

Business Overview of the JVCKENWOOD Group

Aiming to become a customer value creator solving customers' issues with our accumulated technologies and knowhow



Automotive Sector (Aftermarket Business and OEM Business)

The Automotive Sector mostly develops car navigation systems, car audio systems, dashcams, and in-vehicle devices. It is divided into the Aftermarket Business, which provides products to consumers through volume-sales retailers and distributors, and the OEM Business, which is operated by the Dealer-Installed Option Business Unit and Factory-Installed Option Business Unit that provide products through automobile manufacturers and dealers.



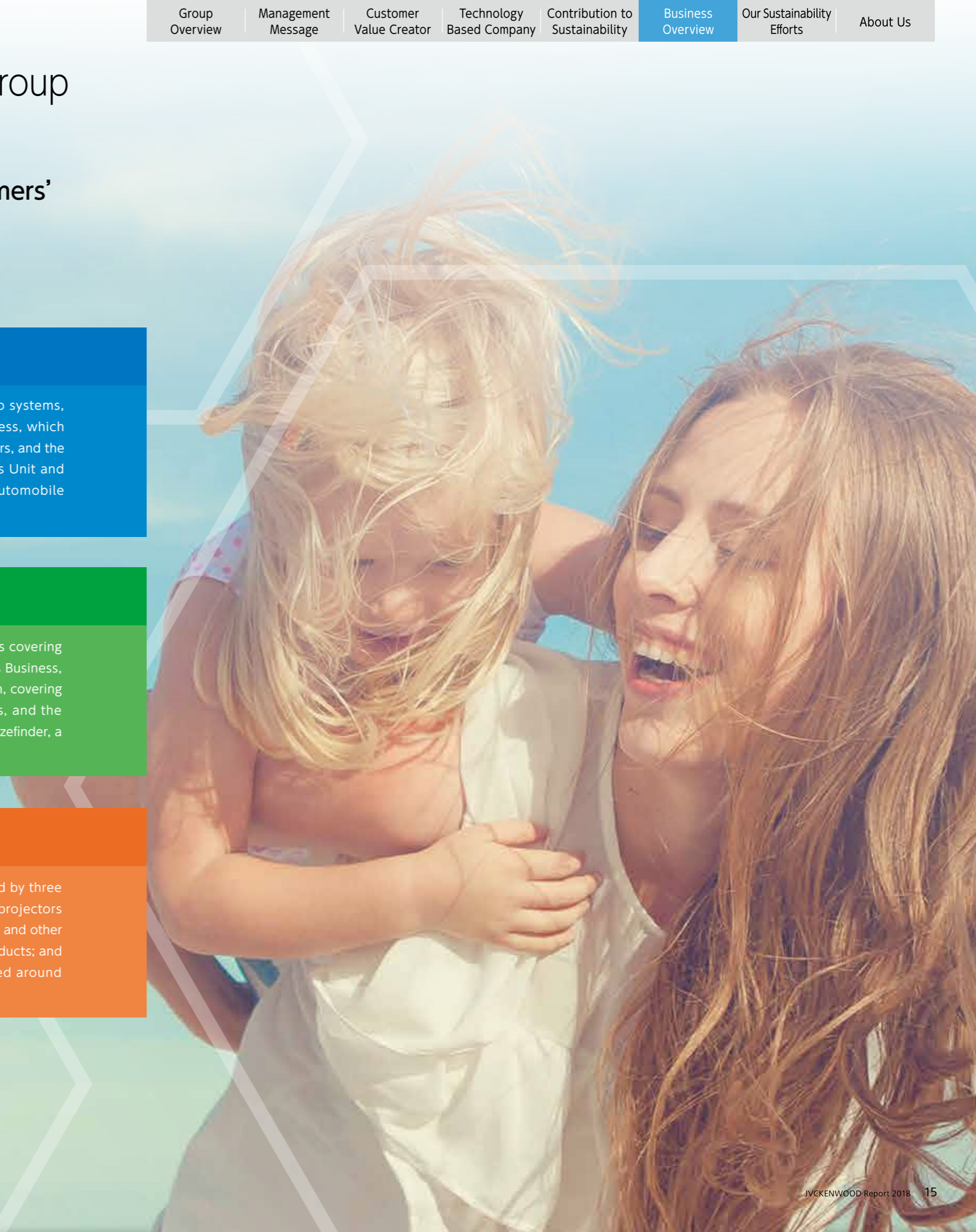
Public Service Sector (Communications Systems Business, Professional Systems Business and Healthcare Business)

