

Musical Instruments Business

The musical instruments business is the Yamaha Group's core business in which it boasts the No. 1 share in the global musical instruments market. In this business, we aim to further increase profitability through technological development and marketing activities that take advantage of our business scale.

Kimiyasu Ito
Operating Officer
Executive General Manager of Musical Instruments Business Unit

Business Overview

Since its establishment, the Yamaha Group's core business has been the musical instruments business. In this business, we possess numerous core technologies related to sound and music that we have cultivated over many years. We focus on the development of acoustic instruments, such as traditional pianos and wind, string, and percussion instruments, and digital musical instruments that leverage electronic technologies. In addition, we also place emphasis on the development of hybrid instruments that meld both acoustic and digital technologies. In recent years, we have been utilizing AI, *kansai* (emotional) engineering, and simulation technologies to take on challenges in the digital network environment and other new domains. Through our product lineup and global sales and service structure, which also includes the music school and software content businesses, we have secured a position as the world's leading comprehensive musical instruments manufacturer.

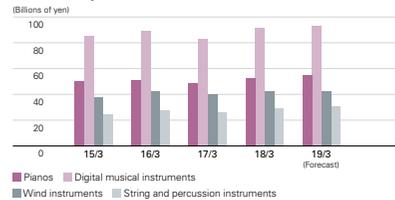
Operating Environment

In terms of the market environment for the musical instruments business, although the Japanese market is stagnating as the population continues to decline, we are realizing stable growth on a continuous basis in the markets of Europe and the United States. In addition, we have recently been achieving a high rate of growth in the Chinese market. In emerging countries and other markets, we recognize a strong potential for growth despite uncertain factors such as the impact of the macro economy. By product, in addition to stable growth in pianos and wind instruments, we anticipate the further growth of string and percussion instruments, centered on guitars, as well as digital musical instruments. While our competitors differ by instrument, we continue to compete against mostly the same companies in our mainstay product of keyboards, and we have been gradually expanding our market share for this product.

Sales / Operating Income / Operating Income Ratio



Sales of Major Products



Major Product Conditions and Primary Competitors

	Conditions of the Market and at Yamaha	Primary Competitors
Pianos	Continued high-level growth in the major market of China, with stable growth in the markets of developed countries. Also, sales of hybrid products increasing	Steinway & Sons (Germany and the U.S.); Guangzhou Pearl River Piano Group Co., Ltd. (China); Kawai Musical Instruments Manufacturing Co., Ltd. (Japan)
Digital musical instruments	Growth in each market for digital pianos supported by educational and hobby-related demand, with lineup for these products expanding	Casio Computer Co., Ltd., Roland Corporation, and Kawai Musical Instruments Manufacturing (Japan)
Wind instruments	Stable growth primarily in emerging countries supported by demand from schools and bands, anticipated growth in China going forward	Conn-Selmer, Inc (the U.S.); Buffet Crampon (France); Jupiter Band Instruments, Inc. (Taiwan)
String and percussion instruments	Expanding demand in China and emerging countries and favorable reputation of new concept guitars. Numerous competitors	Fender Musical Instruments Corporation, Gibson Brands, Inc., C.F. Martin & Co., and Taylor Guitars (the U.S.)



Our Business Strategy

Competitive Edge

- R&D and technological development that emphasizes dialogue with users
- Sales and service network that spans around the globe, product development and design that considers the characteristics of each market
- Deep understanding of music and instruments underpinned by our extensive track record

Business Opportunities

- Further development of music culture in emerging countries following a rise in the standard of living
- Diversifying consumer behavior and marketing activities resulting from the expansion of e-commerce
- Technological development such as digital networks, robotics, AI, and FA

Business Strategies under the Medium-Term Management Plan

- Improve profitability through growth in digital musical instruments, improvement in gross margin, and cost reduction
- Accelerate the enhancement of product competitiveness through pursuing the essence of musical instruments using Yamaha's original technology for "scientific evaluation of assessing human sensitivities" * and offering new value
- *Yamaha's original technology that quantitatively and qualitatively evaluates and analyzes the tacit relationship between human sensitivities and physical properties of a product
- Optimize marketing and points of contact with customers by region to promote brand power awareness and enhance customer interaction

Business Issues to Address

- Discover and incorporate potential music-related needs in emerging countries
- Adopt an accurate approach to diverse sales channels and consumer behavior
- Pursue market segmentation and thoroughly promote product value
- Apply the latest technologies to our products and services and provide more value
- Provide new musical experiences using AI technologies



Progress during Fiscal 2018

- Recorded sales that exceeded last year's levels in all product categories
- Realized significant growth in China and emerging countries
- Developed and sold products with distinctive individuality such as the casual wind instrument Venova™
- Gained approx. 300 new customers in emerging countries
- Accelerated digital marketing activities (with major success particularly in China)
- Deepened relationships with artists

Creating Added Value and Improving Product Competitiveness

Looking from a global perspective, the countries for which we have a significant understanding of market characteristics are still limited to a certain number of developed countries. In addition, as the consumption behavior and needs of our customers diversify, the key to further growth will be to understand these changes while at the same time leveraging our strengths and technologies to create highly competitive and appealing products. In fiscal 2019, we will draw on the newly constructed Innovation Center, an R&D building that brings together our in-house expertise and technologies, to further pursue the essence of musical instruments and centralize our technologies and people. In these ways, we will work to create new customers.

