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New Product Information

YAMAHA

R/A/T

RX-V620

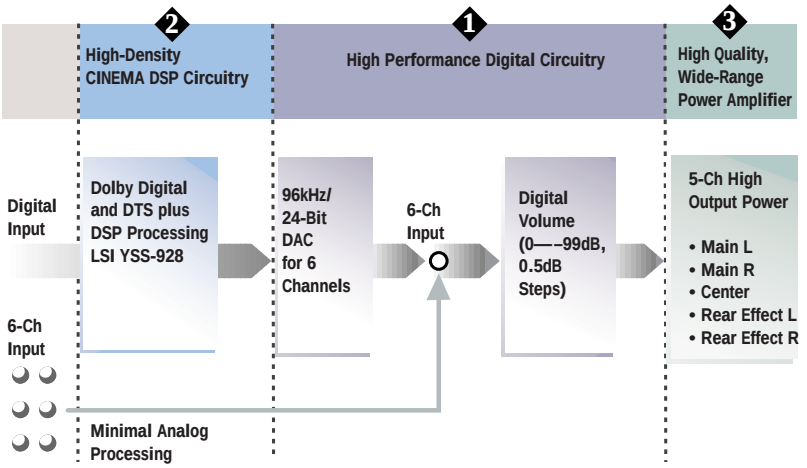
Digital Home Theater Receiver

New Powerful Home Theater Receiver Features the Digital ToP-ART Design Concept, 26 Surround Programs, Versatile Digital Input/Output Capability, On-Screen Display, and User Friendly Features. Incredible Cost/Performance in the Middle Price Range.

CINEMA DSP DIGITAL™ silent CINEMA DOLBY DIGITAL DIGITAL dts SURROUND 6CH EXT. INPUT

Black finish available in some areas.

DIGITAL ToP·ART



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New Product Information

RX-V620

Digital Home Theater Receiver

- **Digital ToP-ART**
- **Newly Developed 32-Bit Original LSI (YSS-928) for High Precision Decoding and CINEMA DSP Processing**
- **26 Surround Programs with 18 CINEMA DSP and 5 HiFi DSP Programs**
- **96kHz/24-Bit D/A Conversion**
- **Digitally Regulated Volume Control for All Channels**
- **Equal 5-Channel High Power Amplifier**
- **SILENT CINEMA for Headphone Enjoyment**
- **Virtual CINEMA for Versatile Surround Enjoyment**
- **On-Screen Display**
- **Bass Extension**
- **Versatile Digital Input/Output Capability**

DIGITAL ToP·ART

2 High Density CINEMA DSP Circuitry

- Yamaha Original 32-Bit Floating-Point Quantization System LSI (YSS-928) for High Precision Decoding and CINEMA DSP Processing
- 26 Surround Programs with 18 CINEMA DSP and 5 HiFi DSP Programs
- SILENT CINEMA for Headphone Enjoyment
- Virtual CINEMA DSP for Versatile Surround Enjoyment

1 High Performance Digital Circuitry

- 96-kHz/24-Bit Digital-to-Analog Converters for All Channels
- Digitally Regulated Volume Control for All Channels
- High Sound Quality Multi-Function Processing Board, with Fully Shielded Cabinet for Reduced Digital Interference

3 High Quality Power Amplifier

- Total Low-Impedance Design
- High Dynamic Power, Low Impedance Drive Capability
- Linear Damping [Damping Factor (Main Ch, 8 ohms, 20—20,000 Hz): 80]
- Finest Parts Used Throughout
- Anti-Resonance, Aluminum-Extruded Heat Sink
- Discrete Power Supply Configuration

RX-V620 Surround Programs

HiFi DSP Programs	Analog Input	Dolby Digital Input	DTS Input
■CONCERT HALL	■Concert Hall	■<——	■<——
■JAZZ CLUB	■Jazz Club	■<——	■<——
■ROCK CONCERT	■Rock Concert	■<——	■<——
■ENTERTAINMENT	■Disco	■<——	■<——
	■5 Ch Stereo	■<——	■<——
Programs	8 Programs		

Surround Programs	Analog Input	Dolby Digital Input	DTS Input
	■Dolby Pro-Logic Normal	■Dolby Digital Normal	■DTS Digital Sur. Normal
Programs	1 Program	1 Program	1 Program

