiative in their work to create a company that is widely trusted and whose business activities contribute to society.

## Concept of Corporate Social Responsibility

Promoting corporate activities that place no burden on society

While businesses provide people with useful products, services, and employment opportunities, they also create burdens on society. Environmental and social problems are closely related to businesses, particularly for manufacturers because of the waste, pollution, massive consumption of resources and energy, and population concentrations that are associated with the manufacturing process. However, our society would no longer exist if we got rid of businesses.

In the JVC Kenwood Group, we are promoting manufacturing processes that provide “excitement and peace of mind,” because we believe one part of a corporation’s operations is to reduce its impact on society, based on our corporate vision by focusing on the fact that, “The very existence of businesses has an impact on society.”



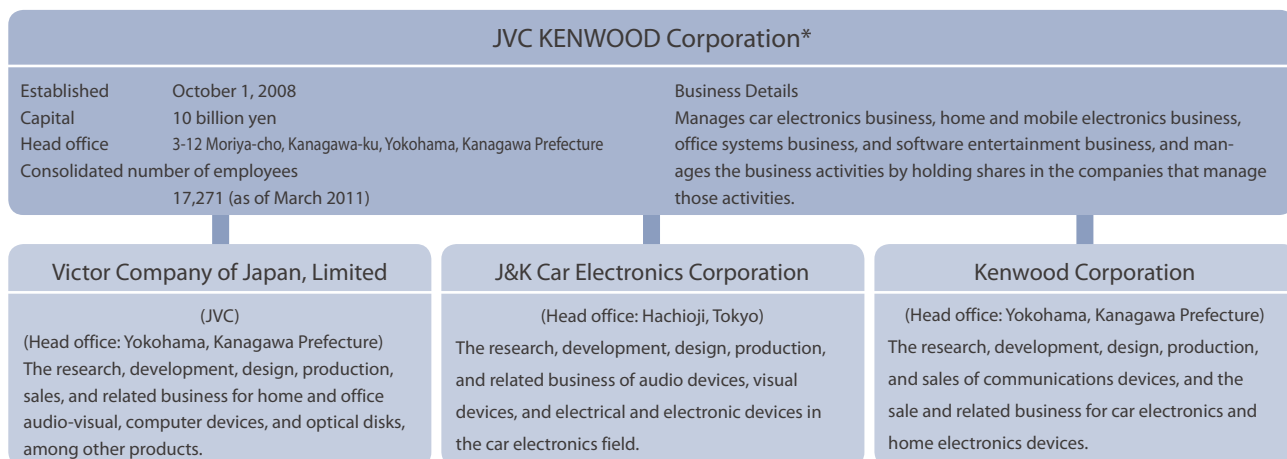
JVC Kenwood Group’s social responsibilities are supported by four elements to reduce the burden on society.



# Overview of JVC Kenwood Group

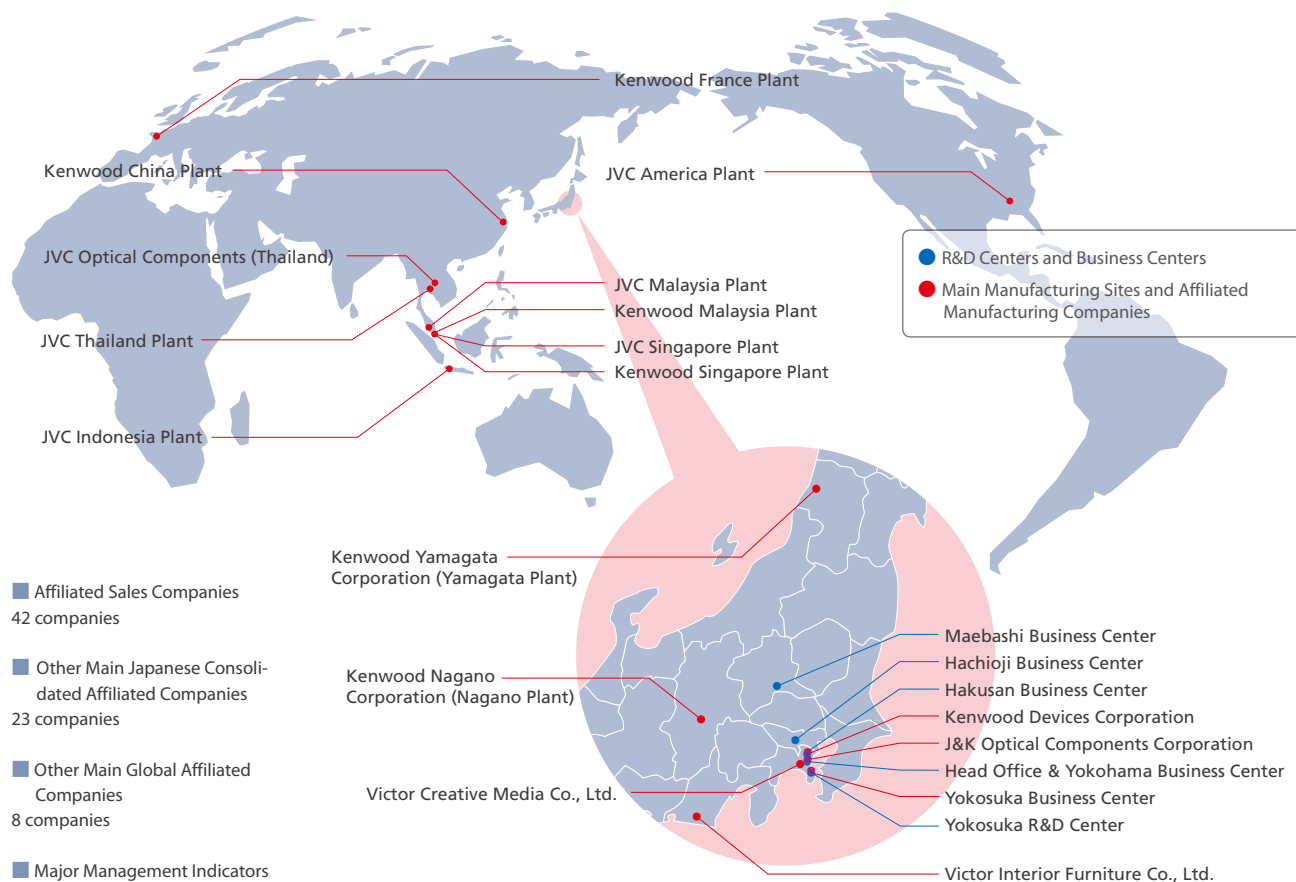
Current as of August 2011

JVC Kenwood Group comprises a joint holding company and three operating companies, and is leading the industry by combining its entertainment business with its imaging, audio, and wireless technologies.



\*On August 1, 2011, "JVC KENWOOD Holdings Inc." became "JVC KENWOOD Corporation."

## Main Sites of the JVC Kenwood Group



Major Management Indicators  
(consolidated) (millions of yen)

	1st quarter 2011
Sales	352,672
Operating profits	12,956
Net profits	△4,025

Detailed information is available in our separate Annual Report.

# Top Management Message

## Fulfilling our Social Responsibilities as a Global Corporate Citizen Coexisting with the World Environment

### Life in the Environment of the World

Humanity, having reached great heights in technology and civilization, nevertheless does not possess the wisdom to create the universe which surrounds our planet nor to sustain and restore the earth's natural environment. However, we do have a responsibility to maintain a healthy world environment, which can itself be considered a living thing, and to pass this on to our children. We must reduce the impact our consumption of energy and resources has on the environment and redouble efforts to build a beautiful environment and a safe society.

There is no consensus in opinions regarding goals set under the Kyoto Protocol, but all the countries that participated recognize the importance of protecting the earth's beautiful environment and leaving it for the generations that follow. We live among about 1.75 million life forms and last year, during the International Year of Biodiversity, we learned what must be done to maintain the diversity of the world's ecosystems, life forms, and genetic materials so that we may continue enjoying the riches they provide. Further, the UN declared this year to be the International Year of Forests to raise awareness of the importance of sustainable forests worldwide.

It is necessary for us to recognize that our lives depend on the many benefits provided by the world's environment.

### Promoting Environmentally Conscience Designs

Reducing environmental impact, such as reducing consumption of energy and resources and the appropriate control of chemical substances, is also an extremely important part of our corporate activities.

JVC Kenwood Group is involved in thoroughly reducing our environmental impact through products designed based on ideas to reduce their environmental impact.

With our LCA style environmentally friendly product designs, we analyze product life cycles through design, sales, usage, and disposal to save energy, reduce, reuse, and recycle (3R) resources, and control the use of harmful chemical substances. In addition, we also aim for zero risk to the environment by working according to our environmental management systems.

JVC Kenwood Corporation Representative Director and CEO  
Hisayoshi Fuwa

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Background shows area in Yokohama near location of 2010 Japanese APEC (Asia-Pacific Economic Cooperation) summit.  
The conference operations used the special JVC Kenwood digital radio system "NEXEDGE".

## Intermediate Business Plans for New Growth

JVC Kenwood Group has identified the three years from 2011 as an important growth period and has created a three-year intermediate business plan extending to March 2013.

This plan concentrates on strong business to “establish our position as a world-leading, specialized manufacturer” involving all companies to achieve profitable growth with widespread trust from society.

Further, we are satisfying our social responsibilities by making good use of the core technologies we have cultivated to date, and pouring our efforts into attractive products that offer excitement and peace of mind, as a global corporate citizen that coexists with the world environment.

In becoming involved in social and environmental activities, the JVC Kenwood Group aims to carefully consider environmental problems, to listen to everyone’s opinions, and to be a company that is more widely trusted by society.





# Business Introduction

JVC Kenwood Group comprises four groups based on cutting-edge technologies and unique ideas that fully recognize the changes in the way we live, focusing all corporate activities to reduce our burden on society while promoting manufacturing that provides "Excitement and Peace of Mind."

## Car Electronics Business Group

Leading the car AV market through products that enable all media to be enjoyed with the highest quality sound



Car navigation



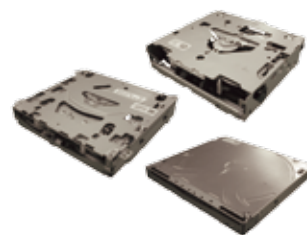
Navigation



Car audio



On-board optical sensor



On-board optical disk drive mechanisms

## Home & Mobile Electronics Business Group

Presenting a space and time filled with sensations through high quality audio and visual technologies cultivated over many years



Development of video cameras and office video cameras



Projectors



All-in-one AV system



Home audio



AV accessories



## Professional Systems Business Group

Supporting customer business and safety with high reliability and service



Professional digital radio system "NEXEDGE"



Digital professional wireless devices



3D monitor for business



3D imaging processor for business



Emergency and office  
broadcasting equipment



CCTV systems

## Soft Entertainment Business Group

Contributing to culture by offering dreams and emotions through numerous high-quality products across a wide range of video and music software genres



Recording studio



Control room, music,  
and image software creation



CD, DVD, and BD manufacturing



Video and music mastering

# Unique Involvement by Plants Outside Japan



The JVC Kenwood Group is a global business that is developing production bases all over the world. We are expanding with high-quality manufacturing to provide excitement and peace of mind based on the idea that the "heart of manufacturing is to nurture the people and the environment in which they work." JVC Kenwood Group factories have introduced a unique system to improve quality and raise production efficiency. We are promoting manufacturing that reduces employee workloads at the same time as it improves product quality. This section introduces some of that system.

Disk production preprocessing



Printing process



Packaging process



JVC America Plant manufactures CDs and DVDs



Photos show some of the DVD production facilities at the JVC America Plant.

An excellent production line is in operation that can process numerous titles in a short time.

These production facilities are clean at every step from when the raw materials are introduced to the system to when the disc is finished, and they are built to keep dirt off the products. We have created an environment in which employees can work in casual wear such as jeans and T-shirts, which reduces workload by eliminating the need to change into dust-proof clothing.



## 1. Specialist Training

In the JVC Kenwood Group, we consider the basis of product quality to be the education of personnel, so we focus our efforts on educating specialists in manufacturing.

Further, we are also implementing training for all personnel alongside the annual plans to assure the required skills for the job.

### ● Soldering Skills Certification System

Employees who do soldering work are required to take a proficiency test.

Every year, a “soldering proficiency competition” is held at the JVC plant in Indonesia with the cooperation of the Japan Vocational Ability Development Association (JAVADA), which is a Japanese government organization. FY2010 was the third such occasion. There are around 100 applicants each year, and the top three attend the “soldering instructors training course” in Japan.

After the course, there is further promotion of product quality assurance and quality improvement through work as trainers



Soldering instructor training completion certificate



Badge denoting its wearer is certified proficient at soldering

to teach upcoming staff.

This not only polishes skills, it also is intended to widely spread both work improvements and skills to junior staff.



Soldering proficiency competition



Soldering proficiency competition winners



Power screwdriver training  
Screw tightening is also thoroughly taught as an important task

### A word from the plant manager

At our plants outside Japan, we are improving the manufacturing skills of our personnel so they can deliver low-cost products in a timely fashion to our customers around the world. Our in-house and outside training respects the different cultures and customs of each country. Employee training starts with the basics of the in-house rules for greetings and keeping the work environment clean, orderly, and ship-shape. We are implementing specialist training such as safety, environmental management, quality management, and graded training. We cultivate specialists in manufacturing to produce a desire to work and a sense of achievement.



Kenwood Malaysia Plant  
Managing Director  
Norio Sato

### 2. Promotion of Green Procurement

JVC Kenwood Group is involved in green procurement together with all our trading partners to enable a continuous supply of goods that can be used by the customer with peace of mind.

We have configured a system that implements explanatory meetings and technical training for trading partners, strictly adheres to the laws and social standards of each country, and that enables us together to maintain a win-win relationship.



Parts acceptance: Receiving numerous parts according to the production plan



### ● Acceptance Inspections

Parts delivered from suppliers are rigorously checked to make sure no harmful substances have been used by using specification checks at the acceptance inspection level, and inspections using fluorescent X-ray analyzers.



Inspection using a fluorescent X-ray analyzer



Specifications conformance check



### A Message from Malaysian Suppliers



We started green procurement activities in line with customer demand upon receiving ISO14001 certification in July 2003. Since then, we have expanded our green procurement activities with the cooperation of raw materials producers.

All Tokyo Electric Wire Industrial Co., Ltd. offices have introduced their own fluorescent X-ray analyzers, and have taken up the challenge of management to bolster in-house controls to assure reliability.

We are winning customer trust using a management system learned through green procurement activities.



TODENKO (M) SDN. BHD.  
QA/QC Manager  
Alan Kee Teik Hong

### A Message from American Suppliers



We use our existing facilities to meet the green procurement standards as the sole supplier of US-manufactured DVD cases that use 100% recycled materials. We will propose more and more products, with the eco-friendly difference and no loss of quality or basic performance, that meet the demand for diversified package media and supply chains in response to new concepts in product expansion and environmental awareness.



Technimark LLC  
VP of Sales and Marketing  
Kris Peavy

### A Message from Singaporean Suppliers



Through our green procurement efforts, we are saving energy, eliminating toxic materials, and controlling hazardous wastes allowing us to grow to international levels of competitiveness through high-level management methods. Further, we have been able to expand our influence over business partners, civilian and public institutions, and the industry through our environmental management system.

Our ISO14001 certification indicates our company culture and acts as a guide to our employees.



Zephyr Co.(PTE) LTD.  
Managing Director  
Ko Beng Soo

### A Message from Chinese Suppliers



We have come to supply customer needs in specific formats by pursuing press processing technology for precision machine parts ever since our establishment in 2003, and by configuring a consistent production system for die design and manufacture, press processing, and completed product assembly. Since our establishment, we have sought to configure a "do not input, do not use, do not output" system for chemical materials that affect the global environment, and to improve the environmental management system to adhere to green procurement standards through an awareness that the future global environmental problems are the most important issues common to all humanity. We are further increasing customer trust through our green procurement activities, and business is also expanding smoothly.



Shanghai Seki Electronics Co.,Ltd  
Managing Director  
Zhou Feng Xiang

### A word from the plant manager

We cite "environmental protection" as one of the core ideals of the company.