The Public Service Sector consists of the Communications Systems Business covering professional radio systems and amateur radio sets, the Professional Systems Business, which is operated by JVCKENWOOD Public & Industrial Systems Corporation, covering security camera systems, professional audio systems and other products, and the Healthcare Business covering medical image display monitor solutions and Gazefinder, a gaze tracking system.



Media Service Sector (Media Business and Entertainment Business)

The Media Service Sector consists of the Media Business, which is operated by three business units, namely, Solutions covering professional-use video cameras, projectors and other products, Lifestyle covering commercial video cameras, headphones and other products, and Imaging Devices covering image display devices and other products; and the Entertainment Business, which handles the Content Business centered around JVCKENWOOD Victor Entertainment, Corp., and the OEM Business.



Automotive Sector



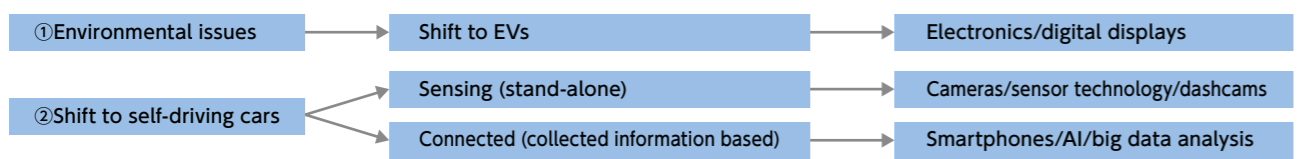
Main Products

Car navigation systems, car audio, display audio systems, dashcams, in-car cameras, in-car optical pickups, CD/DVD mechanisms for vehicles, speakers, amplifiers, antennas, and other products

Director of the Board,
 Managing Executive Officer in Charge of Automotive Sector,
 General Executive of Automotive OEM Business Division,
 COO EMEA
 (Europe, Middle East and Africa)
Masao Nomura

Aiming to contribute to a safe, secure, and comfortable motorized society

The automobile industry is being demanded to address future environmental issues (CO₂/NO_x emission regulations) and to adapt to the coming self-driving society. To manage environmental issues, advanced electronics technologies are needed to accommodate the shift to electric vehicles (EVs), and conventional speedometers and other instruments are being digitalized. In the self-driving society, vehicles will also need to be equipped with cameras and various other sensing technologies. In addition, being connected to the Internet will enable in-vehicle infotainment systems to show vehicle information and traffic information by utilizing cloud services. Furthermore, the application of artificial intelligence (AI) will allow vehicles to provide drivers with more accurate and appropriate information and services.



With these advancements in automobiles, the importance of communication between vehicles and drivers (HMI: Human Machine Interface) is increasing and hence the automobile industry is facing the need to develop new technologies. Responding flexibly to these changes, JVCKENWOOD aims to contribute to a safe, secure and comfortable motorized society through solutions and services utilizing our visual, audio and communications technologies that will give us an edge in car navigation, dashcams and other products.

Aftermarket Business

In the Aftermarket Business, JVCKENWOOD has the Saisoku-Navi series of car navigation systems featuring high-contrast image quality, high-speed response and high-quality sound reproduction, which has seen its market share grow in Japan. We also have car navigation systems and display audio systems that enjoy leading market shares in the U.S. and Europe, and these are compatible with Apple CarPlay and Android Auto™, which enable car-mounted equipment to be connected to the Internet. These products are highly acclaimed in the market.



