

MICRO COMPONENT SYSTEMS 2004

13

WE Bring the Music to You

John Patitucci at the 2003 JVC International Jazz Festival

A Musical Instrument Called a "Speaker"

JVC

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JVC

Natural acoustics from a speaker cone made by Mother Nature. The superb sound of JVC's new Audio system is enabled by elements not found in conventional speakers.

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The World's First Wood Cone Speaker — Raising the Speaker to the Level of a Musical Instrument

A popular material for violins, pianos, and many other musical instruments, wood is blessed with superior acoustic characteristics not seen in other materials. This is why many speaker enclosures are made of wood. Then, why not a speaker diaphragm? It was 20 years ago that JVC engineers came up with this idea in their eternal quest for reproducing original sounds as envisioned by studio engineers, and it was at that time that the first step toward developing a wood speaker diaphragm was taken.

Natural Sound

Underlying the wood's superiority as a material for musical instruments — and speaker diaphragms — are the following acoustic characteristics:

1) Sound Propagation Speed and Vibration Attenuation

High sound propagation speed ensures high sound definition, while sufficient internal loss (vibration attenuation) is essential for crispness and clarity. Solid wood is superior in both of these factors — impossible with conventional materials. And especially the birch wood, featuring firm fiber and a beautiful grain, ensures high durability and optimum acoustic characteristics.

2) Uneven Sound Propagation Speed

With conventional diaphragms, sound propagates at the same speed in all directions, causing standing waves, resonant points, and poor sound pressure frequency response, all of which degrade sound quality. Wood diaphragms are free of such drawbacks, because the sound propagates at diverse speeds — much faster along the grain than across the grain.

Challenges in Development — and a Surprising Solution

When it came to making a diaphragm out of wood, however, there was a significant barrier — wood sheets can crack, split, or break when stamped. JVC engineers tried various techniques, such as boiling sheets and soaking them in water, but each method attempted proved ineffective for changing the physical characteristics.

After years of trial and error, JVC finally found the solution in a surprising material — sake, or Japanese rice wine. When soaked in sake, a wood sheet becomes soft and pliable enough not to break or crack even when stamped.



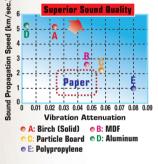
JVC has combined the "sake" careful, elaborate stamping processes using resin and special agents to make the wood ble enough to retain natural sound over years so took JVC engineers several years to come up with. In D-year process of research and discovery resulted in the pment of a wood cone speaker.

2nd Stamping Process 3

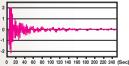
^{3rd Stamping Process} Final Sound Tuning with JVC's Studio

Engineers In its quest to reproduce original sound — sound that comes extremely close to what studio engineers intended — and to get the optimum out of the wood cone speaker, JVC looked to studio engineers from the Tokyo Aoyama Recording Studio, a JVC affiliate, to collaborate in the final sound-tuning stage of EX-A1 development. Advice and opinions from the sound-creating experts are also reflected in the selection and layout of parts and devices for the center unit (see the next page for details).

Properties of Diaphragm Materials



Wood Diaphragm's Vibration Attenuation



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World's First Wood Cone Speaker

The sound from the EX-A1's wood cone speaker is astonishingly clear and natural, just like sound emitted from a musical instrument, with dynamic bass that is usually impossible without a separate subwoofer. This is because the superior, exclusive acoustic characteristics of wood are working in synergy with the following high-grade parts and devices, which JVC carefully chose for completing the speaker unit:

The solid cherrywood enclosure not only features the same acoustic characteristics as the diaphragm — high sound propagation speed, natural vibration attenuation, reduced standing waves and resonant points, and better

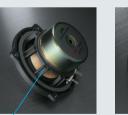


sound pressure frequency response — but also gives an elegant, classy appearance to the speaker unit. Heavy

diecast aluminum frame, which JVC chose for the wood cone speaker, helps to provide a dynamic, high-quality bass sound.

