

Yamaha Digital Home Theater Components

Where Home Theater Lives



CINEMA DSP[™]
DIGITAL

Advanced Solutions for Home Theater

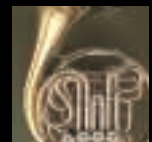
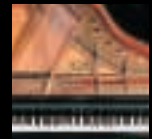
Yamaha has been one of the most popular and innovative manufacturers of home audio components for more than three decades. In recent years we have helped to create the new category of home theater entertainment, and now offer a wide range of products for every budget and preference. Our top-of-the-line components are the most sophisticated in the world, and much of the same technology goes into our compact and affordable systems. What's more, our commitment to high quality home theater is not limited to sound; we have also introduced a high performance video projector designed to maximize the image quality of movies. For the finest in music and movie enjoyment at home, make your system a Yamaha.





A Unique Company

Yamaha can develop products and technologies unlike any others because it is a company unlike any other. The world's largest producer of musical instruments, it is also well known as one of the world's top manufacturers of motorcycles. The company runs a worldwide music school and has an acoustic division that designs concert halls. Furthermore, it actually designs and produces its own LSIs — the world's most sophisticated microprocessors for electronic instruments and audio components. All of this expertise comes together in the design and manufacture of audio products that reproduce music with the same "Natural Sound" as Yamaha's renowned grand pianos and other instruments.



Home Theater Quality Raised to a New Level.



DPX-1 Digital Cinema Projector

Advanced digital technology used to develop high-performance digital projector.

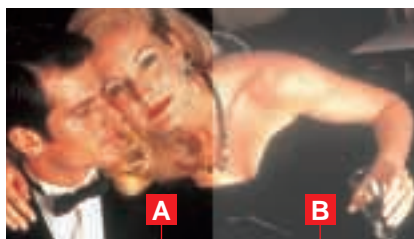
If you love movies, you want to watch them at home. And while it's fun and convenient, it's hardly an awesome experience. Well, here's good news: now it can be. The DPX-1 offers large-screen, finely detailed, beautiful movie image quality. This is a projector designed specifically for watching movies in a home theater. On any size screen, you'll be thrilled by the amazing degree of clarity, sharpness and contrast that this projector delivers. Install the DPX-1 in a full Yamaha home theater system, and you may have to start taking reservations!

Natural Black Makes a Dramatic Difference

When you watch a movie, shadows should stand out from the background, black levels should be solid even in dark scenes, and blacks should maintain their depth when the scene becomes brighter. Which is exactly what happens with Yamaha Natural Black. Because even though it's usually the bright colors that you notice, how a video system reproduces gradations of black is extremely important. This is what determines contrast, and is very often the difference between an image that is merely good, and one that is sharp and rich at every level of brightness. Yamaha put a great deal of effort into improving black reproduction, and with Natural Black, we've achieved levels of black that are about 18% "blacker" than those of conventional projectors.

DLP™ Optical System Provides Numerous Quality Benefits

Digital Light Processing™ technology, developed by Texas Instruments, has a number of advantages that caused Yamaha to choose it as the basis for this projector. Its single panel architecture allows the use of a small, lightweight optical system, and the fact that it is a reflective rather than



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

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

transmissive technology provides greater efficiency. In addition, the all-digital nature of the DLP™ system, as opposed to the analog nature of other systems, means that color and motion are more accurately controlled, resulting in superior image quality.

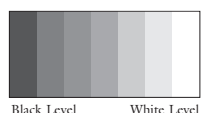
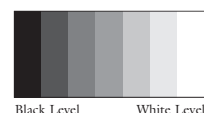
Extra-Large DMD™ Semiconductor

The key component of the DLP™ system is the Digital Micromirror Device™ optical semiconductor chip. This DMD™ switching

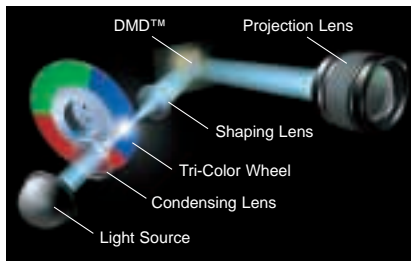
Black reproduction by DPX-1 and conventional projectors.

A DPX-1: Deep blacks are clearly defined, all dark gradations are sharply and cleanly rendered.

B Conventional projectors: Due to "floating black" effect, rendering of deep blacks is very difficult.



The DPX-1 has been honored with an EISA Award for Best Projector 2001-2002. The prestigious EISA Awards are chosen by media representatives from 19 European countries.



The DPX-1 Optical System

unit has an array of 786,432 hinged, microscopic mirrors which operate as optical switches to create a high resolution, full colour image. To maximize DMD™ quality, Yamaha uses a large 0.9-inch semiconductor that generates greater light output than the smaller 0.7-inch chip used in other DLP™ projectors, resulting in greater detail.

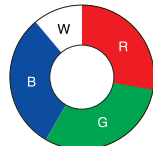


Extra-Large 0.9-inch DMD™ Device

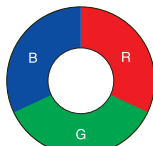
Unique Tri-Color Wheel Optimizes Movie Images

The DPX-1 is the first home cinema projector to employ a true tri-color wheel. Conventional color wheels contain a or white (transparent) section to brighten them for presentations via computer. This section is not used in movie mode, but its presence reduces movie contrast because of the extra light transmission.

By eliminating the white section, the tri-color wheel provides greater area for each of the three primary colors (red, green and blue) that create the images. This results in much higher movie image contrast, which is 40% better than that of conventional DLP™ projectors (and note that other projectors' contrast ratios often refer to computer mode, not movie mode) and of course superior color reproduction.



Conventional Color Wheel (RGBW)



DPX-1 Tri-Color Wheel (RGB)

A Super-Quiet Projector That's Easy to Operate

Ultra-Low 30dB Noise Level Means You'll Hear Every Sigh and Whisper

Yamaha went to extreme lengths to make the DPX-1 as noiseless as possible. We started with a low-noise yet powerful Sirocco fan to cool the lamp housing, and designed the unit with innovative duct architecture and a silencing chamber in the front of the body. The hot exhaust air passes through the duct below the lens barrel and is led to the silencing chamber, which is lined with porous foam to absorb sound. Finally, the air is exhausted from the front so it won't annoy viewers and in a direction that prevents the temperature difference from causing an air current in front of the screen and swaying the image.



Sirocco fan and silencing chamber

On-Screen Display with Extensive Menus

The on-screen display, selectable via the remote control unit, offers a wide range of parameters that can be adjusted to provide the highest possible image quality in all situations. There are Setup and Initial (default) menus, and for detailed adjustments, Image and Signal menus. This extremely detailed assortment of choices ensures that you can achieve the best looking picture for all input formats, sources and room conditions. You can even vary the position of the menu on the screen!



A full complement of professional grade inputs are provided, including component video with BNC terminals for maximum connection integrity, analog RGB and DVI, composite video and S-video. An RS-232C serial interface and a +12V trigger out jack output signals to activate other components when the projector is powered on.

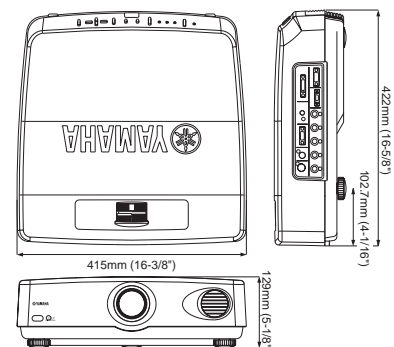
DPX-1 Specifications

- Projection System: Digital Light Processing (DLP)™ technology
- Panel: 0.9 inch XGA DMD™ x 1
- Resolution: 1,024 x 768 pixels
- Brightness: 800 ANSI lumens
- Contrast Ratio: 900:1 (full on/off)
- Projection Lens: 1:1.2 manual zoom, manual focus
- Light Resource: 120 W VIP lamp
- Projection Distance: 1.2 – 10.6m (3' 9" – 35' 1")
- Image Size: 25" – 200"
- Video Standard: NTSC, PAL, NTSC4.43, SECAM, PAL60, PAL-M and PAL-N
- Input Accepted: SDTV (480i, 576i), HDTV (480p, 720p, 1080i), DVD component progressive or interlaced, or interlaced, TV/Satellite tuner, VCR, SXGA (compression), XGA, SVGA and VGA
- Horizontal Sync Range: 15 – 80 kHz (analog); 31.5 – 64 kHz (digital)
- Vertical Sync Range: 50 – 85 kHz (analog); 60 Hz (digital)
- Power Consumption: 185 W
- Dimensions (W x H x D): 415 x 129 x 422 mm; 16-3/8" x 5-1/8" x 16-5/8"
- Weight: 7.8 kg; 17.2 lbs.

Digital Light Processing, DLP, Digital Micromirror Device Digital Micromirror Device and DMD are trademarks of Texas Instruments, Inc.

DPX-1 Options

- PJL-112 Optional Lamp Cartridge
- PMT-L11 Optional Installation Brackets for Low Ceiling
- PMT-H15 Optional Installation Brackets for High Ceiling



The Smartest and Friendliest Remote Control You've Ever Used.

- Large Dynamic LCD Touchscreen with High-Resolution Display
- Multi-Command and Learning Capability with Large Capacity Flash Memory
- Preprogrammed Codes for a Wide Variety of A/V Connections
- Edit Your Own Macros at the Touch of a Button
- Easy Customization via Your PC: RS-232C

Interface and Edit Programs

RAV-2000 Specifications

- Memory: 2 MB non-volatile flash memory (retains commands when batteries aren't present) 512 KB SRAM
- Dimensions (W x H x D): 93 x 136 x 38 mm; 3-11/16" x 5-3/8" x 1-1/2"
- Weight: 180 g 6.3 oz. (without batteries)

For the Flawlessly Accurate, Exquisitely Clear Reproduction



NS-8HX
3-Way Bass-Reflex
Speaker System

NS-6HX
3-Way Bass-Reflex
Speaker System

NS-4HX
2-Way Bass-Reflex
Speaker System

NS-2HX
2-Way Bass-Reflex
Speaker System

NS-C5HX
2-Way Acoustic Suspension
Speaker System

NS-C7HX
2-Way Acoustic Suspension
Speaker System

HX Series Home Theater Reference Speaker Systems

Yamaha is ideally qualified to produce the world's finest home theater systems. With years of acoustic, audio, and digital expertise to draw on, we have been able to develop innovative, high-performance home theater systems that make it possible to enjoy movies at home with all the dramatic sound impact that the director intended to convey.

Now, in response to growing demand for a home theater reference speaker system worthy of the Yamaha name, we have developed the HX Series Home Theater Reference Speaker System – the ultimate choice for home theater enjoyment in the digital age.

The Waveguide Horn

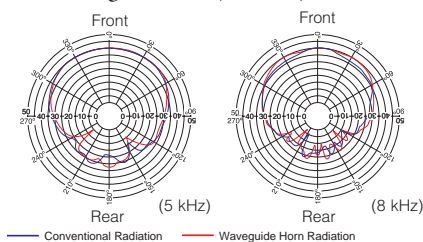
Yamaha's goal in developing the Waveguide Horn was to achieve the three key elements of accuracy, speed and depth, thereby creating a home theater audio experience comparable to that in a movie theater or concert hall. When conventional direct radiating speakers are used in a home environment, their broad directional characteristics result in a relatively high proportion of reflected sound. Modern movie theaters, 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. Achieving a similar level of spatial expression in the home requires speakers with a directional control sound ratio quite different from the speakers used for listening to conventional music recordings.

Yamaha's Waveguide Horn was

Flat High-Frequency Directional Characteristics of the Waveguide Horn (NS-8HX)



High frequency directional characteristics of an installed Waveguide Horn speaker (red lines) and ordinary (blue lines). The Waveguide Horn speaker shows excellent balance in the front direction, with the surround effect to the sides and rear is not adversely affected by reflected sounds.

specifically developed to realize this goal, providing superb reproduction that expresses every nuance of the soundtrack designer or concert-recording engineer's intentions.

Diecast Aluminum Waveguides

Yamaha tested a wide range of waveguide materials to determine which offered the best home theater sound reproduction quality. Cherry and other hardwoods were considered, but in the end, diecast aluminum was found to make the detailed nuances of dialogue easier to hear, while providing the incisive attack needed for action and horror scenes.

Light, Stiff, White Spruce Diaphragms for Midrange & Woofer

The pulp material used for Yamaha's White Spruce Diaphragm (WSD) is manufactured almost entirely from long fibers of Canadian evergreen white spruce, the world's lightest single-sheet

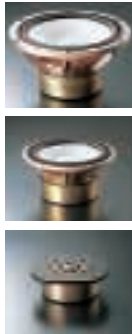
of Movie Soundtracks in Your Own Personal Theater.

diaphragm material. With a Young's coefficient* equal to that of metal, WSD material offers both

exceptional toughness and lightness.

An exclusive Yamaha process accounts for the distinctive white color of WSD material. It was selected for use on the HX Series to reflect the performance heritage of the Yamaha NS-10M, a long-selling model that has been popular as a studio monitor for over 20 years.

* The ratio of stretching force per unit of cross-sectional area to elongation per unit of length.



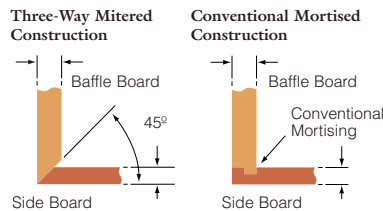
times higher than that of normal metal plate or plastic frames further enhance performance.

All-Aluminum Dome Tweeters and Diffusers

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

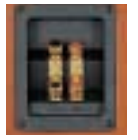
Three-Way Mitered Construction

Yamaha speakers have featured 45° mitered-joint construction at the cabinet corners and baffle/body joints for many years. On the HX Series, mitered construction is also used for the back panel, improving the tightness of the joints so that the entire cabinet behaves as a single rigid body. This reduces unwanted vibration and helps realize the three key elements of ideal home theater sound.



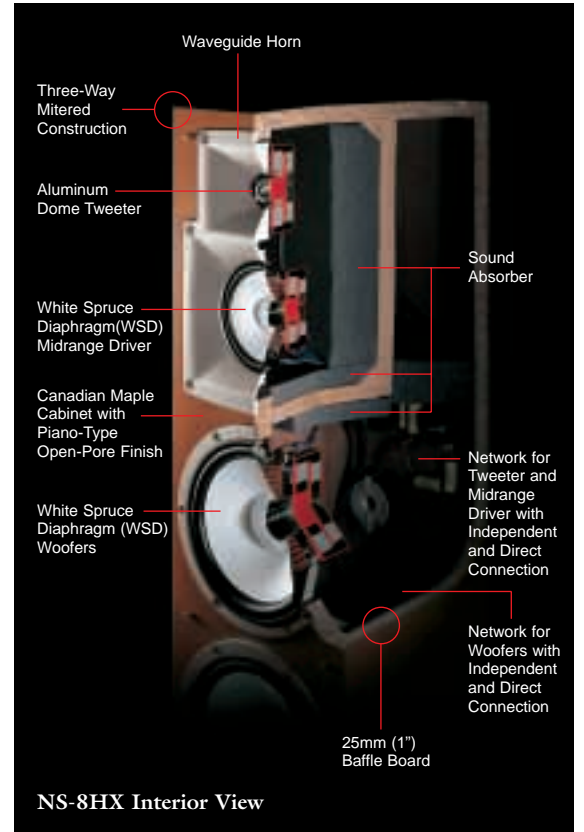
Bi-Wiring Connectivity

Signal integrity is enhanced by a bi-wiring system that provides separate +/- connection terminals for the woofer(s) and other driver(s). The result is lower modulation distortion for purer sound quality.



Edge-Wound Rectangular Voice Coils with Aluminum Diecast Frames

These two high-quality components are now used in only a few luxury units. The edge-wound rectangular voice coils have a wire moment 20% higher than conventional round voice coils, significantly improving the efficiency with which they convert magnetic flux to motion. In addition, aluminum diecast frames with flexural strength three to five



Home Theater Reference Speakers	NS-8HX	NS-6HX	NS-4HX	NS-C7HX	NS-C5HX	NS-2HX
Woofers	Dual 20cm WSD cone	20cm WSD cone	Dual 13cm WSD cone	Dual 16cm WSD cone	Dual 13cm WSD cone	13cm WSD cone
Midrange Driver	13cm WSD cone with waveguide horn	13cm WSD cone with waveguide horn				
Tweeter	3cm Aluminum dome with waveguide horn	3cm Aluminum dome with waveguide horn	3cm Aluminum dome with waveguide horn	3cm Aluminum dome with waveguide horn	3cm Aluminum dome with waveguide horn	3cm Aluminum dome with waveguide horn
Magnetic Shielding	Yes	Yes	Yes	Yes	Yes	Yes
Input Power (Max/Nominal)	400 W/140 W	300 W/100 W	300 W/100 W	300 W/100 W	300 W/100 W	200 W/60 W
Sensitivity	92 dB/2.83 V/m	91 dB/2.83 V/m	91 dB/2.83 V/m	91 dB/2.83 V/m	91 dB/2.83 V/m	90 dB/2.83 V/m
Frequency Response	35-50,000 Hz	45-50,000 Hz	55-50,000 Hz	45-50,000 Hz	55-50,000 Hz	60-50,000 Hz
Impedance	6 ohms	6 ohms	6 ohms	6 ohms	6 ohms	6 ohms
Edgewound Rectangular Voice Coil	Yes	Yes	Yes	Yes	Yes	Yes
Aluminum Diecast Frame	Yes	Yes	Yes	Yes	Yes	Yes
Full Three-Way Mitered Construction	Yes	Yes	Yes	Yes	Yes	Yes
Baffle Board Thickness	25 mm	25 mm	25 mm	25 mm	25 mm	18 mm
Bi-Wiring Connection Capability	Yes	Yes	Yes	Yes	Yes	Yes
Dimensions (W x H x D)	364 x 1,102 x 397 mm	364 x 1,062 x 397 mm	186 x 500 x 257 mm	549 x 217 x 318 mm	500 x 186 x 257 mm	186 x 318 x 189 mm
Weight	32.5 kg	28 kg	11.5 kg	15 kg	11.5 kg	6 kg

Yamaha CINEMA DSP: A Dramatic Difference from



Hear Every Movie How the Director Wanted It to Be Heard.

Only Yamaha Digital Home Theater provides an audio experience that not only reproduces theater sound, but is actually superior to the sound in many theaters. The reason is CINEMA DSP, the world's most sophisticated home theater audio technology. Developed and refined over the past 15 years, it enables movies to be heard with the same degree of realism and impact that the directors and sound engineers intended. Not only is the surround sound field larger, deeper and richer, but it is not necessary to adjust speaker placement. CINEMA DSP brings out the full potential of all movie sound formats, including the newest ones, and even selects the correct format automatically. Extensive listening tests have confirmed that it is simply the best system for enjoying home theater sound.

CINEMA DSP Puts You Inside the Scene

With Dolby Digital and DTS Digital Surround, CINEMA DSP projects three sound fields into the home theater: a Presence sound field in the front and two Surround sound fields in the left rear and right rear. The Presence field supplies the dialogue, music and effects, while the Surround fields are independent stereo sound fields that create a large-scale surround environment, resulting in a powerfully realistic three-dimensional soundscape. And our newest Quad-Field system adds a rear center field for 6.1-Digital Digital Surround formats.

The success of CINEMA DSP is due as much to Yamaha's outstanding sound

field software as to the hardware (microprocessors, etc.). The overwhelming sense of realism is due to the fact that data from real sound fields is used (in this case, the actual dubbing theaters that movie sound technicians use).

This is why even though other systems may sound "good," you still have the sense of watching/listening to the scene, whereas with Tri-Field/Quad-Field CINEMA DSP, you feel as though you are actually INSIDE the scene. This results in sound with highly accurate localization, smooth movement, exceptional clarity and richness, and startlingly realistic presence.

