

JVC[®]

The Perfect Experience / —
/

HI-FI
COMPONENTS
2005



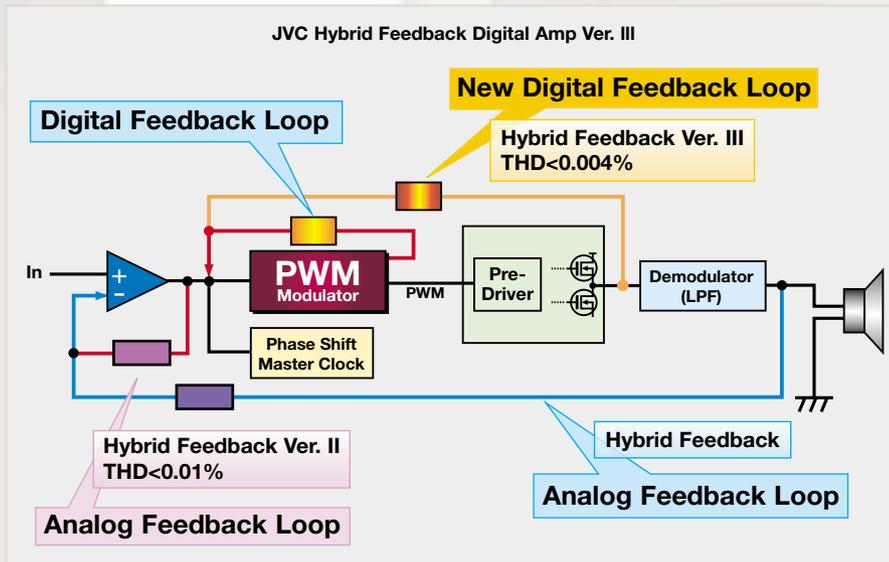


An Evolution in Technology and Style For the Latest in Home Theater

JVC's enthusiasm for providing the leading-edge products leads to yet another evolution in technology — and style. The latest generation of our A/V control receivers feature a sleek profile to complement today's home theater systems. The streamlined designs each offer advanced digital audio and video features. Upgrade your home theater system in style.



Sophisticated digital circuitry for high performance



High-Performance DSP

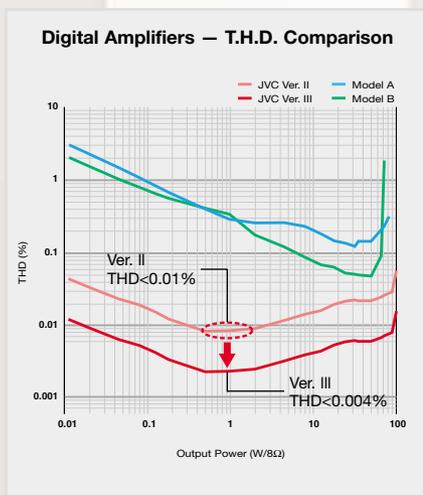
At the heart of JVC A/V receivers is a high-performance DSP. The RX-D702 comes with a Texas Instruments DSP (TMS320DA601). Currently, it is one of world's fastest, highest-performing chips of its kind, replacing two conventional DSP chips. Clocking at 1,800MIPS* or 1,200MFLOPS** (at 225MHz clock speed), this chip boasts one of the highest processing power ratings on the market and features 32/64-bit double-precision operations for accuracy. Its floating-point operations allow for more accurate calculations with an expanded range of numbers. Additionally, the chip's compact size is conducive to reduction in digital noise.

All the other units come with the advanced Freescale DSP56371, which features superior sound field processing power.

The high-performance DSPs are compatible with many of today's home cinema sound formats, including Dolby Digital EX, Dolby Pro Logic IIx, DTS-ES, DTS 96/24, and DTS NEO:6. Plus, the devices handle the JVC-exclusive DAP, digital EQ, midnight mode, and other functions.

Advanced Digital Acoustics Processor (DAP)

The JVC DAP allows digital recreation of acoustic environments — halls, pavilions, etc. — in your media room. JVC developed a new sound field simulation technology jointly with one of leading concert-hall designers and contractors. Capable of handling multi-channel sources, it makes use of a vast amount of data for the creation of sound field patterns that are difficult with conventional processing systems based on field-measured impulse responses. Each sound field pattern is verified and modified repeatedly by critical auditions. The result is that sound fields are reproduced most naturally, with early reflections simulated realistically. Moreover, the processor is compatible with multi-channel sources such as Dolby Digital and DTS.



Hybrid Feedback Digital Amplifier

Hybrid Feedback Digital Amp Ver. III

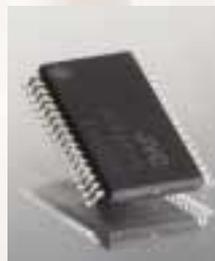
Despite their ultra-slim design, JVC's A/V control receivers provide amplification for up to seven channels. The secret to this outstanding feat is the JVC-exclusive Hybrid Feedback Digital Amp.

A digital amp first digitizes the music signal, then amplifies it. The process of digital amplification combines high efficiency and reduced power dissipation through heat loss. So a digital amp requires a smaller transformer and power supply, permitting compact size and lightweight design.

But with conventional digital amps, the process of converting analog signals to digital leads to the generation of digital noise. Fluctuations in the power supply voltages and power-supply noise can also aggravate analog noise.

The JVC Hybrid Feedback Digital Amp solves the problem by using two feedback loops. The digital feedback loop significantly improves the precision with which the PWM (Pulse Width Modulation) signals are generated. The analog feedback loop "brushes up" the waveform of the analog signal at output to match the original.

What's more, this JVC exclusive design is upgraded to "Version III," which features double feedback loops for both digital and analog. It effectively reduces the distortion caused by speaker impedance, enabling even lower total harmonic distortion — around 0.004 percent. This year, a new IC dubbed "JCV8015" was developed to contain all the circuits necessary for signal processing, including dual audio input circuits, the Hybrid Feedback Signal Processing Circuit, and PWM modulators. This allows a drastic reduction in parts and a smaller "footprint."



* MIPS (Million Instructions per Second): A 1MIPS computer processes 1 million instructions per second. An "instruction" is a command sent out to a DSP to directly control and operate it.
 ** FLOPS (Floating Point Operations per Second): the number of floating-point calculations per second performed with real numbers.



CC Converter

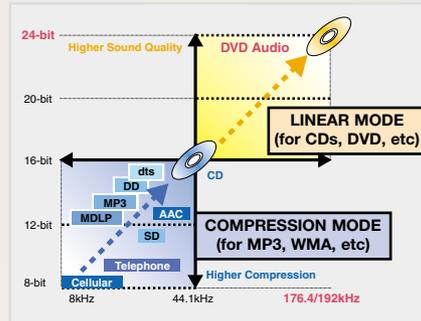
When an analog signal is converted into digital (A/D conversion), high frequencies — normally those higher than 20kHz with CDs — are removed as dictated by the CD's sampling frequency. Absence of this high-frequency data affects the quality of sound in the audible range.

The CC Converter features exclusive algorithms to restore lost signals based on the recorded digital signals of audible frequencies, those frequencies that should have been recorded in the first place. It also uses high-bit quantization to reproduce minute signals. Moreover, in order to precisely reproduce the signals that have undergone such processing, the CC Converter features a broader analog bandwidth (up to 4 times the sampling frequency) extending beyond 20kHz. This improves the quality of the music data in

the audible range.

Through high-bit/high-sampling processing, the CC Converter generates expanded digital signals with a quality close to that of the original master.

In response to the growing popularity of PC music files, JVC has upgraded the CC Converter so it applies different algorithms for non-compressed hi-fi (CDs, DVDs and other linear formats) and compressed audio (MP3, WMA, and others). Compressed music has never sounded better or clearer.



DTS 96/24

DTS 96/24 allows encoding 5.1 channel soundtracks at a rate of 96kHz/24 bits on DVD-Video. So it can deliver 5.1 channels in 96/24 along with full-motion video for feature film soundtracks and music programs on DVD-Video (and DVD-Audio for sound only).

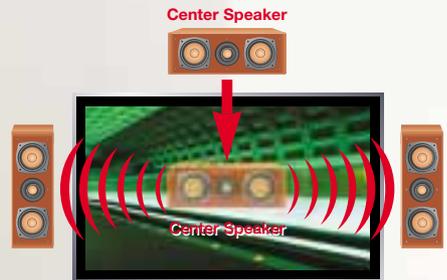
Virtual Surround Back

In case your home theater is a 5.1-channel setup, Virtual Surround Back lets you upgrade to 6.1-channel surround without adding any more speakers. When the source you play comes with 6.1-channel surround (Dolby Digital EX or DTS ES), information in the Surround Back channel is distributed to Surround Left and Surround Right channels. Sound effects can be placed right behind you to put you in the middle of the action.

Center-Channel Alignment

The center speaker is usually placed on top of or under the display, while the front speakers are set at or near ear level. The result is that dialog, carried by the center speaker, seems out of place relative to music and sound effects. JVC's exclusive DSP application virtually positions the center speaker to align it with other speakers with respect to height. The dialog simply sounds more natural.

(RX-D702, RX-D302, RX-D301, RX-D202, RX-D201)



Quick Speaker Setup

This is an "unpack and play" convenience. To set up your home theater properly, just input the number of speakers you use and the size of your listening/viewing room — that's all. You can skip the elaborate steps you normally have to follow before the show starts for the first time. Anytime later, you can adjust settings to your personal taste. (RX-D302, RX-D301, RX-D202, RX-8040)

Advanced features for multi-channel surround



Dolby Digital EX

Dolby Digital EX is an extended specification for the Dolby Digital Multi-Channel Audio System. It adds an extra channel — a matrixed surround back channel — to the 5.1 discrete channels of Dolby Digital. The added channel is matrix-encoded into the left surround (LS) and right surround (RS) channels; on playback, the encoded signals are decoded into a separate surround back (SB) channel. Surround is now reproduced by three different signals to provide higher definition and a smoother sense of motion.



Dolby Pro Logic IIx

Dolby Pro Logic IIx offers the choice of processing any stereo or 5.1-channel source into 6.1-channel or 7.1-channel surround sound — 5.1-channel surround plus one or two surround back channels — to provide a seamless, enveloping sound experience. Using advanced steering logic, it allows high channel separation and an exceptionally stable sound field. Two modes are available: **Movie mode**, optimized for movies and programs with Dolby Surround soundtracks, and **Music mode** for creating a rich and enveloping surround ambience from stereo sources such as CDs. (RX-D702, RX-D302, RX-D301, RX-D202, RX-D201, RX-8040)



DTS-ES

DTS-ES was developed by Digital Theater Systems, Inc. in 1999 for movie theaters. Upward compatible with the conventional DTS Digital Surround format, it significantly improves 360-degree localization and spatial expression utilizing surround signals that have been further extended.

• DTS-ES Discrete 6.1

All 6.1 channels, including the newly added SB (Surround Back) channel, are digital, discrete and separate. Because each channel is completely independent, the sense of direction and definition in surround sound is accurately expressed.

• DTS-ES Matrix 6.1

In the Matrix 6.1 format, the added surround back (SB) channel is matrix-encoded into the left surround (LS) and right surround (RS) channels. On playback, the encoded signals are decoded into separate LS, RS and SB channels. This allows a surround sound that is close to what the sound producers intended.