CINEMA DSP Programs	Analog Input	Dolby Digital Input	DTS Input
■ENTERTAINMENT	●Game	●<——	●<——
■MONO MOVIE	●Mono Movie	●<——	●<——
■TV SPORTS	●TV Sports	●<——	●<——
■MOVIE THEATER 1	●70mm Spectacle	●Dolby Digital Spectacle	●DTS Digital Sur. Spectacle
	●70mm Sci-Fi	●Dolby Digital Sci-Fi	●DTS Digital Sur. Sci-Fi
■MOVIE THEATER 2	●70mm Adventure	●Dolby Digital Adventure	●DTS Digital Sur. Adventure
	●70mm General	●Dolby Digital General	●DTS Digital Sur. General
■DOLBY/DTS SURROUND	●Dolby Pro-Logic Enhanced	●Dolby Digital Enhanced	●DTS Digital Sur. Enhanced
Programs	8 Programs	5 Programs	5 Programs
Program Total	14 Programs	6 Programs	6 Programs
Program Grand Total: 26 Programs			

Remarks

■: HiFi DSP Programs ■: A/V Programs
●: CINEMA DSP ●: Tri-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.

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Versatile, Extensive Connections

- 4 Optical and 1 Coaxial Digital Input Terminals (fixed and assignable, except Video Aux)
- 1 Optical Output Terminal (fixed and assignable)
- 2 Component Video Input Terminals (fixed and assignable) and 1 Monitor Output Terminal with HDTV Compatibility

Fixed and Assignable Terminals
Yamaha offers terminals that can be either independently assigned to sources or defaulted to fixed settings.

- 5 A/V (with S-Video) and 3 Audio Input Terminals
- 2 A/V and 1 Audio Output Terminals
- Front Panel Aux Input Terminals with Optical Digital and S-Video Terminals: Auxiliary terminals with optical digital input on the front panel make it convenient to connect a digital game machine so you can enjoy DVD games and movies.
- Wide-Range Frequency Response for DVD-Audio Compatibility
- 6-Channel External Decoder Input Terminals for Future Sound Formats
- Subwoofer Output Terminal
- 2-Way Binding-Post Speaker Terminals (banana-plug compatible and large binding-post type, all terminals)

Convenient Operating Features

- On-Screen Display
- Auto Priority Input Selection and Auto Decoder Selection
- Convenient “Set Menu”
  - Speaker Set Functions (Center, Main, Rear, LFE/Bass and Main Level)
  - L/R Balance
  - Headphone Tone Control
  - I/O Assignment
  - Input Mode
  - Dolby Digital Set
  - DTS Set
  - Speaker Delay Time
  - Display Set
  - Memory Guard
- Bass Extension
- Speaker A/B Selector
- Sleep Timer
- Luminescent Preset Remote Control Unit
  - Preset Remote Capability with Control Code for TV, VCR, CDR, etc.
  - Subwoofer Level Controllable

High Reception Tuner

- 40-Station AM/FM Random Access Preset Tuning
- Auto Preset Tuning (FM Station Memory and Editing)