"Saisoku Navi" MDV-Z905W

Dashcams that can be retrofitted to existing vehicles are becoming hugely popular in the wake of growing safety and security awareness among automobile users. JVCKENWOOD's dashcams have captured an industry-leading share in Japan by combining our existing in-car technologies and imaging and optical technologies to deliver high functionality, high reliability and high-quality video recording, and by incorporating driver assistance features to help ensure safe driving. Going forward, we will carry out full-scale expansion in overseas markets and achieve enhanced functionality by incorporating communication features for the shift to connected vehicles.



Dashcam DRV-830

OEM Business

In the OEM Business, JVCKENWOOD is strengthening its proposal activities for car navigation and dashcams in the dealer-installed option field. We are winning new orders for large projects mainly from leading Japanese automobile manufacturers thanks to our strong reputation and excellent product performance in the aftermarket. In the factory-installed option field, we are developing display audio systems specifically designed for certain vehicle models, which are selling well.



In-car devices by ASK Industries S.p.A.

JVCKENWOOD is also working on the development of car-mounted cameras and various sensor technologies, which are expected to show growth with the shift from conventional vehicles to EVs and self-driving vehicles. By developing in-vehicle optical related businesses that leverage the visual, audio and communications technologies of the JVCKENWOOD Group as well as products that utilize HMI technologies, we will improve our proposals for next-generation vehicle interiors and try to expand our business.

Looking to expand our factory-installed option business, we will collaborate with Shinwa International Holdings Limited, a tier-2 manufacturer of CD/DVD mechanisms for vehicles which became a subsidiary in June 2013 (now JVCKENWOOD Hong Kong Holdings Limited), and ASK Industries S.p.A., a tier-1 and 2 supplier of car-mounted speakers, amplifiers, antennas, and cable products which became a subsidiary in April 2015. Together, we will win new customers by utilizing each other's customer networks and production bases. We will focus our efforts on strengthening business particularly in China, which is the largest automobile market in the world and has great potential for growth.



Illustrative image of the next-generation car interior

Public Service Sector



Main Products

Professional radio systems, amateur radio systems, security cameras, broadcasting equipment, medical image display monitors, exsome analysis systems, Gazefinder, and other products



Executive Officer in Charge of Public Service Sector
Akira Suzuki

Communications Systems Business

In the Communications Systems Business, JVCKENWOOD provides highly reliable professional radio systems to the public safety market (e.g. police, fire departments and ambulance services), the public service market (e.g. electricity, water and gas) and the private sector market (e.g. hotels and retailers) around the world. JVCKENWOOD boasts a high market share in these areas.

Going forward, JVCKENWOOD will step up its efforts in the North American public safety market, which is expected to expand continuously, by strengthening cooperation with Zetron, Inc. and EF Johnson Technologies, Inc., its communications system subsidiaries in the U.S., and by aiming to provide total solutions for professional radio systems conforming to Project 25 (P25), a digital radio format for North America.

We will also deploy the NEXEDGE® series of professional digital radio systems which conform to the NXDN™ digital protocol around the world, as we aim to provide digital radio solutions to issues confronting a wide range of users, including those in the public service market.



JVCKENWOOD's DMR-compliant digital radio communications systems adopted by MotoGP™

In addition, an Italian company Radio Activity S.r.l., which produces repeaters and other products conforming to Digital Mobile Radio (DMR), a digital radio format in high demand as a replacement for analog radio in the private sector market and elsewhere, became our subsidiary in January this year. With the shift to broadband in radio infrastructure, we have entered into a capital alliance with a U.S. company called Sonim Technologies Inc., a leader in the professional LTE smartphone business, and launched products in collaboration with them, starting with the U.S. and Japanese markets. Going forward, we will make an effort to address the diversification of radio communication methods and services that are developing worldwide.



Professional LTE smartphone by Sonim Technologies Inc.

