

JVCKENWOOD



JVCKenwood Group

# Social & Environmental Report 2012

## About this report

This report was created as a communications tool to deepen understanding by disclosing easily understandable information to all stakeholders regarding JVCKenwood Group involvement in corporate responsibility, and its results.

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

### ● Online publications

You can also access this report from our homepage.

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

### ● Scope of this report

This report covers the activities of the JVCKenwood Group around the world.

### ● Period covered by this report

This report is for the period from April 2011 to March 2012, but includes some details for FY2012.

### ● Published

August 2012 (Next publication scheduled for August 2013.)

### ● Reference materials

GRI Sustainability Reporting Guidelines, G3

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

### ● Major organizational changes during the target period

JVCKENWOOD Corporation merged and took over the three operating companies in its group, the subsidiaries Victor Company of Japan, Limited, Kenwood Corporation, and J&K Car Electronics Corporation on October 1, 2011.





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## Concept of Corporate Social Responsibility

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 JVCKenwood 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 and contribute to society, based on our corporate vision by focusing on the fact that, the very existence of businesses has an impact on society.



JVCKenwood Group's social responsibilities are supported by four elements to reduce the burden on society.



# Group Overview

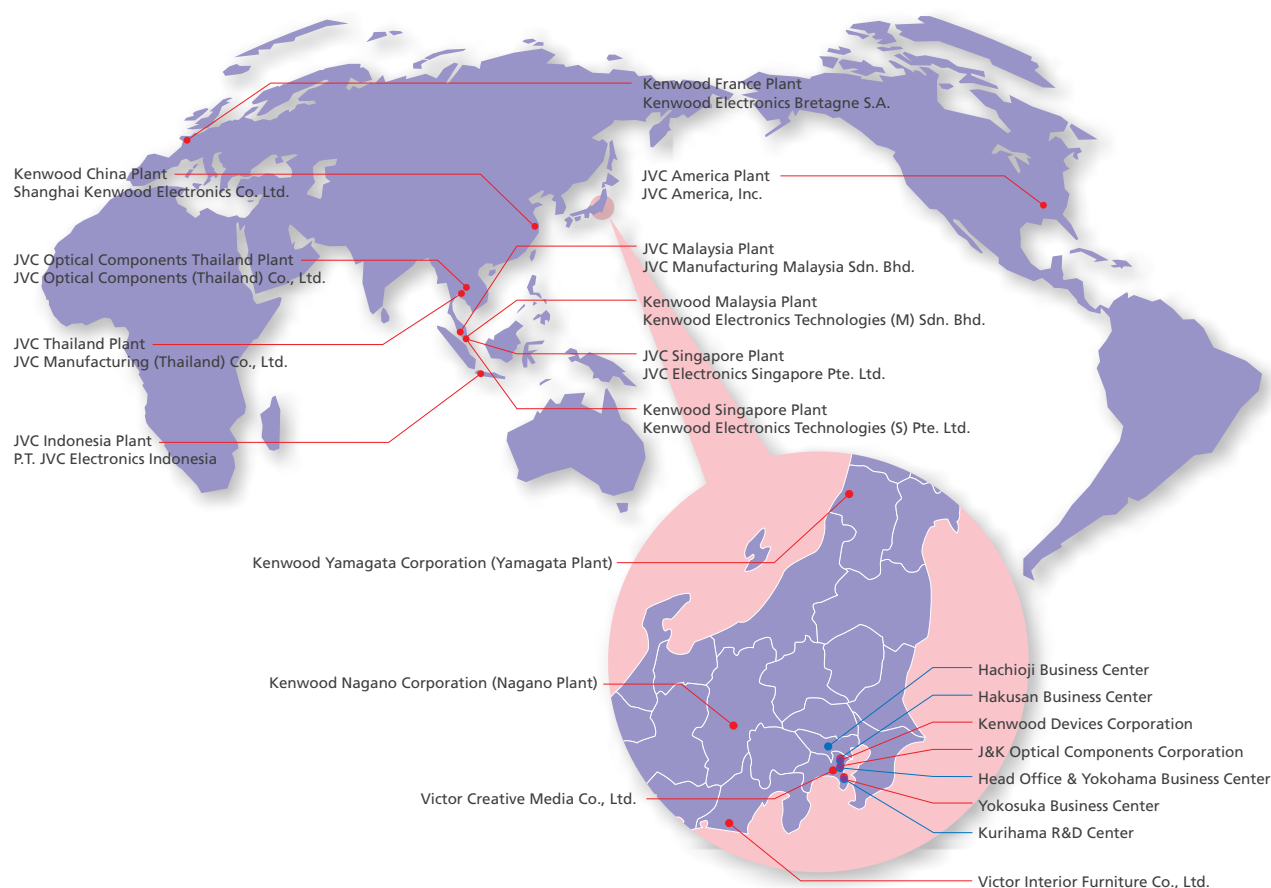
## Company Overview (Current as of March 2012)

<b>Name</b>	JVCKENWOOD Corporation	<b>Major management indicators</b>	
<b>Established</b>	October 1, 2008	<b>Sales</b>	320,868 million yen (consolidated)
<b>Capital</b>	10 billion yen	<b>Operating profits</b>	12,813 million yen (consolidated)
<b>Head office</b>	3-12 Moriya-cho, Kanagawa-ku, Yokohama, Kanagawa Prefecture	<b>Net profits</b>	6,032 million yen (consolidated)
<b>Employees (consolidated)</b>	13,594		

## Business Segments

Controlling and managing the business activities by operating the Car Electronics business, Professional Systems business, Home & Mobile Electronics business and Entertainment business and owning shares and interest in the companies which run those businesses.

## Main Sites of the JVCKenwood Group



Visit the JVCKenwood Group website for details.  
<http://www.jvckenwood.co.jp/corporate/index.html>

● R&D Centers and Business Centers  
 ● Main Manufacturing Sites and Affiliated Manufacturing Companies

# Top Management Message

Together with our employees around the world, we aim to become a specialized manufacturer creating excitement and peace of mind for the world.

## Now, we are the JVCKenwood

Last year we experienced the East Japan Earthquake, a series of huge catastrophes on an unprecedented level here in Japan, yet natural disasters struck globally as well with flooding in Thailand and earthquakes in Turkey. In addition, industry is also being driven by extreme forces as the world heads for a financial turning point as we face financial and banking crises in the US and the EU and an unprecedented increase in the value of the yen.

On October 1, 2011, we started on a history making path with the merger of three companies, Victor Company of Japan, Limited, KENWOOD Corporation, and J&K Car Electronics Corporation to form the JVCKENWOOD Corporation.

At JVCKenwood, we consider it our duty to produce results that exceed the expectations of everyone that supports our company by implementing reforms to overcome these difficulties as each and every one of us becomes leaders under our management policies to; "Create excitement and peace of mind as a global manufacturer specializing in electronics and entertainment products," "Realize profitable growth by concentrating on strong business," and "Be a company that is trusted throughout society."

## Issues in the 21st century

While humanity has developed a high level of technology and civilization to achieve a convenient and comfortable society, in doing so we have destroyed the health of our world's environment, which we may consider to be a living thing. We must be aware that our lives depend on the diverse blessings of the world's environment and we must bear the responsibility to continue into the next generation maintaining a healthy and beautiful global ecology by reducing environmental impact caused by large-scale consumption of energy and resources.

This is why we consider the issues of the 21st century to understand the distance and relationship between humans and the global environment.

**JVCKENWOOD Corporation President, Representative Director and CEO**



Background shows employees of JVCKenwood Group, which is developing globally. (composite)



## Achieving a sustainable society

Following the East Japan Earthquake, we must reconsider our mass-production and mass-consumption lifestyles, and further accelerate our efforts towards a sustainable society. The JVCKenwood Group is helping to achieve a sustainable society by implementing our Eco Promotion Plan 2020 to promote control of chemicals to minimize their effects on ecosystems, environmental designs to conserve resources, and energy saving activities to conserve resources and prevent global warming.

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

Through its social and environmental activities, the JVCKenwood Group is aiming to be a company that brings excitement and peace of mind to customers while reducing environmental impact, and listening to everyone's opinions.





# Business Introduction

JVCKenwood Group promotes the supply of excitement and peace of mind through its four businesses.

## Home & Mobile Electronics Business

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



Projectors



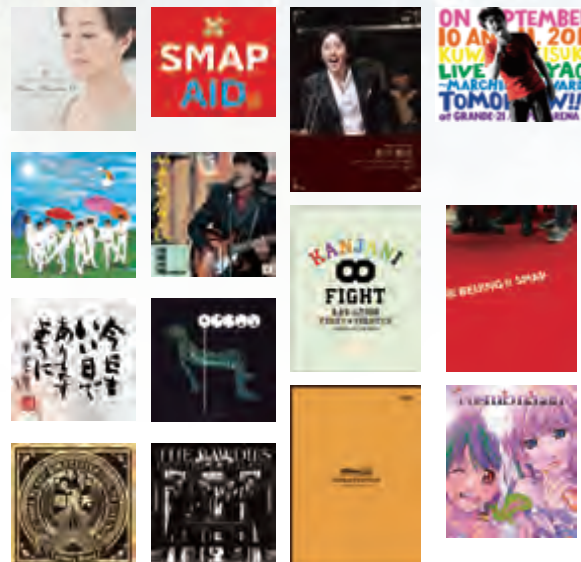
Camcorders and development of professional grade camcorders



Home audio

## Entertainment Business

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







## Professional Systems Business

Supporting customer business and safety with high reliability and service.



Digital land mobile radio NEXEDGE®



Pro HD camcorders



3D monitors



Voice Evacuation & Public-address System



CCTV camera systems



## Car Electronics Business

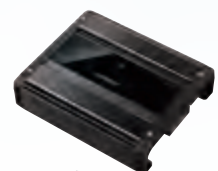
Leading the car AV market with products that enable all media to be enjoyed with the highest quality sound.



Car navigation



On-board optical sensors



Car audio



On-board optical disk drive mechanisms



# Creating a Total Entertainment Business

JVCKENWOOD Corporation manufactures video and audio equipment, and radio equipment, but we are a unique enterprise in that we also have our Entertainment Business, which is focused on music software. Our Entertainment Business is a software operation that produces sensational content. Now we are expanding operations into a broad range of businesses creating new value in the new era by shifting our business area from production of music and video packages to a total entertainment production business. In this special feature, we introduce our work in traditional fields and our efforts as a new total entertainment business.

## 1. New efforts to produce sensations

This feature introduces the activities of the entertainment laboratory (e-lab) as it expands into new business operations based on many years of accumulated experience and know-how at Victor Entertainment.

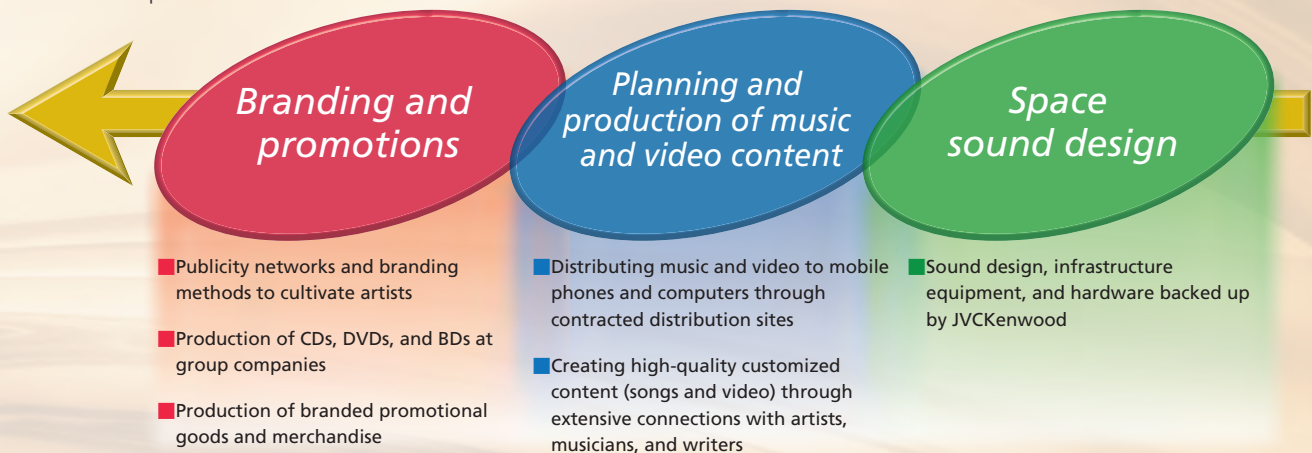


Our e-lab produces advertising, branding, and production promotions



## Leveraging the strengths of a record company for e-lab business operations

Our e-lab is expanding operations of sensational productions by applying our acumen and networks for marketing, promotion, and music and video production to create hits in the entertainment business. When you want to increase name recognition and awareness of a product and invigorate business, come to our e-lab for help.



