

## AAC

- Advanced Audio Codec; Compressed Music Format
- Used by Apple in the popular i-Tunes service

## ATSC

- Advanced Television Systems Committee
- Creates Digital TV Broadcast Standards (HDTV & SDTV)
- An ATSC Tuner is a Digital TV Tuner

## Aperture/F-Stop

- Defines the iris setting or "light passing" characteristic of a lens assembly
- The lower the number, the larger the iris opening and greater light transmission through the lens
- Each full f/stop allows either twice or half as much light through as the previous one - depending upon which direction you're going. f/4 allows half as much light as f/2.8. f/5.6 allows twice as much light as f/8
- F1.0 is theoretically perfect-with no reduction as light passes through the lens

## Aspheric Lens

- A lens design that is not spherical in shape
- Aspheric lenses are smaller, lighter and in general, better than similar lenses which only employ spherical elements. In some instances, using an aspherical element can enable the lens designer to use fewer lens elements with fewer lens surfaces, there is also less potential for internal reflection

## Audio Delay (adjustable)

- Allows for proper audio/video synchronization
- Video processing can take more time than audio, so audio can be delayed in 10ms intervals from 0-100ms. When HDMI is used, Audio Delay is adjusted automatically.
- Feature generally available only on "upscale" surround sound receivers

## Auto Exposure Bracketing

- Automatically takes 3 shots with sequential exposures of -1/3rd f-stop, normal & +1/3rd f-stop with each shutter pressing. Ideal for tricky lighting where correct exposure is critical

## Auto Shutter Priority & Aperture Priority Modes

- Allows microprocessor control of exposure based on preference
- **Shutter Priority:** Select shutter speed; processor determines proper aperture
- **Aperture Priority:** Select lens aperture setting; processor determines proper shutter speed. Allows advanced control over depth of field, etc. GZ-MC500 & GR-X5 include Shutter Priority & Aperture Priority for advanced exposure control

## Auto Smart Setup

- Feature available with select JVC Theater Systems
- Provides simple Multi-Channel audio setup; automatically adjusts critical settings
- Push one button on the remote & clap hands
- The built-in microcomputer detects each speaker's distance from viewing position and automatically sets to ideal speaker level and time delay

## A/V Compu Link

- For one touch operation of compatible JVC video components, such as Televisions, DVD Players & Video Recorders
- Inserting a DVD or Video Tape powers up the necessary components (including receiver & TV) and the proper source is automatically selected
- Uses a 1/8" mono mini plug cable to connect each component to allow communication between them

## BBE

- Barcus Berry Electronics, a "household name" in pro-audio and studio applications
- Based on careful analysis of sound behavior and the physical characteristics of the human ear, BBE sound processing accurately shapes sound to ensure maximum realism. With clear high frequencies and crisp vocals, assures that reproduced sounds are the closest possible to the original recording

## BBEII

- BBE with three preset operational modes
- Makes it possible to get the best sound with a wider range of source material

## Banana Plug Speaker Terminals

- Provides easy connection and disconnection capability for speakers, higher current capability, and lower resistance than most other connection methods
- Allows for more convenient hook up of larger gauge, higher performance speaker wires

## Bi-Amp Mode

- The RX-DP15/20 receivers can be configured to provide 120 Watts X2 for the midranges & tweeters in the Front/Main Speakers and an additional 120 Watts X2 for the woofers in the Front/Main Speakers
- Bi-Amp mode requires Bi-amp/Bi-Wire capable loudspeakers

## Blu-ray

- One of two high definition optical disc formats that has been proposed for recording and playback. Uses new, shorter wavelength blue laser technology for storing more data on a disc
- Offers the highest storage capacity of the currently proposed HD disc format contenders.
- The capability to produce a 4 layer, 100GB disc has been announced
- JVC has announced support of Blu-ray "next-generation" HD disc format

## CCD

- Charge Coupled Device
- The number of pixels affects the picture quality of both video & digital stills
- The number of pixels also effects how well the electronic picture stabilizer works on models that have this feature

