

Devices/Materials



Consumer Products

Digital Media Devices
Consumer Appliances

Healthcare Systems/
Biotechnology

Industrial Systems

HIGHLIGHTS

Hitachi Plasma/Liquid Crystal Television 9000 Series —Viewers can Watch High-quality High-fidelity Images as well as Record them on the Spot

2006-2007

The Hitachi Plasma/Liquid Crystal Television 9000 Series inherits the advantages of the conventional series, along with further enhanced image quality and functions. The lineup includes a plasma/liquid crystal TV model equipped with an HDD recorder (HR9000) and a model without one (H9000).



From left to right: Hiroyuki Suzuki, Engineer, FPD Marketing Dept., Marketing Operation, Marketing Division, Ubiquitous Platform Systems; Yasushi Naito, Chief Engineer, FPD Development Dept., Development Operation, Product Development Division, Ubiquitous Platform Systems; Takahiro Mizuguchi, Engineer, FPD Development Dept., Development Operation, Product Development Division, Ubiquitous Platform Systems; Yutaka Yamada, Display Mechanical Design Dept., FPD Operation, Product Development Division, Ubiquitous Platform Systems.

Realistic, Beautiful Images on a New Panel

We create televisions that emphasize image quality. Our 9000 Series is designed to realize images with the veritable ambience of a theater or stadium. To achieve such images, we began by adopting a new panel. The plasma panel is based on the “1080ALIS (alternating lighting of surfaces) panel,” which boasts of world top-class resolution. The panel features 1,080 pixels vertically just like high-fidelity television broadcasts, thus enabling the realistic display of images without having to convert the vertical pixel level. The liquid crystal television comes equipped with an “IPS (in-plane switching) α panel” that offers a wide angular field of view—178 degrees vertically and horizontally. This enables images of very impressive quality without any color drift to be enjoyed, even when viewed obliquely.

Moreover, the image-processing engine has evolved into the “Picture Master HD.” The new models enable up to 16-bit internal processing, the world’s highest level. As a result, tone, color density, and brightness can be adjusted independently to express all images with enhanced beauty and substance. Therefore, the “Picture Master HD” incorporates as much of our extensive image-processing know-how as possible. This is why we have devoted our efforts to optimizing the configurations of image analysis and image conversion processing to achieve even higher image quality.

Evolutional Characteristic Functions

The HR9000 model of the 9000 Series incorporates an HDD (hard disk drive) recorder. As a result, viewers need only press the TV remote control button once whenever they wish to record an image. They can then easily record the image with high fidelity and high image quality. To record longer time, only increased HDD capacity is needed. But wouldn’t that increase the cost? Of course, users would want “larger HDD capacity, though at low prices.” Therefore, the HDD of the HR9000 model combines longer recording with lower pricing by adopting a concept unlike that of the conventional series. The “XCodeHD” multi-encoder chip

based on the HD transcoding/translating technology of ViXS Systems Inc. in Canada has been combined with Hitachi’s unique HDD control technology to achieve about 50 hours of high-fidelity (Hi-Vision) beautiful images recording for 500-Gbyte worth in 250-Gbyte HDD.

The “Remote Swivel” that changes the direction of the TV via remote control from a distance has consistently enjoyed a favorable reputation in user surveys. To realize an even thinner stand profile for the

new model, we have standardized many parts that used to vary by function into a single component, thus reducing the number of drive unit parts to about one-third that of conventional models. The result is a very stylish design.

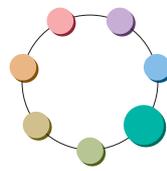
We are so confident that the 9000 Series offers such an attractive product lineup that even the developers rushed to purchase a model the moment the series hit the market (grin).

More Pleasure, Higher Flexibility

Our next challenge is to commercialize products equipped with a “full Hi-Vision(1,920 × 1,080 pixels)” panel for which Hitachi has presented technical specifications, thus allowing users to enjoy even more beautiful images. We will also market our products worldwide by offering Hitachi-led HDD-equipped TVs to the whole world. We will thus make sure that more people enjoy television in the way it ought to be enjoyed, that is, “watching television any time you like, any program you like, and with beautiful images.”