We are continuously promoting pollution prevention and reduced environmental impact by strict adherence to environmental laws and by constantly considering the environmental impact of our business activities and products.

Further, in the future we will promote business activities that promote procurement of materials and parts with low environmental impact from suppliers who are environmentally conscience, and we will value our trusting relationships with suppliers as a "green factory."

We ask our trading partners for their continued cooperation.



JVC Indonesia Plant Managing Director  
Tadashi Muromoto  
(Currently in the Global Production & Procurement Division)

### 3. Quality-Improving Activities

The workers at the plant have come up with various ideas to facilitate the work in each product manufacturing process. Revolutionary ideas to improve production efficiency have been implemented in all locations by improving quality based on the idea that the “heart of manufacturing is to nurture the people and the environment in which they work.” Some examples are introduced here.



Photo shows a production promotion verification meeting at the JVC Malaysia Plant  
Every morning, the production issues and quality status are checked, and countermeasures decided

● The heart of manufacturing is to nurture the people and the environment in which they work



The JVC Malaysia Plant implements on-site audits every morning to revolutionize awareness by considering the management of the production site. An area is chosen each day, so that one day it's the assembly process and the next the parts warehouse, so they are audited in rotation. First, the quality, productivity, importance of 5S, handling of parts and PCBs, etc., and basics and ideas for improving organization of parts are thoroughly explained. These efforts are linked to successes such as halving the defect rate in the production process. It is precisely this that delights the production workers. Daily improvement has become a habit, and we intend to build our work environment on this.



JVC Malaysia Plant, which implements on-site audits; Yoshihiro Tamaki managing director (on right of photo)  
(Now at the Kenwood Singapore Plant)

#### Voice



Instruction to broaden fields of vision outside the workplace to improve quality.

JVC Malaysia Plant Production Administration Department Parts Store  
Mr. Adam Tan



Keeping the area around you clean and tidy makes machine and tool problems visible, and improves employee morale.

JVC Malaysia Plant Production Administration Department Logistics  
Mr. Maniam AL Karuppiah



The managing director audits our workplace every morning to reduce the gap between managers and workers.

JVC Malaysia Plant Production Department Assembly Group Final Assembly  
Mr. Segaran AL Vasudavan



Auditing the production methods also enables us to thoroughly understand our workplace situation. Direct discussion with all staff members means continuous learning and proposals.

JVC Malaysia Plant Factory Innovation Centre  
Mr. Leong Ngai Chuen

### "Attack" Quality Activities: "Zero Defect Activities"

At the JVC Thailand Plant, we are promoting quality improvement activities using "zero defect" benchmarks by citing the theme "not causing problems = prevention" from activities centered on preventing the recurrence of quality problems. Specifically, we are noting results through implementation mainly by local staff of: ① Eliminating tasks that are difficult to perform and require care, ② Developing work using know-how and examples of failure, and ③ Thorough employee training and instruction.



If a failure occurs, the relevant staff quickly gather to apply what is learned to other procedures

### Meetings to Announce KAIZEN Activities, which Improve Quality Awareness

The Kenwood Malaysia Plant announces the results of its KAIZEN activities for each department with the aim of raising quality awareness among employees by establishing a quality improvement month in line with Japan's quality improvement month. Participation was open to subcontractors as well as in-house teams. In 2010, 11 teams participated, including Indonesian subcontractors, and a certificate was awarded to the best team.



The results of KAIZEN activities are announced in each department



Certificates awarded to the best examples

### Highly-Effective Fruit and Veg Management Methods



The Kenwood China Plant adopted "visualization" based on 5S management standards, and using "fruit and vegetable management methods," which target fruit and vegetables, and parts numbers in the warehouse layout design. Identifying parts in the warehouse using fruit and vegetable markers reduces mistakes due to visual fatigue and is an effective way to manage operations.

Adopting this management method has enabled even new employees to easily understand the system to manage parts in the warehouse, and at the same time makes handling speedy, effective and comprehensive.



The warehouse is kept in order using fruit and veg displays



On-site displays

### A word from the plant manager

As a manufacturer, obsession with quality is only natural, but we have raised our quality improvement results by implementing zero defect efforts by adopting thorough 5S activities, ISO quality management, implementation of quality months, and six-sigma methods. To improve quality, we don't just stop at our own company activities, but also receive strong support from our parts suppliers. Dissatisfied with the current situation, we will continue to constantly take up the challenge of high quality improvement benchmarks.



Kenwood Singapore Plant Managing Director  
Ryo Mizuhara  
(Currently at Kenwood USA Sales Company)



# “Reclaiming Nature for Ourselves” Hi-Resolution Audio System



How the stresses of life in modern society affect our minds and bodies is an issue of growing importance in our society.

This feature story introduces our approach to solving these social issues through research in our “Hi-Resolution Audio System” (hereinafter called “Hi-Res”) by Victor Entertainment in the JVC Kenwood Group.

## ● The Sound-Impoverished Metropolis

Many people think that the city is overflowing with noise, but in reality the sounds are very limited.

In data measuring the environmental noise in cities and tropical rain forests, there were few sounds up to 20 kHz, which is the upper limit of the human audible range (which is about 20 Hz to 20 kHz), whereas there was approximately six times as much noise at up to 130 kHz in tropical rain forests.

These were natural sounds such as the rustling of leaves, calling of birds, and chuckling of rivers. People think that the bustling and busy city is overflowing with noise, such as vehicle sounds and people’s voices. But in reality, the noise in the natural world is richer, and has greater resonance with many good effects for people who live amidst nature. Noise cannot be seen with the eye, and so tends to be



Tropical rain forest environmental noises  
Sounds just beyond the audible range



Urban environmental noises  
Sounds at the upper limit of human hearing

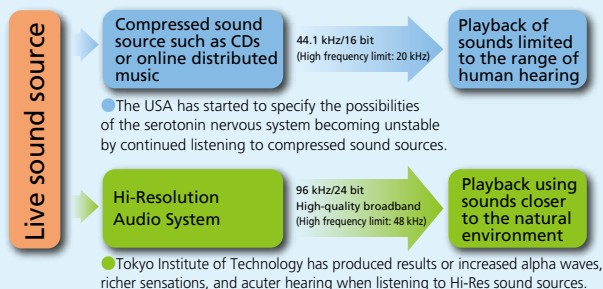
viewed lightly, but there is also data saying that it affects 39% of our senses, and the ears are an important sensory organ for human beings.

Vibrations in the air, which create sound, are felt not just by the ears but systemically, such as by the skin, bones, and muscles, and water, which accounts for over 70% of the body. Humans have been bathed in abundant audio frequencies since the dawn of time and have built up unconscious protections. Modern man, however, and the urban dweller in particular, can be said to lack experience with sound on a corporeal level.

Another problem involving sound is the compressed sound source. We can also listen to music easily through the spread of CDs and music distribution. In fact, these sound sources can only be heard at frequencies audible to humans, just like urban sounds. It goes without saying that the utility of CDs and music distribution fits the lifestyle of the modern person. At times, however, couldn’t it be necessary to listen to broad spectrum of music with high sound quality close to the natural sound environment. Urban children in particular may grow up never having experienced natural sounds.



### Difference between CD or online distributed music and Hi-Res



### ● Creating a Natural Sound Environment

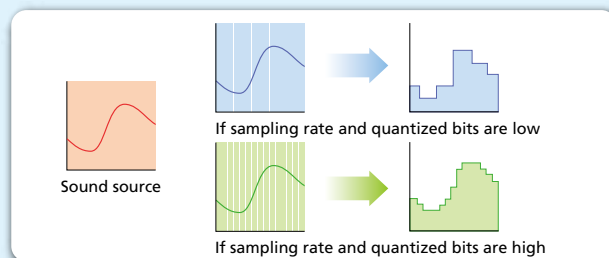
This new perspective, that is necessary to experience an abundance of sounds, is the point from which our efforts to develop the "Hi-Resolution Audio System" started.

When seeking "rich sounds," ideally one should go deep into the mountains or beside the sea where there are few human settlements. That, however, is impossible for most of us. This



being the case, Hi-Res was born from the idea that if only we could bring the sound environment closer to nature. Hi-Res is an original sound medium that creates the sound environment of nature in spaces such as the city or indoors.

Its mechanism is explained here briefly. CDs have a standard sample rate of 44.1 kHz/16 quantized bits, and the upper frequency range is limited to 20 kHz in the audible range. By contrast, Hi-Res is a system that compresses and supplies, on DVD and other media, sound sources recorded in high fidelity and broadband such as a sampling rate of 96 kHz/24 quantized bits. This allows approximately triple the volume as a CD and reproduces sounds that are close to nature with the richness of high-frequencies that exceed the upper limit of human perception, up to a high-frequency limit of 48 kHz.



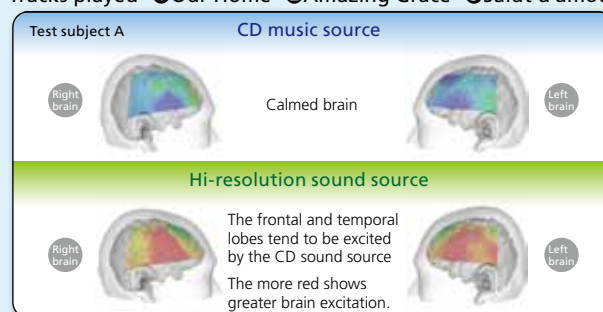
### ● Sounds that Are the Focus of Neuroscientists

In reality, Professor Kikunori Shinohara, the primary neuroscientist at the Tokyo University of Science, Suwa, examined changes in brain activation by making people listen to Hi-Res and CD music, to examine how the brain reacts when listening to Hi-Res. Compared to CDs, which tend to be calming, Hi-Res was inclined to invigorate both the frontal lobe and the temporal lobes.

People may not be able to tell the difference between the two, but clearly the brain reacted to the differences. According to the professor, it is highly likely that the brain and mind are more easily stimulated by Hi-Res, which is high-quality audio close to that of a live performance. Essentially, people are part of nature. Hi-Res enables both the convenience of urban living and the improved psychological effects of rich sounds to co-exist as if living surrounded by a world of natural noises. This is thought to also work effectively on the development of children's minds and brains.

### "Results of brain excitation tests using broadband high-quality music" at Tokyo University of Science, Suwa

Tracks played ①Our Home ②Amazing Grace ③Salut d'amour



### Message from a Neuroscientist

Three subjects listened to two types of music and wave sounds using an ordinary CD source and Hi-Res source, and their brain activation examined using an fNIR (functional near-infrared) device.

It was already known that sounds comprising an abundance of high frequencies exceeding the upper limit of audibility invigorate the brain stem deep in the brain. However, our experiments showed there was also a greater tendency towards invigoration of the temporal lobes than with regular sound sources. This may be because Hi-Res sound sources are closer to live performances and so stimulate the brain and mind more easily.

Tokyo University of Science, Suwa  
Kikunori Shinohara

# “Getting Back to Nature,” Actually

I want to verify the research results using the process by which Hi-Res was researched, and I want to verify the effects of “involvement in social issues through music.” We invited university students, who can give us open minded insight from the user’s point of view, from among the JVC Kenwood Group target users to examine the Hi-Res results and get their candid opinions.

From 12:00 to 15:00 hours on February 8, 2011 (Tues), a symposium and hearing test of the “Hi-Resolution Audio System” was held at the “Victor Studios” in Jingumae, Shibuya-ku.

First, tell us your impressions.

**Iwasaki** CDs and Hi-Res are totally different.

CDs give the impression of listening to music, whereas Hi-Res feels more like “being part of the music” than merely listening, and this difference in impressions is refreshing.

**Takahashi** It felt very real, and there was a deep feeling to the sound of the waves, which I am used to hearing.

**Hirano** I can’t tell unless I compare it to a CD. The comparison, however, is distinct. I normally listen to music at low volume, but the greater the volume, the more obvious the difference. Explosive sounds, like the sound of fireworks, brings out the difference from CDs.

**Furuki** CD sounds feel flat, whereas Hi-Res sounds are solid and I never tire of listening to them.

**Baba** CDs contain only sounds that we can hear, but not all the sounds that need to be heard. Hi-Res includes sounds that we cannot hear, which creates a feeling of relaxation as we listen.

**Ono** The difference between “sounds we hear” and “sounds we are immersed in” is amazing. In particular, I

felt goosebumps when I was able to hear the resonance of the violin at the start, and the movements of the bow at the end. Really, it was like listening to the music live.

**Makimoto** CDs can’t pick up the change in speed of the bow at the start or end of strokes, but Hi-Res picks it up beautifully, so it feels like listening to a live performance.

Who do you think would benefit from listening to Hi-Res?

**Baba** I listened to “Boys Air Choir” on Hi-Res, which is an old favorite of mine, for this test. I listened to CDs of performances of this song as a member of the choir in high school, but I had a completely different impression, and so using Hi-Res in music lessons would be beneficial. That’s because in class, you want to listen to the voices of performers and singers that are as close to live performances as possible.

**Iwasaki** CDs feel flat, and the music presses on you, whereas Hi-Res feels solid, as if you were actually there. People bedridden in hospital can experience a



I never get tired of listening to Hi-Res



Can change the moods of people in hospitals

### Symposium participants



Mai Hirano  
Aoyama Gakuin University  
School of Cultural &  
Creative Studies



Ayumu Furuki  
Aoyama Gakuin University  
School of Cultural &  
Creative Studies



Mariko Iwasaki  
Tama Art University  
Product Design



Nobutada Takahashi  
Tama Art University  
Product Design



Kazuki Ono  
Chiba Institute of  
Technology  
Department of Design



Tomoko Baba  
Chiba Institute of  
Technology  
Department of Design

sensation as if they have escaped to a live performance.

**Furuki** I like rock. I love the power and sense of being there at summer festivals. A Hi-Res player can raise the roof for everyone without spending any time or money. Music is now all compressed, maybe more people would listen to live music.

**Ono** Playing Hi-Res music in a school lab could make it possible to do research in a relaxing environment. Being able to do research in a Yakushima-like atmosphere will

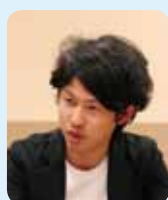


Able to immerse myself in research in a relaxing environment

improve results.

**Takahashi** Using Hi-Res in kindergartens might enable children to learn with richly sensitive spirits.

**Hirano** While 3D is the focus of attention, enjoying movies with a sense of really



Effective in teaching children

being there through the music as well will prevent phenomena such as stress and snapping easily. There was a real sense of being there when I tried listening to the sound of an insect's wings.

**Baba** Seeing the landscape through music was an experience I'd never had before. This could make virtual reality that appears to be just like traveling abroad. There are TV shows that travel the world, but I think Hi-Res sounds coupled with images would be extremely realistic.



Can relieve stress while enjoying movies

**Makimoto** I want to introduce them to lobbies, restaurants, kindergartens, and corporate counseling rooms and restaurants. It would feel good to dine in a restaurant in the forest. We must also think of locations where you can experience Hi-Res.

## What Is the Right Audio Set Design Image for Hi-Res?

**Baba** The installation space in rooms is a problem. In particular, the speakers must be designed to match the living environment so as to be unobtrusive.

**Iwasaki** Sounds are invisible, but this audio set has too much of a sense that the speakers emit sounds. Commercialization of speakers that don't betray the sound source is essential.

**Makimoto** Speaker shapes certainly haven't changed much throughout history. We don't feel that's strange, but everyone's declarations contain many important keywords for product manufacturing.

**Ono** The sound elements also have to be incorporated into the product design. It's understood that sounds are an important element in making people feel good.

**Makimoto** Tuning the sounds for pleasantness, such as copier sounds, the sound of a high-class automobile door closing, and the sounds of a turn signal operating, is highly advanced in the West. However, Japan is indifferent to sounds.

Nowadays, when listening to compressed music with headphones is the norm, it is possible to unilaterally shut out external sounds and become closed off in your own little world. In modern society, sometimes it is necessary to listen to Hi-Res in order to reset our feelings.



Designs matching our living environments are necessary



## Ending the Symposium

All the university students we gathered are typical of the young today, with no rich audio environment. But their exchange of views indicates they all were highly sensitive and able to clearly feel the greater stimulation to their senses by listening to Hi-Res.

