

# Yamaha Digital Home Cinema Components

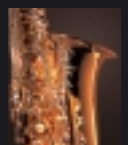
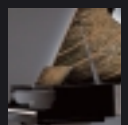
& NATURAL SOUND HiFi Components





## The Leader in High Quality Audio and Video Entertainment.

Yamaha's involvement with sound began with the production of our first reed organ in 1887. Shortly thereafter, we began making pianos and other instruments, and today we are the world's largest producer of musical instruments. We also operate a worldwide music school, design concert halls and produce innovative electronic instruments. In recent years, our expertise in analogue and digital technology, including the manufacturing of our own custom-designed LSIs and unrivaled sound processing capabilities, as well as the development of advanced video components, has brought us to the forefront of the home cinema market.



# Video Technology



## DPX-1100: Advanced technologies deliver extraordinary performance.

### "Natural Black" Concept

To provide superior contrast, Yamaha has developed the Natural Black concept, combining advanced technologies, parts and functions to achieve truer, deeper levels of black than ever before.

Black reproduction by DPX-1100 and conventional projectors.



Yamaha Natural Black makes subtle degrees of black in textures, shadows stand out more clearly.

With other projectors, black contrast may be soft and fuzzy rather than sharp and clear.

### Taking Projector Performance to a New Level

The DPX-1100 makes use of a wide range of new technologies to deliver extraordinary video performance. Contrast is an incredible 4000:1 and brightness is 800 ANSI lumens.

### High Resolution Lens

A new high resolution lens maintains resolution sensitivity to the edge of the lens. Four anomalous dispersion glass components decrease chromatic aberration while maintaining a short focal point and high zoom magnification.

### Latest DMD™ HD2+ Device

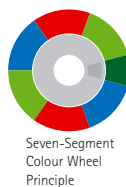
The projector is equipped with the latest DMD HD2+ device, which uses narrow mirror gaps to improve contrast. Video processing is 10-bit from A/D conversion through to DMD output.



Latest DMD™ HD2+ Device

### Seven-Segment Colour Wheel

Yamaha debuts the use of a seven-segment colour wheel, with an ND filter-equipped green segment having been added to the previous wheel. The seven-segment structure reduces dither, while colour reproduction is excellent, with greens especially being more true to life than ever.



Seven-Segment Colour Wheel Principle

### Colour Balance System

There are three Colour Balance modes: Standard, RGB for adjusting three colours, and RGBYCM for adjusting six colours. There are also six memory presets for storing personal adjustments.

### Mounting Flexibility

Mounting the DPX-1100 is easy and versatile. Lens-to-screen distance can be anywhere from 9 ft. 10 in. to 15 ft. 9 in. (100" screen) thanks to the

powerful 1.6x zoom lens. And the projector can be used at any height between the top and bottom of the screen.

### Six User Preset Memories

There are six memory positions for storing different combinations of parameter settings. Each can be used for two input signals, making a total of 12 memory conditions.

### Other Convenient Functions

Other features include Smart Zoom for projecting 4:3 broadcasts onto a full 16:9 screen, Cinema Zoom with Zoom Up and Zoom Out for eliminating bars on the top and bottom of the 16:9 screen, selectable video scan, HDMI terminal, operation status lock, lamp power selector and automatic aspect conversion.

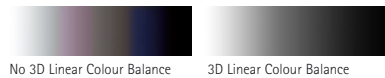
## LPX-510: "Natural Black" and advanced functions for enjoying widescreen movies.

### High Performance LCD Panels

The LPX-510 uses LCD panels capable of projecting high resolution 720p HDTV images and 10-bit video processing gives it the ability to reproduce 1.07 billion colours. 16:9 aspect ratio compatibility means that widescreen movies can be viewed in their entirety.

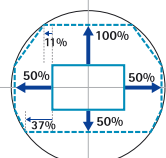
### 3D Linear Colour Balance

The 3D Linear Colour Balance function maintains the proper balance between the three signals from the LCD panels, adjusting colour irregularities through a range of 15,360 correction points for accurate colour in any type of scene.



### Lens Shift, Motorized Iris and Zoom

Vertical and horizontal lens shift capability means that the projector does not have to be positioned directly in front of the screen. The motorized iris control can be used to improve contrast and focusing, and the motorized Zoom will expand the image up to 1.5 times.



Picture position at lens shift zero.  
Picture position adjustable by lens shift.

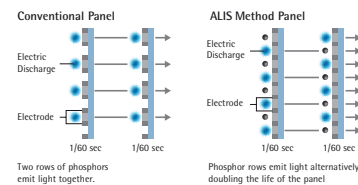
### Cinema Balance Filter

The LPX-510 introduces a new Cinema Balance Filter that enhances colour reproduction when viewing in a dark room, such as that typically used for movies. It is an optical filter so dynamic range is not affected.

## PDM-4210: Incredibly Smooth, High-Definition Image Quality.

### ALIS Method Panel Technology

This plasma display panel uses an advanced ALIS (Alternate Lighting of Surface) Method to deliver a sharp, clear picture with the smooth, high-definition quality you see in a movie theatre. The ALIS Method employs a screen surface comprised of vertical channels of continuous phosphor material. The pixels are defined electronically rather than physically, allowing each picture element to be smaller than normal. This creates a higher pixel count for a smoother, seamless picture, with edges and curves clearly defined. The PDM-4210 uses the latest ALIS Method technology, which features new plasma gas and luminescent material that are more effective than previous types. The result is a brighter picture (1,100 cd/m<sup>2</sup>) and higher colour temperature, which makes white areas such as clouds in the sky stand out more vividly. The panel can also display a wider range of colours (16.7 million), with enhanced colour purity.



### Natural Black Drive System

The Natural Black Drive System automatically determines the brightness of the screen and applies the gray scale (contrast) best suited to the scene in order to reproduce both bright and dark areas with small details clearly visible. The contrast ratio is an outstanding 1.000:1 under daylight condition, making it possible for the PDM-4210 to deliver sharp, natural-looking images.

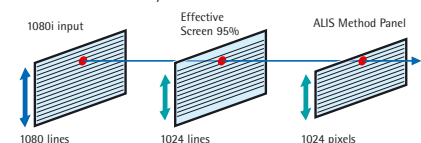
### Digital Linear Colour Control

Digital Linear Colour Control continually maintains the ideal balance between the three main colours (red, green, blue) for optimum colour reproduction in every scene from very dark to very bright. The sharpness and tint of each colour are independently controlled, so you can adjust the tint more precisely.

### HDTV Capability

The PDM-4210 is fully HDTV capable, meaning that 1080i high definition images can be displayed line for line without vertical scaling. The 1,024 x 1,024 resolution provides a completely clean HDTV picture, with no noise at the edges.

### True HDTV Picture Quality



1080i is the HD broadcasting standard. However, it uses overscanning, so the actual screen is 95%, or 1024 lines, therefore, the ALIS Method Panel with 1024 pixels reproduces the true image, without noise at the edges.

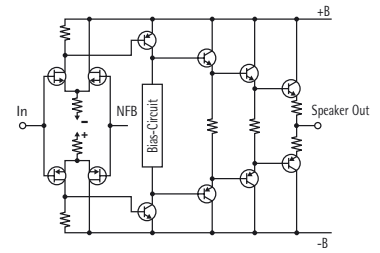
# Digital ToP-ART Technology

## Digital ToP-ART Concept

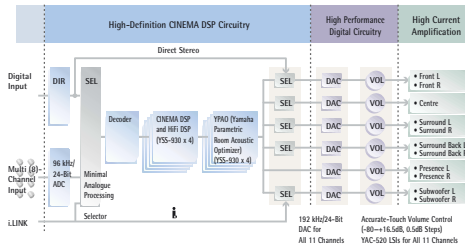
Digital ToP-ART (Total Purity Audio Reproduction Technology) is a Yamaha product development philosophy that combines advanced digital engineering and circuit design to maximize audio signal purity. Digital ToP-ART enables the Yamaha Digital Home Cinema Components to deliver superb sound quality and bring out the full potential of Yamaha's amazing CINEMA DSP technology.



amplifier circuit and the speaker terminals, caused by the cables, speaker output relays, copper circuit boards, and so on. To avoid this problem, we use an extra-large, low-impedance toroidal transformer and gold-plated speaker relay contacts. As a result, Yamaha amplifiers/receivers achieve low impedance, high current power from input (power supply circuit) to output (speaker terminals). This drives the speakers much more smoothly and dynamically, for better sound from all sources, including 2-channel audio.

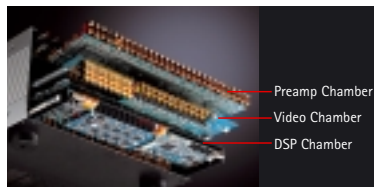


Symmetrical power amplifier circuit configuration results in improved slew rate and balanced clipping.



## High Grade Construction with Independent Chambers and Anti-Vibration Design

The DSP-Z9 uses a heavy-duty, rigid chassis construction with separate individual chambers for left and right power amplifiers, power supply and control section to prevent any chance of internal interference. This thick chassis also has electromagnetic shielding. The extremely large aluminium-extruded heat sinks have anti-resonance characteristics and ensure effective heat dissipation. Supporting all this are Yamaha's ToP-ART base and feet, which provide stability and further vibration-damping.



## High Current Amplification

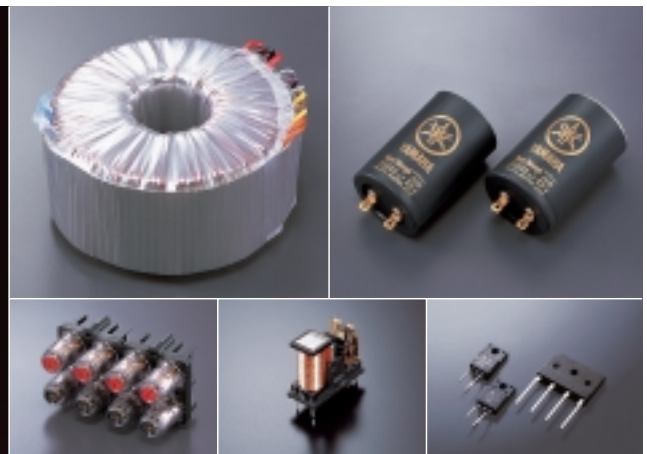
Although power rating is often the first thing people look at in an amplifier/receiver, high power output does not necessarily mean good sound. A High current level is a much more important factor, so Yamaha has developed the High Current Amplification system, which overcomes two problems common to ordinary receivers. The first is a difference in voltage between the power supply and amplifier circuits caused by current fluctuations. This was solved by using custom-made, high-grade block electrolytic capacitors and a copper grip for one-point grounding. Another current drop is generally seen between the

## Symmetrical Power Amplifier Circuitry (DSP-Z9)

The High Current Amplification system uses a symmetrical, full push-pull circuit configuration with a complementary FET input stage. This ensures balanced output with no signal interference and highest slew rate (rate at which signal changes; affects high frequency response). Furthermore, the massive toroidal transformer and large capacity block chemical condenser (28,000µF) ensure a consistently stable power supply.

## Finest Parts Used Throughout

At this degree of extreme sound quality, each and every part in the receiver makes a difference. Yamaha technicians tested, selected and in many cases custom-designed all parts, and then tested them in groups to ensure that they sounded good together.



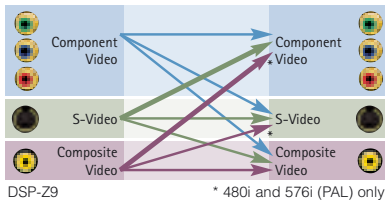
DSP-Z9 Interior View, Extra-Large Toroidal Transformer, Extra-Large Custom-Made Block Electrolytic Capacitors (28,000 µF), Gold-Plated-Extruded Gigantic Speaker Terminals, Two Direct Signal Path Speaker Relays and High Sound Quality Schottky Barrier Diode for High Gain S/N Ratio

# High Picture Quality

## Component Video Up Conversion\*

(DSP-Z9, RX-V2400RDS, RX-V1400RDS and RX-V750)

One way of ensuring the highest video quality for your home cinema system is to use the best possible video signal. The components automatically upgrades the input signal (composite to S-Video or component,



S-Video to component) to the one that your monitor/TV can accept. In the DSP-Z9, this is done digitally, and all signals pass through the DCDi and Noise Shaped Video circuits further improving them. This means that you simply use the best possible cable between the component and the monitor/TV, and then whatever the source is, you are assured of getting the highest possible quality.

\* The DSP-Z9 offers component video up and down conversion.

## Progressive Scan Video Output and Other Video Technologies (DSP-Z9)

The DSP-Z9 is the first amplifier to provide Progressive Scan Video Output, for use with high

definition monitors. With almost twice as much video data, it provides a sharper, noise-free picture with clearer details. The progressive circuit is an 3:2 Pull-Down Detection type, and gives you the benefit of progressive scanning even if your DVD player does not have it. Other video technologies include 216MHz/12-bit Video D/A Conversion, Motion Adaptive Noise Reduction, Cross Colour Suppression, Aspect Ratio Conversion, a Time Base Corrector that prevents the wavy distortion seen in video tapes and TrueLife Enhancer by Farouja that brings out details in the picture, producing a more life-like image.

## Image Adjustment (DSP-Z9)

To ensure that the high quality image looks precisely the way you want it to, the DSP-Z9 includes an extremely detailed Image Adjustment function. You can select three modes, Cinema, Standard or Dynamic, and within these modes, you can "fine-tune" five parameters: Enhancer, 3D NR, Brightness, Contrast and Saturation.

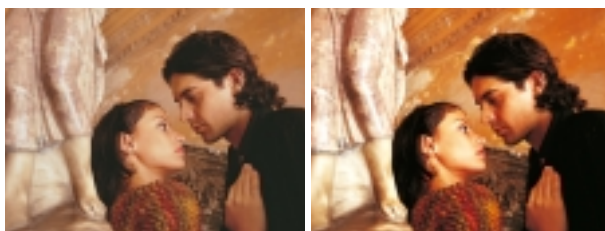
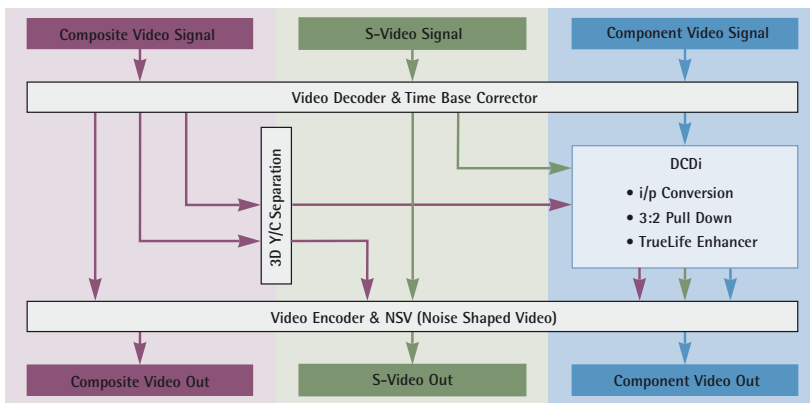
You can then store your final adjustments in the user memory for recall at any time.



YGV-619 Yamaha Original LSI



## Digital Component Video Up Conversion Circuit Configuration (DSP-Z9)



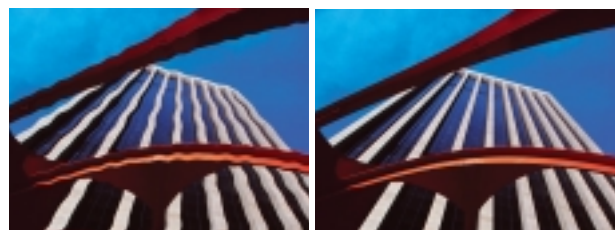
Before TrueLife Enhancer (Left) vs. After TrueLife Enhancer (Right)



DCDi Off (Left) vs. DCDi On (Right)



Without Film Mode (Left) vs. With Film Mode (Right)



Time Base Corrector Off (Left) vs. Time Base Corrector On (Right)

• Below images are simulated.

