

TV sets and components in 1953

From a Crisis of Survival to a Financial Turnaround

Handling a Steep Drop in Demand for Radios

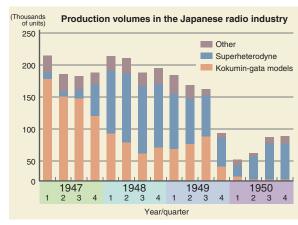
■ Tight Fiscal Measures Bring About a Recession That Hits the Company Hard

In the years after the war, Japan experienced severe inflation as a result of serious shortages of food and materials coupled with increased government spending intended to spur economic recovery. Between the fall of 1945 and the spring of 1949, the consumer price index saw an almost 100-fold increase (based on official prices).

To counter this situation, in 1949 and 1950 the General Headquarters of the Allied Forces (GHQ) implemented a series of financial and monetary austerity measures that included an anti-inflation policy (the so-called "Dodge Line"). The main recommendations of the initiative were to balance the national budget and reduce subsidies from the government. As a result, funds available to the open market were dramatically reduced. While this brought inflation under control and stabilized prices, rapid deflation took hold and the country fell into a deep recession. Unemployment soared, and consumer purchasing power began to decline.

After the war, the radio manufacturing industry had recovered relatively quickly and production capacity had risen. Yet sales became extremely sluggish due to the recession, and inventories became bloated. Furthermore,

commercial radio stations were scheduled to begin broadcasting the following year on new frequencies different from those used by Japan Broadcasting Corporation (NHK). The industry suffered another blow when consumers were reluctant to buy Kokumin-gata radios designed to receive NHK stations. Rumors circulated that these conventional radios would be susceptible to interference from the new commercial stations. Instead, consumers were choosing to wait for newer superheterodyne models that had better channel selectivity.



Although demand for low-price Kokumin-gata models had begun to increase in the midst of the recession, it plummeted at the beginning of 1950 as consumers reined in their spending.

In addition, black-market traders who paid no excise tax were flourishing, and this added to the turmoil in the market. The situation grew dire, with radio production in the industry plummeting from 800,000 sets in 1948, to 600,000 in 1949, and less than 300,000 units in 1950. Bankruptcies slashed the number of radio manufacturers from 80 immediately after the war to just 17 companies.

■ Desperate Efforts to Keep the Company Afloat

The company was saddled with a mountain of inventory and was posting losses due to wholesalers failing to pay their bills. Cash flow was tight as well. Under these circumstances, on the dates when the company's own bills were due, individual sales employees around the country scrambled to collect the proceeds from sales, which were then remitted to the head office as quickly as possible in amounts of 20,000 yen or even 10,000 yen at a time. It was a desperate effort to stave off bankruptcy.

At the end of February 1950, salary payments were delayed. In April, the company took a number of measures, such as strengthening its sales organization, lowering selling prices, and introducing a low-priced superheterodyne radio. In addition, production was suspended to concentrate on selling existing inventory. However, during the period from April to June, average monthly sales dropped to 15 million yen—40% of the figure for the equivalent period in the preceding year. By the end of July, borrowings amounted to 132 million yen. The company was also paying a special war indemnity tax, and there was insufficient cash on hand to cover these payments.

Overcoming the Crisis with Tremendous Cooperation and Support

Banks made reducing excess personnel a prerequisite for granting additional loans: "You should cut 210 people, and make it an organization of 378 people, which should be able to maintain current sales levels. And you should make further management efforts." President Hayakawa, however, had other ideas: "It would be better to dissolve the company than lay off so many employees." He gathered all the employees together and conveyed his thoughts to them. The employees responded by shouting, "Don't kill the company!"

At a labor council meeting on August 9, 1950, the company announced a reorganization plan that included staff reductions. Many union members also had strong hopes for the survival of the company and agreed to solicit members willing to take voluntary early retirement. A pamphlet entitled, *About Ways*for the Company to Get Back on



A pamphlet entitled About Ways for the Company to Get Back on Its Feet was distributed to all employees (August 1950)

Within a month, the number of employees taking early retirement reached the target set. Furthermore, on top of the personal guarantees of all the executives, the company received joint financing of 15 million yen from four different

Its Feet, was distributed by the

outlining the actual condition of

the business, including sales,

profits, and debt, as well as a

strategy for reorganization.

company to all employees,

Under the reorganization plan, retirees received a discharge allowance as stipulated by law, severance pay of two months' salary, and a compensatory gift such as a commemorative radio. As well as assisting employees who chose to seek new jobs, the company promised them preferential status when the time came once more for the company to take on new employees. The layoffs that the company was forced to make at that time were a painful episode for everyone involved.