DTS NEO:6

DTS NEO:6 Surround provides 6.1-channel surround from conventional stereo sources. All channels are full-range, with 20Hz-20kHz frequency response, and separation is almost discrete. You can choose DTS NEO:6 Cinema or DTS NEO:6 Music according to the program you are playing.

Sophisticated digital technologies matching the latest home theater needs

USB Wireless Terminal

PC Link — Wireless USB and Wired USB

You can digitally send audio from your PC (MP3, WMA, and even Internet streamed audio) to a JVC receiver and from there through your audio system.

USB Transmitter Provided



USB Input



HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

HDMI Input/Output

HDMI (High-Definition Multimedia Interface) is a next-generation digital interface, the industry-supported standard for digital audio and video used at home. Its advantages include:
 1) HDMI is the only interface for consumer electronics that can handle high-definition video

JVC A/V receivers feature USB to interface with your PC — Wireless USB, which uses the built-in transceiver (transmitter/receiver), and Wired USB, which uses a USB cable. Combined with CC Converter — which significantly improves the sound quality of compressed music files from PC — this function lets you experience sound far superior to what comes from your laptop's tiny speakers.

With Wireless USB, 2Mbps transmission rate using the 2.4GHz band allows lossless reproduction of even uncompressed files. Use of DSSS (Direct Sequence Spreading Spectrum) modulation technology enables transmission of uncompressed signals with superior resistance against noise, which retains superb sound quality.

Wireless Digital Signal Reption and Transmission*



RX-D702/RX-D302/RX-D301

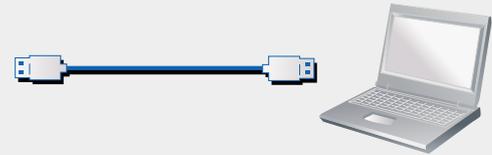
* Available when the two devices are in the same room.

Built-in Receiver & Transmitter

USB Input (Wired)



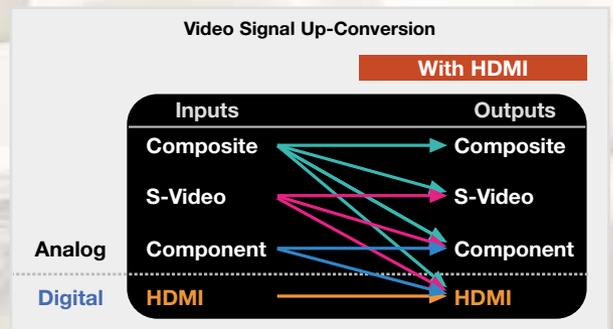
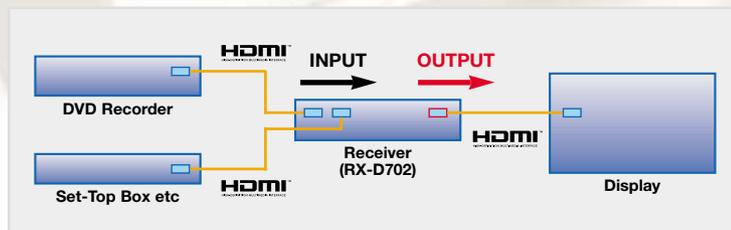
RX-D702/RX-D302/RX-D301/RX-D202/RX-D201



- and multi-channel audio, both in uncompressed format. HD video formats supported include 720p (progressive) and 1080i (interlaced).
- 2) HDMI allows transmission of audio and video signals over a single cable.
- 3) HDMI supports HDCP (High-bandwidth Digital Content Protection).
- 4) HDMI is backward compatible with DVI formats. (RX-D702)

Video Signal Up-Conversion

The RX-D702, RX-D302 and RX-D301 can convert the format of a video input to other compatible signals for output (composite to S-Video, for instance). With the RX-D702, the format of an input can be converted to HDMI format for display on a compatible monitor with easy, one-cable connection.





RX-D702

Audio/Video Control Receiver

7-Channel Receiver Featuring HDMI, New Digital Amplifier, and Wireless PC Connectivity

Hybrid Feedback
Digital Amplifier

DOLBY
DIGITAL+EX
PRO LOGIC II

DTS
ES
20
NEO:6

3D-PHONIC

K2
TECHNOLOGY

CC
CONVERTER

HDMI

AV COMPU LINK

Custom

Consumer Value LoOut

- Stereo: 150 watts per channel, 6 ohms, from 20Hz to 20kHz, with 0.8% THD
- Surround: (Front) 150 watts per channel, 6 ohms at 1kHz, with 0.8% THD; (Center) 150 watts, 6 ohms at 1kHz, with 0.8% THD; (Surround) 150 watts per channel, 6 ohms at 1kHz, with 0.8% THD; (Surround Back) 150 watts per channel, 6 ohms at 1kHz, with 0.8% THD
- Dolby Digital EX/Dolby Digital/Dolby Pro Logic II/Dolby Pro Logic II
- DTS/DTS-ES/DTS NEO:6/DTS 96/24
- DVD Multi-Channel Audio Compatible

- Hybrid Feedback Digital Amplifier Ver. III
- HDMI — for single-cable, all-digital transmission of audio and video signals
- Wireless Connection with PC — enjoy playback of music files from PC
- CC Converter (2 Modes, Front Channels) — offers two modes for improving the sound quality of compressed audio and non-compressed sources, respectively
- USB Input for receiving audio signals from PC
- SIRIUS Input and SIRIUS Control on Remote
- On-Screen Display
- Center-Channel Alignment
- Virtual Surround Back for creating even wider sound field without a surround back speaker
- 3D-PHONIC
- DAP for Multi-Channel Digital Sources: THEATER 1/THEATER 2/HALL 1/HALL 2/ DANCE CLUB/LIVE CLUB/PAVILION

- DAP for 2-Channel Sources: MONO FILM/THEATER 1/ THEATER 2/HALL 1/HALL2/ DANCE CLUB/LIVE CLUB/ PAVILION/ALL CH STEREO
- 3D Headphone
- 192kHz/24-bit P.E.M. D.D. Converter (Front Channels)
- Video Up-Conversion (to HDMI) for single-cable output of high-quality video from any input terminals
- One-Touch Operation
- DSP Digital Equalizer
- AV COMPU LINK
- Multi-Brand A/V-STB (CATV/ DBS) Glow Remote Control





RX-D302

RX-D302/RX-D301 Audio/Video Control Receiver

7-Channel Receiver with Wireless PC Connectivity, New Digital Amplifier, and CC Converter



- Stereo: 110 watts per channel, 6 ohms, from 20Hz to 20kHz, with 0.8% THD
- Surround: (Front) 110 watts per channel, 6 ohms at 1kHz, with 0.8% THD; (Center) 110 watts, 6 ohms at 1kHz, with 0.8% THD; (Surround) 110 watts per channel, 6 ohms at 1kHz, with 0.8% THD; (Surround Back) 110 watts per channel, 6 ohms at 1kHz, with 0.8% THD
- Dolby Digital EX/Dolby Digital/Dolby Pro Logic II/Dolby Pro Logic II
- DTS/DTS-ES/DTS NEO:6/DTS 96/24
- DVD Multi-Channel Audio Compatible

- Hybrid Feedback Digital Amplifier Ver. III
- Wireless Connection with PC — enjoy playback of music files from PC
- CC Converter (2 Modes, Front Channels) — offers two modes for improving the sound quality of compressed audio and non-compressed sources, respectively
- USB Input for receiving audio signals from PC
- Center-Channel Alignment
- Virtual Surround Back for creating even wider sound field without a surround back speaker
- 3D-PHONIC
- DAP for Multi-Channel Digital Sources: THEATER 1/THEATER 2/HALL 1/HALL 2/ DANCE CLUB/LIVE CLUB/PAVILION
- DAP for 2-Channel Sources: MONO FILM/

- THEATER 1/THEATER 2/HALL 1/ HALL 2/DANCE CLUB/ LIVE CLUB/PAVILION/ ALL CH STEREO
- 3D Headphone
- 192kHz/24-bit P.E.M. D.D. Converter (Front Channels)
- Video Up-Conversion (Composite to S-Video/ Composite to Component)
- Quick Speaker Setup
- One-Touch Operation
- DSP Digital Equalizer
- AV COMPU LINK
- Multi-Brand A/V-STB (CATV/ DBS) Glow Remote Control



RX-D301



RX-D202

RX-D202/RX-D201 Audio/Video Control Receiver

7-Channel Receiver Featuring PC Connection via USB and New Digital Amplifier

Hybrid Feedback
Digital Amplifier

DOLBY
DIGITAL EX
PRO LOGIC II

DTS
ES
24
NEO:6

3D-PHONIC

AV COMPU LINK

COMPONENT VIDEO I/O

- Stereo: 100 watts per channel, 6 ohms, from 20Hz to 20kHz, with 0.8% THD
- Surround: (Front) 100 watts per channel, 6 ohms at 1kHz, with 0.8% THD; (Center) 100 watts, 6 ohms at 1kHz, with 0.8% THD; (Surround) 100 watts per channel, 6 ohms at 1kHz, with 0.8% THD; (Surround Back) 100 watts per channel, 6 ohms at 1kHz, with 0.8% THD
- Dolby Digital EX/Dolby Digital/Dolby Pro Logic II/Dolby Pro Logic II
- DTS/DTS-ES/DTS NEO:6/DTS 96/24

- Hybrid Feedback Digital Amplifier Ver. III
- USB Input for receiving audio signals from PC
- Center-Channel Alignment
- Virtual Surround Back for creating even wider sound field without a surround back speaker
- 3D-PHONIC
- DAP for Multi-Channel Digital Sources: THEATER 1/THEATER 2/HALL 1/HALL 2/ DANCE CLUB/LIVE CLUB/PAVILION
- DAP for 2-Channel Sources: MONO FILM/ THEATER 1/THEATER 2/HALL 1/HALL 2/ DANCE CLUB/LIVE CLUB/PAVILION/ ALL CH STEREO

- 3D Headphone
- Quick Speaker Setup
- DSP Digital Equalizer
- AV COMPU LINK
- Multi-Brand A/V-STB (CATV/ DBS) Remote Control



RX-D201

K2 Technology



K2 Processing — an inspired technology behind JVC's original CC Converter. Delivering superb quality of pure audio from every source, stereo or multi-channel.

K2 Processing is the result of a close collaboration among JVC studio engineers, producers and hardware engineers, embodying the elaborate algorithms for a sound quality that is close to the master by professional standards. The CC Converter is an application it uses to improve the sound quality of not only pure audio sources but also compressed formats, such as DTS, Dolby Digital, and MP3. The CC Converter lets you experience a sound that is truer to the original master than ever.

K2 Processing and the CC Converter improve the sound quality of uncompressed hi-fi sources, compressed stereo, or multi-channel sources, and compressed multi-channel soundtracks of today and the future.



CC Converter (Compression Compensative Converter)

When an analog signal is converted into digital (A/D conversion), high frequencies — normally those higher than 20kHz with CDs — are removed as dictated by the CD's sampling frequency. Absence of this high-frequency data affects the quality of sound in the audible range.

The CC Converter features exclusive algorithms to restore lost signals based on the recorded digital signals of audible frequencies, those frequencies that should have been recorded in the first place. It also uses high-bit quantization to reproduce minute signals. Moreover, in order to precisely

reproduce the signals that have undergone such processing, the CC Converter features a broader analog bandwidth (up to 4 times the sampling frequency) extending beyond 20kHz. This improves the quality of the music data in the audible range.

