

P2 Asset Support System The member's service program

Providing valuable information when you need it

P2 Asset Support System assists your P2 HD and AVCCAM use by providing extended warranty repairs & various technical information (update notices, operation guides, etc.) upon registration.

Free registration, no membership fees

■ 5-year or 3-year extended warranty repairs

Exclusive offer for P2 HD and AVCCAM! Maximum 5-year and 3-year extended warranty repairs are applied for P2 HD and AVCCAM models after registration. Several other services are also provided to members.



1st year	2nd year	3rd year	4th year	5th year
Basic warranty*1	P2 HD Extended warranty repair*2			
	AVCCAM Extended warranty repair*3			

* Not all models are eligible for extended warranty coverage.

* Please note that this extended warranty is not available in some countries/region. See website below for the details.

*1: The basic warranty period may vary depending on the country/region. See enclosed warranty card for warranty coverage.

*2: Not all repair work is covered by this extended warranty. See enclosed warranty card for warranty coverage.

*3: The maximum warranty period may be adjusted depending on the number of hours the device has been used.

■ Latest news only for you

In the member's website, information is selected and presented for your models only. To be alerted to new firmware information and other releases, an email newsletter can be subscribed to.

■ Document library

You can browse through and find various technical information (operation guides, technical descriptions, etc.) quickly from the library.

■ Manage your equipment

You can easily know the update status and past service history of each unit, and can leave comments in free text as memos about your equipment.

Details and user registration: http://panasonic.biz/sav/pass_e

Please refer to the latest Nonlinear Compatibility Information, P2 Support and Download and Service Information, etc. at panasonic website.



<https://www.pavc.panasonic.co.jp/pro-av/index.html>

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Indonesia +62 21 385 9449
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Factories of Systems Business Group have received ISO14001:2004-the Environmental Management System certification. (Except for 3rd party's peripherals.)



SP-HMC41EE1

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Panasonic

ideas for life

Memory Card Camera-Recorder
AG-HMC41

AVCCAM

New, Lightweight AVCCAM Camcorder
with Full-HD Images and Advanced Functions



*The microphone and XLR Audio Input Adapter shown in the photograph are optional.



* Memory card not included



Bundled* with
EDIUS Neo 2
nonlinear editing software

* Limited time offer. The package model number is AG-HMC41EU.



AVCCAM 3-Year Warranty Repair Program*
* AG-HMC41 users qualify for a 3-year warranty on repairs. Visit the website for details: <www.panasonic.biz/sav/pass_e>

Small, Light, Easy to Use — And Exceptional Image Quality

Full-HD Images plus the Versatility and Mobility to Cover All Kinds of Events



Monitoring and Recording at Construction Sites
The Interval REC function*1 automatically records frames at preset intervals.

Traffic Studies and Crime Surveillance
Records in HD quality for up to 12 hours*2 and features a Time stamp function.

News gathering for TV and Newspaper Websites
In addition to recording full-HD motion images, the AG-HMC41 shoots still images at the equivalent of 10.6-megapixel resolution (approx.).

Recording at Halls and Other Venues
Add the optional XLR adapter for professional-quality audio recording.

Weddings and Events
In addition to manual focus, auto focus with Face Detection quickly finds and keeps the focus on the bride and groom.

Student Video Production
Students of any age will appreciate its compact and lightweight body. There's no need for video capturing (digitising), so editing is quick and easy. The recorded images can be viewed on a monitor or computer.

*1: The maximum recording interval is 24 hours. *2: In HE (extended time) mode using a 32GB SDHC Memory Card.

- Newly developed 1/4.1-inch 3.05-megapixel, progressive 3MOS sensors. Also records still images with 10.6-megapixel resolution (approx.)
- 12x Leica Dicomar zoom lens with Optical Image Stabiliser (OIS)
- Professional-quality PH mode and reliable SD memory card recording
- Wide-ranging functions include a detachable XLR adapter (option), waveform monitor, and camera remote
- Smooth, easy operation with a manual focus ring and touch panel
- Outstanding mobility with a small body that weights just 0.98 kg (camera-recorder only)

SD Memory Card Recorder: Lower Operating Costs, Better for the Environment

SD Reduces Total Cost of Ownership

- (1) Faster, easier editing because digitisation is not necessary
- (2) Lower media costs because memory cards are reusable
- (3) Lower maintenance costs because there is no moving mechanism

By reducing editing, media and maintenance costs, AVCCAM can help improve your bottom line. Users can also take advantage of a special 3-year free-repair service program that Panasonic offers for AVCCAM equipment.