Professional Systems Business

In the Professional Systems Business, operated by JVCKENWOOD Public & Industrial Systems Corporation, we aim to bring security, safety, comfort and trust as a solution provider helping customers solve their issues. We produce and sell highly reliable video and audio systems based on our advanced technologies and knowhow, aiming at the education, public sector, distribution, social infrastructure, amusement facility and other markets, and also offer one-stop total solutions such as system proposals and designs to resolve customers' issues, high-quality construction, and maintenance and operation services ensuring long-term safe use.



Security system/Professional audio system

Furthermore, we actively promote alliances with external organizations and offer a wide range of solutions based on outside-the-box ideas. These include an intelligent security system that enables Intelligent Video Analytics (IVA) of multiple security camera images in real time, as well as the KooNe Space Sound Design Solution that produces a unique space, planned and developed by JVCKENWOOD Victor Entertainment, Corp. To promote these solutions to a wider audience and boost sales, we have taken measures such as holding private shows called Solution Fairs since October 2017.



Intelligent Video Analytics (IVA)

Going forward, JVCKENWOOD will strive to strengthen its solution proposal capabilities by offering one-stop solutions, ranging from sales, proposal of systems, and engineering to support services through integrated organization. In addition, we will aim to become a solution provider that meets the needs of customers by proposing solutions based on collaboration not only within the Group but also with external organizations.

Healthcare Business

In the Healthcare Business, JVCKENWOOD handles mammography image display monitors and other radiographic medical image display monitors which realize the highest levels of display performance and stability that medical imaging demands. This is achieved with our unique display technologies. We also provide pathological image display monitors using our unique color management technology.



Medical monitor display

In addition to these monitors, we are trying to expand our imaging business comprehensively in the healthcare field. To strengthen our future business, we are making a full-scale entry into the OR* video solutions business with the acquisition of a German company Rein Medical GmbH in April 2018, and by promoting the commercialization of 4K/8K camera system solutions using our imaging technologies developed over many years.

Moreover, JVCKENWOOD will aim for business growth as we try to solve social issues by developing advanced and innovative testing/diagnostic systems. These include Gazefinder, a gaze tracking system that uses our proprietary gaze tracking technology to identify developmental disorders at an early stage, and an early detection system for cancer incorporating optical disk technologies being developed jointly with the National Cancer Center Japan, Daiichi Sankyo Company, Limited and Sysmex Corporation.



OR imaging solutions by Rein Medical GmbH

*Abbreviation for Operating Room

Media Service Sector



Main Products

Professional video cameras, projectors, headphones, AV accessories, consumer video cameras, home audio, imaging devices, audio and video content/OEM business, and other products

Executive Officer in Charge of Media Service Sector,
General Executive of Media Business Division

Kazuyoshi Hayashi

Media Business

In the Solution Business Unit, JVCKENWOOD is dealing in equipment making use of our video technologies accumulated over many years such as high-definition video cameras, monitors and industrial imaging systems that meet the needs of professional sectors. We also carry out development and sales of high-definition and high-brightness projectors used in flight simulators, planetariums, automobile design, home theaters and other products by installing our unique D-ILA image display devices. Customer needs are rapidly changing as an effect of the diversification of broadcasting and business formats due to the Internet of Things (IoT), the advancement of high-quality video technologies such as 4K/8K imaging, and the expansion of the sports industry ahead of 2020. To respond to these needs flexibly, JVCKENWOOD will not only provide equipment and services but also switch to a solution business that will enable us to promptly meet customer needs through systemization and customization.



Flight simulator



HD memory card camera recorder

In the Lifestyle Business Unit, we conduct development and sales of special-purpose headphones utilizing our unique advanced acoustic technologies, such as Bluetooth® compatible models that deliver high-quality reproduction wirelessly, high-resolution audio models for sports, home audio systems such as the Wood Cone series that feature wooden diaphragms, as well as video cameras with a shift toward proposal-based products including long recording/playback models and all-weather models for expected use in outdoor activities and sports, and cameras for home monitoring.

We also aim to deliver outstanding, completely new products and services such as WiZMUSIC, a sound field customizing service featuring our unique EXOFIELD out-of-head localization sound field processing technology with which headphones provide the same real sound field effect as speakers.