Conventional 6.1-Channel Systems



Conventional 5.1-Channel/6.1-Channel Sound Field Imaging
Since all channels are reproduced independently, different sounds can be reproduced at the same time. This gives an added sense of localization. Stereo output for the surround channels enables a further widening of the audio imagery.

Going Beyond Conventional Multi-Channel Systems

Conventional 5.1 and 6.1 channel audio reproduction systems base their sound on Dolby Digital and DTS decoding, using matrix and steering technologies to create surround sound effects. Yamaha CINEMA DSP is much more advanced, actually creating richly realized independent sound fields that merge to envelop you in an unmatched surround sound experience. With dialogue, music and effects from the presence (front) and rear sound fields (plus rear center with 6.1-channel Quad-Field CINEMA DSP), it will seem as if the walls of your room have disappeared and you are in the middle of your own immense theater!

Other Systems.

Quad-Field CINEMA DSP



Rear Left
Surround/Effect
Sound Field

Rear Center
Surround/Effect
Sound Field

Rear Right
Surround/Effect
Sound Field

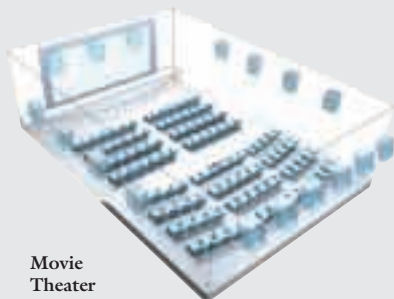
Presence (Front) Sound Field

Dialogue Effect Music

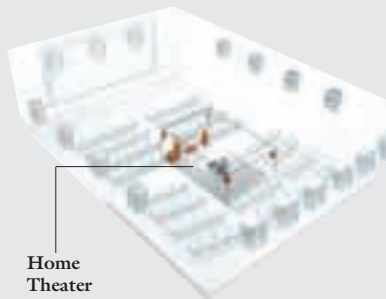
Tri-Field/Quad-Field CINEMA DSP Sound Field Imaging

When reproducing movie soundtracks encoded with the Dolby Digital EX or DTS-ES sound formats, Yamaha's Quad-Field CINEMA DSP processing handles the Presence (front), Left Surround, Right Surround and Rear Center sound fields independently. The 6.1-channel format brings movies to life with thrilling power, presence and sound positioning.

Overcoming the Differences Between Movie Theater and Home Theater



Movie Theater



Home Theater

The use of Dolby Digital or DTS formats enables audio decoding in a home theater according to the same principle as in a movie theater. But a home media room is, of course, far smaller than a movie theater, where the audience is surrounded by arrays of multiple speakers. Yet amazingly, Yamaha CINEMA DSP is able to compensate for the differences in facilities, acoustics, dimensions and other conditions between movie theaters and a home listening room, enabling the viewer to enjoy sound that gives the sensation of being as expansive as in a theater. That's what creating a home theater is all about.

Yamaha DSP: Digital Sound Field Processing

Digital Sound Field Processing is a technology developed by Yamaha in 1986 to measure the sound fields, or acoustic characteristics, of concert halls, jazz clubs and other performance spaces. Yamaha engineers invented a technique called Single Point Quad Miking that allowed them to make precise measurements of these spaces, and they went to many famous venues around the world, gathering data which they stored in custom-designed computer chips. Utilizing this data in even more powerful processing chips allows Yamaha DSP components, with four or more speakers, to recreate the original sound fields right in ordinary listening rooms.

Other manufacturers try to imitate these results with what they call Digital Signal Processing, but this is only their audio engineers' best guesses as to what the acoustic properties of concert halls or jazz clubs might be.



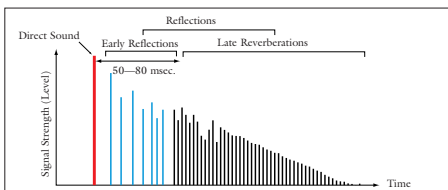
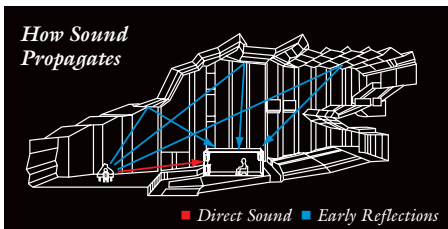
The world's most sophisticated audio microcomputer LSIs are placed with other components on high-density integrated circuit boards.

Digital Sound Field Processing was one important step in Yamaha's quest to bring listeners "Natural Sound." They could hear how their favorite singer or group would actually sound in New York's Bottom Line, for example, or even in a cathedral!



DSP Uses Actual Sound Field Data

Single Point Quad Miking array precisely measures the acoustic patterns of a sound space and is placed on the same plane or in proximity to each other to capture pulsed sounds, and their impulse responses are recorded.



CINEMA DSP Programs

One of the main advantages of CINEMA DSP is the large choice of sound field programs available, each designed to match a specific type of source. The basic program for movies is Enhanced, which greatly improves the sound of the surround fields. Yamaha then went further and developed four Movie Theater programs, which add an additional sound field component in the front to impart the excitement and grandeur of a first-class movie theater.

The "largest" of these sound fields is Spectacle, which recreates the open feeling of large-scale, epic motion pictures, while keeping the dialogue clear and focused. The Sci-Fi program is of course designed to reproduce all the complex, dynamic sounds of space/science fiction movies. Adventure and General programs are also included.

Unlike other home theater systems, the full benefits of CINEMA DSP can be enjoyed in almost any room. Performance is not dependent upon the acoustic character or quality of the room because all processing is done electronically by sophisticated microprocessors, not by using the rear or side walls to reflect sounds.

Yamaha has also introduced Dolby Digital/Matrix 6.1 and DTS-ES programs to take advantage of the extra rear center channel in 6.1-channel sound formats.



The Bottom Line

With an extremely wide floor, the 300-seat club has a realistically live sound field.

Blue: Early Reflection Red: Direct Sound



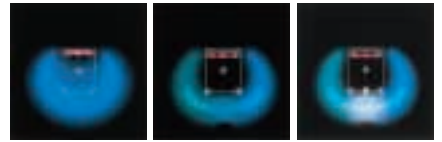
Imaginary Sound Source Distribution of Sound Field Data

EFECT TRIM 0 dB
INIT.DELAY 30 ms
ROOMSIZE 1.0
LIVENESS 5
S. DELAY 5 ms*
* Dolby Digital/DTS Input

Sound source distribution with listening position at center. Each circle represents an actual or reflected sound source, showing strength and position.

Enhanced

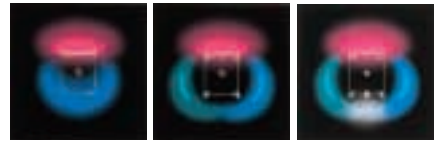
Main channels' decoded signals are output as is, and surround signals are processed by 4-channel DSP for large-scale surround.



Stereo Input (Dolby Pro-Logic/Enhanced) 5.1-Channel Input (Tri-Field CINEMA DSP) 6.1-Channel Input (Quad-Field CINEMA DSP)

Spectacle

This program transports the listener into the middle of the scene. In a very wide space, every sound, even large sounds, are heard clearly.



Stereo Input (70mm Spectacle) 5.1-Channel Input (Tri-Field CINEMA DSP) 6.1-Channel Input (Quad-Field CINEMA DSP)

Sci-Fi

Reproduces dialogue, music and effects of the latest SF high-tech movie soundtracks with excellent separation.



Stereo Input (70mm Sci-Fi) 5.1-Channel Input (Tri-Field CINEMA DSP) 6.1-Channel Input (Quad-Field CINEMA DSP)

Adventure

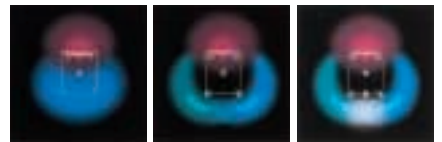
Designed for action movies, this program provides a powerful three-dimensional sound field with superb clarity.



Stereo Input (70mm Adventure) 5.1-Channel Input (Tri-Field CINEMA DSP) 6.1-Channel Input (Quad-Field CINEMA DSP)

General

Moderate reverberation results in clear dialogue, with a 3-dimensional sound field around and behind the screen for a soft, expansive sound.



Stereo Input (70mm General) 5.1-Channel Input (Tri-Field CINEMA DSP) 6.1-Channel Input (Quad-Field CINEMA DSP)

Auto Priority Input Terminal Selection and Auto Decoder Selection

Digital input terminals are provided to handle any kind of digital input.

Functions are programmed to select priority in order of coaxial digital, optical digital and analog when different digital formats are input from the same source. The sound decoder is also automatically selected and processed according to the combination of the format of input signals and the selected sound field programs.

DIGITAL ToP-ART

The Digital ToP-ART Concept

Digital ToP-ART (Total Purity Audio Reproduction Technology) is the name Yamaha has given to a design philosophy whose goal is to maximize digital quality while minimizing analog circuitry. The culmination of the best digital engineering and design possible today, it brings together several key elements to create the best-sounding, easiest-to-use A/V components available. In Yamaha Digital Home Theater Receivers, Digital ToP-ART can be divided into three categories.

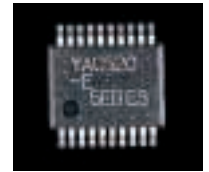
silent CINEMA

SILENT CINEMA and Virtual CINEMA DSP

The SILENT CINEMA mode allows private listening enjoyment of multi-channel music or movie sound, including Dolby Digital and DTS digital surround, through ordinary headphones. Virtual CINEMA DSP lets the listener enjoy the effects of CINEMA DSP surround sound without using rear speakers. This is useful for custom installations where some rooms don't have rear speakers. It can be used with the main/center/front effect speakers or even with just the two main left and right speakers.

1 High Performance Digital Circuitry

Positioned between the DSP circuitry and the power amplifier stage, this section makes a large contribution to the these component's outstanding audio performance. It exemplifies the Digital ToP-ART concept of minimizing analog circuitry while maximizing the quality of the digital circuitry. It is composed of a DAC block, a volume control block and the Processor Direct circuitry.



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

2 High Density CINEMA DSP Circuitry

With CINEMA DSP, Yamaha has raised digital sound field processing to the state of fine art. This proprietary technology truly makes movies come alive in your home theater, affording all the realism, excitement and nuance that the director intended to convey.



Yamaha designs and manufactures original chips.

3 High Quality, Wide Range Power Amplifier Section

Despite all the digital processing magic, the most basic function remains power amplification. Drawing on our long years of amplifier expertise and refusing to make any compromises on quality, we've given our amplifier section awesome capabilities. Each channel in these multi-channel amps delivers high power levels with virtually undetectable distortion.



High Precision FE Mica Capacitors and Metallic Mylar Film Capacitors with Copper Leads

Enjoy Movies Without Disturbing Others

SILENT CINEMA

Just connect a pair of headphones to your Digital Home Theater component and you can enjoy an accurate simulation of 5.1-channel surround sound in complete privacy. Yamaha's SILENT CINEMA technology makes it possible. You can even select from among the many CINEMA and HiFi DSP programs to vary the sound field. For late night listening when you don't want to disturb others, or if other noises are disturbing you, just slip on your headphones and enjoy your own private concert or movie.



SILENT CINEMA Sound Field Imaging

Surround Sound from Only Two Speakers.

Virtual CINEMA DSP

Virtual CINEMA DSP, like SILENT CINEMA, is based on HRTF (Head-Related Transfer Functions), and employs aggressive crosstalk cancellation technology. With just two left and right speakers, Virtual CINEMA DSP will create virtual center and rear left/right speakers, giving you the sense of being in a full-scale surround sound field. So even in rooms with no space for rear speakers, you can enjoy the full effects of Dolby Digital and DTS movie sound formats. If you have a center speaker, Virtual CINEMA DSP will provide the rear channel sound.



Virtual CINEMA DSP Sound Field Imaging

The RX-Z1: The World's Preeminent Home Theater Receiver



RX-Z1 Digital Home Theater Receiver



silent
CINEMA



Preeminent means “standing above others” and that’s exactly what this receiver does. From its extraordinary sound quality, to its wide array of surround programs and other advanced functions, to its unmatched CINEMA DSP technology, to its compatibility with every movie sound format, and even to its impressive design, this is a receiver that has no equal. Once again, Yamaha asserts its leadership in home theater — with the RX-Z1.

The DSP-AZ1* has received the HiVi Grand Prix 2001 (AV Center Category) awarded by Japan’s prestigious “HiVi” magazine.

* The DSP-AZ1 provides the same performance and features as the RX-Z1 except for tuner functions.

World's Most Powerful Audio LSIs

The RX-Z1 introduces for the first time in a consumer-use audio product, a 44-bit DSP LSI, the Yamaha YSS-910. This powerful microprocessor offers extremely precise calculation of signal data — each additional bit provides twice the resolution and half the distortion — meaning it can resolve subtle audio nuances that bring the listening experience closer to reality than to reproduction. Two YSS-910s are used, one for processing sound fields, the other for SILENT CINEMA, Virtual CINEMA DSP and system configurations.

Decoding of all Dolby and DTS movie sound formats is handled by advanced circuitry which includes the powerful and accurate YSS-938 32-bit LSI.

High Quality DACs

The digital-to-analog converters play an important role in determining sound quality. For all of the RX-Z1’s 10 DACs, Yamaha has chosen the PCM1704

manufactured by the high-end audio expert, Burr-Brown. This is a high-precision 192kHz/24-bit BiCMOS Sign-Magnitude DAC systems with ultra-low distortion of 0.0008% and S/N ratio of 120dB. It offers superior low level linearity, with excellent full-scale performance under varying operating conditions. Needless to say, it realizes the full potential of Dolby Digital and DTS sound. It’s also ideal for two-channel stereo, providing outstanding separation and accurate musical delineation. Its 192kHz/24-bit decoding capability, makes it compatible with the latest (and future) digital audio sources.

Digitally Regulated Volume Control

Yamaha combines the best features of digital and analog volume controls with a high precision digital device that controls an analog signal. This provides two benefits. First, a digitally controlled device is more accurate for balancing levels

between channels and offers much finer control than an analog device. The wide control range is from 0dB to -99dB, with extremely accurate 0.5dB steps throughout the range. Second, an analog volume control permits good signal resolution of low signal levels.

Processor Direct Switching

A Processor Direct Switch that provides a direct signal connection between the processor board and the power amplifier section. This shortens the signal path, feeding the pure, robust signal directly to the outputs for cleaner, more efficient operation and higher quality sound.

High Power and Front Effect Coupler

The RX-Z1 provides all the power a first-class home theater needs: 130W x 6 and 45W x 2 (front effect). It also has a Front Effect Coupler, so you can add another amp or use the output as is for stereo sound in Zone 2 (a second room).

Tri-Field and Quad-Field CINEMA DSP

Tri-Field CINEMA DSP projects three sound fields into the home theater, providing a powerfully realistic three-dimensional soundscape with 5.1-channel sound formats, including DTS 96/24. Quad-Field CINEMA DSP adds a rear center sound field, allowing enjoyment of 6.1-channel movie sound formats like Dolby Digital EX and DTS-ES.

Auto Priority Input Terminal Selection and Auto Decoder Selection

The RX-Z1 input terminals will handle any kind of input signal. According to the type of signal, terminals are selected in priority order of RF (AC-3), coaxial digital, optical digital and analog. Furthermore, according to the type of movie sound format, the proper decoder and surround sound program are automatically selected. For example, if the Movie Theater Sci-Fi program is selected and the input is a DTS-ES Discrete 6.1 signal, the DTS-ES Discrete 6.1 decoder is automatically engaged and the program switches to Movie Theater DTS-ES Discrete 6.1 Sci-Fi.

Total Convenience

A comprehensive On-Screen Display with a convenient Set Menu lets you select and adjust a wide variety of functions. It includes a speaker display that makes it easier to balance speaker output in the Speaker Test Mode. You can select each of the DSP programs with the remote control so you can compare the effects from your listening position.

Custom Installation Compatibility

As befits a high performance home



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

theater receiver, the RX-Z1 is ideal for use in custom installations. It is equipped with an RS-232C interface that allows two-way communication between the amplifier and a touch-pad controller. It provides interactive control functions that are more versatile than that of an ordinary remote control, and has Zone 2 and +12V trigger outputs that enables multi-room control capability.

Increased Number of Input/Output Terminals

The rear panel provides independent LD, CD and DVD input terminals, as well as increased digital input terminals for future digital broadcasting such as Digital TV, Cable TV and Satellite Digital TV. All digital inputs are designed to be compatible with the 96kHz format. All A/V input terminals are equipped with S-video terminals. There are also two independent video monitor output terminals, so the unit can be connected to both a TV display and projector (projection TV) simultaneously. In addition, the RX-Z1 provides RCA pin jacks for switching to component video to

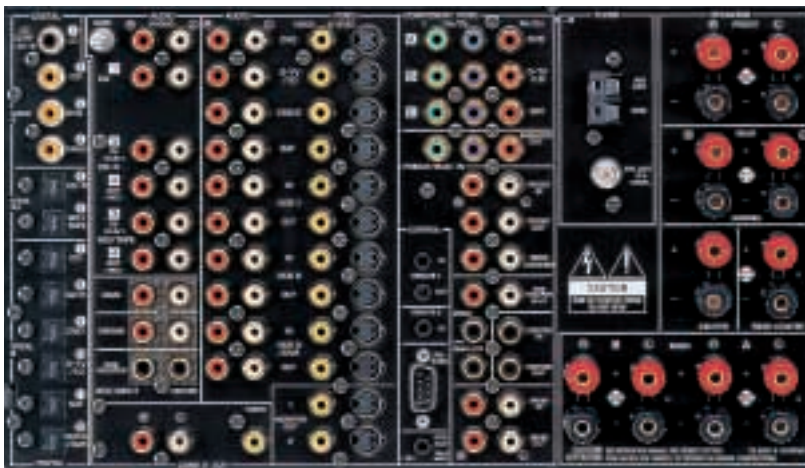
achieve higher picture quality. The changeover device for the component video signal uses reliable relay connectors and does not go through the amplifier section in order to avoid any deterioration of picture quality.

Mono/Split Subwoofer Output Terminals

New audio formats have LFE (Low Frequency Effect) added to them, an important factor in adequate reproduction of low frequencies. The RX-Z1 has Mono and Split output terminals, and the low frequencies of channels programmed by the speaker mode programming function can be output from the subwoofer. Subwoofer level is easily adjusted with a test tone.

Rec Out Selector

The audio or video source can be recorded on VCR 1, 2 or 3 or CD-R or MD/Tape. By using the Rec Out Selector, a popular Yamaha feature, users can record a different source from the one they are listening to.



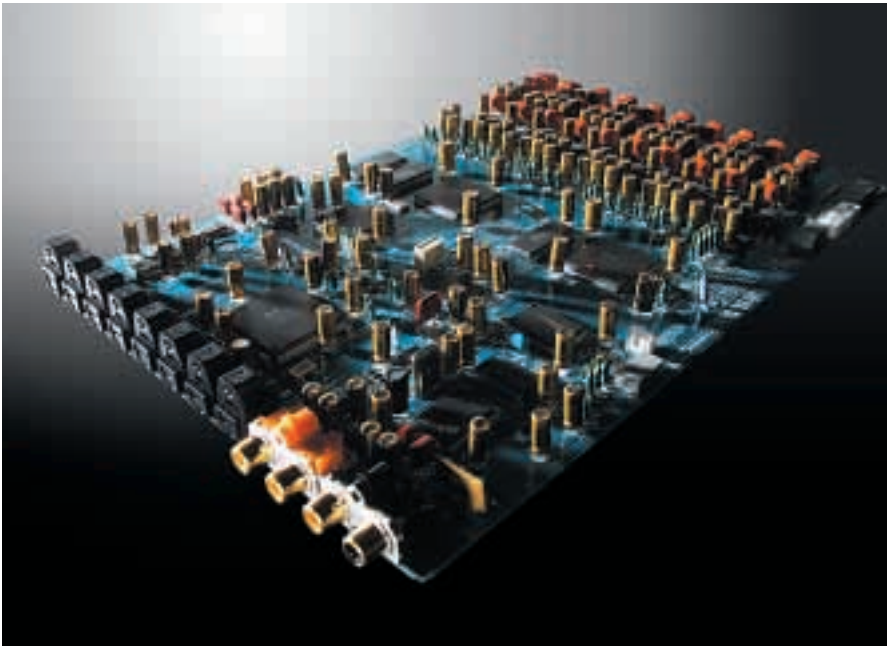
RX-Z1 Extensive System Connections

In addition to the input and output terminals shown in the chart, the RX-Z1 provides pre-main, center and front effect couplers, and rear and rear center channel preout terminals, 6-channel external decoder input terminals, subwoofer outputs (mono and split), and Zone 2 out, RS-232C and +12V trigger out terminals for custom installation. All speaker terminals are 2-way binding type (banana plug compatible).