## CD-A

- Uncompressed CD-Audio
- State of the art digital audio technology from the early 80's. No longer state-of-the-art
- Uncompressed files were considered too large to share on the internet

## cd/m<sup>2</sup>

- Candela per square meter; the standard unit for measuring luminance/brightness
- Used when comparing display response time, lumens output, etc

## Component Video

- The elements that make up a component video signal are **luminance**, which represents brightness in the image, and **separate red and blue color difference signals** (expressed as either Y R-Y B-Y or Y Pb Pr)
- Component video is superior to both composite and S-video because it provides improved color purity, superior color detail and reduces NTSC artifacts

## Component Video/RGB H/V Connection

- Three conductor video connection to send /receive the luminance (Y) and two color difference signals (Pb, Pr), each delivered via a separate, dedicated cable
- These are analog connections that can be used for both high quality HD & SD signals
- With Older (Legacy) HDTV Sets, these may be the only available HD connections
- These connections are not copy protected, although there are very limited devices available that can record from them

## Composite Video

- Video signal combining luminance and chrominance, burst and sync signals (horizontal and vertical)
- A direct video connection typically using an RCA-type plug or jack
- Superior to the RF type of connection but inferior to S-video or component video

## Continuous Shooting

- Allows camcorders to provide high speed digital stills capturing. Similar to a motor drive on a still camera with the ability to capture stills at a speed of up to 3 frames per second

## CRT

- Cathode Ray Tube. Used in direct view televisions as well as traditional front & rear projection televisions. Uses electron gun or guns and electro-magnetic scan deflection

## D-ILA

- Direct Drive Image Light Amplifier. The JVC version of LCOS. Often considered a hybrid of LCD and DLP technologies. A "reflective" technology utilizing liquid crystals instead of individual mirrors. Liquid crystals are applied to a reflective mirror substrate. As the liquid crystals open and close, the light is either reflected from the mirror beneath, or blocked. This modulates the light and creates the image. Unlike LCD, no organic compounds are used, so there are no issues with degradation of image quality over time

## DLP

- "Digital Light Processing" is a proprietary technology developed by Texas Instruments. The DLP chip is a reflective surface made up of thousands of tiny mirrors. Each mirror represents a single pixel. In a DLP projector, light from the projector's lamp is directed onto the surface of the DLP chip. The mirrors wobble back and forth, directing light either into the lens path to turn the pixel on, or away from the lens path to turn it off. High End DLP projectors have three separate DLP chips, one each for the red, green, and blue channels. Mainstream DLP projectors (under \$20,000) use a single chip design

## DTS

- Discrete 5.1 channel surround sound technologies from Digital Theater Systems

## DTS-ES

- Discrete 6.1 and Matrix 6.1 surround sound variations (with back surround) from DTS

## DTS-Neo:6

- 6.1 channel surround from conventional stereo sources.
- Two modes: "DTS NEO:6 Cinema" & "DTS NEO:6 Music"

## DVD-Audio

- Audio specifications that far exceed CD players
- Available multi-channel sound
- Advanced interactive options

## DVD+/-R

- Blank + & -R DVD Media. Can be recorded once

## DVD+/-RW

- Blank + & -RW DVD Media. Can choose "Video" mode for best compatibility or "VR" mode for advanced features such as play list editing. Can be erased/rewritten ~1000x

## DVD-RAM-Home Application

- 4.7GB (Single Layer), 9.4GB Dual Layer Capacity
- Re-writable (~100,000x), Typically Housed in a Cartridge
- It is possible to begin to watch a program before the recording is complete
- It is possible to watch one program already on the disc while recording another
- Less Compatible for playback on other systems than other formats

## DVD-RAM-Camcorder Application

- 2.8GB Capacity
- 20 to 120 minutes per disc, depending on record quality
- In 60 minute mode, resolution is 352 x 480, which is roughly ½ of Mini DV
- Cannot be used with standard editing software
- Expensive Media