Through high-bit/high-sampling processing, the CC Converter generates expanded digital signals with a quality close to that of the original master.

The algorithms of the CC Converter have been verified for their musical legitimacy by studio engineers and musicians through repeated auditions. Because the number of digital sound sources has been growing fast, the CC Converter has proved to be a much-sought-after solution for the faithful recreation of original sound. It also works with compressed data, such as Dolby Digital and DTS formats.



Elaborate mechanical construction and designs — customized for current and future digital sources

Zero interference construction concept ensures high sound quality

DVD-Audio is an extraordinary next-generation audio format, with frequency response topping 96kHz and dynamic range more than 140dB. The RX-DP20VBK and RX-DP15 feature basic specifications that are fully compatible with DVD-Audio's high specs, whether the source is stereo or multi-channel.

Functionally separate block construction

Circuit blocks — a power supply, power amp, low-level audio section, video section and so forth — are laid out separately according to function, with the strategic addition of shields and sub-brackets. This elaborate construction not only minimizes the interference between blocks but also increases structural rigidity.

Triple transformers for analog, digital and video circuitry

Inside the RX-DP20VBK and RX-DP15, there are three blocks of circuitry — one each for analog signals, digital signals, and video signals: Each block has its own separate power supply, complete with a transformer. They are anchored to



a thick (1/16 inch), isolated base. This sophisticated design prevents digital and video noise from mixing with the delicate audio signals. Result: better sound quality.

Independent direct power supplies for output power transistors

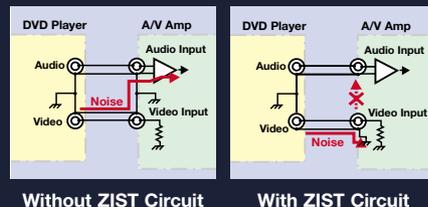
The power supply for the analog circuitry features separate coil windings for



the positive and negative voltages, while the power to output power transistors is supplied directly from channel-independent rectifier circuits. This advanced power supply design reduces interference between channels and also between the positive and negative voltages, to improve channel separation and sound purity.

ZIST (Zero Interference Audio Signal Transmission) Circuit

When video equipment is connected with an A/V receiver, the video noise generated in the former can pass to the latter through the video input terminal and interfere with audio signals. This results in degradation of audio signals. The JVC-developed ZIST circuit electrically insulates the audio input terminals (EXT 7.1-channel Input) from video noise. Advantages include exceptionally pure and clean sound. (RX-DP20VBK)



Copper-plated chassis

The rear panel, brackets and bottom plate are copper-plated to prevent interference between mounted circuits, reduce chassis impedance, and stabilize the potentials of voltages of low to high frequencies. (RX-DP20VBK)



High-Speed Rectifier Diodes



Banana-Plug Speaker Terminals

Realistic home theater experience enhanced with natural DSP simulations

Texas Instruments Aureus™ Chip (TMS320DA610)

At the heart of the RX-DP20VBK/DP15's DSP is a high-performance Texas Instruments Aureus™ chip. Currently, it's the world's fastest, highest-performing chip of its kind, replacing two conventional DSP chips. The JVC RX-DP20VBK and RX-DP15 are the world's first to feature this LSI.

Clocking at 1,800MIPS* or 1,200MFLOPS** (at 225MHz clock speed), this chip boasts one of the highest processing power ratings on the market. It features 32/64-bit double precision accurate operations, and the formats it decodes include THX Surround EX/Ultra2, Dolby Digital, Dolby Digital EX, Pro Logic II, DTS, DTS-ES, DTS 96/24, and DTS NEO:6. Plus, it handles DAP (Digital Acoustics Processing), 3D-PHONIC, 3D Headphone, DSP Digital Equalizer, Dynamic Range Control, and Bass Management.

Its floating-point operations allow for more accurate calculations with an expanded range of numbers. Finally, the chip's compact size is conducive to reduction in digital noise.



Virtual Sound Source Distribution Patterns



DANCE CLUB



THEATER 2

Convenient features for comfortable operation

High-performance video converter

A high-performance video converter is built-in: it's capable of converting any video format — including composite and S-video — into the component format and feeding the signal to the component video output. Therefore, high-quality video signals are supplied to the monitor using a component terminal, whether the source is a videotape or DVD. The RX-DP20VBK and RX-DP15 are equipped with three component inputs and one component output.

DAP Modes (RX-DP20VBK/RX-DP15)

Mode	Signal	DTS		Dolby Digital		Linear PCM	Analog
		5.1ch	2ch	5.1ch	2ch		
Multi-Channel DAP	Large Theater	●*	-	●*	-	-	-
	Small Theater	●*	-	●*	-	-	-
	Large Hall 1	●*	-	●*	-	-	-
	Large Hall 2	●*	-	●*	-	-	-
	Recital Hall	●*	-	●*	-	-	-
	Opera House	●*	-	●*	-	-	-
	Church	●*	-	●*	-	-	-
	Live Club	●*	-	●*	-	-	-
	Dance Club	●*	-	●*	-	-	-
	Pavilion	●*	-	●*	-	-	-
Pro Logic + DAP	Large Theater	-	●*	-	●*	●	●
	Small Theater	-	●*	-	●*	●	●
DAP	Stereo Film	-	●	-	●	●	●
	Mono Film	-	●	-	●	●	●
	Large Hall 1	-	●	-	●	●	●
	Large Hall 2	-	●	-	●	●	●
	Recital Hall	-	●	-	●	●	●
	Opera House	-	●	-	●	●	●
	Church	-	●	-	●	●	●
	Live Club	-	●	-	●	●	●
	Dance Club	-	●	-	●	●	●
	Pavilion	-	●	-	●	●	●
Headphone DAP	Large Theater	●	●	●	●	●	●
Small Theater	●	●	●	●	●	●	
Stereo Film	●	●	●	●	●	●	
Mono Film	●	●	●	●	●	●	
Large Hall 1	●	●	●	●	●	●	
Large Hall 2	●	●	●	●	●	●	
Recital Hall	●	●	●	●	●	●	
Opera House	●	●	●	●	●	●	
Church	●	●	●	●	●	●	
Live Club	●	●	●	●	●	●	
Dance Club	●	●	●	●	●	●	
Pavilion	●	●	●	●	●	●	
3D Headphone		●	●	●	●	●	●
3D-PHONIC		●	●	●	●	●	●
All Ch. Stereo		-	●	-	●	●	●

*When the SURR. BACK SPK. setting is "On", the DAP performs 7-channel processing, outputting reverberation components to Surround Back channels.

Mode	For Recreation of Spatial Feel of:
Large Theater	Large movie theater
Small Theater	Small movie theater
Large Hall 1	Large shoebox-shaped hall designed primarily for classical concerts
Large Hall 2	Large vineyard-shaped hall designed primarily for classical concerts
Recital Hall	Small hall designed primarily for classical recitals
Opera House	Opera house with a high ceiling and multi-level seating layout
Church	Majestic church with a high ceiling
Dance Club	Rocking dance club
Live Club	Live music club with a low ceiling
Pavilion	Exhibition hall with a high ceiling
Stereo Film	For surround-rich reproduction of movies with stereo soundtracks
Mono Film	For 3D-like reproduction of classic movies with mono soundtracks

Audiophile features for better appreciation of music

Precision Downmix Converter

With the DVD MULTI or EXT. 7.1-channel, you can mix down multi-channel signals to stereo signals. The signals going to non-existing channels — center, surround and subwoofer — are mixed with those going to the front channels. Downmix is performed in the analog domain, bypassing the DSP. Unlike digital downmix, this process does not use "scaling," therefore, it does not involve reduction of bit rates; the frequency response remains as wide as the original.

* MIPS (Million Instructions per Second): A 1MIPS computer processes 1 million instructions per second. An 'instruction' is a command sent out to a DSP to directly control and operate it.
 ** FLOPS (Floating Point Operations per Second): the number of floating-point calculations per second performed with real numbers.



The expanding world of multi-channel surround for movies and music — THX, Dolby, and DTS.

Home THX

THX is a set of specifications and standards set forth by Lucasfilm Ltd., to guarantee that a piece of equipment is capable of allowing the audience to hear movie soundtracks just as the movie makers intended the soundtracks to be heard. Home THX is the version optimized for playback at home: it takes into consideration the spatial and acoustic differences between homes and theaters to compensate for them by digital processing. Moreover, to be Home THX certified, the equipment's amplifier must also perform in compliance with specified requirements. The RX-DP20VBK and RX-DP15 are THX Ultra2 certified, meaning they are up to the task of making you feel like sitting in a THX-equipped movie theater.

THX Ultra2

THX Ultra2 provides a specification for equipment using the latest Dolby Digital Surround-EX and DTS-ES 6.1 channel soundtracks, presenting a movie closely to the director's original cut when it's played at home. The RX-DP20VBK and RX-DP15 bear the THX Ultra2 logo, certifying that they satisfy the newest certification standards of Lucasfilm Ltd., governing performance, features, sound quality, power, stability for driving low-impedance speaker loads, and ease of operation.

THX Ultra2 offers THX Cinema and THX MusicModes that use seven channels of amplification for playback of multi-channel-encoded sources over a 7.1-channel layout.

In Cinema mode, THX Ultra2 converts Dolby Surround Pro Logic matrix-encoded stereo and 5.1-channel soundtracks into 7.1-channel soundtracks.

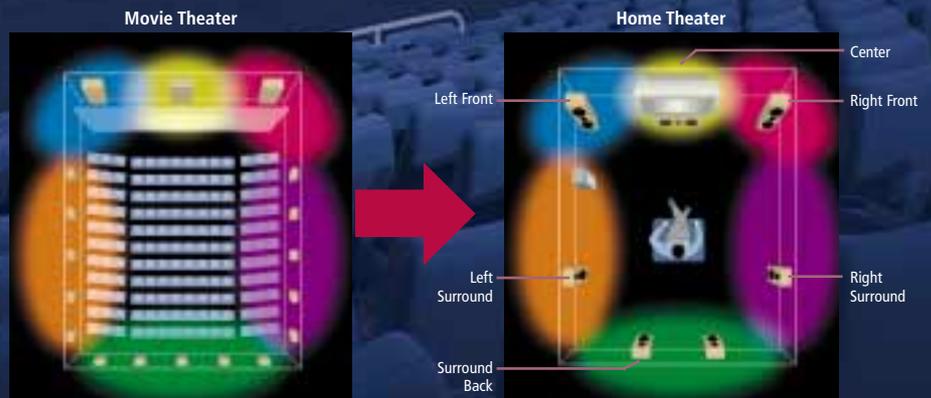
In MusicMode, 2-channel audio programs are converted into 7.1-channel surround sound for a compelling multi-channel audio experience.

THX SURROUND EX™

THX Surround EX

THX Surround EX is a format that has additional left and right Surround Back channels on the basis of Dolby Digital 5.1 channels. It enhances the sense of depth, provides the sense of smooth movement, and improves the definition of movement of sounds

in rear channels — all to make you feel you are there. The RX-DP20VBK and RX-DP15 come complete with a 7-channel amplifier, making it unnecessary to add on more amps.