# High Definition CINEMA DSP Technology



## Way Beyond Ordinary Surround Sound

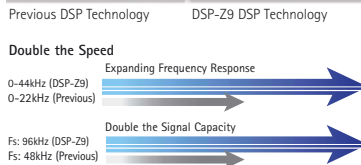
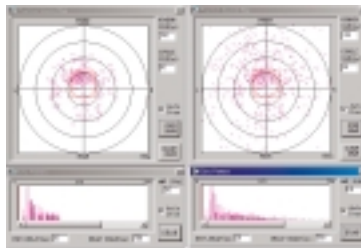
Conventional multi-channel systems base their sound on Dolby Digital and DTS decoding, using a relatively simple matrix and steering techniques to create surround sound effects. Yamaha's CINEMA DSP Digital technology is much more sophisticated. It naturally decodes the Dolby Digital and DTS movie sound formats, but it also draws on a huge memory of real-world data from actual venues (especially for the music programmes) and input from movie sound technicians. This data is stored and processed on Yamaha-developed LSIs, the most powerful audio chips in the world.

Our latest technology, Quad-Field CINEMA DSP actually creates four independent sound fields (front, surround left, surround right and surround back) that merge to envelop you in an unmatched surround sound experience. You hear movies and music with accurate sound localization, smooth movement across the sound space, exceptional clarity and remarkably realistic presence. It will seem as if the walls of your room have disappeared and you are in the middle of your own immense theatre!

## High Definition CINEMA DSP Technology

The DSP-Z9 has six times greater DSP capacity than previous models, thanks to an increase from 48kHz to 96kHz/24-bit A/D converters that can accept 96kHz analogue signals for direct digital conversion and processing. Higher density processing enables approximately triple the amount of early reflection data to be handled, for significantly richer surround sound performance. The DSP-Z9 also employs

### Triple the Density



192kHz/24-bit D/A conversion and DSP processing and Yamaha's 32-Bit Floating-Point Quantization System LSIs (four YSS-930s) for high precision decoding of Dolby Digital, DTS Digital Surround, DTS 96/24, DTS-ES Discrete 6.1, DTS-ES Matrix 6.1, DTS Neo:6 and Dolby Pro Logic IIx formats.

## SILENT CINEMA and Virtual CINEMA DSP

SILENT CINEMA makes it possible to hear large-scale surround sound through ordinary headphones! This is a variation of CINEMA DSP technology that Yamaha has developed to let you listen in private to movies and other multi-channel sources for hours without listening fatigue. Virtual CINEMA DSP lets you enjoy the effects of CINEMA DSP surround sound without using surround speakers (handy for use in custom installations where some rooms don't have surround speakers). It can be used with the front/centre/presence speakers or even with just the two front left and right speakers.

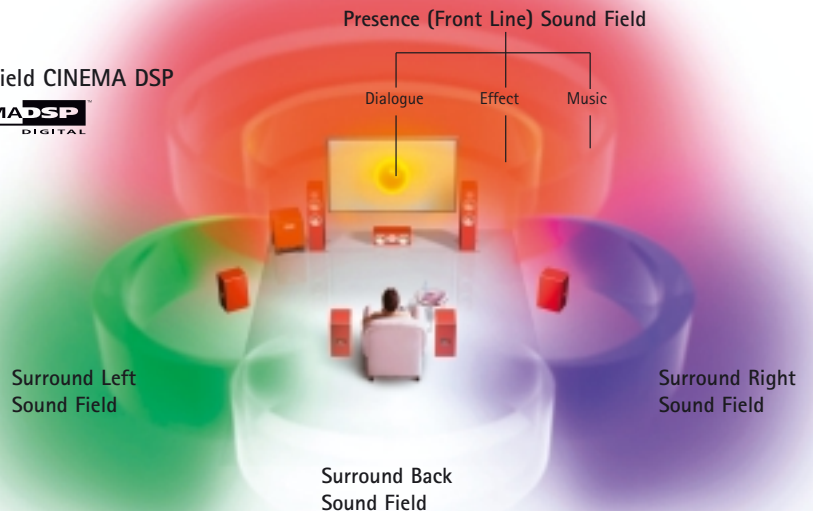


SILENT CINEMA Sound Field Imaging

## Conventional 7.1-Channel Systems

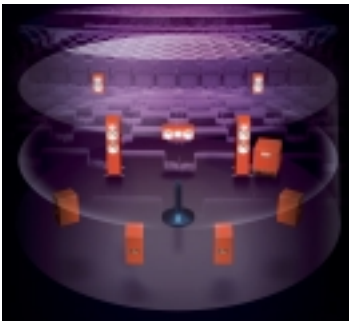


## Quad-Field CINEMA DSP



# Easy to Use

Each generation of Yamaha receivers brings an evolution of our popular features while adding innovative enhancements to improve the operating experience. This is why even though our receivers are the most technologically advanced, they remain remarkably easy to use and enjoy. Although these A/V components look like formidable machines, you'll soon appreciate just how convenient and enjoyable they are to use.



**A World's First! — YPAO**  
(DSP-Z9, RX-V2400RDS, RX-V1400RDS, RX-V750 and RX-V650)

The DSP-Z9, RX-V2400RDS and RX-V1400RDS are the first amplifiers to give you the benefits of a 10-band

[DSP-Z9, RX-V2400RDS and RX-V1400RDS: 7-band] (selected from 25 bands) parametric equalizer, which automatically modifies the audio output to provide precisely the best sound for the acoustics of the room. The unit comes supplied with a high precision Optimizer Microphone, which you simply place in the position where you most frequently listen. Activating the YPAO function causes test tones to be emitted from the speakers. These tones are picked up by the Optimizer Microphone and then analyzed. Based on the results, a variety of audio parameters are precisely calibrated to optimize the sound at the listening position. You enjoy not only better sound, but the BEST sound for each and every room.



DSP-Z9 Optimizer Microphone

### Easy Setup and Operation

An ergonomic design that ensures simple, convenient operation. Everything from the layout of the controls to the display menus has been planned to make using it easy and enjoyable. For even greater setup ease, a Basic Mode permits basic settings to be made without using the Setup menus and with a minimum of steps.

### Programme Name and Surround Sound Indications

The front panel display presents comprehensive information about operating status, including the programme name, whether it is a Tri-Field or Quad-Field CINEMA DSP programme, and much more. You'll never be confused about what mode you are in.

### A/V Rec Out Selector with Zone 2 Selector (DSP-Z9 and RX-V2400RDS)

The Rec Out Selector lets you choose which source you want to record. As you are recording, you can listen to that source or to the source selected by the Input Selector. The Rec Out Selector also functions as a Zone 2 Selector.

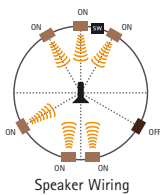
### Subwoofer Crossover Selection

The Yamaha amplifiers/receivers provide a choice of nine subwoofer crossover frequencies: 40, 60, 80, 90, 100, 110, 120, 160 and 200 Hz. In addition to providing a wider range than other amplifiers, the steps from 80 to 120 Hz are only 10 Hz apart for more precise selection. This choice of crossovers lets you "fine-tune" the audio system by selecting the optimum frequency to maximize amplifier/speaker efficiency and also ensures best performance from a wider variety of speakers (small to large).

## YPAO Acoustic Customization (DSP-Z9, RX-V2400RDS and RX-V1400RDS)

### 1) Speaker Connections

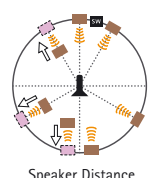
Checks for missing connections and subwoofer phase control (here the right surround speaker is not connected).



Speaker Wiring

### 2) Speaker Distance

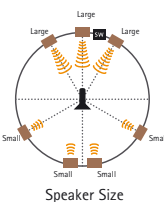
Measures speaker distances from the listening point and corrects for differences down to 5cm.



Speaker Distance

### 3) Speaker Size

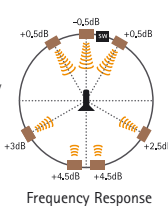
Checks speaker sizes (large or small) and subwoofer crossover frequency.



Speaker Size

### 4) Speaker Frequency Response

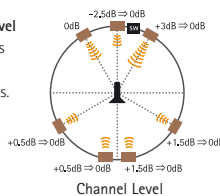
Measures and optimizes each speaker's frequency response using the 10-band parametric equalizer.



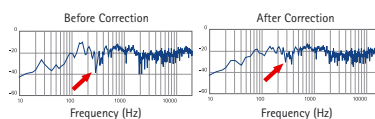
Frequency Response

### 5) Sound Pressure Level

Measures and aligns the sound pressure levels of all speakers.



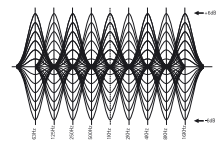
Channel Level



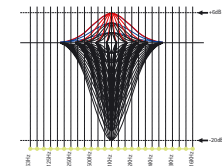
Frequency (Hz)

## Graphic Equalizer vs. Parametric Equalizer

Conventional Graphic Equalizer

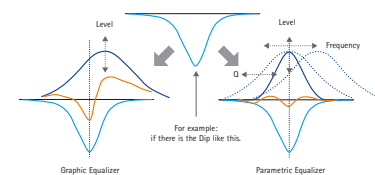


Yamaha Parametric Equalizer



### YPAO

YPAO provides frequency response compensation for all channels via a 10-band parametric equalizer. Graphic equalizers adjust only the level, while parametric equalizers adjust level, frequency and Q factor, thus providing more detailed and effective sound equalization.



# MusicCAST

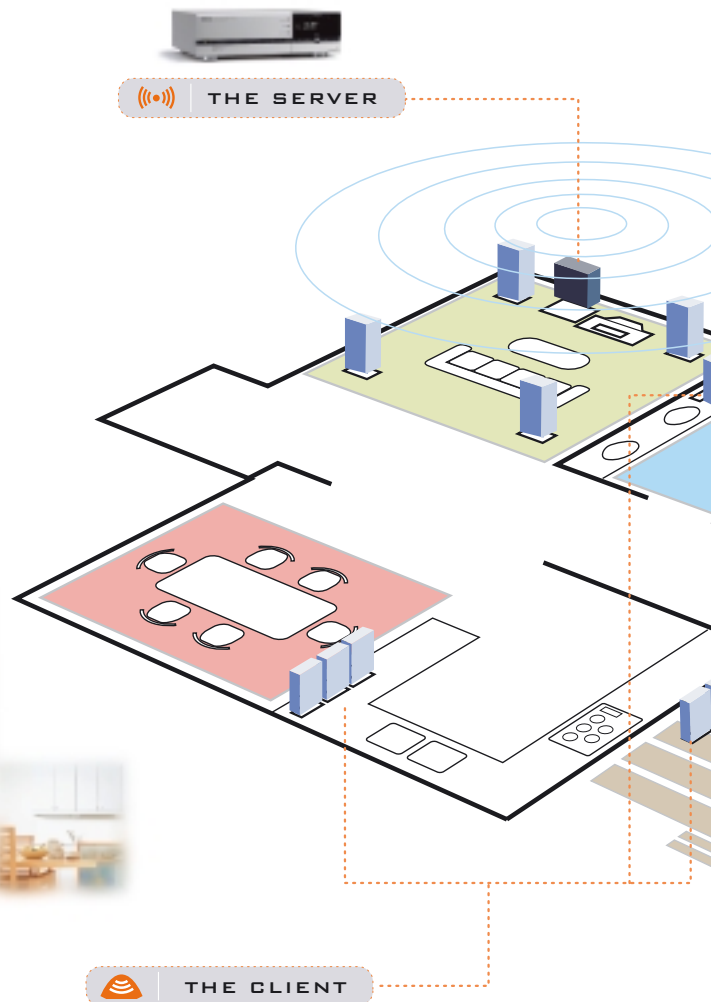
Interactive Wireless Home Music Network System

## Music does not need any cable!

The world's first wireless, multi-room, multi-selectable music network for home entertainment.



Now the power of the MusicCAST music distribution system is packed into a stylish in-wall mountable client. Designed to offer greater flexibility and convenience, the new distributed audio controllers take family music enjoyment to a whole new level.



### THE SERVER

The MusicCAST server stores and broadcasts music content wirelessly to any location within your home.



#### MCX-1000 Digital Audio Server

- Dimensions (W x H x D): 435 x 136 x 434 mm
- Weight: 11.5 kg



### THE CLIENT

Clients are used to retrieve music content stored on the MusicCAST server, for instant access to music in any location within your home.



#### MCX-A10 Digital Audio Terminal

- Dimensions (W x H x D): 210 x 245 x 79 mm
- Weight: 2 kg



High sound quality exclusive MusicCAST speaker system.



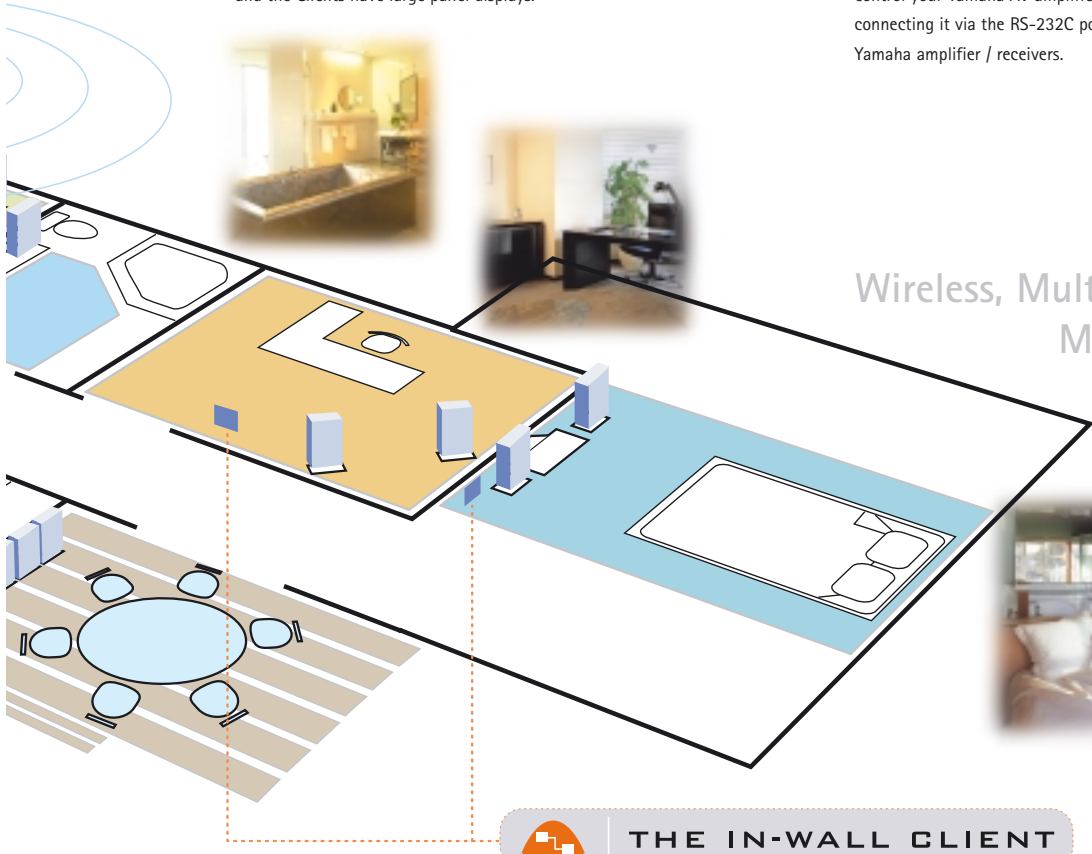
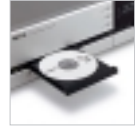
#### MCX-SP10 Optional Speaker System

- Dimensions (W x H x D): 210 x 210 x 79 mm
- Weight: 1.2 kg

- **Simply wireless** – You can enjoy and control music in as many as eight locations: one Server and seven Clients (wireless plus wired).
- **Store 1000 hours of music** – A huge amount of music is at your fingertips. The hard disk stores up to 1,000 hours of music in MP3 format. (Upgradable hard disk)
- **User friendly** – Operating the system is easy for everyone in the family. The Server has a GUI (graphical user interface) with on-screen menus and the Clients have large panel displays.



- **Multiple sources** – You can also enjoy music, etc. from other connected sources, such as digital radio, FM, LP or tape.
- **Create your own CDs** – You can even make your own CDs from playlists composed of songs you have selected, by using the built-in CD recorder. For extra-high sound quality, record CDs with the Advanced Audio Master Quality Recording function.
- **Use your amplifier / receiver** – You can control your Yamaha AV amplifier / receiver by connecting it via the RS-232C port to certain Yamaha amplifier / receivers.