The **neodymium magnet** generates an extremely high magnetic flux density - equal to that from a much larger-sized ferrite magnet -, which translates into the compact speaker's astounding power. Moreover, use of a **copper cap** for the magnet helps reduce sound distortion.

The **butyl rubber edge** features physical characteristics that improves the linearity of low frequency signals and prevents the distortion of bass.





Butyl Rubber Edge

Diecast Aluminum Frame

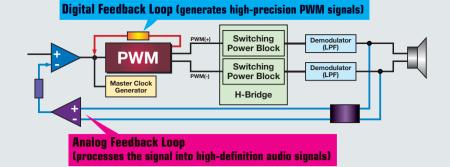
The edgewise-wound 4-layer voice coil features the wires pressed flat and packed closer than round ones. The results are higher efficiency, better heat radiation. and lower distortion.

Hybrid Feedback Digital Amplifiers

To fully exploit the benefits of the wood cone speaker, JVC has applied its expertise to the EX-A1's center unit. One of the most remarkable features is the JVC-original Hybrid Feedback Digital Amplifier.

Usually, a digital amplifier is compact

Hybrid Feedback Digital Amp Configuration



and lightweight: because the process of digital amplification combines high efficiency and reduced power dissipation through heat loss, it operates on a smaller transformer and power supply than analog amplifiers. But analog-digital conversion of signals generates digital noise, and fluctuations in the powersupply voltages and power-supply noise can also cause analog noise.

The Hybrid Feedback Digital Amplifier eliminates these noises by using two feedback systems: a digital feedback system to significantly improve the precision with which the PWM (Pulse Width Modulation) signals are generated, and an analog feedback system that further "brushes up" the signals to ensure the waveform of the analog signal at output is identical to that at input.

Combined, the two feedbacks are extremely efficient, which results in higher sound quality.

All in all, the JVC Hybrid Feedback Digital Amp features not only the compact size, but also high power and low distortion - 1/10th that of conventional designs.

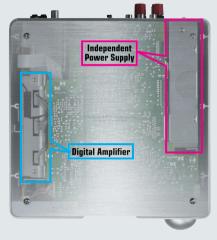
Digital Direct Progressive Scan

The EX-A1 delivers high-resolution progressive pictures to compatible TVs and monitors. With this advanced technology, odd and even scan lines are not displayed alternately like interlaced pictures, but all at once. The result: solid, remarkably clear pictures with smooth lines/curves and no interline blur, even on large-screen displays.

Aluminum "Twin Arc Panel" Construction

The amplifier's excellence in noise reduction is further enhanced by the internal construction of the EX-A1's center unit. The Aluminum "Twin Arc Panel" Construction features aluminum cabinets that individually house the digital amplifier and switching power supply module, physically separating the two units from the audio circuit. This effectively avoids signal interference and noise.

Selection of High-Quality Parts



with JVC's Studio Engineers

Advice and opinions from the soundcreating experts are reflected in the carefully chosen, high-grade parts including SILMIC electrolytic capacitor with silk fiber used for the main electrolytic paper material, and the bass circuit's polypropylene film capacitor, which features high reliability



and performance, superior frequency response, and stable temperature characteristics.

DVD Audio Plavback

The EX-A1's outstanding audio features are completed by its playability of DVD Audio, which results in the master-tapequality sound intended by JVC. This latest format features a dynamic range of 144dB using a high 192kHz sampling frequency and a high 24-bit rate - about seven times more information than that contained in an ordinary CD. What the wood diaphragm will bring to your ears — and mind — is not a sound, but real music played on a musical instrument called a speaker.

"Dolby," the double-D symbol and "Dolby Digital" are trademarks of Dolby Laboratories Licensing Corporation. "DTS" is a trademark of Digital Theater Systems, Inc.