RX-Z1 Inputs and Outputs

	Analog		Digital				Video					
	In	Out	Coaxial In	Coaxial Out	Optical In	Optical Out	Composite In	Composite Out	S Video In	S Video Out	Component Video In	Component Video Out
PHONO	■											
CD	■		■		■	■						
CD-R	■	■			■	■						
MD/TAPE	■	■			■	■						
DVD	■		■		■	■	■					■
D-TV/LD	■		■		■	■	■					■
LD			■									
CABLE	■		■		■	■						■
SAT	■		■		■	■						■
VCR 1	■	■			■	■	■	■	■	■		■
VCR 2	■	■			■	■	■	■	■	■		■
VCR 3/DVR	■	■			■	■	■	■	■	■		■
VIDEO AUX	■		■		■	■	■					■
MONITOR OUT												■
ZONE 2 OUT		■										■

Fixed (■), Fixed and Assignable (■), and Assignable (■) Terminals.



The elegantly designed, compact processing board ensures optimum performance for multi-channel audio sources. It has a fully shielded cabinet to prevent interference.

High Quality, Wide-Range Power Amplifier Section

The RX-Z1 is designed to deliver the full impact and dynamism of movies by supplying generous amounts of power (including bass power!). That's why despite all the digital processing magic, it is first and foremost a powerful receiver. By drawing on our long years of amplifier expertise (we've created some of the world's legendary power amps and preamps) and refusing to make any compromises on quality, we've endowed the RX-Z1 with awesome capabilities. It incorporates a powerful 8-channel amplifier with high dynamic power and sophisticated circuitry like linear damping.

Total Low-Impedance Design

All current signal paths, from the power supply to the power amplifier to the speaker drive circuits, utilize a low-impedance design. This improves the separation characteristics among multi-channels and allows the use of a wider variety of low-impedance speakers.

8-Channel High Power, Discrete Amplifier Configuration

The RX-Z1 will deliver as much as 130W of power at a negligible 0.015% distortion to each of six channels (two main, two rear, one center and one rear center). Plus 45W to each of the two front effect channels.

This is more than enough to fill even the largest rooms with vibrant music and Richter-scale sound effects.

High Dynamic Power Capability

The RX-Z1 is capable of delivering large amounts of reserve power for accurate reproduction of the high energy peaks that are especially prevalent in digital audio sources. This emphasizes the music's dynamic qualities and provides a sharper sound image.

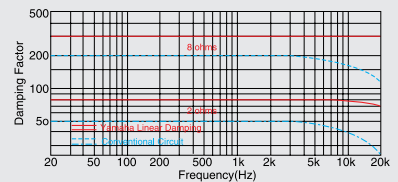
Linear Damping

Level variations due to high amp impedance tend to reduce an amplifier's damping factor, and frequency variations cause it to fluctuate. This circuit cancels the effect of these variations, maintaining a high, stable damping factor, for superior articulation of all sounds and better frequency response.

Anti-Vibration, Anti-Resonance Chassis and 1.6mm (5/8") ToP-ART Base

Supporting the heavy heat sinks, transformer, and circuit board is Yamaha's 1.6mm (5/8") ToP-ART base, which has exceptional anti-

Damping Factor Characteristics



Linear Damping

Yamaha's Linear Damping maintains a high, stable damping factor even at frequencies from 10 to 20 kHz, where it generally tends to fall off. The result is superior articulation of all sounds.

RX-Z1 Surround Programs: 42 Surround Programs (62 Variations)

HiFi DSP Programs	Variations
HALL 1	3
HALL 2	3
CHURCH	3
JAZZ CLUB	3
ROCK CONCERT	3
ENTERTAINMENT	3
Program Subtotal	18

CINEMA DSP Programs	Variations
ENTERTAINMENT	1
CONCERT VIDEO 1	1
CONCERT VIDEO 2	1
TV THEATER	1
MOVIE THEATER 1	2
MOVIE THEATER 2	2
ENHANCED	1
Program Subtotal	12
Surround Formats	Variations

- Dolby Digital 1
- Dolby Digital/ EX 1
- DTS Digital Surround 1
- DTS 96/24 1
- DTS-ES Matrix 6.1 1
- DTS 96/24 ES (6.1) 1
- DTS-ES Discrete 6.1 1
- Dolby Pro Logic 1
- Dolby Pro Logic II Music 1
- Dolby Pro Logic II Movie 1
- DTS Neo:6 Music 1
- DTS Neo:6 Cinema 1

Program Subtotal	12	12
Program Total	42	62

- Remarks**
- HiFi DSP Programs
 - CINEMA DSP
 - Quad-Field CINEMA DSP Capable
 - A/V Programs
 - Tri-Field CINEMA DSP Capable

• All DSP programs are available in the SILENT CINEMA and Virtual CINEMA DSP modes.



Ultra-heavy-duty chassis with two large, anti-resonance, aluminum-extruded, naturally cooled anodized heat sinks.

resonance and damping characteristics. Beneath this base is the bottom of amplifier, part of the heavy chassis which is also designed for maximum vibration damping.

Naturally Cooled Anodized Heat Sinks

The two large, anti-resonance, aluminum-extruded, naturally cooled heat sinks undergo black anodization processing to ensure maximum heat dissipation efficiency. The power block is equipped with a fan, but it is only used for extreme heat build-up and is not activated during normal operation, preventing even the slightest unwanted noise.

Bass Extension

Turn the bass extension switch on to provide +6dB boost to the main speakers' low end centered at 60Hz. Frequencies under 50Hz will be cut by 12dB/oct. to prevent overdrive.

Every Internal Component Is a Top Performer — And It Makes a Difference!

In order to realize the goals of massive power and superlative sound quality, Yamaha technicians completely re-evaluated all the parts used in previous receivers. As a result, many were replaced with more expensive or custom-designed units. These include extra-large custom-made block electrolytic capacitors, a massive, low-impedance power supply transformer, and wire-wrapped connectors that provide much greater signal reliability.

Other Notable Features

- 6-Channel External Decoder Input Terminals for Future Sound Formats
- 40-Station AM/FM Random Access Preset Tuning
- Auto Preset Tuning (FM Station Memory and Preset Editing)



(1) Extra-Large Custom-Made Block Electrolytic Capacitors, (2) Wire-Wrapped Connectors, (3) FE Mica Capacitors and Polypropylene Film Capacitors Using Copper Foil, (4) High Performance Power Transistors, (5) High Sound Quality Schottky Barrier Diodes, (6) Twin Direct Signal Path Speaker Relays and (7) Inlet-Type Power Terminal



Intelligent Remote Unit

The Smartest and Friendliest Remote Control You've Ever Used.

- Large Dynamic LCD Touchscreen with High-Resolution Display
- Multi-Command and Learning Capability with Large Capacity Flash Memory
- Preprogrammed Codes for a Wide Variety of A/V Connections
- Edit Your Own Macros at the Touch of a Button
- Easy Customization via Your PC: RS-232C Interface and Edit Programs

Specifications

- Memory: 2 MB non-volatile flash memory (retains commands when batteries aren't present) 512 KB SRAM
- Dimensions (W x H x D): 93 x 136 x 38 mm; 3-11/16" x 5-3/8" x 1-1/2"
- Weight: 180 g; 6.3 oz. (without batteries)



Best Receiver Choice for High-Performance Home Theater Systems.



RX-V3200 Digital Home Theater Receiver



ToP-of-the-Line Receiver for Ultra-High-Performance Home Theater Systems. Superior Features Include Digital ToP-ART Design Concept, Quad-Field CINEMA DSP, 32 surround programs (52 variations), SILENT CINEMA, Extensive System Connections and Custom Installation Capability. Compatible with Newest Dolby Pro Logic II, DTS-ES Discrete 6.1 and DTS NEO:6 6.1-Channel Movie Sound Formats.

96kHz/24-bit DACs for All 9 Channels*

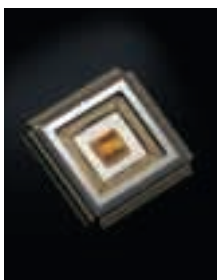
The digital-to-analog converters play an important role in determining sound quality. For all of the RX-V3200's 9 DACs, Yamaha has chosen a high-precision 96kHz/24-bit DAC with ultra-low distortion and high S/N ratio. They deliver excellent low level linearity and help realize the full potential of Dolby Digital and DTS sound. The 96kHz/24-bit decoding capability, also means compatibility with the latest (and future) digital audio sources.

* The 9 channels consist of Main L/R, Center, Rear L/R, Rear Center, Front Effect L/R and Subwoofer (LFE) channels. Front effect channel signals are mixed with main channel signals to achieve more precise separation of dialogue, music and effects on the front sound stage.

Digitally Regulated Volume Control

Yamaha combines the best features of digital and analog volume controls with a high precision digital device that controls an analog signal. This provides two benefits. First, a digitally controlled

device (Yamaha original YAC-520 LSI) is more accurate for balancing levels between channels and offers much finer control than an analog device. The wide control range is from 0dB to -99dB with extremely accurate 0.5dB steps throughout the entire range. This means that greater attenuation is possible, with precision even at low volume levels. Second, an analog volume control permits good signal resolution of very low signal levels. This is important for



Yamaha's Exclusive YSS-938 32-Bit Floating Point Quantization LSI

This powerful LSI performs Dolby Digital and DTS decoding with extreme accuracy, as well as all digital sound field processing, capabilities that previously required two or more chips. It also outperforms other chips in the precise synchronization of images and sound.



Finest Parts Used Throughout

High- f_T Power Transistors, Thick PC Board Wiring with 1.6mm ϕ Copper Jumper Cables, etc.

Optimum Space Utilization

The use of highly integrated LSIs allows an interior design that maximizes power and sound quality by positioning all the digital processors and related circuitry in one small area. This leaves most of the space open for the power amplifier components: transformers, capacitors, heat sink and so on. This means that these parts can be much larger than usual for greater power, that they can be separated for minimum chance of interference, and that circuits can be arranged in straight lines for maximum signal purity.

Amazing Range of Capabilities.

subtle signals that are often masked by louder signals and are not resolved as clearly.

Processor Direct Switching

The RX-V3200 has a Processor Direct Switch that provides a direct signal connection between the processor board and the power amplifier section. This shortens the signal path, feeding the pure, robust signal directly to the outputs for cleaner, more efficient operation and higher quality sound.

Total Low-Impedance Design

All current signal paths, from the power supply to the power amplifier to the speaker drive circuits, utilize a low-impedance design. This improves the separation characteristics among the channels and allows the use of a wider variety of low-impedance speakers.

Tri-Field and Quad-Field CINEMA DSP

Tri-Field CINEMA DSP projects three sound fields into the home theater: a Presence sound field in the front and two Surround sound fields in the left rear and right rear, resulting in a powerfully realistic three-dimensional soundscape. And now Yamaha also offers Quad-Field CINEMA DSP. It adds an additional rear center sound field to the Tri-Field system,



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

in order to enjoy the new 6.1-channel formats, Dolby Digital EX and DTS-ES.

SILENT CINEMA and Virtual CINEMA DSP

The SILENT CINEMA mode gives you private listening enjoyment of multi-channel music or movie sound, including Dolby Digital and DTS surround, through ordinary headphones. It's automatically selected when the headphones are plugged in. Virtual CINEMA DSP lets you enjoy the effects of CINEMA DSP surround sound without using rear speakers (handy for use in custom installations where some rooms don't have rear speakers). It can be used with the main/center/front effect speakers or even with just the two main left and right speakers.

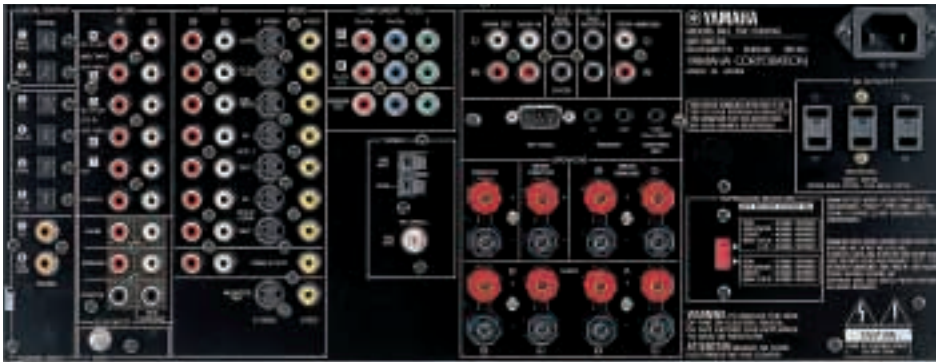
Custom Installation Compatibility

As befits a high performance home theater receiver, the RX-V3200 is ideal for use in custom installations. It is equipped with an RS-232C interface that

allows two-way communication between the amplifier and a touch-pad controller. It provides interactive control functions that are more versatile than that of an ordinary remote control, and has Zone 2 output that enables multi-room control capability.

Other Notable Features

- Direct-Access Remote Control Unit: Easy to Understand and Operate
- A/V Rec Out Selector
- On-Screen Display
- Convenient "Set Menu"
- 6-Channel External Decoder Input for Future Sound Formats
- Speaker Test Mode
- High Dynamic Power, Low Impedance Drive Capability
- Linear Damping
- Bass Extension
- Sleep Timer



RX-V3200 Extensive System Connections

There are five optical and two coaxial inputs, two optical outputs (fixed and assignable, except Optical Video Aux input) and two component video inputs (assignable), including a front panel optical input for games and portable DVD players. In addition to 6-channel external decoder input terminals, there are pre-main coupler, center, rear and rear center preout terminals, and subwoofer output terminals (mono x 2) with low pass filters, Zone 2 out and RS-232C terminal for custom installation, and speaker impedance selector. All speaker terminals are 2-way binding-post type (banana-plug compatible). The inlet-type power cable is separate, rather than attached to the unit. It is a thicker type than usual, for higher power handling capacity.

RX-V3200 Inputs and Outputs

	Analog		Digital				Video					
	In	Out	Coaxial		Optical		Composite		S Video		Component Video	
PHONO	■											
CD	■		■		■	■						
CD-R	■	■	■		■	■						
MD/TAPE	■	■	■		■	■						
DVD	■		■		■	■			■			■
D-TV/LD	■		■		■	■			■			■
CBL/SAT	■		■		■	■			■			■
VCR 1	■	■	■		■	■			■			■
VCR 2/DVR	■	■	■		■	■			■			■
VIDEO AUX	■		■		■	■			■			■
MONITOR OUT												■*
ZONE 2 OUT		■										

Fixed Terminals (■), Fixed and Assignable Terminals (■), and Assignable Terminals (■)

Fixed and Assignable Terminals

Only Yamaha offers terminals that can be either independently assigned to channels or defaulted to fixed settings (Changeable in Set Menu).

*HDTV Compatible Component Video Out

Frequency response of Component Video Out signal is DC – 60MHz, making it compatible with HDTV monitors.

Advanced Control and Superb Quality in a Receiver That Makes Any System Top Class.

This high performance 6-channel receiver (100W x 6) brings outstanding sound quality and functionality to any home theater system. Featuring Quad-Field CINEMA DSP with a choice of 25 surround sound programs (45 variations), it makes any room sound sensational. Its processing power comes from Yamaha's newest 32-bit LSI, the YSS-938, and it is compatible with all the latest movie sound formats.

DIGITAL
TOP·ART



RX-V2200 Digital Home Theater Receiver



Quad-Field CINEMA DSP and Wide Choice of Surround Programs

This receiver features Yamaha's newest surround sound format, Quad-Field CINEMA DSP, which envelops you in four independently produced sound fields. The fourth is a rear-center sound field that adds depth and power to the music and effects, and sound movement across the rear sound stage. You'll also have the freedom to choose among 25 surround programs with a total of 45 variations, for a myriad of listening possibilities with music and movies.

Extensive Movie Compatibility

You've probably heard of the two most popular movie sound formats, Dolby Digital and DTS Digital Surround, but the Dolby and DTS companies are continually

developing new ones. They've taken a step past 5.1-channel sound and developed 6.1-channel sound (six channels plus a bass channel) and released the Dolby Pro Logic II, DTS-ES Discrete 6.1, DTS-ES Matrix 6.1 and DTS Neo:6 formats. Choosing the right format is not a problem, though, because the RX-V2200 is compatible with all of them and automatically selects the right one.

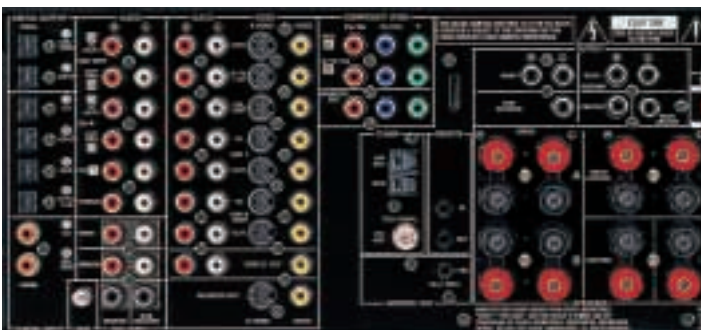
Other Notable Features

- 96kHz/24-Bit DACs for All Channels
- Digitally Regulated Volume Control for All Channels (Yamaha Original YAC-520 LSI)
- Processor Direct Switching
- SILENT CINEMA
- Virtual CINEMA DSP
- Auto Surround Decoder and Auto Priority Input Terminal Selection



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

- A/V Rec Out Selector
- On-Screen Display
- High Dynamic Power, Low Impedance Drive Capability
- Linear Damping
- Convenient "Set Menu"
- Bass Extension
- 40-Station Preset Tuning
- Direct-Access (Macro-Command, Learning and Preset Capable) Remote Control Unit



RX-V2200 Inputs and Outputs

	Analog		Digital				Video					
	In	Out	Coaxial		Optical		Composite		S Video		Component Video	
			In	Out	In	Out	In	Out	In	Out	In	Out
PHONO	■											
CD			■		■	■						
CD-R		■			■	■						
MD/TAPE		■			■	■						
DVD			■		■	■			■			■
D-TV/LD					■	■		■		■		■
CBL/SAT			■									■
VCR 1		■			■	■		■		■		■
VCR 2/DVR		■			■	■		■		■		■
VIDEO AUX		■			■	■		■		■		■
MONITOR OUT												■
ZONE 2 OUT												■

■ Component Video Out is compatible with HDTV.
Fixed (■), Fixed and Assignable (■), and Assignable (■) Terminals

RX-V2200 Extensive System Connections

In addition to the input and output terminals shown in the chart, the RX-V2200 provides main/center/rear/rear center preout terminals, 6-channel external decoder input terminals, a subwoofer output terminal and front panel aux input terminals including optical digital and S-Video. All speaker terminals are 2-way binding post type (banana plug compatible). The Inlet-Type Power Cable is separate, rather than attached to the unit. It is a thicker type than usual, for higher power handling capacity.