Hitachi plasma television 9000 series



New Flat-panel HDTVs for Japanese Market : PDP Models Setting a New World Standard in Resolution and LCD Models with High-performance Motion Quality

This year Hitachi is celebrating 50 years in the business of manufacturing televisions. Ever since the company's first 14-inch black-and-white set, the F-100, went on sale half a century ago in 1956, Hitachi has remained on the cutting edge of the industry in adopting all solid-state circuitry, sharper picture quality, and larger screen sizes. In 2001 Hitachi unveiled the first 32-inch PDP (plasma display panel) set, thus opening up a new market for flat-panel TVs for the home.

Digital terrestrial broadcasting is scheduled to go nationwide throughout Japan in December 2006, a critical milestone for the domestic TV market ushering in a new era of large flat-screen digital HDTVs (high definition TVs) with crystal clear picture quality. Anticipating this development, Hitachi created the flat-panel series in dedicated pursuit of indicating full images of HDTV sources (1080i) and has again broken new ground in defining state of the art.

The new 37-inch and 42-inch PDP models in the 9000 Series with 1,080 ALIS (alternating lighting of surfaces) panel is featuring a vertical pixel count of 1,080 (versus 1,024 in older models) that delivers the sharpest resolution of any PDP TV on the market^{*1}. This not only provides better grayscale gradation from brilliant white to intense black, but thanks to a newly developed high color purity red fluorescent material, also displays a truer red that is vibrant and life-like.

Turning to the 32-inch LCD (liquid crystal display) model, it is built around a new IPS α ^{*2} featuring 120-Hz super impulse display technology, a Hitachi technology of high performance motion quality with fast-action movement on the screen.

HR-type sets in the 9000 series lineup come with built-in digital HDTV HDD (hard disk drive) recorders that give people a new viewing option by enabling quickly and easily recording programs with just the click of a button on the remote controller. The physical capacity of the hard disk on this HR type has been upgraded to 250 Gbytes, but it can actually hold the equivalent of 500 Gbytes of data—about 50 hours of recording^{*3}—thanks to the clever integration of XCode HD transcoding and transrating technology^{*4} together with Hitachi's own HPSM (high performance streaming manager) technology^{*5}. The sets are also equipped with two digital tuners so users can record one program while watching another program or can even watch two digital HDTV programs at the same time on a split screen.

These series are made by many collaborations of Hitachi Group, concentrates on the most advanced device technology. 1080 ALIS panel by FUJITSU HITACHI PLASMA DISPLAY LIMITED and IPS α panel by IPS Alpha Technology, Ltd. are the cutting-edge of the two makers. 250-Gbyte capacity HDDs are made by Hitachi Global Storage Technologies, and the integrated analog/digital tuners are made by Hitachi Media Electronics Co., Ltd.

^{*1} According to a Hitachi study as of April 2006.

^{*2} Name of an IPS type LCD panel manufactured by IPS Alpha Technology, Ltd.

^{*3} When digital broadcast recording time in TSE1/TSE2 mode is converted to HDD capacity.

^{*4} Transcoding and transrating hard disk drive technology developed by Toronto-based ViXS Systems.

^{*5} HPSM is powerful video streaming middleware developed by Hitachi.

^{*6} An integrated tuner incorporating terrestrial, satellite broadcast, 110° CS digital and analog tuners.



32-inch LCD TV



42-inch PDP TV

Hitachi's flat-panel HDTVs : LCD and PDP models for Japanese market



Digital Hi-Vision HDD/DVD Recorders with Double Terrestrial Digital Tuners

Hitachi has released four models of digital Hi-Vision recorders, all of which have seven tuners: two terrestrial digital tuners, two broadcasting satellite digital tuners, two communication satellite digital tuners, and one terrestrial analog tuner.