## Wireless, Multi-Room Music Network

### THE IN-WALL CLIENT



### THE IN-WALL CLIENT



**MCX-C15** Distributed Audio Controller

■ Dimensions (W x H x D): 120 x 120 x 106 mm



### MCX-C15 Family



**MCX-CA15** Distributed Audio Amplifier

■ Dimensions (W x H x D): 120 x 120 x 106 mm

This multipurpose in-wall amplifier is perfectly matched to the MCX-C15 Client. It provides high quality power to speakers, as well as subwoofer and video OSD outputs.

# Plasma Display Monitors / Projectors

High Performance Home Theater Projectors and Plasma Display Monitors.  
With the Emphasis on "Theater"!



**DPX-1100** Digital Cinema Projector



The previous DPX-1000 has been honoured with an EISA Award for High-End AV Product 2003-2004. The prestigious EISA Awards are chosen by media representatives from up to 20 European countries.

New high resolution lens and advanced video technologies deliver extraordinary performance, including 4000:1 contrast.

- Yamaha Natural Black Concept • 4000:1 contrast ratio • High resolution lens • Four anomalous dispersion glass components (see pg. 4) • Motorized iris control • Latest DMD™ HD2+ device • Seven-segment colour wheel • ND filter-equipped green segment • 10-bit green resolution • Faroudja TruLife Enhancer • Motorized vertical lens shift, iris, focus and zoom controls • 1.6x zoom ratio • One-line menu with graphical menu configuration • Low-noise operation • Automatic aspect conversion • Smart Zoom • Cinema Zoom • HDMI terminal • 6 memories for each terminal • Variable lamp power control
- <Accessories> • PJL-427: Optional lamp cartridge • PMT-L31: Optional installation brackets for low ceiling

*\* DCDi is not applicable to images from film sources.*



In addition to the Input A and Input B (Component Video and RGB signal) terminals, the DPX-1100 rear panel offers the HDMI input terminal, composite video input terminals, remote in/out terminal and RS-232C and Trigger out (12V/200mA) terminals.

Movies have never looked better in the home than they do on this extraordinary plasma display monitor. HDTV and other TV broadcasts will also look superb. For the finest in home theater viewing, as well as superior control, convenience and versatility, the PDM-4210 is the clear choice.

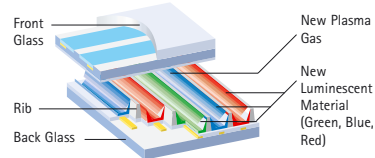


Delivers incredibly smooth, high-definition image quality for an exceptional home cinema viewing experience.

- ALIS Method panel technology • Natural Black Drive System for 1,000:1 contrast ratio • Daylight: 1,100 cd/m<sup>2</sup> • High resolution: 1,024 x 1,024 pixels • HDTV capability • Digital Linear Colour Control
- Long life: 60,000 hours\* • Two picture modes • Four white balance modes • Low power consumption • Side-by-side picture
- Picture-in-picture • Multi-language on-screen display • Timer functions • Five video and five PC size modes • Simple remote control unit • Television tuner • DVI Interface with HDCP
- <Accessories> • PDS-242: Stand
- <Option> • wall-hanging brackets

\* Until panel brightness reduced to 40%. Yamaha measurement.

The ALIS Method Panel



The PDM-4210 rear panel offers digital input (RGB 1, DVI Interface), analogue input (RGB 2), analogue audio input (RGB 1 and RGB 2: 3.4mm stereo mini jack), and RS-232C Interface.



**PDM-4210** Plasma Display Monitor



**LPX-510** Home Cinema Projector



With the LPX-510, Yamaha makes it easy to enjoy widescreen movies at home with beautiful movie-like picture quality.

- High contrast film-like picture quality with "Natural Black" • Latest 0.7" 720p liquid crystal panel • 720p HDTV format compatibility, 16:9 widescreen display • 3D Linear Colour Balance • Cinema Balance Filter • Motorized iris control • Vertical/horizontal lens shift • Faroudja DCDi\* processing • Short focus lens with high power zoom • Yamaha Cinema Filter • 1.5x motorized zoom • 15° vertical keystone correction • Motorized focus control • 6 user preset memories • Smart Zoom for projecting 4:3 sports broadcasts onto a full 16:9 screen • Automatic aspect conversion • 6-step lamp power control
- HDMI terminal • Low-noise operation
- <Accessories> • PJL-520: Optional lamp cartridge
- PMT-L51: Optional installation brackets for low ceiling

\* DCDi is not applicable to images from film sources.



In addition to the Input A (5 composites) and Input B (5 composites) terminals, the LPX-510 rear panel offers the HDMI input terminal, S-Video and composite video input terminals and RS-232C and Trigger out (12V/200mA) terminals.



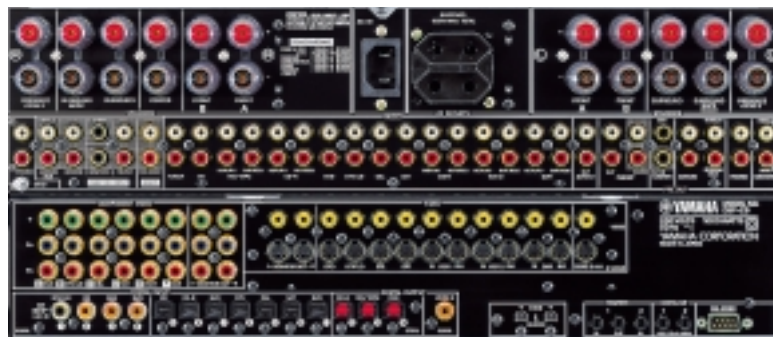
# Digital Home Cinema Components

Only Yamaha could set these goals for a home cinema amplifier — and achieve them!

The DSP-Z9 was developed to achieve three ambitious goals: deliver the highest sound quality, provide the highest picture quality, and be the easiest amplifier to use. We believe we succeeded in all three areas, but we invite you to judge for yourself — we're confident that the DSP-Z9 will totally satisfy your highest expectations for a home cinema amplifier.



## DSP-Z9 *HiFi* Digital Home Cinema Amplifier



**Video Inputs on Front Panel:** A panel on the front of the receiver flips up to reveal a number of controls and video input terminals. These include video and audio terminals as well as optical digital and S-Video inputs. This makes it convenient to temporarily connect a game machine for DVD games or movies, or other devices such as a camcorder.

### DSP-Z9 Rear Panel Connections

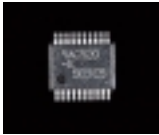
- 8\* optical, 4 coaxial digital inputs (fixed and assignable)
- 8\* A/V and 5 audio (audio signal) inputs, 3 A/V and 2 audio (audio signal) outputs, and Zone 2 audio output
- 3 optical digital outputs (fixed and assignable)
- 6 component video inputs (fixed and assignable) and 2 monitor component video outputs
- 2 monitor (with S-Video) outputs, 8 video inputs/3 video outputs (with S-Video), and Zone 2 video (with S-Video) output
- Pure Direct 2-channel input
- Pre-main and centre couplers, surround, surround back and presence preouts, and subwoofer output
- 8-channel external decoder input
- RS-232C interface for custom installation
- 2 trigger outputs for automatic power on of other components (+12V, 15mA)
- Remote control IR code input/output
- Zone 2 coaxial digital output
- i.LINK (IEEE 1394) digital audio interface
- Terminal for detachable power cable

\* Including Video Aux terminals on front panel

## Highest Sound Quality

The most advanced audio technology and digital sound field processing capabilities are backed by over a century of experience and an undiminished commitment to "natural sound."

- 9.1-channel powerful surround sound (300W x 7 + 90W x 2 DIN)
- Digital ToP-ART and High Current Amplification
- 192 kHz/24-bit DACs for all channels
- Accurate touch digitally regulated volume control governs all channels (Yamaha YAC-520 LSIs)
- Pure Direct for high quality 2-channel sound reproduction
- i.LINK (IEEE1394)
- High dynamic power, low impedance drive capability
- Linear Damping
- DVD-Audio/Super Audio CD compatibility
- Digital tone controls for front L/R and centre channels
- 9-band graphic equalizer
- High grade construction with independent chambers and anti-vibration design
  - ToP-ART Base for reduced external resonance
  - ART (Anti-Resonance and Tough) feet
- Finest parts used throughout
  - Extra-large toroidal transformer
  - Extra-large (28,000µF) custom made block electrolytic capacitors
  - Gold-plated-extruded gigantic speaker terminals
  - Anti-resonance, Alumite-finish heat sinks
  - Schottky Barrier diodes allow fast switching for high S/N ratio.
  - Thick PC board wiring with 1.6mmφ diameter copper jumper cables.
  - Two direct signal path speaker relays with gold-plated crossover connections and shielding



Digitally Regulated Volume Control Device (Yamaha Original YAC-520 LSI)

## Highest Picture Quality

As the central control unit in a home cinema system, the DSP-Z9 interfaces with video source and display components to ensure that video performance is on a par with sound quality.

- Digital component video up and down conversion
- Progressive Scan video output
  - Faroudja's TrueLife Enhancer
  - 216MHz/12-bit video D/A conversion
  - Motion adaptive noise reduction
  - Cross colour suppression
  - Aspect ratio conversion
- DCDiprocessing: The DSP-Z9 is the first amplifier to offer Faroudja's DCDi Processing, which is selectable and ensures that images are smooth and natural, without staircasing or jaggies.
- NSV (Noise Shaped Video)
- Time Base Corrector
- HDTV (720p/1080i) compatibility
- Wide-range video bandwidth (100MHz -3 dB)



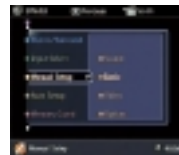
Digital Video Processing Board

All digital video processing circuitry is on a single board, housed in its own separate chamber to completely avoid interference from other circuitry.

## Easiest to Use

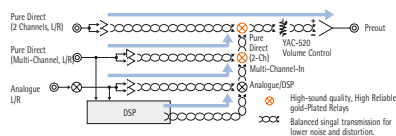
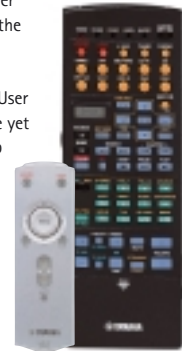
Yamaha amplifiers/receivers have a long history of introducing features that enhance operating ease. The DSP-Z9 continues this tradition with one major convenience breakthrough and many other advanced features.

- YPAO (Yamaha Parametric Room Acoustic Optimizer)
- On-Screen Display with GUI (Graphical User Interface) and dedicated remote control
- Programme name and sound field indications
- Selectable subwoofer crossover (40, 60, 80, 90, 100, 110, 120, 160, 200 Hz)
- Direct access (macro command, learning capable and preset) remote control unit
- A/V rec out selector with Zone 2 selector
- Audio/video custom installation compatibility
- Automatic Zone 2 or presence speaker selection (9-channel speaker terminals)
- Speaker A+B and A/B selector



### On-Screen Display with GUI and Dedicated Remote Control

The DSP-Z9 has the best looking and easiest to use on-screen display you've ever seen. This is due in part to the high quality video circuitry, which provides sharp, clear images. The GUI (Graphical User Interface) includes extensive yet easily understandable setup menus and has been designed to make it easy to select and adjust desired functions. And to further simplify operation, Yamaha has provided a second remote control dedicated to GUI use.



### Choice of Signal Paths for Optimum Quality

The DSP-Z9 gives you a choice of specialized signal paths, ensuring that you can obtain the purest signal quality possible. **Pure Direct** provides the shortest possible signal path for two-channel or multi-channel analogue inputs, with no signal processing and no display. **Straight** outputs the original analogue or digital signal without any post-processing. **i.LINK** provides a digital connection for DVD-Audio Linear PCM, Super Audio CD DSD (Direct Stream Digital) and other high quality audio sources. **Direct** provides a direct connection for analogue stereo/multi-channel input and digital stereo/multi-channel (via i.LINK) input, with a dimmed display.

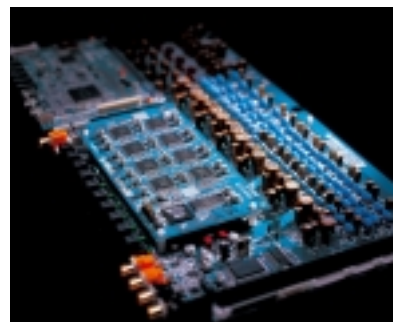
## Best Surround Realism

Yamaha has developed its audio and cinema digital sound field processing technology decades ago and has been refining it ever since. The DSP-Z9 offers an unrivaled, breathtaking surround sound experience.

- Powerful original 32-bit floating-point quantization system LSIs (YSS-930 x 4) for CINEMA DSP processing
- Compatibility with Latest Movie Sound Formats Including Dolby Pro Logic IIx, Dolby Digital EX, DTS-ES Discrete 6.1, DTS Neo:6 and DTS 96/24
- 55 surround programmes (79 variations)
- THX Ultra2 processing
- Audio Delay for adjusting lip-sync
- Night Listening mode
- SILENT CINEMA and Virtual CINEMA DSP



Advanced decoding circuitry including YSS-930 32-bit floating point quantization LSI



### 4-Layer DSP Processing Board in DSP Chamber

All of the DSP IC chips and related circuitry are located together on a 4-layer board, which provides a number of advantages. The dimensions are smaller (2/3 the size of previous types), so signal paths are shorter and there is more space for the large power supply components. Digital interference is reduced and impedance is lower as well.

**Ideal as the main component of a top-class home cinema system, providing the finest sound quality and extensive control**

The RX-V2400RDS is a high performance, technologically advanced receiver that will provide all the power and control necessary for any high quality home cinema system. Major features include 7-channel discrete amplification (180W x 7 DIN), Yamaha's Digital ToP-ART design concept, YPAO, Quad-Field CINEMA DSP, 33 surround programmes including 2 THX programmes, full movie sound format compatibility as well as Dolby Pro Logic IIx, and component video up conversion.



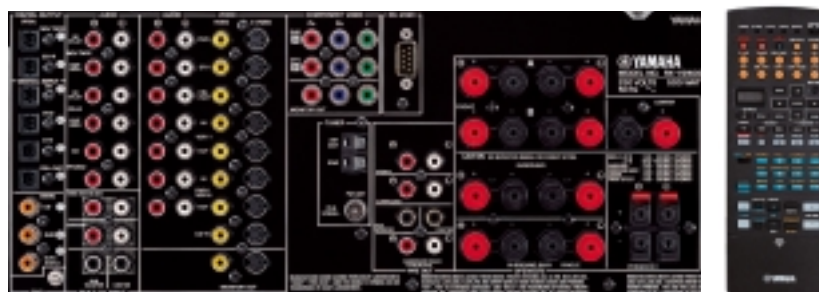
**RX-V2400RDS** *Fi* 7.1-Channel Digital Home Cinema Receiver



- 7-channel, powerful surround sound (180W x 7) • Digital ToP-ART and High Current Amplification
- Direct Stereo mode for high quality 2-channel sound reproduction • Accurate touch volume control
- Audio Delay for adjusting lip-sync (0-240ms) • 32-bit Yamaha LSI (YSS-930) for CINEMA DSP processing
- Dolby Pro Logic IIx, Dolby Digital EX, DTS-ES Discrete 6.1, DTS Neo:6 and DTS 96/24 compatibility
- THX Select processing • 33 surround programmes (57 variations) with SILENT CINEMA and Night Listening mode • Component video up conversion • YPAO acoustic customization • Rec out selector • RS-232C interface • Finest parts used throughout • Direct access (macro command, learning-capable and preset) remote control unit



Optimizer Microphone



Extensive system connections (see page 34)



Oil-Damped Hidden Control Panel includes S-video input and optical digital input terminals for connecting game machines, digital equipment.