## Helping in a wide range of businesses

We can operate in a wide variety of business arenas through promoters throughout the country's large cities who have networks of TV, radio, and print medium for publicity, the many songs we own as a record company with a long history, and our extensive connections with artists.

We can also function as a distributor for bringing products to market for companies that have branded promotional merchandise by managing royalty distribution through our record companies.

### Branding and promotions

#### Example of producing branded promotional goods

We helped to popularize Pandoseru, mascot of the Learning Networks, an employment agency that sends experienced tutors to private homes. We promoted the product by taking charge of production of the music and licensing of the character.

Our focus was on making the character a hit by creating videos and promotions on TV and other venues by using



Merchandising and promoting branded character goods for Learning Networks, Inc.

our record company know-how to negotiate merchandising through to contracts. In addition, we created a fancy song, that perfectly matches the



In Jiyugaoka presenting a song that perfectly suits the image of the character

image of Jiyugaoka as a city of sweets, for Hoippurun a character from the Jiyugaoka Association in Meguro-ward Tokyo.

## Example of holding events to produce branding and sales promotions

We produced the promotional activities and branding for CreCla, the bottled water from NAC Co., Ltd. a major bottled water home delivery company.

We set up sponsored water support outlets at marathons around the country throughout the year to raise the CreCla brand image and saturate the market with the image that athletes drink CreCla.

We plastered the CreCla brand on pamphlets, number tags, the goal tape, and other places. By setting up water servers to support water supply depots, we got the same results as a sampling survey in a shopping mall or other location. These



Merchandise to popularize the CreCla brand



Water server set up to support water depot

### Sponsored events in fiscal 2011

- Miyagi:** Tohoku Matsushima Marathon to Support Earthquake Recovery
- Tokyo:** Aoyama Love Couple Running  
Tachikawa & Akishima Marathon
- Gifu:** Ibigawa Marathon
- Osaka:** Nagai International Marathon
- Hiroshima:** CreCla Onomichi Relay Marathon 2012
- Kagoshima:** Ibusuki Nanohana Marathon

events supported promotion and branding at the same time.

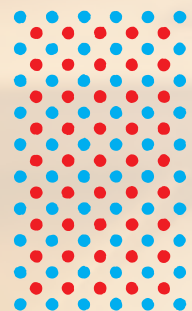
In addition, as part of integrated branding, we produced the CreCla booth at the Eco Products Exhibition 2011 helping to maximize the appeal of the corporate value. Working with the blue and red polka dot pattern used as the Nac corporate colors since 2011, we presented the CreCla and Calpis



CreCla booth for the 2011 Ecological Products Exhibition produced by e-lab

Golden Proportion Campaign in December of 2011 in front of the Shibuya 109 store to increase brand image.

While both water servers and Calpis have strong summertime images, the event was well received as an effective promotion for both companies through the tasting of hot Calpis with the convenience of a hot water server that dispenses just a single serving.



CreCla and Calpis Golden Proportion Campaign set up at Shibuya 109

VOICE



Sponsoring a sporting event just puts a company's name out there. A company like ours, that wants to raise awareness in the market, cannot expect sufficient PR results from that. The marathon event that was planned was fun for the runners and brought CreCla, the home delivered water, closer to people. I was also very happy to have run myself and taken fifth place in the Ibusuki Nanohana Marathon in Kagoshima.

Nac Co., Ltd. Katsunori Yanagisawa



## Example of project activities to produce musical creations

In an instant the tsunami swallowed up people and left only scars from the East Japan Earthquake. Everyone dies, no one is excepted, but it is surely lamentable when a whole family is lost or an entire village is wiped out in a single instant. The company, in-store media co., ltd., opened an office and started business with the help of a professor at Tohoku University through the Forever East Japan Earthquake Project on the Engraving Proof of Life bulletin board web site for sharing thoughts about the people who died. Our e-lab was effective in its role to spread the spirit of this site through the creation of "Forever #1" a song to express the importance of this project.

Theme song for the project  
Forever #1 (part one)

ひとは生まれる それは奇跡  
ひとは生きる それは勇気  
あなたがここで 生まれて生きた  
その証を わたしは刻みたい

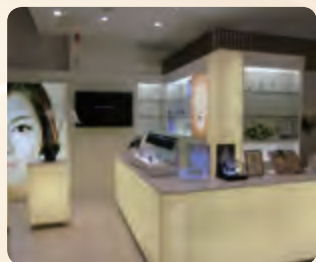
あなたの笑顔 優しい声 手をさしのべた温かさ  
言葉を越えた その愛を  
彼の命を伝えたい  
それが今の わたしにできること

FOREVER 永遠に  
FOREVER 未来に

The concept of the song Forever #1 is to leave proof of the lives of these people for future generations

## Example of producing comfortable spaces with audio technology

From the close of 2011 to early in February 2012, e-lab worked to install a space sound design solution at episteme Shanghai, the local affiliate of ROHTO Pharmaceutical Co., Ltd. episteme brand cosmetics. It has been quite successful as a salon for all five senses in a fusion of sound designs that invigorate the brain in an effective contrivance by Japanese cosmetics companies to sell cosmetics. The plan to install a salon in Beijing is moving forward toward a spring opening.



Opening of episteme Shanghai shop in Xintiandi

In addition, e-lab is proposing five-sensory approaches, from original herb teas to diffusers, in practical applications for Shanghai.

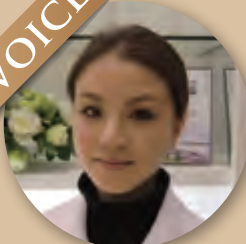
The space sound design solutions proposed by e-lab of Victor Entertainment, Inc. are

solutions proposed to create optimized spaces that balance the five senses in alignment by presenting a relaxing space through the application of sound design in such spaces as facilities for business, commerce, healing, education, and beauty.



Natural sounds present a relaxing atmosphere (image is artistic conception)

VOICE



The world of natural sound was introduced as a service to appeal to the five senses via the sense of hearing in the episteme Xintiandi direct outlet shop in a space and sound design solution that flows through the shop. As the pleasant sounds enveloped my senses, it was the first time in my life to experience sound as a service. Even those of us who are always in the shops can feel the ambiance is unique and we are able to relax and breath easily.

episteme Shanghai Shop Manager Eri Mayuzumi

## 2. Inspiration provided through masterful techniques

The software and entertainment operations at JVCKenwood Group have been contributing to society through music for more than 80 years. Akira Ohta, a music producer at Teichiku Entertainment\*, Inc. who has cultivated many enka singers, explains the masterful techniques applied in producing a musical piece.



\*Teichiku Entertainment, Inc.

Planning, producing, and selling music, movies, and more, Teichiku was founded as TEIKOKU CHIKUONKI CO., LTD. in 1934 as a company aimed at producing and selling gramophones and records. The company's name was changed to the current Teichiku Entertainment, Inc. in 1999. It is located in Shibuya in Tokyo and is the fourth oldest record company in Japan.



Typical product from Teichiku



The producer Akira Ohta talks about the process to create an album

### Akira Ohta

Born in Toono, Iwate Prefecture

Started work at Watanabe Productions in 1975

Working at Teichiku Entertainment since 2000



## Creating an album

—What are the unique qualities of the enka in which you specialize?

**Akira Ohta:** Enka is recorded with an orchestra of acoustic instruments. Our hand-made feeling is unique to enka as we try to avoid electronic instruments and create an analog feel. Enka also expresses the feelings of the lyrics through the song to the listener. The lyrics of enka are always written first, before the melody, which is also unique.

—Tell us about your work as a producer.

Producers are involved in the cultivation of singers, but the real trick is in how to bring out the singer's personality and give them direction. I coordinate the entire process from planning to finishing the jacket for the CD.

—How do you go about finishing an album?

**Akira Ohta:** The process starts with planning, then to writing lyrics and music, musical arrangement and recording the orchestra, recording the lyrics, mixing, then mastering.

Let me explain them in order:

### 1. From planning to writing lyrics and music

Plans are created for a new album with an eye on the level of development and life of the singer.

Lyrics suitable for the singer are created and an appropriate song writer is selected. The lyrics are put to a melody and sent to me on a demo tape, and then matched to the key of the singer.



Score used by musical arranger to record an orchestra.  
All the scores for each instrument are lined up vertically

### 2. Musical arrangement and recording the orchestra

The melody is arranged by the musical arranger. Arranging the melody entails such things as adding trumpets to make it lively, guitars to add feeling, or maybe increasing the tempo until the score is finished. This is very important work because the make up of the orchestra is decided at this stage. Let's take a look at a score used to record an orchestra. You can see that the musical arranger really puts his heart into it.



Recording the orchestra

Each instrument is recorded so the sounds do not intermingle



The arranger and orchestra add the finishing touches  
(Akira Ohta on the left)

### 3. Recording the lyrics

The recorded instrumental accompaniment is turned over to the singer and recording of the lyrics starts in the studio.

It depends on the singers' condition, but I want them to record a song four or five times.

### 4. Mixing

In our industry this is the process of combining different tracks of recorded music. If we take the phrase, "I love you", we may pick up each of the words, "I," "love," and "you" from a different track to get the best sound and combine them in the best mix. When this is done, we are 80% finished.

### 5. Mastering

Next we master the song. We take the original master of the mixed music and we adjust the sound quality for the final version of the song. This is also called fine tuning. I add my input on how much fine tuning should be done. Next, the order of the songs and their spacing is decided and a CD manufacturing master is created. This CD manufacturing master is taken to the factory where a metal mold (stamper) is created and used to press the CDs. They are then packaged and shipped to retailers all over the country.

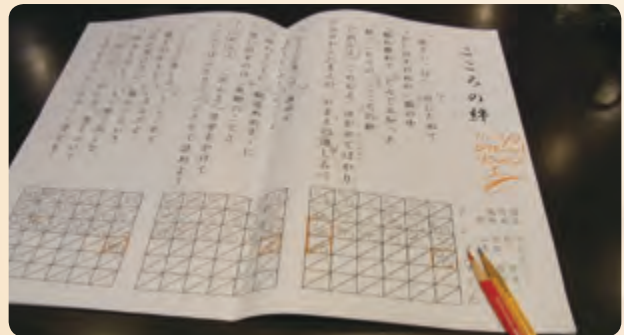
—Those are really masterful techniques. We can see that it takes quite a bit of time to turn a song into a CD.

**Akira Ohta:** The mixing work keeps going until we are satisfied, and it often runs long into the night. On average, it takes about a month and a half to two months to go from planning to mastering a CD.

—Well now, the scores are included with enka CDs, right?

**Akira Ohta:** Many enka fans like to practice the songs for karaoke, so the CD jacket includes the lyrics and score.

This score is created from the original score.



**Recording the lyrics**

Each phrase in the lyrics is considered, and the best are mixed into a smooth song



**Mixing**

The mixer is working on the 64 channel console and in the foreground is Akira Ohta



**Mixing is finished**

Everyone relaxes as Akira Ohta, with the staff, checks the finished song

—In what way do you feel you have contributed to society through music?

**Akira Ohta:** Basically I produce music for the common people, so I am really happy when I hear it on the street corner or see people singing it for karaoke.

I really feel I am contributing to society when I sense I have provided the people with a little pleasure. I want to keep my spirit, strength, and focus on creating hit songs in our studios.

—Thank you very much

We really understand your passion for enka.



## Promoting new albums



Teichiku Entertainment  
Manager Promotion Department, Akihito Okazaki

### Akihito Okazaki

Born in Kushiro, Hokkaido.  
Chose a path in the music industry by starting work at Teichiku Entertainment Co., Ltd. in 1989.

—We would like to hear about promoting new albums.

**Akihito Okazaki:** When a new album is finished, we start promoting it so as many people as possible will hear it.

Advertising media includes magazines, broadcasters, cable, newspapers, and music distributors, and we use various media according to the genre and character of the artist.

We make booklets, posters, and autographed merchandise for the artists and distribute them through the media.

—Tell us the relationship between the artist and the label.

**Akihito Okazaki:** The artists make a contract with a label that belongs to Teichiku Entertainment and then CDs are made.

For the artist, the label is like a brand that indicates the orientation of the music.