Rear Panel



RX-DP20VBK

Audio/Video Control Receiver

High-End 7-Channel Receiver Featuring K2 Technology, THX Ultra2 Certification, Texas Instruments Aureus™ Chip, Low-Noise ZIST Circuit, and High-Rigidity Copper-Plated Chassis



THX SURROUND EX



- Stereo: 120 watts per channel, 8 ohms, from 20Hz to 20kHz, with 0.02% THD; 120 watts per channel, 4 ohms, from 20Hz to 20kHz, with 0.07% THD
- Surround: (Front) 120 watts per channel, 8 or 4 ohms, from 20Hz to 20kHz, 0.02% (8 ohms) or 0.07% (4 ohms) THD; (Center) 120 watts, 8 ohms, from 20Hz to 20kHz, 0.02% THD; (Surround) 120 watts per channel, 8 ohms, from 20Hz to 20kHz, 0.02% THD; (Surround Back) 120 watts per channel, 8 ohms, from 20Hz to 20kHz, 0.02% THD
- Dolby Digital EX/Dolby Digital/Dolby Pro Logic II Decoders Built-in
- DTS/DTS-ES (Discrete6.1/Matrix6.1)/DTS NEO:6/DTS 96/24 Decoders Built-in
- DVD Multi-Channel Audio Compatible (5.1-Channel Inputs)

- CC Converter (7.1 Channels)
- THX Ultra2 (Cinema/Music)/THX Surround EX
- Texas Instruments 32/64-bit Floating-Point DSP
- Multi-Room/Multi-Source Capability
- External 7.1-Channel Inputs
- Low-Noise ZIST (Zero Interference Audio Signal Transmission) Circuit
- 3D-PHONIC
- DAP for Multi-Channel Digital Sources: LARGE THEATER/SMALL THEATER/LARGE HALL 1/ LARGE HALL 2/RECITAL HALL/OPERA HOUSE/ CHURCH/LIVE CLUB/DANCE CLUB/PAVILION
- DAP for 2-Channel Sources: STEREO FILM/ MONO FILM/LARGE THEATER/SMALL THEATER/ LARGE HALL 1/LARGE HALL 2/RECITAL HALL/ OPERA HOUSE/CHURCH/LIVE CLUB/ DANCE CLUB/PAVILION/ALL CH STEREO
- Video Converter
- Precision Downmix Converter
- 192kHz/24-bit P.E.M. D.D. Converter (7.1 Channels)
- 3D Headphone
- Ultra-High Current Dynamic Super-A Power Amps
- MM/MC Phono Equalizer

- Front-Channel Bi-Amplification
- High-Rigidity Z-Chassis
- Copper-Plated Chassis
- DSP Digital Parametric Equalizer
- Analog Direct
- Midnight Mode
- 4-ohm Speaker Drive Capability (Front Channels)
- On-Screen Display (Component Video Compatible)
- Dot-Matrix Fluorescent Display with Dimmer
- One-Touch Operation
- TEXT COMPU LINK
- Enhanced COMPU LINK Control System
- AV COMPU LINK
- RF Multi-Brand A/V-DBS-CATV LCD Learning Remote Control with Backlight Illumination



With the motor-driven sliding door on the front panel fully opened

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RX-DP15

Audio/Video Control Receiver

High-Grade 7-Channel Receiver Featuring K2 Technology, THX Ultra2 Certification, Texas Instruments Aureus™ Chip, Low-Noise ZIST Circuit, and High-Rigidity Chassis



THX SURROUND EX



- Stereo: 120 watts per channel, 8 ohms, from 20Hz to 20kHz, with 0.02% THD; 120 watts per channel, 4 ohms, from 20Hz to 20kHz, with 0.07% THD
- Surround: (Front) 120 watts per channel, 8 or 4 ohms, from 20Hz to 20kHz, 0.02% (8 ohms) or 0.07% (4 ohms) THD; (Center) 120 watts, 8 ohms, from 20Hz to 20kHz, 0.02% THD; (Surround) 120 watts per channel, 8 ohms, from 20Hz to 20kHz, 0.02% THD; (Surround Back) 120 watts per channel, 8 ohms, from 20Hz to 20kHz, 0.02% THD
- Dolby Digital EX/Dolby Digital/Dolby Pro Logic II Decoders Built-in
- DTS/DTS-ES (Discrete6.1/Matrix6.1)/DTS NEO:6/DTS 96/24 Decoders Built-in
- DVD Multi-Channel Audio Compatible (5.1-Channel Inputs)

- CC Converter (7.1 Channels)
- THX Ultra2 (Cinema/Music)/THX Surround EX
- Texas Instruments 32/64-bit Floating-Point DSP
- Multi-Room/Multi-Source Capability
- External 7.1-Channel Inputs
- 3D-PHONIC
- DAP for Multi-Channel Digital Sources: LARGE THEATER/SMALL THEATER/LARGE HALL 1/ LARGE HALL 2/RECITAL HALL/OPERA HOUSE/ CHURCH/LIVE CLUB/DANCE CLUB/PAVILION
- DAP for 2-Channel Sources: STEREO FILM/ MONO FILM/LARGE THEATER/SMALL THEATER/ LARGE HALL 1/LARGE HALL 2/RECITAL HALL/ OPERA HOUSE/CHURCH/LIVE CLUB/DANCE CLUB/ PAVILION/ALL CH STEREO
- Video Converter
- Precision Downmix Converter
- 192kHz/24-bit P.E.M. D.D. Converter (7.1 Channels)
- 3D Headphone
- Ultra-High Current Dynamic Super-A Power Amps
- MM Phono Equalizer
- Front-Channel Bi-Amplification
- High-Rigidity Z-Chassis

- DSP Digital Parametric Equalizer
- Analog Direct
- Midnight Mode
- 4-ohm Speaker Drive Capability (Front Channels)
- On-Screen Display (Component Video Compatible)
- Dot-Matrix Fluorescent Display with Dimmer
- One-Touch Operation
- TEXT COMPU LINK
- Enhanced COMPU LINK Control System
- AV COMPU LINK
- RF Multi-Brand A/V-DBS-CATV LCD Learning Remote Control with Backlight Illumination



With the motor-driven sliding door on the front panel fully opened



RX-8040

Audio/Video Control Receiver

6-Channel Receiver Featuring Multi-Room/Multi-Source Capability, High-Performance DSP, Quick Speaker Setup Function, and RF Multi-Brand Glow Remote



- Stereo: 130 watts per channel, 8 ohms, from 20Hz to 20kHz, with 0.08% THD; Surround: (Front) 130 watts per channel, 8 ohms at 1kHz, with 0.8% THD; (Center) 130 watts, 8 ohms at 1kHz, with 0.8% THD; (Surround) 130 watts per channel, 8 ohms at 1kHz, with 0.8% THD; (Surround Back) 130 watts, 8 ohms at 1kHz, with 0.8% THD
- Dolby Digital EX/Dolby Digital/Dolby Pro Logic IIx Decoders Built-in
- DTS/DTS-ES (Discrete6.1/Matrix6.1)/DTS NEO:6/DTS 96/24 Decoders Built-in
- DVD Multi-Channel Audio Compatible (5.1-Channel Inputs)

- Texas Instruments 32/64-bit Floating-Point DSP
- CC Converter (Front Channels)
- Multi-Room/Multi-Source with RF Remote
- Virtual Surround Back for creating even wider sound field without a surround back speaker
- 3D-PHONIC
- DAP for Multi-Channel Digital Sources: THEATER 1/THEATER 2/HALL 1/HALL 2/ DANCE CLUB/LIVE CLUB/PAVILION
- DAP for 2-Channel Sources: MONO FILM/ THEATER 1/THEATER 2/HALL 1/HALL 2/ DANCE CLUB/LIVE CLUB/PAVILION/ ALL CH STEREO

- 3D Headphone
- P.E.M. D.D. Converter (Front Channels)
- New Quick Speaker Setup
- Dot-Matrix Fluorescent Display with Dimmer
- One-Touch Operation
- Enhanced COMPU LINK Control System
- DSP Digital Equalizer
- AV COMPU LINK
- RF Multi-Brand A/V-STB (CATV/DBS) LCD Remote Control



Experience D-VHS from JVC

You've selected the perfect JVC audio system to go with your HDTV, but there is still one more item you need to make your high definition home theater complete. What's a great system without great movies? Get ready for the absolute best in HD Entertainment—on demand—with a JVC D-VHS VCR.

With D-VHS you can watch what you want, whenever you want!

With over 100 D-Theater titles available, including home theater classics like "The Fast & The Furious," "Independence Day," "Terminator," "Alien," and "X-Men.", you no longer need to wait for your cable, satellite, or local network affiliate to broadcast a great movie in order to show off your new system. You can build your own library of movies that are available anytime, for viewing as often as you like!



JVC HM-DH5

JVC D-VHS offers the best high definition signal source currently available, with data rates that far exceed even the best HD broadcasts. To insure the most pristine connection to your HDTV, an HDMI digital output (compatible with DVI) is included to provide direct digital to digital

connection. And, not only do D-VHS titles offer the absolute best 1080i HD picture—they offer the ultimate in home theater audio, with Dolby Digital or DTS surround sound.

Playing back movies is only half the story. With JVC D-VHS you can also record in HD with full resolution for later viewing. It's possible to record up to 4 hours on a single tape at the best HD quality, or up to 24 hours of programming at standard DVD quality.



D-VHS Software

Of course, D-VHS is part of the VHS family, so it's fully "backwards compatible" with your existing library of standard VHS recordings. And, to make them look their absolute best, this year JVC has added a new performance enhancement called VHS Progressive Scan, which can up convert existing VHS recordings for even better playback on an HDTV.

Add a JVC D-VHS deck to your theater system and you can enjoy the best that HD has to offer! What you want to watch, when you want to watch it...the total package!



XL-FZ258BK/XL-F158BK

5-Disc Carousel CD Changer

- Play & Exchange System: Change any of 4 discs while one more is being played
- 1-bit P.E.M. D.D. Converter
- Optical digital output
- 10-key pad for direct track access (XL-FZ258BK)
- 8x oversampling digital filter
- Remote control (XL-FZ258BK)
- Headphone output with volume control
- 5 DISC keys on the front panel
- Continuous play and smart random play
- 20-track program chart
- Program play of up to 32 "steps" (tracks and discs) from 5 discs
- 4-way repeat
- Auto/manual search
- Enhanced COMPU LINK Control System



XL-FZ700BK

7-Disc Carousel CD Changer



- Newly-developed 7-disc carousel changer with Play & Exchange System
- Playable formats: CD, CD-R/RW
- 1-bit dual D/A converter (P.E.M. D.D. Converter)
- 8x oversampling digital filter
- Optical digital output
- Program (32 tracks)/smart random play
- 18-track program chart
- 7 DISC keys and 10-key pad (on remote)
- Enhanced COMPU LINK Control System
- Remote control

Experience DVD Recorders from JVC

The perfect companion product for your new JVC surround sound system is a matching JVC DVD recorder. Many people are replacing their older video cassette recorders with DVD recorders to achieve better picture performance and additional convenience. There's never any rewinding and DVD offers the additional convenience of instant and immediate access to any recorded program.



JVC DR-DX7S
HDD/DVD/MiniDV Video Recorder Combo

tape, and builds a thumbnail image for each recording on the DVD index. Wow!

JVC's exclusive bit rate optimizer varies the bit rate based on the complexity of the scene for higher quality recordings with longer recording time on the hard drive. The 160 GB hard drive can store up to 300 hours of your favorite programming. Then, select the programs you want to archive permanently and copy them to DVD at up to 64X normal speed. That means a one hour program can be copied to DVD in less than one minute!