[Main features]

(1) Double Hi-Vision recording
Built-in dual digital tuners enable simultaneously recording two Hi-Vision programs.

(2) High-capacity HDD (hard disk drive)

The DV-DH1000W has a 1-Tbyte HDD and can record 128 hours of Hi-Vision programs at the original image quality or a max. 1,700 hours in EP recording mode.

(3) Hitachi's unique sort function

Recorded programs are automatically sorted by name, genre, etc. A user can easily find the program to watch by simply pressing the button.



Digital Hi-Vision recorder: DV-DH1000W



High-definition Home Theater Projector PJ-TX200: High Contrast System with Dual Irises

The high-definition projector PJ-TX200 achieves high contrast using a dual iris system consisting of automatic and manual irises. An iris is a kind of shutter for a light bulb, and it can control brightness. The automatic iris is automatically opened or closed by an inputted signal level. The manual iris can be controlled by the

user. The PJ-TX200 uses these irises and achieves high contrast (7,000:1) and high picture quality using our own Super Focus Lens and 10-bit processing signal chip.



PJ-TX200



6th Generation DVD Camcorder with Four Formats of DVD Recording Capability

Hitachi has released three models of DVD (digital versatile disc) camcorders: the DZ-GX3300 [with a CCD (charge-coupled device) of 3.3 mega pixels] in two colors, the DZ-GX3200 (with a CCD of 2.1 mega pixels), and the DZ-GX3100 (with a CCD of 1.3 mega pixels). These models are designed to support the most popular and widely available DVD formats, including DVD-RAM, DVD-RW, DVD-R, and +RW discs.

[Main features]

(1) 3-mega pixel resolution (DZ-GX3300)

Increasing the resolution of the CCD chip means more critical picture information is available for the video processor to optimize the image.

(2) Four formats of DVD plus SD card recording capability

All models can record and play back a wide range of disc and memory formats (DVD-RAM, DVD-RW, DVD-R, +RW, and SD memory card).

(3) Quicker startup

Never miss a moment with Hitachi's instant-on quick start button. The button allows you to conserve power while waiting for that special moment. It allows the DVD camcorder to be set to standby (to conserve battery power) and to be reactivated with a single push of a button. On reactivation, recording begins in less than one second.



6th generation DVD camcorders



Home Server PC

We have developed a line of compactly implemented, high-performance home server PCs (models DH75P and DH73P) that support reception of digital terrestrial broadcasting, video recording, and other advanced capabilities.

[Main features]

(1) Features Hitachi developed video processing BroadGear chip that supports viewing of digital terrestrial HDTV (high definition TV) programs.

(2) Exceptional processing performance based on dual core CPU.

(3) Module width has been trimmed to 59 mm, 53% the size of previous models.

(4) Noise has been slashed to less than 35 dB.

(5) Monitor is equipped with DVD and memory card slots for more flexible positioning of the main unit.

(6) Features an HDMI (high-definition multimedia interface) connection, that supports no-loss video streaming and crystal clear playback.

(7) Received the prestigious iF (International Forum) design award.

(8) Supports quick and easy connectivity to Internet content sites by remote control.



Trim-profile and stylishly home server PC DH75P and DH73P in black





Room Air Conditioner Featuring Advanced Air-supply and Air-purifying Functions that Eliminate Air-borne Pollen

Hitachi's latest air conditioner not only improves on the basic performance of its earlier models but also features for the first time in the industry a pollen mode that eliminates close to 99% of air-borne pollens.

[Main features]

(1) For the first time in the industry, features a pollen-elimination mode using air intake, electrostatic dust collection, and nano-plasma air-purifying filtering that screen out 99% of air-borne pollens.

(2) Uses sensors to monitor air quality and automatically suppress pollen, mold spores, and all other air-borne contaminants.

(3) Adopts a new type of full coverage nano stainless filter by which users can easily clear out grime, oil-bearing dust, and other pollutants in the air.