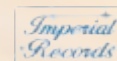
### Booklets about artists

These booklets include the artist's latest songs, discography, and biography.

■ Teichiku Label



■ Imperial Label



■ Takumi Note Label



■ Union Label



■ Continental Star Label



—Thank you very much.

Your use of specialized jargon that we normally do not hear was refreshing.

# Maintaining the trust of the community

The JVCKenwood Group considers increasing the value of our business through continued growth as an enterprise trusted by our stakeholders to be one of the most important issues that we face. To achieve this we are unifying our corporate governance, promoting greater transparency in management, and working to streamline internal control systems and build risk management systems.

## Corporate governance system

JVCKenwood 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. We established a system to separate the operations and management functions, employed outside directors and corporate auditors, and improved the ability to make checks through an internal auditing division.

### Separating operations and management functions

JVCKenwood instituted an operating officer system, splitting off the business operation functions to clarify responsibility for management and responsibility for business operations. We also introduced an operating officer system, under the CEO, to oversee operational organization between the head office and each business group. Each business group assigns a chief operating officer (COO) from among these operating officers, who control the actual operation of the business group to build a management system focused on implementing strategies for expansion in growth areas and

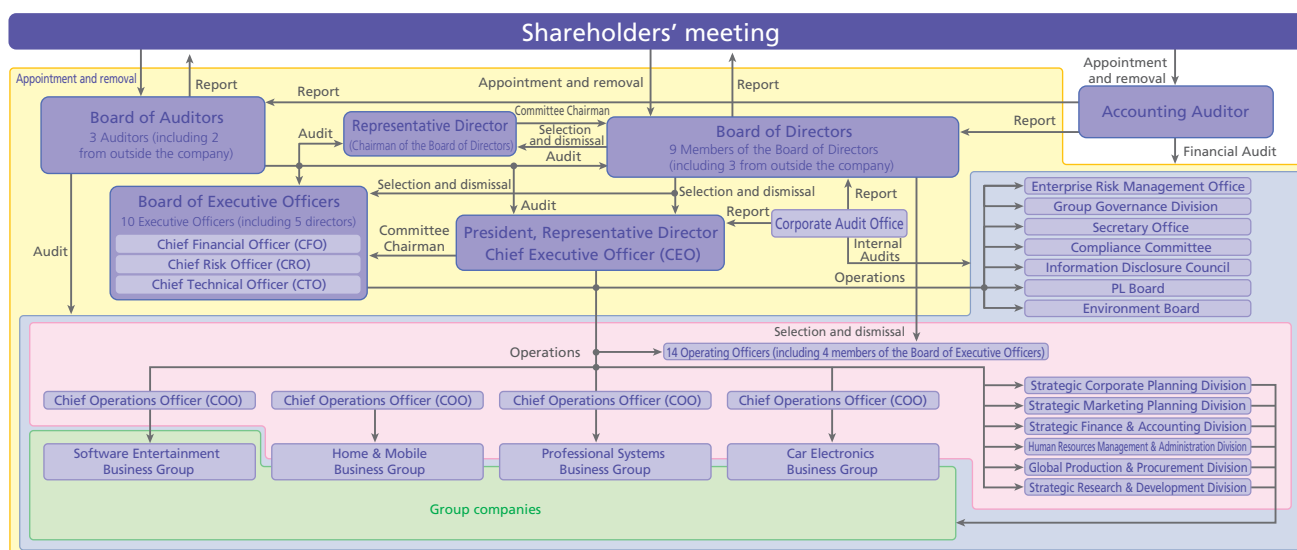
creating new growth areas.

### Employing outside directors and corporate auditors

In principle, JVCKenwood selects and appoints outside directors and corporate auditor candidates by checking that they have not worked in the business operations of any major stockholders or major business partners in order to assure independence and eliminate the risk of a conflict of interest with general stockholders as well as having viable abilities in supervisory management based on their experience, track record, and expert outlook and perceptions.

### Improving the ability to make checks through an internal auditing division

JVCKenwood has established a corporate audit office, and implements on-site inspections far and wide, including affiliates within the group. By monitoring the implementation status of internal controls uniformly, we strive to promptly discover any problems arising from a different perspective from the workplace values, and so improve the ability to prevent problems from occurring.



Corporate governance system diagram (as of June 26, 2012)



## Compliance

The CEO is the chairman of the committee through which the JVCKenwood Group promotes compliance activities in response to the needs of society in light of our corporate ethics and moral responsibilities.

### Compliance Activity Standards

The JVCKenwood Group Compliance Activity Standards were established in March 2010, and were disseminated to all group employees in a booklet and via our intranet (in three languages) and via compliance supervisors to all affiliated companies.

### Helpline

We have established a helpline, a unified internal reporting system, which is a dedicated communication infrastructure

that protects the privacy of reports (reporters) within the group. It works to find and correct activities that go against our activity standards or social requirements while working cooperatively with the Compliance Committee and the Corporate Audit Office.

### Compliance education and in-house trainers

In addition to sit-down studies, such as e-learning, in fiscal 2011 we added compliance education in group discussion formats led by the CEO, in which 1,248 managerial employees of affiliated companies participated in 23 lessons at 13 locations. In the second half of fiscal 2011, we started educating 11 compliance trainers in-house so that we can implement greater compliance education in fiscal 2012.

## Risk management

Disasters that had huge effects on Japan's economy and business activities, such as the East Japan Earthquake and the flooding in Thailand, occurred in 2011, and public concern regarding the risks facing businesses is increasing. In response to such societal needs as these, the JVCKenwood Group has set up a risk management system, led by the chief risk officer (CRO), a new position, who has ultimate responsibility for risks, to promote risk management through executive leadership. Under the leadership of the CRO, we are bolstering our response to risks by building a risk management system that will

eventually cover all companies while implementing the important points in our business continuity plan (BCP).

To face these risks head on, the JVCKenwood Group is strengthening its ability to recover and rebuild from emergency situations through executive level involvement of the PDCA management cycle.



Practice for a simulation near the head office pre-supposing an earthquake occurs in the southern Kanto area

## Business continuity plan (BCP)

In the case of a disaster, the JVCKenwood Group believes its first responsibility to society is the importance of human life and the second is providing products and services to customers as well as other stakeholders.

Based on this belief, we have formed a top-down decision, that is known throughout the company, to contribute to the security and safety of society through the continuation of business by rapid recovery of business activities following the occurrence of an emergency situation. Specific activities include selecting core operations for B-to-B businesses and establishing a model BCP. In addition, we are promoting continuous revisions of manuals and implementing

practice runs to assure the implementability of our BCP. When the flooding in Thailand occurred last year, we were able to rapidly arrange alternative production for the disaster-hit plant in Thailand at the Yokosuka Business Center based on the knowledge gathered through these activities. In the future, we will further develop our model BCP to gradually expand throughout the group to build a system suitable for continuing operations in a global enterprise.



Flooded office in the Thailand Plant

## Bringing excitement and peace of mind to our customers

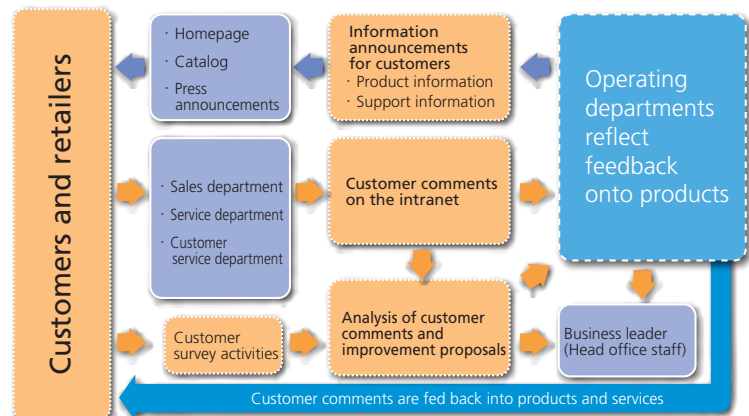
The JVCKenwood Group is communicating with all its stakeholders to promote manufacturing processes that provide excitement and peace of mind based on feedback from our customers.

◀ JVCKenwood booth at the IFA 2011

### Connecting with customers

#### Customer comments are reflected into products and services

Everyday we organize and categorize the opinions of customers that visit our customer support and service departments and the thoughts and ideas of our registered users and deliver this feedback through our in-house customer feedback system to operating departments and any related departments. This allows us to facilitate improvements in products and services based on customer feedback as we work to provide full product information and support information to our customers.



#### Basic policy on product safety

In order to provide safety and peace of mind to customers, the JVCKenwood Group established its basic policy on product safety and posted it for the public on the JVCKenwood Group website.

To put this into practice, the JVCKenwood Group created a Voluntary Action Plan for product safety to organize and carry out measures in an effort to continuously improve.

Moreover, if an accident related to a product occurs, JVCKenwood confirms the actual situation quickly and investigates the cause. In case of a product incident, or if an occurrence of such an accident is imminent, we promptly provide appropriate information to customers and related people, and provide information on the necessary steps

for recalling the products and preventing further damage.

#### Basic policy on product safety for the JVCKenwood Group

1. Legal compliance
2. Corporate culture that gives top priority to maintaining and improving product safety
3. Design of products that are truly safe
4. Prevention of the misuse of products
5. Measures to assure product safety
6. Collection and disclosure of information about product accidents
7. Suitable response to product accidents



## Examples of products designed for our customers' peace of mind

### Camcorder with manner mode

In 2012 we introduced a model equipped with the new manner mode in response to customers' opinions about being bothered by the operating sounds and brightness of the LCD monitor when recording videos in dark quiet places such as recitals. The brightness of the LCD monitor can be reduced and the operating sounds can be turned off with an easy operation so there is no trouble recording videos in places where you might bother people around you.



### Safety considerations for camcorder batteries

The contacts are shaped so they are unlikely to be short circuited by metal objects, to prevent short circuit accidents if the battery is being carried around in a bag with metal objects (such as necklaces or hair pins).



Contacts shaped to prevent short circuits

### Car navigation ①

#### Function to prevent pinching in electro-mechanical panel

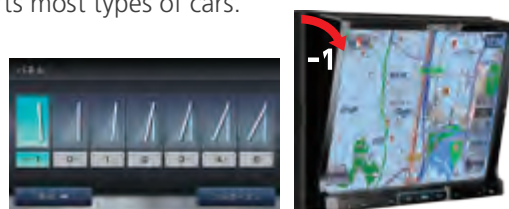
In the chance that a finger is pinched in the panel as it opens or closes, the software reverses the motor and a clutch mechanism on both sides control the electro-mechanical driven panel to prevent pinching.



### Car navigation ②

#### Function to adjust angle of panel

The screen may be difficult to see because of reflected sunlight if the angle of the screen is upward due to the position in which the car navigation equipment is installed. It is possible to adjust the angle for easy viewing with an angle adjustment mechanism that supports most types of cars.



A special feature is the reverse angle adjustment.

### Car navigation ③

#### Map data update

More customers are keeping and maintaining the cars they love for many years. We have set up our Kenwood Map Fan Club, a substantially free service you join to access map updates for a five year period (at 315 yen/month) so you always have new maps that are suitable for use in the car navigation system you have installed.



MDV-737DT

**KENWOOD**  
**MapFan Club**

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

### Professional grade radios with rugged design

Customers that use professional grade radios do various jobs in many environments so they demand high quality, ruggedness, durability, and safety. We provide products that reflect the views of people who are actually on the job with the specifications and shape that they want in a radio, and that will work reliably over the long run. As a result, our radios are certified to MIL-STD-810C/D/E/F/G military standard of the US Department of Defense.



Designed to be operated even while wearing gloves

## Involvement in new businesses that use elemental technologies



The JVKenwood Group gives new value to customers with excitement and peace of mind in a broad range of business fields based on elemental technologies we developed.

### Noise canceling speaker microphone for digital radios KMC-51/52

Providing safety and peace of mind by applying audio technology to the field of radios.

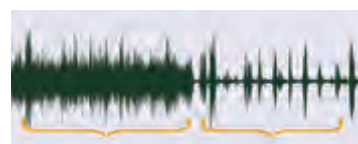
We developed and brought to market noise canceling speaker-microphones for digital radios that use high-level signal analysis to keep voices clear even when there is excessive noise.

They are intended to be used by firemen, policemen, and at airports where the sound of jet engines is



KMC-51/52

very loud, because voice transmissions are very clear and sounds such as sirens, have been separated from voice signals to greatly reduce the interference of noise.



Before noise canceling After noise canceling

Noise is canceled so that voices are clear



## 200-inch screen in natural realistic 3D

Working together with the National Institute of Information and Communications Technology, we developed the technology to make natural and realistic 200-inch 3D screens.