Business Recovery Thanks to Growing Demand for Radios

Military Procurement for the Korean War Sparks a Boom

In June 1950, the Korean War broke out. Military procurement for the war saved Japanese industry, which had been struggling in a recession. The economy turned around and sales of goods boomed. In the radio market, customers' desire to hear shortwave broadcasts telling of the growing international tensions fueled demand for All-Wave multi-band radios.

Net income for the fiscal period ending March 31, 1951—at the time, fiscal periods were six months long—was 3.43 million yen, with the company



US soldiers prepare for an amphibious landing during the Korean War (1950) (photo courtesy of *Asahi Shimbun* newspaper)

returning to profitability for the first time in over three periods. That April, there was a large order for radios from the US government. This helped to boost net income for the period ending in September by more than four times, to 13.29 million yen.

Nevertheless, the company saw the boom as temporary and implemented a series of prudent management measures in preparation for any sudden future recession. These measures helped the company withstand the impact of the national recession that followed the cessation of US procurements for the Korean War.

■ Commercial Radio Boom Boosts Popularity of "Super Radios"

Nine private commercial radio stations began broadcasting in 1951, with that number swelling to 21 the following year. The resultant variety of programming on offer sparked a boom in consumer demand for radios, which in turn led to a rapid recovery in radio manufacturing.

The new Sharp 5R-50 Superheterodyne Radio introduced in July 1950 was a compact, mass-produced model. It offered enough selectivity to prevent interference among multiple broadcast signals from stations in urban areas, along with the high sensitivity needed for receiving urban commercial broadcasts in rural areas. Sold at an affordable price point, it became a popular product.

Then there was the hit NHK radio drama, *Kimi no na wa* ("What's Your Name?"). In 1952, the popularity of this program helped drive the number of radio subscribers beyond 10 million, marking a peak for the radio industry.

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The Dawn of the Television Era

Success in Developing a Prototype TV

Research on Television Began Even Before the War

In December 1926, Kenjiro Takayanagi—an assistant professor at Hamamatsu School of Technology, which is now Shizuoka University's Faculty of Engineering—successfully tested an experimental television based on technology that he had developed himself. Hearing of this, Hayakawa expressed his confidence that radio would be superseded by the era of television. He wanted his company to research this new technology. So he sent a postcard to the school with a job offer bearing the simple words, "Seeking a graduate."

Reading the postcard, the professor who chaired the electrical engineering department thought it had come from a small company not used to dealing with personnel matters. Yet, from that brief sentence, he also got the feeling that it was a company passionate about new technology. The professor visited the company and found a small factory that nevertheless held promise. He was impressed, for example, by the sophisticated metal press techniques that formed the basis of the company's radio manufacturing.

In March 1931, one of Professor Takayanagi's most well regarded graduate students joined the company. A radiowave engineering laboratory was set up and research on television began, driven chiefly by this young man. Later, as the clouds of war grew ever darker, research on television was banned by the government.

■ Development Efforts and a Successful Prototype

For a period after the war, the occupation authorities (GHQ) did not allow research on television in Japan. It was 1949 before such research resumed in earnest. This long hiatus, which included the war years, caused Japan to fall significantly behind Europe and the US. The company, which had resumed developmental work on television, conducted research by consulting the scientific literature found in the GHO library.

Industry figures at the time were concerned that manufacturing and servicing televisions would be difficult. Even the major manufacturers were hesitant about introducing commercial TV models. Under President Hayakawa's policy of breaking new ground by taking the initiative wherever possible, the company worked actively on developing a prototype model.

The development process was boosted by the company's expertise with related technologies, such as aviation radios developed during the war and VHF circuitry in FM radios used by police after the war. In 1951, a prototype was finally completed. Twenty years had passed since the graduate of Hamamatsu School of Technology had been invited to begin research.