JVC blends advanced technology with ease of operation better than anyone. The new DVD/VHS combo recorder features "One Touch Expert Dub" which scans the VHS tape, determines the perfect DVD recording speed, eliminates any blank spots on the

Select DVD recorder/hard drive combo recorders feature TV Guide On-Screen. This user friendly on-screen listing is the perfect way to see what is on TV, and making recordings from the guide is just a matter of point and click.

An i-Link connection makes copying digital camcorder tapes extremely simple, and the JVC remote will control your camcorder for easy editing. If you make a disc and later decide you aren't completely satisfied with the results, it's also easy to go back and edit further, or even rearrange the order of the scenes on the disc you made. With an all digital connection, this is the perfect way to make your memories last and last.

JVC DVD recorders can play back any recordable disc format you might have. For recording purposes, they are compatible with the most popular formats: DVD-R, DVD-RW and DVD-RAM. You get up to 8 hours recording on a single disc. Choose JVC's standard DVD recorder or a combo unit with either VHS or HDD. For the ultimate in flexibility choose a triple play model with DVD, HDD and either VHS or MiniDV.



TV Guide On-Screen



TD - W 3 5 4 B K

Double-Mechanism Cassette Deck

- Twin auto-reverse transports
- COMPU CALIBRATION
- Full-logic control
- Pitch control (Deck A)
- Mic input with level control
- Multi Music Scan
- Continuous play of two tapes
- High-speed editing with synchro dubbing
- Dolby HX Pro (Deck B)
- Dolby B/C noise reduction
- Enhanced COMPU LINK Control System



TD - W 2 5 4 B K

Double-Mechanism Cassette Deck

- Twin auto-reverse transports
- Full-logic control
- Continuous play of two tapes
- High-speed editing with synchro dubbing
- Dolby HX Pro (Deck B)
- Dolby B/C noise reduction
- Enhanced COMPU LINK Control System

"Dolby," the double-D symbol and "Dolby HX Pro" are trademarks of Dolby Laboratories Licensing Corporation.

Notice: It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable program and in any literary, dramatic, musical, or artistic work embodied therein.

Experience Plasma-LCD from JVC

You decided on JVC because you know they offer the best surround sound systems available today. Now, make things picture perfect with a new high definition JVC Plasma or LCD display.



JVC 40" LCD: LT-40X776

A new flat panel LCD or Plasma display is equal parts performance and design. You'll marvel at the stunning picture quality provided by the high definition panels. LCD models are available with up to full 1920 x 1080 resolution, meaning they can display every pixel, or picture element, found in a full high definition signal. All new Plasma models this year are high definition as well. Most new models are powered by the next generation JVC exclusive D.I.S.T. (Digital Image Scaling Technology), which uses JVC's new 32 bit GENESSA chip.

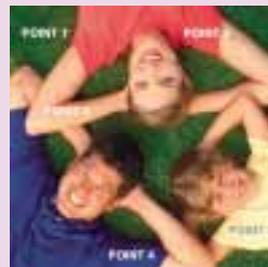
This single chip provides optimum scaling of any input signal to your LCD or Plasma display. The picture fits perfectly, with the highest possible resolution. Also part of D.I.S.T. are 5-Point Color Management and Dynamic Gamma Control. The new 5-Point Color Management insures perfect color, even with skin tones, while Dynamic Gamma makes sure the grayscale is correct and that detail is maintained in the darker/shadow portions of the picture. There are also a variety of other noise reduction and picture enhancement

technologies. Whether your source is progressive scan DVD or true high definition, you will be impressed!

JVC provides the performance you need with the aesthetics you want. For both wall mount and traditional table top applications, you'll admire the arc shape design elements and cool blue illumination which complement your other JVC components.

Ease of operation is also paramount with JVC. The exclusive Smart Input simplifies connection to your other components, while the EZ Fill makes it simple to adjust any picture to fill the full screen, eliminating most letterbox bars if you choose.

All new JVC widescreen LCD's & Plasma's are HD ready and ATSC HD Tuners are included on our new premium 26" & 32" sizes. ATSC tuners are standard on all of our new 37", 40", 42" & 50" displays.



- Point 1-Green**
- Point 2-Yellow**
- Point 3-Red**
- Point 4-Blue**
- Point 5-Flesh**

5 Point Color Management at Work

Experience HD-ILA from JVC

Home Theater is equal parts picture and sound. With the right products, the result can be a total immersion, which takes the viewer beyond the confines of the living room. Once you've decided on the audio components, the next key decision is to select a state-of-the-art HD display.



JVC HD-70G886

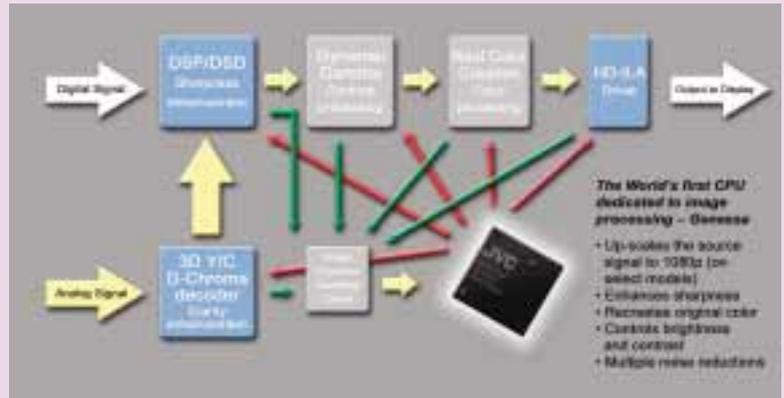
Micro Device displays are the biggest news in HDTV, and JVC is leading the industry as the first to offer a full line of these displays with the revolutionary D-ILA technology. JVC has been perfecting this technology for many years. Our professional display division has been offering state-of-the-art D-ILA front projection displays since 1997 for digital cinema and other demanding applications. Now that same technology is available in a full line of rear projection displays, designed for home use.

Never before have such large screen displays been so slender and light weight. A 52" HD-ILA is just over 16 inches deep, and only weighs about 85 pounds. Imagine the possibilities! The HD-ILA fits where ordinary rear projection televisions cannot, and it can be integrated beautifully into virtually any room. 56", 61" and 70" sizes are also available.

Even more impressive than the size is the picture quality. Leading enthusiast magazines are raving about JVC's HD-ILA. Get close and notice the incredible detail with virtually no visible "pixel grid" or "screen door"

effect. Or, sit back and take it all in... you will be amazed to see the most lifelike color, natural, smooth contrast and brightness of the D-ILA light engine. Credit goes to JVC's exclusive 3-chip, reflective design.

For 2005 you can connect an even wider variety of devices to the HD-ILA. Use it as a computer monitor with the VGA connector, or hook up the latest HD satellite receiver through the HDMI connection. An ATSC HD Tuner with Digital CableCARD™ capability is also standard this year. Plenty of other HD and SD connections are available, and with a picture this good it's likely you will want to use them all.



Genessa CPU Diagram

Experience DISH from JVC

You'll get more enjoyment from your home theater system when you have the best possible programming available. When it comes to the greatest variety, highest quality, and the most advanced technology, nobody beats JVC and DISH Network.

Imagine a single component that can feed your choice of exciting DISH Network programming in either high definition for your main room or standard definition to any room in the house. Now imagine this same component can also record and save any programming to a built-in 250 GB hard drive for later viewing. The hard drive also makes it possible to pause live programming as well as to back that programming up for an instant replay or skip past a commercial. There's even a built-in ATSC tuner for watching and recording local off-air HD network broadcasts.

DISH Network high definition programming includes HBO, Showtime, ESPN, Discovery Channel, HDNet, HDNet Movies, TNT as well as HD pay-per view and other HD special events. Select DISH Network programming packages also include access to more than 60 channels of music from Sirius Satellite Radio. It's a value that can't be beat!

A standard IR remote is provided to control the HD programming in the main room. An HDMI (compatible with DVI) connection provides a pure all digital connection to your JVC display, while an optical audio output feeds the Dolby Digital signal to your JVC surround sound receiver. It's everything you need for the ultimate home theater experience!

A second UHF remote is provided to control the SD programming through walls, floors or ceilings from any other room in the house. This makes it possible to watch different programming in each of the two zones, either live or from the hard drive.

Don't need two zones of entertainment? Use the two tuners at the same time for picture-in-picture functionality on any TV in the house.

A full line of JVC DISH Network satellite receivers are available in both high definition and standard definition models. Choose one with a built-in hard drive for easy recording and time-shifting, or choose a standard model and expand your programming options into additional rooms. No matter what your requirements, JVC/DISH Network offers the perfect experience in satellite receiver systems.



JVC/DISH TU-DVR942



JVC/DISH 811

An ideal choice if you do not need the hard drive recording functionality of the TU-DVR942.



HA-W1000RF
900MHz Cordless Headphone System
with Built-in Paging/Call Function



HA-W300RF
900MHz Cordless Headphone System
with Built-in Paging/Call Function



HA-DX3
Digital Reference
Stereo Headphones



HA-DX1
Digital Reference
Stereo Headphones



HA-M500
Monitoring
Stereo Headphones



HA-G770
Digital-Ready
Stereo Headphones



HA-G55
Digital-Ready
Stereo Headphones



HA-G33
Digital-Ready
Stereo Headphones



HA-G11
Digital-Ready
Stereo Headphones



HA-G101
Stereo Headphones



HA-D350
Digital-Ready
Stereo Headphones



HA-V570
Digital-Ready
Stereo Headphones
with Volume Control



HA-X570
Digital-Ready
Stereo Headphones



HA-CD60
Digital-Ready Lightweight
Stereo Headphones



HA-35
Lightweight
Stereo Headphones



MV-89
Dynamic Microphone



MV-79
Dynamic Microphone



MV-J3-BK
Dynamic Microphone

Specifications

Audio/Video Control Receivers (1)