This makes it possible to present intense large-screen hi-vision 3D images of life-size actors and full-scale automobiles and other subjects to large groups of people, without special glasses.

This technology is expected to be used in the medical field, for education, electronic advertising, public viewings, and for industrial design, such as for cars. These developments use JVCKenwood's optical technology, materials and device technology, and imaging technology.



Realistic reproduction of 3D images at full scale (image shown is a composite)

## Next-generation heads-up display for automobiles

We developed this next-generation heads-up display for automobiles through a blend of our optical technology, materials and device technology, and imaging technology. This system was presented as a technical exhibit at the 2012 International CES, the world's top electronics show, held in January 2012 in Las Vegas, USA.

It can display multiple layers of information such as speed, alerts, and navigation information, which appears in the driver's line of sight by projecting a high-resolution image in space in front of the windshield. This makes it possible for the driver to access necessary information safely without altering line of sight.



Driver accessing necessary information safely without altering line of sight (image shown is a composite)

VOICE



All sorts of operations are enhanced, such as checking the speedometer, routes on the navigator, GSM, and audio equipment so the driver can pay attention to their surroundings and what is in front of them while they drive. Shifting your line of sight for even a moment could cost your life while driving across the continent of Europe on the expressways where cruising speeds can be very fast.

As the person responsible for products for sales across Europe, I want to work together with the product planning and technology divisions to really polish this product to provide a fun driving atmosphere that lets drivers concentrate on safe driving with our heads up display.

Kenwood Electronics Europe B.V. / Kenwood European Headquarters  
Product Manager Automotive

**Ton van Bodegraven**

Local Communities and JVCKenwood

## Contributing to communities on a local scale

JVCKenwood Group is helping throughout local communities with a variety of activities to bolster exchanges and connections with local communities.

◀ Employees from Yamagata Kenwood Corporation participate in rejuvenation activities to support the Shiogama Urato Islands.

### In Japan

#### Helping rebuild after the East Japan Earthquake (Yamagata Kenwood Corporation)

Employees from Yamagata Kenwood participated in rejuvenation activities to support the Shiogama Urato Islands, a sponsored conference on protecting the environment in Yamagata on September 23, 2011. Employees helped move households and to dispose of waste materials in homes near the port of Shiogama in Miyagi Prefecture, which were devastated by the ground subsidence of the East Japan Earthquake and then by

flooding from typhoons. The local media presented the situation many times and we received a certificate of thanks from the sponsors. We intend to continue our efforts to help in local areas within the range of our abilities.



Helping to move households and remove mud from flooded homes



I could really understand the importance of specified low-power radio equipment for working efficiently with a limited number of people and time.

Yamagata Kenwood Corporation  
Engineering Department 1, Engineering Support G  
Shuichi Hinata



Certificate of thanks from the Yamagata Prefecture Environmental Protection Committee

VOICE



I took a rejuvenation support tour in November of 2011 in Shichigahamamachi in Miyagi Prefecture where I spent two days on the go, non-stop on a bus company plan. Someday I want to visit Shichigahamamachi again to see for myself the changes from the rejuvenation and visit the local tourist hot-spots.

Strategic Marketing Planning Division, Strategic Marketing Operation Hisao Hino



## Training outreach (Head Office & Yokohama Business Center)

Working in cooperation with the city of Yokohama, our Head Office & Yokohama Business Center, as a manufacturer specializing in audio and visual products, established an educational outreach program for elementary and middle school children based on the concept of, "Contributing to social development by supporting the academic abilities of children." Yamagata Kenwood Corporation is cooperating with the Shonai Area General Branch Administration Office of Yamagata Prefecture for outreach training that includes requests from the Energy Conservation Center, Japan.



Outreach training in Yokohama, Kanagawa Prefecture

## Middle school students experience a hands-on day at work (Hachioji Business Center)

Five students from Kanagawa Prefectural Sagami-hara Secondary School visited Hachioji Business Center for a real-life job experience. The students were able to experience manufacturing by building speakers, checking the operation of on-board equipment, and drawing 3D CAD drawings.



Building speakers

## Donating radios helps recovery from flooding in Thailand

JVCKenwood Group donated 200 radios, capable of communications independent of public infrastructure, to help recovery efforts in damaged areas and to provide relief to refugees from the flooding that occurred starting in October 2011. 2,800,000 yen was donated through our matching program with group employees and unions.



Kenwood's TK-2310R 245-MHz radio

## Supporting video education in elementary schools (Head Office & Yokohama Business Center)

In September 2011, our Head Office & Yokohama Business Center lent eight camcorders to Kawasaki City to support efforts to educate people through the creation of videos to cultivate the creativity of children in elementary schools throughout the city.



Using their imagination to create videos (at Kawasaki City Kyomachi Elementary School)

## Internship program (Kenwood Design)

Kenwood Design is placing interns in a program that accepts university students from Japan and overseas. We are using the careers of our people and technologies we have developed to provide an environment for learning how products are introduced to market through the role of design in society and the PDCA cycle.



Internee (left) learning from a professional designer

## Participating in local cleanup campaigns

The JVCKenwood Group participates in a wide variety of volunteer activities in cooperation with local communities. We are also participating in local beautification efforts in the neighborhood and along the road from our plant to the nearby train stations by picking up cigarette butts and empty cans discarded among the bushes.



Cleanup activities near Shinkoyasu station

## Overseas

### Collecting donations at a Halloween party

Every year, Zetron, a part of the JVCKenwood Group, gives its support to the Children's Miracle Network, a pediatric fund. This year they collected \$1,625.58 at their Halloween party.



### Participating in the Spark of Love Toy Drive

Kenwood and JVC sales companies in America participated in the Spark of Love Toy Drive to collect toys with the Los Angeles fire department in California for underprivileged children.



Firemen collecting boxes full of toys

### Charity activities via e-commerce

Kenwood Electronics Italia S.p.A. started its own e-commerce website [www.kenwoodstore.it](http://www.kenwoodstore.it) operating 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)



Italian Kenwood on-line store introduces its charities

### Supporting operations at charitable TV programs

Since 1996, Kenwood Iberica, S.A. has supported the operations of the charity program Fundació La Marató de TV3 in Barcelona by providing radios so the staff can communicate with each other. This year we provided 40 radios that were used throughout the 15 hours of the broadcast.



Donations were collected at the Barcelona Trade Fair Show Center

### Donating presents and scholarship funds

The JVC Optical Components Thailand Plant donated scholarship funds and presents to Nakhon Ratchasima state school for the blind and to children's welfare facilities opened by a Buddhist temple on the day before Children's Day on January 14.



Children receiving scholarship funds and presents

### Supporting education for elementary school students

Kenwood Electronics UK supports the education of ten year old girls in Senegal through an international NGO that promotes local development in developing nations.

Because of this, children can travel about 30 minutes everyday to attend the school that they love. By the way, this girl's favorite subject is arithmetic.



A girl in Senegal whose education is supported by Kenwood UK



## Organizing and supporting a youth soccer tournament

Sixteen middle school teams from the Johor area were selected to participate in the youth soccer tournament in May 2011 at the sixth annual KEGU Friendship Cup, sponsored every year by KEGU (Kenwood Group Union). Employees from the Kenwood Malaysia Plant and union volunteers from Japan worked together with the Malaysia Youth Sports Ministry to hold the tournament aiming to cultivate healthy young minds and bodies.



Commemorative photo with the winning team

## Sponsorship of beach volleyball tournament

Kenwood Electronics Italia S.p.A. continues to support the Italian Beach Volleyball Championship. The tournament was held in nine locations throughout the country from June to August 2011.



Beach volleyball in front of a big crowd

## Helping the community: Community Service Day Activities

On December 16, 2011, the Kenwood Singapore Plant cleaned up the park and seaside of East Coast Park to help beautify the environment as part of Community Service Day, which is held every year. Employees who participated were able to experience the importance of keeping our environment clean. We will continue these activities to support our communities in the future.



Nine groups were formed to clean up

## Donating blood

On March 20, 2012, blood was donated by 162 employees at the JVC Indonesia Plant for West Java State's Indonesian Red Cross as a part of local disaster support in case of flooding, earthquakes, tornadoes or other disasters.



Employees at JVC Indonesia Plant donating blood

## Holding a cricket tournament

In December 2011, Kenwood Electronics Gulf FZE held a cricket tournament. Cricket is very popular in the UAE. The tournament is held in cooperation with our representatives every two years.



Participants listening to an explanation at the opening of the tournament

## Participating in an elementary school science fair

The JVC America Plant has been providing judges at the science fair that has been held every year for the last 15 years at the nearby Arcadia Elementary School. On February 7, 2012, six employees judged the science projects of students from kindergarten to fifth grade on creativity, originality, and scientific comprehension.



JVC America Plant employee judging a science project



Business Partners and JVCKenwood

## Building partnerships with business partners

With equality and balance from a global point of view according to the laws and ethics of society, the JVCKenwood Group is working with parts procurement partners and sales partners to build mutually beneficial relationships through shared trust and transparency.

◀ Image of green procurement auditing

### Working with parts procurement partners

#### Partnership with suppliers

As a basic policy to build interactive partnerships with suppliers, we are working to integrate with suppliers to bolster product development. We are receiving many types of proposals from our suppliers and we aim to keep win-win relationships with suppliers by promoting the reformation of procurement practices related to quality, environment, delivery time, and costs. Also, we are developing products in alignment with the suppliers' development of parts based on the JVCKenwood Group's development road map.



environmental concerns in all business activities. 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 investigated the chemical breakdown of the materials we are procuring and evaluated them based on our "Green procurement guidelines" 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 auditing is done based on these results and tied to the creation of a system to reduce the environmental impact of parts and materials and to establish environmental management systems at suppliers.



Green procurement guidelines

#### Environmental activities

We are constantly working to reduce the environmental load throughout the life cycle of our products, from production to sales, with an eye on

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



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

VOICE



After our company was certified for ISO 14001, we realized that it was our duty to move into the next generation with a complete business development in light of the global environment. Working with the JVCKenwood Group enabled us to further increase our awareness of the environment, which we appreciate. As we move into the future, we are going to do our best to live up to our motto of, "Providing products and services that satisfy our customers."

AONO INDUSTRIAL CO., LTD., Sales department, **Shinji Aoki**



## Working with sales partners

The JVCKenwood Group is working to strengthen ties with its sales partners working as agents and retail companies to deliver appealing products to our many customers throughout the world.

### Product promotion meeting in various regions

Whenever new products are released, the JVCKenwood Group invites sales partners from around the world to seminars to explain new products and share opinions.

In India, where sales are climbing, the seminar is started with a good luck ceremony, intended to bring good luck to everyone, in which a candle on a golden stand at center stage is lit.

Casual gatherings are held after the seminar to promote good communications where people exchange opinions about the new products.



Product seminar (India)  
Lighting a candle in a golden stand in the good luck ceremony that starts the seminar



Retail companies affiliated with our agent in India listen carefully to explanations about products



Product seminar (Sudan)



Product seminar (Turkey)

### Promotional sales in demonstration cars

Demonstration cars are created across the globe and are employed pro-actively at various events and in magazines to provide a hands on experience of our new products' appeal and features.

In Japan also, many demo cars are used to promote sales at retail shops across the country.



Turkey



Iran



Panama



Japan

VOICE



I manage the agency representing Kenwood Audio in India. Even though we have been working together for over 19 years, I intend to increase the market share of the Kenwood brand and further strengthen our relationship with Kenwood.

Nippon Audiotronix Ltd, President, KS Goindi



Employees and JVCKenwood

## Work environments that are safe and easy to work in

The JVCKenwood Group is making efforts to create workplaces that are safe and pleasant, and to provide each employee with support in their growth through education and training systems.

◀ Staff who came to Japan on December 4, 2011 on an alternate production plan from the JVC Thailand Plant

### Working with our employees

#### Thailand employees in Japan instruct staff for alternate production

When the flood damaged the JVC Thailand Plant we arranged to shift production to Japan. To do this a total of 68 specialists in production, quality assurance, and shipping inspection from the Thailand Plant came to Japan from December 5, 2011 to the end of March 2012 to work in the Yokosuka Business Center producing professional-level equipment. They arrived at the Yokosuka Business Center and were given full support for language, cuisine, and help in handling the unaccustomed cold Japanese winter from other employees who were invited to give them heavy winter clothing.



Thailand Plant employee (left) directing the work of Japanese employees

staff both enjoy these events, which may be beer parties, barbecues, field days, or trips that are unique every year.