## D-VHS

- High capacity digital bit stream recording, based on the foundation of the VHS format
- Maximum transfer/recording rate is 28.2 Mbps
- Up to 50GB storage on a single DF-480 tape

## DVR

- Digital Video Recorder, also known as PVR (Personal Video Recorder)

## D-Theater

- A set of standards for hi-def pre-recorded content, developed based on D-VHS technology which adds an advanced security system for the encryption/decryption of recorded signals, and a proprietary dubbing system with piracy prevention function. Pre-recorded cassettes labeled with the D-Theater logo can be played back only on a D-VHS VCR displaying the D-Theater logo

## Data Battery

- Remaining battery power can be checked by simply touching "Info" button even before shooting and with the power turned off. Recording time remaining is automatically calculated and displayed

## Digital Amplifier

- Higher performance and efficiency with lower heat generation when compared with traditional audio amplifiers
- Allows for much more compact receiver/mini system design

## Diplexer

- Utilized for advanced home satellite/antenna signals routing. Among the many uses, it allows a single cable provide both an off-air antenna signal and a satellite signal
- Can also be used to route different signals in different directions. For example, a single cable could carry a satellite signal from the DISH antenna into the receiver, and at the same time carry a second signal (such as a TV output to a second zone) from the receiver back to the central point of distribution in the home

## Direct DV Editing

- Lossless copying/editing from Mini DV to HDD in Native Mini DV format. Allows for best picture quality, freezeless edits and higher editing accuracy

## Dolby Digital

- Discrete 5.1 channel surround sound technologies from Dolby Labs
- Part of the HDTV standard for surround sound

## Dolby Digital EX

- 6.1 channel surround (5.1 discrete channels, plus matrix-encoded back surround channel)

## Dolby Pro Logic II

- 5.1 channel surround (with bass management & excellent separation) from two channel sources
- Two modes: "Movie" & "Music"

## Dolby Pro Logic IIx

- 6.1 or 7.1 channel surround (with bass management & excellent separation) from two channel sources
- Two modes: "Movie" & "Music"

## Dynamic Backlight LCD Monitor

- New LCD monitor technology for camcorder applications
- Exceptional viewing performance in any kind of lighting situation, both low light and very bright light. Switchable backlight modes reduces power consumption
- Monitor performance actually improves in brighter lighting conditions

## Energy Star Compliant

- Energy Star labeled products use less energy than other products, save money on utility bills and helps protect the environment

## EZ Fill

- Allows the user to eliminate any letterboxing, to allow the picture to fill the screen on JVC HD Displays. HD Panorama is used for 4:3 video with bars on the left & right edges. HD Cinema Zoom is used for wide aspect ratio video that has bars on the top & bottom

## Faroudja DCDi

- JVC Receivers w/ HDMI Switching use Faroudja DCDi processing to convert 480i to 480p for smoother, more "film-like" images
- DCDi Stands for Directional Correlational Deinterlacing. This Identifies all the moving edges in a scene and adjusts the angle of interpolation at each pixel so that the interpolation always follows the edge instead of crossing it. Eliminates most staircasing & jagged edge artifacts
- Faroudja received an Emmy for this technology in 1999

## FLOPS

- Floating Point Operations per Second

## Firewire/i-Link/ieee1394

- Bi-directional high speed digital connection for video, audio & control via a single cable
- AV/C: Basic Firewire control protocol (Play, Stop, FF, Rew, etc.)
- 5C: Digital copy protection for Firewire. Traditional content remains recordable. Includes copy once, copy never, copy freely
- Selectable Output Control: Firewire output can be completely disabled based on program content. Many people believe this will never be implemented, but the fact remains that it could be done. Doing this would severely restrict the ability to use firewire for Home Networking

## G-Sensor

- Drop detection: monitors & calculates the Everio-G's gravitational velocity in 3 dimensions (x,y,z axis) allowing increased protection from vibration & shock