The Leader in Its Class for Sound Quality and Overall Versatility.

The RX-V1200 is a versatile 6-channel receiver (80W x 6) designed to serve as the core component of any high quality home theater system. High sound quality is ensured by the many sophisticated parts and circuits that Yamaha calls Digital ToP-ART amplifier design. Quad-Field CINEMA DSP provides exciting 6.1-channel surround sound, with 24 surround programs (44 variations) and SILENT CINEMA for headphone listening.

DIGITAL
ToP-ART



RX-V1200 Digital Home Theater Receiver



Powerful Quad-Field 6.1-Channel Sound

The RX-V1200 offers Yamaha's exclusive Quad Field CINEMA DSP technology, which delivers an awe-inspiring 6.1-channels of sound: main, center, rear and rear center plus subwoofer output. What's more, the amplifier keeps power in reserve for the sonic peaks in music or sound effects, thanks to the use of High Dynamic Power, Low-Impedance Drive and Linear Damping technology.

YSS-938 32-Bit LSI

This Yamaha-developed, extremely powerful LSI performs all types of Dolby Digital and DTS decoding with precision accuracy, as well as all digital sound field processing, capabilities that previously required two or more chips.

Digitally Regulated Volume Control

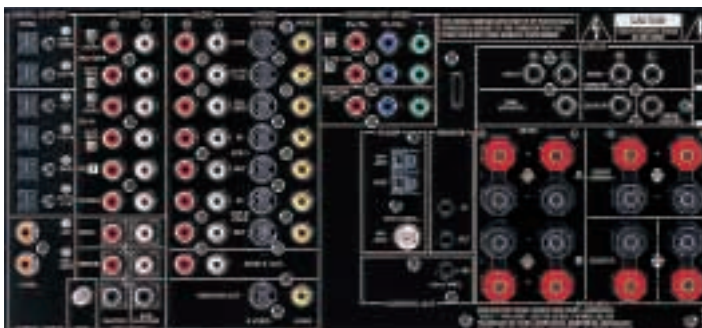
Yamaha combines the best features of digital and analog volume controls with a high precision digital device (Yamaha Original YAC-520 LSI) that controls an analog signal. This provides two benefits. First, a digitally controlled device is more accurate for balancing levels between channels and offers much finer control than an analog device. The wide control range is from 0dB to -99dB, with extremely accurate 0.5dB steps throughout the entire range. This wide range and narrow steps mean that greater attenuation is possible, with precision even at low volume levels. Second, an analog volume control permits good signal resolution of low signal levels.



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

Other Notable Features

- 96kHz/24-Bit DACs for All Channels
- Auto Surround Decoder and Auto Priority Input Terminal Selection
- SILENT CINEMA
- Virtual CINEMA DSP
- Bass Extension
- 40-Station Preset Tuning
- Learning-Capable and Preset Remote Control Unit



RX-V1200 Inputs and Outputs

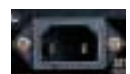
	Analog		Digital				Video							
	In	Out	Coaxial		Optical		Composite		S Video		Component Video			
			In	Out	In	Out	In	Out	In	Out	In	Out		
PHONO	■													
CD	■		■		■									
CD-R	■	■			■	■								
MD/TAPE	■	■												
DVD	■		■		■								■	
D-TV/LD					■	■								■
CBL/SAT	■		■		■									
VCR 1	■	■			■									■
VCR 2/DVR	■	■			■									■
VIDEO AUX	■		■		■									■
MONITOR OUT														■
ZONE 2 OUT		■												

■ Component Video Out is compatible with HDTV.

Fixed (■), Fixed and Assignable (■), and Assignable (■) Terminals

RX-V1200 Extensive System Connections

In addition to the input and output terminals shown in the chart, the RX-V1200 provides main/center/rear/rear center preout terminals, 6-channel external decoder input terminals, a subwoofer output terminal and front panel aux input terminals including optical digital and S-Video. All speaker terminals are 2-way binding post type (banana plug compatible). The Inlet-Type Power Cable is separate, rather than attached to the unit. It is a thicker type than usual, for higher power handling capacity.



6.1-Channel Sound Enjoyment with Superb Sound Quality.

This extremely sophisticated 6.1-channel Home Theater Receiver incorporates the best of Yamaha's digital sound field processing and audio technologies. It will decode all currently available movie sound formats and provides 21 surround programs with 41 variations for outstanding home theater entertainment.

DIGITAL
TOP·ART



RX-V730 Digital Home Theater Receiver



Yamaha's Exclusive YSS-938 32-Bit Floating Point Quantization LSI for Advanced Decoding

The decoding circuitry performs Dolby Pro Logic II, Dolby Digital, Dolby Digital EX, DTS and DTS "ES-Compatible" decoding with extreme accuracy, as well as all digital sound field processing. It also outperforms other systems in the precise synchronization of images and sound. Its low 3V power consumption minimizes digital noise.

Enjoy the Marvels of Tri-Field and Quad-Field CINEMA DSP

Tri-Field CINEMA DSP projects three sound fields into the home theater, resulting in a powerfully realistic three-dimensional soundscape for 5.1-channel sound. Quad-Field CINEMA DSP adds an additional rear center sound field, allowing enjoyment of 6.1-channel movie sound formats.

Finest Parts for Highest Quality

The RX-V730 uses exceptionally high quality parts for this class of receiver, including extra-large, low-impedance transformer, extra-large block electrolytic capacitors, anti-resonance, Aluminum-extruded heat sink, twin direct signal path speaker relays for stable signal path and speaker protection, and high performance mica and film capacitors.

Wide Choice of Surround Sound Programs

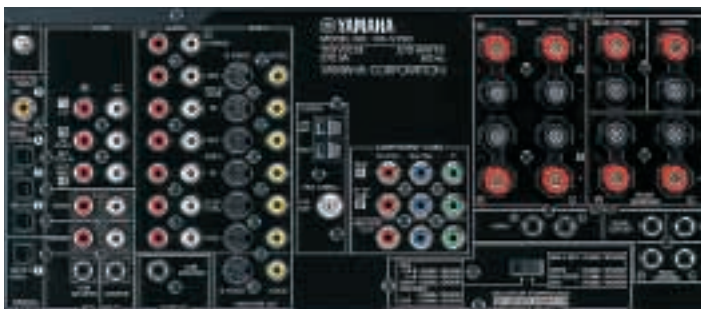
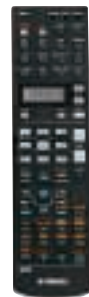
You can select from 21 surround programs which include a total of 41 variations. What's more, each of these programs has various parameters that can be "fine-tuned" to bring out the best of a CD or movie soundtrack. No other brands come close to Yamaha in offering this degree of acoustic control.

On-Screen Display

An on-screen display with an extensive menu makes operation quick and easy. You can fine-tune the sound to achieve just the effect you want by adjusting settings for speakers, Dolby Digital, DTS, center channel delay and much more. Have fun experimenting!

Other Notable Features

- Digital ToP·ART Design
- 96kHz/24-Bit DACs
- 6-Channel Discrete Amplification
- Digitally Regulated Volume Control (Yamaha Original YSS-520 LSI)
- SILENT CINEMA
- New Concert Video Program
- DVD-Audio/SACD Ready
- Convenient "Set Menu"
- Preset Remote Control Unit



RX-V730 Inputs and Outputs

	Analog		Digital				Video					
	In	Out	Coaxial In	Coaxial Out	Optical In	Optical Out	Composite In	Composite Out	S Video In	S Video Out	Component Video In	Component Video Out
PHONO	■				■	■						
CD	■		■		■	■						
MD/CD-R		■			■	■						
DVD	■		■		■	■			■			■
D-TV/CBL	■		■		■	■			■			■
VCR 1	■	■	■		■	■			■			■
VCR 2/DVR	■	■	■		■	■			■			■
VIDEO AUX	■		■		■	■			■			■
MONITOR OUT									■			■

■ Component Video Out is compatible with HDTV.

■ Fixed (■), Fixed and Assignable (■), and Assignable (■) Terminals

RX-V730 Extensive System Connections

In addition to the input and output terminals shown in the chart, the RX-V730 provides main/center/rear/rear center preout terminals, 6-channel external decoder input terminals, a subwoofer output terminal and front panel video aux input terminals including optical digital and S-Video. All speaker terminals are 2-way binding post type (banana plug compatible).

6.1-Channel Sound Enjoyment and Large Choice of Surround Programs.

Discover the new dimensions of listening pleasure provided by the world's most sophisticated DSP technology. With high power, superb sound quality, 21 surround programs (41 variations) and numerous control functions, this is a truly outstanding receiver.

DIGITAL
ToP·ART



RX-V630 Digital Home Theater Receiver



Digital ToP-ART Design

Digital ToP-ART is Yamaha's combination of advanced digital engineering and circuit design that maximizes digital quality and signal purity. It includes a high performance digital circuit, high density CINEMA DSP circuitry, and a high quality power amplifier, ensuring that the receiver will deliver superb sound quality and bring out the full potential of Yamaha's amazing CINEMA DSP technology. Additionally, the RX-V630 uses a Digitally Regulated Volume Control that offers wide and precise control with excellent resolution at even very low signal levels.

Enjoy Movies at Their Best

The RX-V630 is fully compatible with all the latest movie sound formats. It offers both Tri-Field and Quad-Field CINEMA

DSP, so you can experience the dynamic realism of both 5.1-channel and 6.1-channel surround sound.

Powerful Six-Channel Output

The two main channels, two rear channels, center and rear center channel all deliver 75 watts of power with virtually no distortion. This discrete configuration and equal power distribution maximizes the surround sound effect.

SILENT CINEMA and Virtual CINEMA DSP

The SILENT CINEMA mode brings you the surround sound feeling of multi-channel music or movie sources through ordinary headphones. Virtual CINEMA DSP lets you enjoy the effects of CINEMA DSP surround sound without using rear speakers.

Other Notable Features

- Powerful 32-Bit Floating-Point Quantization Original LSI (YSS-938)
- 96kHz/24-Bit DACs
- Digitally Regulated Volume Control (Yamaha Original YAC-520 LSI)
- Auto Surround Decoder and Auto Priority Input Terminal Selection
- SILENT CINEMA
- Virtual CINEMA DSP
- New Concert Video Program
- High Dynamic Power, Low Impedance Drive Capability
- Linear Damping Circuit Prevents Unwanted Speaker Cone Movement
- DVD-Audio/SACD Ready
- 40-Station Preset Tuning
- Auto Preset Tuning
- Preset Remote Control Unit



RX-V630 Inputs and Outputs

	Analog		Digital				Video					
			Coaxial		Optical		Composite		S Video		Component Video	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
CD	■		■		■							
MD/CD-R	■	■	■		■	■						
DVD			■		■				■			■
D-TV/CBL	■		■		■		■		■			■
VCR 1	■	■	■		■		■		■		■	■
VCR 2/DVR	■	■	■		■		■		■		■	■
VIDEO AUX			■		■		■		■			■
MONITOR OUT									■		■	■

■ Component Video Out is compatible with HDTV.

Fixed (■), Fixed and Assignable (■), and Assignable (■) Terminals

RX-V630 Extensive System Connections

In addition to the input and output terminals shown in the chart, the RX-V630 provides main/center/rear/rear center preout terminals, 6-channel external decoder input terminals, a subwoofer output terminal and front panel aux input terminals including optical digital and S-Video. All speaker terminals are 2-way binding post type (banana plug compatible).

High Sound Quality A/V Center Allows Enjoyment of the Latest Movie Sound Formats.

The RX-V530's wide range of surround sound programs let you match the sound field to the type of movie or other program you're watching. 96kHz/24-bit D/A converters for all channels and other advanced Yamaha technology provide high performance to make this receiver a superb value.



RX-V530 Digital Home Theater Receiver



Vary Your Listening Enjoyment

With 21 CINEMA DSP and HiFi DSP surround programs (41 variations) to choose from, including a brand new Concert Video program, you'll be able to optimize your audio output for every source and try some interesting combinations. Decoders for various Dolby and DTS sound formats are built-in, so you can enjoy many movie sound formats, as well as Dolby Pro Logic II. Quad-Field CINEMA DSP allows enjoyment of Dolby Digital EX and DTS-ES Matrix 6.1 sound formats in the Phantom mode.

High Power, High Quality

Supplying equal power to all five channels (two main, two rear effect and center) is important for achieving optimum surround sound ambience, which is just what you'll get, thanks to the hefty 75W

power output for each channel. 96kHz/24-bit D/A converters for all channels, a 32-bit LSI and other high-grade digital technology ensure that sound quality is excellent.

"Set Menu" Makes Operation Easy

Yamaha's extensive "Set Menu" makes operation quick and easy. You can fine-tune the sound to achieve just the effect you want by adjusting settings for speakers, Dolby Digital, DTS, center channel speaker delay, input/output terminal assignment and much more. Have fun experimenting!

Finest Parts for Highest Quality

The RX-V530 uses exceptionally high quality parts for this class of receiver, including twin direct speaker path relays and high performance mica and film capacitors.

Other Notable Features

- Powerful 32-Bit Floating-Point Quantization Original LSI (YSS-938)
- 96kHz/24-Bit DACs
- Digitally Regulated Volume Control
- Auto Surround Decoder and Auto Priority Input Terminal Selection
- Speaker Test Mode
- SILENT CINEMA
- Virtual CINEMA DSP
- High Dynamic Power, Low Impedance Drive Capability
- Linear Damping Circuit Prevents Unwanted Speaker Cone Movement
- DVD-Audio/SACD Ready
- 40-Station Preset Tuning
- Auto Preset Tuning
- Sleep Timer
- Preset Remote Control Unit with Control Code for TV, VCR, etc.



RX-V530 Inputs and Outputs

	Analog		Digital				Video					
	In	Out	Coaxial		Optical		Composite		S Video	Component Video		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
CD	■		■		■							
MD/CD-R	■	■	■		■	■						
DVD	■		■		■						■	
D-TV/CBL	■		■		■		■		■			■
VCR	■	■	■		■		■	■	■			■
VIDEO AUX	■		■		■		■				■	
MONITOR OUT									■			■

■ Component Video Out is compatible with HDTV.
 Fixed (■), Fixed and Assignable (■), and Assignable (■) Terminals

RX-V530 Extensive System Connections

In addition to the input and output terminals shown in the chart, the RX-V530 provides 6-channel external decoder input terminals and a subwoofer output terminal. All speaker terminals are 2-way binding post type (banana plug compatible).

Versatile A/V Center for Outstanding Home Theater Entertainment.

The RX-V430 is an affordable way to discover the pleasures of home theater entertainment. It offers quality and versatility unsurpassed in its class, including extensive Dolby Digital and DTS compatibility, to bring out the full potential of any home theater system.



RX-V430 Digital Home Theater Receiver



Wide Selection of Features

The RX-V430 provides an amazing array of sophisticated features compared to other receivers in its class. The Digital Movie Theater program makes use of Yamaha's most advanced Tri-Field CINEMA DSP technology to create an extraordinarily realistic sound field in your home theater. You can choose from among 21 surround programs with 41 variations. All your movies and music will take on new dimensions of excitement with these sound field programs. Quad-Field CINEMA DSP allows enjoyment of Dolby Digital EX and DTS-ES Matrix 6.1 sound formats in the Phantom mode.

Full Operating Convenience

Designed to function as your main system command center, the RX-V430 is logical and simple to operate. Yamaha's "Set Menu" makes it easy to fine-tune your

system's sound and an input selector lets you shift quickly among sources for listening and recording. Both master volume and subwoofer level can be controlled from the remote.

Excellent Power and Quality

Not only does the RX-V430 provide power for five speakers, but the power output for each of these channels is the same high 75 watts. This is important for achieving the maximum surround sound field effect. It also offers High Dynamic Power, Low-Impedance Drive capability, meaning that there are large amounts of reserve power for accurate reproduction of the strong musical peaks found in digital sound sources.

Upgraded Tuning Convenience

The RX-V430 has been designed to make station selection as fast and convenient as

possible. And when the station is tuned in, sophisticated circuitry ensures that it will be strong and clear.

Other Notable Features

- Powerful 32-Bit Floating-Point Quantization Original LSI (YSS-938)
- Auto Surround Decoder and Auto Priority Input Terminal Selection
- 96kHz/24-Bit DACs
- Digitally Regulated Volume Control
- Speaker Test Mode with Test Tone Generator
- New Concert Video Program
- SILENT CINEMA for Headphone Enjoyment
- Virtual CINEMA DSP
- Linear Damping Circuit
- DVD-Audio/SACD Ready
- Sleep Timer
- Preset Remote Control Unit



RX-V430 Extensive System Connections

In addition to the input and output terminals shown in the chart, the RX-V430 provides 6-channel external decoder input terminals and a subwoofer output terminal.

RX-V430 Inputs and Outputs

	Analog		Digital				Video	
	In	Out	Coaxial		Optical		Composite	
	In	Out	In	Out	In	Out	In	Out
CD	■		■		■			
MD/CD-R	■	■	■		■			
DVD	■		■		■			■
D-TV/CBL	■		■		■		■	
VCR	■	■	■		■		■	■
VIDEO AUX	■		■		■		■	
MONITOR OUT								■

Fixed (■), Fixed and Assignable (■), and Assignable (■) Terminals

Stylish and Convenient Home Cinema Sound Systems

The two CinemaStation systems are a convenient way to bring full-scale 5.1-channel surround sound into your home. Easy to install and operate, they combine excellent performance with stylish elegance.



The DVX-S100 received the "Best of CES Home Theater Winner" award.

DVX-S100

Digital Home Cinema Sound System with DVD Player



Extra-High Picture Quality, Ultra-High Sound Quality and Extremely Stylish and Slim Design with Progressive Scan DVD-Audio DVD Player. The Elegant Speakers Will Look Great with a Plasma Display or Flat-Panel TV.

Receiver Section

- 21 Surround Programs (see page 25)
- Yamaha Original 32-Bit CINEMA DSP LSI (YSS-938)
- DCDi Processing for smooth and natural images without staircasing or jaggies
- Quad-Field CINEMA DSP for Enjoying Formats such as Dolby Digital EX and DTS-ES in Phantom Mode (Rear Center Matrix Processing)
- SILENT CINEMA and Virtual CINEMA DSP
- 96-kHz/24-Bit DACs for All Channels
- Total 205W Dynamic Power (Main/Center/Rear: 33W x 5 + Subwoofer: 40W)
- Digitally Regulated Volume Control

(Yamaha Original YAC-520 LSI, see page 14)

- Bass Boost
- 40-Station Preset Tuning
- Preset Remote Control Unit

DVD Player Section

- DVD-Audio Playback
- CD-R and CD-RW Playback Compatibility
- MP3 Playback Compatibility
- Intelligent Progressive Video Output
- Cinema Image and Cinema Dialogue
- 54MHz/12-Bit Video DAC for High Picture Quality
- 192kHz, 24-Bit Audio D/A Conversion for High Sound Quality
- DTS and Dolby Digital Decoders



- Optical and Coaxial Digital Outputs
- Large Disc Stabilizer
- DVD-Audio, DVD-Video and CD Disc Playback Compatibility
- Easy Operation through On-Screen Menu Icons

Speaker Section

- Configuration of 4 Satellite (Main and Rear) Speakers, Center Speaker and Subwoofer
- Advanced YST Subwoofer
- Magnetic Shielding (All Speakers)

Dimensions (W x H x D) / Weight

• Center Unit: 17¹/₈" x 3⁵/₁₆" x 14³/₁₆" • 4 Satellites: 4³/₄" x 9¹/₁₆" x 3⁵/₈" mm • Center Speaker: 17⁵/₁₆" x 3⁵/₁₆" x 4¹/₁₆" • Subwoofer: 7⁷/₈" x 15⁹/₁₆" x 16³/₈"



VS-10 Digital Home Cinema Sound System



With an amplifier that can be positioned vertically or horizontally and six compact yet powerful speakers, this system will look and sound great in any room. Dolby Digital and DTS compatibility plus 12 Surround Programs make movies more fun than ever.