In the Imaging Device Business Unit, JVCKENWOOD is striving to expand its businesses in global markets by increasing external sales and finding new applications for D-ILA devices, achieving full-scale production of Pico devices, and launching next-generation image devices such as head-mounted displays for virtual reality (VR) systems.



Wireless Sports Earphones
HA-ET900BT



Wood Cone Audio System
EX-HR11



Out-of-head Localization
Sound Field Processing Service
"WiZMUSIC"



4K Camcorder
"Everio R" GZ-RY980

Entertainment Business

In the Content Business, centered on JVCKENWOOD Victor Entertainment, Corp. (referred to below as VE), we are looking to enhance our core Music Business by actively seeking and nurturing new artists so that we can continue to create hits even amid major changes in the entertainment industry such as the diversification of user preferences and the expansion of fixed-fee unlimited listening services via digital sound sources. The Victor Rock Matsuri, an annual event launched in 2014, celebrates its fifth anniversary this year. Held in Osaka as well since 2016, this popular live concert features many of the major Victor Entertainment artists.

In the Spatialized Sound Production Business, JVCKENWOOD has developed the KooNe Spatialized Sound Design Solution, which uses a high-resolution audio system to enhance the comfortableness of spaces. In collaboration with JVCKENWOOD Public & Industrial Systems Corporation, we have introduced the system in many locations, such as corporate offices, co-working spaces, libraries, commercial facilities including car dealerships, residential facilities, and medical institutions.



Spatialized Sound Design Solution
"KooNe"

In the OEM Business, which focuses mainly on the production of packaged software such as CDs, DVDs and Blu-ray products, we provide full support from mastering and authoring to the creation of packaged media that meet customers' requests. In 2016, we relocated JVCKENWOOD Creative Media Corporation, a subsidiary engaged in the contract manufacturing of packages, to our Yokosuka Plant in order to enhance the corporate value of the Group as a whole.

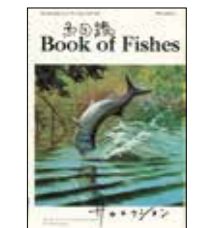
Going forward, we will strengthen the comprehensive capabilities of the Group by linking the appeal of our artists and music to a wide range of businesses and accelerating growth of our overall entertainment business including management, live concerts and events, and merchandising.