Although they have no connection with high-end audio sets, and so there was resistance to the hardware in the forum, they gained a new awareness of the importance and social functions of music, and each developed a positive opinion that they wanted to be involved with a heavy focus on music in their studies, and so I think this was a significant symposium for both sides.



Victor Entertainment, Inc.  
Entertainment Lab  
Senior Producer  
Hiroyuki Makimoto



# Corporate Governance

JVC Kenwood Group management believes that increasing the efficiency and transparency of decision making through enhanced corporate governance is crucial to improving corporate value. To achieve this it is fundamental to strengthen and expand corporate governance by implementing a group-wide internal control system. To improve our internal safeguards, we divided the policy making and management functions, employed outside directors and corporate auditors, and established an Internal Auditing Division.

## Corporate Governance System

### Role of the Board of Directors

The board of directors makes fundamental and strategic decisions, and they are responsible for supervising the execution of operations. They meet once a month, or more in special cases, to deliberate and vote on the basic policy of management and other important matters, and monitor and supervise the state of corporate affairs. The members of the board are given one year terms, which keeps responsibility clear and management agile. Clarity in decision making is achieved through the proactive appointment of outside board members.

### Role of the Executive Officer System

The JVC Kenwood Group has introduced a new executive officer system. The executive business function has been divided and the responsibility for management and operations has been clarified. From June 24, 2011, there have been nine members on the board (two of whom are external) and ten executive officers (six of whom are also on the board). Further, four "business groups" were launched, corresponding to the four corporate group businesses, and an operating officer system was introduced under the CEO to supervise the work of each business group and the duties of organizing head office functions. A COO (Chief Operating Officer) is appointed from among the operating officers of each group, and proactively directs the operations of their business group, thus configuring a comprehensive management system that can respond promptly

and flexibly to changes in the business environment.

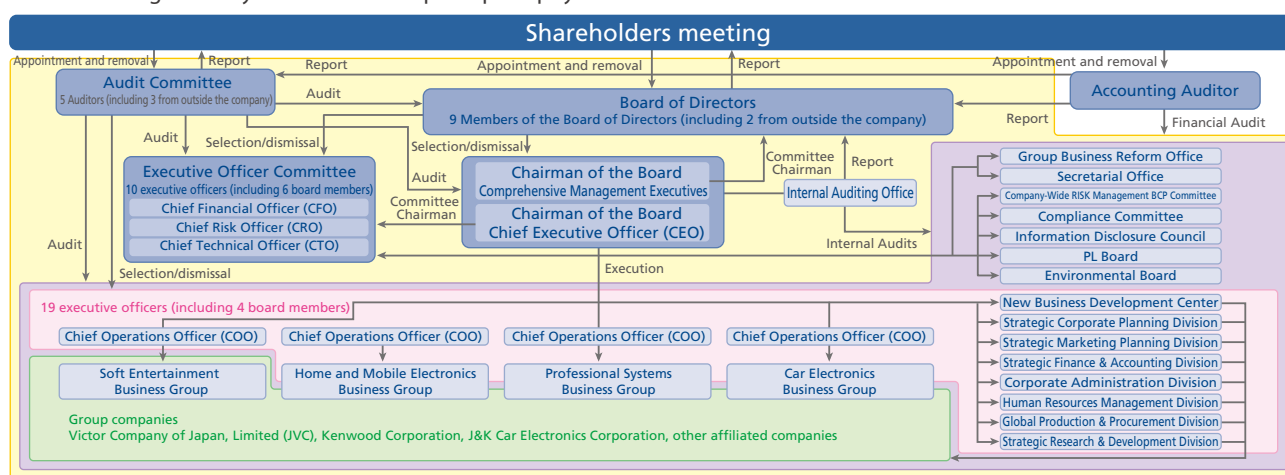
### Role of the Board of Corporate Auditors

Further, JVC Kenwood Group was established as an auditing company, and the auditors attend board and other important meetings, and also convene auditors' meetings, and implement the duties of the board, audit the work implemented throughout the corporate group, and audit the accounts, and function as business auditors. In addition, the five auditors (three of whom are external) have assumed these duties since June 24, 2009, and the Board of Corporate Auditors meets once a month or as necessary.

### Role of Internal Auditing

The JVC Kenwood Group has established a business auditing office, and implements on-site inspections far and wide, including companies and affiliates within the corporate group, and by monitoring the implementation status of internal controls uniformly, strives to promptly discover any problems from a different perspective from the workplace values, and so improve the ability to prevent problems from occurring.

As of June 24, 2011, the business auditing office had 11 members, two of whom also work as directors or managers of general companies outside Japan, and who function as a base of operations during internal audits.



Corporate governance system diagram (as of June 24, 2011)



## Compliance

JVC Kenwood Group does not think that compliance is merely obeying the law. Compliance means responding to the needs of society. In other words, the objective of compliance is not only to obey the law, but also to be aware of meeting social requirements that touch upon corporate ethics and moral responsibilities, and from that viewpoint, we have been promoting compliance activities centering on the compliance committee that was established in 2009.

### Specific Promotion System

#### Compliance Activity Standards

The JVC Kenwood Group Compliance Activity Standards, which were published on March 3, 2010 and revised on November 1, 2010, were disseminated to all group employees from JVC Kenwood Holdings both via our intranet (in three languages) and in handy booklets. The compliance supervisors of the relevant umbrella companies are in charge of distribution and education through appropriate types of training. In addition, during FY2010 training by



JVC Kenwood Group Compliance Action Standards



Training course at JVC Europe Limited (UK) on June 8, 2010. 18 people attended, including the head of European sales.

head office staff was mostly held outside Japan, and a total of 99 managerial staff received training in the UK, Spain, Austria, Germany, China, and the USA.

#### Compliance Supervisors

The JVC Kenwood Group has established compliance supervisors (as a rule, the chairman of affiliated companies) in subsidiaries in addition to the compliance committee, and a system has been configured to thoroughly inculcate and disseminate compliance by leading from the top.

#### Helpline

The group's integrated internal Helpline (to report internal problems) is operated by the Strategic Corporate Planning Division. Its goal is to detect and correct activities that do not adhere to standards of conduct and the demands of the community while operating in tandem with the compliance committee and business auditing office.

## Risk Management

Nowadays, there is a social requirement to suitably handle the various risks that threaten sustainable corporate development through the progress of business globalization, increased IT, the push to higher levels, specialization, and the introduction of black boxes. The JVC Kenwood Group departments have been established to handle the foreseeable risks for both business and natural disaster risks. This means deciding who will be in charge and strengthening connections for handling ① daily risk surveillance, ② mobilization measures if a disaster occurs, and ③ a business continuity plan (BCP) for each phase, based on the accident and disaster risk countermeasure regulations.

## Business Continuity Plans

### Continuing Business that is Aware of the Responsibility to Provide for Clients

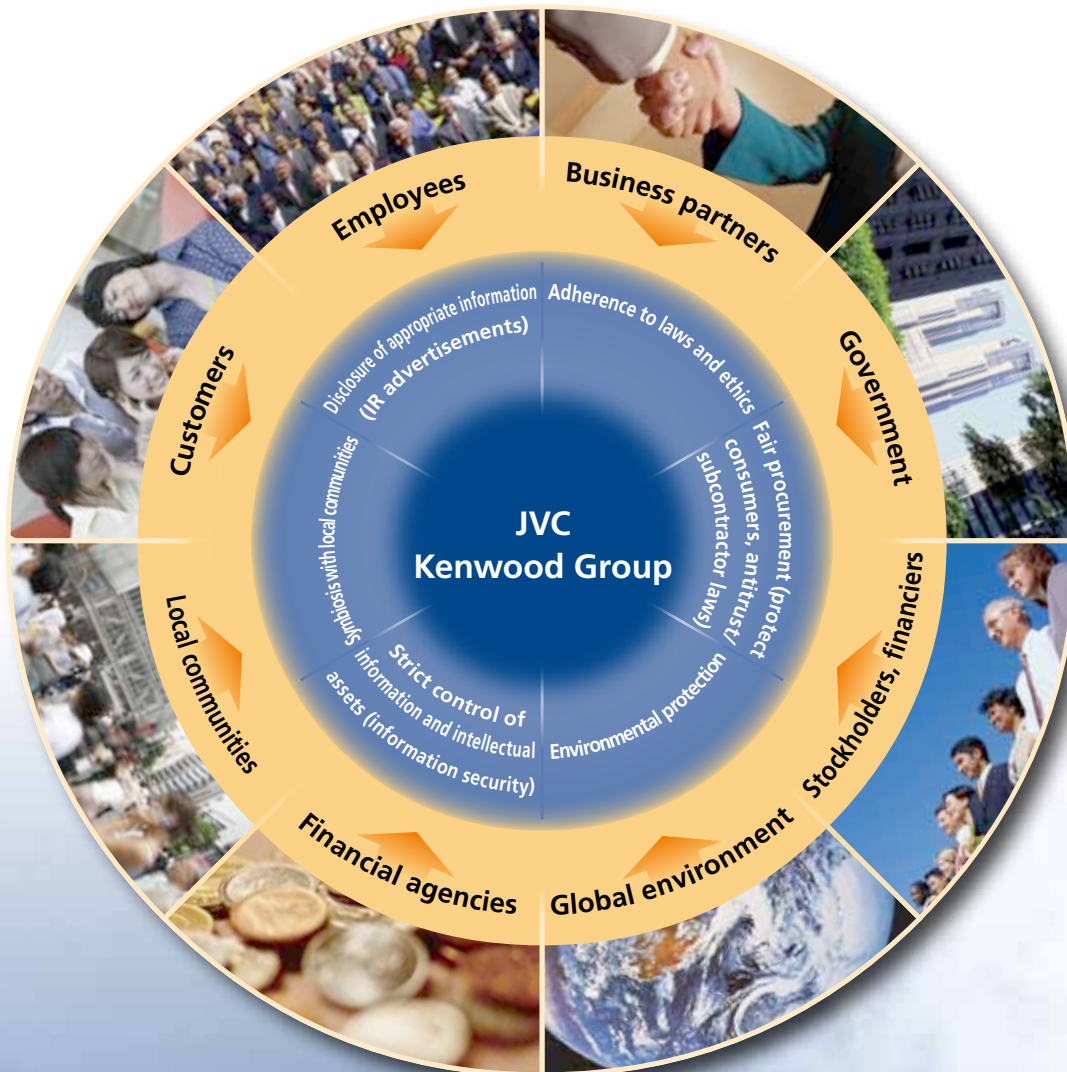
The JVC Kenwood Group has determined from the top down the basic BCP policy of "contributing to a safe society with peace of mind through continuous business" from the rise in the B-to-B business ratio, which places a greater burden on the responsibility to supply customers, and not only have we informed everyone in the company of the importance of business continuity, but also have strengthened our involvement in business continuity management by establishing a BCP promotion division as a new head office organization. The corporate "Business Continuity Planning (BCP) Guidelines" identify the respect for life as primary, and maintaining the supply of products and services secondary, as corporate responsibilities to

stakeholders starting with our clients. Based on this policy, we are promoting company-wide BCP development. This includes supply chains, a welfare check system for employees and their families, disaster prevention systems, and the establishment of emergency supplies. Further, we have determined our B-to-B model as a champion business, and are rolling out the BCP configuration in earnest, and in future will promote the company-wide roll-out of BCP, including supply chains.

During the recent Tohoku Earthquake, there were fears of the effects on business due to supply chains being cut off and of the rolling blackouts, but due to the basic BCP policy and by putting into practice our business continuity know-how obtained from our activities to date, we were able to continue business operations without incurring any major impediments.

# Social Report

## Stakeholders



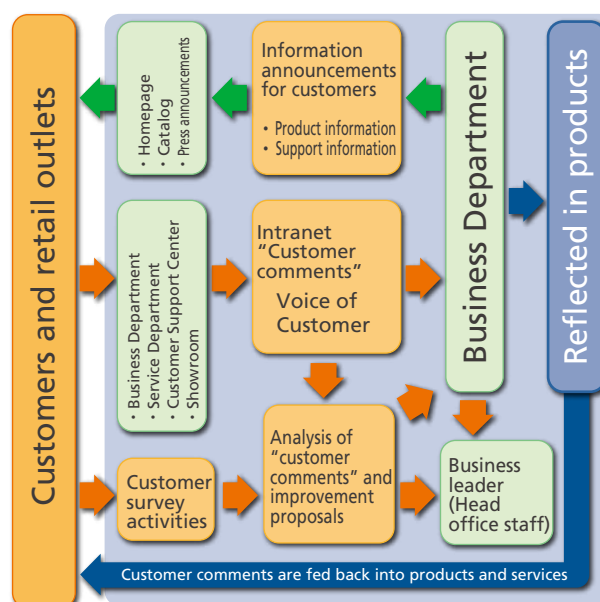
# Working with Our Customers

The JVC Kenwood Group is communicating with all its stakeholders to promote manufacturing processes that provide “excitement and peace of mind,” because we believe that one part of a corporation’s operations is to reduce its impact on society.

## Connecting with customers

### Customer support and service

To earn maximum customer satisfaction with our products and services, it is important to reflect customer feedback into products and services. This is to establish a quick and close relationship of trust with the customer. We make the customer central to our product creation process. The opinions of our customers arrive everyday at our customer support and service departments where they are processed and classified on a daily basis. This feedback is sent to the business departments and other relevant in-house departments using our “Customer’s Voice” in-house intranet where the information is reflected in improvements to products and services as well as information we provide to customers.



### Actual Products that Reflect Customer Feedback

Application software is stored in the main device, eliminating the enclosed CD-ROM

In the past, the “Everio” video camera came with the application software supplied on a CD-ROM, but the new model that was launched in December 2010 comes with the application software on its internal memory. This helps to save resources and essentially solves the issue of customers losing and then requesting replacements of the CD-ROM.



GZ-HM890

The application software is built into the “Everio” internal memory.

KENWOOD Map Fan Club: the first new service and map update program in the industry

We have received numerous inquiries from customers about upgrading our car navigation maps. With the launch in 2011 of car navigation products MDV-727DT and MDV-626DT, we started the first map update service in the industry with the ability to update to the latest maps for a maximum of five years at a cheaper price than approximately one use of the existing version upgrade kits.

This gives the customer peace of mind, genuine savings, and great satisfaction.



MDV-727DT



Updates to the latest maps are possible for up to 5 years



# Working with Our Customers

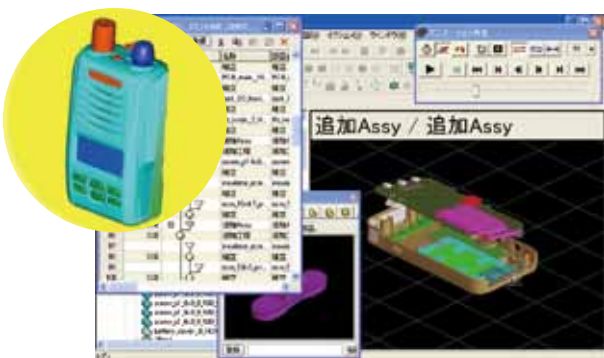
## Supplying Customers with Excitement and Peace of Mind

### Analytical Technology that Supports High Quality

The JVC Kenwood Group makes full use of analytical technology, and is involved in the development of products that bring our customers excitement and peace of mind. Analytical technology has revolutionized the fabrication process, and is cutting-edge technology that is the trump card in being able to respond to increasingly diverse and high-level needs. Virtual tests and experiments from every angle are implemented on computers, to support high product quality. As a result, actual testing and the number of experiments are greatly reduced, it also “shortens development time,” “eliminates waste loss,” and “lowers production costs, which makes it possible to produce environmentally-friendly products.