## Genessa CPU

- An exclusive single chip imaging computer found in many JVC HD Displays. Uses fast 32 bit processing for more accurate scaling, 5 point color management, and motion adaptive dynamic gamma control

## Giga MP3

- On all '05 JVC mobile DVD players. For the first time, it is possible to read music files in MP3 or WMA format from burned DVD-R discs. DVD-R media provides 4.7GB of storage, meaning that there is enough capacity for up to 1,000 songs on a single disc

## HD-DVD

- One of two high definition optical disc formats that has been proposed for recording and playback
- Claims lower start up costs/easier production. 4th Quarter '05 target for 1st players (Toshiba). 1st Quarter '06 target for 1st recorders (Toshiba)
- Have announced triple layer, 45GB disc

## HDMI

- Superior, uncompressed digital video and audio using a simple, user-friendly connector
- Integrated remote & simplified system operation
- Uses HDCP (High Bandwidth Digital Content Protection)
- Supported by major motion picture producers

## HDV

- Format for HD recording & playback using Mini DV tape. The 720P specifications for HDV are the same specifications as adopted by JVC in the GR-HD1

## High Definition

- 720P, 1080i & 1080P formats are considered high definition

## Histogram Display

- Graphically shows exposure distribution for the image you are shooting
- Shows pixel density at all brightness levels. Best exposure & most balanced brightness is usually achieved with highest density in the middle of the range

## Hybrid Feedback Digital Amplifier:

- Digital amplifier design with dual feedback loops (analog & digital) for improved performance
- JVC exclusive design is highly regarded for excellent performance with a wide range of speaker designs

## JPEG

- Industry standard digital still file format

## J-Link

- Interface on select JVC mobile audio receivers. Allows CD Changer, Sirius DLP or i-pod adaptor to be connected

## K2 Interface

- JVC's exclusive digital interface eliminates the "ripple" & "jitter" found in a digital signals
- Ripple and jitter are totally unrelated to the music or soundtrack therefore unwanted distortion caused by such factors as fluctuations in the power supply, stray capacitance, inductance within the circuits and/or vibration
- When ripple and jitter are added to the signal, they produce an effect (distortion) which can be discerned by the listener

## LCD

- Liquid Crystal Display. Transmissive technology using liquid crystals for each pixel in the display. As light passes through the LCD, individual pixels can be opened to allow light to pass or closed to block the light, as if each pixel were fitted with a venetian blind. This modulates the light & produces the image that is displayed on the screen

## LCOS

- Liquid Crystal on Silicon. Often viewed to be a hybrid between LCD and DLP. It is a reflective technology that uses reflective surfaces behind liquid crystals instead of individual mirrors. Liquid crystals are applied to a reflective mirror substrate. As the liquid crystals open and close, light is reflected from the mirror below, or blocked. This modulates the light & creates the image

## MIPS

- Million Instructions per Second

## MP3

- The MPEG (Moving Picture Experts Group) compression system includes a subsystem to compress sound, called MPEG Audio Layer-3. We know it by its abbreviation, MP3
- 128 Kbps is considered good quality that is close to CD with 1/10 the file size
- 192 Kbps has higher fidelity, but larger file size

## MP3PRO

- Compressed Music Format
- ½ the file size of Regular MP3

## MPEG

- Moving Picture Experts Group
- A family of digital video compression standards & file formats
- MPEG achieves high compression rate by storing only the changes from one frame to another, instead of each entire frame

## MPEG1

- Moving Picture Experts Group Level 1
- The most common implementations of the *MPEG-1* standard provide a video resolution of 352-by-240 at 30 frames per second (fps). This produces video quality slightly below the quality of conventional VHS

## MPEG2

- Moving Picture Experts Group Level 2
- Used with DVD, Satellite & High Definition
- Industry standard compression method for coding high definition audio/video content
- Formats include 720 x 480P, 1280 x 720P & 1920 x 1080i

## MPEG4

- Moving Picture Experts Group Level 4
- MPEG format optimized for small file size to enable sending video content over the internet (Video E-Mail)