**RX-V1400RDS** *HiFi* 7.1-Channel Digital Home Cinema Receiver **video** **REPRO**

**CINEMA DSP DIGITAL** **SILENT CINEMA** **DOLBY DIGITAL EX** **dts** **THX** **6CH EXT. INPUT** **RDS**

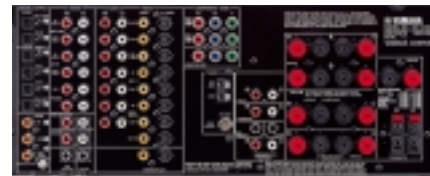
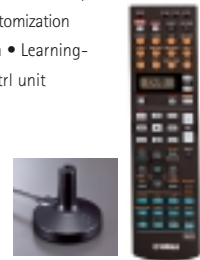


Oil-Damped Hidden Control Panel includes S-video input and optical digital input terminals for connecting game machines, digital equipment.



Enjoy movies and music with astonishing realism and clarity in your own acoustically customized home cinema

- 7-channel, powerful surround sound (170W x 7)
- Digital ToP-ART and High Current Amplification • Direct Stereo mode for high quality 2-channel sound reproduction
- Accurate touch volume control • Audio Delay for adjusting lip-sync (0-240ms) • 32-bit Yamaha LSI (YSS-930) for CINEMA DSP processing • Dolby Pro Logic IIx, Dolby Digital EX, DTS-ES Discrete 6.1, DTS Neo:6 and DTS 96/24 compatibility
- THX Select processing • 31 surround programmes (55 variations) with SILENT CINEMA and Night Listening mode • Component video up conversion • YPAO acoustic customization
- Speaker A, B or A+B selection • Learning-capable and preset remote control unit



Extensive system connections (see page 34)



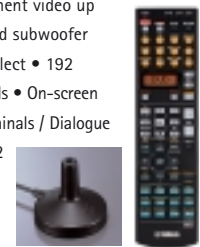
**RX-V750** *HiFi* 7.1-Channel Digital Home Cinema Receiver

**CINEMA DSP DIGITAL** **SILENT CINEMA** **DOLBY DIGITAL EX** **dts** **THX** **6CH EXT. INPUT** **RDS**



Astounding array of home cinema functions including YPAO acoustic customization, Dolby Pro Logic IIx and component video up conversion

- 7.1-channel, powerful surround sound (150W x 7)
- Digital ToP-ART and High Current Amplification
- Pure Direct mode • YPAO • Accurate touch volume control • Dolby Pro Logic IIx, Dolby Digital EX, DTS-ES Discrete 6.1, DTS Neo:6 and DTS 96/24 compatibility
- Audio Delay for adjusting lip-sync (0-160ms)
- 29 surround programmes • Night Listening Enhancer and SILENT CINEMA • Component video up conversion • Selectable 9-band subwoofer crossover/ subwoofer phase select • 192 kHz/24-bit DACs for all channels • On-screen display • Presence speaker terminals / Dialogue Lift • 6 digital (4 optical and 2 coaxial) inputs • Phono input
- Learning-capable remote control unit



Extensive system connections (see page 34)

DIGITAL  
TOP·ART



**RX-V650** *[Ti]* 7.1-Channel Digital Home Cinema Receiver

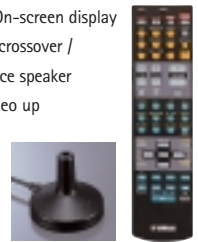
CINEMA DSP DIGITAL SILENT CINEMA

DOLBY DIGITAL EX DTS 96 24 NEO:6 6 CH EXT. INPUT R·D·S



Extensive range of home cinema functions including YPAO acoustic customization, Dolby Pro Logic IIx compatibility and on-screen display

- 7.1-channel powerful surround sound (145W x 7)
- Digital ToP-ART and High Current Amplification
- Pure Direct mode • YPAO for automatically optimizing the sound in your room • Accurate touch volume control
- Dolby Pro Logic IIx, Dolby Digital EX, DTS-ES Discrete 6.1, DTS Neo:6 and DTS 96/24 compatibility • Audio Delay for adjusting lip-sync (0–160ms) • 29 surround programmes (53 variations) • Night Listening Enhancer (Cinema/Music) and SILENT CINEMA • 192 kHz/24-Bit DACs for all channels • On-screen display
- Selectable 9-band subwoofer crossover / subwoofer phase select • Presence speaker terminals / Dialogue Lift • S-Video up conversion • 6 digital (4 optical and 2 coaxial) inputs
- Preset remote control unit



Extensive system connections (see page 37)

DIGITAL  
TOP·ART



**RX-V550** *[Ti]* 6.1-Channel Digital Home Cinema Receiver

CINEMA DSP DIGITAL SILENT CINEMA

DOLBY DIGITAL EX DTS 96 24 NEO:6 6 CH EXT. INPUT R·D·S



Full home cinema enjoyment with functions including Dolby Pro Logic IIx, Quad-Field CINEMA DSP and Night Listening Enhancer

- 6.1-channel powerful surround sound (135W x 6)
- Digital ToP-ART and High Current Amplification
- Direct Stereo mode • 192 kHz/24-Bit DACs for all channels • Dolby Pro Logic IIx, Dolby Digital EX, DTS-ES Discrete 6.1, DTS Neo:6 and DTS 96/24 compatibility
- Audio Delay for adjusting lip-sync (0–160ms)
- 29 surround programmes (51 variations)
- Night Listening Enhancer (Cinema/Music) and SILENT CINEMA • Selectable 9-band subwoofer crossover/subwoofer phase select • Speaker A, B and A+B selection
- S-Video up conversion • Preset remote control unit with coloured buttons

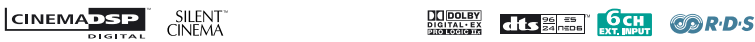


Extensive system connections (see page 34)

DIGITAL  
TOP·ART



**RX-V450** *HiFi* 6.1-Channel Digital Home Cinema Receiver



Home cinema enjoyment with functions including Dolby Pro Logic IIx, Quad-Field CINEMA DSP and 29 surround programmes

- 6.1-channel powerful surround sound (130W x 6)
- Digital ToP-ART and High Current Amplification
- 192kHz/24-Bit DACs for all channels • Direct Stereo mode • Dolby Pro Logic IIx, Dolby Digital EX, DTS-ES Discrete 6.1, DTS Neo:6 and DTS 96/24 compatibility
- Audio Delay for adjusting lip-sync (0-160ms) • 29 surround programmes (51 variations) • Night Listening Enhancer (Cinema/Music) and SILENT CINEMA
- Selectable 9-band subwoofer crossover / subwoofer phase select • Speaker A, B and A+B selection • Front panel Video Aux terminals • HDTV (720p/1080i) compatibility
- 2 component video inputs • Preset remote control unit with coloured buttons



Extensive system connections (see page 34)

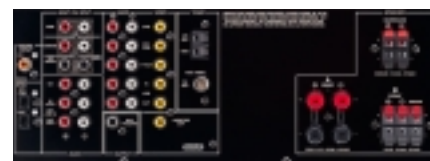


**RX-V350** 5.1-Channel Digital Home Cinema Receiver



Exceptionally high dynamic power and overall performance with 192kHz/24-bit D/A converters and 3 digital inputs.

- 5.1-channel powerful surround sound 105W x 5)
- 192kHz/24-bit D/A converters for all channels
- Analogue mixdown • Quad-Field and Tri-Field CINEMA DSP • Dolby Digital EX Matrix 6.1 and DTS-ES Matrix 6.1 compatibility plus Dolby Pro Logic II decoding
- 21 surround programmes (41 variations) • Night Listening mode and SILENT CINEMA • Powerful 32-bit Yamaha LSI (YSS-938) for CINEMA DSP processing
- Easy setup and operation (Basic Menu) • 5-band centre graphic equalizer • Speaker A/B selection
- Wide-range frequency response for DVD-Audio/SA-CD compatibility • Programme name and sound field indications • 6-channel external decoder input



Extensive system connections (see page 34)

# Home Theater in a Box



Illustration shows AV Pack 104S/S

## AV Pack 104



AV Pack 104S/S includes Digital Home Cinema Receiver RX-V350 (Silver) (see pg. 17), DVD Player DVD-S550 (Silver) (see pg. 20) and Digital Home Cinema Speaker Package NS-P100 (Silver) (see pg. 27)

Black finish available: AV Pack 104B/B (RX-V350 Black + DVD-S550 Black + NS-P100 Black)



Illustration shows AV Rekorder Pack 304T/S

## AV Recorder Pack 304



AV Recording Pack 304T/S includes Digital Home Cinema Receiver RX-V450 (Titanium) (see pg. 17), DVD Recorder DRX-2MKII (Titanium) (see pg. 20) and Digital Home Cinema Speaker Package NS-P240 (Silver) (see pg. 27)

Black finish available: AV Pack 304B/B (RX-V450 Black + DRX-2MKII Black + NS-P240 Black)

## Digital Home Cinema Packages – Yamaha makes it easy to get sensational Home Cinema Sound.

If you enjoy watching movies at home, you'll enjoy them a lot more with realistic, dynamic, full-surround sound. But rather than having to select various components and worrying about which speakers will match, Yamaha Home Cinema packages make it easy. The receivers are not only powerful and versatile, they also offer a wide choice of surround modes with Yamaha's amazingly realistic CINEMA DSP sound. Plus, they give you full compatibility with the latest 5.1-channel/ 6.1-channel movie sound formats. The speakers are all compact yet extremely high performance models, and the subwoofers (a vital part of any home cinema system) use Advanced YST technology for remarkable efficiency. Choose a Yamaha package and discover how good movies can sound in your home.



Illustration shows AV Pack 204T/S



Illustration shows HTiB104S/S



Illustration shows HTiB204T/S



Illustration shows HTiB304T/S

### AV Pack 204



AV Package 204T/S includes Digital Home Cinema Receiver RX-V450 (Titanium) (see pg. 17), DVD Player DVD-S550 (Titanium) (see pg. 20) and Digital Home Cinema Speaker Package NS-P240 (Silver) (see pg. 27)

Black finish available: AV Pack 204B/B (RX-V450 Black + DVD-S550 Black + NS-P240 Black)

### HTiB104



HTiB104S/S includes Digital Home Cinema Receiver RX-V350 (Silver) (see pg. 17) and Digital Home Cinema Speaker Package NS-P240 (Silver) (see pg. 27)

Black finish available: HTiB104B/B (RX-V350 Black + NS-P240 Black)

### HTiB204



HTiB204T/S includes Digital Home Cinema Receiver RX-V550 (Titanium) (see pg. 16) and Digital Home Cinema Speaker Package NS-P430 (Silver) (see pg. 27)

Black finish available: HTiB204B/B (RX-V550 Black + NS-P430 Black)

### HTiB304



HTiB304T/S includes Digital Home Cinema Receiver RX-V550 (Titanium) (see pg. 16) and Digital Home Cinema Speaker Package NS-P436 (Silver) (see pg. 27)

Black finish available: HTiB304B/B (RX-V550 Black + NS-P436 Black)

# DVD Players / DVD Recorder

DVD's new level of high class entertainment.

Whether you simply want to enjoy the latest DVDs in top quality or use the Super Audio CD and DVD-audio high-resolution audio standards with your player. Yamaha offers a tailor-made solution for every application. Plus a high quality DVD Recorder with a wide range of versatile functions.



## DRX-2 MKII DVD Recorder



Offering all the advantages of the DVD+RW format, the DRX-2MKII provides highest video/audio quality with the most comprehensive range of features.

- Records on DVD+RW\* and DVD+R discs\*
- Linear PCM audio recording (1 and 2-hour recording modes)
- 6 recording modes up to 6 hours
- Fit to Space recording
- Recorded discs play on nearly all DVD-Video players and DVD-ROM drivers
- Digital copying from camcorder via i.LINK
- Index Picture Screen shows selected scenes of all recorded segments for easy identification
- Auto and Manual Chapter Marker insertion
- No need to finalize DVD+RW\* discs as with DVD-RW
- SHOWVIEW timer recording
- MP3

\* DVD+R discs must be finalized to play on other DVD players.



Titanium finish available



## DVD-S550 DVD Player



Exceptionally good image and sound quality, with wide-ranging format and disc compatibility.

- PAL/NTSC Progressive Scanning
- PAL/NTSC conversion
- CD up-sampling
- 108MHz/12-Bit video DAC
- 192kHz/24-bit audio DAC
- DVD-Video, Super VCD, VCD, Audio CD, DVD+RW/+R\*, DVD -R /-RW\* and CD-R/RW\*,\*\*,\*\* playback
- MP3, JPEG and DivX playback (multisession) with navigation display
- Picture CD playback with display
- MP3 fast forward / rewind / repeat / shuffle playback
- JPEG/MP3 simultaneous playback for slide show
- 6-step multiple zoom
- Easy operation with GUI
- CD Text display (English)
- 4 video picture modes



\* Only compatible with discs that have been finalized when recording is completed. Some discs may not play due to disc characteristics or recording conditions.

\*\* Only compatible with discs that have been recorded in CD-DA format or Video CD format and Super Video CD format.

\*\*\* Some MP3 or JPEG discs may not play due to disc characteristics or recording conditions.

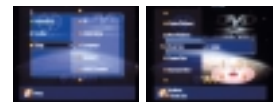


## DVD-S1500 DVD-Audio/Video and Super Audio CD Player



Uses new video and audio technologies for superior performance and allows playback of both DVD-Audio and Super Audio CD discs.

- DVD-Audio and Super Audio CD playback
- PAL/NTSC Progressive Scan
- PAL/NTSC conversion
- CD upsampling
- Audio Direct mode
- Faroudja DCDi processing for smooth and natural images without staircasing or jaggies
- 192kHz/24-bit audio D/A conversion for high sound quality
- 108MHz/12-bit video D/A conversion for high picture quality
- On-Screen Display with GUI (Graphical User Interface)
- DVD-Video, Super VCD, VCD, JPEG (multisession), Audio CD and MP3 (multisession) playback
- DVD+RW/+R\*, DVD-R/-RW\* and CD-R /RW\*, \*\*,\*\* playback
- Detachable power cable
- Gold-plated terminals for all pin jacks
- Aluminium front panel



## DVD-S540 DVD Player



The ideal DVD player for those who want high quality with convenience, and the ability to play many different types of discs.

- PAL/NTSC Progressive Scanning
- PAL/NTSC Conversion
- YUV component output terminal
- DVD-Video, SVCD, VCD, Audio CD and JPEG/MP3 (multisession) playback
- DVD+RW/+R\*, DVD-R/-RW\* and CD-R/RW\*,\*\*,\*\* playback
- 54MHz/12-bit video D/A conversion for high picture quality
- Picture CD playback with display
- MP3 navigation display
- MP3 fast forward/rewind/special playback
- Playback of discs with both JPEG and MP3 tracks



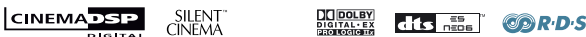
# SLIM-LINE System

Can a high performance home cinema system be slim and elegant?  
 Yamaha answers "Yes" with the RX-SL100RDS and matching DV-SL100 DVD Player.

The RX-SL100RDS is the world's slimmest receiver, designed to match the thin styling motif of flat-screen plasma and LCD monitors. Capable of powering and controlling a 6.1-channel home cinema system, it features excellent performance with a 100W x 6 digital amplifier, Quad-Field CINEMA DSP, 28 surround programmes, SILENT CINEMA, full compatibility with movie sound formats including new Dolby Pro Logic IIx and convenient operation using on-screen display with GUI. For a system with elegant sound AND appearance, choose the RX-SL100RDS matched with the high-performance DV-SL100.



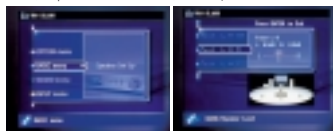
**RX-SL100RDS** Digital Home Cinema Receiver



GUI (Graphical User Interface) for Easy Use



Hidden Control Panel includes headphone terminal for SILENT CINEMA enjoyment and optical digital input terminal for connecting game machines, digital equipment, and so on.



Basic Menu



**DV-SL100** DVD Player



A SLIM-LINE receiver whose performance is as sophisticated as its design.

- High power 100W x 6 (Max) Yamaha original digital amplifier
  - Convenient setup on-screen display with GUI (Graphical User Interface)
  - Easy setup and operation
  - Compatibility with latest movie sound formats including Dolby Pro Logic IIx, Dolby Digital EX, DTS-ES Discrete 6.1, and DTS Neo:6
  - Powerful 32-bit Yamaha LSI (YSS-938) for CINEMA DSP processing
  - 28 surround programmes (48 variations, see page 33) with SILENT CINEMA and Night Listening mode
  - Aluminum front
- [Specifications are on page 32]



The RX-SL100 rear panel offers 2 optical and 1 coaxial digital input (fixed and assignable), 2 SCART terminals (external in/out and TV in/out), and subwoofer output terminal.