- Reduced testing
- Short development period
- Reduced waste and losses
- Reduced production costs



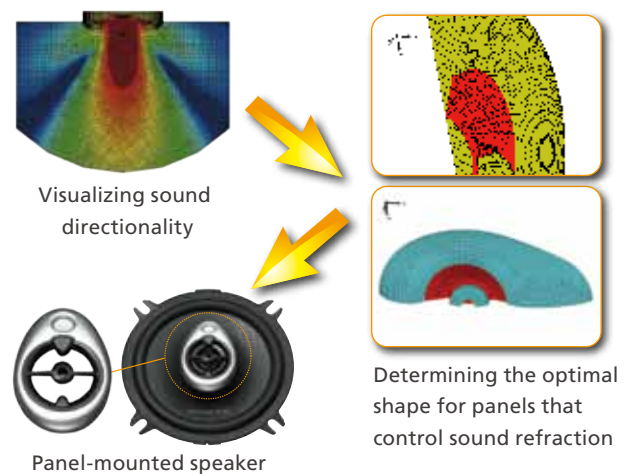
#### Analytical Technology Examples

Strength	Sound	Signal	Materials	Heat conductor
Vibration	Noise	DC	Light path	Thermo hydrodynamics
Configuration	Electric field	Transition	Electromagnetic wave	Energy

### Introducing Analytical Technology Examples

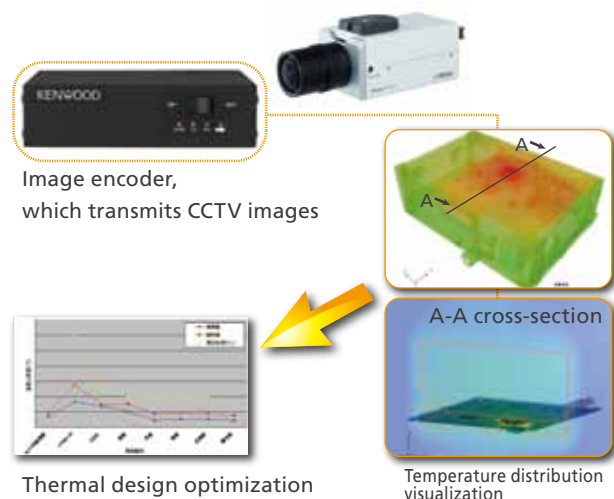
#### I. Sound Analysis: Onboard Speakers

Orientation of the speakers controls the sound quality as they vibrate the air to transmit sounds to the ears. Orientation of the sound is visualized using analytical technology to evaluate the diffraction of the sound using panels of various shapes, leading to the optimum panel shape.



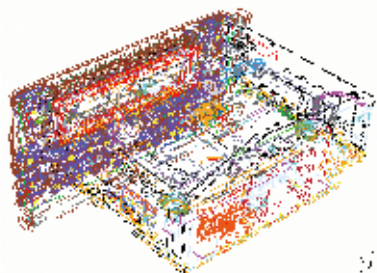
#### II. Thermodynamic Analysis: Unmanned Monitoring Camera System

The unmanned monitoring camera system requires constantly accurate and stable operation as it is installed in dangerous and harsh environments such as construction sites. Heat is one of the factors that inhibits product reliability. Thermodynamic analysis visualizes heat distribution and air flow, and prevents thermal runaway by efficiently dispersing the heat within the product.

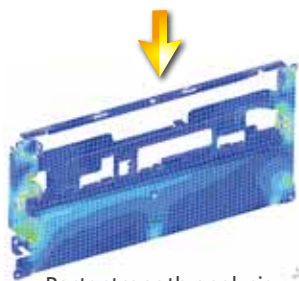


### III. Configuration Analysis: In-Car Audio

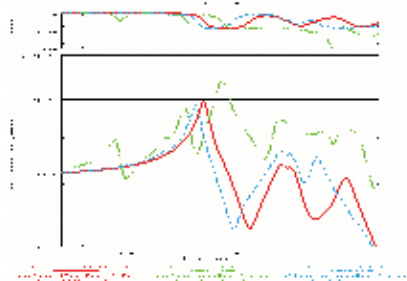
On-board products are constantly vibrating. To improve reliability and performance, a computer was used to analyze and examine the vibration resistance strength characteristics to prevent fatigue damage. Further, a compact configuration was achieved by optimizing the overall product strengths.



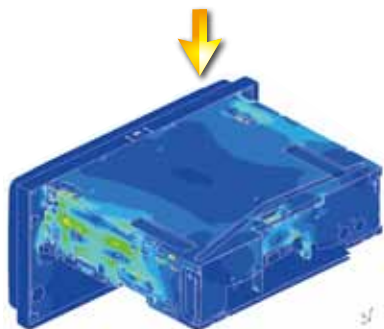
Configuration design on the computer



Parts strength analysis



Vibration resistance strength characteristics



Optimization of overall strength

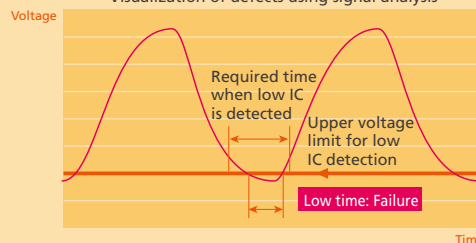
### IV. Signal Analysis: PCB Design

The following diagram shows a six-layer navigation PCB. In this case changed part of the GND (ground) layer on top of the signal layer during the design, to optimize signal flow. To handle the higher speed of signal processing, a computer was used to design PCBs, and the characteristics of the individual electronic components and the signal characteristics including the length, thickness, and paths of the hard wiring on the PCB were visualized and countermeasures to defective parts were identified to assure operational reliability.

#### During PCB patterning and design



Visualization of defects using signal analysis

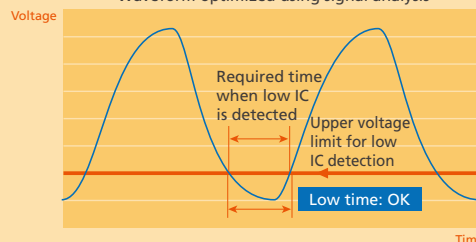


#### After PCB patterning and correction

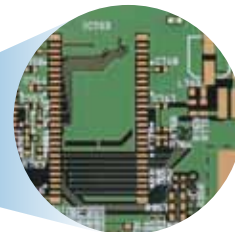
Ground direction arrow shape changed to optimize signal flow



Waveform optimized using signal analysis



Mass produced PCBs



Voice



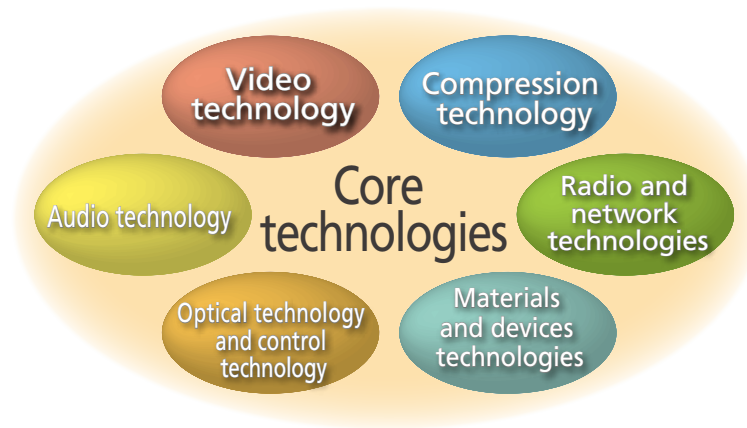
I supervise the design of in-car audio and navigation devices using the motto "Creating excitement and peace of mind for the people of the world."

We are involved in optimizing designs by making full use of analytical tools with computers to solve difficult problems such as reducing size, lowering weight, assembly and disassembly, and normal operations in vibrating environments.

OEM Engineering Dpt., Technology Development Div., Car Electronics Business Group  
Kazuhisa Uchida

## Working with Our Customers

### Supplying Attractive Products Supported by Core Technologies



Full use is made of the core technologies, planning, and development skills cultivated by the JVC Kenwood Group to supply "excitement and peace of mind" with products that do not place a burden on society.

#### Creating a Cheerful and Stress-Free Space Inside Vehicles Using High-Speed Response and High Definition

The compression technology, and imaging and sound technology, provide an all-in-one AV car navigation system that achieves "high-speed response" and "easy screen viewing."

The "high-speed response" has smooth operability, and the "easy screen viewing" provides high visual recognition for map and other displays.

These produce an easy to use and stress-free space inside vehicles using the all-in-one AV car navigation system.



High-performance engine that achieves high-speed response



Easy operation touch panel



All-in-one AV car navigation unit MDV-727DT (domestic model)

#### Voice



I am involved with MDV-727DT production.

It makes me proud to be involved in the production of these hi-tech products, and I keep quality first during production, and put my heart into each and every unit.

We hope that the products we manufacture are of use in providing pleasant and stress-free driving.

Production Department Assembly Group Final Assembly, JVC Malaysia Plant  
Ms. Liza Yuliana



## Capturing Valuable Memories and Exciting Moments as they Are Viewed in High Definition

We have developed a high-definition "FALCONBRID" engine that collates imaging technology, compression technology, and optical technology to launch a video camera



GZ-HM890 with built-in "FALCONBRID"



into which all these have been incorporated. The high-definition engine enables valuable memories and exciting moments to be captured as they are viewed.

Professional cameras have highly-regarded high definition and high performance supported by core technologies, and are highly regarded in the industry, as shown by the purchase of 177 cameras\* by the major American broadcaster CNN. \*Actual results as of December 2010



GY-HM100 used by CNN

Video technology

Optical technology and control technology

Compression technology

Voice



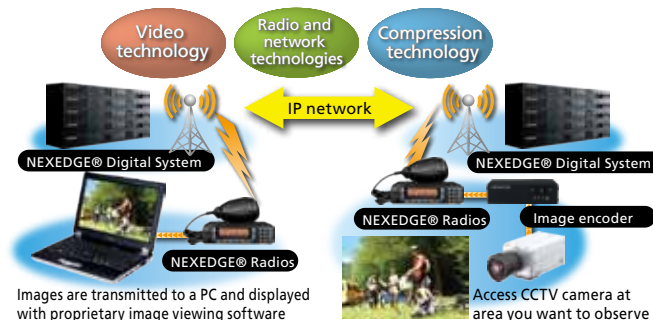
In the showroom, the most important thing is not only viewing the products, but also conversing with the customers. With video cameras, images taken using an SD card can be taken home to experience the quality of the images and audio. Testing the GY-HM100, which is compact and can take professional quality images, is always popular.

JVC Kenwood Marunouchi Showroom  
Emi Ide

## Protecting Safety by Monitoring Public Facilities and Remote Areas

We have commercialized an image transmission system that fuses narrow band digital radio technology to cover wide area communications with a compression technology that achieves image transmission using small amounts of data.

This system enables monitoring operations with cameras that are easily installed in public facilities and remote areas such as rivers and forests, thus enabling the safety of many people to be protected.



Images are transmitted to a PC and displayed with proprietary image viewing software

Access CCTV camera at area you want to observe

Voice



Safety is supported using image security systems and communications tools for traffic agencies. In particular, this system contributes to maintaining safety and preventing crime within railway stations, and is linked to customer service, for railway operations.

Infrastructure Systems Operation, Business Solution Div.,  
Professional Systems Business Group.  
Kyouhei Kawatsu

## Faithfully Reproducing Cinematic Image Quality

We developed a home theater projector that displays cinematic film quality as is through optical engines and color reproduction technology that provide high contrast using the "D-ILA\* element," which was developed independently using



D-ILA element

Video technology

Optical technology and control technology

Materials and devices technologies

high-level device technology. D-ILA projector display power does not stop merely at image reproduction, but faithfully draws the ideas of the creators incorporated into the product to give excitement to viewers.



D-ILA projector DLA-X9

\*D-ILA is a reflective LCOS (Liquid Crystal On Silicon) panel developed by JVC Kenwood.

Voice



I project images with the actual D-ILA element, and perform inspections to determine there are no dirt, scratches, or defects in the element. I evaluate up to 300 elements a day, and inspect them all visually, and I am actively proposing ways to improve my duties. JVC Kenwood projectors are highly regarded in the market, so in response to customer expectations and to bring them satisfaction, I implement my evaluations every day with the feeling that I "must absolutely not miss a single defect."

LCOS Operation, Strategic Research & Development Division  
Yasuko Ogura

## Working with Our Customers

### Involvement in New Business that Uses Core Technologies



The JVC Kenwood Group gives new value to customers by developing applications in a broad range of business fields such as medicine, education, ecology, response to the graying of society, safety, and peace of mind based on core technologies developed to date.

#### The Top 3D Technology in the Industry

We are implementing a broad range of businesses from 3D video cameras to 3D displays, 3D projectors, and 3D content creation using the top 3D technology in the industry. 3D video cameras can handle not only 3D image photography, but also 3D audio.

There is great hope for the display ability and sense of presence with 3D not only from the entertainment field such as movies and games, but also the fields of medicine, and education and training.



Voice



We create and edit images. The advent of the "IF-2D3D1" 3D image projector, which can convert 2D to 3D in real time, has greatly changed the 3D content creation workplace, which had many limitations. Further, the "GS-TD1" 3D hi-vision movies for consumers not only enable 3D filming to be enjoyed easily, but also have the ability to thoroughly support our professional use.

Executive Producer, Video-Tech Co., Ltd.  
Toshifumi Mori

## High-Precision 3D Imaging System that Exhibits a Great Sense of Presence

The JVC Kenwood Group started research and development of the high-definition 4K imaging with four times the resolution of hi-vision in 1999, and has constantly led the world in this field. The large-screen high-definition



Realistic life-size playback of 4K3D camera images

3D imaging system was developed by blending this high-definition 4K technology and 3D technology.

By projecting life-size human figures, it is possible to clearly project the detailed expressions on faces and each and every single hair with a sense of presence as if the person were actually there next to you. This makes this imaging

technology highly regarded by medical professionals.

It is expected to be used in future in remote treatment and distance learning.



4K3D camera

Voice



The environment involving the field of medical treatment is changing greatly, such as the expanding graying of society and the increase in lifestyle illnesses, a lack of doctors and other issues means that medical infrastructure also needs to be revamped. ICT technology is indispensable for developing medical treatment infrastructure, but the important point therein is imaging and audio technology for the easy-to-understand transmission and display of information. The JVC Kenwood Group possesses imaging, audio, and optical technology cultivated over many long years. In particular, imaging technology with a real sense of presence through 3D and high-definition, and various image and audio signal processing technologies with history are expected to solve the problems that we currently face, and to create new medical technologies.

Tokyo Institute Of Technology, Solutions Research Laboratory, Department of Biological Information, Graduate School of Bioscience and Biotechnology, Doctor of Medical Science, Professor  
Hiroshi Handa

## x16 the High Resolution of Hi-Vision: Super Hi-Vision

NHK Science & Technology Research Laboratories are researching super hi-vision (SHV) formats with a view to implementing trial broadcasts in 2020. JVC Kenwood Group has developed a low-cost SHV jointly with NHK and NHK Engineering Services Inc. SHV has x16 the number of pixels of hi-vision, and displays images overflowing with high definition and a sense of presence. Image displays

with this sense of presence are expected to be applied in a wide range of fields outside broadcasting as well.



General-use super hi-vision projector that can display 8K images using one device

4K describes resolution 4 times that of hi-vision, and 8K describes resolution 16 times that of hi-vision.

Voice



We are pursuing super hi-vision research together with NHK. Since the start of development, the JVC Kenwood Group and NHK-Engineering Services have been developing a Dual-Green format using two 4K projectors that were successfully displayed at the Aichi Expo, and since then, we have arrived at the development of the full pixel projector. Recently we have further developed a general use projector that obtains a picture quality equivalent to that of full pixels using a new format. In this way, we are delighted to be able to pursue research and development in association since the start of these developments.

In the future, it is thought that super hi-vision will be used in many fields, not just broadcasting, so further contributions in this field are expected.

Executive Researcher, NHK-Engineering Services, Inc.  
Fumio Okano, Dr. Eng.



# Acting Socially and Locally

The JVC Kenwood Group aims to be a good corporate citizen in the local communities where we operate, so we hold various activities to deepen our relationship and interaction in these communities.

## Outreach Training



JVC Kenwood Group has implemented outreach training in elementary and junior high schools using teaching materials as a specialist audio and visual manufacturer on the concept of "contributing to social development" by supporting the academic abilities of children."