DVD Compact Component System with Wood Cone Speakers

Power Output: 30 watts per channel Sources: DVD-Audio/Video, DVD-RW, DVD-R, CD, SVCD/VCD, CD-R/RW, MP3/JPEG (CD-R/RW), Tuner World's First Wood Cone Speaker (Birch Wood Diaphragm) Real Cherrywood Speaker Enclosure JVC-Exclusive Hybrid Feedback Digital Amplifier

dts

Aluminum "Twin Arc Panel" Construction Dolby Digital/DTS Decoder (2ch) 192kHz/24-bit Audio D/A Converter 10-bit/54MHz Video D/A Converter Digital Direct Progressive Scan Output Express Play Start Screw-type Speaker Terminals Virtual Surround



Hybrid Feedback



Unwind with Quality Sound — and Pictures.

JVC offers quality time with crystal clear sound and high-resolution pictures. Add visual elements to your special moments.

DVD Audio/Video Compatibility (FS-S77)

The JVC micro component systems boast compact dimensions but offer compatibility with virtually all disc formats. Playability of DVD-Video, DVD-RW, and DVD-R means you can enjoy movies and other video content with high-quality pictures.

The FS-S77 is also compatible with DVD Audio — one of the latest and most advanced formats that far exceeds CDs in total sound quality. The high specs of DVD Audio let you enjoy the highestquality stereo sound.



RHYTHMAX RHYTHMAX intensifies your listening experience even at low sound levels. This JVC-exclusive technology accurately detects areas of sound, which constitute "beats", or rhythm of the song, and amplifies them for an even punchier sound. RHYTHMAX provides upgraded



acoustic experience even when the song has no articulate "beats", such as classical music, because the "Loudness

RHYTHMAX Off Signals are amplified for more punchy bass **RHYTHMAX On**

Function" automatically amplifies bass sound recorded at low levels, which becomes inaudible when the sound level is low.

5-Disc Changer (FS-S77/FS-S57) The compact bodies of JVC micro component systems incorporate a 5disc tray-type disc changer mechanism, which lets you jump around an expanded

number of movies (FS-S77), albums, and



disc changes. Discs not in play can be removed even while playback is underway.



FS-S77

DVD Micro Component System

Power Output: Woofer: 25 watts per channel; Tweeter: 25 watts per channel Sources: DVD-Audio/Video, DVD-RW, DVD-R, CD, SVCD/ VCD, CD-R/RW, MP3/JPEG/WMA (CD-R/RW), Tuner 5-Disc Changer DVD-Video: Slow/ Zoom/Angle/Chapter Search/Time Search/Still/ Resume Functions Dolby Digital/DTS Decoder (2ch) Digital Direct Progressive Scan Output

192kHz/24-bit Audio D/A Converter 10-bit/ 54MHz Video D/A Converter Express Play Start Bi-Amp Operation RHYTHMAX 3D PHONIC Surround Play 2-Way Bass-Reflex: $3^{15}/_{16}$ " (10cm) Cone Woofer, $1^{5}/_{8}$ " (4cm) Cone Tweeter



0000 5-DISC TRAY CHANGER



FS-S57

Micro Component System

Power Output: 74 watts per channel 5-Disc Changer Fluorescent Display on Clear Background with Backlit LED Sources: CD, CD-R/RW, MP3 (CD-R/RW), Tuner Active Hyper-Bass PRO (2-Step) CD Program (32 Tracks)/Random/Repeat Play Rotary Encoder Volume Control Electronic Bass/ Treble Tone Controls Clock/Timer (Daily/Rec/Sleep) Wakeup Volume 2-Way Bass-Reflex: $4^{3}/_{4}$ " (12cm) Cone Woofer and $1^{5}/_{8}$ " (4cm) Cone Tweeter





3-Preset Timer (FS-S77/FS-H300/FS-H100)

The user-friendly timer allows you to preset up to three different times and switch them whenever you want with ease. This function is particularly convenient when you need to wake up at different times during the week, because you do not have to reset the timer, but just choose from preset times.