Business Direction in Fiscal 2019

In fiscal 2019, we will steadily advance the development and launch of new product lineups in line with the medium-term management plan. At the same time, we will continue to develop products with distinctive individuality by pursuing the essence of musical instruments. We will also continue efforts to adjust sales prices and reduce costs. By doing so, we will expand our top line and improve profitability.

Strengthening Marketing Activities

Although we have been promoting the development of new products that offer new value in each product category, there have been product-specific inconsistencies in our marketing efforts to promote the value of a product in each market. In regard to products for which we have yet to sufficiently reach the end users, we will work to discover potential needs and offer completely new customer experiences. In doing so, we will step up efforts to promote our unique added value and accelerate sales.

Supporting the Activities of Orchestras and Bands to Encourage Youth Development

In the countries of Latin America, juvenile crime and delinquency are becoming more serious. In response to this issue, local governments are working to provide music education free of charge, and orchestras and bands have been formed to promote the healthy development of young people.

For many years, we have supported the activities of these governments to ensure that an even greater number of young people can participate in these orchestras and bands. In 2014, we commenced the "AMIGO Project" to further strengthen these activities. Under this project, we hold workshops to teach the young performers how to maintain their instruments in good condition by themselves. Also, to provide additional support for putting broken instruments back in working order, we are helping to train repair technicians. Through these activities, we are working to create better environments where young people are able to continue to play music.

Orchestra and band formed under youth development programs



Audio Equipment Business

In the audio equipment business, we offer a wide range of products in both commercial and consumer domains. Going forward, we will expand our business domains and accelerate growth through the combination of technological innovation and enhanced customer support.

Akira Iizuka
Executive Officer
Executive General Manager of Audio Products Business Unit

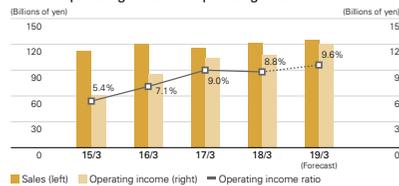
Business Overview

The audio equipment business acts as the second business pillar of Yamaha, a company that develops business centered on sound and music, after the musical instruments business. In this business, we offer AV products for consumers and PA equipment for industrial and facility use as well as for use by music enthusiasts. In addition, we provide ICT devices such as network devices and voice communication equipment. By leveraging not only our strengths in terms of audio networks but also our ICT technologies, we position the audio equipment business as a growth domain, centered on professional audio equipment.

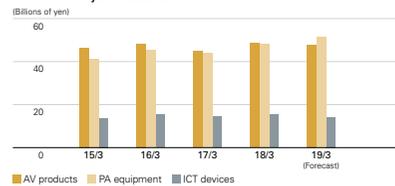
Operating Environment

In regard to AV products for consumers, there has been a rapid shift toward products that respond to streaming transmission, particularly in Europe and North America. Additionally, for PA equipment, the shift toward digitalization has continued, and there has been a greater need for a high level of affinity with IT networks. In light of these circumstances, it is now more important than ever to maintain a high level of reliability and enhance customer support structures. Moreover, we expect a continued expansion in demand for equipment used for remote conferences at corporations and institutions. Going forward, to gradually extend the strengths we have leveraged in the live show and concert hall domains to cover various other settings, we intend to pursue new product development while strengthening our customer support structure and accelerating global growth.

Sales / Operating Income / Operating Income Ratio



Sales of Major Products



Major Product Conditions and Primary Competitors

	Progress	Primary Competitors
AV products	Strengthened the proposal of value from development focused on home theaters to network audio equipment	Sonos, Bose Corporation (the U.S.); Sony Corporation (Japan), etc.
PA equipment	Bolstered amps and speakers, centered on digital mixers, as well as equipment for use in commercial facilities	Harman International Industries (the U.S.); Music Group (the Philippines); Robert Bosch GmbH (Germany), etc.
ICT devices	Expanded mainstay commercial-use routers as well as LAN products	Circo Systems, Inc., Polycom Inc., The Hewlett-Packard Company (the U.S.), etc.