Every year, we work with the Environmental Services Bureau of Yokohama City, Kanagawa Pre-

fecture, and the Shonai General Affairs Office of Yamagata Prefecture, and in FY2010 we implemented outreach training to 826 children in ten schools, including requests from the Energy Conservation Center, Japan. Further, outside Japan, the JVC America Plant also implemented outreach training.



Outreach classroom in Yokohama, Kanagawa Prefecture



Outreach classroom in Yamagata Prefecture



Outreach training in Tuscaloosa, Alabama

### Voice



When learning about electricity during science in the 4th grade at elementary school, I also want the children to be interested in global warming and energy conservation, so I applied to the "outreach classes."

The contents may have been difficult, but they were able to learn through quizzes and experiments about the importance of preventing global warming and how they themselves could save energy, and for the children, this was a breakthrough in the awareness of the problems.

Teacher, Sakata Municipal Kijyo Elementary School  
Ms. Tetsuko Sato

## Participation in "Yokohama Triennale 2011" as part of Promoting Local Culture



JVC Kenwood Group employees participated in supporting the creation of the exhibition artwork "Breathing is Free: JAPAN, Hopes & Recovery" by the artist Jun Nguyen-Hatsushiba who participated in the Yokohama Triennale 2011 (from August 6 to November 6, 2011) an international exhibition of modern art held in Yokohama every three years.

This is an exhibition art project taking place in Yokohama and Ho Chi Minh City, which is where Hatsushiba lives. Hatsushiba and ordinary people wear data loggers that receive GPS data as they run through the cities along routes that trace several cherry blossoms. It is being done in support of recovery work for the Tohoku Earthquake.



Cherry blossom depicted on the ground along the route

A total of 33 people ran along ten routes near the Head Office & Yokohama Business Center (Kanagawa-ku, Yokohama) and the Hakusan Business Center (Midori-ku, Yokohama). They ran in support of the recovery efforts of the Tohoku Earthquake.



JVC Kenwood employees running in Yokohama with GPS-receiving data loggers

## Donating Radios to Support Disaster Area Reconstruction



Kenwood visited Amami city, Yamato village, and Uken village in Kagoshima Prefecture, which were greatly damaged by record torrential rains in October 2010, and donated 86 specified low-power transceivers.

As transceivers that can communicate regardless of public infrastructure contribute to assuring communications during an emergency, we received a certificate at the 20th Central Emergency Communication



The head of Kenwood Communications Systems Division (left) receives a certificate from the Central Emergency Communication Committee meeting\*

\*The Central Emergency Communication Committee is part of the Ministry of Internal Affairs and Communications, and comprises people deeply involved with emergency communications such as the Fire and Disaster Management Agency, Cabinet Office, National Police Agency, Ministry of Defense, Ministry of Land, Infrastructure, Transport, and Tourism, Japan Meteorological Agency, Japan Coast Guard, NHK, and other main electrical communications businesses and radio station license holders, etc.

Committee meeting\* on February 22, 2011.

Further, we also donated commercial radios to the Qinghai Province Gyêgu Tibet Autonomous Region Gyêgu People's Government Bureau and Qinghai Province Urban Construction Bureau for the "Yushu Earthquake," which occurred in April 2010.

We offer heartfelt prayers that the devastated areas can recover as soon as possible.



Donating radios to Gyêgu People's Government Bureau Kenwood Electronics (Hong Kong) Ltd. workers on the left

### Voice



Traffic and communications were cut off during the disaster of the local Amami deluge, and information gathering was extremely difficult. The transceivers supplied by JVC Kenwood were used by the disaster response HQ at Naze general branch office to communicate with all sections. In future, we intend to use them as communications devices not only during disasters, but also for all manner of official duties.

Head of the General Affairs Section, Amami City Hall  
Mr. Sakizirou Maezato

## Disaster Support Activities for the Tohoku Earthquake



To be of use in supporting victims of a major disaster and in rebuilding the disaster region, during the "Tohoku Earthquake" of March 11, 2011, we delivered 200 Kenwood digital radios, 200 specified low-power transceivers, five amateur radios, and 300 JVC radios to the disaster zone. Further, we donated 15 million yen through a program of matching donations with JVC Kenwood and JVC Kenwood Group employees, and donations from affiliated companies and representatives. We offer heartfelt prayers that the devastated areas can recover as soon as possible.



Kenwood China Plant employees soliciting money

## Participating in Yabitsu Pass Brush Clearing in the Association Forest



On July 31, 2010, Victor Creative Media Co., Ltd., which is a member of Kanagawa Prefectural Association, participated in the Yabitsu Pass brush clearing in the Association

Forest.

The work was completed smoothly while participants built up a healthy sweat under the midsummer sun.



Yabitsu Pass brush clearing in the Association Forest

## Helping the community: Kenwood Community Service Day Activities



On December 10, 2010, the Kenwood Singapore Plant implemented care visits to a home for the elderly as part of community service day, which is held every year.

The facilitators from each section discussed the program, packed presents, and prepared the hall. On the day, all the employees divided into two locations on the island, and sang songs, played games, and supplied food to approximately 100 people in each group. A fun time was had by all.



Enjoying a bingo game

# Acting Socially and Locally

## Hosting Plant Tours



On September 29, 2010, 40 people from Kumamoto National College of Technology toured the Kenwood Singapore Plant, and studied the manufacturing process for products that are marketed globally. The students, who want to work overseas in the future, listened with great interest to the explanations by the plant staff.



Kenwood Singapore Plant



Students listening ardently to explanations

## Joint Action with the Government to Participate in Recycling Electrical Products



The JVC America Plant acted in cooperation with the local cities of Tuscaloosa and neighboring Northport, Alabama, as well as the West Alabama Chamber of Commerce, to participate in recycling electrical products. Employees participated as volunteers to unload 1,000 vehicles in a day, and pack the products for handover to recyclers. The waste processed by the employees reached 5,000 lbs (about 2 tons).



JVC employees loading up materials for recycling

## Recycling Telephone Books at a Local Elementary School



The JVC America Plant joined the neighboring Arcadia Elementary School in a telephone book recycling competition supported by Tuscaloosa city and AT&T. Employees collected several hundred old phone books, leading Arcadia Elementary School to 3rd place and a prize of \$400. The students collected over 1000 phone books, 3.79 each, and they were recycled without any being used in a landfill.



Arcadia Elementary School students collecting phone books

## Charity Activities via E-Commerce



Kenwood Electronics Italia S.p.A. started its own e-commerce website [www.kenwoodstore.it](http://www.kenwoodstore.it) in 2009, and contributes 0.8% of sales to three charities.

- ① Animals Asia Foundation (animal welfare in Asian countries)
- ② Terre des Hommes (child protection in African countries)
- ③ LILT - Lega Italiana per la lotta contro i tumori (Italian League for fight and research on cancers)



Banner introducing the donation recipients on the Italian Kenwood store website

## Organizing and Supporting a Youth Soccer Tournament



In May 2010, union volunteer staff from Japan and employees from the Kenwood Malaysia Plant supported the Johor regional youth soccer tournament, which is sponsored every year by the Kenwood Group Union (KEGU). Ten junior high teams selected from throughout the state participated in the tournament, which was held to help the children become stronger in mind and body.



Commemorative photo with the winning team



# Working with Our Suppliers

While promoting equality and balance and holding a global point of view based on procuring the necessary materials and services according to the laws and ethics of society, the procurement departments in the JVC Kenwood Group are working to build mutually beneficial relationships through shared trust and transparency.

## Partnership with Suppliers

As a way to realize its corporate vision, as a basic policy to build interactive partnerships with vendors, the JVC Kenwood Group is working to integrate with vendors and bolster product development with them. We are proactively receiving many types of proposals from our vendors and we aim to keep high-level win-win relationships with vendors by promoting the reformation of procurement practices related to quality, environment, delivery time, and costs. Also, we are developing products in alignment with the vendors' development of parts based on the JVC Kenwood Group's development road map.



July 2010: Supplier meeting

\*Reach regulations: Registration Evaluation Authorization and Restriction of Chemicals Law for controlling chemicals in the EU determined by EC regulation No. 1907/2007.

## Environmental Activities

To create a society that can improve and maintain the world's environment, the JVC Kenwood Group is considering the environment in all aspects of its business activities and continues efforts to reduce the environmental burden during the life cycle of the products it produces and sells. One method that we think is very important is to place priority on procuring materials and parts that have a small impact on the environment.

Specifically, we revised our "Green procurement guidelines" to version 1.2 and evaluated our green procurement to support REACH\*, which is leading a trend to control

chemicals internationally. Green procurement evaluations are a self-evaluation of chemical control systems and the conditions under which they are implemented. The evaluations aim to have suppliers establish and maintain systems to control the chemicals in their parts and to continuously make improvements.



Green Procurement Guideline



Consult our website for information about our green procurement guidelines  
<http://www.jvckenwood.co.jp/csr/green/index.html>

Voice



I am active in hosting explanatory meetings on the methods of completing and handling "JAMP AIS," which is the component data for parts handled by trading partners within China, and for promoting smooth environmental investigations. Comprehension has been increased by keeping close contact with Japan, thereby reducing misunderstandings and mistakes. In future, I will strive to promote smooth environmental investigations based on cooperation with our trading partners.

Shanghai Kenwood Electronics Co. Ltd. Procurement Dept.  
 Ma Hai Qun

# Working with Our Employees

JVC Kenwood Group is striving to create a work environment that does not overload the body or mind, as well as striving to establish an educational and training system that supports the self-actualization of each and every employee, and a work environment in which they can work cheerfully and in safety.

## Message of Delight from Employees



The photo shows 20 employees who received “Child rearing support system” scholarships at the JVC Thailand Plant.

The Thailand Plant started operating the “Child rearing support system” in October 2010 to eliminate unease among young mothers with children, such as the economic burden and insufficient childrearing experience, and to support an environment allowing them to give birth and raise their children with peace of mind.



I am a mother of two children who has been working at the JVC Thailand plant for 14 years and nine months. Having the company establish a childrearing support system was extremely pleasing to me, a mother, and I feel proud to be a JVC Thailand Plant employee. It also encourages the children to study. This system not only improves employee morale, but also breeds harmony.

Administration Dept., JVC Thailand Plant  
Mrs. Orathai Teoychim

## Involvement in Supporting Skills Development

We have systematized and implemented training to improve the skills necessary for implementing personal roles, and training to manifest personal skills within the organization. The “cooperative work program” therein aims to create new added value out of a mutual recognition of

participants’ different ideas and values, based on essential communications skills such as listening and dialog, to forge a place of learning through experiencing how to draw out and improve team skills through training.

## Involvement in Supporting Career Development

We are implementing a career development program to support actions to achieve “what I want to be in the future,” depicted based on personal employment history and experience.

The career development program comprises the following three pillars.

- ① Career interview
- ② Career design training
- ③ Career development support



## Career Interview

During the “career interview,” which is the most basic of the three pillars, career visions (“what I want to be in the future”) and career development themes are discussed between the individual and their superior once a year, and individual motivations and company expectations are “integrated.”

## Career Design Training

Career design training was implemented as an opportunity to consider the actions required to plan personal career visions. Career design training is training where much realization is gained by considering “what I want to be in the future” while reflecting on *modus operandi*



Career Design Training

to date. Further, this is an opportunity for participants to consider comprehensively work/lifestyle balance comprising “personnel development to reach future goals” and “links to family life and the region,” while discussing their career visions.

## Career Development Support System

At the end of the career design training, a career development support system is introduced to offer support including time and money to enable further challenges by putting into practice the details and realizations learned. This system is used for various purposes to achieve career visions, such as distance learning courses, participation in extramural seminars, and the obtaining of qualifications, and is effective not only in personal development, but also in in-house invigoration.

# Health and Safety

## Mental Health Care Countermeasures

Mental health care countermeasures require prevention in the workplace, and for all of us to have the correct knowledge and awareness of mental health to be able to recognize changes in our colleagues. We are involved in making sure each and every individual has the correct awareness of stress through mental health training courses that aim for a healthy work environment where people enjoy working.



Mental health care training

## Countermeasures Against Overwork

Long working hours ultimately lead to overwork, and are an important social problem that cannot help being linked to health problems and, ultimately, death from overwork. We are striving to prevent damage to the health of people who work long hours. We



Interview between worker with long hours and the industrial physician

do this by reducing overtime and using interviews, guidance, and medical questionnaires by industrial physicians. Further, we have also established days when people leave work on time, and the safety and health committee is actively involved in reducing work hours.

## Health and Safety at Work

The JVC Kenwood Group pursues activities with the basic stance of “strict observance of the law,” “creating work sites that enable skills to manifest,” and “involvement in risk management,” by holding “respect for human life” as the core with regard to “creating a culture of safety and hygiene.” Amidst falling productivity as the workforce ages and seasoned employees retire, we are aiming to establish a corporate atmosphere that prioritizes the health and safety of the workers. To prevent workplace accidents, the JVC Kenwood Group is promoting risk assessment\* to reduce health risks and risks of physical injury from chemicals, machinery, and equipment. Our hope is to go from zero accidents to zero risk.



Safety and Health Committee

\*Risk assessment is the chain of procedures to evaluate risks by defining the dangers and risks in the workplace and to prioritize and set countermeasures to reduce risk.

Voice



In modern society, corporate responsibilities have grown more complex, and the physical and psychological stresses on employees have grown increasingly grave. Overcoming this hurdle is tied to corporate success and social responsibility, but given that it is flesh-and-blood people who are working like this, “injuries” may happen. Everyone is creating human relationships and a workplace environment to eliminate injuries, and increasing even just by one person players who are healthy in both mind and body, is the cornerstone of a robust and attractive team (business). As well as advice to avoid such injuries, we are considering our duty to assist so that people at risk of injury, and people who have been injured, can exhibit 100% performance as quickly as possible.

Industrial Physician  
Yoshinori Ebihara



# Environmental Report

Our world faces the problems of global warming, pollution from harmful substances, loss of biodiversity, and the depletion of resources. People in every country and region of the planet, are now working together to solve these issues.

To respond suitably to this major global effort, the JVC Kenwood Group has not only reviewed its environmental policy from the ground up, but also established an environmental vision that encompasses the specifics of the Eco Promotion Plan 2020.

## Global warming

**COP-FCCC** Framework Convention on Climate Change, Conferences of the Parties  
COP16 (Mexico: From November 2010)

## Pollution from harmful substances

**EU RoHS Directive & REACH Regulations**  
Harmful materials regulated globally

## Loss of biodiversity

**COP-CBD** Convention on Biological Diversity, Conferences of the Parties  
COP10 (Nagoya: October 2010)

## Depletion of resources

**EU WEEE Directive**  
Worldwide expansion of recycling

## Environmental Vision

We will contribute to society as an eco-promoting company active in efforts focused on reducing the environmental impact.

## Environmental Policies

To preserve global environments and resources and prevent pollution, we will manage our business activities, our product development, and our services through ongoing improvements with a full awareness of our environmental impact.

1. Prevent global warming by promoting the reduction of CO<sub>2</sub> emissions throughout the product lifecycle, including business activities, by developing technologies and products that reduce environmental impact.
2. Use limited global resources effectively to create a sustainable society by reducing the resources we use within a framework of 3R activities and progressive usage of eco-friendly materials.
3. Manage chemicals that affect the world's environment and biosphere, continued reduction in consumption, and switch to eco-safe materials.
4. Recognize the effect on biodiversity of all business activities, product development, and services to comprehensively reduce our environmental impact in harmony with the natural environment.
5. Comply with legislation applied to environmental aspects and other permissible requirements.
6. Educate employees on the environment to cultivate greater environmental awareness.