Keisuke Kuwata



Gen Hoshino



Sakanaction



Mariko Takahashi



Leo Ieiri

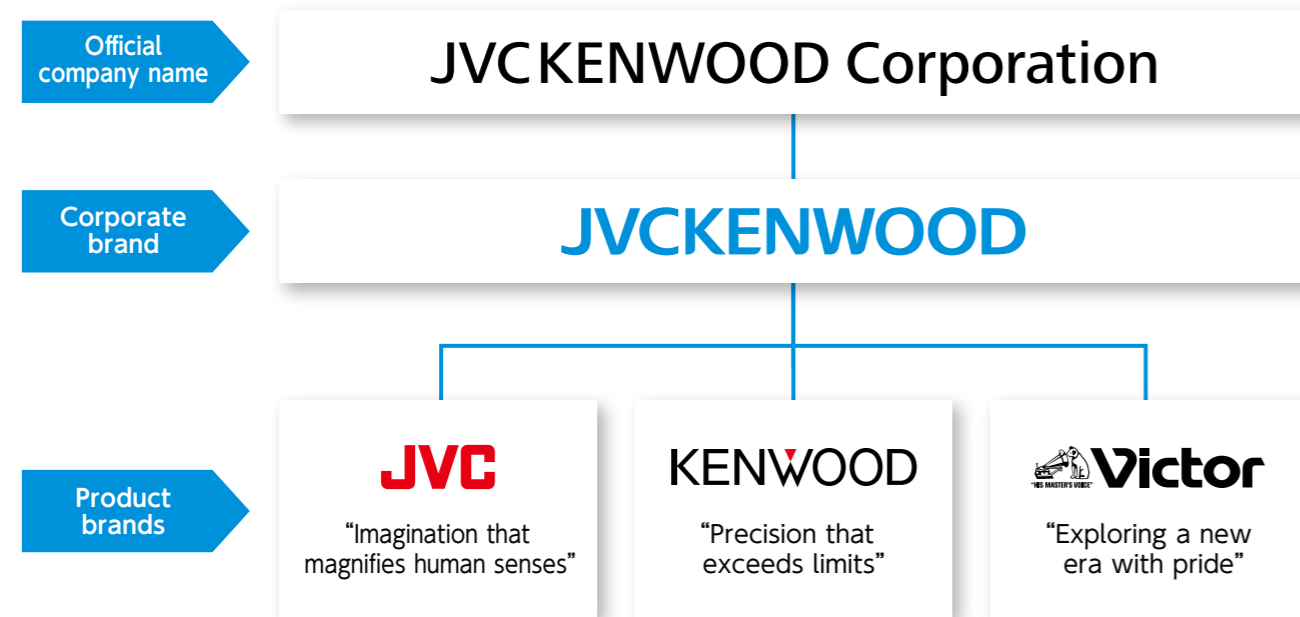


Sakurako Ohara

Initiatives to Increase the Brand Value

Brand Portfolio

The JVCKENWOOD Group is promoting the multi-brand strategy of managing multiple product brands under the umbrella of the JVCKENWOOD corporate brand. We deliver the vision of each brand, namely "Imagination that magnifies human senses," "Precision that exceeds limits" and "Exploring a new era with pride" by providing a customer experience through sponsorship and various promotional activities linked to business activities. We strive to maximize the corporate value of the entire Group by leveraging the strengths of each brand.



Sponsorship Activities

Official MotoGP™ Supplier

JVCKENWOOD's digital radio communications system compliant with Digital Mobile Radio (DMR) international digital radio standards has been adopted as the communication system for MotoGP™, the pinnacle of motorcycle racing, and is being used for communications by about 400 staff involved in operations at each round of MotoGP™. JVCKENWOOD has signed a sponsorship agreement for three seasons from 2018. Taking this opportunity, we will communicate the high reliability of our digital radio communications systems and enhance the value of our brand.



Official Supplier to McLaren

Since signing an official supplier agreement with the renowned McLaren Formula 1 team under the KENWOOD brand in 1991, JVCKENWOOD has had a continuous partnership with McLaren for 27 years through the development and supply of specialized digital communication systems, and by having dedicated engineers provide support at racing circuits. KENWOOD's brand value, developed through this long history, has been passed down to the present day.



Sub-sponsor of Modulo Drago CORSE

JVCKENWOOD supports Modulo Drago CORSE, a racing team participating in the GT300 class of the 2018 SUPER GT series-Japan's premier international motor racing series for touring cars (remodeled stock cars)-as a sub-sponsor, linking business activities in the Automotive Sector with the aim of promoting international motor sports.



Racing car "Modulo KENWOOD NSX GT3"

Supplying AE series headphones to Mario Mola

JVCKENWOOD has signed a sponsorship agreement with top-ranked Spanish triathlete Mario Mola for the supply of AE series sports headphones under the JVC brand. We have launched various promotional activities with him around the world through catalogues, web content and promotional videos.



Mario Mola (The winner of 2016 and 2017 ITU World Triathlon Championship titles)

Promotional activities

We conduct promotional activities using various media channels according to target users and exhibit at various events, which offer important opportunities for communication with the targets. We also leverage owned media including SNS to deliver information in a timely manner. Our aim is to comprehensively enhance each brand value by rolling out promotional activities that highlight the characteristics of each brand.



OOH for N_W label JVC brand headphones at stations



OOH for a KENWOOD brand dashcam on trains



JVCKENWOOD Facebook

JVC Twitter



CES 2018 (The world's largest electronics trade)



NAB 2018 (The world's largest broadcasting equipment exhibition)



IWCE 2018 (The world's largest exhibition and trade event for professional wireless communication equipment/systems)