Early in the summer of 1951, NHK began experimental TV broadcasts from its Osaka broadcasting station. The tests involved sending out a signal from Bamba-cho in Higashi-ku (now Chuo-ku), Osaka City, and viewing the





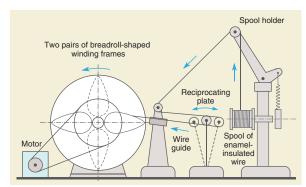
Prototype of a console-model TV with a 12-inch CRT (cathode ray tube) (1951) (left)
Hayakawa's TV research laboratory (1952) (right)

television pictures using an NHK receiver located in the Mitsukoshi Department Store in Kitahama, Higashi-ku. At that time, the company's technical team brought their prototype TV set to the Mizuno Building located near Mitsukoshi and managed to successfully receive the television signals. Those who had gathered to witness the experimental broadcasts were given their first experience of watching television. Apart from them, no one had known of the company's planned experiment—not even the broadcast station. Other manufacturers were duly impressed.

Following this success, the company moved quickly to set up a mass-production system in anticipation of the onset of television broadcasting. Specifically, the company had

decided to develop and mass produce three key components on its own—the tuner, deflection coil*1, and flyback transformer*2—but mass producing the deflection coil proved to be particularly difficult. Based solely on the





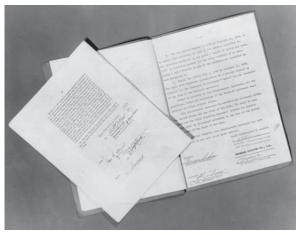
Deflection coil (top) and operation of deflection coil winding machine (bottom)

guidance of a single phrase from a scientific paper—"the deflection coil is a cosine winding"—the company was eventually able to perfect a winding machine that made mass production possible.

Signing a Technical Assistance Agreement with US-Based RCA

The company completed a working prototype of the television. While it was a success in terms of receiving television signals, significant breakthroughs in TV technology had already been achieved in the US and Europe. Moreover, bringing a practical television to market would require the cooperation of Western manufacturers who owned the patents to key technologies. To promote a cooperative technical alliance with RCA (Radio Corporation of America), President Hayakawa visited his old friend Kenjiro Takayanagi and asked for a personal referral to the company. Around this time, Takayanagi had been appointed chief engineer and a director of Victor Company of Japan, Ltd. (now JVC Kenwood Corporation), which had a connection with RCA. Although President Hayakawa was competing with Victor and other rival companies in the development of television, Takayanagi readily agreed to his request. That he did so owed much to the dream that the two men had shared before WWII of developing television in Japan. Consequently, they had a strong desire to provide the public with a Japan-made TV set as quickly as possible.

Accompanied by his chief of research, President Hayakawa visited RCA in the United States, and on June 19, 1952, signed a technical assistance agreement. This became the forerunner of such contracts for Japanese manufacturers, and soon led to Japan's first mass-produced televisions. Etched in his mind were the words of H. Alexander Straus, RCA's Far East representative and the man in charge of overseeing the agreement: "Television is a product that comes along only once in a hundred years and is indeed the product of the century. Please develop it into a



Technical assistance agreement signed with RCA

successful enterprise."

Over the course of two months, President Hayakawa and his colleague traveled throughout the US and toured leading manufacturers, focusing in particular on the TV industry. With his own eyes, President Hayakawa saw efficient television production that made the most of available machinery and equipment. After purchasing a large amount of state-of-the-art machinery and research equipment needed for production, he returned to Japan.

President Hayakawa had been afforded an intimate look at the state of TV manufacturing in the US. The visit reaffirmed for him the potential of television and deepened his confidence in the TV business.

Television Broadcasts Begin

Japan's first television broadcast aired at 2 pm on February 1, 1953. Following greetings from the chairman of NHK, a kabuki play was shown live. As of this day, the number of subscriptions to receive television broadcasts was 866. On August 28 of the same year, Japan's first private station began beaming telecasts.

In the beginning, TVs were prohibitively expensive, so people used to crowd around the sets installed in front of train stations or in shopping arcades. Businesses such as coffee shops, restaurants, barbershops, and public baths installed TVs to attract customers. Professional wrestling was particularly popular at that time: homegrown warrior Rikidozan became an overnight sensation as he cut down foreign wrestlers with his famous 'karate chop'.



People gather in front of a TV in a public place (photo courtesy of *Asahi Shimbun* newspaper)

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^{*1} The deflection coil generates a magnetic field to bend the electron beam projected onto the CRT screen.