The SD Memory Card Helps Preserve the Environment with Its Reusability and Low Power Consumption



The SDHC/SD Memory Card media for the AVCCAM camcorder is totally free from abrasion and dropout. There is no drive mechanism required, as there is for tape and disc-based recorders, so power consumption is low and size and weight are reduced. Malfunctions are less likely to occur, and there is no need to replace heads or transport components. This translates into lower costs and easier maintenance, greater energy savings, and less waste when the unit is eventually disposed of. All of these features help to conserve the environment.



Style 1

With handle detached, this super-compact camera fits easily into a bag or pack for highest mobility.



You can use AG-HMC41 three different ways



Style 3

With the optional XLR adapter mounted on the handle, the AG-HMC41 has outstanding audio specs, plus the ability to add two external phantom microphones or line inputs with level controls.

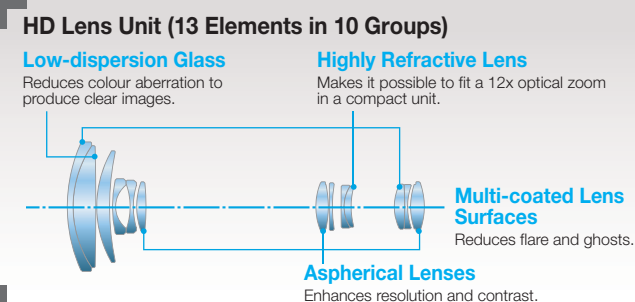
Style 2

With handle in place, the AG-HMC41 is easy to carry and easy to use, even when shooting at difficult angles.

A Small Camcorder That's Packed with Image-enhancing Technologies 3MOS System with Full-HD Sampling and Pro Tuning

Sharp, Crisp Rendering of Every Subject **LEICA** New Leica Dicomar Lens **DICOMAR**

Featuring 13 elements in 10 groups, the newly developed Leica Dicomar lens is ideal for full-HD recording. The new lens system uses low-dispersion glass and aspherical lenses to reduce colour aberration and boost resolution. Use of a special multi-coating process dramatically reduces flare and ghosts. The result: sharp, crisp, beautifully rendered pictures with vivid colours, delicate nuances, and exceptional shading. This advanced lens also lets you capture 40.8mm wide-angle shots (35mm lens equivalent) – unusual for such a compact unit.



Up to 120x Zoom Power 12x Optical Zoom and 10x Digital Zoom

Even at the 490mm zoom setting (35mm lens equivalent), this advanced 12x optical zoom lens is free of image degradation. And the AG-HMC41 is also equipped with a digital zoom that instantly magnifies the image by any of three fixed values. 2x, 5x or 10x. Use it together with the 12x optical zoom lens, and you get super magnification equivalent to a 120x zoom, without the drop in light intensity that happens when using a lens extender.

*The image quality decreases as the digital zoom magnification increases.



Image with Wide-angle Image with 12x optical zoom Image with 12x optical zoom x 10x digital zoom (120x)

Take Clear Shots While Walking or Zooming Optical Image Stabiliser (OIS)

Because the hand-shake correction is done by actually driving the lens, there's none of the image degradation that occurs with electronic stabilisation. You can capture beautiful, high-quality shots even in situations where hand-shake is typically a big problem – such as when zooming, shooting indoors in dim lighting, or shooting outdoors at night.

*Hand-shake from strong vibrations may remain. Also, visible differences may be slight under some conditions.

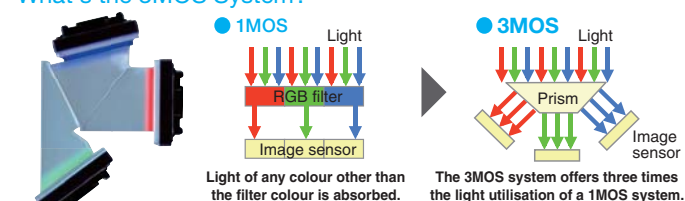


Image with OIS OFF Image with OIS ON

Highly Nuanced Image Expression 3.05-megapixel Progressive 3MOS Sensors

The progressive 3MOS image sensors record full-HD images with a total, 3.05-megapixel (approx.) resolution [effective motion-image resolution of 2.51 megapixels (approx.)]. This produces full-raster HD images with high resolution and superb image quality. Because each of the three separate image sensors receives one of the three primary colours of light (red, green and blue), they render more precise images and more faithful colours than the single light-receiving 1MOS sensor.