FS-H300

Micro Component System

Power Output: 20 watts per channel Sources: CD, CD-R/RW, MP3 (CD-R/RW), Tuner, Cassette S.E.A. (4 Modes): POP/ROCK/CLASSIC/JAZZ Electronic Bass Control Clock/3-Preset Timer Front AUX Input 1-bit D/A Converter Program (40 Tracks)/Random/Repeat Play Full-Logic Cassette Control





FS-H100

Micro Component System

Power Output: 12.5 watts per channel Sources: CD, CD-R/RW, MP3 (CD-R/RW), Tuner, Cassette S.E.A. (4 Modes): POP/ROCK/ CLASSIC/JAZZ Electronic Bass/Treble Tone Controls Clock/3-Preset Timer







Front AUX Input (FS-H300/FS-H100)

An auxiliary input is conveniently located on the front panel, so you can easily enjoy sound from external sources, such as digital audio players.



FS-X3

Executive Desktop Stereo

Power Output: 30 watts per channel Sources: CD, CD-R/RW, Tuner JVC-Exclusive Hybrid Feedback Digital Amplifier Motor-Driven CD Door Active Hyper-Bass PRO (1-Step) Audio Output: Optical x 1, Analog x 1 and Subwoofer x 1 Solid Aluminum Volume Control Clock/Timer (Daily/ Sleep) Electronic Bass/Treble Tone Controls 2-Way Bass-Reflex: 3¹⁵/₁₆" (10cm) Aramid Hyper Neo Olefin Cone Woofer with 2-Layer Edgewise-Wound Voice Coil, and ¹³/₁₆" (2cm) Soft Dome Tweeter





FS-X1

Executive Desktop Stereo

Power Output: 30 watts per channel Sources: CD, CD-R/RW, Tuner JVC-Exclusive Hybrid Feedback Digital Amplifier Motor-Driven CD Door Active Hyper-Bass PRO (1-Step) Audio Output: Optical x 1, Analog x 1 and Subwoofer x 1 Oblique Cone Speaker Solid Aluminum Volume Control Clock/Timer (Daily/Sleep) $3^{3}/_{16}$ " (8cm) Full-Range Aramid Hyper Neo Olefin Cone Speaker with 4-Layer Edgewise-Wound Voice Coil

AHB PRO CD-R/RW PLAYBACK

Hybrid Feedback Digital Amplifier

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.