## Megabrid Engine

- For upgraded camcorder performance with higher quality video and better digital stills.
- Applies separate, optimized processing to moving and still images. Video is processed for high sensitivity and a high signal-to-noise ratio, even in low-light conditions. Still images are optimized for highest resolution to deliver beautiful, high quality prints
- RGB based processing assures rich and realistic color



## Mini DV

- Popular, mainstream digital camcorder format

## Multi-Switch

- Used for distributing the signal from a DISH satellite antenna and/or off-air antenna to multiple receivers

## NTSC

- National Television Systems Committee
- Analog TV Broadcast Signal
- An NTSC Tuner is an Analog TV Tuner

## One Touch Expert Dub

- With a single touch, the DVD Recorder does the following:
  - **Auto Record Speed Optimizer** picks the perfect recording speed to fill the disc
  - **Auto Thumbnail Creation** creates chapter reference thumbnails
  - **Auto Blank Cut Dubbing** eliminates blank spots from the original recording

## Optical Stabilization

- Helps to correct image shake optically, rather than digitally so that more pixels are available to create the image and no “buffer” is set aside for stabilization. Important for HD applications in achieving maximum resolution from the imaging device

## P.E.M. D.D. Converter

- JVC’s exclusive Pulse Edge Modulation Differential-Linearity-Errorless D/A Converter
- Considered to be one of the most accurate and musical 1-bit D/A converters available
- The delicacy and subtlety of the music can be heard at all levels as it was meant to be

## PictBridge

- Simple connection from a camcorder or digital still camera directly to a printer, via USB without the need for a personal computer

## Plasma

- “Electricity Illuminating a Gas.” Extremely thin flat panel displays. Very bright & long lasting, flicker-free images with wide viewing angle

## Plays for Sure

- Microsoft initiative to insure compatibility between portable audio devices and music services. Look for JVC to be a part of this in the near future

## Record Link

- Timed external source recording made simple
- Works in conjunction with the event timers in a Cable or DBS tuner box for automatic timer recording
- Turns on the DVD Recorder when an input signal from the Cable or DBS tuner is present
- Turns the DVD Recorder off at the end of the event (when the signal is no longer present)

## Response Time

- A specification used to compare picture quality on LCD displays. The lower the number, the better. Measures how quickly liquid crystals can twist and then untwist to either pass or block light. Response time is instrumental in determining whether or not LCDs can clearly show full-motion video without smearing or ghosting

## Single Out, Dual Play

- The same component video out is used for both the DVD and VHS side of a combo player/recorder. This simplifies connection and switching and provides for the best possible picture quality

## Smart Input

- Featured on select JVC HD Displays. Allows Component Video, S-Video & Composite Video to all be connected to input #1. The display constantly scans those inputs for the active signal and automatically switches to the proper input
- Provides simplified operation

## Smart Picture

- Monitors average peak level of brightness
- Brightens dark images. Keeps bright images from washing out

## Splitter

- Allows the output from a single device, such as a satellite receiver, to be distributed to multiple displays

## Super Audio CD

- Audio specifications that far exceed CD players
- Available multi-channel sound
- More limited interactive options
- Hybrid Discs that can be played on standard CD Players as well

## Super Dish

- Elliptical 66 cm DISH Antenna
- Can receive satellite signals from 3 orbital locations
- Echostar is implementing this DISH Antenna to expand the number of markets where it can offer local programming

## THX

- A set of specifications and standards set forth by Lucasfilm, Ltd, which encompasses all aspects of performance in a home or movie theater. Allows the audience to hear & see movies rendered as closely as possible to what movie's creators intended
- "Home THX" is optimized for home theater. It takes into consideration the spatial and acoustic differences between home & movie theaters and compensates for them via digital processing

## THX Music Mode

- Optimum back sound field with sound levels and tones best suited for music playback (Using 6.1 or 7.1 Speaker System)

## THX Select

- THX Quality at a Lower Price Point
- Optimized for spaces up to 2,000 cubic feet