See our website for our environmental policies.  
<http://www.jvckenwood.com/safety/index.html>

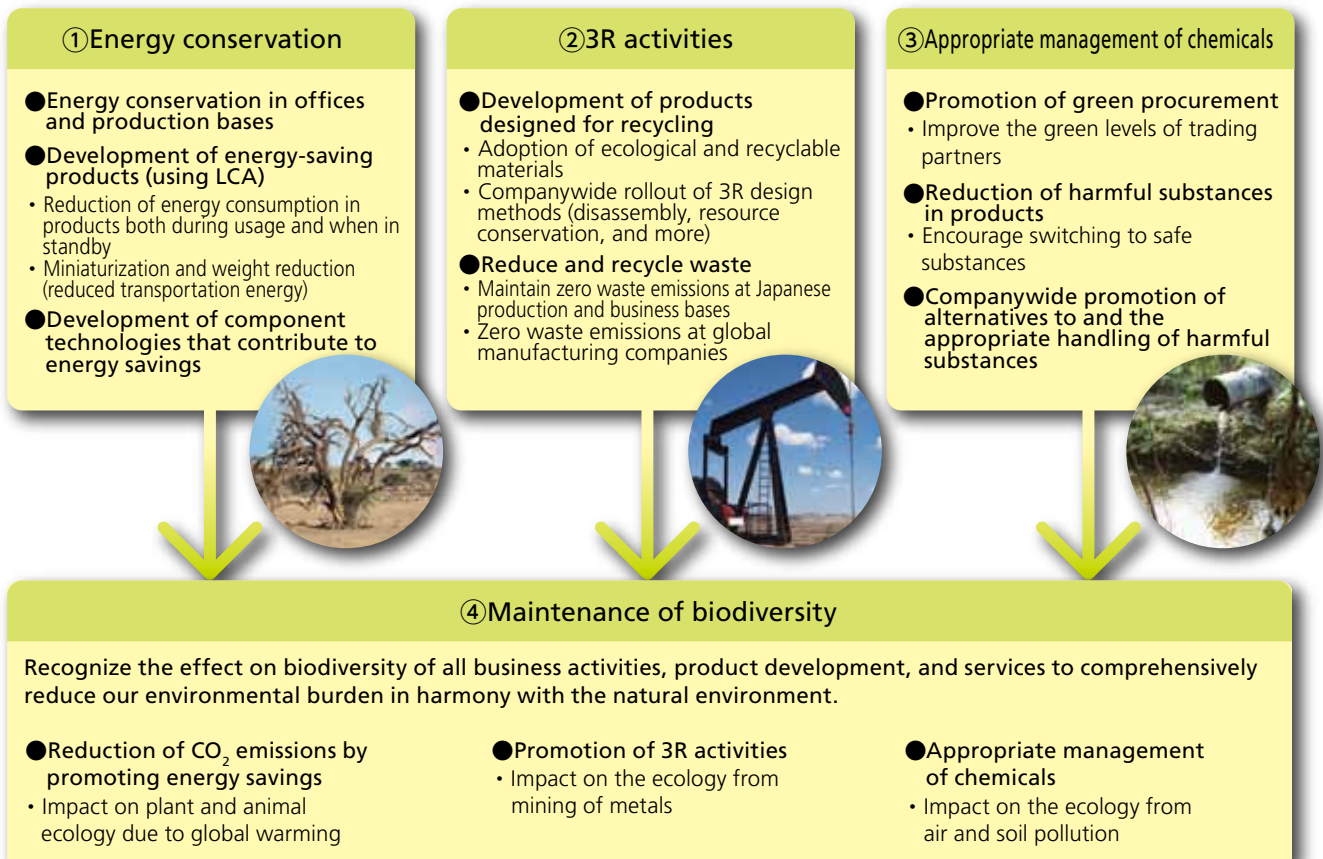
# Eco Promotion Plan 2020

The JVC Kenwood Group established its unified environmental philosophy and policies in March 2009. Then, in February 2011, we established our environmental vision and policy to help create a society that is ever developing and sustainable. This will allow us to respond appropriately to the vast and global transformation in circumstances and focus our efforts on fighting problems such as global warming.

Four JVC Kenwood Group activities were established based on the new environmental vision and policy, and the entire group is involved in their realization.



## Rollout of Eco Promotion Plan 2020



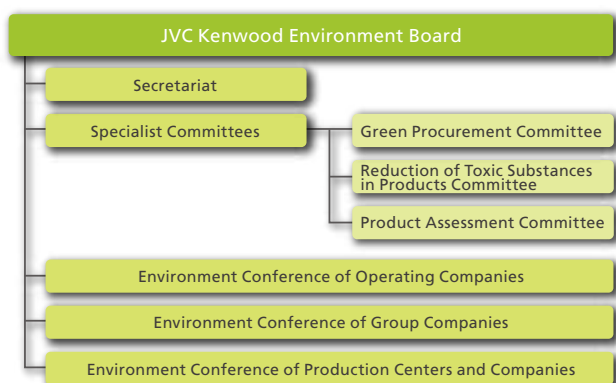
# Environmental Management

The JVC Kenwood Group is building an environmental promotion system to link results with products that do not have an impact on the environment and the promotion of environmental management.

## Environmental Promotion Organization

### Environmental Board

The environmental management activities promotion system comprises environmental conferences by each operating company, manufacturing center, and production company, who send environment conference members that have the responsibility for environmental affairs as well as specialized committee members from throughout the companies, under the umbrella of the "JVC Kenwood Environment Board," which is the highest decision-making body. The policies and measures decided by the "JVC Kenwood Environment Board" are implemented through environment conferences throughout the group.



JVC KENWOOD Environment Meeting Organization System

### Maintaining ISO14001 Certification

The JVC Kenwood Group has acquired and is maintaining ISO14001 certification in all manufacturing centers and manufacturing companies both in Japan and other countries, and the main Japanese affiliated companies, to specifically promote environmental management based on our environmental vision and environmental policies. Further, to maintain the ISO14001 system, inspections are implemented by the Japan Audit and Certification Organization for Environment and Quality (JACO) every year, and in FY2010, our environmental management



Update inspection



Inspection by JACO

system was verified as functioning effectively.

Also, internal audits by internal auditors trained by internal and external training programs also are implemented carefully every year.

So that internal audits are implemented fairly and subjectively, audits are composed of internal auditors from departments other than those being audited. These internal auditors verify compliance with environmental laws and regulations and conformance with in-house environmental standards. We continue to improve on any issues found by checking even the efficacy of their countermeasures.

### Environmental Training

As a group of companies that develop, produce, and sell environmentally conscience products, the JVC Kenwood Group understands how important it is that all our employees are aware of the effect their work has on the environment and take positive steps everyday to reduce that effect. Every year, we train our employees according to detailed plans. This training includes general training, hierarchy based training, specialist education, training for internal auditors of environment management systems, and training to prepare for emergencies.

#### General Training, Hierarchy-based Training

Based on laws for increasing the desire for environmental protection and for conducting environmental education, all our employees (including new employees, temps, and part-timers) receive environmental education. They learn about the role and responsibility of each individual, workplace activities and other information for achieving our environmental policies.



Environmental training for designers

#### Specialist Training

Employees engaged in work (e.g. design related to facilities and the environment) that has the potential of significantly affecting the environment receive training to provide them with the required skills.

Employees who pass the course are presented with a certificate.



Certification for employees who inspect chemicals



## Ecological Promotion Concepts



### 1. Energy conservation



- Development of energy-saving products through compactness, lighter weights, (to save shipping energy) and energy reduction during standby and use
- Active promotion of energy-saving activities in offices and manufacturing sites

### 2. 3R activities



(3R: Reduce, Reuse, Recycle)

- Developing products that consider the resource cycle, such as improved biodegradability and energy conservation
- Supporting recycling based society by promoting zero-emission waste products

### 3. Appropriate management of chemicals



- Active promotion of reduction and prohibition of environmental pollutants in cooperation with trading partners to prevent chemical pollution
- Promoting the replacement of parts with REACH-approved materials
- Actively promoting the reduction of materials that impact the environment

### 4. Maintenance of biodiversity



Promoting the comprehensive reduction of environmental impact through an awareness of the effect on biodiversity of all business activities, product development, and services

## Environmental Green Logo Concept

The environmental green logo is used to identify excellent environmentally-friendly products and to encourage environmental action.

This logo shows that the product is particularly environmentally friendly among all the JVC and Kenwood products. It shows products that conform to all the environmental standards. Further, the logo is also used for environmental activities such as ISO 14001.



Environmental green logos

### Voice



Kenwood Australia is continuously implementing environmental and recycling training by distributing our "Recycling Policy" to all employees.

By discussing the siting of garbage cans and enabling garbage sorting by viewing pictures, we have configured a system that enables us to sort our garbage for collection by recycling companies.

Australia is a country with abundant natural wilderness. Each and every one of us wants to preserve our environment through our environmental activities.

Kenwood Electronics Australia Pty. Ltd., Finance and Operations Manager  
George Nisizaka

# Environmental Targets and Results

JVC Kenwood Group is setting annual targets to reduce our environmental impact while meeting the needs of customers based on a life-cycle viewpoint during production.

## FY2010 Environmental Targets and Results

With few exceptions, the activities results for FY2010 reached their targets. The reduction of portable radio standby current did not achieve its goal due to design

specification changes from the initial product specifications to assure performance, but approximately 18% reduction from the norm was achieved.

	Activities	FY2010 targets	Evaluation
<b>Product information P41 to P45</b>			
	<b>Green procurement</b>	<ul style="list-style-type: none"> <li>● Introduction of REACH-compatible IT system</li> <li>● Evaluation of business partners' green procurement</li> </ul>	○
	<b>LCA introduction</b>	Roll-out of LCA evaluation tools to all groups in Japan	○
<b>JVC</b>	<b>Energy-saving products</b> <b>Resource reduction and recyclability (3Rs)</b> <b>Reduction of toxic substances</b>	Global warming prevention factors x2.0 (compared to FY2000) Resources factors: x1.7 (compared to FY2000) Elimination of PVC and TBPA	○
<b>KENWOOD</b>	<b>Energy-saving products</b> ① Commercial car products	<ul style="list-style-type: none"> <li>● Making new models compact: Total weight ratio of target models reduced 2% compared to previous models</li> <li>● Reducing power consumption: reduced 3% compared to selected standard models</li> </ul>	○
	② Multimedia car products	<ul style="list-style-type: none"> <li>● Making new models compact: Weight ratio of target models reduced 2% compared to previous models</li> <li>● Reducing power consumption: reduced 12.5% compared to selected standard models</li> <li>● CO<sub>2</sub> reduction plans created since FY2011 using</li> </ul>	○
	③ OEM car products	<ul style="list-style-type: none"> <li>● New designs used for selected models over 2 kg weight: Number of parts reduced 10%, and 5% more compact, compared to previous models</li> <li>● Activities to reduce power consumption</li> </ul>	○
	④ Communications products	<ul style="list-style-type: none"> <li>● Reduced product standby current: Reduced 28% compared to standard (portable models), reduced 5% compared to standard (in-car models)</li> <li>● Lightweight products: Reduced 5% compared to standard</li> <li>● Reduced packaging materials: Reduced 5% compared to standard</li> </ul>	△
<b>Plant information P46 to P49</b>			
<b>JVC</b>	<b>1. Energy-saving</b> Reduced CO <sub>2</sub> emissions (globally)	Over 10% (compared to FY2000) Work sites achieving GP2010 maintain energy-saving activities to reduce energy consumption by 1.0% compared to previous year	○
	<b>2. Chemicals</b> ① Main chemicals to reduce (global)	Over 10% (compared to FY2005)	○
	② Controlled chemicals (global)	5% min. (compared to FY2005): Work sites achieving GP2010 maintain energy-saving activities to reduce emissions and transfer amounts by 2% compared to previous year	○
	<b>3. Waste Reduction</b> ① Total waste reduction (global)	Over 20% (compared to FY2000)	○
	② Zero emissions (Japan)	99% min. Work sites achieving GP2010 maintain energy-saving activities to reduce waste by 2% compared to previous year's results	○
	<b>4. Environmental Risks</b>	Completed verification of 100% safety in all storage plants and offices	○
<b>KENWOOD</b>	<b>1. Energy-saving CO<sub>2</sub> Emissions Reductions</b>	CO <sub>2</sub> reduction target 5,111 tons max. (46.1% reduction compared to 1997)	○
	<b>2. Reduction of Final Waste Processing Amounts</b>	Final disposal amount maintained at less than 0.66 tons	○
	<b>3. Waste Recycling Ratio</b>	Zero emission base 99.5% min.	○

Evaluation standards: ○ Target achieved    △ Target partially unachieved    × target not achieved

FY2010 indicates the fiscal year from April 1, 2010 to March 31, 2011.

\* REACH regulations: Registration Evaluation Authorization and Restriction of Chemicals Law for controlling chemicals in the EU determined by EC regulation No. 1907/2007.

# Making Products Environmentally Friendly

JVC Kenwood Group is actively involved in reducing our environmental impact by pursuing technologies to reduce product power consumption and standby power consumption, and to make products increasingly compact and lightweight.

## Cases of Environmentally-Friendly Product Development

### DVD/USB/SD AV All-In-One Car Navigation MDV-727DT/626DT



There is a built-in "ECO Drive" function with raised social awareness to help the driver navigate.

As well as evaluating the extent of ECO driving operations in real time, the device also supplies point scores for smooth startup (e-start), acceleration, and deceleration, and advice depending on those scores.

Further, the ECO ratio (extent of fuel consumption) is recorded for 30 days, so the improvement status can be seen at a glance by displaying the graph, enabling a pleasant ECO driving experience.



MDV-727DT/626DT ECO drive mode screen

Voice



After purchasing MDV-727DT, I set the screen to always display "ECO drive mode." Until now, I had little awareness of the concept of "ECO," but since using this Sat-Nav, my family has encouraged me to get a good score while being aware of driving without sudden startup movements or accelerations. I switched along with the change to terrestrial digital broadcasting, and compared to my previous model, this is clearer and easier to see, which is very satisfying.

Public and Investor Relations, Strategic Corporate Planning Division  
Yoshiaki Kotake

### Headphones HA-F150, HA-FX11, HA-FX16, and HA-FX18



Headphones are often in contact with the human body, so we are reducing harmful substances such as abolishing phthalates as quickly as possible.

Since last year, we have been using recycled materials. These products are the first JVC Kenwood accessories to use recycled plastic. 12 million of the hit product Gummy were sold worldwide in FY2010. (Including the obsolete HA-F140 model.)



HA-FX11



HA-F150

Voice



Accessory packaging plays a role both in protecting the product, and in advertising the product's appeal in the storefront. On the other hand, packaging is discarded after use, so our aim is to reduce the environmental impact while satisfying these two roles, which is why we have adopted recycled plastic. We worked hard to acquire materials that resist the harsh shipping environment. And in the future, we want to make products that delight our customers while considering the global environment.

AV Communications Div., Home & Mobile Electronics Business Group  
Tatsurou Hoshino



# Making Products Environmentally Friendly

## Professional-grade Radios for the Overseas Market TK-7360/NX-220



The professional-grade radios for the overseas market TK-7360/8360 have reduced standby consumption current by 30% over existing equivalent products. Further, the professional-grade digital radios NX-220/320, which are highly regarded overseas, have reduced product weight by 20%. This is the result of combining a variety of ideas in such aspects as circuits, mechanisms, and parts. Achieving compactness and light weight while improving operability and performance by incorporating multiple functions and roles into single parts in anticipation of malfunction mode was not simple, but has been achieved comprehensively by using various simulation technologies and the accumulated analysis of past cases. In FY2010, 1,249,000 professional-grade radios for the overseas market were sold worldwide.



TK-7360/8360



NX-220/320

## Security Cameras TK-C9510



Not only is power consumption reduced by approximately 40% compared to existing models, but also the intricate heat radiating design has reduced its volume by approximately 30%. Further, the modular design has reduced types of parts by 50%, and thus reduced the environmental impact at the parts' shipping stage. In addition, the environmental impact has also been reduced at the production stage by reducing waste through improving the efficiency of the number of PCBs cut from a substrate.



TK-C9510

## Card Printer CX-7000

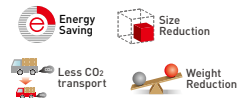


Reproduction card printers print to cards, and then form cards after printing, using heated rollers mounted inside the device. This model has a sleep mode installed in the heater control to reduce power consumption during operations by approximately 1/10th.