- Full-Scale 5.1-Channel Sound
- Dolby Digital and DTS
- 12 Surround Programs (14 Variations)
- SILENT CINEMA
- Virtual Surround Program
- Total 190 W High Power: 25 + 25 W (main) + 40 W (center) + 25 + 25 W (rear) + 50 W (subwoofer)
- High Performance Amplifier with High Quality Parts

- Advanced YST Subwoofer
- Favorite Mode for One-Touch Selection
- Loudness Mode for Late-Night Listening
- TruBass for More Powerful Bass (at 2-channel operation)
- External Subwoofer Input Terminal
- Preset Remote Control Unit



Dimensions (W x H x D) / Weight

• Center Unit: 5" x 11⁷/₈" x 11³/₄" / 10.4 lbs. • Main Speakers: 5" x 7¹/₄" x 5³/₄" / 3.1 lbs. (unit) • Center Speaker: 9¹/₂" x 3⁷/₈" x 5³/₄" / 3.7 lbs. • Rear Speakers: 3⁷/₈" x 5³/₄" x 4³/₈" / 1.5 lbs. (unit) • Subwoofer: 7⁷/₈" x 15¹/₂" x 15³/₄" / 23.4 lbs.

- The VS-10 is combination of VS-10 (Basic System) and NX-SW10.

RX-V3200, RX-V2200, RX-V1200, RX-V730, RX-V630, RX-V530, RX-V430 and DVX-S100 Surround Programs

RX-V3200 Surround Programs:

32 Surround Programs (52 Variations)

HiFi DSP Programs	Variations
HALL 1	<ul style="list-style-type: none"> Hall A in Europe 1 A large fan-shaped hall with a wooden interior seating 2,500 in Munich. Hall B in Europe 1 A shoebox-shaped hall seating 2,400 in Frankfurt.
HALL 2	<ul style="list-style-type: none"> Hall D in U.S.A. 1 A shoebox-shaped hall seating 2,600. Live Concert 1 A circular hall with an expansive sound field.
CHURCH	<ul style="list-style-type: none"> Freiburg 1 A large church located in south Germany. Royaumont 1 A medieval Gothic monastery located near Paris.
JAZZ CLUB	<ul style="list-style-type: none"> Village Gate 1 The famous New York jazz club with a wide listening area. The Bottom Line 1 A popular New York club seating 300.
ROCK CONCERT	<ul style="list-style-type: none"> The Roxy Theatre 1 The well known L.A. rock showcase seating 460. Arena 1 The sound field of a large arena.
ENTERTAINMENT	<ul style="list-style-type: none"> Disco 1 Designed to emphasize the exciting rhythms of disco music. 6 Ch Stereo 1 For reproducing stereo sources via six channels.
Program Subtotal	12 12
CINEMA DSP Programs	Variations
ENTERTAINMENT	<ul style="list-style-type: none"> Game 1 Adds a deep, spacious feeling to video game sounds.
CONCERT VIDEO 1	<ul style="list-style-type: none"> Pop/Rock 1 For 2 to 6.1 channel live music sources.
CONCERT VIDEO 2	<ul style="list-style-type: none"> Classical Opera 1 For 2 to 6.1 channel opera and classical music sources.
TV THEATER	<ul style="list-style-type: none"> Mono Movie 1 For old monaural video sources. Variety/Sports 1 For 2 to 6.1 channel music and sports shows.
MOVIE THEATER 1	<ul style="list-style-type: none"> Spectacle 5 Emphasizes the excitement of scenes with high visual/audio impact. Sci-Fi 5 For reproducing the expansive, supernatural effects of high-tech SF movie soundtracks.
MOVIE THEATER 2	<ul style="list-style-type: none"> Adventure 5 A powerful three-dimensional sound field with superb clarity. General 5 Provides clear dialogue, with a soft, expansive sound.
ENHANCED	<ul style="list-style-type: none"> Enhanced 5 A wide, all-enveloping surround sound field as in a theater.
Program Subtotal	10 30
Surround Formats	Variations
<ul style="list-style-type: none"> Dolby Digital 1 Dolby Digital/Matrix 6.1 1 DTS Digital Surround 1 DTS-ES/Matrix 6.1 1 DTS- ES Discrete 6.1 1 For precise reproduction of the various movie sound formats. Dolby Pro Logic 1 Dolby Pro Logic II Music 1 Dolby Pro Logic II Movie 1 DTS Neo:6 Music 1 DTS Neo:6 Cinema 1 	
Program Subtotal	10 10
Program Total	32 52

RX-V2200 Surround Programs:

25 Surround Programs (45 Variations)

HiFi DSP Programs	Variations
CONCERT HALL 1	<ul style="list-style-type: none"> Concert Hall 1 1
CONCERT HALL 2	<ul style="list-style-type: none"> Concert Hall 2 1
CHURCH	<ul style="list-style-type: none"> Church 1
JAZZ CLUB	<ul style="list-style-type: none"> Jazz Club 1
ROCK CONCERT	<ul style="list-style-type: none"> Rock Concert 1
ENTERTAINMENT	<ul style="list-style-type: none"> Disco 1 6 Ch Stereo 1
Program Subtotal	7 7
CINEMA DSP Programs	Variations
ENTERTAINMENT	<ul style="list-style-type: none"> Game 1
TV THEATER	<ul style="list-style-type: none"> Mono Movie 1 TV Sports 1
MOVIE THEATER 1	<ul style="list-style-type: none"> Spectacle 5 Sci-Fi 5
MOVIE THEATER 2	<ul style="list-style-type: none"> Adventure 5 General 5
ENHANCED	<ul style="list-style-type: none"> Enhanced 5
Program Subtotal	8 28
Surround Formats	Variations
<ul style="list-style-type: none"> Dolby Digital 1 Dolby Digital/Matrix 6.1 1 DTS Digital Surround 1 DTS-ES/Matrix 6.1 1 DTS-ES Discrete 6.1 1 Dolby Pro Logic 1 Dolby Pro Logic II Music 1 Dolby Pro Logic II Movie 1 DTS Neo:6 Music 1 DTS Neo:6 Cinema 1 	
Program Subtotal	10 10
Program Total	25 45

Remarks

- HiFi DSP Programs
- A/V Programs
- CINEMA DSP
- Tri-Field CINEMA DSP Capable
- Quad-Field CINEMA DSP Capable

RX-V1200 Surround Programs:

24 Surround Programs (44 Variations)

HiFi DSP Programs	Variations
CONCERT HALL	<ul style="list-style-type: none"> Concert Hall 1
CHURCH	<ul style="list-style-type: none"> Church 1
JAZZ CLUB	<ul style="list-style-type: none"> Jazz Club 1
ROCK CONCERT	<ul style="list-style-type: none"> Rock Concert 1
ENTERTAINMENT	<ul style="list-style-type: none"> Disco 1 6 Ch Stereo 1
Program Subtotal	6 6
CINEMA DSP Programs	Variations
ENTERTAINMENT	<ul style="list-style-type: none"> Game 1
TV THEATER 1	<ul style="list-style-type: none"> Mono Movie 1 TV Sports 1
MOVIE THEATER 1	<ul style="list-style-type: none"> Spectacle 5 Sci-Fi 5
MOVIE THEATER 2	<ul style="list-style-type: none"> Adventure 5 General 5
ENHANCED	<ul style="list-style-type: none"> Enhanced 5
Program Subtotal	8 28
Surround Formats	Variations
<ul style="list-style-type: none"> Dolby Digital 1 Dolby Digital/Matrix 6.1 1 DTS Digital Surround 1 DTS-ES/Matrix 6.1 1 DTS-ES Discrete 6.1 1 Dolby Pro Logic 1 Dolby Pro Logic II Music 1 Dolby Pro Logic II Movie 1 DTS Neo:6 Music 1 DTS Neo:6 Cinema 1 	
Program Subtotal	10 10
Program Total	24 44

RX-V730/RX-V630 Surround Programs:

21 Surround Programs (41 Variations)

HiFi DSP Programs	Variations
CONCERT HALL	<ul style="list-style-type: none"> Concert Hall 1
JAZZ CLUB	<ul style="list-style-type: none"> Jazz Club 1
ROCK CONCERT	<ul style="list-style-type: none"> Rock Concert 1
ENTERTAINMENT	<ul style="list-style-type: none"> Disco 1 6 Ch Stereo 1
Program Subtotal	5 5
CINEMA DSP Programs	Variations
ENTERTAINMENT	<ul style="list-style-type: none"> Game 1 Concert Video 1
MONO MOVIE	<ul style="list-style-type: none"> Mono Movie 1
TV SPORTS	<ul style="list-style-type: none"> TV Sports 1
MOVIE THEATER 1	<ul style="list-style-type: none"> Spectacle 5 Sci-Fi 5
MOVIE THEATER 2	<ul style="list-style-type: none"> Adventure 5 General 5
ENHANCED	<ul style="list-style-type: none"> Enhanced 5
Program Subtotal	9 29
Surround Formats	Variations
<ul style="list-style-type: none"> Dolby Digital 1 Dolby Digital EX 1 DTS Digital Surround 1 DTS-ES 1 Dolby Pro Logic 1 Dolby Pro Logic II Music 1 Dolby Pro Logic II Movie 1 	
Program Subtotal	7 7
Program Total	21 41

RX-V530/RX-V430/DVX-S100 Surround Programs:

21 Surround Programs (41 Variations)

HiFi DSP Programs	Variations
CONCERT HALL	<ul style="list-style-type: none"> Concert Hall 1
JAZZ CLUB	<ul style="list-style-type: none"> Jazz Club 1
ROCK CONCERT	<ul style="list-style-type: none"> Rock Concert 1
ENTERTAINMENT	<ul style="list-style-type: none"> Disco 1 6 Ch Stereo 1
Program Subtotal	5 5
CINEMA DSP Programs	Variations
ENTERTAINMENT	<ul style="list-style-type: none"> Game 1 Concert Video 1
MONO MOVIE	<ul style="list-style-type: none"> Mono Movie 1
TV SPORTS	<ul style="list-style-type: none"> TV Sports 1
MOVIE THEATER 1	<ul style="list-style-type: none"> Spectacle 5 Sci-Fi 5
MOVIE THEATER 2	<ul style="list-style-type: none"> Adventure 5 General 5
ENHANCED	<ul style="list-style-type: none"> Enhanced 5
Program Subtotal	9 29
Surround Formats	Variations
<ul style="list-style-type: none"> Dolby Digital 1 Dolby Digital/Matrix 6.1 1 DTS Digital Surround 1 DTS/Matrix 6.1 1 Dolby Pro Logic 1 Dolby Pro Logic II Music 1 Dolby Pro Logic II Movie 1 	
Program Subtotal	7 7
Program Total	21 41

Digital Home Theater Receiver Specifications

Models	RX-Z1	RX-V3200	RX-V2200
AUDIO SECTION			
Minimum RMS Output Power (8 ohms)			
Main Ch (20–20,000 Hz) [THD]	130 W + 130 W [0.015%]	120 W + 120 W [0.02%]	100 W + 100 W [0.04%]
Center Ch (20–20,000 Hz) [THD]	130 W [0.015%]	120 W [0.02%]	100 W [0.04%]
Rear Ch (20–20,000 Hz) [THD]	130 W + 130 W [0.015%]	120 W + 120 W [0.02%]	100 W + 100 W [0.04%]
Rear Center Ch (20–20,000 Hz) [THD]	130 W [0.015%]	120 W [0.02%]	100 W [0.04%]
Front Effect Ch (1 kHz) [THD]	45 W + 45 W [0.05%]		
Minimum RMS Output Power (8 ohms, 1 kHz)			
Main Ch [THD]			
Center Ch [THD]			
Rear Ch [THD]			
Rear Center Ch [THD]			
High Dynamic Power & Low Impedance Drive Capability			
Dynamic Power/Ch (Main Ch, 8/6/4/2 ohms)	165/200/260/360 W	145/180/240/330 W	130/160/200/245 W
Linear Damping			
Damping Factor (8 ohms, 20–20,000 Hz)	200 (main/center)	200 (main, speaker A)	80 (main, speaker A)
Frequency Response (CD)			
Total Harmonic Distortion (20–20,000 Hz, CD)	10–100,000 Hz +0, -3 dB	10–100,000 Hz +0, -3 dB	10–100,000 Hz +0, -3 dB
Signal-to-Noise Ratio (IHF-A-Network, CD, 250 mV)	0.005% (65 W/8 ohms)	0.02% (60 W/8 ohms)	0.04% (50 W/8 ohms)
Signal-to-Noise Ratio (IHF-A-Network, CD, 250 mV)			
Multiple A/V Inputs	100 dB	100 dB	100 dB
Digital	7 optical, 3 coaxial & 1 RF (AC-3) (fixed and assignable)	5 optical & 2 coaxial (fixed and assignable)	5 optical & 2 coaxial (fixed and assignable)
Analog	8 A/V with S-video & 4 audio	6 A/V with S-video & 4 audio	6 A/V with S-video & 4 audio
Component Video	3 (fixed and assignable)	2 (fixed and assignable)	2 (fixed and assignable)
Digital Output Terminals (Optical)			
Preout Terminals	2 (fixed and assignable)	2 (fixed and assignable)	2 (fixed and assignable)
Preout Terminals			
	Pre-main, center and front effect couplers, and rear and rear center preout	Pre-main coupler, and center, rear and rear center preout	Main, center, rear and rear center preout
VIDEO SECTION			
Video Signal Level			
S-Video Signal Level (Y; C)	1 Vp-p/75 ohms	1 Vp-p/75 ohms	1 Vp-p/75 ohms
Monitor Out Frequency Response (Component Video)	1 Vp-p/75 ohms; 0.286 Vp-p	1 Vp-p/75 ohms; 0.286 Vp-p	1 Vp-p/75 ohms; 0.286 Vp-p
DC–100 MHz –3 dB			
DC–60 MHz –3 dB			
DC–60 MHz –3 dB			
TUNER SECTION			
FM 50 dB Quietening Sensitivity (IHF, 75 ohms)			
Mono	2 µV (17.3 dBf)	2 µV (17.3 dBf)	2 µV (17.3 dBf)
Stereo	25 µV (39.2 dBf)	25 µV (39.2 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
GENERAL SECTION			
Dimensions (W x H x D)			
	435 x 211 x 471 mm 17 ¹ / ₈ " x 8 ⁵ / ₁₆ " x 18 ⁹ / ₁₆ "	435 x 191 x 468 mm 17 ¹ / ₈ " x 7 ¹ / ₂ " x 18 ⁹ / ₁₆ "	435 x 171 x 432 mm 17 ¹ / ₈ " x 6 ³ / ₄ " x 17"
Weight			
	28 kg; 61.7 lbs.	21 kg; 46.3 lbs.	15 kg; 33.1 lbs.

Digital Home Theater Receiver Feature Comparison

	RX-Z1	RX-V3200	RX-V2200	RX-V1200	RX-V730	RX-V630	RX-V530	RX-V430
Surround Program (Variation)	42 (62)	32 (52)	25(45)	24 (44)	21 (41)	21 (41)	21 (41)	21 (41)
Quad-Field CINEMA DSP	■	■	■	■	■	■	Phantom mode	Phantom mode
Tri-Field CINEMA DSP	■	■	■	■	■	■	■	■
Dolby Pro Logic II	■	■	■	■	■	■	■	■
Dolby Digital	■	■	■	■	■	■	■	■
Dolby Digital EX	■	Matrix 6.1	Matrix 6.1	Matrix 6.1	■	■	Phantom mode	Phantom mode
DTS Digital Surround	■	■	■	■	■	■	■	■
DTS-ES Matrix 6.1	■	■	■	■	Compatible	Compatible	Phantom mode	Phantom mode
DTS-ES Discrete 6.1	■	■	■	■				
DTS 96/24	■							
DTS NEO:6	■	■	■	■				
SILENT CINEMA	■	■	■	■	■	■	■	■
Virtual CINEMA DSP	■	■	■	■	■	■	■	■
On-Screen Display	■	■	■	■	■	■	■	■
Digital ToP-ART	■	■	■	■	■	■	■	■
Digitally Regulated Volume Control	■	■	■	■	■	■	■	■
192kHz/24-Bit DAC System	■							
96kHz/24-Bit DAC System		■	■	■	■	■	■	■
Subwoofer Output Terminals	Mono/split	Mono x 2	■	■	■	■	■	■
A/V Rec Out Selector	■	■	■					
Zone 2 Out	■	■	■	■ (audio only)				
RS-232C Interface	■	■						
Bass Extension	■	■	■	■				
40-Station Preset Tuning	■	■	■	■	■	■	■	■

RX-V1200		RX-V730		RX-V630		RX-V530		RX-V430	
80 W + 80 W	[0.04%]	75 W + 75 W	[0.06%]	75 W + 75 W	[0.06%]	75 W + 75 W	[0.06%]	75 W + 75 W	[0.06%]
80 W	[0.04%]	75 W	[0.06%]	75 W	[0.06%]	75 W	[0.06%]	75 W	[0.06%]
80 W + 80 W	[0.04%]	75 W + 75 W	[0.06%]	75 W + 75 W	[0.06%]	75 W + 75 W	[0.06%]	75 W + 75 W	[0.06%]
80 W	[0.04%]	75 W	[0.06%]	75 W	[0.06%]	75 W	[0.06%]	75 W	[0.06%]
95 W + 95 W	[0.04%]	80 W + 80 W	[0.06%]	80 W + 80 W	[0.06%]	80 W + 80 W	[0.06%]	80 W + 80 W	[0.06%]
95 W	[0.04%]	80 W	[0.06%]	80 W	[0.06%]	80 W	[0.06%]	80 W	[0.06%]
95 W + 95 W	[0.04%]	80 W + 80 W	[0.06%]	80 W + 80 W	[0.06%]	80 W + 80 W	[0.06%]	80 W + 80 W	[0.06%]
95 W	[0.04%]	80 W	[0.06%]	80 W	[0.06%]	80 W	[0.06%]	80 W	[0.06%]
Yes		Yes		Yes		Yes		Yes	
105/130/170/200 W		95/120/150/180 W		95/120/150/180 W		95/115/140/160 W		95/115/140/160 W	
Yes		Yes		Yes		Yes		Yes	
80 (main, speaker A)		80 (main, speaker A)		80 (main, speaker A)		80 (main)		80 (main)	
10–100,000 Hz +0, -3 dB		10–100,000 Hz +0, -3 dB		10–100,000 Hz +0, -3 dB		10–100,000 Hz +0, -3 dB		10–100,000 Hz +0, -3 dB	
0.04% (50 W/8 ohms)		0.06% (45 W/8 ohms)		0.06% (45 W/8 ohms)		0.06% (40 W/8 ohms)		0.06% (40 W/8 ohms)	
100 dB		100 dB		100 dB		100 dB		100 dB	
5 optical & 2 coaxial (fixed and assignable)		4 optical & 1 coaxial (fixed and assignable)		4 optical & 1 coaxial (fixed and assignable)		3 optical & 1 coaxial (fixed and assignable)		1 optical & 1 coaxial (fixed and assignable)	
6 A/V with S-video & 4 audio		5 A/V with S-video & 3 audio		5 A/V with S-video & 2 audio		4 A/V with S-video & 2 audio		4 A/V & 2 audio	
2 (fixed and assignable)		2 (fixed and assignable)		2 (fixed and assignable)		2 (fixed and assignable)		2 (fixed and assignable)	
2 (fixed and assignable)		1 (fixed and assignable)		1 (fixed and assignable)		1 (fixed and assignable)		1 (fixed and assignable)	
Main, center, rear and rear center preout		Main, center, rear and rear center preout		Main, center, rear and rear center preout		Main, center, rear and rear center preout		Main, center, rear and rear center preout	
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	
1 Vp-p/75 ohms; 0.286 Vp-p		1 Vp-p/75 ohms; 0.286 Vp-p		1 Vp-p/75 ohms; 0.286 Vp-p		1 Vp-p/75 ohms; 0.286 Vp-p		1 Vp-p/75 ohms; 0.286 Vp-p	
DC–60 MHz –3 dB		DC–30 MHz –3 dB		DC–30 MHz –3 dB		DC–30 MHz –3 dB		DC–30 MHz –3 dB	
2 µV (17.3 dBf)		2 µV (17.3 dBf)		2 µV (17.3 dBf)		2 µV (17.3 dBf)		2 µV (17.3 dBf)	
25 µV (39.2 dBf)		25 µV (39.2 dBf)		25 µV (39.2 dBf)		25 µV (39.2 dBf)		25 µV (39.2 dBf)	
76 dB/70 dB		76 dB/70 dB		76 dB/70 dB		76 dB/70 dB		76 dB/70 dB	
435 x 171 x 432 mm		435 x 161 x 390 mm		435 x 161 x 390 mm		435 x 151 x 387 mm		435 x 151 x 380 mm	
17 ¹ / ₈ " x 6 ³ / ₄ " x 17"		17 ¹ / ₈ " x 6 ⁵ / ₁₆ " x 15 ³ / ₈ "		17 ¹ / ₈ " x 6 ⁵ / ₁₆ " x 15 ³ / ₈ "		17 ¹ / ₈ " x 5 ¹⁵ / ₁₆ " x 15 ¹ / ₄ "		17 ¹ / ₈ " x 5 ¹⁵ / ₁₆ " x 14 ¹⁵ / ₁₆ "	
15 kg; 33.1 lbs.		11.5 kg; 25.3 lbs.		11.5 kg; 25.3 lbs.		10 kg; 22 lbs.		10 kg; 22 lbs.	