**Easy Connections**  
 Six one-touch speaker terminals are furnished in a slim space, coloured for easy connection.



Elegantly SLIM-LINE DVD Player with advanced technology and features for outstanding performance.

- PAL/NTSC Progressive Scanning
  - PAL/NTSC Conversion
  - DVD-Video, SVCD, VCD, Audio CD and JPEG/MP3 (multisession) playback
  - DVD+RW/+R\*, DVD-R/-RW\* and CD-R/RW\*,\*\*,\*\* playback
  - 54MHz/12-bit video D/A conversion for high picture quality
  - Picture CD playback with display
  - Audio equalizer and 3D reverb
  - MP3 fast forward/rewind/special playback
  - Playback of discs with both JPEG and MP3 tracks
  - Aluminum front
- [Specifications are on page 34]



The DV-SL100 rear panel offers coaxial digital audio output, mixed 2-channel audio output, composite, S-video and component video output terminals and SCART terminal.



# CinemaStation



www.CinemaStation.com

Your sound, your style . . . you're satisfied!



MOVIE



MUSIC



SPORTS



GAME

### Fashionably Slim Styling

Unlike most package home cinema systems, the DVR-S200 and DVX-S120 do not have a low-end, box-like appearance. The design team wanted to make them stylish enough to appeal to anyone who carefully chooses good-looking products for their home or apartment, and they succeeded with a slim, innovative design. Even the speakers are tastefully elegant. This is a home cinema you will be eager to show to your friends.

### Quad-Field and Tri-Field CINEMA DSP

Tri-Field CINEMA DSP projects three sound fields into the home cinema: a Presence sound field in the front and two Surround sound fields in the left



Surround and right Surround, resulting in a powerfully realistic three-dimensional soundscape. And now Yamaha also offers Quad-Field CINEMA DSP via a Phantom mode. It adds an additional Surround back sound field to the Tri-Field system, in order to enjoy the new 6.1-channel formats, Dolby Digital EX and DTS-ES.

### One-Touch CINEMA DSP Selection

With the DVR-S200 and DVX-S120 you can enjoy Yamaha's amazingly realistic CINEMA DSP surround sound, in a choice of 19 programmes. Selecting the four most popular programmes – Movie, Music, Sports and Game – is quick and easy because the remote control has four buttons clearly marked with icons. Just touch the button and you'll hear the sound field change around you.

### Night Listening Mode for All Surround Programmes

When you're listening to movies late at night and turn down the volume during loud scenes, dynamic range suffers and you may miss some dialogue and other sounds. By engaging the Night Listening mode, you can reduce the volume and

still enjoy proper tonal balance and dynamic range. You hear dialogue clearly and the music and action are just as exciting (without the screams and explosions disturbing others).

### On-Screen Display and Convenient Controls

A handy On-Screen Display that includes extensive yet easily understandable setup menus makes it easy to select and adjust desired functions.



### High Performance Speakers and Subwoofer (DVX-S120)

Speakers are extremely important to the success of a home cinema system, and the CinemaStation units are up to the task. The five speakers (two front, two surround and one for the centre to handle mainly dialogue) deliver exceptionally high quality surround sound, and have a compact, stylish design.





## CinemaStation DVR-S200 DVD Home Cinema Receiver



This is the home cinema DVD receiver you've been waiting for! Impressive performance by a beautifully slim, stylish component.

- [Receiver] • Powerful 32-bit Yamaha LSI (YSS-938) for CINEMA DSP processing • 19 surround programmes with SILENT CINEMA and Night Listening mode • Compatibility with Dolby Digital, DTS and Dolby Pro Logic II
- Quad-Field CINEMA DSP for formats such as Dolby Digital EX Matrix 6.1 and DTS-ES Matrix 6.1 in Phantom mode • 100W x 5 digital amplifier
- Component video output and SCART terminal
- RDS • 40-station FM/AM preset tuner
- [DVD player] • 192kHz/24-bit D/A conversion
- Wide disc compatibility: Super Audio CD, DVD-Video, DVD+RW/+R, DVD-R/RW, Audio CD, CD-R/RW, MP3, VCD and SVCD • JPEG



## NS-P430 Recommended Speaker Package

- Six-speaker package for full enjoyment of movies in 5.1-channel formats
- Two-way acoustic suspension design featuring coaxial and full-range drivers (front/surround) and coaxial plus dual full-range drivers (centre)
- QD-Bass technology and Advanced YST
- Magnetic shielding [Description on pg.26]



## CinemaStation DVX-S120 DVD Home Cinema System



The home cinema system that lets you enjoy all your favourite entertainment.

- [Receiver] • Powerful 32-bit Yamaha LSI (YSS-938) for CINEMA DSP processing • 19 surround programmes with SILENT CINEMA and Night Listening mode
- Compatibility with Dolby Digital, DTS and Dolby Pro Logic II
- Quad-Field CINEMA DSP for formats such as Dolby Digital EX Matrix 6.1 and DTS-ES Matrix 6.1 in Phantom mode
- 55W x 5 digital amplifier
- Component video output and SCART terminal
- RDS
- 40-station FM/AM preset tuner
- [DVD player] • 192kHz/24-bit D/A conversion
- Wide disc compatibility: DVD-Video, DVD+RW/+R, DVD-R/RW, Audio CD, CD-R/RW, MP3, VCD, SVCD • JPEG
- [Speakers] • Dual 5cm cone full-range drivers (satellites and centre)
- Powerful 100W Advanced YST subwoofer
- Magnetic shielding (all speakers)
- Optional speaker stands (SPS-80) available



## SPS-80

- Optional Speaker Stands for DVX-S120
- 300 mmφ (base), 650-900 mm (height) • 1.9 kg



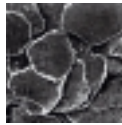
# Digital Home Cinema Speakers

## A wide range of speakers for every type of home cinema system

As high-quality home cinemas have become more popular, Yamaha has created high-performance speakers to match. These speakers are characterised by their robustness and dynamism in the reproduction of the current multi-channel sound standard and offer the music lover a pleasant musical sound. Thanks to its own patented technologies, such as Advanced YST or QD Bass, Yamaha subwoofers offer powerful and precise bass reproduction from robust housings with compact dimensions.

### PMD Cone Woofer Uses Advanced Technology and Materials (515 PMD and PMD Series)

Digital Home Cinema Speakers feature a unique Polymer-injected Mica Diaphragm (PMD). The diaphragm is composed of 30% top-quality white Indian Pearl Mica, chosen for the amazing contribution it makes to sound quality. In order to maximise its distinctive qualities, absolutely no colouring is added to the material, and the cone's shape, produced by injection moulding, is a natural catenary curve. Extremely lightweight, it achieves good stiffness along with ideal internal loss and a high modulus of elasticity.



Microscopic View of Polymer-Injected Mica.

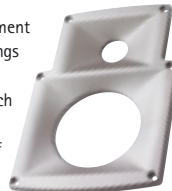


### WSD Cone Midrange and Woofer (HX Series)

Yamaha's White Spruce Diaphragm (WSD) material emerged from an intensive search for a light, tough diaphragm material that would help us achieve ideal home cinema sound. The pulp material used for the WSD is manufactured almost entirely from long fibres of Canadian evergreen white spruce, the world's lightest single-sheet diaphragm material.

### Waveguide Horn (HX Series)

When conventional direct radiating speakers are used in a home environment, their broad directional characteristics result in a relatively high proportion of reflected sound. Modern movie theatres, however, are designed to offer a highly absorptive acoustic environment in which soundtrack recordings with five or more channels can be used to achieve a rich sense of spatial expression. To achieve a similar level of spatial expression at home, it is therefore necessary to use speakers with a direct/reflected sound ratio that is quite different from the speakers used for conventional music recordings.



Waveguide Horn (NS-8HX)

### All-Aluminium Dome Tweeters and Diffusers (HX Series and 515 PMD Series)

Both the shape and material used for dome tweeter diaphragms and diffusers were refined to improve speed and response. 30µm pure aluminium film was formed into a new dome shape and fitted with an all-aluminium diffuser for wide-ranging 50kHz sound reproduction capability.



### QD-Bass Technology

QD-Bass (Quatre Dispersion Bass)

technology uses down-firing drivers with square, pyramid-shaped reflective plates to radiate the sound efficiently in four horizontal directions. The reflective plates (not used in competitors' down-firing subwoofers) negate any effects caused by the floor surface and reduce resonance between sound waves reflected from the floor and the unit. Also, most other systems use circular cones.

But by radiating in four directions to avoid the legs of the cabinet, QD-Bass reduces turbulence caused by reflection from the legs.



QD-Bass TECHNOLOGY

### Advanced YST

Advanced Yamaha Active Servo Technology (Advanced YST) is a unique system in which the speaker and amplifier work together to cancel out impedance so the speaker unit has a perfectly linear motion. Advanced YST helps to ensure the highest levels of sound pressure and overall performance.



### How Yamaha achieves our "ideal" sound.

The key to achieving the purest, most natural, and most pleasing sound is balance. Balance among the above three elements, balance among all the components that make up the speaker, and balance among subjective listening judgments.

### Testing and More Testing

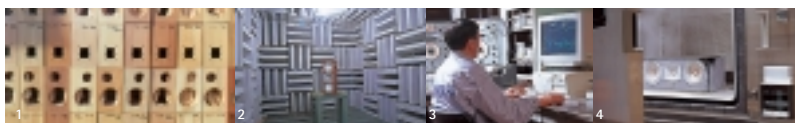
Yamaha tests speakers in various ways, both before and after production. Each part of the speaker, be it a coil, a capacitor, or a cabinet, is selected out of many alternatives, which may be tested for months before a

decision is made. In the case of cabinets, for example, we often build 50 to 60 cabinets and test each one. In order to test many cabinets with many drivers in many configurations, we begin with computer simulations, then move to actual prototypes for measuring a myriad of factors, such as the variations of standing waves inside the cabinet. An anechoic chamber is used to obtain precise acoustic data on pre-production models. Even speaker finishes are rigorously tested for durability and how they influence the sound. We have an environmental room where speakers are tested for 500 hours in Amazon rain forest conditions, and five different listening rooms,

where speakers are carefully evaluated reproducing a variety of music and movie sources.

### The Final Judgment

Throughout the design process and especially in the final phase, our most important test equipments are the ears of our speaker experts. Having hard data is helpful, but deciding which cabinet sounds "better" and whether the speaker meets Yamaha's high standards can only be done by the "golden ears" of Yamaha speaker designers who have dedicated their lives to the pursuit of beautiful, natural sound.



1. Many cabinets are built and tested for each speaker series.
2. A testing room that simulates an actual listening room.
3. A wide range of parameters are tested.
4. Speakers undergo harsh environmental testing.

# Subwoofers

A Must for Home Cinema & HiFi

Full audio enjoyment of digital music and movie sources requires deep, clear bass response. Yamaha subwoofers use sophisticated technologies such as QD-Bass (down-firing drivers that radiate the sound in four directions) and Advanced YST to ensure the highest levels of sound pressure and overall performance.



## YST-SW1500

Advanced YST and QD-Bass Subwoofer



## YST-SW800

Advanced YST and QD-Bass Subwoofer



## YST-SW315

Advanced YST and QD-Bass Subwoofer



## YST-SW215

Advanced YST and QD-Bass Subwoofer



## YST-SW015

Advanced YST and QD-Bass Subwoofer



Subwoofers	YST-SW1500	YST-SW800	YST-SW315	YST-SW215	YST-SW015
Advanced YST	Yes	Yes	Yes	Yes	Yes
QD-Bass Technology	Yes	Yes	Yes	Yes	Yes
High-Efficiency Power Amplifier	Yes	Yes	Yes		
High-Efficiency Power Supply	Yes	Yes			
Drivers	30 cm extra-long stroke design with dual-bias system	25 cm extra-long stroke with dual-bias system	25 cm cone	20 cm cone	16cm cone
Magnetic Shielding	Yes	Yes	Yes	Yes	Yes
High Cut Filter	40-140 Hz (continuously variable)	40-140 Hz (continuously variable)	40-140 Hz (continuously variable)	40-140 Hz (continuously variable)	50-150 Hz (continuously variable)
LFE (Low Frequency Effect) Input Terminal	Yes				
HPF (High Pass Filter) Output Terminal	Yes				
Phase Control (Normal or Reverse)	Yes	Yes	Yes	Yes	Yes
Auto Standby	Yes	Yes	Yes	Yes	Yes
BASS (Bass Action Selector System)	Yes	Yes	Yes	Yes	Yes
Remote Control Unit	Yes				
I/O Port	Yes				
Output Power	1,000 W (5 ohms)	800 W (6 ohms)	250 W (5 ohms)	120 W (5 ohms)	70 W (5 ohms)
Dynamic Power	1,000 W	800 W	270 W	150 W	120 W
Frequency Response	16-160 Hz	18-160 Hz	20-160 Hz	28-200 Hz	30-200 Hz
Dimensions (W x H x D)	420 x 511 x 448 mm	390 x 482 x 420 mm	340 x 432 x 370 mm	290 x 360 x 322 mm	280 x 325 x 320 mm
Weight	29 kg	24 kg	17 kg	11.5 kg	9.2 kg

# PMD and HX Series

## Digital Home Cinema & HiFi Speaker Systems

All the speakers in these two series are designed to reproduce the full potential of digital sound sources. The PMD Series features PMD (polymer-injected mica diaphragm) cone woofers, while the HX Series offers high performance and impressive designs. There is a wide choice of models for any type of system configuration.



**NS-515F**  
3-Way Bass-Reflex  
Speaker System



**NS-M515**  
2-Way Dual-Woofer  
Speaker System



**NS-C515**  
2-Way Dual-Woofer Bass-Reflex  
Centre Speaker System



**NS-150**  
3-Way Bass-Reflex  
Speaker System



**NS-C120**  
2-Way Dual-Woofer Bass-Reflex  
Centre Speaker System



**NS-8HX**  
3-Way Dual-Woofer  
Bass-Reflex Speaker System



**NS-4HX**  
2-Way Dual-Woofer  
Bass-Reflex Speaker System



**NS-C5HX**  
2-Way Dual-Woofer Acoustic  
Suspension Centre Speaker System



**NS-45E**  
2-Way, 3-Speaker Bass-  
Reflex Tower Speaker System



**NS-G40MKII**  
2-Way, 3-Speaker Bass-  
Reflex Tallboy Speaker System



**NS-G25**  
2-Way Bass-Reflex  
Speaker System



**NS-CG75**  
2-Way Dual-Woofer  
Centre Speaker System

	NS-515F	NS-M515	NS-C515		NS-150	NS-C120	
Woofers	16cm PMD LF cone and 16cm PMD subLF cone	13cm PMD cone	Dual 13cm PMD cone		13cm PMD LF cone and 13cm PMD subLF cone	Dual 10cm PMD cone	
Tweeter	3cm Aluminium dome	3cm Aluminium dome	3cm Aluminium dome		3cm silk dome	3cm silk dome	
Magnetic Shielding	Yes	Yes	Yes		Yes	Yes	
Gold-Plated Speaker Terminals	Yes	Yes	Yes		Yes	Yes	
Bi-Wiring Connection Capability	Yes		Yes		Yes		
Input Power (Max/Nominal)	300 W/100 W	200 W/60 W	300 W/100 W		300 W/100 W	200 W/60 W	
Sensitivity	90 dB/2.83 V/1 m	89 dB/2.83 V/1 m	90 dB/2.83 V/1 m		89 dB/2.83 V/m	88 dB/2.83 V/m	
Frequency Response	40 Hz-50 kHz	60 Hz-50 kHz	57 Hz-50 kHz		40 Hz-35 kHz	60 Hz-35 kHz	
Impedance	6 ohms	6 ohms	6 ohms		6 ohms	6 ohms	
Dimensions (W x H x D)	200 x 1,000 x 328 mm	180 x 333 x 184 mm	500 x 170 x 218 mm		168 x 850 x 269 mm	480 x 140 x 171 mm	
Weight	21 kg/unit	5 kg/unit	8 kg		14.5 kg/unit	5.2 kg	