^{*2} A flyback transformer generates the high voltages needed to accelerate electrons in a CRT.

Mass Production of TVs Begins

Developing—and Mass Producing— Japan's First Television

In 1952, the government of Japan approved the alliance with RCA, and the company immediately began working on the design for a TV. Three models were developed with 12-inch, 14-inch, and 17-inch screens (measured diagonally), and test results were excellent. In the same year, mass production in the laboratory was successful. The Sharp TV3-14T TV marked the birth of Japan's first domestically produced television. In January 1953, television production was transferred to the Manufacturing Department—which was then made the independent TV Production Division—and full-scale mass production of TVs could begin. Among the factors that enabled this system to be developed so quickly were the bold decision to invest in plant and equipment, and the reservoir of production technologies from before the war.

On January 16, 1953, the company presented its plans for TV manufacturing to a gathering of about 200 marketing and sales staff. The price structure, planned monthly production volume, equipment construction, after-sales service, and other details were described. On hearing the company's ideas and proactive approach, participating retailers had high hopes for TV sales. A model with a 14-inch screen was to be priced at 175,000 yen. This was at a time when the starting salary for government workers with a high school education was 5,400 yen a month.

On February 1, 1953, the long-awaited NHK television broadcasts began, raising the curtain on the era of television in Japan. The subscribers were mainly radio stores, coffee shops, hotels, banks, and other businesses. Initially, the televisions were used for commercial purposes in public places. As a consequence, many were large 17-inch models made by competing companies. In May of the same year, the company added the 12-inch TV3-12T and 17-inch TV3-17T models to its lineup.



Sharp model TV3-14T—
Japan's first commercially produced TV set

Developing a Television Service Organization

Televisions have a much more complicated structure than radios. Learning from the example of the US, the leader in TV at the time, the company knew that being able to offer solid after-sales service was essential to success.

At the same time that it moved to prepare for mass production, the company worked to organize a service system. Beginning at the end of 1952 and covering a period of more than six months, it conducted weekly TV technology training sessions for in-house personnel.

From February 1953, the company held workshops to teach dealers about TV assembly and testing. While gaining hands-on experience assembling a television, they spent a week learning about a TV's construction and developing skills for making adjustments and repairs that would be invaluable for after-sales servicing. The TVs that were assembled during these classes were of a high enough standard that dealers could sell them in their own stores. In addition to the workshops held at the head office, training sessions were conducted at locations around the country.



After-sales service training (left) Hiroshima group photo (bottom)



The company aimed to develop a network of 1,000 television dealers to provide after-sales service—dealers who would have the technical skills needed to repair broken TV sets, make picture adjustments, and handle similar requests. The training sessions gave dealers a sense of security and confidence when selling televisions in their stores and yielded good results in the early days of TV marketing.

In September 1956, the company established the Sharp Authorized Service Shop system, through which member stores undertook after-sales service on the company's behalf. The name of the shop responsible for after-sales service was printed on the warranty card, so consumers could feel free to request repairs and other services.

Increasing Demand for TVs and Streamlining Production

■ Promoting the 14-Inch TV as the Model for Every Home

In January 1953, when full-scale mass production began, the company produced only fifteen TV sets; but with each passing month, production volume increased. On May 21 of that year, when it was clear that production would reach 1,000 sets per month, the company reduced prices from 175,000 yen to 145,000 yen for the 14-inch model, and from 197,000 yen to 153,000 yen for the 17-inch model.

The industry had initially focused on the 17-inch model, which was in high demand for commercial applications. But the company decided to focus on a model with a 14-inch screen, considering it a better fit for the typical Japanese room and an optimal size for achieving the goal of bringing a TV into every home. The company further streamlined production and introduced a 14-inch model for 127,000 yen, finally achieving its price target of 10,000 yen per diagonal inch of screen size. Price reductions encouraged consumers to acquire TVs, moving toward the idea of "one set per home"

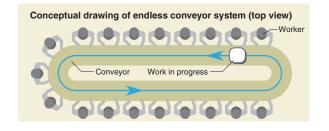
In May 1954, the company held a 60% share of the 14-inch TV market. Eventually, the 14-inch model would become the standard television size in Japan. The fact that all manufacturers came to focus on this size for their flagship models led to even greater streamlining of production processes, improved quality for parts (especially for the CRT), and progressively lower prices. TVs would later become an important export product, and the focus on the 14-inch screen size is said to have contributed to the international competitiveness of Japan's TV manufacturing industry during its early years.