## THX Surround EX

- This THX mode is optimized for reproducing Dolby Digital EX content using a 6.1 or 7.1 speaker system

## THX Ultra

- Previous Top-of-the-line THX Specification
- Optimized for spaces up to 3,000 cubic feet

## THX Ultra II

- THX Ultra2 is the Latest, highest standard surround specification. It is optimized for use with 7.1ch speaker systems

## THX Ultra II-Cinema Mode

- Wider sound ambience & better sound localization beside & behind listeners w/ 5.1 Channel Sources (Using 6.1 or 7.1 Speaker System)

## TIVO

- A service that automates the process of recording favorite television programs
- Season Pass capability makes it possible for the service to find & record a show even if the schedule changes. Smart recording can adjust for changes in scheduled time. Can also suggest programs based on prior viewing habits

## Texas Instruments Aureus™ Floating-Point DSP

- 1,800MIPS (1,200MFLOPS) (at 225MHz clock speed) processing speed
- The world's fastest, highest-performing DSP chip
- Replaces two conventional DSP chips
- Decodes all surround modes
- Controls DAP, 3D-PHONIC, 3D Headphone, DSP Digital Equalizer, Dynamic Range and Bass Management

## Ultra High Current Dynamic Super A Amplifier

- With the RX-DP15/20, the current capacity of each amp channel is increased to more than 18 Amps. Provides maximum fidelity and musicality
- With robust heat sinks and a "cooling chimney" chassis layout, no cooling fan is needed (for silent operation during normal use)

## VHS Progressive

- Uses line doubling, time base correction, 3D noise reduction and a variety of other technologies to improve the picture and create a 480p output from a VHS tape

## Video Navigation

- Menu based access to chapters on pre-recorded D-VHS movies
- Also makes it possible to locate VHS/S-VHS/D-VHS recordings
- Finding the program is made easy by allowing you to sort from the database (approx. 2000 programs max.) three different ways: Tape Number, Record Date and Category sorting

## WMA

- Compressed Music Format
- Windows Media Audio. Considered equal sound quality to MP3 with ½ the file size
- Incorporates advanced Digital Rights Management

## WM9

- The most recent Microsoft digital media platform for audio & video. Supports music & movies at any compression level. Including high definition video & 5.1 surround sound.
- Incorporates advanced Digital Rights Management
- A small selection of HD movies have been released in this format, including Terminator II (High Definition) & Standing In the Shadows of Motown

## 3 CCD

- Upgraded camcorder imaging system utilizing a CCD for each elementary color (R, G, B)
- Uses Dichroic Mirrors instead of Color Filters
- Benefits include better color fidelity & saturation, wider video dynamic range (better contrast) and reduced noise for enhanced clarity

## 3D/YC Digital Comb Filter

- Provides enhanced color purity and reduces dot crawl, accomplished by separating the chrominance and luminance parts of the video signal in the digital domain.
- Our 3D YC comb filter converts analog signals to digital. By using that digital signal process and frame memory technology, it checks the picture vertically and horizontally with the adjacent frames, leading to better separation of color and black & white information. The result is a clear, sharp picture without flickering and virtually no dot-crawl or color interference

## 4K2K:

- Ultra high definition format with 4096 x 2160 resolution. JVC is an industry leader in the development of this format. Displays have 8.85 million pixels per chip

## 8K4K:

- Ultra high definition format with 16384 x 8640 resolution. JVC is an industry leader in the development of this format which was first demonstrated in 2005

## 480p

- A progressive signal with 720 x 480 resolution, displayed at 60 frames per second

## 720p

- A progressive signal with 1280 x 720 resolution. Can be displayed at 24, 30 or 60 frames per second

## 1080i

- An interlaced signal with 1920 x 1080 resolution. Displays 60 interlaced fields per second

## 1080p

- A progressive signal with 1920 x 1080 resolution. Can display at 24 or 30 frames per second. Please note that 1080/60p is not currently part of the ATSC standard