Kenwood Electronics Gulf FZE

#### Commemoration ceremony of the merger of JVCKenwood

On October 1, 2011, Victor Company of Japan, Limited, Kenwood Corporation, and J&K Car Electronics Corporation merged to form the JVCKENWOOD Corporation. The memorial ceremony at the PACIFICO Yokohama National Convention Hall (Kanagawa Prefecture, Yokohama) themed the "New founding: Now, we are the JVCKenwood" marked the beginning of a new chapter in history. About 4,200 employees of the JVCKenwood Group from Japan and overseas gathered this day to show their commitment to future growth as a single company. We also held family style events at each of our facilities to commemorate the merger from October to November of 2011.



Merger ceremony held in the PACIFICO Yokohama National Convention Hall

#### Holding a party for employee families

Every year at our overseas plants and sales companies, we hold parties for the families of our staff so they can relax and release the stress of their daily routine. The families and



Family party for employees at the JVC Electronics Singapore Pte., Ltd.

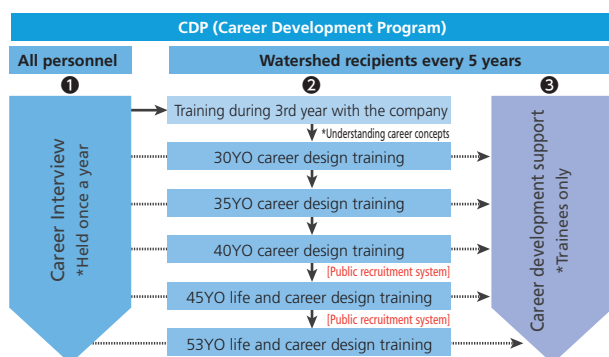


## Supporting career and skill development

We have systematized and implemented training to improve the skills necessary for implementing personal roles, and training to manifest personal skills within the organization.

We are also implementing a Career Development Program to support actions to achieve “what I want to be in the future,” 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 how they have worked in the past. Further, this is an opportunity for participants to consider comprehensive work/lifestyle balance comprised of personal development to reach future goals and links to family life and the region, while discussing their career visions.



Career design training

### 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 outside seminars, and the obtaining of qualifications, and is effective not only in personal development, but also in in-house invigoration.

## Helping support harmony between work and family life

JVCKenwood understands that in the future the lifestyles of each employee will become ever more diverse and is doing various things to support a work/life balance (WLB).

### Supporting childcare and nursing

We have established a variety of ways, for childcare and nursing, to support our employees both at work and at events in their lives.



<b>Childcare leave</b>	Leave can be taken until the end of April following the child's first birthday or the end of the month in which the child reaches 18 months
<b>Reduced working hours for childcare</b>	During the period ending at the end of March following the child's ninth birthday, it is possible to reduce work time up to two hours per day as provided by law for childrearing
<b>Pregnancy leave for spouses</b>	Three days holiday are allowed to attend the birth of a child by one's spouse
<b>Sick/injured childcare leave</b>	During the period ending at the end of March following the child's ninth birthday, five days holiday per year are allowed for nursing care
<b>Nursing leave</b>	A cumulative maximum of one year leave is allowed for each family member who requires nursing
<b>Reduced working hours for nursing</b>	Together with nursing leave, it is possible to reduce work time up to two hours per day for a cumulative total of one year
<b>Nursing days off</b>	Five days holiday are allowed to care for a family member who requires nursing
<b>Overtime work and late night work</b>	If an employee is raising a child, until the end of March following the child's ninth birthday, and the employee nursing a family member requiring nursing care so requests, work at night will not be required and overtime work will be limited to a maximum of 24 hours per month or 150 hours per year
<b>Registration for reemployment</b>	An employee who quit because of pregnancy, childbirth, childcare, nursing care, or a spouse being transferred will be registered for reemployment

### Reduction in overtime work

Besides the specified family situations, such as childcare and nursing care, we are reducing overtime hours so employees can lead fuller family lives everyday. Specifically, some of the things we are doing include; setting one day a week on which we urge all employees at a facility to go home at the end of the regular workday, holding classes as per union agreements on overtime to increase the awareness of overtime, and developing activities intended to have employees independently manage their own time as they work.

### Encouraging workers to have a day off

In addition to lowering overtime hours, we are encouraging employees to use their annual holidays. To promote taking days off, we are promoting efforts such as spreading the idea through the various work sites, of setting a goal of a certain number of days to be taken during a proposed month in a joint effort with labor unions. In the future we will do surveys at each workplace to follow up on whether all employees are taking their days off.

### Other systems

In addition to these systems and activities, to create greater harmony between work and home, we are using the preexisting "Spouse Transfer" system that rehires workers that leave the company for pregnancy, childcare, or nursing care, and we have renewed the "System to register retirees for reemployment" to give more consideration to family life.

VOICE



I returned to work after maternity leave for my second child which ended in May 2012. This period was very meaningful to me. The growth of infants is incredible; every day is a series of surprises and thrills. It was really helpful to work in a place with an environment and system in which it is easy to work while raising a child, and the bosses and coworkers have a deep understanding of raising children.

Strategic Research & Development Division, Planning Office, Yoshie Ohki



## Health and safety

### Supporting people returning to work after a long absence

We are working proactively in the workplace, as a mental health care strategy, constantly presenting seminars on mental health so we are all aware and understand the reality of mental health and can treat our colleagues with thoughtfulness.

We have also established a return to work support system to allow people to return to work without stress when returning to the job after a long absence.

This system, in principle a three month program that introduces work responsibilities on a trial basis, increasing the workload and working time in stages, to a state of normal full time work after a return from a long absence or period of not working.

We support returning to work during this trial period; the industrial physician and medical staff add their support also.

When returning to full work after finishing the trial work stage, a returning to work evaluation meeting is held with those people involved, such as the industrial physician, medical staff, and supervisors, where everyone involved evaluates considerations surrounding the return to work and the support system.



Mental health training

We are striving to prevent damage to the health of people and reduce long working hours. We 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 reducing work hours as part of our pro-active efforts.



Interview between worker with long hours and the industrial physician

### Health and safety at work

The JVCKenwood Group is promoting activities centered on safety and health every month based on the ideas of creating a culture of health and safety, zero accidents at work, and assuring the health of workers.

Our aim is to establish a corporate culture that places priority on the health and safety of employees. Regarding safety, we are introducing risk assessments as tools to remove risks as soon as we find them in the spirit of going from zero accidents to zero risks, and not just on the factory floor, in our offices also. On the health side also, we are working to create pleasant working conditions to support the health of our employees, such as with mental health strategies.



Safety and health committee

### Countermeasures against overwork

Long working hours lead to overwork, and this is an important social problem that cannot help being linked to health problems.

VOICE



What, if anything, are you giving up for your "job"? Maybe your hobbies, relations with your family, time with your friends, or something else. Your job can be a major part of a happy life, but sometimes it can be the opposite. Perhaps we can balance our work and life by controlling our jobs, and not letting our jobs control us. I think that if we change our outlook a little in this way, our lives can become much fuller.

Industrial Physician, Yoshinori Ebihara

# Conserving the world's beautiful environment through our business activities

Countries and regions across the globe are working to solve the problems of global warming, pollution from harmful substances, loss of biodiversity, and depletion of resources that face the planet on which we live. To respond suitably to these global movements, the JVCKenwood Group is working to help preserve and conserve the beautiful environment on a global scale to the next generation through activities such as energy conservation, 3R activities, and appropriate management of chemicals established in our Eco Promotion Plan 2020 based on our Environmental Vision and Policy.

## Environmental vision

We will contribute to society as an eco-promoting company active in efforts focused on reducing 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, continue 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.





## Eco Promotion Plan 2020

### ① Energy conservation

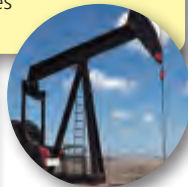
- Energy conservation in offices and manufacturing sites
- Development of energy-saving products (using LCA)
  - Reduction of energy consumption in products both during usage and when in standby
  - Miniaturization and weight reduction (reduction of transportation energy)
- Development of elemental technologies that contribute to energy savings



Reducing the impact of global warming on plant and animal ecosystems

### ② 3R activities

- Development of products designed for recycling
  - Adoption of ecological and recyclable materials
  - Company-wide rollout of 3R design methods (disassembly, resource conservation, and more)
- Reduce and recycle waste
  - Maintain zero waste emissions at Japanese production and business bases
  - Zero waste emissions at global manufacturing sites



Reducing the impact of excavating mineral resources on ecosystems

### ③ Appropriate management of chemicals

- Promotion of green procurement
  - Improve the green levels of suppliers
- Reduction of harmful substances in products
  - Encourage switching to safe substances
- Company-wide promotion of alternatives to and the appropriate handling of harmful substances



Reducing the impact of air and soil pollution on ecosystems

### ④ Maintenance of biodiversity

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.

## Promoting environmental management throughout our companies

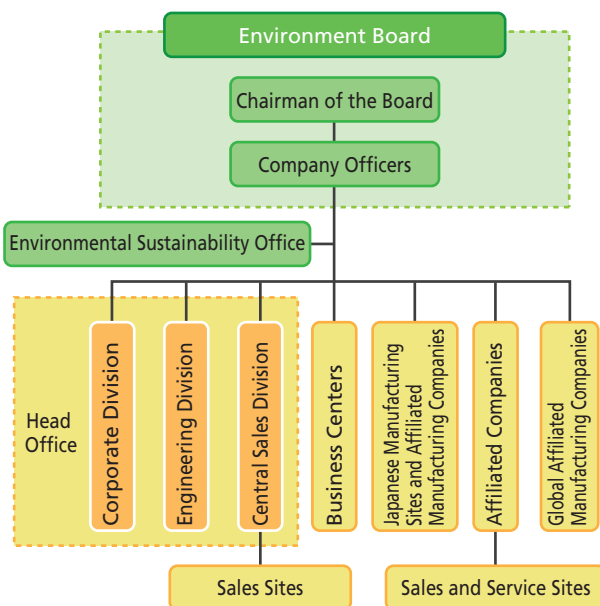
The JVCKenwood Group is promoting environmental management in all its companies to produce verifiable results linked to development of products with no environmental impact and the promotion of business and production operations with no environmental load.

◀ July 2011, seminar on REACH and how it affects sales companies in Europe

### Environmental promotion organization

#### Environment Board

The environmental management activities of the JVCKenwood Group are implementing environmental management and spreading the policies and measures decided by the Environment Board, management's top level decision making body.



Environmental Promotion Organization

#### Environmental management system

The JVCKenwood Group set up an environmental management system based on the ISO14001 standard and maintains its certification. Since fiscal 2012, we started integrating the

environmental management systems of JVC and Kenwood. We are working to acquire certification for all offices, non-manufacturing facilities, and affiliated companies throughout Japan based on a unified environmental policy.

	Consolidated certification	Number of sites
Japan	Business centers	5
	Manufacturing companies	2
	Non-manufacturing sites	40
	Affiliated companies	16
Overseas	Independent certification	Number of sites
	Manufacturing companies	10

#### Environmental green logo concept

The environmental green logo is a symbol used to indicate the JVCKenwood Group's stance and efforts regarding environmental concerns. It appears on our catalogs and environmental posters as the symbol of environmental activities of the JVCKenwood Group and is used to enlighten people in the company and appeal to people outside the company.



Environmental green logo



## Creating eco products

In our Environmental Sustainability Office, we are leveraging our originality to reflect our environmental ideas in the development of new products as we work to create eco products with the goal of contributing to society through our products and services. Fixing our point of view on the expected lifestyle of 2050, our business groups are creating eco products following the theme, "People of the world going happily through their days with a natural awareness of the planet and a feeling of connectedness," based on the road map for our eco promotion plans until 2020.



Meeting to brainstorm about eco-products

## Environmental training

The JVCKenwood Group is educating employees about the environment in general training, varied-level training, and specialized task training as an enterprise developing, producing, and selling environmentally conscience products. All of our employees are aware of the environmental impact of the work they are doing and are making positive efforts every working day. In addition, to build a sense of corporate responsibility and to sustain and improve environmental activities, we periodically hold classes for internal auditors and for legal compliance.



Learning about waste management

## Complying with environmental regulations around the world

As environmental awareness is on the rise around the world, we are teaming up with sales companies overseas and business groups to constantly gather the latest legal information and requirements from the world's markets.

We create easy-to-understand materials from the information we gather from



Seminar on environmental compliance

around the world and distribute them to employees at every level, from planning to

design, and implement product assessment training to handle environmental compliance.