According to a summary in the book, *Japan's Television Industry: The Structure of Its Competitive Superiority*, by Atsushi Hiramoto, Sharp's share of all models produced in Japan was 22.9% in 1953 (April to December). By 1956, with a 16.9% share, the company had held the top place in the market for four consecutive years*1.

■ Building a New TV Plant

To push ahead with even greater streamlining of production, the company planned construction of a new TV plant at the head office (now the Tanabe Building). President Hayakawa laid down new design guidelines for the construction of the company's first reinforced-concrete production facility as a plant that "will not burn, will not collapse" and that would be a place "where people can work with peace of mind."

The new plant was completed in March 1954. Production lines were installed that used an endless conveyor system*²,





New TV plant

an original design. All processes from wiring and assembly to packaging and warehousing were performed using this assembly-line operation.

To further increase production, the company continued to build extensions to its plants, with TV production capacity eventually reaching 20,000 sets per month. The company worked not only to lead the industry in market share, but also to develop a series of innovative products to generate new demand.

Such products included the TV-500 from 1955, which used an all-metal cabinet, and the TB-50 from 1957, which adopted the world's first push-button tuner. This tuner allowed users to quickly select a station simply by pressing a button, without having to turn a channel-selector dial.

In July 1956, the company completed construction of a new head office building (Head Office, Phase 1). It was a four-story reinforced concrete building, with a partial 5th floor and a basement.



Push-button channel selector on the TB-50

Since 1953 when full-scale mass production of TVs began, the company's financial results had improved year after year. During this period, against the backdrop of strong financial performance, the company constructed a series of new buildings, including new plants, a new head office building, and sales offices.

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^{*1} Source: Data compiled by the Japan Fair Trade

^{*2} The endless conveyor system was motor driven and featured a horizontal conveyor that ran in a continuous loop (conventional conveyors moved in a straight line longitudinally). As workers were positioned around the outside of the conveyor, increased production volumes were possible.

Aiming to Become a Comprehensive Consumer Electronics Manufacturer

Developing and Commercializing Electrical Appliance Products

■ The Electrical Appliance Boom and Working to Support Exclusive Sharp Dealers

In the first half of the 1950s, the Japanese economy enjoyed a post-war recovery. As people became more affluent, interest grew in durable consumer goods—in particular, electrical appliances. The year when television sales began in earnest, 1953, is generally regarded as the first year of the electrical appliance era in Japan. Beginning around that time, there were three products that every household aspired to own: the electric washing machine, the black-and-white TV set, and the electric refrigerator. These symbols of affluence and aspiration came to be known as the "three sacred treasures."

With radios and TVs dominating its manufacturing roster, the company was late to enter the market for other home electrical appliances. In addition, the company was affected by competition in the TV market and by the exclusive dealer policies of other companies who could offer a more extensive lineup of products. As a result, the company experienced a significant decline in its share of the television market. To respond to growing demand for electrical appliances such as washing machines and refrigerators—and to maintain the loyalty of its exclusive dealers—the company had to expand the depth and breadth of its product range. In 1957, the company announced a new business policy of expanding to become a comprehensive consumer electronics manufacturer by adding more home appliances to its lineup.

■ Speeding Up Expansion of Electrical Appliances

The company had already been manufacturing its own brand of electric fans since 1956 and had launched production of refrigerators and washing machines in 1957. By adding mixers, toasters, electric rice cookers, and water-cooled air conditioners to these, the company started on the road to expanding and upgrading its electrical

The RC-101 Water-Cooled Air Conditioner, the company's first such product based on an original concept. Because it used underground water, which remains at a nearly constant temperature year-round, it offered better performance as the room temperature increased. This product gained great popularity.



appliance offerings. The water-cooled air conditioner introduced in 1958 used cold water pumped up from underground to cool air inside the device before sending it out into the room. Its outstanding feature was quiet operation: since it did not use a compressor, there was no vibration or noise while it was running.

Around this time, product-development personnel would report on prototypes to senior management, including President Hayakawa, at monthly New Product Promotion Meetings. Product development would then proceed based on opinions expressed in these meetings.