Specifications & Features

EX Series

SPECIFICATIONS			EX-A1	
CENTER UNIT				
Output Power (FTC)			30 watts per channel, min. RMS, driven into 4 ohms, at 1kHz, with no more than 10% total harmonic distortion	
Horizontal Resolution			500 Lines	
Output Level	Component Y		1.0Vp-p/75 ohms	
	PR/F) _p	0.7Vp-p/75 ohms	
	S-Video Y		1.0Vp-p/75 ohms	
	C		0.286Vp-p/75 ohms	
	Composite		1.0Vp-p/75 ohms	
Dynamic Range (1kHz)			88dB	
Signal-to-Noise Ratio			95dB	
Dimensions (W x H x D)	inches		9 ³ / ₁₆ x 3 ¹⁵ / ₁₆ x 10 ⁵ / ₈	
	mm		232 x 100 x 269	
Mass	lbs. (kg)		6.6 (3.0)	
SPEAKERS				
Speaker	Full	Range	3 ³ / ₁₆ " (8cm), Wood Cone	
Dimensions (W x H x D)	inch	-	4 ³ / ₄ x 6 ³ / ₈ x 9 ⁷ / ₁₆	
	mm		120 x 161 x 239	
Mass	lbs.		3.5 (1.6)	
FEATURES				
GENERAL				
Fluorescent Display			•	
Dimmer			•	
Sleep Timer				
AMPLIFIER/TUNER				
Hybrid Feedback Digital Am	n		•	
Electronic Bass/Treble Tone				
Preset Stations (15 AM, 30				
DVD/CD PLAYER	11100		•	
Playable Formats	DVD-Audio		•	
riayable i ultilata	DVD-Audio DVD-Video		•	
	DVD-Wideo DVD-RW/DVD-R (VIDEO Format)		•	
	CD/CD-R/RW	umuu	•	
	SVCD/VCD		•	
	MP3 (CD-R/RW)			
	JPEG (CD-R/RW)		•	
DVD V/dee: Clew/7eeee/Aee	le/Chapter Search/Time Search	- Chill/Decurrentiese		
	ie/unapter bearch/ mille bearc	avouivnesume runcuons		
Dolby Digital/DTS Decoder	Outrut		• (2ch)	
Digital Direct Progressive S	can output		•	
Express Play Start			•	
Rolling Pickup			•	
Virtual Surround			•	
192kHz/24-bit Audio D/A C			•	
10-bit/54MHz Video D/A Ci	onverter		•	
Number of Programs			99	
Program/Random/Repeat P			•	
Optical Digital Output (Dolb	y Digital/DTS Digital Out)		•	
On-Screen Language			English/French/Spanish	
TERMINALS				
Audio Out	Optical		•	
	Subwoofer		•	
Audio In	Analog		•	
Video Out	Component		•	
	S-Video		•	
	Composite		•	
Headphone Out			•	
SPEAKERS				
Real Cherrywood Enclosure			•	
Birch Wood Cone Diaphrag	n		•	
Diecast Aluminum Frame			•	
Neodymium Magnet			•	
Detachable Grilles			•	
Edgewise-Wound 4-Layer Voice Coil			•	
Screw-Type Terminal			•	
Magnetically Shielded			•	

FS-X	Series

		FS-X3	FS-X1	
SPECIFICATIONS				
CENTER UNIT				
Cutput Power (FTC)		30 watts per channel, min. RMS, driven into 4 ohms, at 1kHz, with no more than 10% total harmonic distortion	30 watts per channel, min. RMS, driven into 4 ohms, at 1kHz, with no more than 10% total harmonic distortion	
Dynamic Range (1kHz)		88dB	88dB	
Signal-to-Noise Ratio		95dB	95dB	
Dimensions (W x H x D)	inches	6 ⁵ / ₁₆ x 5 ¹ / ₈ x 9 ¹⁷ / ₃₂	6 ⁵ / ₁₆ x 5 ¹ / ₈ x 9 ¹⁷ / ₃₂	
	mm	160 x 130 x 242	160 x 130 x 242	
Mass	lbs. (kg)	5.1 (2.3)	5.1 (2.3)	
SPEAKERS				
Speaker	Woofer	3 ¹⁵ / ₁₆ " (10cm), Cone		
	Tweeter	¹³ / ₁₆ " (2cm), Dome		
	Full Range		3 ³ / ₁₆ " (8cm), Cone	
Impedance		4 ohms	4 ohms	
Dimensions (W x H x D)	inches	5 ¹³ / ₁₆ x 9 ¹¹ / ₁₆ x 8 ⁵ / ₁₆	4 ¹ / ₂ x 6 ¹⁵ / ₁₆ x 6 ⁷ / ₈	
	mm	145 x 245 x 210	114 x 176 x 174	
Mass	lbs. (kg)	5.3 (2.4)	2.9 (1.3)	
FEATURES				
GENERAL				
Fluorescent Display		•	•	
Dimmer		•	•	
Motor-Driven CD Door		•	•	
Blue CD Illumination		•	•	
Aluminum Volume Knob		•	•	
Clock/Timer (Daily/Sleep)		•	•	
AMPLIFIER/TUNER				
Hybrid Feedback Digital Amp		•	•	
Active Hyper-Bass PRO		•	•	
Electronic Bass/Treble Tone (Controls	•	•	
Preset Stations (15 AM, 30	FM)	•	•	
CD PLAYER				
CD-R/RW Playback		•	•	
1-Bit D/A Converter		•	•	
Number of Programs		32	32	
Program/Random/Repeat Pla	зу	•	•	
Optical Digital Output		•	•	
TERMINALS				
	alog/Subwoofer	•/•/•	•/•/•	
Audio In Analog		•	•	
Headphone Out		•	•	
SPEAKERS				
Aramid Hyper Neo Olefin Cone		•	•	
Detachable Grilles			•	
Oblique Cone Speaker			•	
Edgewise-Wound 4-Layer Voice Coil			•	
Edgewise-Wound 2-Layer Voice Coil		•		
Magnetically Shielded				
Speaker Type		2-Way, Bass-Reflex	Full Range, Bass-Reflex	