Collecting information on market trends and environmental regulations from around the world and distributing it to all our operations

VOICE



I supervise activities related to conformance with environmental regulations in accordance with state and federal laws, and market demands in the United States. So far, we are registered in various states and have submitted reports for compliance with different recycling laws in 20 states.

We are developing concrete measures while at the same time sharing information with Japan to comply with the increasingly complex laws relating to energy conservation, chemical substances and recycling, and providing an appropriate response to market demands such as EPEAT.

JVC Americas Corp.

Product Safety and Environmental Liaison

Ted Marks

## Environmental accounting

### Analyzing environmental preservation costs

The JVCKenwood Group aims for transparent and highly refined environmental management through actively publishing information and by introducing environmental accounting in line with the Ministry of Environment's guidelines. Investment for environmental protection in FY2011 totaled 9.8 million yen in new plants and equipment and 674.9 million yen in expenditures. Main environmental preservation expenditure items that changed greatly from the previous year were increased management activities costs by 188.9 million yen and reduced upstream and downstream costs of 86.1 million yen. Increases in chemical management costs for complying with REACH and other regulations are a major factor in the changes in the management activities costs. Also, the increase in green procurement control management costs on the one hand and the large decreases in costs for recycling products in Japan are a major factor in changes in the upstream and downstream costs. No significant changes to factors were recorded in other areas. The environmental results assure energy-saving effects and enable sale of valuable waste. However, there is a trend towards a reduction in the effect itself and shrinking scale of environmental accounting continuing. We are promoting activities to reduce the burden on the environment and ensure environmental effect by the adequate application of environmental preservation costs.

JVCKenwood 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	6.55	70.04	76.59
	Global environmental costs	Global warming prevention and ozone layer protection costs	1.06	8.04	9.10
	Resource cycle	Waste material reduction, recycling, and reuse costs, etc.	1.98	53.23	55.21
Subtotal			9.59	131.31	140.90
Upstream and downstream costs		Eco product and green procurement costs, waste home appliance countermeasures, and packaging and container recycling, etc.	0.00	12.43	12.43
Management activities costs		Environmental management costs, ISO certification, maintenance, training, and staff costs	0.26	530.52	530.78
R&D costs		Eco product development, energy conservation, and harmful chemicals replacement technology development costs	0.00	0.00	0.00
Social activities costs		Amenities, contribution and support costs, and information publication, environmental advertising, and environmental exhibition costs	—	0.00	0.00
Environmental damage costs		Soil contamination countermeasure costs, reparations, fines, and other costs	0.00	0.60	0.60
Total			9.85	674.86	684.71

Environmental results		Sum (Million yen)	
Reduction of amount of electricity used and waste processing costs through environmental maintenance activities			
Classification		FY2011	Past cumulative total
Reduction	Energy-savings at plants	10.20	75.08
	Reduction of waste processing costs	0.63	0.51
	Reduction of water and sewer service costs	2.95	5.70
	Reduction of packing materials and logistics costs	5.53	5.53
Income	Profits from sales of recycled plant waste products	107.03	
	Profits from sales of recycled products	0.10	
Total		126.44	193.96

#### Environmental accounting scope

Period	April 1, 2011 to March 31, 2012
Total scope	JVCKenwood 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, Kurihama R&D Center, Victor Creative Media Co., Ltd., Victor Interior Furniture Co., Ltd., Kenwood Yamagata Corporation (Yamagata Plant), Kenwood Nagano Corporation (Nagano Plant)
	Global Affiliated Manufacturing Company JVC America, Inc., JVC Electronics Singapore Pte. Ltd., JVC Manufacturing Malaysia Sdn. Bhd., JVC Manufacturing (Thailand) Co., Ltd., JVC Optical Components (Thailand) Co., Ltd., P.T. JVC Electronics Indonesia Shanghai Kenwood Electronics Co. Ltd., Kenwood Electronics Technologies Singapore Pte. Ltd., Kenwood Electronics Technologies Malaysia Sdn. Bhd., Kenwood Electronics Bretagne S.A.

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



## Environmental targets and results

### FY2011 environmental targets and results

The JVCKenwood Group is setting annual targets to reduce our environmental impact while meeting the needs of customers based on a life-cycle viewpoint throughout manufacturing.

The activities results for FY2011 reached initial targets.

Activities	FY2011 Targets	Evaluation
<b>Energy conservation</b>		
Energy-saving products	Targets from assessments of each model were set and implemented	○
Reduction in CO <sub>2</sub> emissions from business activities	2% or more (compared to previous year)	○
<b>3R activities (Reduce/Reuse/Recycle)</b>		
Resource reduction and recyclability	Targets from assessments of each model were set and implemented	○
LCA* introduction	Roll-out of LCA evaluation tools to all groups in Japan	○
Waste		
①Reduce total volume produced	Over 22% reduction (compared to FY2000)	○
②Zero emissions	Over 99.5%	○
<b>Appropriate management of chemicals</b>		
Green procurement	<ul style="list-style-type: none"> <li>Completed introduction of REACH* compatible IT system</li> <li>Evaluation of business partners' green procurement</li> </ul>	○
Chemicals at plants		
①Main chemicals to reduce	Over 12% (compared to FY2005)	○
②Chemicals to be managed	Over 6% (compared to FY2005)	○
<b>Environmental risks</b>		
Not using toxic substances	Adherence to Green Procurement Guideline	○
Environmental risks	Completed verification of 100% safety in all storage plants and offices	○

**Evaluation standards:** ○Target achieved; △Target partially unachieved; ×Target not achieved

FY2011 indicates the fiscal year from April 1, 2011 to March 31, 2012.

\* LCA (Life Cycle Assessment):

Methodology to quantitatively and objectively evaluate the environmental impact at every stage of a product's life from acquisition of resources to production, transport, usage, and disposal

\* REACH regulations:

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

# Saving energy helps reduce CO<sub>2</sub>

JVCKenwood 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.

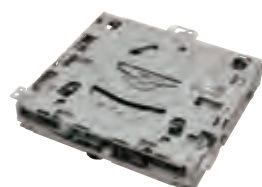
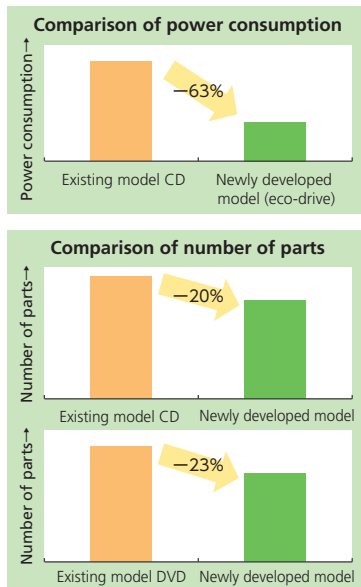
◀ Designers working on mechanical components for automotive CD and DVD players examine the waveform of drive motors

## Development of energy-saving products

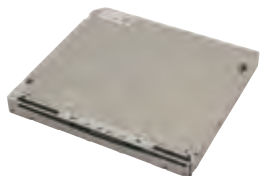
### On-board optical disk drive mechanisms

JVCKenwood makes the mechanisms for on-board CD and DVD players that are delivered to many automobile manufacturers via the manufacturers of car stereo equipment.

Their quality and competitive pricing are recognized by many manufacturers. In June 2011, Delphi gave us the Delphi 2010 Above and Beyond Award. A month later in July, Robert Bosch presented us with the Bosch Supplier Award for electric and electronic parts. We changed the electric circuitry in our newly developed mechanism for on-board CD players to the eco-drive circuitry to reduce the power consumption by 63% compared to the existing model. Even though it is a CD mechanism, we reduced the power consumption to lower than the equivalent of a digital audio player (DAP). Plus, we reduced the weight by eliminating 20% of the parts used for the mechanical



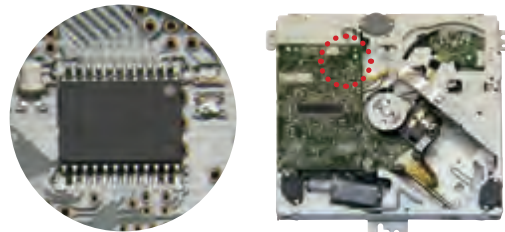
Newly developed CD mechanism



Newly developed DVD mechanism

systems.

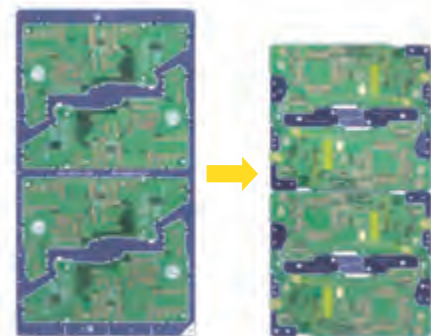
We also developed new mechanisms for on-board DVD players that have 23% fewer parts than the existing models.



Eco-drive circuitry

The printed circuit board in the mechanism uses a system LSI for compression from the existing multi-layer (6 layer) circuit board to a dual surface circuit board.

We were also able to greatly reduce the surface area of margin boards\* by increasing the effective surface area of the printed circuit board through cooperative production technology with the mechanism manufacturer at the Kenwood China Plant.



Reduction of surface area of margin boards

\*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.



## Navigation system for compact cars

### NMZK-W62/-BR NMZK-D62

We have been steadily increasing the number of car navigation systems delivered to auto manufacturers based on our ease of operations and our high reliability. Economical driving is fun with functions for setting hidden characters in the own-car icon depending on the eco-driving track record and other functions that support eco-driving by calculating expected fuel consumption for a route. Even in areas where FM and optic beacons cannot be used, our system is useful for planning eco-driving in a wide area because traffic information can be acquired by connecting via an iPhone with a special application.



## Amateur radios

### TM-281 (overseas model)

The Kenwood brand professional wireless radio has the second largest share of the market. This equipment delivers more than just the high reliability and durability comparable to real professional equipment, it is loaded with the know-how garnered in the field of professional radios. Power consumption for receiving/standby was reduced by 25%. Weight was greatly reduced by using a printed circuit board that is shielded, rather than using a cast aluminum shield to prevent circuits from the radio waves emitted from outside equipment, which is normally used for radios.



Shielded printed circuit board



## Image transfer system powered with solar panels

### NEXEDGE

We developed an image transfer system that is capable of transferring images and data using NEXEDGE, a Digital Land Mobile Radio. This system can be used in dangerous locations where there is no electric power or communications infrastructure because it is equipped with solar panels.

It uses motion sensors for recording images and has a highly sensitive camera for capturing images in moonlight at night. By going through a NEXEDGE base station connected to the Internet, it is possible to monitor the other side of the planet in real time.



## Professional 21-inch LCD multi-format monitor

### DT-E21L4

This LCD monitor is intended for production editors and broadcasters. It is lightweight and handles DC power so it can be used in the field or in the studio. We produced great energy savings to reduce standby power consumption by 82% and operating power consumption by 47% compared to existing 20-inch models. To do this, we optimized the user interface design and used a single chip IC for the image signal processing circuit and an LED back light LCD panel.



Single chip IC image processing circuit

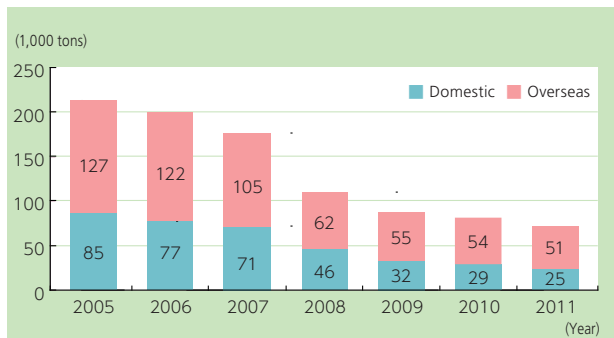
## Office activities to save energy

### Energy-saving activities

The JVCKenwood Group is continuing to reduce greenhouse gas emissions, particularly from CO<sub>2</sub> emissions resulting from energy consumption, based on our FY2011 targets.

We were able to reduce usage compared to last year by careful control of air conditioning, turning off lights at lunch time, using inverters for lighting, and other less specific methods lead to increased energy savings through more efficient office work and improved productivity at our plants.

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



### Summer time energy saving measures

The JVCKenwood Group developed three strategies to reach 15% reductions in peak electric power usage compared to the previous year's power savings in the summer of 2011.

- ① Rotating days off for plants and offices
- ② Promoting usage of paid holidays
- ③ Controlling lights and air conditioning by showing people how much electric power plants and offices are using

We presented the information in real time via our intranet to let people see how much power is being used.