Our Business Strategy

Competitive Edge <ul style="list-style-type: none"> Communications and signal processing technologies that enable support that caters to each market and product type Product lineup that covers both commercial and consumer domains, ability to propose solutions Thorough sales and customer support activities through our sales network 	Business Opportunities <ul style="list-style-type: none"> Increasing demand in emerging countries following economic growth Expansion of sales channels through the introduction of new settings Growing demand for AV and PA equipment and ICT devices in North America Widespread use of smart devices and 5G
Business Strategies under the Medium-Term Management Plan <ul style="list-style-type: none"> Accelerate growth by expanding applications of PA equipment in various settings Pursue evolution of audio systems by progressing and fusing signal processing and network technologies Increase the number of audio contractors who partner with Yamaha by 50% through the reinforcement of our support system Propose unrestricted listening styles tailored to consumer needs 	Business Issues to Address <ul style="list-style-type: none"> Steadily capture demand in the audio equipment market Secure and develop human resources with a high level of expertise regarding professional AV products Enhance brand strength for ICT devices Reestablish position of amateur AV products

Progress during Fiscal 2018

- Recorded sales that exceeded previous year's levels in all product categories
- Developed and sold new products that integrate cutting-edge technologies
- Held displays at stores for audio products, primarily in Europe and North America, and implemented related online campaigns
- Increased support staff for audio contractors, achieved a 37% increase in customers over the past two years

Business Direction in Fiscal 2019

In fiscal 2019, we will work on expanding settings where we offer professional audio equipment, which we position as a growth domain. At the same time, we aim to accelerate growth by boosting the recognition of the Yamaha brand in terms of reliability and peace of mind.

Expanding Settings by Leveraging the Strengths of Our Diverse Technologies

In the audio equipment business, we operate in three areas that vary in nature. While there are some areas where progress has

been less than anticipated, we are steadily growing in all three areas. Particularly, to expand settings where we offer PA equipment, we will draw on our high level of fundamental technologies to enhance our product lineup and systems from the perspective of providing solutions that meet the needs of our customers. While the business environment remains difficult, we will work to achieve business growth by enhancing our proposal-making capabilities.

Boosting Brand Recognition

We understand that we have established a certain level of presence with our PA equipment both in Japan and overseas. On the other hand, when it comes to AV products and ICT devices, the Yamaha brand is not sufficiently known. We therefore need to foster a better awareness of the reliability and peace of mind our brand offers through not only initiatives to boost recognition by increasing our product volume but also through the reinforcement of customer support and provision of solutions. We will continue to focus our efforts on accomplishing this task as we work to capture new business opportunities.

Improving Working Styles by Offering a More Comfortable Environment for Remote Conferences

Since entering the online conference systems market in 2006, we have realized an expansive product lineup, strengthened customer support, and installed a large number of high-quality sound technologies, which we have cultivated over many years. These efforts have garnered a high level of praise from our customers, allowing us to secure the No. 1 share in the domestic market.* For example, the CS-700 video sound collaboration system for huddle rooms is a product we developed by focusing our attention on the expanded use of video and online conferences at numerous corporations and institutions as part of their efforts to improve working styles. Through an all-in-one USB device that integrates a high-quality microphone, speaker, and camera that is optimal for huddle rooms (conference rooms for small groups), CS-700 enables voice, video, and image sharing simply by connecting a USB cable to a PC. By doing so, CS-700 makes it easy to speak and hear and realizes communication without difficulties or stress for the participants. The system also contributes to the reduction of CO₂ emissions as it reduces the need for business trips and enables people to work from any location.

* According to the 2016 Communications Related Marketing: Comprehensive Survey conducted by Fuji Chimera Research Institute



Industrial Machinery and Components Business

In the industrial machinery and components business, we leverage the technologies we have acquired through the manufacturing process for musical instruments to provide comfortable, safe, and secure solutions. We will realize growth in existing businesses and take on challenges in new domains as we work to establish this business as our third business pillar.

Shigeki Fujii
Executive Officer
Executive General Manager of IMC Business Unit and Technology Unit

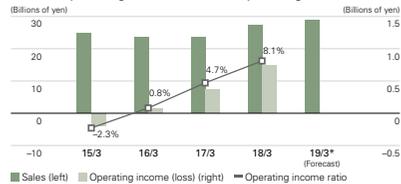
Business Overview

The industrial machinery and components business covers a broad range of fields, such as electronic devices, which started with the development of LSI for musical instruments; automobile interior wood components for luxury automobiles, which started from the integration of our lumber processing and coating technologies; and factory automation (FA) equipment, which originated in our musical instruments manufacturing facilities. In these diverse areas, we offer comfortable, safe, and secure solutions.