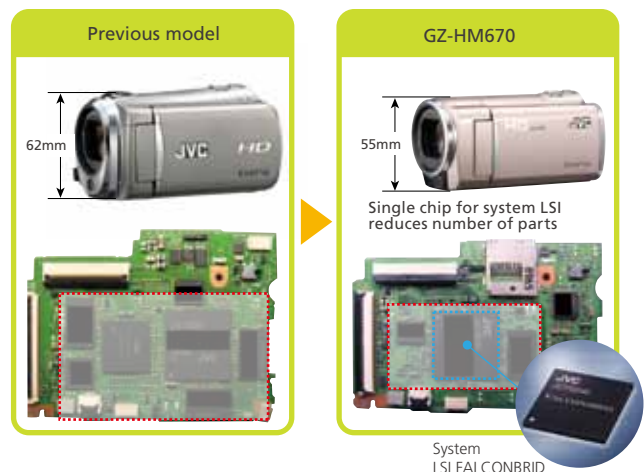
CX-7000

## Video Cameras Everio Series



Selectively reviewing the mechanical structures and parts configurations of existing models has achieved compactness and light weight. Compared to existing models, the volume is reduced by approximately 14%. Further, unifying the Victor brand within Japan with the JVC brand has accomplished mold uniformity.

In addition, the introduction of the newly-developed "FALCONBRID" LSI has not only reduced the number of parts by 25%, but also power consumption by approximately 15%, thus lowering the impact on the environment. In FY2010, the Everio series sold 1,427,000 units worldwide.



## In-Car AV Receivers KW-AVX840/740, DDX4 Series



A common platform developed for multimedia products was rolled out to both JVC and Kenwood brand products. This model greatly reduces packing volume by 13%, and packing materials by 20%, as well as improving loading efficiency at the shipping stage, thus reducing the impact on the environment.

Further, not only are LEDs used in the TFT LCD backlight to reduce power consumption by 26% compared to existing models, but the use of mercury, which is a toxic substance hitherto included in fluorescent tubes, has been completely eliminated.



JVC  
KW-AVX840 (top)/740 (bottom)



Kenwood  
DDX4 series

## In-Car Speakers CS-V4627



For in-car speakers, multilingual user manuals and all-in-one packaging materials are advancing.

CS-V4627 aims to reduce individual box volume, and so we strove to assure reliability by overlaying falling and vibration resistance tests with strength simulations. These reduction activities not only merely reduce size, but also comprehensively consider the dimensions of the box and loading methods, including the loading efficiency of the pallets used during shipping.

As a result, individual box volume has been reduced by 12% compared to existing devices, thus simultaneously conserving resources and reducing the environmental impact of shipping.



Old and new packing box size comparison (top: CS-V4627, bottom: existing models)

## Personal Audio Systems K Series U-K525 System Components CLX-70



U-K525 has reduced waste and lost materials through analysis using 3D CAD. Further, a special duct configuration that passes through the bottom of the CD mechanism achieves both high audio quality and major reduction in size. In addition, the molds used in the production of packing materials, remote controls, and main units, etc., have been greatly reduced. If in the use environment the CD sound source stops and is not used for 30 minutes or more, the built-in standby mode turns off the power supply automatically.

CLX-70 has also abolished foam packing materials, and is considering using pulp mold materials.



Kenwood  
U-K525



Kenwood  
CLX-70

## Wood Cone Audio System EX-S1



As a result of developing models based on designs that consider the environment, low product weight and compactness have been successfully achieved while retaining wood cone audio quality. Compared to existing models developed in 2009, standby power has been reduced by approximately 43%, operating power by approximately 47%, and even life cycle CO2 emissions by approximately 44%.

Audio products have completely different appearances depending on their product category, such as radio cassette or mini-computer. So commoditizing configuration components is difficult, but by increasing the commoditizing ratio to approximately 30% we have reduced not only the product itself, but also the resources such as molds, involved in parts production.



JVC  
EX-S1

# Making Products Environmentally Friendly

## Promotion of Global Chemicals Management

### Chemicals Management System

To handle the chemical regulations of each country without exception, starting with the REACH regulations, it is necessary to have a suitable grasp of the chemical information for the parts and materials used in products. JVC Kenwood Group has introduced new IT systems and formed teams for full-time management to comprehensively manage chemicals from the design stage to shipping.

Intensive inspections of the chemical information received from all businesses partners at main manufacturing sites and procurement sites around the world are implemented at head office, and only parts authorized as having no environmental problems are used in production.

In this way, we supply products that customers will feel safe using for years to come.

### Cooperation System with Business Partners

We acquire the latest legal restrictions information regarding the environment from countries around the world to set our environmental standards by incorporating the information into our green procurement guidelines.

We cooperate with our business partners to verify the chemicals included in goods received, their production systems, and the status of quality management, based on these environmental standards, to promote the move to fully green procurement.

#### Production System Verification and Instruction

We verify the environmental consideration status of our business partners' production systems using green procurement evaluation, and teach the creation of environments for the delivery of products above a set level of quality while implementing audits as necessary.



Green Procurement Assessment Form



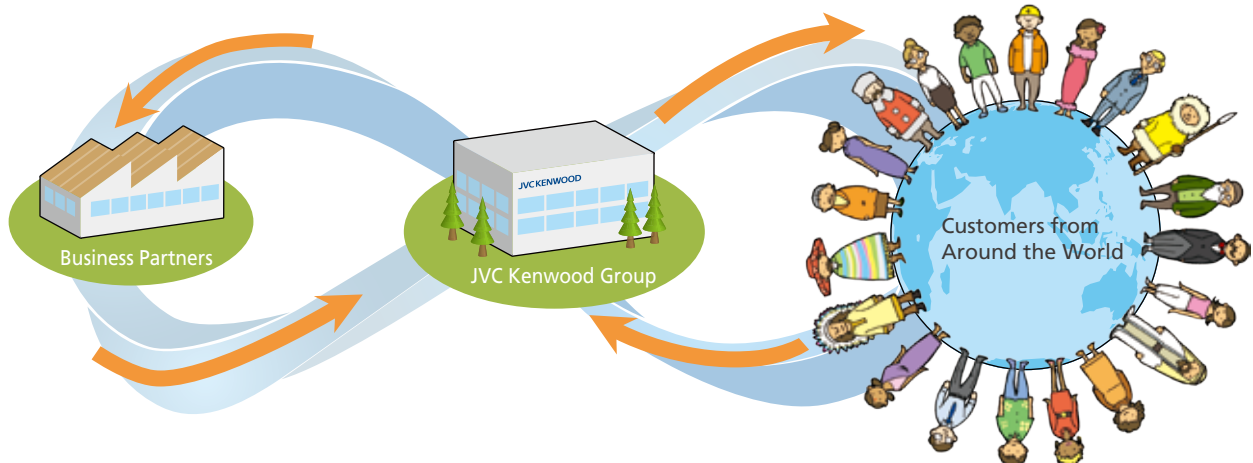
Evaluation Results



Action Report for Correction

#### Supplying Products

We supply products that are kind to people and the environment and that consider national laws from each country on the environment to customers around the world.



#### Information on Chemicals Used in Materials and Parts

Verify and use in products only parts manufactured using materials that are kind to people and the environment based on the Green Procurement Guidelines.

Sample Form

#### Environmental Laws and Regulations around the World

Environmental awareness is rising in every country around the world, and examination and discussion of enacting laws is gaining momentum by the day. These laws and social requirements that are examined and discussed around the world are broadly acquired from information sites and corporate activities to foster awareness of the ability to supply only products that are kind to people and the environment.



## Product Recycling

### Japanese Recycling Conformance

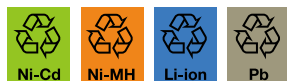
The JVC Kenwood Group is implementing recycling based on the home appliance recycling laws, which target JVC Kenwood products in Japan, the container and packaging recycling laws, and the laws that promote the effective use of resources.

#### Container and Packaging Recycling

The container and packaging recycling law was enacted in April 2000, and the JVC Kenwood Group calculates the prospective paper and plastic container and packaging waste used in Japan as a designated business, and signs a "reuse contract" every year with the Japan Containers and Packaging Recycling Association. To reduce excess emissions, we are using 3R designs to reduce the size and weight of packaging materials.

#### Compact Rechargeable Battery Recovery Program

The JVC Kenwood Group has become a trustee member of a general public body, JBRC, which was established by the Battery Association of Japan based on the "Law for Promotion of Effective Utilization of Resources," which was enacted in 2001. We are now outsourcing the recovery, and implementing the recycling of used compact rechargeable batteries for which recycling is obligated by law as a designated resource product. The legally-designated recycling rates are NiCad 60%, NiMH 55%, lithium ion 30%, and compact sealed lead 50%, and the recycling results of the outsourcer JBRC for these were all cleared.



#### DVD, CD Recovery Program

To not waste even a little bit, we crush all dry-run discs used for molding and printing and all DVDs and CDs that fail to pass rigorous quality inspections in specialized equipment, and use them as materials for plastic products.



Disks that fail the quality inspection are sent to subcontractors after destruction to be recycled as materials for lacquered containers

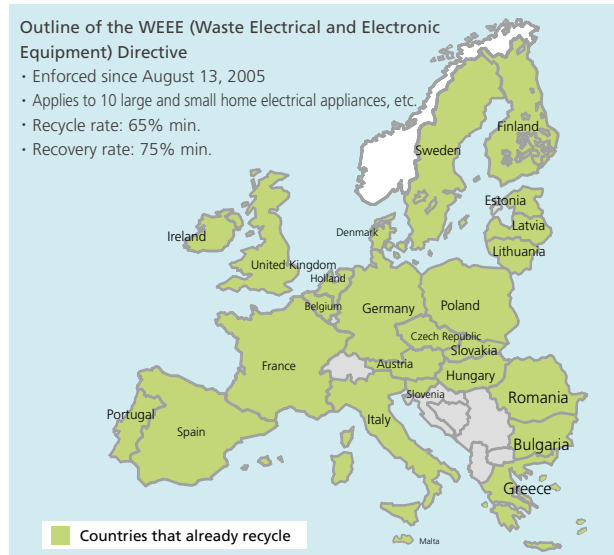
### EU and USA Recycling Activities

The JVC Kenwood group is committed to recycling in full compliance with EU's WEEE (Waste Electrical and Electronic Equipment) directive and the various regional waste electrical and electronic directives that are spreading throughout the United States. In consideration of 3R design, we are reducing the number of component parts in TVs, AV equipment and other target products, and designing these products so as to be easily recycled. We are also promoting 3R design through total optimization that considers not only the recycling and recovery rates, but also the environmental risks and recycling burden, as determined by the WEEE directive.

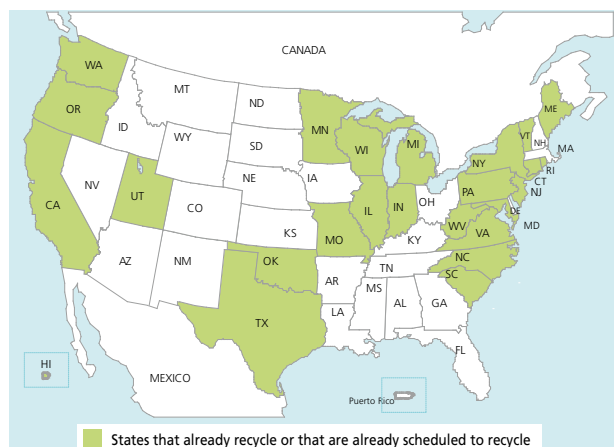
#### European WEEE Recycling Conformance

##### Outline of the WEEE (Waste Electrical and Electronic Equipment) Directive

- Enforced since August 13, 2005
- Applies to 10 large and small home electrical appliances, etc.
- Recycle rate: 65% min.
- Recovery rate: 75% min.



#### US Recycling Conformance by State



Presented by Japan Machinery Center for Trade and Investment UPDATE

##### Involvement in Waste Home Appliance Laws by State

JVC Kenwood conforms to the recycling laws in all states.

##### Involvement in Mercury Regulation

We report to IMERC (Interstate Mercury Education & Reduction Clearinghouse), and label products and packaging, etc.

\*IMERC: Interstate Mercury Education & Reduction Clearinghouse

# Conservation in Our Company Operations

JVC Kenwood Group is actively involved in preventing global warming to implement business activities that do not have an impact on the environment, and to fulfill our social responsibilities through production activities.

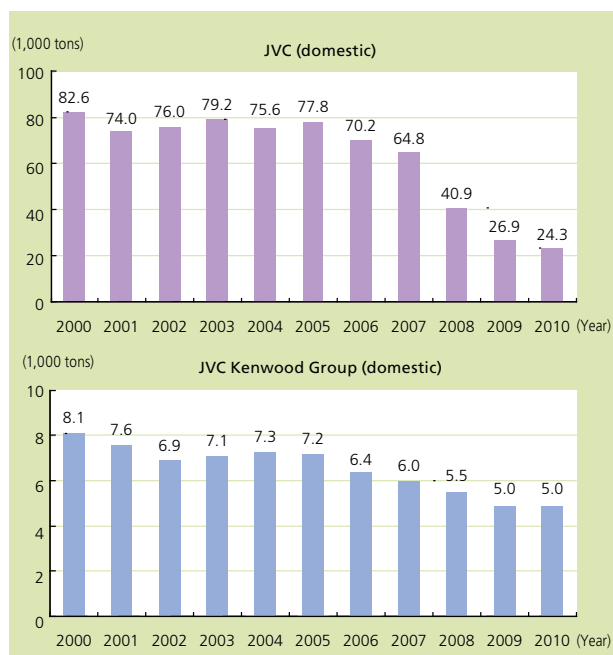
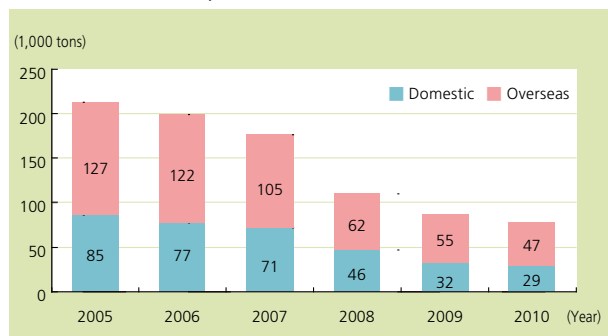
## Global Warming Countermeasures

### Energy-Saving Activities

The JVC Kenwood Group is continuing to reduce greenhouse gases, in particular, greenhouse gas emissions and CO<sub>2</sub> emissions resulting from energy consumption, based on our FY2010 targets. The total amount of CO<sub>2</sub> emissions in Japan and overseas in FY2010 has fallen to 36% over the past six years.

Though this result is greatly affected by the revamping of our business structure, continuing from last year, we have continued to implement measures to conserve power to reduce not only CO<sub>2</sub> emissions, but also other greenhouse gas emissions.

■ Reduction of CO<sub>2</sub> emissions by consuming less energy  
JVC Kenwood Group (domestic & overseas)



### CoolBiz and WarmBiz

The JVC Kenwood Group is developing summer "CoolBiz" and winter "WarmBiz" campaigns.

A temperature manager is assigned to adjust air conditioners, keeping room temperature at 28°C in the summer and at 20°C in the winter. All employees are urged to take part through our Intranet and posters, suggesting "no neckties" and to use "natural air conditioning" in the summer, and to wear "suitably warm clothing" in the winter.



Poster displayed in-house

### Thorough Management of AC Temperatures by Temperature Managers

JVC Kenwood Group has appointed special temperature managers for the ACs on each floor, which place a heavy burden on the power used, to strictly control the AC temperatures.

Employees other than the temperature managers cannot operate the AC temperature settings panel. Careful AC control increases the effects of reducing CO<sub>2</sub> emissions.



The temperature manager adjusts the AC while checking the room temperature

## Implementing Continuous Energy-Saving Diagnosis

We have gathered energy management specialists for each regional business to mutually inspect business facilities, and are implementing continuous diagnoses of wasteful energy use.

Diagnoses reveal daily points of which we were unaware, such as where and how improvements are necessary to facilities, lighting, power tools, and building structures. Detecting waste centering on equipment that required large amounts of power improves the effects of reducing CO<sub>2</sub> emissions.