The results of this were the ability to clear our goals by wide margins with peak power reductions compared to the same month of the previous year of 27% in July, 28% in August, and 27% in September.



Power consumption information presented on our intranet

### Home activities to save energy

The JVCKenwood Group is also working in cooperation with employee households to protect the environment. At Kenwood Yamagata, almost all employee households participated in a "Declaration to save energy at home," challenging families to reduce power consumption by 15% compared to the same month the previous year.

Wide reaching calls went out to participate in the Tanabata Lights Down event, which had people simultaneously turn off their lights from 20:00 to 22:00 on July 7. In the future, we plan to continue activities to save energy at home as well as at work.



Kenwood Yamagata employee receiving award for reducing electric power consumption



Family of employee participating in Tanabata Lights Down

VOICE



At our house, we really took notice of the energy savings activities at home because our utility costs had really gone up after we had a baby. We are having fun with our energy saving lifestyle by killing two birds with one stone. We are spending more time together and reducing electricity consumption by developing the habit of the whole family hanging out in a single room.

Global Production & Procurement Division,  
Yokosuka Plant Production Department, **Shinji Takeshita**





Eco Promotion Plan ②, 3R Activities

## Contributing to a sustainable society through 3R activities

The JVCKenwood Group considers environmental resources when developing products and promotes the 3Rs to reduce waste and recycle resources to contribute to a sustainable society.

◀ Optical designers working on 3R designs for lenses

### Promoting 3R designs

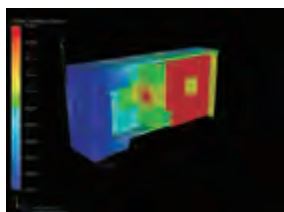
#### Camcorder GZ-V570

The JVC brand camcorder Everio series is popular with customers around the world with sales over 1,640,000 units last year.

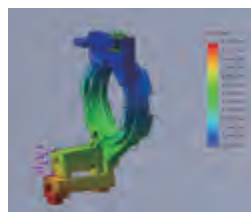
3R design is used from the basic design stages where various technical analyses and simulations are done, the number of components are reduced to make it more

compact and lighter, and it is designed to be easy to dismantle for recycling.

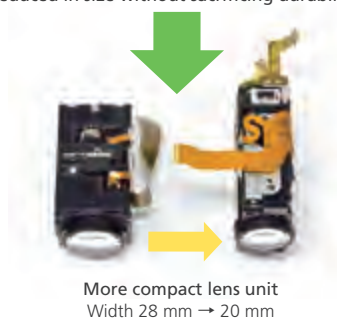
Ultra thin batteries can now be used due to low energy electronic circuitry, performance is improved while size is reduced by about 41% and weight is reduced by about 32%.



Heat distribution and air flow can be visualized with heat analysis



Strength analysis allows lens units to be reduced in size without sacrificing durability



VOICE

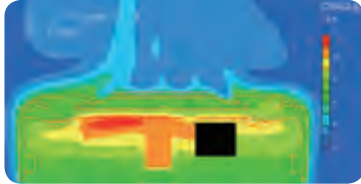


I am promoting 3R design by assessing products based on studies of regulatory systems related to design from countries around the world. At the design stage we leverage the power of 3D-CAD analysis tools to reduce the number of parts in a product, create visualizations for ease of disassembly, and design packaging according to legal regulations. I imagine that we will see some effects that may also reduce work time and design time as we become more familiar with these tools. I intend to work closely with the various divisions in this way in the future also.

Human Resources Management &  
Administration Division, Environmental Sustainability Office, **Hiroyuki Arawaka**

### In-car audio amplifier X500-1

The Kenwood brand boasts the top share in the car audio market in America which is a car audio heaven. The entry model X500-1 monaural power amp, was reduced in size by about 40% by optimizing heat dispersal with heat analysis technology and improving efficiency of power circuits, while maintaining the sound and performance compared to the previous model. The compactness helps reduce environmental impact by reducing packaging materials and increasing shipping efficiency.



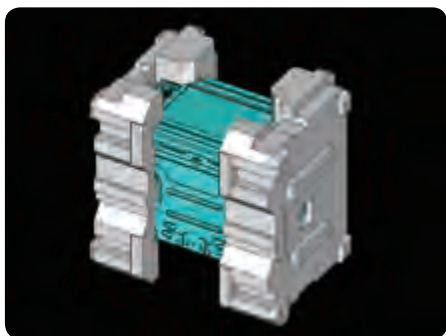
Heat analysis technology is used to optimize component layout which allows for a smaller radiator



X500-1 (top) and previous model (bottom)

### Car navigation MDV-434

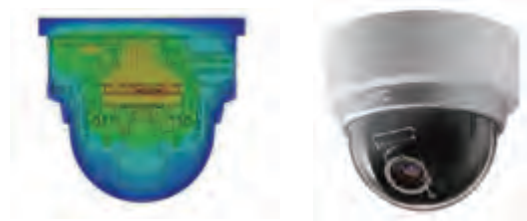
Packaging materials are used on all our products to protect them from vibration, falls, and when stacked for shipping. Simulations are done again and again using 3D-CAD analysis technology to find the optimal shape and materials for packages. The packaging materials of the MDV-434 (domestic model) was reduced 8% in size and 14% in weight.



Using analysis technology to simulate optimal packaging materials to reduce package size

### Dome shaped CCTV camera TK-C2201

CCTV cameras that provide 24 hour monitoring of public facilities, businesses, and schools must be compact and consume little power. Heat dispersal and air flow are visualized by using heat analysis technology making it possible to reduce size by 61% and power consumption by 50% compared to the previous model. We changed the shape of the packaging materials to assure they were strong enough to pass the G force shock in the drop test and got a 42% reduction in volume and are using pulp molds.



Visualizing heat dispersal and air flow by using heat analysis technology to reduce size

### Home theater sound system TH-LB3

This is a bar speaker that is connected to a TV to provide the enjoyment of intense theater sound. We made it compact but kept the high quality sound by further improving the environmental design of the previous model, which was known for being compact and having high quality sound. It is 30% smaller and 10% lighter than the model developed in 2010.





## Japanese recycling conformance

### Containers and packaging recycling

The JVCKenwood Group is actively recycling based on the relative laws in Japan.

The Containers and Packaging Recycling Law was enacted in April 2000, and the JVCKenwood Group calculates the prospective paper, 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 secondary battery recovery program

The JVCKenwood 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 the 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.



### Building a recycling system for INA copier paper

As a member of the Recycling System Research Group established by local businesses, Kenwood Nagano has been building an INA copier paper recycling system since 1998. The INA copier paper recycling system is different from regular paper recycling. It is the ultimate in recycling systems in which members of the Recycling System Research Group and government agencies cooperate to return and recycle paper to the region in which it is produced.

Kenwood Nagano is handling locations specified as

collection points for disposal of high quality paper in the local region.

This INA copier paper recycling system made a big contribution to preserving the natural ecology in 2010 by collecting 28 tons of old paper, which is the same as 560 trees\*.

\*One ton of old paper recycled in this system equals the pulp created from 20 eight-meter trees with 14 cm diameter trunks. From materials provided by the Ministry of the Environment



#### Recycling system for INA copier paper



### Effectively using waste from DVDs and CDs

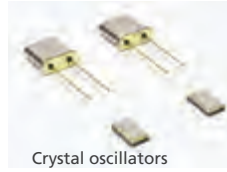
Victor Creative Media does not waste even small amounts of materials. DVDs and CDs that are rejected during the molding and printing process are collected and pulverized with special equipment and then passed off to an outside company where they are recycled into plastic products.



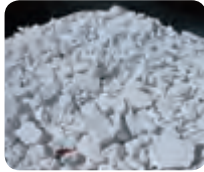
Disks that fail the quality inspection are pulverized and recycled as cases for smart phones

## Effective use of sludge produced during the production of crystal oscillators

Kenwood Devices mainly develops and produces crystal oscillators and products with crystal applications. The sludge produced during the etching part of the production process is handed off to an outside company where it is reused to make products such as gravel or bricks.



Crystal oscillators



Sludge produced during the etching of crystals is recycled as bricks and other products

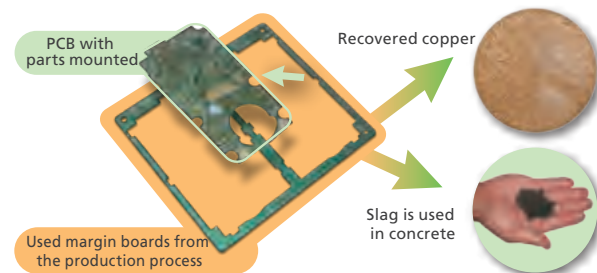
heating in the winter. Materials being used are recyclable ecological materials that are environmentally friendly and do not produce dioxin.



Waste from the production of furniture is recycled as thermal energy

## Effective use of waste from printed circuits

At Kenwood Yamagata, margin boards that are discarded in the product manufacturing process are recycled as copper or as slag to be mixed into concrete by outside contracted recycle specialists.



## Effectively using waste from furniture

Victor Interior Furniture is effectively using waste so it does not waste even small amounts of materials. Waste materials produced during the production of furniture are chipped and used as fuel in the boiler. This thermal recycling produces heat that is used to dry paint and for

## Overseas recycling conformance

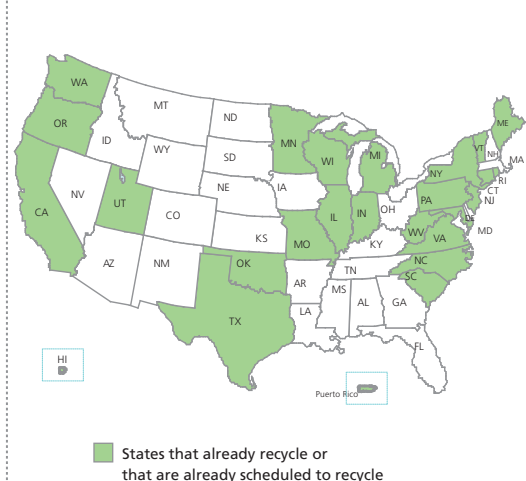
### EU and USA recycling

The JVKenwood Group is committed to recycling in full compliance with EU's WEEE (Waste Electrical and Electronic Equipment) directives and the various regional electrical and electronic waste laws that are spreading to all the states in the US. We are optimizing the entire system promoting 3R designs. The targeted 3R products are configured with fewer parts and designed to be easy to recycle in consideration of the environmental risk and recycling load.

#### European WEEE Recycling Conformance



#### US Recycling Conformance by State

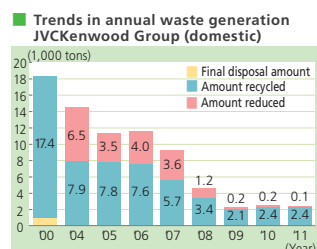




## Reducing waste

### Continuously reducing waste through zero emissions (domestic)

The amount of waste produced by the JVCKenwood Group in Japan had an influence on the revamping of our domestic network, but since fiscal 2009 we have moved to below 15% of the levels of fiscal 2000. We have reduced the volume of waste compared to last year by continued recycling of resources and separation of our garbage and reduction of waste. We are also continuing with zero emissions as we move towards a 99% recycling ratio.



**Breakdown and composition of waste for FY2011 JVCKenwood Group (domestic)**

	Amount created (tons)	Composition ratio (%)
Dirt (inorganic, organic, and mixed)	222	8.7
Paper and wood waste	1,301	50.8
Waste plastic	577	22.6
Waste liquids (waste oils, acids, and alkalis)	37	1.4
Metal filings (ferrous and non-ferrous)	327	12.8
Other (animal and vegetable residue, etc.)	95	3.7
<b>Total</b>	<b>2,559</b>	<b>100.0</b>

### Successfully separating and recycling garbage

Yokohama City recognized two of the JVCKenwood Group's facilities, Head Office & Yokohama Business Center and Hakusan Business Center, in Yokohama with awards for being Offices with Excellent 3R Activities for their superior efforts at 3R.

This is our fifth consecutive year to receive this recognition.

In the future, we will continue to work pro-actively in our 3R activities in all the group companies.



Award ceremony



Head Office & Yokohama Business Center (left) and Hakusan Business Center (right)

## Reuse

### Measuring equipment at in-house flea market

To make effective use of unused equipment and surplus products, we uploaded some "Reuse Notices" to the intranet. In 2011, we held an in-house flea market by uploading about 400 "Reuse Notices" to the intranet, most of which were measuring equipment that became available when production facilities were shifted overseas.