What's the 3MOS System?



3MOS (metal-oxide semiconductor) image sensors process the three primary colours of light (red, green and blue).

High-quality Digital Stills Still Shots with 10.6-megapixel Resolution (approx.)



Image with still shots

The new 3MOS sensors also combine with Panasonic's proprietary Quad-Density Pixel Distribution technology to achieve a resolution that is equivalent to 4 times the normal level. The AG-HMC41 captures still images with approx. 10.6-megapixel resolution (in still image mode, 3:2 aspect ratio), which approaches the level of a high-performance digital still camera. For example, you can use it to shoot both motion and still images for a website.

*The AG-HMC41 is not equipped with a flash function. The digital zoom cannot be used.

Highly Detailed Image Composition Advanced Pro Tuning Functions

Matrix settings

Lets you choose basic colour hues that convey the desired overall image mood.



Matrix settings

NORM1	For colours suited to shooting outdoors or under halogen lights.
NORM2	For colours more vivid than NORM1.
FLUO	For colours suited to shooting indoors under fluorescent lights.
CINE-LIKE	To reproduce colours similar to those in cinemas.

Knee point settings

Controls the highlights within the frame. (AUTO/LOW/MID/HIGH)

Adjustable H detail level, V detail level, detail coring and skin detail

Corrects edges and removes image noise.

Adjustable chroma level, chroma phase, colour temp and master pedestal

Sets the basic levels for brightness and other signals.

Two scene files

The AG-HMC41 can save two sets of camera settings as scene files for instant recall later in similar shooting conditions.

Cine-like Gamma Curves 7-mode Gamma for Richer Gradation

Drawing on technologies developed for the VariCam HD camcorders for digital cinema, Panasonic has equipped the AG-HMC41 with advanced gamma functions that address seven different shooting scenarios and enhance your creative abilities. This includes the cine-like gamma, which produces the characteristic warm tone of film recordings.



Image with VIDEO GAMMA Image with CINE-LIKE GAMMA

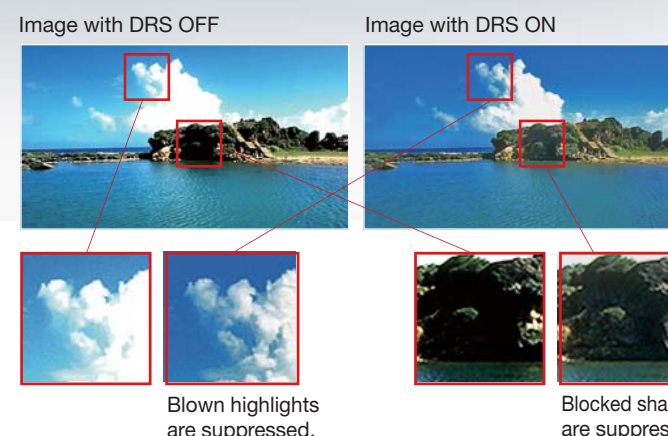
AG-HMC41 Gamma Modes

HD NORM	Suitable for HD recording
LOW	Works to flatten out a high contrast scene
SD NORM	Normal setting for SD (This was available in the DVX100 series.)
HIGH	Provides more contrast and colour gradation
B.PRESS	Provides more contrast and blacks in low contrast scenes
CINE-LIKE-D	The Cine-like mode shifted to prioritise dynamic range
CINE-LIKE-V	The Cine-like mode shifted to prioritise contrast

Suppresses Blocked Shadows and Blown Highlights Dynamic Range Stretch (DRS)

A gamma curve and knee slope are estimated to match the contrast of each pixel, and applied in real time. When dark, bright, and intermediate shades are all contained in the same scene, this produces excellent gradation for each shade and minimises blocked shadows and blown highlights. The images that result are enhanced by a visually wider dynamic range.