		RX-D702	RX-D302/RX-D301	RX-D202/RX-D201
AMPLIFIER SECTION				
Power Output: Stereo (FTC)		150 watts per channel, min. RMS, driven into 6 ohms, from 20Hz to 20kHz, with no more than 0.8% total harmonic distortion	110 watts per channel, min. RMS, driven into 6 ohms, from 20Hz to 20kHz, with no more than 0.8% total harmonic distortion	100 watts per channel, min. RMS, driven into 6 ohms, from 20Hz to 20kHz, with no more than 0.8% total harmonic distortion
Power Output: Surround	Front Channels	150 watts per channel, min. RMS, driven into 6 ohms at 1kHz, with no more than 0.8% total harmonic distortion	110 watts per channel, min. RMS, driven into 6 ohms at 1kHz, with no more than 0.8% total harmonic distortion	100 watts per channel, min. RMS, driven into 6 ohms at 1kHz, with no more than 0.8% total harmonic distortion
	Center Channel	150 watts, min. RMS, driven into 6 ohms at 1kHz, with no more than 0.8% total harmonic distortion	110 watts, min. RMS, driven into 6 ohms at 1kHz, with no more than 0.8% total harmonic distortion	100 watts, min. RMS, driven into 6 ohms at 1kHz, with no more than 0.8% total harmonic distortion
	Surround Channels	150 watts per channel, min. RMS, driven into 6 ohms at 1kHz, with no more than 0.8% total harmonic distortion	110 watts per channel, min. RMS, driven into 6 ohms at 1kHz, with no more than 0.8% total harmonic distortion	100 watts per channel, min. RMS, driven into 6 ohms at 1kHz, with no more than 0.8% total harmonic distortion
	Surround Back Channels	150 watts per channel, min. RMS, driven into 6 ohms at 1kHz, with no more than 0.8% total harmonic distortion	110 watts per channel, min. RMS, driven into 6 ohms at 1kHz, with no more than 0.8% total harmonic distortion	100 watts per channel, min. RMS, driven into 6 ohms at 1kHz, with no more than 0.8% total harmonic distortion
Input Sensitivity/Impedance		270mV/47k ohms	270mV/47k ohms	270mV/47k ohms
Signal-to-Noise Ratio (66 IHF/78 IHF)		80dB/67dB	80dB/67dB	80dB/67dB
Frequency Response		DVD MULTI 20Hz-20kHz (+1dB) OTHER INPUTS 20Hz-20kHz (+1dB)	20Hz-20kHz (+1dB) 20Hz-20kHz (+1dB)	20Hz-20kHz (+1dB)
FM TUNER SECTION (IHF)				
Usable Sensitivity		12.8dBf (1.2uV/75 ohms)	12.8dBf (1.2uV/75 ohms)	12.8dBf (1.2uV/75 ohms)
Quieting Sensitivity		MONO 16.0dBf (1.7uV/75 ohms) STEREO 37.5dBf (20.5uV/75 ohms)	16.0dBf (1.7uV/75 ohms) 37.5dBf (20.5uV/75 ohms)	16.0dBf (1.7uV/75 ohms) 37.5dBf (20.5uV/75 ohms)
Stereo Separation at REC OUT (1kHz)		35dB	35dB	35dB
VIDEO INPUTS/OUTPUTS				
Output Signal Level		Component - Y 1Vp-p Component - Pb/Pr 0.7Vp-p S-Video - Y 1Vp-p S-Video - C 0.286Vp-p Composite 1Vp-p	1Vp-p 0.7Vp-p 1Vp-p 0.286Vp-p 1Vp-p	1Vp-p 0.7Vp-p 1Vp-p 0.286Vp-p 1Vp-p
Impedance		75 ohms (Unbalanced)	75 ohms (Unbalanced)	75 ohms (Unbalanced)
Synchronization		Negative	Negative	Negative
CIRCUITRY				
Surround Sound	Dolby Digital EX	●	●	●
	Dolby Digital	●	●	●
	Dolby Pro Logic fix	●	●	●
	Dolby Pro Logic II	●	●	●
	DTS	●	●	●
	DTS-ES	●	●	●
	DTS NEO:6	●	●	●
	DTS 96/24	●	●	●
	DVD Multi-Channel Audio Compatible (5.1-ch Inputs)	●	●	●
	Virtual Surround Back	●	●	●
	3D-PHONIC	●	●	●
	DAP for Multi-Channel Digital Sources	THEATER1 / THEATER2 / HALL1 / HALL2 / DANCE CLUB / LIVE CLUB / PAVILION ●	●	●
	DAP for 2-Channel Sources	MONO FILM / THEATER1 / THEATER2 / HALL1 / HALL2 / DANCE CLUB / LIVE CLUB / PAVILION / ALL CH STEREO ●	●	●
	3D Headphone	●	●	●
P.E.M. D.D. Converter		192kHz/24-bit, Front ch ● (Front ch)	192kHz/24-bit, Front ch ● (Front ch)	● (Ver. III)
CC Converter (2 Modes)		● (Ver. III)	● (Ver. III)	● (Ver. III)
Hybrid Feedback Digital Amplifier		● (Ver. III)	● (Ver. III)	● (Ver. III)
Video Up-Conversion (to H.D.M.I.)		●	●	●
Video Up-Conversion (Composite to Component)		●	●	●
Video Up-Conversion (Composite to S-Video)		●	●	●
Wireless for PC		●	●	●
INPUTS/OUTPUTS				
Audio		5 Inputs and 2 Outputs	4 Inputs and 2 Outputs	4 Inputs and 2 Outputs
Digital		3 Optical Inputs, 1 Optical Output and 1 Coaxial Input (Assignable)	2 Optical Inputs, 1 Optical Output and 1 Coaxial Input (Assignable)	1 Optical Input and 1 Coaxial Input (Assignable)
Video	Component	2 Inputs and 1 Output	2 Inputs and 1 Output	2 Inputs and 1 Output
	S-Video	4 Inputs and 3 Outputs	3 Inputs and 3 Outputs	3 Inputs and 3 Outputs
	Composite	4 Inputs and 3 Outputs	3 Inputs and 3 Outputs	3 Inputs and 3 Outputs
	Subwoofer	●	●	●
Pre-Out		●	●	●
Speaker Terminals	Front L/R 2	● (Screw Type)	● (Screw Type)	●
	Center	● (Screw Type)	● (Screw Type)	●
	Surround L/R	● (Screw Type)	●	●
	Surround Back x 2	● (Screw Type)	●	●
	●	●	●	
HDMI		●	●	●
USB Input		●	●	●
SIRIUS Input		●	●	●
FUNCTIONS				
On-Screen Display		●	●	●
Fluorescent Display		●	●	●
Dot-Matrix Display		●	●	●
Dimmer		●	●	●
Quick Speaker Setup		●	●	●
One-Touch Operation		●	●	●
Equalizer (S.E.A.)		DSP Digital Equalizer ● (For Each Source)	DSP Digital Equalizer ● (For Each Source)	DSP Digital Equalizer ● (For Each Source)
S.E.A. Control Level		Front ch: 63/250/1k/4k/16kHz ±8dB, 2dB Step; Center ch: 2.5kHz ±6dB, 3dB Step	Front ch: 63/250/1k/4k/16kHz ±8dB, 2dB Step; Center ch: 2.5kHz ±6dB, 3dB Step	Front ch: 63/250/1k/4k/16kHz ±8dB, 2dB Step; Center ch: 2.5kHz ±6dB, 3dB Step
S.E.A. Memory (Manual)		● (For Each Source)	● (For Each Source)	● (For Each Source)
Midnight Mode		●	●	●
Headphone Output		●	●	●
Bass Boost		●	●	●
Center-Channel Alignment		●	●	●
Sound Level Display on TV Screen (For Composite and S-Video Outputs Only)		●	●	●
TUNER				
Number of Presets		15 AM, 30 FM	15 AM, 30 FM	15 AM, 30 FM
MISCELLANEOUS				
AV COMPU LINK		●	●	●
Remote Control Unit	Multi-Brand	●	●	●
	A/V-STB (CATV/DBS)	●	●	●
	Glow	●	●	●
	SIRIUS Control	●	●	●
GENERAL				
Dimensions (W x H x D)	inches	17 ³ / ₁₆ x 3 ⁷ / ₁₆ x 14 ⁷ / ₁₆	17 ⁷ / ₁₆ x 3 ⁷ / ₁₆ x 14 ⁷ / ₁₆	17 ³ / ₁₆ x 3 ⁷ / ₁₆ x 14 ⁷ / ₁₆
	mm	435 x 91.5 x 371	435 x 91.5 x 371	435 x 91.5 x 360
Weight	lbs.	15.0	15.0	14.8
	kg	6.8	6.8	6.7

Specifications

Audio/Video Control Receivers (2)