Designer gets a direct current stabilizing power supply

### Providing winter clothes to factory employees visiting from Thailand

Invitations were issued throughout the company to provide heavy winter clothes for free to Thai factory workers who had come to work at the Yokosuka Business Center starting on December 5, 2011. They came as an alternative to working at the JVC Thailand Plant, which was damaged by the large flood. Many employees approved of this request, and they provided many winter clothes.



Lots of winter clothes were provided

VOICE



A rule in our house is to not keep anything in storage. Putting old clothes in the dresser makes them unnecessary supplies, but cut them up with scissors and they are a resource.

I use my old clothes to wipe my babies spills or runny nose and I try to limit my use of tissues as much as possible. This reduces garbage, and it is gentle to our skin. My daughter likes the bib (in photo) I made from one of my husband's shirts. In our house, every month is 3R promotion month.

JVC WORKERS UNION Yuko Tsuchiya



Eco Promotion Plan ③, Appropriate Management of Chemicals

## Promoting lower environmental impact through global chemical management

The JVCKenwood Group has established a comprehensive chemical management system to help reduce our environmental impact in compliance with environmental laws in the countries where we produce and sell products.

◀ Designer checking the chemicals included in products

### Comprehensive system to manage chemicals in products

#### Management system using an IT system

To handle the chemical regulations of each country without exception, starting with the European REACH regulations, it is necessary to have a suitable grasp of the chemical information for the parts and materials used in products. At JVCKenwood Group, we use a new IT system to build a system centered on an environment database that manages chemicals comprehensively.

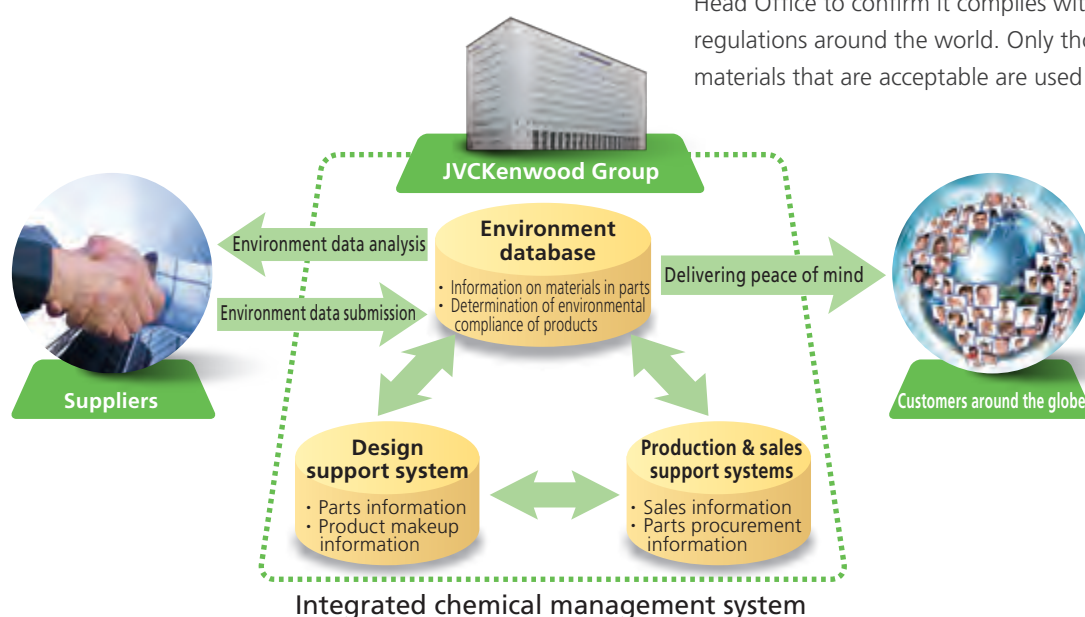
#### Cooperative system with suppliers

Comprehensive management of chemicals is done with the cooperation of our suppliers, from whom we purchase parts and materials to manufacture products. Our suppliers submit information on the chemicals in the parts and materials that we purchase.

In addition, we also check the environmental management systems of our suppliers, such as the state of their manufacturing systems and quality control.

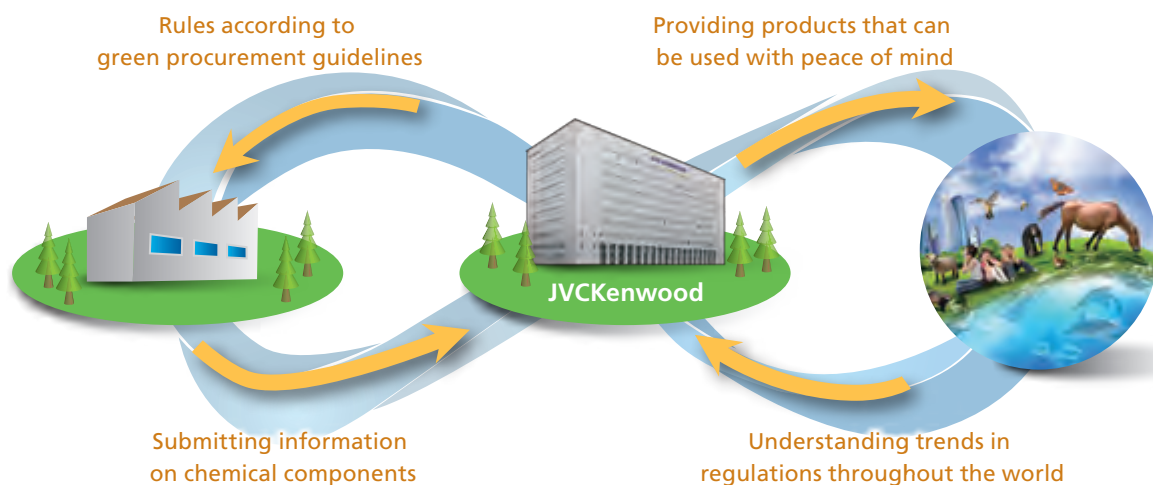
#### Checking information on chemical components

The information on chemical components submitted by our suppliers is checked by the examination section at our Head Office to confirm it complies with environmental regulations around the world. Only those parts and materials that are acceptable are used for production.



We are constantly expanding these activities to bring our customers products they can use with peace of mind into the future.





Constantly working to provide products that can be used with peace of mind

## Understanding global environmental regulations and distributing them in the group

Environmental awareness is rising in every country around the world, and examination and discussion of enacting environmental laws is gaining momentum by the day.

JVCKenwood receives information on the latest legal trends from around the world from information sites, participation in industry associations, and overseas factories and sales companies. Information about the



Lecturing on the control of chemicals in products as part of business activities



Spreading the word on environmental laws and regulations throughout our operations

establishment and revision of laws is distributed to each operating division and JVCKenwood's green procurement guidelines are revised and distributed to suppliers.



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

## Submitting information on chemical components

Our suppliers submit information on the chemical components of parts and materials based on the content of JVCKenwood's green procurement guidelines.

Example submission of chemical component information

VOICE



My job is the compliance of our products with the world's safety regulations, EMC, and radio wave regulations. Collecting information is difficult, and translating and understanding the various languages consumes a lot of time, but the appeal of this job is being able to contact people in many countries and industries to collect the information. Environmental regulation is a different area, but I really understand everyone's efforts. Let's work hard as we work together.

Strategic Research & Development Division, Planning Office, Yukiko Kawauchi

## Reducing materials that have an impact on the environment and lowering environmental risks at business centers and plants

### Detoxification of polychlorinated biphenyls

In the past, polychlorinated biphenyls (hereafter PCBs) were used for insulation in heavy electrical equipment. However, PCBs are harmful to humans and we are now legally required (by the Law Concerning Special Measures against PCB Waste) to eliminate the toxic materials by 2016. The JVCKenwood Group started detoxification at facilities for processing insulator fluids for trace amounts of PCB in October 2011 by removing oil with traces of PCB from the heavy electrical equipment that contains PCB, which are stored at our Head Office & Yokohama Business Center. This work satisfies legal requirements



Trace PCB Storage for contaminated materials  
Head Office & Yokohama Business Center



Removing insulation oil that contains traces of PCB



Facilities for removing insulation oil that contains traces of PCB



Incineration at over 1100°C

and eliminates the risk to the environment of PCBs leaking at the Head Office & Yokohama Business Center. In the future we will continue to work to reduce the amount of chemicals that impact the environment by implementing detoxification of electric equipment that contains PCBs at every level of our companies.

### Emergency response

Currently the JVCKenwood Group has six locations, including the Head Office & Yokohama Business Center, in which heavy electric equipment that contains PCBs and materials contaminated with PCBs can be properly stored and detoxified.



Disaster prevention training to prevent the spread of contamination

Moreover, we are working to reduce environmental risks by periodically conducting 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. Similarly, we

#### Regulations and procedures for preventing accidents and accidents expected to affect the environment

Materials that impact the environment	Accidents expected to affect the environment	Regulations and procedures for preventing accidents
Kerosene	Accidental leak while tanker truck is filling underground tank	Managing operation of environmental facilities (underground storage tank location)
Chemicals for water treatment · Polyaluminum chloride · Hydrochloric acid & sodium hydroxide	Accidental leak while tanker truck is filling storage tank	Emergency procedure for transport of chemicals
Industrial waste subject to special control · Waste acid · Waste oil (organic solvents)	Accidental leak while tanker truck is filling underground tank	Emergency procedure for transport of chemicals
Organic solvents (acetone)	Accidental leak of dangerous materials	Regulations for emergency response Procedure for emergency response at indoor storage of dangerous materials
Lubricants (hydraulic oil) Adhesives	Accidental leak of dangerous materials	Regulations for emergency response Procedure for emergency response at indoor storage of dangerous materials

are working to prevent, mitigate, stop re-occurrences of accidents and emergencies that affect the environment by establishing procedures to handle emergency situations and accidents that occur in various environments.

### Managing PRTR chemicals

Nickel was the only PRTR material handled in volumes greater than one ton by the JVCKenwood Group in fiscal 2011. In the future, we will continue to manage the volumes used and stored to promote further reductions and will recycle to reduce how much is released and transported.

PRTR: (Pollutant Release and Transfer Register)

### Plans for suppressing VOC emissions into the atmosphere

The JVCKenwood Group is participating in the industry's independent action plan to suppress release of VOC into the atmosphere and while the total volume of emissions has been aggressively reduced, we will continue to promote further reductions.

VOC: (Volatile Organic Compounds)



# Global Environment Dialogs

Due to the efforts of the JVKenwood Group to reduce overall environmental impact through promotion of energy conservation, 3R activities, and appropriate management of chemicals, we can see the results in a more secure and beautiful global environment.

◀ The nine-spined stickleback (*Pungitius pungitius*) is confirmed to be living in the Shoryuji River in Tsuruoka City in Yamagata Prefecture.

## Planting trees in the Horqin desert in China (JVC WORKERS UNION)

Since 1994, we have been planting trees in the Horqin desert in cooperation with the people at a local NGO in an effort to make China's deserts green.



## Maintaining woodlands (Kenwood Yamagata)

Participating as part of the staff maintaining the woodlands near the Children's Nature Exhibit in Kimbo Yamagata Prefecture.



## Clearing brush in the Association Forest (Victor Creative Media Co., Ltd.)



Helping to clear brush in the Association Forest at Yabitsu Ridge as a member of the Kanagawa Prefecture Yamato Association.

## Biotope Dragonfly Pond

(Head Office & Yokohama Business Center)

Operating the Dragonfly Pond as a biotope since 2003, as part of the "Keihin Forest Creation" project which is sponsored by Yokohama City.



## Cleaning up the mouth of the Aka River (Kenwood Yamagata)

Holding the Aka River Cleanup every year. Reporting analysis of garbage floating in the river to the JEAN Cleanup Project office.



## Researching water quality and marine-life (Kenwood Yamagata)

Researching water quality and marine-life with children and their parents during summer vacation in the Aka River, Uchi River, and the Shoryuji River, which are rivers that flow through the area. We confirmed that the nine-spined stickleback (*Pungitius pungitius*) a small freshwater fish was alive in the Shoryuji River system.



## Families investigating water quality (Kenwood Nagano)

Researching water quality in the wetlands of the Tenryu River during summer vacation. Locations that were also reported at a presentation.



## Environmental picnic in the Tenryu River system (Kenwood Nagano)

Every year employees and their families (especially elementary school age children) gather in three locations along the Tenryu River for Environmental picnics in the Tenryu River system to beautify and learn about the environment.



# JVCKENWOOD

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