In 1957, Hirano Plant No. 2 was completed. Here. electrical appliances such as washing machines were assembled, and systems established for comprehensive consumer electronics manufacturing. The site covered an area of 10,200 m2, with the company constructing separate plants for fabricating metal TV cabinets and for painting. Although washing machines were the company's first large-size product, they were manufactured in volume using a conveyor-based start-to-finish production process—from sheet metal fabrication to painting and assembly. Comparing sales reports for the second half of fiscal 1959 to the first half of fiscal 1957, sales volume of electrical appliances was over five times higher. During the same two-and-a-half-year period, the proportion of the company's total sales achieved by electrical appliances went from less than 10% to more than 20%. These sales figures were a dramatic indication of the company's new impetus.



Hirano Plant No. 2 completed in 1957 (Kamimatsuyama-cho, Higashisumiyoshi-ku, Osaka City; now Hirano-ku, Osaka)

Forming Special Design Teams

As a wider variety of electrical appliances appeared on store shelves, consumers began to consider other purchasing criteria beyond performance and functionality—factors such as shape, color, and finish. As the 1950s began, manufacturers were becoming acutely aware of the importance of product design.

In 1954, the company hired an industrial designer to be responsible for the design of radios in the engineering department. In 1957, a section dedicated to design was set up in the respective engineering departments for TVs, radios, and electrical appliances. Up to that point, development engineers had worked on exterior appearance and finish as an extension of design, but from this time forward, product development became a collaborative effort between engineers and designers.

Around this time, plastic, which had only been introduced a short time earlier, came to play a major role in design. For example, using plastic to replace the wood and glass that had been used in radio cabinets up to then provided greater flexibility in terms of shape and color. A widely varied assortment of models became available, ranging from small portable types to large-sized models.

Among Sharp's early product designs, the shape of its electric fan was particularly well known. This original design was called the "Z line" because, when viewed from the side, the neck part supporting the motor and blades formed a shape like the letter Z. Its smart and elegant look, like a swan floating on water, proved highly popular.

The company's product designs were highly regarded and earned Sharp products a variety of design awards. In 1957, the TM-20 14-inch portable TV won first place in a design contest based on a reader poll held by *TV Technology* magazine. In 1960, the BH-350 transistor radio won the Arts & Crafts Association of Osaka Chairman's Award and an award of excellence at the Kobe Design Exhibition.



The TM-20 portable TV featured a novel design in which the channel selector and all adjustment knobs were mounted on the side



Billboard advertising sign for the "Z-line" electric fan posted in subway stations (around 1962)

Advertising Yields Success

In May 1952, the company completed a bus for advertising its radios and TVs. Loaded with TVs, megaphones, and tape recorders, it toured the country. At dealers and retailers, staff demonstrated trial television broadcasts and explained how broadcasting worked.

When private radio stations began broadcasting in 1951, the company sponsored many entertainment programs. A favorite of listeners was a radio program that began in 1953 in which two teams faced off in a singing contest. On television, a Sharp-sponsored show of comic plays beginning in 1956 was a hit with viewers.



This bus toured the country promoting Sharp TVs and radios

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5 Strengthening Cooperation with Business Partners and Establishing Sales Subsidiaries

Developing a Nationwide Sales Network

■ Strengthening Ties with Dealers

Around this time in the Japanese electrical appliance industry, competitors began developing sales networks aiming to bring wholesalers and retailers under exclusive sales arrangements. In 1952, the company responded by organizing the Sharp Club—a nationwide network with regional groups working to expand sales of the company's products and strengthen links with dominant dealers (wholesalers) and retail outlets. The Sharp Club's aim was to enable all parties to prosper together by forging closer ties with one another.

In 1953, the company concluded dealer agreements with 190 leading wholesalers under the umbrella of various branch offices in Osaka, Tokyo, Nagoya, Hiroshima, Fukuoka, and Hokkaido. About 6,300 retail outlets who did business with those dealers became members of the Sharp Club organization. Sharp supported these member stores with a "bonus coupon" system that paid a sum of money as a measure of gratitude for sales, depending on the type and quantity of products sold.

In February 1952, the company also began publishing *Sharp News*, an informational magazine that served as a bridge between retailers and the company.