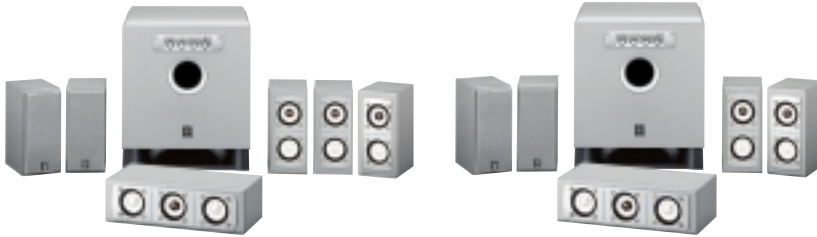
	NS-8HX	NS-4HX	NS-C5HX	NS-45E	NS-G40MKII	NS-G25	NS-CG75
Woofers	Dual 20cm WSD cone	Dual 13cm WSD cone	Dual 13cm WSD cone	Dual 16cm cone	Dual 16cm cone	11cm cone	Dual 10cm cone
Midrange Driver	13cm WSD cone with Waveguide horn						
Tweeter	3cm Aluminium dome with Waveguide horn	3cm Aluminium dome with Waveguide horn	3cm Aluminium dome with Waveguide horn	3cm dome	2.5cm dome	2.5cm dome	2.5cm dome
Magnetic Shielding	Yes	Yes	Yes	Yes	No	No	Yes
Input Power (Max/Nominal)	400 W/140 W	300 W/100 W	300 W/100 W	240 W/80 W	120 W/60 W	60 W/40 W	80 W/40 W
Sensitivity	92 dB/2.83 V/m	91 dB/2.83 V/m	91 dB/2.83 V/m	90 dB/2.83 V/m	90 dB/2.83 V/m	88 dB/2.83 V/m	88 dB/2.83 V/m
Frequency Response	35 Hz-50 kHz	55 Hz-50 kHz	55 Hz-50 kHz	38 Hz-30 kHz	35 Hz-20 kHz	70 Hz-20 kHz	65 Hz-20 kHz
Impedance	6 ohms	6 ohms	6 ohms	6 ohms	4 ohms	4 ohms	4 ohms
Edgewound Rectangular Voice Coil	Yes	Yes	Yes				
Full 3-Way Mitered Construction	Yes	Yes	Yes				
Dimensions (W x H x D)	364 x 1,102 x 397 mm	186 x 500 x 257 mm	500 x 186 x 257 mm	233 x 880 x 275 mm	220 x 900 x 265 mm	165 x 200 x 123 mm	446 x 150 x 140 mm
Weight	32.5 kg/unit	11.5 kg/unit	11.5 kg	11.6 kg/unit	12.6 kg/unit	2.8 kg/unit	4.5 kg

• Models and colours vary depending on area.

# Package Speakers

## Digital Home Cinema Speaker Packages

Here is a quick way to great home cinema enjoyment — buy all your speakers in one package. You get speakers that are perfectly matched for design and acoustics, at a very reasonable price! And if you already have main speakers and a subwoofer, the NS-P60 is a handy choice.



### NS-P436

Digital Home Cinema 6.1-Channel Speaker Package



### NS-P430

Digital Home Cinema 5.1-Channel Speaker Package



### NS-P240

Digital Home Cinema 5.1-Channel Speaker Package



### NS-P100

Digital Home Cinema 5.1-Channel Speaker Package



### NS-P60

Centre and Effect Channel Speaker Package



	NS-P436	NS-P430	NS-P240	NS-P100	NS-P60
System Frequency Response	30 Hz-60 kHz	30 Hz-60 kHz	30 Hz-25 kHz	30 Hz-25 kHz	70 Hz-30 kHz
Magnetic Shielding	Yes (all speakers)	Yes (all speakers)	Yes (all speakers)	Yes (all speakers)	Yes (all speakers)
Impedance	6 ohms*	6 ohms*	6 ohms*	6 ohms*	6 ohms
Satellite Speakers	5 satellites	4 satellites	4 satellites	4 satellites	2 satellites
Type	2-way acoustic suspension	2-way acoustic suspension	Full-range dual cone acoustic suspension	Full-range dual cone acoustic suspension	2-way acoustic suspension
Input Power (Max/Nom)	100 W/30 W	100 W/30 W	100 W/30 W	100 W/30 W	150 W/50 W
Dimensions (W x H x D)	273 x 81 x 147 mm	273 x 81 x 147 mm	72 x 170 x 108 mm	72 x 164 x 111 mm	150 x 265 x 156 mm
Weight/Unit	1.7 kg	1.7 kg	0.9 kg	0.9 kg	2.2 kg
Centre Speaker	2-way acoustic suspension	2-way acoustic suspension	Full-range dual cone acoustic suspension	Full-range dual cone acoustic suspension	2-way acoustic suspension
Input Power (Max/Nom)	100 W/30 W	100 W/30 W	100 W/30 W	100 W/30 W	180 W/60 W
Dimensions (W x H x D)	273 x 81 x 147 mm	273 x 81 x 147 mm	300 x 72 x 105 mm	300 x 72 x 110 mm	465 x 135 x 174 mm
Weight	1.7 kg	1.7 kg	1.1 kg	1.1 kg	3.5 kg
Subwoofer	Advanced YST/QD-Base	Advanced YST/QD-Base	Advanced YST	Advanced YST	
Output Power (RMS)	70 W (5 ohms)	70 W (5 ohms)	50 W (5 ohms)	50 W (5 ohms)	
Dynamic Power	120 W	120 W	100 W	100 W	
Dimensions (W x H x D)	280 x 325 x 320 mm	280 x 325 x 320 mm	200 x 365 x 390 mm	200 x 365 x 375 mm	
Weight	9.2 kg	9.2 kg	8.4 kg	8.5 kg	

\* Except subwoofer



### SPS-10MM (Silver)

Optional Speaker Stands for NS-P436 and NS-P430  
 • 300 x 300 mm (base), 618-868 mm (height) • 1.6 kg

### SPS-S80

Optional Speaker Stands for DVX-S120, NS-P240 and NS-P100  
 • 300 mm φ (base), 650-900 mm (height) • 1.9 kg

# Digital Stereo Power Amplifier

Created for audio purists, by audio purists.

Anyone familiar with the Yamaha brand knows that we have always been dedicated to providing "natural sound" in its truest sense – audio reproduction that sounds as close as possible to the real thing. Given our success with other digital products and having the most advanced digital technology at hand, our engineers decided to focus on creating a truly superb digital amplifier – one that would utilize the benefits of digital technology without its drawbacks to deliver incredibly accurate and pure natural sound. The result is the MX-D1. Prepare to be amazed and delighted.



**MX-D1** Stereo Digital Power Amplifier

## Yamaha Digital Amplifier Technology

- Yamaha original power engine chipset: modulator LSI (YDA133) and power MOS-FET Drive LSIs (YDA134 x 2)
- Constant gain PLL modulator circuit
- Cross feedback loop circuit
- Advanced analogue feedback circuit
- Active power control system
- Magnetic coupling rectification circuit
- High-speed protection circuits
- Safety protection sequence logic
- Over-current protection
- DC detection circuit
- PWM digital drive high-efficiency power supply
- 500W x 2 output power with ultra-low (0.002%) distortion
- 4-layer Epoxy Resin coated PC board containing fiberglass with highest performance parts
- Gigantic WBT input and speaker terminals
- Discrete SEPP amplifier circuit
- Output filter (large effect on sound quality): custom-made double core, low-impedance toroidal coil and extra-large custom-made block electrolytic capacitors
- Input switch using enclosed twin cross bar relays
- High sound quality power supply electrolytic capacitors
- Extra-thick (12mm), Aluminium-extruded, Yamaha piano-finish front and side panels
- Magnetic shielding Aluminium top cover and rear panel
- Point-controlled, anti-resonance feet
- Heavy-duty copper-plated steel inner chassis

## Power Engine Chipset

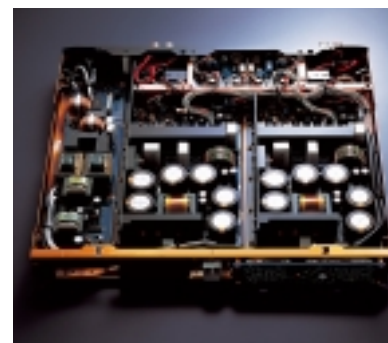
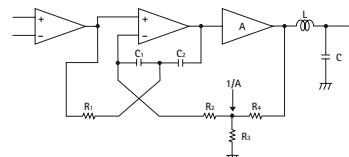
To overcome the limitations of conventional digital amplifiers, Yamaha developed its own Power Engine chipset, which enables the MX-D1 to achieve high levels of sound quality and power, as well as low power consumption and compact size.



YDA133 Modulator LSI (left) and YDA134 Power MOS-FET Drive LSI (right)

## Cross Feedback Loop Circuit

The digital pulse output is fed back by the Cross Feedback Loop, improving the linearity of the output stage and of the modulator circuit. This achieves superior low distortion characteristics and high dynamic range.



## Monaural Independent Construction

Twin monaural independent chambers provide higher efficiency and ensure that there is no chance of electronic interference degrading performance.



**Custom Installation Compatibility:** Using the MX-D1 in a custom installation is facilitated by its RS-232C interface for bi-directional control, ID setting for a multi-channel amplifier system and trigger in/out daisy chain connection for synchronized power switching via Through and Power modes.

## MX-D1 Main Specifications

**[AUDIO SECTION]** • Min. RMS output power (8/6/4 Ohms, 1 kHz, 0.1% THD): 500 W + 500 W • Dynamic power/channel: 1,000 W (2 Ohms)/1,000 W (4 Ohms)/850 W (6 Ohms)/700 W (8 Ohms) • Input sensitivity/impedance (500 W/8 Ohms, balance; unbalance): 2.2 V/10 k-Ohms, 1.3 V/25 k-Ohms • Frequency response: 1 Hz–100 kHz  $\pm$ 3 dB • Total harmonic distortion (1 kHz, 10 W/8 Ohms, 20 kHz LPF): 0.002% • Signal-to-noise ratio (IHF-A-Network, S: 1.3 V, input shorted, 20 kHz LPF): 120 dB • Residual noise (IHF-A-network, 20 kHz LPF): 63  $\mu$ V • Channel separation (1 kHz, input 5.1 k-Ohms shorted): 100 dB • Muting:  $-\infty$

**[GENERAL]** • Standby power consumption: Less than 0.1 W • Dimensions (W x H x D): 435 x 75 x 437 mm • Weight: 10.4 kg



**YPC-1** Passive Controller (Option)

The YPC-1, a Passive Controller unit, provides input selection and volume control. With a black finish that matches the MX-D1, this unit is optionally available.



## YPC-1 Main Specifications

• -1dB (-100dB) gang error high quality continuously variable attenuator with brass case • Low-resistance rotary selector switch • Extra-thick 12mm Aluminium-extruded, Yamaha piano finish front and side panels • Point-controlled, anti-resonance feet • 240 x 75 x 269 mm (W x H x D) • 3.4 kg



**PianoCraft: Natural Sound Enjoyment  
from a High Performance, Elegant System.**



**PianoCraft E400** Micro Component System



**STEREO**

- High power: 2 x 60 W (DIN) • Linear Damping
- High Dynamic Power and Low-Impedance Drive Capability • Subwoofer out • Discrete amplification
- Versatile timer functions • RDS • 40-station presets
- Auto preset memory • CD-R/CD-RW playback
- CD Text display • Optical digital out • 2-way bass-reflex speaker system



**PianoCraft E300** Micro Component System



- High power: 2 x 30 W (DIN) • Linear Damping
- High Dynamic Power and Low-Impedance Drive Capability • Subwoofer out • Discrete amplification
- Versatile timer functions • RDS • 40-station presets
- Auto preset memory • CD-R/CD-RW playback
- CD Text display • Optical digital out • 2-way bass-reflex speaker system



**PianoCraft Options**



**MDX-E300** MiniDisc Recorder



- Versatile editing functions • Digital and analogue recording level control
- MDLP • Recording mode selection • optical digital inputs (2) and output (1) • 217 x 88 x 297 mm (W x H x D); 2.6 kg



**KX-E300** Auto-Reverse Cassette Deck



- Versatile editing functions • Music search • Reverse mode selector
- 4-digit tape counter • 217 x 88 x 291 mm (W x H x D); 3 kg

# HiFi Components



**CDR-HD1300** HDD + CD-R/RW Digital Audio Recorder



CD Recorder with Hard Disk Drive expands recording, editing and playback possibilities.

- Linear PCM recording (no compression) • 24-bit DAC and ADC • Audio Master Quality Recording mode (CD-R only) • CD-HDD-CD recording maintains full digital quality • Easy, extensive editing possible before recording CDs
- Create up to 999 Albums with up to 99 songs in each for playback or recording
- High-speed ripping (10x normal speed)
- High-speed recording (8x to CD-R, 4x to CD-RW) • On-screen display • Title input with PC (via RS-232C) • SCMS compatibility



**AX-596** *HiFi* ToPART CD Direct Amplification

Stereo Integrated Amplifier

- 155 W x 2 (DIN) • ToP-ART with Pure Direct Switch • CD/DVD Direct Amplification (discrete configuration) with switch • DVD-Audio ready with extended frequency response • Continuously variable loudness control • Rec out selector • Gold-plated input terminals (all terminals)



**AX-496** *HiFi* ToPART CD Direct Amplification

Stereo Integrated Amplifier

- 120 W x 2 (DIN) • ToP-ART with Pure Direct Switch • CD/DVD Direct Amplification with switch • DVD-Audio ready with extended frequency response • Continuously variable loudness control • Rec out selector • Gold-plated CD input terminal



**AX-396** *HiFi* ToPART CD Direct Amplification

Stereo Integrated Amplifier

- 95 W x 2 (DIN) • ToP-ART with Pure Direct Switch • CD/DVD Direct Amplification with switch • DVD-Audio ready with extended frequency response



**RX-496RDS** *HiFi* RDS

AM/FM Stereo Receiver

- 105 W x 2 (DIN) • Pure Direct Switch • 5 audio inputs with 2 tape positions • RDS • 40-station AM/FM random access preset tuning • Auto FM station memory and preset editing • Direct PLL IF count synthesizer tuning



**RX-396RDS** *HiFi* RDS

AM/FM Stereo Receiver

- 55 W x 2 (DIN) • 5 audio input with 2 tape positions • RDS • 40-station random access preset tuning • Auto FM station memory and preset editing • Direct PLL IF count synthesizer tuning



**TX-592RDS** *HiFi* RDS

AM/FM Stereo Tuner

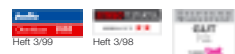
- RDS • 40-station AM/FM random access preset tuning • Auto FM station memory and preset editing • Direct PLL IF count synthesizer tuning
- Absolute Linear Phase IF Amplifier circuitry • Rotary encoder tuning



**TX-492RDS** *HiFi* RDS

AM/FM Stereo Tuner

- RDS • 40-station AM/FM random access preset tuning • Auto FM station memory and preset editing • Direct PLL IF count synthesizer tuning
- Absolute Linear Phase IF Amplifier circuitry



## Brilliant Audio: Titanium

Availability of titanium finish varies by region. Please contact your dealer for availability.



### KX-493 *HiFi*

Stereo Cassette Deck with Play Trim

- Play trim • Auto tape tuning • Dolby B/C NR
- 160-kHz high recording bias • Dolby HX Pro Dynamic Bias Servo • Cassette stabiliser • CD-tape synchro rec start • 0-M point/full repeat
- MPX filter switch • Manual bias control



### KX-393 *HiFi*

Stereo Cassette Deck with Play Trim

- Play trim • Auto tape tuning • Dolby B/C NR
- Dolby HX Pro Dynamic Bias Servo • Cassette stabiliser • CD-tape synchro rec start • 0-M point/full repeat • MPX filter switch • Manual bias control



### KX-W321 *HiFi*

Double Auto-Reverse Cassette Deck

- Two speed (normal/high) dubbing • Dolby B/C NR • Relay play • Yamaha GF heads • Auto tape type selection • 4-digit tape counters (both decks)

**Play Trim** makes it possible to adapt the Dolby noise reduction system for reproducing individually recorded cassettes, in order to compensate for an excessively dull or light sound.