		RX-DP20VBK	RX-DP15	RX-8040
AMPLIFIER SECTION				
Power Output: Stereo (FTC)		120 watts per channel, min. RMS, driven into 8 ohms/4 ohms, from 20Hz to 20kHz, with no more than 0.02%/0.07% total harmonic distortion	120 watts per channel, min. RMS, driven into 8 ohms/4 ohms, from 20Hz to 20kHz, with no more than 0.02%/0.07% total harmonic distortion	130 watts per channel, min. RMS, driven into 8 ohms, from 20Hz to 20kHz, with no more than 0.08% total harmonic distortion
Power Output: Surround		120 watts per channel, min. RMS, driven into 8 ohms/4 ohms, from 20Hz to 20kHz, with no more than 0.02%/0.07% total harmonic distortion	120 watts per channel, min. RMS, driven into 8 ohms/4 ohms, from 20Hz to 20kHz, with no more than 0.02%/0.07% total harmonic distortion	130 watts per channel, min. RMS, driven into 8 ohms at 1kHz, with no more than 0.8% total harmonic distortion
	Front Channels	120 watts, min. RMS, driven into 8 ohms, from 20Hz to 20kHz, with no more than 0.02% total harmonic distortion	120 watts, min. RMS, driven into 8 ohms, from 20Hz to 20kHz, with no more than 0.02% total harmonic distortion	130 watts, min. RMS, driven into 8 ohms at 1kHz with no more than 0.8% total harmonic distortion
	Center Channel	120 watts, min. RMS, driven into 8 ohms, from 20Hz to 20kHz, with no more than 0.02% total harmonic distortion	120 watts, min. RMS, driven into 8 ohms, from 20Hz to 20kHz, with no more than 0.02% total harmonic distortion	130 watts, min. RMS, driven into 8 ohms at 1kHz with no more than 0.8% total harmonic distortion
	Surround Channels	120 watts per channel, min. RMS, driven into 8 ohms, from 20Hz to 20kHz, with no more than 0.02% total harmonic distortion	120 watts per channel, min. RMS, driven into 8 ohms, from 20Hz to 20kHz, with no more than 0.02% total harmonic distortion	130 watts per channel, min. RMS, driven into 8 ohms at 1kHz, with no more than 0.8% total harmonic distortion
	Surround Back Channels	120 watts per channel, min. RMS, driven into 8 ohms, from 20Hz to 20kHz, with no more than 0.02% total harmonic distortion	120 watts per channel, min. RMS, driven into 8 ohms, from 20Hz to 20kHz, with no more than 0.02% total harmonic distortion	130 watts, min. RMS, driven into 8 ohms at 1kHz, with no more than 0.8% total harmonic distortion
Input Sensitivity/Impedance	PHONO MC	0.25mV/100 ohms		
	PHONO MM	2.5mV/47k ohms	2.5mV/47k ohms	2.5mV/47k ohms
	OTHER INPUTS	200mV/47k ohms	200mV/47k ohms	200mV/47k ohms
Signal-to-Noise Ratio (66 IHF/78 IHF)	PHONO MC	60dB/72dB (REC OUT)		
	PHONO MM	72dB/80dB (REC OUT)	72dB/80dB (REC OUT)	70dB/78dB (REC OUT)
	OTHER INPUTS	92dB/80dB	92dB/80dB	87dB/80dB
Frequency Response	PHONO MC	20Hz-20kHz (+1dB)		
	PHONO MM	20Hz-20kHz (+1dB)	20Hz-20kHz (+1dB)	20Hz-20kHz (+1dB)
	DVD MULTI	10Hz-100kHz (+1dB, -3dB)	10Hz-100kHz (+1dB, -3dB)	20Hz-100kHz (+1dB, -3dB)
	OTHER INPUTS	10Hz-100kHz (+1dB, -3dB)	10Hz-100kHz (+1dB, -3dB)	20Hz-100kHz (+1dB, -3dB)
RIAA Phono Equalization		+1dB (20Hz-20kHz)	+1dB (20Hz-20kHz)	+1dB (20Hz-20kHz)
FM TUNER SECTION (IHF)				
Usable Sensitivity		12.8dBf (1.2µV/75 ohms)	12.8dBf (1.2µV/75 ohms)	12.8dBf (1.2µV/75 ohms)
Quieting Sensitivity	MONO	16.0dBf (1.7µV/75 ohms)	16.0dBf (1.7µV/75 ohms)	16.0dBf (1.7µV/75 ohms)
	STEREO	37.5dBf (20.5µV/75 ohms)	37.5dBf (20.5µV/75 ohms)	37.5dBf (20.5µV/75 ohms)
Stereo Separation at REC OUT (1kHz)		40dB	40dB	35dB
VIDEO INPUTS/OUTPUTS				
Output Signal Level	Component - Y	1Vp-p	1Vp-p	1Vp-p
	Component - Pb/Pr	0.7Vp-p	0.7Vp-p	0.7Vp-p
	S-Video - Y	1Vp-p	1Vp-p	1Vp-p
	S-Video - C	0.286Vp-p	0.286Vp-p	0.286Vp-p
	Composite	1Vp-p	1Vp-p	1Vp-p
Impedance		75 ohms (Unbalanced)	75 ohms (Unbalanced)	75 ohms (Unbalanced)
Synchronization		Negative	Negative	Negative
CIRCUITRY				
Surround Sound	THX Processing	Ultra2	Ultra2	
	THX Surround EX	●	●	
	Dolby Digital EX	●	●	●
	Dolby Digital	●	●	●
	Dolby Pro Logic Iix	●	●	●
	Dolby Pro Logic II	●	●	●
	DTS	●	●	●
	DTS-ES	●	●	●
	DTS NEO.6	●	●	●
	DTS 96/24	●	●	●
	DVD Multi-Channel Audio Compatible (5.1-ch Inputs)	●	●	●
	EXT 7.1-ch Inputs	●	●	●
	Virtual Surround Back	●	●	●
	3D-PHONIC	●	●	●
DAP for Multi-Channel Digital Sources	LARGE THEATER / SMALL THEATER / LARGE HALL 1 / LARGE HALL 2 / RECITAL HALL / OPERA HOUSE / CHURCH / LIVE CLUB / DANCE CLUB / PAVILION	●	●	
	THEATER 1 / THEATER 2 / HALL 1 / HALL 2 / DANCE CLUB / LIVE CLUB / PAVILION			●
DAP for 2-Channel Sources	STEREO FILM / MONO FILM / LARGE THEATER / SMALL THEATER / LARGE HALL 1 / LARGE HALL 2 / RECITAL HALL / OPERA HOUSE / CHURCH / LIVE CLUB / DANCE CLUB / PAVILION / ALL CH STEREO	●	●	
	MONO FILM / THEATER 1 / THEATER 2 / HALL 1 / HALL 2 / DANCE CLUB / LIVE CLUB / PAVILION / ALL CH STEREO			●
3D Headphone		●	●	
P.E.M. D.D. Converter		● (192kHz/24-bit, 7.1-ch)	● (192kHz/24-bit, 7.1-ch)	● (Front ch)
CC Converter (2 Modes)		● (7.1-ch)	● (7.1-ch)	● (Front ch)
INPUTS/OUTPUTS				
Audio	Analog	10 Inputs (Gold-Plated) and 4 Outputs (Gold-Plated)	10 Inputs (Gold-Plated) and 4 Outputs (Gold-Plated)	9 Inputs and 4 Outputs
	Digital	4 Optical Inputs, 1 Optical Output and 3 Coaxial Inputs (Assignable)	4 Optical Inputs, 1 Optical Output and 3 Coaxial Inputs (Assignable)	4 Optical Inputs, 1 Optical Output and 1 Coaxial Input (Assignable)
Video	Component	3 Inputs (Gold-Plated) and 1 Output (Gold-Plated)	3 Inputs (Gold-Plated) and 1 Output (Gold-Plated)	2 Inputs and 1 Output
	S-Video	5 Inputs (Gold-Plated) and 3 Outputs (Gold-Plated)	5 Inputs (Gold-Plated) and 3 Outputs (Gold-Plated)	5 Inputs and 3 Outputs
	Composite	5 Inputs (Gold-Plated) and 3 Outputs (Gold-Plated)	5 Inputs (Gold-Plated) and 3 Outputs (Gold-Plated)	5 Inputs and 3 Outputs
Pre-Out	Front	● (Gold-Plated)	● (Gold-Plated)	●
	Center	● (Gold-Plated)	● (Gold-Plated)	●
	Surround	● (Gold-Plated)	● (Gold-Plated)	●
	Surround Back	● (Gold-Plated)	● (Gold-Plated)	●
	Subwoofer			●
	Zone2 / Sub Room (Front ch)	● (Gold-Plated)	● (Gold-Plated)	●
Speaker Terminals	Front L/R 1	● (Large Size, Banana-Plug Type)	● (Large Size, Banana-Plug Type)	● (Large Size, Banana-Plug Type)
	Front L/R 2	● (Large Size, Banana-Plug Type) / Zone2	● (Large Size, Banana-Plug Type) / Zone2	● (Large Size, Banana-Plug Type) / Zone2
	Center	● (Large Size, Banana-Plug Type)	● (Large Size, Banana-Plug Type)	● (Large Size, Banana-Plug Type)
	Surround L/R	● (Large Size, Banana-Plug Type)	● (Large Size, Banana-Plug Type)	● (Large Size, Banana-Plug Type)
	Surround Back x 2	● (L/R, Large Size, Banana-Plug Type)	● (L/R, Large Size, Banana-Plug Type)	● (Large Size, Banana-Plug Type)
FUNCTIONS				
On-Screen Display		●	●	
Fluorescent Display		●	●	
	Dot-Matrix Display	●	●	●
	Dimmer	●	●	
Quick Speaker Setup				● (New Version)
One-Touch Operation		●	●	
Equalizer (S.E.A.)		DSP Digital Parametric	DSP Digital Parametric	DSP Digital Equalizer
S.E.A. Control Level		Front/Center/Surround/Surround Back Ch: Bass: 63Hz-1kHz, 1/3-Oct. Step; Mid: 250Hz-4kHz, 1/3-Oct. Step; Treble: 1-16kHz, 1/3-Oct. Step ±6dB, 10dB Step	Front/Center/Surround/Surround Back Ch: Bass: 63Hz-1kHz, 1/3-Oct. Step; Mid: 250Hz-4kHz, 1/3-Oct. Step; Treble: 1-16kHz, 1/3-Oct. Step ±6dB, 10dB Step	Front ch: 63/250/1k/4k/16kHz ±8dB, 2dB Step; Center ch: 2.5kHz ±6dB, 3dB Step
S.E.A. Memory (Manual)		● (For Each Source)	● (For Each Source)	● (For Each Source)
Multi-Room/Multi-Source		●	●	●
Analogue Direct		●	●	●
Midnight Mode		●	●	●
Headphone Output		●	●	●
Bass Boost		●	●	●
TUNER				
Number of Presets		15 AM, 30 FM	15 AM, 30 FM	15 AM, 30 FM
MISCELLANEOUS				
4-Ohm Capability		● (Front Ch)	● (Front Ch)	
High-Rigidity Z-Chassis		●	●	
AV COMPLU LINK		●	●	●
TEXT COMPLU LINK		●	●	●
Enhanced COMPLU LINK Control System		●	●	●
Remote Control Unit	RF	●	●	●
	Multi-Brand	●	●	●
	A/V-STB (CATV/DBS)	●	●	●
	A/V	●	●	●
	Glow	●	●	●
	Illuminated (Back Light)	●	●	●
	Learning	●	●	●
	LCD	●	●	●
GENERAL				
Dimensions (W x H x D):	inches (mm)	17 ^{9/16} x 7 x 18 ^{1/4} (445 x 177 x 475)	17 ^{9/16} x 7 x 18 ^{1/4} (445 x 177 x 475)	17 ^{9/16} x 6 ^{7/16} x 16 ^{1/4} (435 x 156.5 x 425)
Weight	lbs. (kg)	52 (23.5)	52 (23.5)	26.5 (12.0)

Specifications

Double Cassette Decks

CD Changers

SPECIFICATIONS		TD-W354BK	TD-W254BK
Frequency Response at -20dB	Metal Tape	20 - 17,000Hz (30 - 16,000Hz, ±3dB)	20 - 17,000Hz (30 - 16,000Hz, ±3dB)
	SA/Chrome Tape	20 - 16,000Hz (30 - 15,000Hz, ±3dB)	20 - 16,000Hz (30 - 15,000Hz, ±3dB)
	Normal Tape	20 - 16,000Hz (30 - 15,000Hz, ±3dB)	20 - 16,000Hz (30 - 15,000Hz, ±3dB)
Signal-to-Noise Ratio		58dB* (Metal)	58dB* (Metal)
Wow and Flutter		0.08% (WRMS)	0.08% (WRMS)
Crosstalk (1kHz)		60dB	60dB
Harmonic Distortion: K3 (0VU, 315Hz)		0.8% (Metal)	0.8% (Metal)
Input Sensitivity/Impedance	Microphone (0VU)	0.4mV/600 - 10k ohms (Matching impedance)	0.4mV/600 - 10k ohms (Matching impedance)
	Line Input (0VU)	80mV/50k ohms	80mV/50k ohms
Output Level/Impedance	Line Output (0VU)	300mV/5k ohms	300mV/5k ohms
	Headphones (0VU)	0.3mW/8 ohms (Matching impedance 8 - 1k ohms)	0.3mW/8 ohms (Matching impedance 8 - 1k ohms)
Dimensions (W x H x D)	inches	17 ¹ / ₁₆ x 5 ¹ / ₂ x 13 ¹ / ₁₆	17 ¹ / ₁₆ x 5 ¹ / ₂ x 13 ¹ / ₁₆
	mm	435 x 139 x 331	435 x 139 x 331
Weight	lbs.	10.9	11.3
	kg	4.9	4.8
FEATURES			
MECHANISM			
Deck A	Auto Reverse	●	●
Deck B	Record/Play	●	●
	Auto Reverse	●	●
Full-Logic Silent Mechanism			
Cassette Shell Stabilizer			
CIRCUITRY			
Dolby HX Pro			
Dolby B/C Noise Reduction			
Pitch Control			
● (Deck A)			
Mic Input with Mixing Level Control			
DISPLAY			
Fluorescent Display Panel			
Dual Digital Counters			
Direction Indicator			
FUNCTIONS			
COMPU CALIBRATION			
High-Speed Editing			
Multi Music Scan (Deck A/B)			
DDRP			
Auto Tape Selector (Deck A/B)			
Full Auto Stop			
MISCELLANEOUS			
Headphone Output			
Enhanced COMPU LINK Control System			