Announcing where improvements are needed as a result of the energy-saving diagnosis

## Participation in the "Tanabata Lights Down" Campaign

As part of our response as called for in the past by the Japanese Ministry of the Environment, in the evening of July 7 we invited our employees and their families to turn off their lights and join in the "Tanabata Lights Down" campaign. We turned off all our office billboard lights for two hours from 8:00 to 10:00 pm to help stop global warming. The participating employees feel very grateful, saying "This is an opportunity to consider the environment," and "This is our annual custom."



Families of Employees who Participated in the "Tanabata Lights Down"

## Separating and Recycling Garbage

In December 2010, the activities of the relevant Victor Company of Japan (Head Office & Yokohama Business Center) and Kenwood (Hakusan Business Center) were recognized by the city of Yokohama in the business category of the "Yokohama Environmental Action Award\*," and were certified for the fourth continuous year as "Excellent (Three-Star) Garbage Separation Offices."



"Offices with Excellent (Three-Star) Garbage Separation" award shield  
Victor Company of Japan, Limited (JVC) (left) and Kenwood Corporation (right)



Fine-tuned garbage separation to enable recycling



Using both sides of the paper is an in-house standard

\*"Yokohama Environmental Action Awards"

To handle the increasing amounts of garbage and concomitant lack of waste processing facilities, and to recycle resources, Yokohama, as a model city, has continued its "G30 promotion," which awards certificates for distinguished accomplishments to individuals and organizations every year since 2003.

In 2010, of the approximately 2600 companies that were eligible, 23 were selected, an increase of three over last year.

Voice



The Head Office & Yokohama Business Center and Hakusan Business Center have reduced waste by implementing thorough and uniform garbage separation by employees. Their daily efforts to promote even modest recycling have been recognized by Yokohama, and the "Excellent (Three-Star) Garbage Separation Office" award shows the success of our activities.

We will strive in the future also to concentrate the powers of all employees to promote garbage separation and recycling as part of our corporate activities, and to meet the needs of the recycling-oriented society.

General Affairs, Corporate Administration Division  
Teruhiro Okada (left photo) Toshiji Ishii (right photo)



# Conservation in Our Company Operations

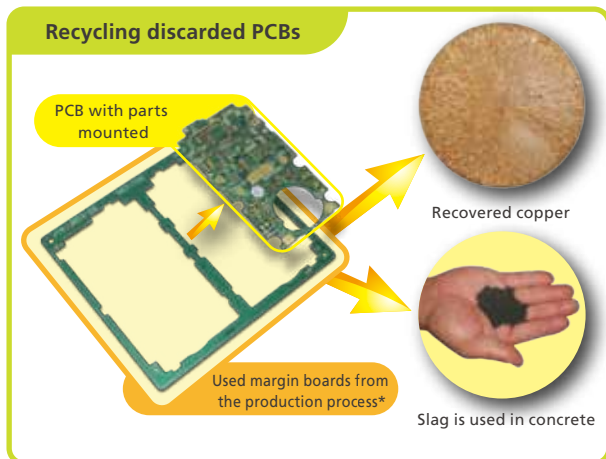
## Resource Protection and Effective Use

### Continuously Reducing Waste through "Zero Emissions"

The JVC Kenwood Group has improved its waste recycling rate, and has attained "zero waste emissions" for minimal burden on the environment at many of its plants and offices.

The basis to achieving zero emissions is for all employees to recognize their impact on the environment and thoroughly separate garbage. Explanatory meetings on garbage separation are held for people transferred from other offices, to make sure that each office implements suitable garbage separation.

As one example of our promoting recycling, margin boards\* that are discarded in the product manufacturing process are reborn as copper or slag to be mixed into concrete by outside contracted recycle specialists. Food waste from company cafeterias is taken to a local contracted farm where it is converted to fertilizer and used in growing kale and other vegetables.



\*Margin boards: Frame used to hold the printed circuit board while attaching parts using an inserting machine. They are normally thrown away after being used.



Recycling raw garbage from the cafeteria:  
The raw garbage is converted to fertilizer and used in kale cultivation

**Voice**



The plant cafeteria produces a lot of raw garbage every day, but includes much water. Before handing over raw garbage for recycling to the nearby farms that have been contracted, the water is thoroughly drained to facilitate turning the garbage into fertilizer.

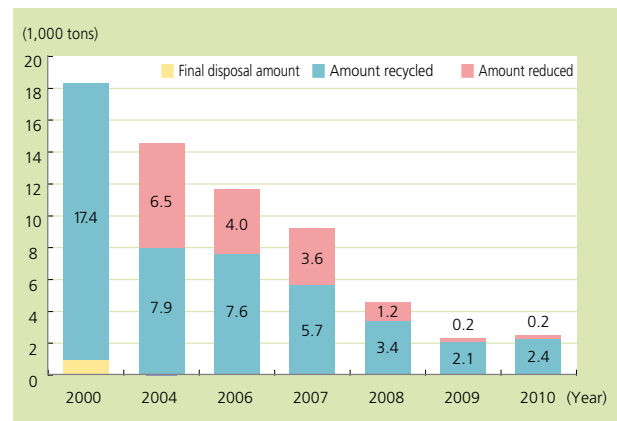
We also contribute to recycling and reducing waste.

Uokuni Sohonsa Co., Ltd. kitchen staff (at Kenwood Nagano Plant)

### Waste Reduction Activities

Reducing the total amount of waste generated in JVC Kenwood Group in Japan proceeded until FY2009. The reduction of manufacturing sites creating large quantities of waste acids and alkalis in Japan has had a major effect. FY2010 increased by approximately 300 tons compared to the previous year. (Compared to FY2000, the amount generated is 14.2%.) The main factor is the creation of waste concomitant with selling the Victor Yokohama Plant in June 2010. As a result of waste reduction activities throughout the year, we have maintained a recycling rate of 99% in Japan, and continue with zero emissions.

■ Trends in annual waste generation  
JVC Kenwood Group (domestic)



■ Breakdown and composition of waste for FY2010

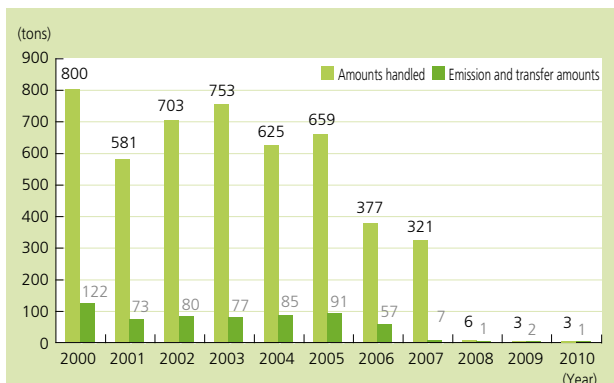
	JVC Kenwood Group	
	Amount created (tons)	Composition ratio (%)
Dirt (inorganic, organic, mixed)	61	2.3
Paper and wood waste	1,326	50.8
Waste plastic	389	14.9
Waste liquids (waste oils, acids, and alkalis)	58	2.2
Metal filings (ferrous and non-ferrous)	706	27.1
Other (animal and vegetable residue, etc.)	69	2.7
Total	2,610	100.0

## Reducing Environmental Impact Materials and Environmental Risks

### Managing PRTR Chemicals

The amount of Pollutant Release and Transfer Register (PRTR) chemicals handled by the JVC Kenwood Group has continued to fall since 2003. In particular, the discharged and transferred amounts in FY2008 onwards have fallen considerably. The Japanese plants that handle more than a ton of these materials have been reduced to one place, Victor Creative Media, and the only material handled is nickel. The main reason for this is that we gave up control of production of blank media and printed circuit boards, that use organic solvents or chemical raw materials, when business operations were revamped.

■ Total amount of PRTR chemicals released and transferred  
JVC Kenwood Group (domestic)



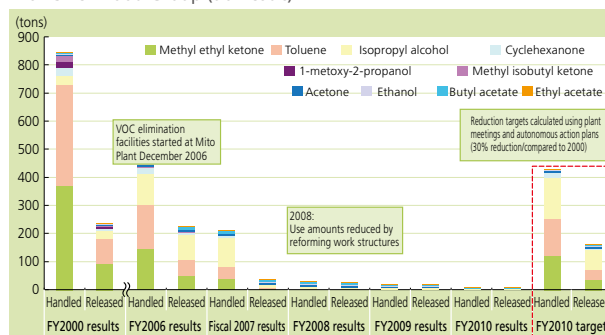
### Plans for Suppressing VOC Emissions into the Atmosphere

The JVC Kenwood Group have broadly achieved its reduction targets for FY2010\* as a result of involvement in reducing emissions by participating in a voluntary action plan to suppress VOC emissions in the atmosphere by the electrical appliance and electronics industries. We are also promoting reductions during FY2011.

\*30% reduction compared to FY2000 (baseline fiscal year)

Amounts of VOCs handled and emitted into the atmosphere from FY2008 onwards have diminished to extremely low levels. Though we are still using organic materials for washing and cleaning parts and in paints, the total amount of emissions has fallen to an extremely low level of 1.3 tons. This further decrease is on top of our having started operation of the VOC combustion-type emission-reduction facilities in our blank media operations at the old Mito Plant in December, 2006.

■ Amount of VOC handled and released to the atmosphere  
JVC Kenwood Group (domestic)



### PCB Management and Countermeasures

Electrical devices containing PCBs, which used to be stored separately at various plants, are now managed centrally. Together with the transfer of electrical appliances containing PCBs, which were stored at the Yokohama Plant, to the Head Office & Yokohama Business Center when the Yokohama Plant closed in November 2010, 12 drums of insulating oils containing trace amounts of PCBs are undergoing ongoing centralized management as they are handled as dangerous materials in the Maebashi Business Center. For this move, we requested governmental guidance and submitted the required legal notices. Currently, JVC Kenwood Group manages these materials centrally at five specialized storage rooms, constructed so PCBs cannot leak out. They are located at the Head Office & Yokohama Business Center, Victor Creative Media, Maebashi Business Center, Hachioji Business Center, and Kenwood Devices.

Moreover, we periodically conduct disaster prevention training in accordance with documented procedures to prevent the spread of contamination on the assumption that an oil leak accident from stored devices has occurred.

Electrical devices containing PCBs continue to be managed rigorously until harmlessly processed by the Japan Environmental Safety Corporation (JESCO) Tokyo Facility.



PCB storage rooms have all been moved to one room at the Head Office & Yokohama Business Center



Local courses on PCB chemical composition and toxicity, and training on recovering leaked oil.

Environmental Safety Corporation (JESCO) Tokyo Facility.

# Contributing to Biodiversity

JVC Kenwood Group recognizes the effect on biodiversity of all business activities, product development, and services to comprehensively reduce our environmental impact in harmony with the natural environment.

## Natural Environment Protection Activities to Safeguard Biodiversity

The main JVC Kenwood Group sites are implementing cleanup activities as local environmental protection, so that waste discharges do not damage ecological systems.

Kenwood Yamagata Corporation (Yamagata Plant) in Tsuruoka City, Yamagata Prefecture, which faces the Sea of Japan, has teamed up with industry, NPOs, local government, and academia to participate in the “Yamagata Prefectural Coastal Pollution Countermeasures Promotion Council,” and every year since 2006 has implemented cleanup activities at the mouth of the Akagawa River.



Akagawa river mouth cleanup activities

In July 2010, FM Yamagata visited to cover these activities, and there was garbage from other countries, but as the majority was local household garbage, they appealed on-air that people not dump garbage in the rivers. Further, every year since 2005, they have also carried out water quality and marine-life research during summer



Kenwood Yamagata Plant receiving coverage by FM Yamagata; Plant manager Mr. Ito (right of photo)

vacation with children and their parents in the Akagawa, Uchigawa, and the Shoryujigawa, which are rivers that flow through the area. We confirmed that the rare fresh-

water fish the nine-spined stickleback (*Pungitius pungitius*), which was declared an endangered species by the Ministry of the Environment, was living in the waters of the Shoryujigawa.

The Head Office & Yokohama Business Center is a member of the “Keihin Forest Creation” project, which is advo-



Marine life form investigation by parents and children (Kenwood Yamagata Plant)



Confirmation that the nine-spined stickleback, which has existed since the ice-age, is still alive

cated by Yokohama, Kanagawa prefecture as part of its natural environment protection activities, and since 2003 has operated what is known colloquially within the organization as “Dragonfly Pond” as a biotope. We are involved in the “Wherever the dragonfly flies forum” where people across the country share information, provide locations for exchanges, and can learn about biodiversity together.



“Dragonfly Pond” biotope within the grounds of Head Office & Yokohama Business Center



The wings of a dragonfly are marked and it is released



# Environmental Accounting

The JVC Kenwood Group aims for transparent and highly refined environmental management through actively publishing information and by introducing environmental accounting in line with the Environment Ministry's guidelines.

## Analyzing Environmental Maintenance Costs

Investment for environmental protection in FY2010 totaled 14.6 million yen in new plants and equipment and 637.1 million yen in expenditures. Main environmental protection expenditure items that changed greatly from the previous year were reduced up and downstream costs of 153.9 million yen and environmental damage costs of 115.1 million yen. The change in up and downstream costs was mainly

due to product recycling costs both inside and outside Japan. The considerable reduction in environmental damage costs in FY2010 compared with the previous year was due to soil contamination and asbestos countermeasures. No significant changes were recorded in other areas. The environmental effects assure energy-saving effects and enable sale of valuable waste. But there is a trend towards falling numbers of sites concomitant with workplace reorganization and the similarly shrinking scale of environmental accounting. We are aiming to reduce our environmental impact and ensure environmental effects by the appropriate application of environmental protection costs.

JVC Kenwood environmental maintenance costs: equipment investment and costs for environmental maintenance activities (Unit: Million yen)					
Activity		Explanation	Equipment investment	Expenses	Total
Business Area Internal Costs	Pollution prevention	Costs and investment required to prevent air and water pollution	5.2	114.1	119.3
	Global environmental costs	Global warming prevention and ozone layer protection costs	2.2	13.3	15.5
	Resource cycle	Waste material reduction, recycling, and reuse costs, etc.	7.2	68.9	76.1
Subtotal			14.6	196.3	210.9
Upstream and downstream costs		Eco product and green purchasing costs, waste home appliance countermeasures, and packaging and container recycling, etc.	0.0	98.5	98.5
Management activities costs		Environmental management costs, ISO certification, maintenance, training, and staff costs	0.0	341.6	341.6
R&D costs		Eco product development, energy conservation, and harmful chemicals replacement technology development costs	0.0	0.0	0.0
Social activities costs		Amenities, contribution and support costs, and information publication, environmental advertising, and environmental exhibitions	—	0.1	0.1
Environmental damage costs		Soil pollution correction costs, reparations, fines, and other costs	0.0	0.6	0.6
Total			14.6	637.1	651.7

Environmental affects		Sum (Million yen)	
Reduction of amount of electricity used and waste processing costs through environmental maintenance activities		FY2010	Past cumulative total
Classification			
Reduction	Energy-savings at plants	50.1	202.7
	Reduction of waste processing costs	0.5	11.3
	Reduction of water and sewer service costs	4.3	17.9
	Reduction of packing materials and logistics costs	0.0	0.0
Income	Profits from sales of recycled plant waste products	124.3	
	Profits from sales of recycled products	0.0	
Total		179.2	356.1

## Environmental accounting scope

Period	April 1, 2010 to March 31, 2011
Total scope	JVC Kenwood Group R&D Center, Business Center, Main Japanese Manufacturing Sites and Affiliated Manufacturing Companies Hachioji Business Center, Hakusan Business Center, Head Office & Yokohama Business Center, Yokosuka Business Center, Maebashi Business Center, Victor Creative Media Co., Ltd., Victor Interior Furniture Co., Ltd., Kenwood Yamagata Corporation (Yamagata Plant), Kenwood Nagano Corporation (Nagano Plant), Yokosuka R&D Center
	<b>Global Affiliated Manufacturing Companies</b> JVC America Plant, JVC Singapore Plant, JVC Malaysia Plant, JVC Thailand Plant, JVC Optical Components (Thailand), JVC Indonesia Plant, JVC Vietnam, Kenwood China Plant, Kenwood Singapore Plant, Kenwood Malaysia Plant, Kenwood France Plant

Reference guidelines: Ministry of the Environment "Environmental Accounting Guidelines, Ver. 2005"

# JVC KENWOOD

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