FS Series

ra aeries						
			FS-S77	FS-S57	FS-H300	FS-H100
SPECIFICATIONS CENTER UNIT						
Output Power (FTC)		Woofer	25 watts per channel,	74 watts per channel,	20 watts per channel,	12.5 watts per channel,
			min. RMS, driven into 4 ohms,	min. RMS, driven into 6 ohms, at 1kHz, with no more than	min. RMS, driven into 4 ohms, at 1kHz, with no more than	min. RMS, driven into 6 ohms, at 1kHz, with no more than 10% total harmonic distortion
1kHz, with no more than 10% total harmonic distortion		10% total harmonic distortion			10% total harmonic distortion	10% total harmonic distortion
		Tweeter	25 watts per channel,			
			min. RMS, driven into 4 ohms, at 1kHz, with no more than			
			10% total harmonic distortion			
Horizontal Resolution Output Level (Component	Y	500 Lines 1.0Vp-p/75 ohms			
Output Level	Joinponent	P _B /P _R	0.7Vp-p/75 ohms			
-	S-Video	Y	1.0Vp-p/75 ohms			
		С	0.286Vp-p/75 ohms			
(Composite		1.0Vp-p/75 ohms			
Dynamic Range (1kHz)			90dB	88dB	85dB	85dB
Signal-to-Noise Ratio			90dB	97dB	85dB	85dB
Dimensions (W x H x D)		inches	6 ¹⁵ / ₁₆ x 9 ³ / ₈ x 14 ¹³ / ₁₆ 175 x 237 x 375.1	6 ¹⁵ / ₁₆ x 9 ¹ / ₂ x 14 ¹⁵ / ₁₆ 175 x 239.5 x 378	6 x 9 ³ / ₁₆ x 11 ¹ / ₂ 152 x 233 x 292	5 ¹¹ / ₁₆ x 10 ¹ / ₁₆ x 10 ¹⁵ / ₁₆ 144 x 255 x 277
Mass		mm Ibs. (kg)	16.5 (7.5)	16.6 (7.5)	8.6 (3.9)	6.4 (2.9)
SPEAKERS		ibs. ikgi	10.3 (7.3)	10.017	0.0 (0.0)	0.4 (£.3)
Speakers		Woofer	3 ¹⁵ / ₁₆ " (10cm), Cone	4 ³ / ₄ " (12cm), Cone		
		Tweeter	1 ⁵ /8" (4cm), Cone	1 ⁵ /6" (4cm), Cone		
		Full-Range			3 ¹⁵ / ₁₆ " (10cm), Cone	3 ¹⁵ / ₁₆ " (10cm), Cone
Impedance			4 ohms	6 ohms	4 ohms	6 ohms
Dimensions (W x H x D)		inches	5 ³ / ₄ x 9 ⁵ / ₁₆ x 8 ¹ / ₈	5 ³ / ₄ x 9 ¹ / ₂ x 8	5 ¹³ / ₁₆ x 9 ³ / ₁₆ x 7 ¹ / ₂	5 ¹ / ₈ x 10 ¹ / ₈ x 6
		mm	145 x 236 x 205	145 x 239.5 x 202	147 x 233 x 189	130 x 257 x 151
Mass FEATURES		lbs. (kg)	5.1 (2.3)	4.9 (2.2)	4.2 (1.9)	3.3 (1.5)
GENERAL						
Rotary Encoder Volume Control			•	•	•	•
COMPU PLAY			•	•	•	(Except for CASSETTE)
Display		Fluorescent Display	-	 (Clear Background) 		
. ,		LCD Display	(Blue)	•	(Blue)	(Amber)
		Dimmer	• (1, 2, Auto)	٠		
Clock/3-Preset Timer			•	Clock/Daily Timer	•	•
Rec Timer			•	•	•	
Sleep Timer			•	•	•	•
Wakeup Volume			•	•	•	•
AMPLIFIER/TUNER						
Bi-Amp Operation Active Hyper-Bass PRO			•	• (2-Step)		
Electronic Bass/Treble Tone Cor	trolo			• tz-stepi	Bass Control Only	
S.E.A. (4-Mode: POP/ROCK/CL/			•	•		
Surround Play	10010/07/222		(3D PHONIC)		-	•
RHYTHMAX			•			
Headphone Output			•	•	•	•
AUX Input			•	•	Front AUX	Front AUX