Brief Guide to Movie Sound Formats

● Dolby Pro-Logic

Dolby Lab's basic 4-channel format, widely used in ordinary theaters and for home videos.

● Dolby Pro Logic II

Improved version of Dolby Pro-Logic for music and movies. With a more intelligent matrix decoder, it is suitable for both stereo and surround-encoded sources. It offers "bass management" as well as the option of incorporating "width," "dimension" and "panorama" controls.

● Dolby Digital

The most popular 5.1-channel home theater sound system. An improvement over Dolby Pro-Logic in that it offers: 1) Full frequency response in all channels (3Hz — 20kHz), 2) discrete surround channels, and 3) a separate track for bass only, called the Low Frequency Effects channel.

● Dolby Digital EX

Dolby's latest surround format, this is Dolby Digital with an added center rear channel. The rear center channel is actually matrixed into the two rear channels, and is extracted upon playback. (Formerly called Dolby Digital Surround EX, or Dolby Digital Matrix 6.1.)

● DTS Digital Surround

The basic DTS 5.1 channel sound format. Uses a higher data rate than Dolby Digital.

● DTS-ES Matrix 6.1

Very similar to Dolby Digital EX. Uses a different rear center channel decoding method.

● DTS-ES Discrete 6.1

DTS-ES uses its large bandwidth to provide a fully discrete rear center channel, as opposed to a matrixed one.

● DTS Neo:6

Provides 5.1 or 6.1 channels of matrix decoding from stereo matrix material. Also decodes Extended Surround matrix soundtracks and has a Music mode to expand stereo non-matrix recordings to 5.1 or 6.1 channels.

● DTS 96/24

Delivers 96kHz/24-bit high resolution audio for 5.1-channel/6.1-channel surround sound on DVD discs. The benefits are greater bit depths for extended dynamic range and high sampling rates for wider frequency response.

Digital Home Theater Packages — Yamaha Makes It Easy to Get Sensational Home Theater 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 Theater packages make it easy. The receivers are not only powerful and versatile, they 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 and 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 theater system) use Advanced YST technology for remarkable efficiency. Choose a Yamaha package and discover how good movies can sound in your home.



YHT-900



YHT-900 Digital Home Theater 6.1-Channel Package

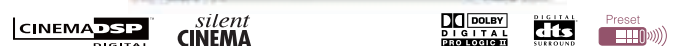
- Digital Home Theater Receiver HTR-5560
- Progressive Scan DVD-Audio Changer DV-C6480
- Digital Home Theater 6-Speaker Package NS-AP580
- Advanced YST Subwoofer YST-SW205 (More information on pg. 34)



HTR-5560 Digital Home Theater Receiver

6.1-Channel Sound Enjoyment and Large Choice of Surround Programs.

- 6-Channel Discrete Power Amplification (75 W x 6) • New Yamaha 32-Bit Original LSI (YSS-938) for Dolby Digital, DTS, Dolby Digital EX, DTS-ES and Dolby Pro Logic II Decoding plus CINEMA DSP Processing • SILENT CINEMA for Headphone Enjoyment • 96kHz/24-Bit D/A conversion
- Digital ToP-ART (Total Purity Audio Reproduction Technology)
- 21 Surround Programs (41 Variations) with Quad-Field CINEMA DSP Programs • 17¹/₈" x 6⁵/₁₆" x 15³/₈" (W x H x D) • 25.3 lbs.



HTR-5550 Digital Home Theater Receiver

High Sound Quality A/V Center Allows Enjoyment of the Latest Movie Sound Formats.

- 5-Channel Discrete Power Amplification (75 W x 5) • 96kHz/24-Bit D/A Conversion • New Yamaha 32-Bit Floating-Point Quantization System LSI (YSS-938, the same used in the flagship receiver) • 21 Surround Programs (41 Variations) with Enjoyment of Quad-Field CINEMA DSP Programs (phantom modes) • SILENT CINEMA for Headphone Enjoyment and Virtual CINEMA DSP • 17¹/₈" x 5¹⁵/₁₆" x 15¹/₄" (W x H x D) • 22 lbs.



DV-C6480 Progressive Scan DVD-Audio DVD Changer

- DVD-Audio Playback • Yamaha Patented "PlayXchange" • Intelligent Progressive Video Output • DCDi Processing • 54MHz/12-Bit Video DAC • 192kHz/24-Bit Audio DAC • CD-R/CD-RW and MP3 Playback • 17¹/₈" x 4⁹/₁₆" x 15⁷/₈" (W x H x D) • 13.7 lbs.



DV-S5450 DVD Player

- CD-R/CD-RW and MP3 Playback Compatibility • Easy Operation Through On-Screen Menu Icons • Optical and Coaxial Digital Outputs • Multiple Zoom • Picture Fine Tuning • 17¹/₈" x 3⁹/₁₆" x 12³/₈" (W x H x D) • 7.3 lbs.



YHT-800



YHT-800 Digital Home Theater 5.1-Channel Package

- Digital Home Theater Receiver HTR-5550
- Progressive Scan DVD-Audio Changer DV-C6480
- Digital Home Theater 5-Speaker Package NS-AP540
- Advanced YST Subwoofer YST-SW105 (More information on pg. 41)



YHT-700



YHT-700 Digital Home Theater 5.1-Channel Package

- Digital Home Theater Receiver HTR-5550
- Progressive Scan DVD-Audio Changer DV-C6480
- Digital Home Theater 5-Speaker Package NS-AP480
- Advanced YST Subwoofer YST-SW45



YHT-500



YHT-500 Digital Home Theater 5.1-Channel Package

- Digital Home Theater Receiver HTR-5550
- DVD Player DV-S5450
- Digital Home Theater 5-Speaker Package NS-AP329
- Advanced YST Subwoofer YST-SW005



YHT-300



YHT-300 Digital Home Theater 5.1-Channel Package

- Digital Home Theater Receiver HTR-5540
- Digital Home Theater 5-Speaker Package NS-AP280A
- Advanced YST Subwoofer YST-SW005



HTR-5540 Digital Home Theater Receiver

Versatile A/V Center for Outstanding Home Theater Entertainment.

- 5-Channel Discrete Power Amplification (75 W x 5) • New Yamaha 32-Bit Floating-Point Quantization System LSI (YSS-938, the same used in the flagship receiver) • 21 Surround Programs (41 Variations) with Enjoyment of Quad-Field CINEMA DSP Programs (phantom modes) • SILENT CINEMA for Headphone Enjoyment and Virtual CINEMA DSP • 2 digital Inputs and 4 Video Inputs/1 Output • 17¹/₈" x 5¹⁵/₁₆" x 15¹/₄" (W x H x D) • 22 lbs.



YST-SW45



Advanced YST Subwoofer

- 75W High Power Output • 8" Multi-Range Driver with Magnetic Shielding • Continuously Variable High Cut Filter • 7¹/₄" x 14³/₈" x 12¹/₂" (W x H x D) • 19.8 lbs.



YST-SW005



Advanced YST Subwoofer

- 55W High Power Output • 6¹/₂" Multi-Range Driver with Magnetic Shielding • Auto Standby • 7⁷/₈" x 14³/₈" x 14³/₄" (W x H x D) • 18.7 lbs.

NS-AP580 Digital Home Theater 6-Speaker Package

- Speaker Package of Main, Rear, Rear Center (5 satellites) and Center • 2-Way Bass-Reflex Design (all speakers) • Dual 4" Woofers and 1" Soft Dome Tweeter with Magnetic Shielding (all speakers) • 130W Music Input Power (all speakers) • 13⁵/₈" x 5⁷/₁₆" x 5³/₄" [5 satellites]; 13⁵/₈" x 5⁷/₁₆" x 5³/₄" [center] (W x H x D)

NS-AP540 Digital Home Theater 5-Speaker Package

- Speaker Package of Main, Rear (4 satellites) and Center • 2-Way Bass-Reflex Design (all speakers) • Dual 3" Woofers and 3/4" Soft Silk Dome Tweeter with Magnetic Shielding (all speakers) • 110W Music Input Power (all speakers) • 11¹³/₁₆" x 3⁷/₈" x 4³/₈" [4 satellites]; 11¹³/₁₆" x 3⁷/₈" x 4³/₈" [center] (W x H x D)

NS-AP480 Digital Home Theater 5-Speaker Package

- Speaker Package of Main, Rear (4 satellites) and Center • 2-Way Bass-Reflex Design (all speakers) • Dual 3" Woofers and 1/2" Balanced-Dome Tweeter with Magnetic Shielding (all speakers) • 110W Music Input Power (all speakers) • 10³/₈" x 3¹⁵/₁₆" x 4¹/₈" [4 satellites]; 10³/₈" x 3¹⁵/₁₆" x 4¹/₈" [center] (W x H x D)

NS-AP329 Digital Home Theater 5-Speaker Package

- Speaker Package of Main, Rear (4 satellites) and Center • 2-Way Bass-Reflex Design (all speakers) • 3" Woofer and 1/2" Balanced-Dome Tweeter [4 satellites]; Dual 3" Woofers and 1/2" Balanced-Dome Tweeter [center] • Magnetic Shielding (all speakers) • 100W Music Input Power (all speakers) • 7⁷/₈" x 3¹⁵/₁₆" x 4¹/₈" [4 satellites]; 3¹⁵/₁₆" x 10³/₈" x 4¹/₈" [center] (W x H x D)

NS-AP280A Digital Home Theater 5-Speaker Package

- Speaker Package of Main, Rear and Center • 2-Way Acoustic Suspension Design (all speakers) • 3" Woofer and 1/2" Balanced-Dome Tweeter with Magnetic Shielding (all speakers) • 100W Music Input Power (all speakers) • 6⁵/₈" x 4¹/₁₆" x 4¹/₄" [all speakers] (W x H x D)

BT-10TV Optional TV Side Brackets

For the YHT-800, YHT-700, YHT-500 and YHT-300



Yamaha Raises the Standard for DVD Players with Advanced Progressive Circuitry, DVD-Audio Playback and Much More

Yamaha has once again raised the standard for DVD players with this superb model. It makes use of the latest digital technology to ensure that both image and sound reproduction are of the highest quality. Naturally, there are a wide range of functions, plus the advantage of DVD-Audio and CD-R/CD-RW playback compatibility.



DVD-CX1 DVD Changer



Advanced Video Technology

The DVD-CX1 uses a 3:2 Pull-Down Detection Type Progressive Circuit to convert the 24-frame per second DVD-Video images to the TV field rate of 60 fields per second. Interlace scanning can result in frame overlap that causes jagged edges, but Yamaha uses progressive scanning with a pattern detection algorithm that reassembles the frames exactly as they should look, so the picture has higher resolution and better color quality. Intelligent Progressive Video Output ensures that the progressive signals on the disc are properly handled and a 4:4:4 Progressive Component Video circuit provides high-quality reproduction of YPbPr signals. Other special features include DCDi Processing for smooth and natural images without staircasing or jaggies, 54MHz/12-bit video D/A conversion and 30p video compatibility.



Highest Quality Audio Reproduction

Yamaha's digital audio technology is the most sophisticated in the

Epoxy Resin Coated and Containing Fiberglass PC Board with Highest Performance Parts such as Copper Foil and Polypropylene Film Capacitors, Electrolytic Capacitors Using Fine Ceramic, and Gold-Plated Relays



Low-impedance, low-noise power supply with large core power transformer and low-loss, high sound quality schottky barrier diode, high-capacity low-impedance electrolytic capacitor (20,000 μ F), and Burr-Brown audio quality op amp

world, as you'll discover when you listen to the DVD-CX1. It uses a 192kHz/24-bit audio DAC (Burr-Brown PCM1608) for extremely precise signal transmission, exceeding what previous DACs were capable of. Pure Progressive Digital Output and a Dual Laser Optical Pickup also contribute to the high performance.

Optical digital outputs for DTS Digital Surround, Dolby Digital and PCM ensure that the signal going to the next component in the system is of the highest possible purity. Finally, no expense or effort was spared to obtain the very best audio parts—these numerous small parts add up to a significant difference in the final sound quality.



Anti-Vibration Double Top Cover and Double Bottom



Large Disc Stabilizer

Anti-Vibration Construction

A heavy double top cover plus a double bottom cover ensure that no chassis vibration or resonance can affect the sound quality. The inside cover has copper-plated shielding, as well. A large disc stabilizer holds the disc that is playing firmly in place.

Outstanding Convenience and Versatility

In addition to Yamaha Patented 5-disc carousel PlayXchange, this changer will accept five DVDs, VCDs (version 2.0) or CDs at one time. You can switch among them or have them play continuously. The remote control

gives you full operating capabilities from your viewing/listening position, and On-Screen Menu Icons make playback selections and adjustment of the various playback modes and other functions a simple matter. The DVD-CX1's versatile capabilities include Still, Slow, Repeat and Resume play and so on.

MP3** and CD-R/CD-RW Playback**

The DVD-CX1 expands your listening possibilities to include MP3 tracks, too. First you download the MP3 tracks from the internet onto your PC. Then you burn the tracks onto a CD-R or CD-RW disc*. Then you just play that disc like a normal CD. CD-R/RW discs can hold about 12 hours of MP3 music, so this is a great advantage.

Other Notable Features

- DVD-Audio Playback
- Easy Operation through On-Screen Menu Icons
- Cinema Image and Cinema Dialogue
- Still Picture
- Video Off Switch
- Low-Impedance, Low-Noise Power Supply with Large Core Power Transformer and Low-Loss, High Sound Quality Schottky Barrier Diode
- Gold-Plated Terminals for All Pin Jacks



The DVD-CX1 rear panel offers optical and coaxial digital audio output, 5.1-channel and 2-channel audio output, and 2 composite, S-video and 2 progressive component video output terminals. Also it provides RC-232C interface and remote control in/out (extended IR code) for custom installation.

Expand Your Entertainment Possibilities with DVD-Video, DVD-Audio, CD, and CD-R/RW Discs

You'll never be at a loss for what to watch or listen to with the DVD-S1200. It plays a wide range of discs, and thanks to Yamaha's outstanding technology, the quality is always first-rate. An On-Screen Menu makes it easy to select and adjust the many functions that add to viewing and listening enjoyment.



DVD-S1200 DVD Player



Highest Quality Reproduction

Yamaha's digital audio technology is the most sophisticated in the world, as you'll discover when you listen to the DVD-S1200. It uses a 54MHz, 12-bit video DAC and a 192kHz, 24-bit audio DAC for extremely precise signal transmission, exceeding what previous DACs were capable of. Intelligent Progressive Digital Output and a Dual Laser Optical Pickup also contribute to the high performance. Optical digital outputs for DTS Digital Surround, Dolby Digital and PCM ensure that the signal going to the next component in the system is of the highest possible quality.



192kHz/24-Bit Audio DAC and 96kHz/24-Bit Audio DACs

Advanced Video Technology

The microcomputer analyzes images for each field to determine whether the input signals were made from a 24-frame movie film or taken from ordinary video material, and automatically chooses between a 3:2 pull-down detection type progressive circuit (for film) and an ordinary progressive circuit (for video).



3:2 Pull-Down Detection Type Progressive LSI

In addition, the Progressive Component Video circuit uses double the sampling rate (4:4:4) of ordinary circuits (4:2:2), resulting in much better color reproduction. This circuitry is more expensive, but the quality difference is considerable.

Block and Mosquito Noise Reduction

Block Noise Reduction eliminates the rectangular block-shaped distortion that appears in the background of a scene with fast movement or with the same color over a wide area accompanied by movement, such as a river or the sky. Mosquito Noise Reduction effectively reduces distortion that occurs at edges where the brightness changes sharply (often seen in animation). This occasionally looks like a mosquito flying.

Three-Dimensional Noise Reduction

Three-Dimensional Noise Reduction reduces the noise component related to the frame memory time axis, thus helping to effectively minimize noise that causes the reproduction of coarse images. The function can be set to zero (off), allowing the user discretion of use depending on the quality of the signal being received.

Resonance-free Design

A large disc stabilizer and memory buffer ensure that neither vibration nor bumps will affect reproduction quality.



Large Disc Stabilizer: By negating the effects of external vibrations, it reduces servo errors for stable playback, and it also allows the smooth playback of slightly warped discs.

CD-R/RW** and DVD-Audio Playback

More and more people these days are using their computers or digital recorders to make their own CD-R and CD-RW discs. The DVD-S1200 is capable of playing these discs, in addition to normal CDs, VCDs and of course DVDs, including DVD-Audio discs, so you've got plenty of entertainment options.

Cinema Image and Cinema Dialogue

Constantly striving to improve video and audio quality, Yamaha has included two new functions that enhance the enjoyment of movies. Cinema Image improves picture quality with movie sources by softening the brightness, upgrading the contrast in dark scenes and reducing video noise. Cinema Dialogue enhances the audio from the center channel, so dialogue is heard with the utmost clarity.

Other Notable Features

- 30p Video Compatibility
- Easy Operation through On-Screen Menu Icons
- Still Picture
- Slow, Repeat and Resume Play
- Video Off Switch
- Low-Impedance Power Supply



The DVD-S1200 rear panel offers optical and coaxial digital output, 5-channel and 2-channel audio output, and composite, S-video and progressive component video output terminals.

The Finest Home Theater Enjoyment Starts Here

When choosing a main source component for your home theater system, you can't go wrong with the DVD-C920. Making the most of Yamaha's world-leading digital technology, it delivers superb quality from a variety of discs including DVD-Audio discs. You'll like the convenience of 5-disc PlayXchange, too.



DVD-C920 DVD Changer



Advanced DVD-Audio/Video Technology

The DVD-C920 uses a 3:2 Pull-Down Detection Type Progressive Circuit to convert the 24-frame per second DVD-Video images to the TV field rate of 60 fields per second. Intelligent Progressive Video Output ensures that the progressive signals on the disc are properly handled and a 4:4:4 Progressive Component Video circuit provides high-quality reproduction of YPbPr signals. Other special features include DVD-

Audio compatibility, DCDi Processing for smooth and natural images without staircasing or jaggies, 54MHz/12-bit video D/A conversion and 30p video compatibility.