RX-V620 vs. RX-V596		RX-V620		RX-V596	
Digital ToP-ART		Yes		—	
Surround Decoding and DSP Processing		Yamaha 32-Bit YSS-928 LSI		Yamaha 24-Bit YSS-918 LSI	
Surround Program		26 programs including 5 ch stereo		23 programs	
Digitally Regulated Volume Control		Yes (for all channels)		—	
SILENT CINEMA for Headphone Enjoyment		Yes		—	
Virtual CINEMA DSP		Yes		—	
Min. RMS Output Power	Main Ch	90 W + 90 W	(0.06% THD)	70 W + 70 W	(0.06% THD)
(8 ohms, 20—20,000 Hz)	Center Ch	90 W	(0.06% THD)	70 W	(0.06% THD)
	Rear Effect Ch	90 W + 90 W	(0.06% THD)	70 W + 70 W	(0.06% THD)
Max Power	Main Ch	115 W + 115 W		105 W + 105 W	
	Center Ch	115 W		105 W	
	Rear Effect Ch	115 W + 115 W		105 W + 105 W	
D/A Converters		96-kHz 24-Bit (all channels)		96-kHz 24-Bit (all channels)	
Digital Input Terminals		4 optical and 1 coaxial (fixed and assignable, except Video Aux)		3 optical and 2 coaxial (fixed)	
Digital Output Terminal		1 optical (all, fixed and assignable)		—	
Component Video Input/Output Terminals		2 input (fixed and assignable)/1 output (monitor)		—	
Component Video Monitor Out Frequency Response		DC–30 MHz –3 dB (HDTV compatible)			
A/V Input/Output Terminals		5 input/2 output (with S-video)/1 monitor out (with S-video)		5 input/1 output (with S-video)/1 monitor out (with S-video)	
Audio Input/Output Terminals		3 input/1 output		3 input/1 output	
Front Panel Input Terminals		Yes (with optical digital and S-video)		Yes (with S-video)	
Subwoofer Output Terminal		Yes		Yes	
High Dynamic Power, Low-Impedance Drive Capability		Yes		Yes	
Dynamic Power/Ch (8/6/4/2 ohms)		120/140/175/210 W		90/110/135/160 W	
Linear Damping		Yes		Yes	
Damping Factor (8 ohms, 20–20,000 Hz)		80 (main ch, speaker A)		80 (main ch, speaker A)	
Frequency Response		10—100,000 Hz	+0/–3 dB	10—100,000 Hz	+0/–3 dB
Signal-to-Noise Ratio	(CD)	100 dB	(250 mV)	103 dB	(250 mV)
Dimensions (W x H x D); Weight		435 x 151 x 390 mm; 10.5 kg		435 x 151 x 391 mm; 11.2 kg	

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RX-V620 Digital Home Theater Receiver

6-Channel External Decoder Input for Future Sound Formats

40-Station AM/FM Random Access Preset Tuning

2 Component Video Inputs (fixed and assignable) and 1 Monitor Out with HDTV Compatibility

Versatile Digital Inputs/Outputs: 4 Optical/1 Coaxial Digital Inputs (fixed and assignable) and 1 Optical Output (fixed and assignable)

All speaker terminals are banana-plug compatible and large binding-post type.

5 A/V (with S-Video) and 3 Audio Inputs, and 2 A/V and 1 Audio Outputs

Subwoofer Output Terminal

RX-V620 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
PHONO	■		▪		▪							
CD	■		■		▪	▪						
MD/CD-R	■	■	▪		■	■						
DVD	■		▪		■	▪	■		■		■	
D-TV/CBL	■		▪		■	▪	■		■		■	
VCR 1	■	■	▪		▪	▪	■	■	■	■	▪	
VCR 2	■	■	▪		▪	▪	■	■	■	■	▪	
Video Aux	■		▪		■	▪	■		■		▪	
Monitor Out								■		■		■*

Fixed (■) and Assignable (▪) Terminals

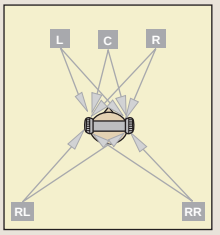
***HDTV Compatible Component Video Out**
Frequency response of Component Video Out signal is DC – 30MHz, making it compatible with HDTV monitors.

HRTF (Head-Related Transfer Functions)

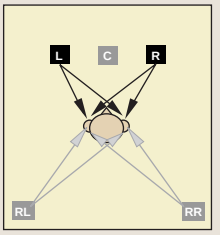
Transfer functions refer to the transmission of sound to the ears and between the ears and the brain. Head-related refers to the method of measuring transfer functions by placing clinical probe microphones in the ear channels of people in anechoic chambers and recording measurements at many positions around their heads.

Using these "HRTF maps," Yamaha engineers were able to direct sound into the ears via headphones that accurately reproduces speaker sound from various directions. This is the basis of SILENT CINEMA.

Virtual CINEMA DSP is also based on HRTF, and employs aggressive crosstalk cancellation technology. In essence, the crosstalk signals from the left speaker to the right ear and vice-versa are cancelled and replaced by new signals that simulate rear speakers. Thus you perceive surround sound without actually having rear speakers.



SILENT CINEMA Principle



Virtual CINEMA DSP Principle

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