Preset Stations		15 AM, 30 FM	•	•		•
		15 AM, 25 FM			٠	
Video Out		Component	•			
		S-Video	•			
		Composite	•			
DVD/CD/VCD PLAYER						
Playable Formats		DVD-Audio DVD-Video	•			
		DVD-Video DVD-RW/DVD-R (VIDEO Format)	•			
		CD/CD-R/RW	•	•	•	•
		SVCD/VCD	•	-	-	-
		MP3 (CD-R/RW)	•	•	•	•
		WMA (CD-R/RW)	•			
		JPEG (CD-R/RW)	•			
	hapter Search/T	ime Search/Still/Resume Functions	•			
Dolby Digital/DTS Decoder			• (2ch)			
Digital Direct Progressive Scan	Output		•			
Express Play Start			•			
Rolling Pickup			•			
5-Disc Changer 1 bit D/A Converter			•	•	-	-
1-bit D/A Converter 192kHz/24-bit Audio D/A Conve	rter		-	•	•	•
10-bit/54MHz Video D/A Conve			-			
Number of Programs			99	32	40	32
Program/Random/Repeat Play			•	•	•	•
Playable System			NTSC			
Optical Digital Output (Dolby Dig	gital/DTS Digital	Out)		•		
On-Screen Language			English/French/Spanish			
CASSETTE DECK						
Full-Logic Control					•	
Auto Reverse Transports					•	
CD Synchro Start Recording					•	•
ALC (Automatic recording Level	Control)				•	•
SPEAKERS						
SPEAKERS Detachable Grilles Magnetically Shielded			•	•	•	



JVC's Time-Honored Tradition of Sponsoring World-Class Cultural and Sporting Events

The best of live jazz — brought to you by JVC. This year, the JVC Jazz Festival celebrates its 20th anniversary, and the Newport Jazz Festival, its 50th as the world's first outdoor jazz event.

JVC has sponsored jazz festivals, including the Newport Jazz Festival, every year since 1984 as a means of showcasing live jazz throughout the globe, and helping to nurture a universal musical culture and common bond among the many peoples of the world.

Enthusiastically supported by audiences worldwide, JVC's Jazz Festivals are now an established global tradition. In the past 20 years, more than 160 major jazz festivals have taken place under JVC sponsorship, with nearly four million people participating, and no less than 47 thousand musicians performing. To witness some of the most exciting moments for yourself, visit JVC's jazz website at http: //www.jvc-victor.co.jp/english/jazz/ JVC contributes to the world through other global events as well. JVC sponsored FIFA World Cup[™] and has been an official partner of the UEFA EURO Cup — for more than 20 years, respectively. JVC is also a key sponsor of major non-sporting events like the annual International Tokyo Video Festival.

JVC — we bring excitement and emotion to the world.





Official Partner of UEFA EURO 2004™

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