### CDX-596 *HiFi*

CD Player with PRO-Bit

- PRO-Bit technology • CD-R/CD-RW playback capability • Intelligent digital servo • CD-tape synchro rec start • 3-mode CD text display • Peak search for setting the recording level properly • 3-way tape edit • 40-track programmable play • Optical digital output • 4-mode time display • Fine sound tuning • Space insert



### CDX-496 *HiFi*

CD Player with Peak Search

- CD-R/CD-RW playback capability • Intelligent digital servo • CD-tape synchro rec start • Peak search for setting the recording level properly • 3-way tape edit • 40-track programmable play • Optical digital output • 4-mode time display • Space insert



### CDX-396 *HiFi*

CD Player with Optical Digital Out

- CD-R/CD-RW playback capability • Intelligent digital servo • CD-tape synchro rec start • Peak search for setting the recording level properly • 3-way tape edit • 40-track programmable play • Optical digital output for sending the digital signal directly to a MD recorder • 4-mode time display



### CDC-685 *HiFi*

CD Changer Plus PlayXchange

- Yamaha patented PlayXchange • CD-R/CD-RW playback compatibility • Intelligent digital servo • CD-tape synchro rec start • 3-mode CD Text display • Peak search for setting the recording level properly • 3-way tape edit • 40-track programmable play • Disc (intro) scan • Optical digital output • 4-mode time display



### CDC-585

CD Changer Plus PlayXchange

- Yamaha patented PlayXchange • CD-R/CD-RW playback compatibility • Intelligent digital servo • CD-tape synchro rec start • Disc (intro) scan • 3-mode CD Text display • 3-way tape edit • 40-track programmable play • Optical digital output • 4-mode time display



### MDX-596 *HiFi*

MiniDisc Recorder

- Digital recording level control with memory • 20-bit A/D and D/A conversion • 24-bit quantization system • Optical digital input (2) and output terminals • Super Bit Allocation (SBA) • Automatic synchro sampling rate conversion • Versatile edit functions • Convenient titling • Time rescue rec • Synchro rec



**A Highly Advanced Digital Technology**  
PRO-Bit (Precise Reproduction of Original Bits) is an exclusive Yamaha technology that "translates"

20-bit data from the 16-bit data on compact discs. This is desirable because even though many professional recording studios now employ advanced 20-bit recording equipment, the music signal data stored on compact discs is still in a 16-bit format. So when the music is transferred to CD, some of the

sound data is lost. The "translation" process is quite complex, but thanks to Yamaha's extensive experience in music, acoustics and digital technology, we were able to successfully recreate 20-bit data from a 16-bit CD. So you hear a much more faithful version of the original recording.

## HiFi Packages

	Receiver	CD Player	Cassette Deck	Speaker
HiFi Pack 1	RX-396RDS	CDX-396		NS-G40MKII
HiFi Pack 2	RX-396RDS	CDX-496	KX-493	NS-G40MKII
HiFi Pack 3	RX-396RDS	CDX-496	KX-W321	NS-G40MKII
HiFi Pack 6	RX-496RDS	CDX-496		NS-100S (x2)
HiFi Pack 515	RX-396RDS	CDX-396		NS-M515



HiFi Pack 2

# Specifications

Projector	DPX-1100	LPX-510
Panel	0.8 inch DMD, HD2+ x1	0.7 inch HTPS TFT active matrix LCD x 3
Resolution	1,280 x 720 pixels	1,280 x 720 pixels
Brightness	800 ANSI lumens (white boost: on, iris: off) 400 ANSI lumens (white boost: on, iris: fully on)	1000 ANSI lumens (iris: off, Cinema Balance Filter: off) 350 ANSI lumens (iris: fully on, Cinema Balance Filter: on)
Contrast Ratio	4000:1 (white boost: on, iris: fully on) 2000:1 (white boost: on, iris: off)	1200:1 (iris: 75%, Cinema Balance Filter: off) 1000:1 (iris: 100%, Cinema Balance Filter: on)
Projection Lens	F=2.7-5.0, f=24.3-38.9 mm	F=2.06-2.79, f=21.4 mm-31.7 mm
Lamp	270 W (300 W) SHP lamp, 2000 hours (270W continuous)	200 W-150 W UHP lamp, 1500 hours (200W continuous)
Acceptable Input	YPbPr RGB Colour Format	480i/480p, 576i/576p, 720p, 1035i, 1080i VGA, SVGA, XGA NTSC, PAL, SECAM, NTSC4.43, PAL60, PAL-M and PAL-N
Horizontal Sync Range	15-80 kHz	
Vertical Sync Range	50-85 Hz (analogue), 60Hz/50Hz (digital)	
Power Consumption	375 W (standby: 0.1 W)	290 W (Eco standby: 0.3 W)
Dimensions (W x H x D); Weight	495 x 189.5 x 465.4 mm; 13.8 kg	450 x 119 x 345 mm; 6.2 kg

Plasma Display Monitor	PDM-4210		
Effective Display Area (H x V)	922mm x 522mm, 1060mm diagonal	Surround Sound	SRS TruBass/Matrix Surround
Aspect Ratio	16 : 9	Sound mode	4 (Movie, Music, Speech, Favorite)
Number of Pixels (H x V)	1,024 x 1,024 pixels (ALIS method panel)	Audio Power (RMS)	12 W + 12 W
Pixel Pitch (H x V)	0.90 x 0.51 mm	Side by Side Picture	Tuner and AV input
Number of Colours	Gray Levels 16.7 million colors ( 256 gray levels )	Wide Mode (Picture Size)	TV/Video: 8 modes (Panoramic, Zoom, Cinema, Full, 4:3, 14:9L, 14:9Zoom, 14:9 (WSS available)) PC: 6 modes (Full, Real, Normal, Zoom1, Zoom2, Zoom3)
Transmission of Front Filter	Dark tint face 32%	Power Consumption	365 W
Brightness	White Peak Panel brightness : 1100 cd/m <sup>2</sup>	Dimensions (W x H x D)	1,030 x 636 x 93 mm (monitor only)
Contrast Ratio (Panel)	1000:1	Weight	35.2 kg (monitor only)
Acceptable Input	YPbPr RGB Colour Format		
	480i/480p, 576i/576p, 720p, 1035i, 1080i VGA, SVGA, XGA, SXGA, UXGA (compressed) NTSC, PAL, SECAM, PAL60 and Modified NTSC		
Picture Mode	2 (Dynamic, Natural)		
White Balance	4 (Cool, Normal, Warm, Black-White)		

	DSP-Z9	RX-V2400RDS	RX-V1400RDS	RX-SL100RDS
<b>Audio Section</b>				
DIN Standard Power (4 Ohms, 1 kHz, 0.7% THD)				(6 Ohms, 1 kHz, 10% THD)
Front Channels	300 W + 300 W	180 W + 180 W	170 W + 170 W	100 W + 100 W
Centre Channel	300 W	180 W	170 W	100 W
Surround Channels	300 W + 300 W	180 W + 180 W	170 W + 170 W	100 W + 100 W
Surround Back Channels	300 W + 300 W	180 W + 180 W	170 W + 170 W	100 W
Presence Channels	90 W + 90 W			
High Dynamic Power & Low Impedance Drive Capability	Yes	Yes	Yes	
Dynamic Power/Ch (Front Ch, 8/6/4/2 Ohms)	210/260/340/580 W	155/195/250/330 W	145/185/240/320 W	
Linear Damping [Damping Factor (8 Ohms, 20 Hz-20 kHz)]	200 (front/centre)	140 (front, speaker A)	140 (front, speaker A)	
Frequency Response (CD)	10 Hz-100 kHz +0, -3 dB	10 Hz-100 kHz +0, -3 dB	10 Hz-100 kHz +0, -3 dB	20 Hz-50 kHz +0, -3 dB
Total Harmonic Distortion (20 Hz-20 kHz, CD)	0.005% (85 W/8 Ohms)	0.04% (60 W/8 Ohms)	0.04% (60 W/8 Ohms)	0.04% (35 W/6 Ohms)
Signal-to-Noise Ratio (IHF-A-Network, CD)	100 dB (250 mV)	100 dB (250 mV)	100 dB (250 mV)	96 dB (250 mV)
<b>Video Section</b>				
Component Video Up Conversion	Yes (up/down, full digital)	Yes	Yes	
Video Signal Level	1 Vp-p/75 Ohms	1 Vp-p/75 Ohms	1 Vp-p/75 Ohms	1 Vp-p/75 Ohms
S-Video Signal Level (Y/C)	1 Vp-p/75 Ohms; 0.286 Vp-p/75 Ohms	1 Vp-p/75 Ohms; 0.286 Vp-p/75 Ohms	1 Vp-p/75 Ohms; 0.286 Vp-p/75 Ohms	
Monitor Out Frequency Response (Component Video)	5 Hz-100 MHz -3 dB	5 Hz-60 MHz -3 dB	5 Hz-60 MHz -3 dB	
<b>General Section</b>				
Dimensions (W x H x D); Weight	435 x 211 x 471 mm ; 30kg	435 x 171 x 434 mm; 15.5kg	435 x 171 x 434 mm; 15.5kg	435 x 55.5 x 330 mm; 6.4kg

	RX-V750	RX-V650	RX-V550	RX-V450	RX-V350
<b>Audio Section</b>					
DIN Standard Power (4 Ohms, 1 kHz, 0.7% THD)					
Front Channels	150 W + 150 W	145 W + 145 W	135 W + 135 W	130 W + 130 W	105 W + 105 W
Centre Channel	150 W	145 W	135 W	130 W	105 W
Surround Channels	150 W + 150 W	145 W + 145 W	135 W + 135 W	130 W + 130 W	105 W + 105 W
Surround Back Channels	150 W + 150 W	145 W + 145 W	135 W	130 W	
High Dynamic Power & Low Impedance Drive Capability	Yes	Yes	Yes	Yes	Yes
Dynamic Power/Ch (Front Ch, 8/6/4/2 Ohms)	135/170/200/245 W	130/165/195/240 W	120/155/190/235 W	115/150/185/230 W	105/135/165 W (6/4/2 Ohms)
Linear Damping [Damping Factor (8 Ohms, 20 Hz-20 kHz)]	100 (front, speaker A)	100 (front, speaker A)	100 (front, speaker A)	100 (front, speaker A)	
Frequency Response (CD)	10 Hz-100 kHz +0, -3 dB	10 Hz-100 kHz +0, -3 dB	10 Hz-100 kHz +0, -3 dB	10 Hz-100 kHz +0, -3 dB	10 Hz-100 kHz +0, -3 dB
Total Harmonic Distortion (20 Hz-20 kHz, CD)	0.06% (50 W/8 Ohms)	0.06% (50 W/8 Ohms)	0.06% (40 W/8 Ohms)	0.06% (40 W/8 Ohms)	0.06% (50 W/6 Ohms)
Signal-to-Noise Ratio (IHF-A-Network, CD)	100 dB (250 mV)	100 dB (250 mV)	100 dB (250 mV)	100 dB (250 mV)	100 dB (250 mV)
<b>Video Section</b>					
Component Video Up Conversion	Yes				
S-Video Up Conversion	Yes	Yes	Yes		
S-Video Signal Level (Y/C)	1 Vp-p/75 Ohms; 0.286 Vp-p/75 Ohms	1 Vp-p/75 Ohms; 0.286 Vp-p/75 Ohms	1 Vp-p/75 Ohms; 0.286 Vp-p/75 Ohms		
Monitor Out Frequency Response (Component Video)	5 Hz-60 MHz -3 dB	5 Hz-60 MHz -3 dB	5 Hz-60 MHz -3 dB	5 Hz-60 MHz -3 dB	
<b>Tuner Section</b>					
FM 50 dB Quieting Sensitivity (IHF, 75 Ohms, Mono/Stereo)	2 µV (17.3 dBf)/25 µV (39.2 dBf)	2 µV (17.3 dBf)/25 µV (39.2 dBf)	2 µV (17.3 dBf)/25 µV (39.2 dBf)	2 µV (17.3 dBf)/25 µV (39.2 dBf)	2 µV (17.3 dBf)/25 µV (39.2 dBf)
FM Signal-to-Noise Ratio (Mono/Stereo)	76 dB/70 dB	76 dB/70 dB	76 dB/70 dB	76 dB/70 dB	76 dB/70 dB
<b>General Section</b>					
Dimensions (W x H x D); Weight	435 x 171 x 420 mm; 12.5 kg	435 x 171 x 420 mm; 12.5 kg	435 x 171 x 420 mm; 11kg	435 x 161 x 416 mm; 11 kg	435 x 151 x 315 mm; 9 kg

•Digital Home Cinema Component Surround Programmes

	DSP-Z9	RX-V2400RDS	RX-V1400RDS	RX-V750	RX-V650	RX-V550	RX-V450	RX-V350	RX-SL100RDS	DVR-S200 DVX-S120
<b>HiFi DSP Programmes</b>										
CONCERT HALL 1	Munich A	●	● (Concert Hall 1)							● (Classic Hall)
	Frankfurt	●								
	Stuttgart	●								
	Munich B	●								
	Vienna	●	● (Concert Hall 2)	● (Concert Hall)						
	Amsterdam	●								
CONCERT HALL 2	Hall G in U.S.A	●								
	Hall H in USA	●								
	Live Concert	●			●	●	●	●	●	●
CHURCH	Tokyo	●								
	Freiburg	●	●							
	Royaumont	●								
JAZZ CLUB	Village Gate	●								
	Village Vanguard	●								
ROCK CONCERT	The Bottom Line	●	●	●	●	●	●	●	●	●
	The Roxy Theatre	●	●	●	●	●	●	●	●	●
ENTERTAINMENT	Warehouse Loft	●								
	Arena	●								
9-CH STEREO	Disco	●	●	●	●	●	●	●	●	●
	Party	●								
9-CH STEREO	9 Ch Stereo	●	● (7 Ch Stereo)	● (7 Ch Stereo)	● (7 Ch Stereo)	● (7 Ch Stereo)	● (6 Ch Stereo)	● (6 Ch Stereo)	● (6 Ch Stereo)	● (5 Ch Stereo)
<b>HiFi DSP Subtotal</b>	<b>21</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>
<b>CINEMA DSP Programmes</b>										
ENTERTAINMENT	Game	●	●	●	●	●	●	●	●	●
TV THEATER	TV Sports	●	● (Variety/Sports)	● (Variety/Sports)	● (Variety/Sports)	● (Variety/Sports)	● (Variety/Sports)	● (Variety/Sports)	● (Variety/Sports)	● (Live Sports)
	Mono Movie	●	●	●	●	●	●	●	●	●
MUSIC VIDEO	Pop/Rock	●	●	●	●	●	●	●	●	● (Music Video)
	DJ	●								
	Classical/Opera	●								
MOVIE THEATER 1	Pavilion	●								
	Spectacle	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]
MOVIE THEATER 2	Sci-Fi	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]
	Adventure	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● (Action) [5]
ENHANCED	General	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● (Drama) [5]
	Enhanced	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● (Theater) [5]
<b>CINEMA DSP Subtotal</b>	<b>12 [32]</b>	<b>9 [29]</b>	<b>9 [29]</b>	<b>9 [29]</b>	<b>9 [29]</b>	<b>9 [29]</b>	<b>9 [29]</b>	<b>9 [29]</b>	<b>9 [29]</b>	<b>8 [28]</b>
<b>Decoder Straight Programmes</b>										
	Dolby Digital	●	●	●	●	●	●	●	●	●
	Dolby Digital EX	●	●	●	●	●	●	● (Phantom)	●	● (Phantom)
	DTS Digital Surround	●	●	●	●	●	●	●	●	●
	DTS 96/24	●	●	●	●	●	●	●	●	●
	DTS-ES Matrix 6.1	●	●	●	●	●	●	● (Phantom)	●	● (Phantom)
	DTS 96/24 ES (6.1)	●								
	DTS-ES Discrete 6.1	●	●	●	●	●	●	●	●	●
	Dolby Pro Logic	●	●	●	●	●	●	●	●	●
	Dolby Pro Logic II Music	●	●	●	●	●	●	●	●	●
	Dolby Pro Logic II Movie	●	●	●	●	●	●	●	●	●
	Dolby Pro Logic II Game	●	●	●	●	●	●	●	●	●**
	Dolby Pro Logic IIx Music	● [3]*	● [3]*	● [3]*	● [3]*	● [3]*	● [3]*	● [3]*	●**	●**
	Dolby Pro Logic IIx Movie	● [3]*	● [3]*	● [3]*	● [3]*	● [3]*	● [3]*	●**	●**	●**
	Dolby Pro Logic IIx Game	●	●**	●**	●**	●**	●**	●**	●**	●**
	DTS Neo:6 Music	●	●	●	●	●	●	●	●	●
	DTS Neo:6 Cinema	●	●	●	●	●	●	●	●	●
<b>Decoder Straight Subtotal</b>	<b>16 [20]</b>	<b>15 [19]</b>	<b>15 [19]</b>	<b>15 [19]</b>	<b>15 [19]</b>	<b>15 [17]</b>	<b>15 [17]</b>	<b>7</b>	<b>14</b>	<b>7</b>
<b>THX Programmes</b>										
	Cinema	●	●	●						
	Ultra 2 Cinema	●								
	Music	●								
	ES Matrix 6.1	●								
	ES Discrete 6.1	●								
	Surround EX	●	●	●						
<b>Surround Format Subtotal</b>	<b>6</b>	<b>2</b>	<b>2</b>							
<b>Programme Total</b>	<b>55 [79]</b>	<b>33 [57]</b>	<b>31 [55]</b>	<b>29 [53]</b>	<b>29 [53]</b>	<b>29 [51]</b>	<b>29 [51]</b>	<b>21 [41]</b>	<b>28 [48]</b>	<b>19 [39]</b>