Operating Environment

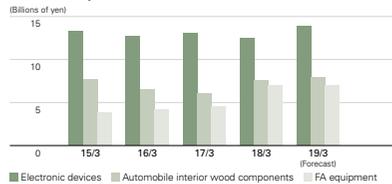
For electronic devices, we were able to pursue business expansion focused on product development following the transfer of manufacturing facilities, thereby making significant improvements on the existing deficit. Rather than simply supplying semiconductors, we promoted a shift toward component modules related to sound, an area in which the Company excels. We also promoted efforts to expand the application of our electronic devices in automobiles, and these efforts have begun to produce results. In the domain of thermoelectric devices, which convert heat and electricity, we are developing not only products for ICT equipment but also products for automobiles. In these ways, we are focusing our efforts to establish a foundation to position the industrial machinery and components business as our third business pillar in the future, alongside the musical instruments and audio equipment businesses.

Sales / Operating Income (Loss) / Operating Income Ratio



* Individual fiscal 2019 forecasts for operating income and operating income ratio are not disclosed for the individual businesses comprising the others segment.

Sales of Major Products



Major Products

Electronic devices	Graphic LSI for amusement equipment, semiconductors for sound generation, magnetic sensors, thermoelectric devices, modules for in-vehicle, hands-free telephone calls, etc.
Automobile interior wood components	Interior wood components for luxury cars of both Japanese and overseas automotive manufacturers that leverage the lumber processing and coating technologies used for pianos
FA equipment	Flexible printed circuit manufacturing and detection equipment, polishing robots, and leak detectors



Our Business Strategy

Competitive Edge <ul style="list-style-type: none"> Knowledge and expertise in sound and music Knowledge and technology in voice quality, vibration, and noise 	Business Opportunities <ul style="list-style-type: none"> Automated driving leading to an increased need for value in automobile interiors Growth in processing and testing equipment to meet the widespread use of smart devices Expansion of voice recognition technology and devices Expansion of healthcare needs in Japan and overseas in conjunction with the growing middle income bracket
Business Strategies under the Medium-Term Management Plan <ul style="list-style-type: none"> Transform the business from a semiconductor manufacturer to a solutions vendor, and thereby build a foundation for growth through expansion in product lineups and customer base <ul style="list-style-type: none"> Expand product lineups and customer base, and enhance customer support system in onboard device market Develop products for home healthcare market Launch new products in the industrial machinery market 	Business Issues to Address <ul style="list-style-type: none"> Shift toward use of modules and expand the scope of solutions Improve voice recognition technology Develop new customer base in the growing electronic components category Apply wealth of knowledge and tech to develop healthcare products

Progress during Fiscal 2018

- Recorded double-digit growth in the industrial machinery and components business, reflecting strong sales of automobile interior components and FA equipment
- Increased overseas orders of automobile interior components, despite concentration on domestic manufacturing
- Continued to perform well with FA equipment due to taking advantage of the need for high precision and sophistication in light of stabilized smartphone-related demand
- Produced an onboard emergency calling system module mandated in Russia and Europe and adopted by multiple manufacturers

Business Direction in Fiscal 2019

In addition to strong sales of semiconductors for voice and audio processing in vehicles, we will also begin mass production of an onboard emergency calling system module. Sales of electronic devices are projected to grow by double digits compared with the previous fiscal year.

We anticipate that automobile interior components will continue to perform well due to the expansion of shipments to overseas manufacturers, and FA equipment is also expected to continue its strong performance from the previous fiscal year.

Modules for In-Vehicle Hands-Free Telephone Calls Geared Toward Emergency Alert Systems

Mass production of an in-vehicle communication module mandated in Russia and Europe began in the first quarter of fiscal 2019. The modules have been adopted by several manufacturers in recognition of the clear voice quality that is required in emergency situations. Since our voice communication technology can be used not only for emergency call systems but also for hands-free communication and voice recognition inside the car, we believe that it will be utilized by various products in the future.

Healthcare Product Development

We are continuing the development of healthcare products that capitalize on the strengths of the Company, including sound and vibration sensor technology and digital signal processing technology. We are collaborating with Tokyo Medical and Dental University to communicate with the medical community directly in order to ensure that our development efforts follow the direction of their needs and opinions.

Reducing Traffic Accident Casualties with Our In-Vehicle Communication Module

Yamaha has developed a module for in-vehicle hands-free telephone calls with an emergency call function for vehicles amid growing mandates in Europe and other regions and has introduced it into the vehicle-related equipment market. This emergency call system automatically contacts the fire department and other emergency services when the airbag triggers during an accident. This system contributes to SDG target 3.6, to "halve the number of global deaths and injuries from road traffic accidents by 2020." Our in-vehicle communication module features automatic notification in times of emergency, a hands-free mobile calling function, and an integrated microphone and speaker. This module also offers the benefit of being compatible with all types of vehicles. In addition, this module realizes differentiation from the products of other companies as it offers a quality of sound that only a musical instrument manufacturer such as Yamaha can provide.