(4) Maintains a humidity level of 40%, which humans find comfortable, even in spacious living rooms. This humidity level effectively suppresses mites and mold spores.

(5) Provides comfortable air conditioning with temperature and humidity control featuring healthy soft-cooling at an optimum temperature and three new comfort settings of your choice.

(6) Saves energy and maintains a pleasant temperature of 30°C at the floor level by making good use of advanced pulse amplitude modulation technology.

Hitachi's work on the 2-stage concentrator injection cycle technology for this air conditioner received recognition in 2005 from the Japan Society of Mechanical Engineers for its remarkable performance and improved efficiency. (Hitachi Appliances, Inc.)



Room air conditioner equipped with the industry's first pollen elimination mode



Refrigerator Featuring Spacious Freezer that is Easy to Organize

Responding to common complaints that freezers are too small and impossible to organize, Hitachi has now come out with a new refrigerator with more spacious freezer with three internal compartments for quick and easy access.

[Main features]

(1) Because it gets opened and closed so often, the freezer has been relocated to the mid section of the refrigerator, and been made much more spacious thanks to Hitachi's unique thin vacuum insulation panels.

(2) The freezer has also been made much more accessible by splitting the freezer compartment into three sections: large, medium, and small. This more than doubles the floor space of the freezer (a measure of orderliness and accessibility), so people can find what they are looking for quickly and easily.

(3) Another industry first, the freezer comes with a cassette that effectively prevents freezer burn. This keeps meat, chicken and other foods stored in the freezer from becoming dehydrated.

(4) The automatic ice-maker can be adjusted to make larger cubes. The refrigerator makes 1.6 times more ice than previous models, and comes with two ice-cube trays. Ice cube trays can be selected that make four different sizes of ice cubes.

(5) This refrigerator is the result of a "freezer quality project" that was done in collaboration with Nichirei Foods Inc., and reflects careful assessment and analysis to customer needs.

(Hitachi Appliances, Inc.)



Twin door refrigerator



Hitachi's Newest Washer-dryer Combines Exceptional Washing/drying Performance, Ease of Use, and Remarkable Water Savings

Hitachi has released a combined washer-dryer that offers superior washing/drying performance and ease of use while saving water consumption.

[Main features]

- (1) Featuring the water-saving hot-beat washing system that gets clothes gleaming white through a process of warming, pressing, beating, and scrubbing, while at the same time preventing wear and damage to fabric.
 - (2) Carrying a pump to circulate highly condensed soapy water, so washing uses 70% less water.*
 - (3) Clothes are dried very quickly in a wide 80-liter capacity tub that can hold up to 7 kg of clothes.
 - (4) The washing tub has a high bottom with a wide loading door, so clothes can be comfortably loaded and unloaded without bending over.
 - (5) A nano-titanium deodorizing filter gets out cigarette and other noxious odors to make clothes fresh and clean.
- (Hitachi Appliances, Inc.)

* Compared to Hitachi's 1996 model NW-8S2 washer-dryer, and assuming a standard wash-dry cycle and 9-kg load.



Combination washer-dryer model BW-DV9F



Paper-pack Vacuum Cleaner Premium: More Power, Better Odor Removal, and Enhanced Versatility



Hitachi's CV-P50J paper-pack vacuum cleaner Premium features a high-performance fan motor and dust collection system to deliver the highest suction work rate and sustained power of any home use vacuum cleaner. Implementing a new nano technology results in a remarkable five-fold improvement odor removal* as dust is collected, and the Premium comes standard with seven nozzle attachments making it more versatile than ever before. The stylish canister body and attachments are coated with a rugged scratch-resistant UV frosted metallic finish.

(Hitachi Appliances, Inc.)

* In comparison with Hitachi's CV-PG9 nano-titanium model vacuum cleaner developed two years ago (never marketed). Deodorization in the dust collection canister. Effectiveness varies depending on conditions.

Paper-pack vacuum cleaner Premium features excellent suction power, odor removal, and versatility.