SPECIFICATIONS		XL-FZ700BK	XL-FZ58BK	XL-FZ158BK
Total Harmonic Distortion (1kHz)		0.002%	0.0022%	0.0022%
Signal-to-Noise Ratio		108dB	107dB	107dB
Dynamic Range (1kHz)		98dB	98dB	98dB
Frequency Response		2Hz - 20kHz	2Hz - 20kHz	2Hz - 20kHz
Wow and Flutter		Unmeasurable	Unmeasurable	Unmeasurable
Channel Separation (1kHz)		94dB	94dB	94dB
Output Level (Line)		2.0V RMS	2.0V RMS	2.0V RMS
Dimensions (W x H x D)	inches	17 ¹ / ₁₆ x 4 ¹ / ₁₆ x 17 ¹ / ₁₆	17 ¹ / ₁₆ x 5 ¹ / ₁₆ x 15 ¹ / ₁₆	17 ¹ / ₁₆ x 5 ¹ / ₁₆ x 15 ¹ / ₁₆
	mm	435 x 102 x 448	435 x 128 x 388	435 x 128 x 388
Weight	lbs.	12.2	11.3	11.3
	kg	5.5	5.1	5.1
FEATURES				
MECHANISM/SERVO				
Type		7-Disc, Carousel	5-Disc, Carousel	5-Disc, Carousel
Play & Exchange System				
DIGITAL FEATURES				
1-Bit Dual D/A Converter				
●				
P.E.M. D.D. Converter				
●				
8-Times Oversampling Digital Filter				
●				
FUNCTIONS				
Playable Format		CD/CD-R/CD-RW	CD	CD
Play Mode		Continue	●	●
		Program	●	●
		Smart Random	●	●
Number of Programs		32	32	32
Number of Program Chart Tracks		18	20	20
Disc Keys		7-Disc Key	5-Disc Key	5-Disc Key
Numeric Keys		●	●	●
Repeat		All Discs/Single Track	●	●
		Program Repeat	●	●
Search (Auto/Manual)		●	●	●
MISCELLANEOUS				
Optical Digital Output				
●				
Headphone Output with Volume Control				
●				
Enhanced COMPU LINK Control System				
●				
REMOTE CONTROL				
Included				
●				
Disc Keys				
●				
Numeric Keys				
●				

* Metal tape, S:315Hz, K3:3%, N:A-weighted, without NR. The S/N ratio is improved about 15dB at 500Hz and 20dB maximum at 1kHz - 10kHz with Dolby-C NR on, and 5dB at 1kHz and 10dB above 5kHz with Dolby-B NR on.

Cordless Headphone Systems

Microphones

General		HA-W1000RF	HA-W300RF
Usable Area		328 ft. (100m)	328 ft. (100m)
Diaphragm		1.57" (40mm) Diameter	1.57" (40mm) Diameter
Frequency Response		30 - 16,000Hz	28 - 17,000Hz
Battery Life		35 Hours (When Charged for 24 Hours)	15 Hours (When Charged for 19 Hours)
Weight (with batteries)		9.5 oz. (270g)	11.3 oz. (320g)
Transmitter	Input Terminals	0.13" (2.5mm) Dia. Stereo Minijack RCA Pin Jack x 2	0.13" (2.5mm) Dia. Stereo Minijack RCA Pin Jack x 2
	Weight	11.3 oz. (320g)	10.2 oz. (290g)
Accessories		AC Adapter, Plug Adapter, Connection Cord	AC Adapter, Plug Adapter, Connection Cord

Type		MV-89	MV-79	MV-J3-BK
Type		Dynamic	Dynamic	Dynamic
Directivity		Uni-directional	Uni-directional	Uni-directional
Sensitivity		-55dB	-55dB	-56dB
Frequency Response		100 - 15,000Hz	100 - 13,000Hz	100 - 13,000Hz
Impedance		600 ohms	600 ohms	600 ohms
Cord Length		16.4 ft (5m)	16.4 ft (5m)	9.8 ft (3m)
Weight (without cord)		9.5 oz. (270g)	5.1 oz. (145g)	8.8 oz. (250g)

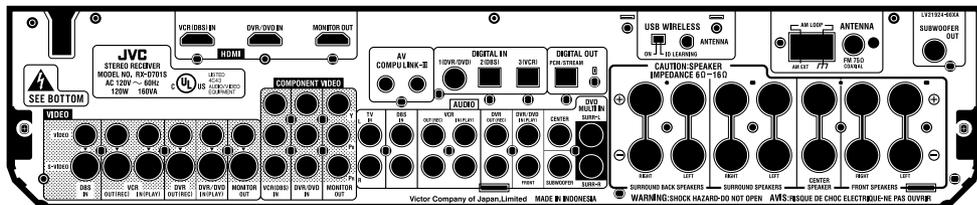
Headphones

Type		HA-DX3	HA-DX1	HA-M500	HA-G770	HA-G55	HA-G33	HA-G11
Type		Moving Coil, Closed						
Frequency Response		4 - 30,000Hz	5 - 30,000Hz	12 - 22,000Hz	10 - 25,000Hz	12 - 25,000Hz	16 - 22,000Hz	18 - 22,000Hz
Nominal Impedance		90 ohms	45 ohms	32 ohms	52 ohms	32 ohms	32 ohms	32 ohms
Sensitivity (1kHz)		98dB/1mW	98dB/1mW	107dB/1mW	107dB/1mW	110dB/1mW	100dB/1mW	98dB/1mW
Max. Input Capability		100mW	100mW	50mW	100mW	100mW	50mW	50mW
Cord Length		13 ft (4m) OFC	13 ft (4m) OFC	9.84 ft (3m) OFC	11.5 ft (3.5m)	11.5 ft (3.5m)	11.5 ft (3.5m)	9.8 ft (3m)
Weight (without cord)		11.9 oz. (340g)	10.5 oz. (300g)	3.8 oz. (108g)	9.0 oz. (255g)	9.5 oz. (270g)	6.7 oz. (190g)	5.3 oz. (150g)

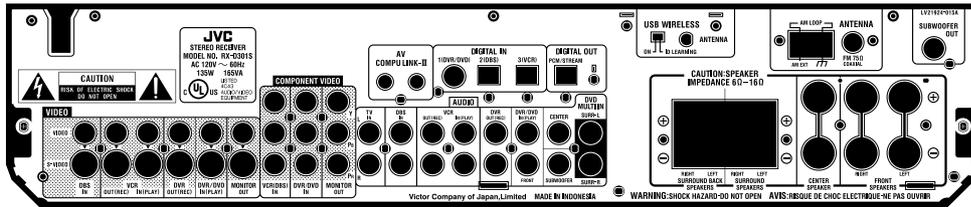
Type		HA-G101	HA-D350	HA-V570	HA-X570	HA-CD60	HA-35
Type		Moving Coil, Closed	Moving Coil, Closed	Moving Coil, Closed	Moving Coil, Closed	Moving Coil, Open Air	Moving Coil, Open Air
Frequency Response		16 - 22,000Hz	16 - 22,000Hz	7 - 21,000Hz	7 - 21,000Hz	18 - 23,000Hz	17 - 25,000Hz
Nominal Impedance		32 ohms	32 ohms				
Sensitivity (1kHz)		98dB/1mW	100dB/1mW	107dB/1mW	107dB/1mW	94dB/1mW	100dB/1mW
Max. Input Capability		50mW	50mW	50mW	50mW	50mW	50mW
Cord Length		9.8 ft (3m)	11.5 ft (3.5m)	9.8 ft (3m)	9.8 ft (3m)	6.6 ft (2m)	4.9 ft (1.5m)
Weight (without cord)		6.0 oz. (170g)	7.05 oz. (200g)	4.2 oz. (120g)	4.2 oz. (120g)	1.9 oz. (55g)	1.5 oz. (43g)

Receiver Rear Panels

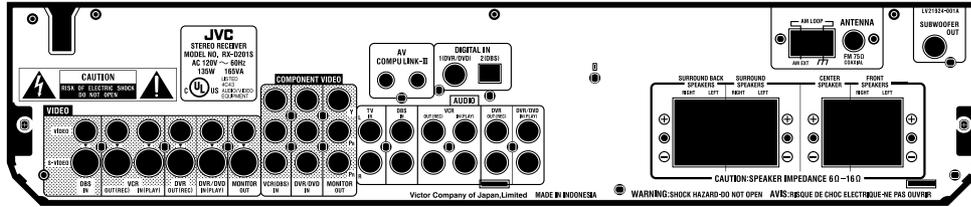
RX-D702



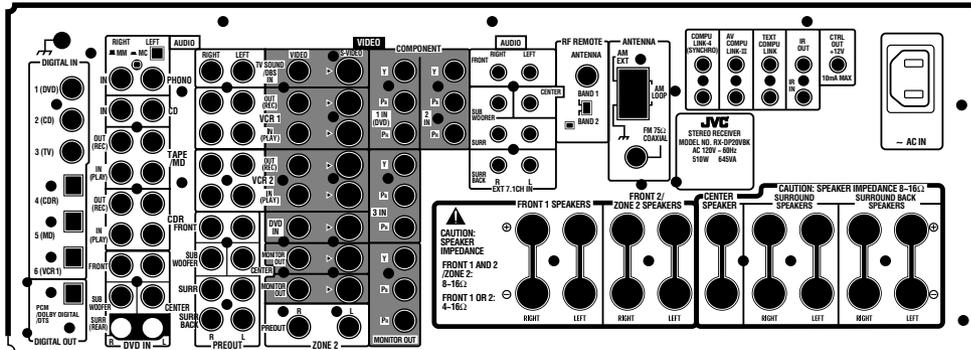
**RX-D302
RX-D301**



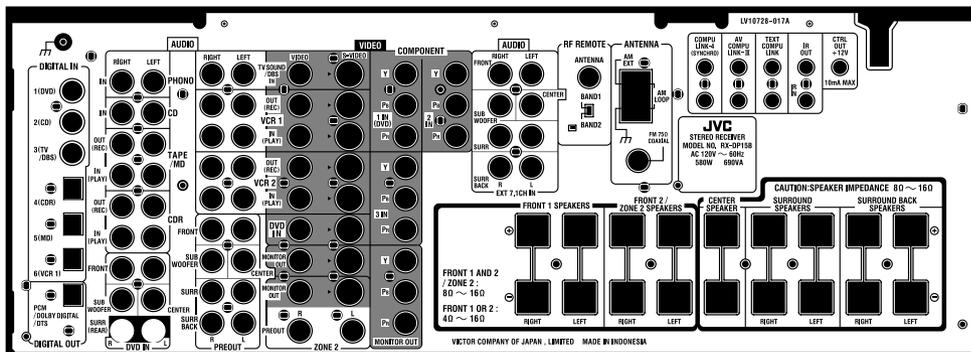
**RX-D202
RX-D201**



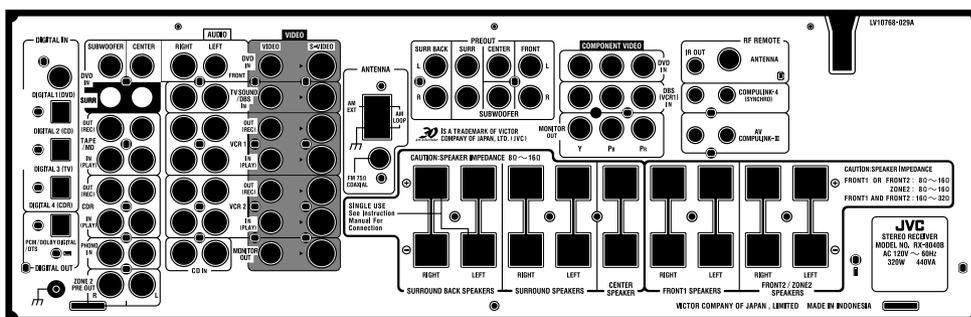
RX-DP20VBK



RX-DP15



RX-8040



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Dianne Reeves

Ron Carter

Peter Cincotti

James Carter

Jamie Cullum



JVC Jazz Festival New York, Carnegie Hall



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