General dealer conference held to celebrate the completion of the head office building (1956)

In 1958, the company inaugurated the Sharp Friend Shop system targeting retail outlets for whom Sharp products accounted for a large percentage of total sales. The Sharp Friend Shop Association, which comprised these retailers, was formed nationwide with the goal of further strengthening collaboration at all levels. The association undertook coordinated sales and advertising, deepening the relationship of mutual cooperation between the company

■ Sharp Electric Co. Established

In 1952, as the company was moving to develop a network of sales outlets, it spun off its sales division as a separate subsidiary and established Sharp Electric Co. with capitalization of 10 million yen. At this time, the sales



Fukuoka Branch building in Nagahama-cho, Fukuoka City (now Nagahama, Chuo-ku, Fukuoka) (1958)

structure was reorganized by bringing all branches, sales offices, and branch offices of Hayakawa Electric Co., Ltd.—with the exception of the Tokyo Branch and Osaka Sales Office—under the umbrella of Sharp Electric Co. The reorganization also included the addition of new sales offices and branch offices around the country. Furthermore, in 1958, Sharp Electric Co. absorbed and merged with Hayakawa Dengyo Co., Ltd., a company mainly engaged in the sale of fluorescent lighting fixtures.

Hayakawa Electric and Sharp Electric thus became inseparable halves. With one devoted to manufacturing and the other to sales, they worked together vigorously to promote business.

The Beginnings of Regional Sales Subsidiaries

In the summer of 1957, Sharp Shoji, a sales subsidiary in the Osaka area established in 1948, merged with a dealer, Nipponbashi Musen, and made a new start as an exclusive dealer for Sharp products.

As competition for sales of electrical appliances heated up, wholesalers with a fragile business base struggled to maintain cash flow as they were also affected by an economic slowdown. Nipponbashi Musen was no exception. After the Hayakawa company gave it an injection of funding and personnel, it was then absorbed into Sharp Shoji.

In September 1958, Sharp Shoji and QRK Shokai, an exclusive Sharp dealer, were combined to establish Osaka Sharp Sales Co., Ltd. Thereafter, regional sales companies were established throughout the country by making exclusive Sharp dealers the parent entity for such companies.

Also, although television would spread rapidly in the late 1950s, consumers still lacked purchasing power. What encouraged consumers to buy were monthly installment programs operated by manufacturers. In May 1957, the company established Tokyo Sharp Geppan Co., Ltd., to handle such purchases. In June, the company opened parallel companies in Osaka and Kyoto, followed by Nagoya, Hiroshima, and Fukuoka. In this manner, Sharp Geppan came to be established across the country.

6

Establishing a Special Metalworking Plant

Predecessor Was a Branch Factory of Hayakawa Electric

The Tokusen Metal Limited Partnership was established in 1950 with a view to being operated by individuals with disabilities.

The predecessor to this company was a branch factory of Hayakawa Electric established in 1944 to do metal press and stamping work. That factory had come into being the previous year, upon a request from Takeo Iwahashi, the founder of the Nippon Lighthouse—a facility located near the head office that assisted visually impaired individuals. Iwahashi had requested assistance in providing jobs to military veterans who had lost their sight in the war. At the factory, they were put to work fabricating wireless radio parts.

At the end of the war, the branch plant had been closed and the employees dismissed. In 1946, seven of these individuals came forward and asked to return to work. President Hayakawa set up a metal stamping plant in the quietest and sunniest part of the head office plant. He encouraged them saying, "There aren't a lot of new job opportunities for the visually impaired. You should all work with the pride of those who have been specially selected for this work from among many." He named the factory the "tokusen" plant, meaning the "specially selected" plant.

Becoming the Tokusen Metal Limited Partnership

This company's 150,000 yen in capital consisted of the retirement benefits of the seven individuals paid by the company, along with loans from rehabilitation funds provided by the Osaka Prefectural government. The visually impaired persons themselves became the owners of the Tokusen Metal plant and operated it on a self-supporting



Operations at the Tokusen Metal Limited Partnership factory (around 1950)

basis. It was likely to have been unprecedented that seven visually impaired persons shared responsibility for jobs such as machine operation and maintenance, as well as accounting, personnel, and administrative affairs. They discussed problems in monthly meetings of the full-time employees, and broke new ground in running a business by themselves.

In 1952, this company began assembly work for parts incorporated into Sharp radios and televisions. Later, the company expanded its assembly business to include printed circuit boards for calculators and remote controller transmitters. As the Hayakawa company's business developed, the products Tokusen Metal produced became ever more sophisticated.