Outstanding Video and Audio Quality

The highest quality parts are used throughout, such as 192kHz/24-bit Audio D/A Converters (Burr-Brown PCM1608), copper foil and polypropylene film capacitors, electrolytic capacitors using fine ceramic,

large core power transformer with high sound quality schottky barrier diode, and large disc stabilizer which make a significant difference in audio and video quality.

Other Notable Features

- MP3 Playback Compatibility*
- CD-R and CD-RW Disc Playback Compatibility**
- DVD-Audio Playback
- Easy Operation through On-Screen Menu Icons
- Cinema Image for Greater Movie Enjoyment
- Cinema Dialogue enhances the center channel so dialogue is heard more clearly
- Video Off Switch



The DVD-C920 rear panel offers optical and coaxial digital audio outputs, 5.1-channel and 2-channel audio outputs, and composite, S-video and progressive component video output terminals. Also it provides remote control in/out for custom installation.

High Performance with Convenient Operation

Yamaha digital technology ensures that both image and sound reproduction are excellent. On-screen menus make operation easy. MP3 and CD-R/RW playback compatibility, too!



DVD-S520 DVD Player



MP3* and CD-R/RW** Playback

Not only can you enjoy DVDs and CDs, but you can also playback CD-R and CD-RW discs, and even discs that have MP3 tracks recorded on them.

yet is always easy to use. Picture Fine Tuning with Saturation, Brightness and Contrast Level controls. Multiple Zoom for enlarging the image. And easy operation through On-Screen Menu Icons.

Lots of Useful Functions

The DVD-S520 provides extensive control,

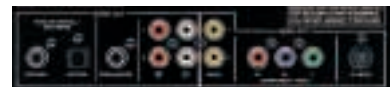
High Quality Reproduction

This player uses much of the same

technology as Yamaha's more expensive models, including a 10-bit video DAC and a 96kHz, 24-bit audio DAC. Optical and digital outputs also ensure that the signal going to the next component in the system is of the highest possible quality.

Other Notable Features

- Dual Laser Optical Pickup
- Program and Shuffle Play
- Resume (5-Disc Memory) Play
- Multiple Repeat Play
- TruSurround 3D Sound for Analog Out
- Screen Saver (75% Dimmer)



The DVD-S520 rear panel offers optical/coaxial digital audio output, 2 composite, S-video and component video output terminals.

DVD Player Specifications		DVD-CX1	DVD-S1200	DVD-C920	DVD-S520
Signal-to-Noise Ratio	(CD)	115 dB	115 dB	115 dB	95 dB
Frequency Response	(CD/VCD)	2—20,000 Hz	2—20,000 Hz	2—20,000 Hz	2—20,000 Hz
	(DVD 48 kHz sampling)	2—22,000 Hz	2—22,000 Hz	2—22,000 Hz	2—22,000 Hz
	(DVD 96 kHz sampling)	2—44,000 Hz	2—44,000 Hz	2—44,000 Hz	2—44,000 Hz
	(DVD-Audio)	2—88,000 Hz	2—88,000 Hz	2—88,000 Hz	2—44,000 Hz
Dynamic Range	(CD)	99 dB	99 dB	99 dB	95 dB
	(DVD 48 kHz, 24 Bit)	103 dB	103 dB	103 dB	
Harmonic Distortion + Noise		0.002% (1 kHz)	0.002% (1 kHz)	0.002% (1 kHz)	0.0035% (1 kHz)
Dimensions	(W x H x D)	449 x 119 x 408 mm	449 x 99 x 281 mm	435 x 116 x 404 mm	435 x 91 x 314 mm
Weight		17 ¹¹ / ₁₆ " x 4 ¹¹ / ₁₆ " x 16 ¹ / ₁₆ "	17 ¹¹ / ₁₆ " x 3 ⁷ / ₈ " x 11 ¹ / ₁₆ "	17 ¹ / ₈ " x 4 ⁹ / ₁₆ " x 15 ⁷ / ₈ "	17 ¹ / ₈ " x 3 ⁹ / ₁₆ " x 12 ³ / ₈ "
		10.5 kg; 23.1 lbs.	3.5 kg; 7.7 lbs.	6.2 kg; 13.7 lbs.	3.3 kg; 7.3 lbs.

* Some MP3 discs cannot be played depending on the disc characteristics or recording conditions.

** Only compatible with discs that have been recorded in CD-DA format or Video CD format and finalized when recording is completed. Some discs may be impossible to replay depending on recording circumstances.

CD Recorder Plus Hard Disk for Quick and Easy CD Creating and Versatile, Convenient Playback.

20GB memory capacity (30 CDs), CD-R/CD-RW disc recording, ultra-fast access and editing, high-speed and high-performance ripping and recording. An exciting new product for the serious music fan.



CDR-HD1000 CD-R/RW + HDD Digital Audio Recorder



The Easiest Way to Create Personalized CDs

The user can quickly select tracks from any of the CDs copied onto the CDR-HD1000 (as many as about 30). Creating personal albums for listening or burning is easy — there's no comparison with copying tracks from CDs one at a time.

The Best Choice for Making CDs

Selecting and arranging tracks from a wide selection of CDs is much quicker and easier than with conventional CD recorders. Sound quality is superior to MD recorders and access is faster than DAT recorders.

Versatile and Long Play Sound Enjoyment

Enjoy playback of tracks from as many as 30 CDs with near instantaneous access. Normal, Repeat and Random modes add variety and convenience, especially for these who want smooth and uninterrupted music for private listening, restaurants, bars or public spaces.

Extremely High Sound Quality

The linear PCM system, plus top-class components such as 24-bit high-performance A/D and D/A converters, ensure excellent audio quality. There are no losses when copying CDs, either. Sound quality is significantly higher than MP3 or MD.

Large 20GB Memory Capacity

The hard disk holds 20 gigabytes of sound data, or the equivalent of about 30 CDs.

CD Text Compatibility

CD Text (title, artist, track title) is displayed and copied. If a CD has no text data, the user can add it after the CD has been ripped onto the hard disk, then when a new CD-R/RW disc is burned this data will be copied onto it.

Other Notable Features

- Manual Incremental Track Marking
- High-Speed Finalization and Erase
- Digital and Analog Rec Level Control
- Two-Color Ripping/Burning LED Indicator Bars
- Sound Monitoring Capability
- CD Direct Copy
- Front Panel Headphone Jack with Level Control
- Full-Function Remote Control Unit

CDR-HD1000 Specifications

- Frequency Response: 5–20,000 Hz ±0.5 dB [PLAYBACK] • Signal-to-Noise Ratio: 105 dB

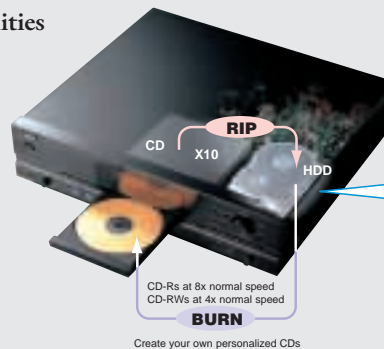
- Dynamic Range: 99 dB • Harmonic Distortion + Noise 0.004% [RECORDING] • Signal-to-Noise Ratio: 92 dB • Dynamic Range: 93 dB
- Harmonic Distortion + Noise: 0.006% [GENERAL] • Dimensions (W x H x D): 17-1/8" x 4-9/16" x 16-5/16" • Weight: 18.3 lbs.



The CDR-HD1000 rear panel offers optical input/output, coaxial digital input/output, line (analog) input/output and RS-232C (for custom installation) terminals.

CDR-HD1000 Capabilities

If you're really into music and want a product with professional capabilities, this Digital Audio Recorder is for you. It gives you long-play enjoyment, extensive editing capabilities for play and recording, and the ability to burn your own CDs.



HDD Image

Stores the music on 30 CDs

EDIT

- Create as many as 999 playlists for playback.
- Edit tracks for making your own CDs

PLAY

- 30 hours of music
- Fast track selection

High-Speed and No Compression

RIPPING	EDITING	BURNING	PLAYING
CD ► Hard Disk	Hard Disk	Hard Disk ► CD-R	Hard Disk
<ul style="list-style-type: none"> • 10-times faster than play speed • High sound quality (perfect copy — no data loss) • CD Text data also copied • Hard disk will hold tracks from about 30 CDs 	<ul style="list-style-type: none"> • Super-fast track access using Jog Dial • Versatile Track editing • Create CD Text data • Edit from 30 hours of music • Easy to create Albums 	<ul style="list-style-type: none"> • 8-times faster than play speed (to CD-R; 4-times faster to CD-RW) • High sound quality (perfect copy — no data loss) • Burn Albums stored on the hard disk to CD-R/RW, quickly. 	<ul style="list-style-type: none"> • 30 hours of music with numerous playback options • Twist dial to select any track • Choose from up to 999 Albums, each with up to 99 songs • Random and Repeat play, and Intro Scan

Yamaha Subwoofers: Bass Sound that Will Move You.

The latest home theater systems not only use high-performance DVD players, but also exploit the merits of advanced sound processing formats. Full audio enjoyment of these digital sources requires deep, clear bass response. This is especially true with 5.1-channel sound, because the sixth channel is dedicated to the bass frequencies. That means you not only need a subwoofer, but a subwoofer capable of handling extremely low frequencies and high power levels, as well as accurately reproducing the high quality digital sound.

QD-Bass

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.



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.

High Power Amplifier

The YST-SW800 amplifier is extremely efficient and features an entirely new type of power supply with superior load characteristics, minimal noise, higher efficiency and greater stability.

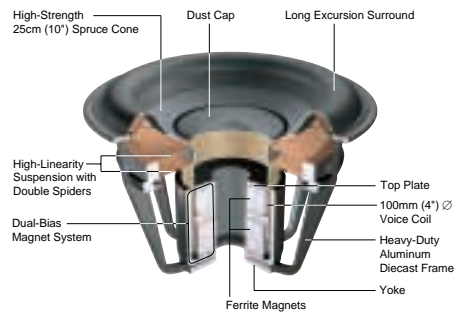
Extra-Long Stroke Drivers

Extra-long stroke, pure spruce drivers provide outstanding



QD-Bass Technology

Extra-Long Stroke Driver Construction (YST-SW800)



power with low distortion. The YST-SW800 also introduces new power supply technology and a driver featuring a Dual-Bias system with a 100mm (4") diameter voice coil for the ultimate in power and performance.

Ultra-Thick MDF Cabinet

The beautifully finished cabinet use ultra-thick (YST-SW800: 25mm; YST-SW320: 18mm) medium density fiberboard for minimum resonance.



YST-SW800

Digital Pro Series Subwoofer



YST-SW320

Digital Pro Series Subwoofer



YST-SW305

Digital Home Theater Subwoofer



YST-SW205

Digital Home Theater Subwoofer



YST-SW105

Digital Home Theater Subwoofer



Subwoofers	YST-SW800	YST-SW320	YST-SW305	YST-SW205	YST-SW105
Advanced Yamaha Active Servo Technology	Yes	Yes	Yes	Yes	Yes
QD-Bass (Quatre Dispersion Bass) Technology	Yes	Yes	Yes	Yes	Yes
High-Efficiency Power Amplifier	Yes	Yes	Yes	Yes	Yes
High-Efficiency Power Supply	Yes	Yes	Yes	Yes	Yes
Drivers	25cm (10") multi-range, extra-long stroke design with dual-bias system	25cm (10") multi-range, extra-long stroke design	Dual 20cm (8") multi-range	20cm (8") multi-range	20cm (8") multi-range
Magnetic Shielding	Yes	Yes	Yes	Yes	Yes
High Cut Filter (Continuously Variable Control)	40-140 Hz	40-140 Hz	40-140 Hz	40-140 Hz	50-150 Hz
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
Two Input Connections (Speaker or Line Level)	Yes	Yes	Yes	Yes	Yes
2-Way Binding-Post Speaker Terminals	Yes	Yes	Yes	Yes	Yes
Output Power	1,000 W	250 W	200 W	150 W	100 W
Frequency Response	18-160 Hz (-10 dB)	20-160 Hz (-10 dB)	20-160 Hz (-10 dB)	23-170 Hz (-10 dB)	30-200 Hz (-10 dB)
Dimensions (W x H x D)	390 x 482 x 420 mm 15 ³ / ₈ " x 19" x 16 ⁹ / ₁₆ "	340 x 432 x 370 mm 13 ³ / ₈ " x 17" x 14 ⁹ / ₁₆ "	235 x 585 x 445 mm 9 ¹ / ₄ " x 23" x 17 ¹ / ₂ "	235 x 485 x 402 mm 9 ¹ / ₄ " x 19 ¹ / ₈ " x 15 ¹³ / ₁₆ "	235 x 365 x 312 mm 9 ¹ / ₄ " x 14 ³ / ₈ " x 12 ⁵ / ₁₆ "
Weight	24 kg; 52.9 lbs.	17 kg; 37.5 lbs.	21 kg; 44.3 lbs.	15 kg; 33.1 lbs.	9.5 kg; 20.9 lbs.

High-Performance Speaker Systems Specifically Designed for Digital Home Theater Use.

The speakers you use for your home theater system will play an important role in determining its sound quality, and must be chosen with care. Because main and center speakers will be reproducing the dialogue and effects that make the real difference in a home theater system, they must be very high quality.



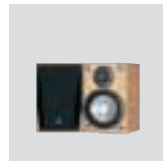
NS-6390
3-Way Acoustic Suspension Bookshelf Speaker System (Black Finish)



NS-6395
3-Way Acoustic Suspension Bookshelf Speaker System (Birch Color Finish)



NS-5290
2-Way Acoustic Suspension Bookshelf Speaker System (Black Finish)



NS-5295
2-Way Acoustic Suspension Bookshelf Speaker System (Birch Color Finish)

	NS-6390/NS-6395	NS-5290/NS-5295
Woofer	8" cone	6 1/2" cone
Midrange Driver	4" cone	
Tweeter	3/4" balanced-dome	3/4" balanced-dome
Input Power (Music/Nominal)	140 W/70 W	60 W/30 W
Frequency Response	45–20,000 Hz	60–20,000 Hz
Impedance	8 ohms	8 ohms
Sensitivity	91 dB/2.83 V/m	90 dB/2.83 V/m
Dimensions (W x H x D)	10 1/2" x 16 1/8" x 13 1/8"	8" x 12" x 9 13/16"
Weight	13.2 lbs./unit	7.5 lbs./unit



NS-A200XT
3-Way Performing Bass-Reflex Tower Speaker System



NS-A100XT
3-Way Performing Bass-Reflex Tower Speaker System



NS-A60X
3-Way Performing Bass-Reflex Speaker System

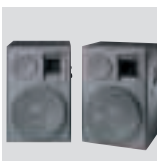


NS-A50X
2-Way Performing Bass-Reflex Speaker System

	NS-A200XT	NS-A100XT
Woofers	Dual 8" Aluminum	Dual 6 1/2" Aluminum
Midrange Driver	4 1/4" Aluminum	4 1/4" Aluminum
Tweeter	1" Aluminum dome	1" Aluminum dome
Input Power (Music/Nominal)	220 W/110 W	200 W/100 W
Frequency Response	35–20,000 Hz	40–20,000 Hz
Impedance	6 ohms	6 ohms
Sensitivity	89 dB/2.83 V/m	89 dB/2.83 V/m
Dimensions (W x H x D)	10 1/2" x 42" x 12 1/4"	9" x 37 3/4" x 15 1/4"
Weight	42.5 lbs./unit	35.5 lbs./unit



NS-AC40X
2-Way Performing Center Channel Speaker System



NS-AM200
Pro Monitor Speaker System



NS-AM100
Pro Monitor Speaker System

	NS-A60X	NS-A50X
Woofer	8" Aluminum	Dual 5 1/4" Aluminum
Midrange Driver	5 1/4" Aluminum	
Tweeter	3/4" Aluminum dome	1" Aluminum dome
Input Power (Music/Nominal)	140 W/70 W	140 W/70 W
Frequency Response	60–20,000 Hz	80–20,000 Hz
Impedance	6 ohms	6 ohms
Sensitivity	89 dB/2.83 V/m	89 dB/2.83 V/m
Dimensions (W x H x D)	10 1/2" x 20" x 12 1/4"	7 1/2" x 19 1/2" x 9"
Weight	24 lbs./unit	18.5 lbs./unit



NS-AW1
All Weather Speaker System (Black Finish Version)



NS-AW1W
All Weather Speaker System (White Finish Version)



NS-AW2W
All Weather Speaker System

	NS-AC40X	NS-AM200	NS-AM100
Woofers	Dual 5 1/4" Aluminum	12" high excursion polymer coated	8" high excursion polymer coated
Tweeter	1" Aluminum dome	1" throat compression horn	1" throat compression horn
Input Power (Music/Nominal)	160 W/70 W	270 W/90 W	210 W/70 W
Frequency Response	80–20,000 Hz	40–20,000 Hz	45–20,000 Hz
Sensitivity	89 dB/2.83 V/m	92 dB/2.83 V/m	92 dB/2.83 V/m
Dimensions (W x H x D)	19 1/2" x 7 1/2" x 7 7/8"	15 1/4" x 22 1/2" x 17 7/8"	10 1/4" x 16 1/2" x 12 7/8"
Weight	15 lbs.	49 lbs.	32 lbs.



NS-P610
Digital Home Theater 5.1-Channel Speaker Package
• Cherry Finish Available



NS-P220
Digital Home Theater 5.1-Channel Speaker Package

	NS-AW1/NS-AW1W	NS-AW2W
Acoustic Suspension Design	Yes (2-way bookshelf type for indoor/outdoor use)	Yes (2-way bookshelf type for indoor/outdoor use)
Glass Filled Cloth Woofer	5" high compliance	6 1/2" with rubber surround
Tweeter	1/2" Titanium balanced dome	1" Titanium balanced dome
Input Power (Music/Nominal)	120 W/60 W	160 W/80 W
Frequency Response	55–22,000 Hz ±3 dB	45–20,000 Hz
Impedance	6 ohms	6 ohms
Sensitivity	86 dB/2.83 V/m	86 dB/2.83 V/m
Dimensions (W x H x D)	5 7/8" x 8 1/2" x 5 1/2"	3 7/8" x 5 1/2" x 4 1/2"
Weight	4 lbs.	8 lbs.

	NS-P610	NS-P220
Main/Effect Speakers (x 4)	2-way bass-reflex 100 W music power	2-way acoustic suspension 100 W music power
Dimensions (W x H x D)	4 1/4" x 7 1/2" x 5 1/2"	5 1/2" x 3 7/8" x 4 3/8"
Weight	3.3 lbs.	1.5 lbs.
Center Speaker	2-way bass-reflex 125 W music power	2-way acoustic suspension 100 W music power
Dimensions (W x H x D)	12 1/4" x 4 x 5 1/2"	7 1/2" x 4 1/8" x 4 1/4"
Weight	5.1 lbs.	1.5 lbs.
Subwoofer	Advanced YST 70 W	Advanced YST 50 W
Dimensions (W x H x D)	9 1/4" x 14 3/8" x 12 1/2"	7 7/8" x 15 1/2" x 15 1/8"
Weight	19.8 lbs.	20.5 lbs.

● All speakers are magnetically shielded.

TABLETOP

Elegant Sound Systems



Stylish Compact Design, Flexible Placement, High Sound Quality

Yamaha introduces three Tabletop CD Receiver Systems that combine cool elegance with impressively good sound quality. Customers will also appreciate the fact that they can be set up almost anywhere, in a variety of configurations.



In the office

Add a touch of class to your office — and enjoy nice background music as well.



In the dining room

These systems will fit easily on a side table, so you can have musical accompaniment with your meals.



In the bedroom

Enjoy your favourite CDs or radio programmes at night or in the morning. And take advantage of the timer functions!



On a wall

The TSX-15 and TSX-10 are flat and light enough to hang on a wall. This saves you space and looks great, too.