●: A/V Programmes   ●: HiFi DSP Programmes   ●: CINEMA DSP   ●: Tri-Field CINEMA DSP Capable   ●: Quad-Field CINEMA DSP Capable   [ ]: Variations

\* Only when using Surround Back x 2 Speakers for normal, Dolby Digital and DTS. \*\* Only for Dolby Pro Logic (normal)

## •Digital Home Cinema Component Inputs/Outputs

	DSP-Z9	RX-V2400RDS	RX-V1400RDS	RX-V750	RX-V650	RX-V550	RX-V450	RX-V350		RX-SL100RDS	DVR-S200	DVX-S120	
Inputs	Optical Digital (Fixed & Assignable)	8*	5*	5*	4*	4*	3	2	2		3*	1 (fixed)	1 (fixed)
	Coaxial Digital I (Fixed & Assignable)	3	3	3	2	2	1	1	1		1		
	S-Video	8*	6*	6*	5*	5*	3						
	Pure Direct 2Ch	1											
	Analogue A/V / Audio	8* / 5	6* / 4	6* / 4	5* / 3	5* / 2	4* / 2	4* / 2	4 / 2		1* / -	2 / 1	2 / -
	Component Video (Fixed & Assignable)	6	2	2	2	2	2	2					
Outputs	Multi-Channel External Decoder	8ch	6ch (8ch compatible)	6ch (8ch compatible)	8ch	8ch	6ch	6ch	6ch				
	Optical Digital (Fixed & Assignable)	3	2	2	1	1	1				1 (fixed)	1 (fixed)	
	S-Video	3	2	2	2	2	1						
	Component/S-Video/Composite Monitor	2 / 2 / 2	1 / 1 / 1	1 / 1 / 1	1 / 1 / 1	1 / 1 / 1	1 / 1 / 1	1 / - / 1	- / - / 1			1 / 1 / 1	1 / 1 / 1
	Speaker (without subwoofer)	9	9	9	9	9	6	6	5		6	5	5
	Subwoofer	2	1	1	1	1	1	1	1		1	1	1
I/O	i.LINK	1											
	RS-232C Interface	1	1										
	Zone2	Coaxial / 1											
SCART Input/Output Terminals										2: Ext./TV	1	1	

\* Including front panel Video Aux terminals

CinemaStation	DVR-S200	DVX-S120
Receiver Section		
Maximum Output Power (Main/Center/Rear + Subwoofer)	100 W x 5 (6 Ohms, 1 kHz, 10% THD)	55 W x 5 (6 Ohms, 1 kHz, 10% THD) + 100 W (5 Ohms, dynamic)
DVD Player Section		
Frequency Response (CD)	10 Hz-20 kHz	10 Hz-20 kHz
(DVD, 48 kHz sampling)	10 Hz-22 kHz	10 Hz-22 kHz
(DVD, 96 kHz sampling)	10 Hz-44 kHz	10 Hz-44 kHz
(DVD, 192 kHz sampling)	10 Hz-88 kHz	
Centre Unit Dimensions (W x H x D); Weight	360 x 80 x 361 mm; 6.5 kg	360 x 80 x 360 mm; 6 kg
Speaker Section		All speakers have magnetic shielding.
System Frequency Response		30 Hz-25 kHz
[4 Satellites] Dimensions (W x H x D); Weight		72 x 170 x 108 mm; 0.9 kg
[Centre Speaker] Dimensions (W x H x D); Weight		300 x 72 x 105 mm; 1.1 kg
[Subwoofer] Dimensions (W x H x D); Weight		200 x 365 x 375 mm; 8.4 kg

DVD Players / DVD Recorder	DVD-S1500	DVD-S550	DVD-S540	DV-SL100	DRX-2MKII
Disc Playback Compatibility	SA-CD, DVD-Audio/Video, DVD+RW/+R, DVD-R/+R, SVCD, VCD, DVD-RW/-R, SVCD, VCD, Audio CD and, CD-R/RW	DVD-Video, DVD+RW/+R, DVD-R/-RW, SVCD, VCD, Picture CD, JPEG, DivX, Audio CD and CD-R/RW	DVD-Video, DVD+RW/+R, DVD-R/-RW, SVCD, VCD, Picture CD, JPEG, Audio CD and CD-R/RW	DVD-Video, DVD+RW/+R, DVD-R/-RW, SVCD, VCD, Picture CD, JPEG, Audio CD and CD-R/RW	DVD-Video, DVD+RW/+R, DVD-R/-RW, SVCD, VCD, Audio CD and CD-R/RW
MP3 Playback Compatibility	Multisession	Multisession	Multisession	Multisession	Yes
Video Performance					
Video D/A Converter	108 MHz/12-bit	108 MHz/12-bit	54 MHz/12-bit	54 MHz/12-bit	10-bit
Video Output	1 Vp-p, 75 Ohms	1 Vp-p, 75 Ohms	1 Vp-p, 75 Ohms	1 Vp-p, 75 Ohms	1 Vp-p, 75 Ohms
S-Video Output	Y: 1 Vp-p, 75 Ohms C: 0.3 Vp-p, 75 Ohms	Y: 1 Vp-p, 75 Ohms C: 0.3 Vp-p, 75 Ohms	Y: 1 Vp-p, 75 Ohms C: 0.3 Vp-p, 75 ohm	Y: 1 Vp-p, 75 Ohms C: 0.3 Vp-p, 75 ohm	Y: 1 Vp-p, 75 Ohms C: 0.286 Vp-p, 75 Ohms
Audio Performance					
Audio D/A Converter	192 kHz/24-bit, DSD	192 kHz/24-bit	96 kHz/24-bit	96 kHz/24-bit	24-bit
Signal-to-Noise Ratio (CD)	115 dB	105 dB	100 dB	105 dB	105 dB
Frequency Response (CD/VCD)	2 Hz-20 kHz	2 Hz-20 kHz	2 Hz-20 kHz	2 Hz-20 kHz	4 Hz-20 kHz
(DVD 96 kHz sampling)	2 Hz-44 kHz	2 Hz-44 kHz	2 Hz-44 kHz	2 Hz-44 kHz	4 Hz-44 kHz
Dynamic Range (DVD 48 kHz, 24 Bit)	107 dB (SA-CD)	105 dB	105 dB	100 dB	
Harmonic Distortion + Noise (1 kHz)	0.0017%	0.003%	0.003%	0.003%	
Dimensions (W x H x D)	435 x 55 x 315 mm	435 x 51 x 310 mm	435 x 78 x 302 mm	435 x 55 x 310 mm	435 x 82 x 347 mm
Weight	3.2 kg	2.6 kg	2.8 kg	3 kg	4 kg

PianoCraft		PianoCraft E400	PianoCraft E300
Receiver		RX-E400 Receiver	CRX-E300 CD Receiver
DIN Standard Power	(4 Ohms, 1 kHz, 0.7% THD)	60 W + 60 W	30 W + 30 W
Linear Damping Damping Factor	(6 Ohms, 20 Hz-20 kHz)	60	60
High Dynamic Power, Low-Impedance Drive Capability	Dynamic Power/Channel	60/75/100 W (6/4/2 Ohms)	35/40/45 W (6/4/2 Ohms)
Dimensions (W x H x D); Weight		217 x 108 x 372 mm; 5.4 kg	217 x 168 x 312 mm; 5 kg
CD Player		CDX-E400 CD Player	CRX-E300 CD Receiver
Frequency Response	(2-20,000 Hz)	±0.5 dB	±0.5 dB
Harmonic Distortion + Noise		0.004%	0.006%
Signal-to-Noise Ratio		102 dB	100 dB
Dynamic Range		95 dB	96 dB
Dimensions (W x H x D); Weight		217 x 108 x 345 mm; 3 kg	
Speaker System		NX-E400 2-Way Bass-Reflex Speaker System	NX-E300 2-Way Bass-Reflex Speaker System
Drivers		13 cm cone woofer and 2.5 cm dome tweeter	11 cm cone woofer and 2.5 cm dome tweeter
Input Power (Max/Nominal)		110 W/60 W	110 W/40 W
Frequency Response		55-28,000 Hz	60-28,000 Hz
Selectivity		87 dB/2.83 V/m	85 dB/2.83 V/m
Dimensions (W x H x D); Weight	(per unit)	186 x 300 x 223 mm; 4.3 kg	165 x 255 x 183 mm; 3.4 kg

Integrated Amplifiers	AX-596	AX-496	AX-396		
ToP-ART	Yes	Yes	Yes		
Pure Direct Switch	Yes	Yes	Yes		
DIN Standard Power (4 Ohms, 1 kHz, 0.7% THD)	155 W + 155 W	120 W + 120 W	95 W + 95 W		
High Dynamic Power/Low-Impedance Drive Capability	Yes	Yes	Yes		
Dynamic Power/Ch (8/4/2 Ohms)	140/220/290 W	130/185/220 W	100/140/150 W		
Linear Damping	Yes	Yes	Yes		
Damping Factor (8 Ohms, 20 Hz-20 kHz)	320 (speaker A)	240 (speaker A)	240 (speaker A)		
CD/DVD Direct Amplification Circuit	With switch	With switch	With switch		
Signal-to-Noise Ratio (CD)	110 dB	110 dB	110 dB		
Frequency Response	20 Hz-100 kHz +0.5/-3 dB	20 Hz-100 kHz +0.5/-3 dB	20 Hz-100 kHz +0.5/-3 dB		
Continuously Variable Loudness Control	Yes	Yes	Yes		
Rec Out Selector	Yes	Yes			
Gold-Plated Input Terminals	All terminals	CD terminal			
Dimensions (W x H x D)	435 x 151 x 396 mm	435 x 151 x 391 mm	435 x 151 x 391 mm		
Weight	10.6 kg	9.5 kg	8.7 kg		

Receivers/Tuners	RX-496RDS	RX-396RDS		TX-592RDS	TX-492RDS
Pure Direct Switch	Yes				
DIN Standard Power (4 Ohms, 1 kHz, 0.7% THD)	105 W + 105 W	55 W + 55 W			
High Dynamic Power/Low-Impedance Drive Capability	Yes	Yes			
Dynamic Power/Ch (8/4/2 Ohms)	105/150/178 W	70/89/100 W			
Linear Damping	Yes	Yes			
Damping Factor (8 Ohms, 20 Hz-20 kHz)	100	100			
Signal-to-Noise Ratio (CD)	108 dB	108 dB			
Frequency Response	20 Hz-20 kHz $\pm$ 0.5 dB	20 Hz-20 kHz $\pm$ 0.5 dB			
Continuously Variable Loudness Control	Yes	Yes			
FM Usable Sensitivity (DIN)	Mono 0.9 $\mu$ V/24 $\mu$ V	0.9 $\mu$ V/24 $\mu$ V		0.9 $\mu$ V/24 $\mu$ V	0.9 $\mu$ V/24 $\mu$ V
FM Selectivity	(Two Signals) 70 dB	70 dB		70 dB	70 dB
FM Signal-to-Noise Ratio (DIN)	Mono/Stereo 75 dB/70 dB	75 dB/70 dB		75 dB/70 dB	75 dB/70 dB
Harmonic Distortion (40 kHz Dev.)	Mono/Stereo 0.1%/0.2%	0.1%/0.2%		0.1%/0.2%	0.1%/0.2%
Frequency Response	(30 Hz-15 kHz) $\pm$ 1.5 dB	$\pm$ 1.5 dB		$\pm$ 1.5 dB	$\pm$ 1.5 dB
Dimensions (W x H x D)	435 x 146 x 309 mm	435 x 146 x 309 mm		435 x 86 x 289 mm	435 x 86 x 278 mm
Weight	8.2 kg	6.4 kg		3.2 kg	3.2 kg

CD Players	CDX-596	CDX-496	CDX-396	CDC-685	CDC-585
Harmonic Distortion + Noise	0.003%	0.003%	0.003%	0.003%	0.003%
Frequency Response	2 Hz-20 kHz $\pm$ 0.5 dB	2 Hz-20 kHz $\pm$ 0.5 dB	2 Hz-20 kHz $\pm$ 0.5 dB	2 Hz-20 kHz $\pm$ 0.5 dB	2 Hz-20 kHz $\pm$ 0.5 dB
Signal-to-Noise Ratio	115 dB	105 dB	105 dB	106 dB	106 dB
Dynamic Range	96 dB	96 dB	100 dB	95 dB	95 dB
Dimensions (W x H x D)	435 x 96 x 277 mm	435 x 96 x 277 mm	435 x 96 x 277 mm	435 x 116 x 404 mm	435 x 116 x 404 mm
Weight	3.7 kg	3.7 kg	3.7 kg	5.9 kg	5.9 kg

Cassette Decks	KX-493	KX-393	KX-W321		
Wow & Flutter (W RMS)	0.05%	0.07%	0.08%		
Signal-to-Noise Ratio (NR Off/Dolby B/C)	60/68/76 dB	58/66/74 dB	58/66/74 dB		
Frequency Response (Metal)	20 Hz-20 kHz $\pm$ 3 dB	20 Hz-19 kHz $\pm$ 3 dB	20 Hz-19 kHz $\pm$ 3 dB		
Dimensions (W x H x D)	435 x 126 x 279 mm	435 x 126 x 283 mm	435 x 146 x 279 mm		
Weight	4.5 kg	4.4 kg	5 kg		

HDD + CD-R/RW Digital Audio Recorder	CDR-HD1300E
Frequency Response	5 Hz-20 kHz $\pm$ 0.5 dB
Playback S/N Ratio	105 dB
Playback Dynamic Range	99 dB
Playback THD + Noise	0.004%
Recording S/N Ratio	92 dB
Recording Dynamic Range	92 dB
Recording THD + Noise	0.006%
Inputs	Optical/coaxial digital, audio (composite) and RS232C
Outputs	Optical/coaxial digital, audio (composite) and S-video/video (composite)
Dimensions (W x H x D)	435 x 116 x 415 mm
Weight	8.4 kg

MiniDisc Recorder	MDX-596
Frequency Response	5 Hz-20 kHz $\pm$ 0.5 dB
Signal-to-Noise Ratio	99 dB
Input Level (Line)	300 mV/50 k-Ohms
Sampling Frequency	44.1 kHz
Input Terminals	2 optical digital and 1 analogue
Output Terminals	1 optical digital and 1 analogue
Dimensions (W x H x D)	435 x 96 x 288 mm
Weight	4 kg



"d-cinema" is the slogan of Yamaha A/V products and technology, reflecting our focus on digital technology and our leadership in creating and refining digital home cinema.



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Preset



Preset Remote Control Unit



Standard Remote Control Unit

Option



Optional Remote Control Unit

For details please contact:

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