The story of the Tokusen Metal plant being operated as an independent self-sustaining company became widely known. In April 1952, the renowned social entrepreneur Toyohiko Kagawa—accompanied by wealthy philanthropist John D. Rockefeller III—took a personal tour of the factory. Then, in 1954, HIH Prince Mikasa and HIH Prince Takamatsu toured the plant. These individuals were among an endless stream of celebrities wishing to see this place of work where visually impaired people worked independently and with peace of mind.

Five Accumulations of Competency

The period from late 1949 to early 1950 was a difficult time for the company but it secured a bank loan and set off on the road to recovery. In those hard times, Tokuji Hayakawa decided to establish a management path that would put the company on solid business ground. Based on personal experience, he came up with five principles of business centered on credibility. He put these on the wall of his office as his personal teaching, and people who visited him saw firsthand the struggles Hayakawa had been through and the origin of these principles. They were gradually conveyed from person to person and eventually became the company creed.



3-09

History of Television

NewsVision

Allowed display of text broadcasts

Development at Sharp

TV with an Advanced

Super-V LCD

1992: 36C-SE1 Incorporated a simple MUSE decoder and pioneered HDTV for households at the low cost of one million yen

Start of test

high-definition MUSE

broadcasts in Japan

1991

3-inch LCD color TV

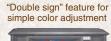
1987: 3C-E1

TFT LCD panel

The 'dream' 8.6-inch

1991: 9E-HC1

color TFT LCD pane





1969: 19C-D3UN Used two on-screen red lines (the "double sign") to simplify color adjustment

Automatic picture adjustment 1959: TD-81 Automatically optimized picture

Japan's first domestically produced TV



1 **6**

Used a horizontal electron gun to eliminate color shift

Sharp's first color TV

1960: CV-2101

Reproduced vivid images thanks to a proprietary color circuit

Start of color

broadcasts in Japan

1960

Linytron CRT



1994: 32C-WD5 Allowed the user to view news in the form of text broadcasts while watching a TV program

TV with support for Displayed detailed images with at least 500 lines of horizontal solution when driven by video input multiplex broadcasts (text and audio)



1983: 21C-L1 a text program or superimpose text onto a TV program

Start of test text broadcasts in Japan 1983

Start of text broadcasts in Japan 1985

Audio multiplexing adapter 1979: CT-2006 TV with built-in audio multiplexing functionality

1978: AN-1

Start of test broadcasts with audio multiplexing in Japan

Start of BS broadcasts in Japan 1989

X1 PC-TV

Start of broadcasts with audio multiplexing in Japan

Key Station F500

1985: 21C-K5B

All-channel TV 1968: 20G-W1U

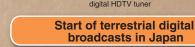
All-channel TV with suppor for UHF broadcasts

Start of commercial UHF broadcasts in Japan

Integrated TV and VCR

Tochigi Plant goes online 1982





LED AQUOS

60V

Start of BS digital broadcasts in Japan

2000 Start of CS digital broadcasts in Japan

1996 Start of CS 1992



set at a retail price of about 10,000 yen per inch







Sakai Plant goes online

Kameyama Plant goes online

Four-primary-color R G B \

2010: LC-60LV3 Displayed colors such as glittery gold and bright yellow with vivid clarity thanks to four-primary-color technology that added yellow sub-pixels

Start of television broadcasts in Japan 1953

1953: TV3-14T

The first TV to be mass-produced in Japan

New Head Office

Plant goes online





1978: CT-1804X at the same time

TV-in-TV capability





1979: CT-1880 Used a control unit that could be detached to serve as a remote control or attached to serve as a touch sensor





AQUOS Familink support 2006: LC-37GX1W Used a single remote control to operate both the TV and





2011: LC-20FE1 Proposed the idea of carrying the TV with you to wherever in the home you want to watch it



1957: TB-50 Allowed users to quickly tune stations with a push-button



Ultrasonic

1959: TW-3 Allowed users to turn the TV on and off, switch channels. and control volume
with a cordless remote control



Displayed the channel numbe on the screen in large text for one or two seconds after changing channels



Used a digital TV circuit to display images from nine channels on the same screen

1950s 1990s 2000s 1960s 1970s 1980s 2010s