TSX-20 
Tabletop CD Receiver System

High Sound Quality, 2-Way Bass Reflex Speakers with High-Gloss Finish and Detachable Grilles



TSX-15 
Tabletop CD Receiver System

2-Way Bass Reflex Speakers with High-Gloss Finish and Detachable Grilles can be used in four positions



TSX-10 
Tabletop CD Receiver System

2-Way Bass Reflex Speakers with Detachable Grilles can be used in four positions

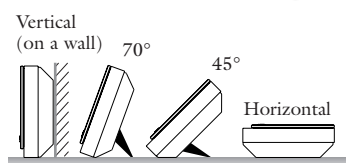
- Space-saving, free-layout design means it can be used in any room where there's a bit of free space
- Can be used in four positions: Vertical, 70°, 45° and Horizontal (TSX-20 Speakers: Vertical only)
- Compact and thin shape made possible by the highly efficient digital amplifier
- One-Touch Open/Close Acrylic Cover (TSX-15/20: smoky gray; TSX-10: ice green)
- CD-R/RW Playback Compatible CD Player
- High Power Output (18W x 2)
- 40-Station AM/FM Random Access Preset Tuner
- 12-Character Dot-Matrix FL Display with 6-Step Dimmer
- Versatile Timer Functions Including Snooze
- Card-Type Remote Control Unit

Dimensions (W x H x D)/Weight

- Center Units: 16" x 3¹/₈" x 8³/₈"/8.8 lbs.
- TSX-20 Speakers: 4¹⁵/₁₆" x 9¹/₁₆" x 5³/₄"/4.2 lbs.
- TSX-15/TSX-10 Speakers: 5¹/₂" x 8³/₈" x 3⁷/₂"/2.2 lbs.



Both the Center Units and the Speakers (except TSX-20 Speakers) can be used in four positions: vertical (standing or wall mount), 70°, 45°, or horizontal. Use the supplied stands for the 70° and 45° positions.





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

A lot of fine craftsmanship goes into Yamaha's world-renowned pianos, and that same dedication to sound and design excellence is behind the creation of the award-winning PianoCraft series. You have a choice of compact, high quality systems, each of which includes two speakers and the capability of adding a subwoofer.



PianoCraft Wins EISA Award
The PianoCraft Micro Component System (MCR-E100) has won an EISA award for Best Compact System 2000-2001. These prestigious awards are chosen by media representatives from 19 European countries.



MCR-E250 Micro Component System

CRX-E250 Receiver and CD Changer

RX-E200 AM/FM Stereo Receiver

- High Power Output: 50 W + 50 W (RMS)
- Linear Damping
- High Dynamic Power and Low-Impedance Drive Capability
- Discrete Configuration Amplifier
- Versatile Timer Functions: Clock, Timer and Sleep Timer
- Subwoofer Out
- 40-Station AM/FM Random Access Preset Tuning
- 8¹/₂" x 4¹/₄" x 12¹/₈" (W x H x D); 9.9 lbs.

CDC-E250 CD Changer

- 3-Disc PlayXchange
- CD Text Display: Title, Artist and Message
- CD-R/CD-RW Playback Compatibility
- Optical Digital Out for Sending the Digital Signal Directly to an MD Recorder or DCC Deck
- 8¹/₂" x 4¹/₄" x 13³/₄" (W x H x D); 6.6 lbs.

PLAYXCHANGE



NX-E200 2-Way Bass-Reflex Speaker System

- 5" Cone Woofer and 1" Dome Tweeter
- 110W Maximum Input Power
- 7³/₈" x 11³/₄" x 8³/₄" (W x H x D); 8.8 lbs./unit



MCR-E150 Micro Component System

CRX-E150 CD Receiver

RECEIVER SECTION

- High Power Output: 25 W + 25 W (RMS)
- Linear Damping
- High Dynamic Power and Low-Impedance Drive Capability
- Discrete Configuration Amplifier
- Subwoofer Out
- Bass/Treble/Balance Tone Controls
- 40-Station AM/FM Random Access Preset Tuning
- System Control Functions: Direct Input Source Selection, Timer Rec and Synchro Rec
- Versatile Timer Functions: Clock, Timer and Sleep Timer

PLAYER SECTION

- CD Text Display: Title, Artist and Message
- CD-R/CD-RW Playback Compatibility
- Copy Time Control
- Optical Digital Out for Sending the Digital Signal Directly to an MD Recorder or DCC Deck
- 8¹/₂" x 6⁵/₈" x 12¹/₈" (W x H x D); 11 lbs.

NX-E150 2-Way Bass-Reflex Speaker System

- 4¹/₂" Cone Woofer and 1" Dome Tweeter
- 110W Maximum Input Power
- 6¹/₂" x 10" x 7¹/₄" (W x H x D); 7.3 lbs./unit

Feast your ears on the finest audio.



some new amplifiers the ability to handle frequencies from 20 to 100,000Hz (+0, -3dB). Although the ear cannot hear the higher frequencies, it has been proven that these harmonics can affect sound reproduction quality. DVD-Audio, SACD and other new formats will be able to output sound over this range, so these models are fully compatible with products using these formats.

PLAYXCHANGE™

Enjoy Uninterrupted Music

Yamaha CD changers give you the benefits of extended playing time and direct selection from all discs. And with PlayXchange, you can change discs while the current one continues to play. You don't have to interrupt the music to change a disc and you're not limited to changing only one disc at a time.

Intelligent Digital Servo System

Conventional tracking servo circuitry cannot completely overcome errors caused by disc defects, warpage, dust and so on. This system adjusts pickup tracking and focus, as well as spindle motor speed, to compensate for any problems.

CD Text Display

Get information about the CD currently playing right on the CD player's display. The 3-mode text display shows the CD's title, the artist's name and the title of the track.

Play Trim Control and High Speed Dubbing Play Trim

Tapes recorded with Dolby NR on one deck may suffer from loss of sound quality when played on a different deck. Play Trim lets you compensate for the differences to maintain full Dolby quality. You can also use Play Trim during high speed dubbing, for greater convenience.

ToP-ART™

Total Purity Audio Reproduction Technology

ToP-ART (Total Purity Audio Reproduction Technology)

When processing and transmission of the audio signal is simple and direct there is less chance of it being affected by noise and distortion. Yamaha's amplifier design technology called ToP-ART features I/O (input to output) Direct Symmetrical Design, with left and right channels organized in a straight, symmetrical layout for highest signal purity.

High Dynamic Power, Low-Impedance Drive Capability

Yamaha amplifiers/receivers are capable of delivering large amounts of reserve power for accurate reproduction of high energy peaks. This emphasizes the music's dynamic qualities and provides a sharper sound image.

CD/DVD Direct Amplification

CD/DVD Direct Amplification Circuit

Engaged by a front panel switch, it matches CD/DVD signal levels so each stage produces less noise, resulting in improved S/N ratio and maintenance of the amp's total gain balance.

Linear Damping

Level variations due to high amp impedance tend to reduce an amplifier's damping factor, and frequency variations cause it to fluctuate. This circuit cancels the effect of these variations, maintaining a high, stable damping factor, for superior articulation of all sounds and better frequency response.

DVD-Audio/SACD Ready

Rather than the usual 20-20,000Hz frequency response, Yamaha has given

Receivers/Amplifier/Tuner	RX-777	RX-596	RX-496	RX-396	AX-596	TX-492
ToP-ART	■	■			■	
Pure Direct Switch	■	■	■		■	
CD Direct Amplification with Switch	■ (discrete configuration)	■			■ (discrete configuration)	
Min. RMS Output Power/Channel (8 ohms, 20-20,000 Hz) [THD]	100 W [0.019%]	80 W [0.025%]	75 W [0.04%]	50 W [0.04%]	100 W [0.015%]	
High Dynamic Power, Low Impedance Drive	■	■	■	■	■	■
Dynamic Power/Ch (8/4/2 ohms)	140/220/290 W	120/180/200W	105/150/178 W	70/89/100 W	140/220/290 W	
Linear Damping	■	■	■	■	■	■
Damping Factor (8 ohms, 20-20,000 Hz)	240 (speaker A)	240	100	100	320 (speaker A)	
Continuously Variable Loudness Control	■	■	■	■	■	■
Rec Out Selector	■	■			■	
Remote Controllable Input Selector	Motor-driven	Motor-driven	■	■	Motor-driven	
Remote Controllable Master Volume Control	Motor-driven	Motor-driven	Motor-driven	Motor-driven	Motor-driven	
40-Station Preset Tuning	■	■	■	■		■
THD (CD, 20-20,000 Hz)	0.012% (50 W/8 ohms)	0.01% (40 W/8 ohms)	0.02% (35 W/8 ohms)	0.02% (35 W/8 ohms)	0.008% (50 W/8 ohms)	0.3% (1 kHz)
Frequency Response	20-100,000 Hz ±1 dB	20-20,000 Hz ±0.5 dB	20-20,000 Hz ±0.5 dB	20-20,000 Hz ±0.5 dB	20-100,000 Hz ±0.5/-3 dB	30-13,000 Hz ±0.5 dB
Signal-to-Noise Ratio (CD)	110 dB	110 dB	108 dB	108 dB	110 dB	82/76 dB (mono/stereo)
Dimensions (W x H x D)	17 ¹ / ₈ " x 6" x 15 ⁵ / ₈ "	17 ¹ / ₈ " x 6" x 15 ⁵ / ₈ "	17 ¹ / ₈ " x 5 ³ / ₄ " x 12 ³ / ₈ "	17 ¹ / ₈ " x 5 ³ / ₄ " x 12 ³ / ₈ "	17 ¹ / ₈ " x 6" x 15 ⁵ / ₈ "	17 ¹ / ₈ " x 3 ³ / ₈ " x 15 ⁵ / ₈ "
Weight	21.6 lbs	20.9 lbs.	18.1 lbs	14.1 lbs.	23.4 lbs.	7.1 lbs.



RX-777 ToP-ART CD Direct Amplification

AM/FM Stereo Receiver

- ToP-ART
- CD Direct Amplification with Switch
- DVD-Audio/SACD Ready
- Gold-Plated Input Terminals (all terminals)



RX-596 ToP-ART CD Direct Amplification

AM/FM Stereo Receiver

- ToP-ART
- CD Direct Amplification
- Remote Controllable Motor-Driven Input Selector and Volume Control



AX-596 ToP-ART CD/DVD Direct Amplification

Integrated Amplifier

- ToP-ART
- CD/DVD Direct Amplification with Switch
- DVD-Audio/SACD Ready
- Gold-Plated Input Terminals (all terminals)



RX-496

AM/FM Stereo Receiver

- Pure Direct Switch
- 5 Audio Inputs with 2 Tape Monitor Positions
- I/O Port



RX-396

AM/FM Stereo Receiver

- 3 Audio Inputs with Tape Monitor Position
- I/O Port for Custom Installation
- 40-Station Preset Tuning



TX-492

AM/FM Stereo Tuner

- 40-Station Random Tuning
- Auto Preset Tuning
- Absolute Linear Phase IF Amplifier Circuitry



CDC-685 PLAYXCHANGE

CD Changer with PlayXchange

- Yamaha Patented PlayXchange
- CD-R/CD-RW Playback Compatibility
- 3-Mode CD Text Display
- I/O Port for Custom Installation



CDC-585 PLAYXCHANGE

CD Changer with PlayXchange

- Yamaha Patented PlayXchange
- CD-R/CD-RW Playback Compatibility
- 3-Mode CD Text Display
- Peak Search and Tape Edit



CDX-396

CD Player with Optical Digital Out

- CD-R/CD-RW Playback Compatibility
- Intelligent Digital Servo
- Optical Digital Output
- Peak Search and 3-Mode Tape Edit



KX-W421

Auto-Reverse Double Cassette Deck

- Play Trim Control and High-Speed Play Trim Control
- Dolby HX Pro Dynamic Bias Servo
- 4-Digit Tape Counters (both decks)



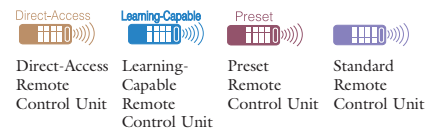
KX-W321

Auto-Reverse Double Cassette Deck

- Two (normal/high) Speed Dubbing
- Relay Play
- Dolby B/C NR
- Auto Tape Type Selection























PlayXchange is a registered trademark in the U.S. Yamaha has received a patent for PlayXchange technology in the U.S. (Patent No. 5,115,419).



CD Players	CDC-685	CDC-585	CDX-396
Yamaha Patented PlayXchange	■ (5-disc)	■ (5-disc)	
CD-R/CD-RW Playback	■ (playback)	■ (playback)	■ (playback)
CD Text Display	■	■	
Synchro Rec	■	■	■
Peak Search	■	■	■
Disc (Intro) Scan	■	■	
Tape Edit	■ (3-way)	■ (3-way)	■ (3-way)
Programmable Play	40-track	40-track	40-track
Optical Digital Output	■	■	■
4-Mode Time Display	■ (single, single remain, total, total remain)	■ (single, single remain, total, total remain)	■ (single, single remain, total, total remain)
3 Illumination Levels	■ (full, half dim, dim)	■ (full, half dim, dim)	■ (full, half dim, dim)
I/O Port for Custom Installation	■		
Harmonic Distortion + Noise	0.003%	0.003%	0.003%
Frequency Response	2-20,000 Hz ±0.5 dB	2-20,000 Hz ±0.5 dB	2-20,000 Hz ±0.5 dB
Signal-to-Noise Ratio	106 dB	106 dB	105 dB
Dynamic Range	96 dB	96 dB	95 dB
Dimensions (W x H x D)	17 ¹ / ₈ " x 4 ⁹ / ₁₆ " x 15 ⁷ / ₈ "	17 ¹ / ₈ " x 4 ⁹ / ₁₆ " x 15 ⁷ / ₈ "	17 ¹ / ₈ " x 3 ³ / ₄ " x 10 ⁷ / ₈ "
Weight	12.7 lbs.	12.7 lbs.	8.2 lbs.

Cassette Decks	KX-W421	KX-W321
Play Trim Control	■ (both decks)	
Dolby HX Pro Dynamic Bias Servo	■	
CD-Tape Synchro Rec Start		■
Peak Level Meters	2-color, 12-segment with peak hold	2-color, 12-segment with peak hold
4-Digit Tape Counter	■ (both decks)	■ (both decks)
Recording Level Control	■	■
Recording Balance Control	■	
Auto Tape Type Selection	■	■
Wow & Flutter	W RMS 0.08% W Peak ±0.15%	0.08% ±0.15%
Frequency Response	Metal 20-20,000 Hz, ±3 dB High Position 20-18,000 Hz, ±3 dB Normal 20-17,000 Hz, ±3 dB	20-19,000 Hz, ±3 dB 20-17,000 Hz, ±3 dB 20-16,000 Hz, ±3 dB
Signal-to-Noise Ratio	NR Off 58 dB Dolby B NR 66 dB Dolby C NR 74 dB	58 dB 66 dB 74 dB
Dimensions (W x H x D)	17 ¹ / ₈ " x 5 ³ / ₄ " x 11"	17 ¹ / ₈ " x 5 ³ / ₄ " x 11"
Weight	11 lbs.	11 lbs.

MAIN AWARDS (Jan. 2001–Jan. 2002)

Product	Area	Publication	Issue	Recommendation	
● Video Projectors					
DPX-1	Europe	EISA	'01/'02	Best video projector of '01/'02	
DPX-1	Germany	AudioVideo	Nov. '01	Test winner	
DPX-1	U.K.	WHAT HI*FI	Dec. '01	★★★★★	
DPX-1	Portugal	AUDIO	Dec. '01	An astonishing image	
● A/V Receivers/Amplifiers/Processors					
RX-V1	U.S.	Home Theater	Aug. '00	Yamaha's flagship RX-V1 has enough power and flexibility to float anyone's boat.	
DSP-AX1	Germany	Stereo	Apr. '01	Excellent 100 (full) points	
DSP-AX1	Germany	HeimKino	Apr. '01	Top class review "Opening new standard"	
RX-V3000RDS	Germany	DVD Home	Feb. '01	Excellent	
RX-V1200	U.S.	Sound & Vision	Jan. '02	Top performance	
RX-V1200	Indonesia	Audio Video	Jan. '02	The most recommended home theater receiver	
RX-V1000RDS	France	Home Theater	Feb. '01	A product very nice to use. A powerful amplifier. The "Silent CINEMA" mode is amazing!	
RX-V1000RDS	U.K.	ESSENTIAL HOME CINEMA	Dec. '01	Amp/receiver of the year: Winner	
RX-V800RDS	U.K.	Home Cinema Choice	Apr. '01	Award winner	
RX-V800	Australia	sound & image	'01	An amplifier/receiver of the year \$1000–1999	
RX-V620RDS	Germany	Heimkino	Sept. '01	Upper class	
RX-V620RDS	Sweden	HammaBio	June '01	★★★★★	
RX-V620RDS	Finland	HiFi-lehti	10/'01	Test Winner	
RX-V520RDS	U.K.	Home Cinema Choice	Jan. '02	Best buy	
RX-V420RDS	Sweden	HammaBio	Oct. '01	Once again the leader of AV receiver!	
● DVD Players					
DVD-S1200	Japan	Ongen Shuppan	'01/'02	Visual Grand Prix	
DVD-S510	U.K.	WHAT HI*FI	June '01	★★★★★	
● Speakers					
NS-8HX	Japan	Ongen Shuppan	'01/'02	Visual Grand Prix	
NS-200	U.K.	WHAT HI*FI	Aug. '01	★★★★★	
NS-200	U.K.	WHAT HI*FI	May. '01	★★★★★	
● Subwoofers					
YST-SW800	Germany	Area DVD internet	Jan. '01	Reference class	
YST-SW800	Greece	HI-TECH	Apr. '01	Best buy	
YST-SW800	U.K.	WHAT HI*FI	Dec. '01	★★★★★	
YST-SW320	Sweden	HammaBio	Oct. '01	Quality build!	
YST-SW320	U.K.	WHAT HI*FI	Sept./Oct. '01	Best subwoofer: Best buy	
YST-SW320	Japan	Ongen Shuppan	'01/'02	Visual Grand Prix: Best of subwoofers	
YST-SW45	U.K.	WHAT HI*FI	May '01	★★★★★	
● Systems					
DVX-S100	U.S.	TECH TV	Jan. '02	Best of CES Home Theater Winner	
HTiB 40	U.K.	WHAT HI*FI	Sept./Oct. '01	Best HTiB: Best buy	
VS-10	U.K.	What Video & TV	Jan. '02	★★★★★	
VS-10	Japan	Ongen Shuppan	'01/'02	Visual Grand Prix	
PianoCraft (E200)	U.K.	Which?	Nov. '01	Best buy	
PianoCraft (E200)	Sweden	HiFi & Musik	Dec. '01	Best buy (No negative point!)	
PianoCraft (E-150)	U.K.	WHAT HI*FI	Jan. '02	★★★★★	
PianoCraft (E250)	U.S.	Time	Dec. '01	Recommended for Christmas gift	
● Recorders					
CDR-HD1000	U.K.	WHAT HI*FI	Jan. '02	★★★★★	
CDR-HD1000	U.S.	Sound & Vision	'01	Reviewer's Choice Award, 2001	
KX-393	U.K.	WHAT HI*FI	Sept./Oct. '01	Best recorder: Best buy	

* The DSP-AX1 provides the same performance and features as the RX-V1 except for tuner functions.



Yamaha's unique technology for the creation of sound fields is capable of powerfully reproducing the three-dimensional environment that movie sound engineers aim to convey, in any audio format from monaural to the latest 6.1-channel digital surround. It is compatible with DVD and all other A/V sources.

Yamaha CINEMA DSP technology has received a patent in the U.S. (Patent No. 5,261,005).

- Dolby Digital and Double D are trademarks of Dolby Laboratories Corporation.
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- Screen images are simulated.
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