Images with the Dynamic Range Stretch (DRS) Effect



AVCHD Format Recording: Superior Quality, Efficiency and Reliability And Exclusive PH Mode for the Highest Bit Rate



High-end AVCHD Image Quality High Bit Rate of the Pro-use PH Mode

The AG-HMC41 features the image-enhancing PH mode that Panasonic developed exclusively for AVCCAM camcorders. It delivers a maximum AVCHD bit rate of 24 Mbps (average: 21 Mbps). Designed for professional image production, this mode lets you record 1080/25p and 720 progressive images in addition to 1080/50i from the AG-HMC41's 1920 x 1080 full-raster HD images.



Image with HDV

Image with AVCHD (PH mode)

Ease, Efficiency, Reliability Large-capacity SDHC Memory Card

Unlike with videotape, there's no need for cueing with the SDHC memory card because recording automatically begins in a blank section of memory. Nor do you have to worry about accidentally recording over important footage. You can delete unwanted clips instantly right on the spot to preserve memory capacity. Editing after shooting is smooth and easy, with no need for digitising. The tiny SDHC Memory Card is durable, too. Its operating range is from -25°C to +85°C, so you can stop worrying about harsh temperatures or condensation and just concentrate on your shooting. And of course, you never have to worry about problems with dropouts or clogged heads.

- Using the high compression efficiency of the AVCHD format, up to 720 minutes*1 of HD data can be recorded onto a single SDHC Memory Card.
- Combined with a maximum data transfer speed of 22 MB/s,*2 this makes data transfers to computers easy and effortless.
- SDHC Memory Cards are inexpensive and can be easily purchased on location when needed.

*1: In HE (extended time) mode using a 32GB SDHC Memory Card. A Class 4 or higher SDHC or SD Memory Card is required for PH and HA recording. Use a Class 2 or higher SDHC or SD Memory Card for other modes. (Panasonic SDHC or SD Memory Cards are recommended.)

*2: Data transfer speed varies depending on the usage of SD devices. The speed given here is the maximum speed according to Panasonic specifications.

AVCHD Format for High-quality, Efficient HD Recording

This format complies with the latest H.264 motion image compression standard, and employs the High Profile standard to improve compression efficiency. Featuring twice the compression efficiency of HDV (MPEG-2), the AG-HMC41 achieves extended HD recording.

MPEG-4 AVC/H.264 Technologies

- Intra-frame Prediction
- Variable Block Size Motion Compensation
- Loop Filter Prevents the Propagation of Compression Distortion
- New Entropy Encoding 'CABAC'

Comparison of HD Recording Formats

	HDV	AVCHD
Pixel (H x V)	1440 x 1080	1920 x 1080
Compression Method	MPEG-2	MPEG-4 AVC/H.264

HD multi-format recording

Recording Format	
1080	1080/50i
1080 (only PH mode)	1080/25p
720 (only PH mode)	720/50p 720/25p

Records for 180 minutes (approx.) in the highest-quality (PH) mode

Recording Mode	Image Size (H x V)	Bit Rate	Max. Recording Time with a 32GB SDHC Memory Card
PH Mode	1920 x 1080 1280 x 720	Approx. 21 Mbps (Average), Max. 24 Mbps	Approx. 180 minutes
HA Mode	1920 x 1080	Approx. 17 Mbps (Average)	Approx. 240 minutes
HG Mode	1920 x 1080	Approx. 13 Mbps (Average)	Approx. 320 minutes
HE Mode	1440 x 1080	Approx. 6 Mbps (Average)	Approx. 720 minutes

More Efficient than Tape Versatile Solid-state Recording Functions

Shot mark

To simplify shot selection, you can add a mark to the thumbnail images of each clip. You can then display and play only the clips that have shot marks.

Pre-REC

This helps to ensure you always get the shot you want, by letting you continuously store, and subsequently record, images and sounds for three seconds before the REC button is pressed in standby mode.

REC check

You can check the end of the most recently recorded clip with one-touch ease.



Last clip delete

Only the most recently recorded clip is deleted with this one-touch function, adding practical convenience to everyday operation. It can be assigned as a User button function if desired.

Meta-data recording

The date, camera operator, location, title and other information can be added to the video data.

Fast Scene Searches LCD Monitor Thumbnail View

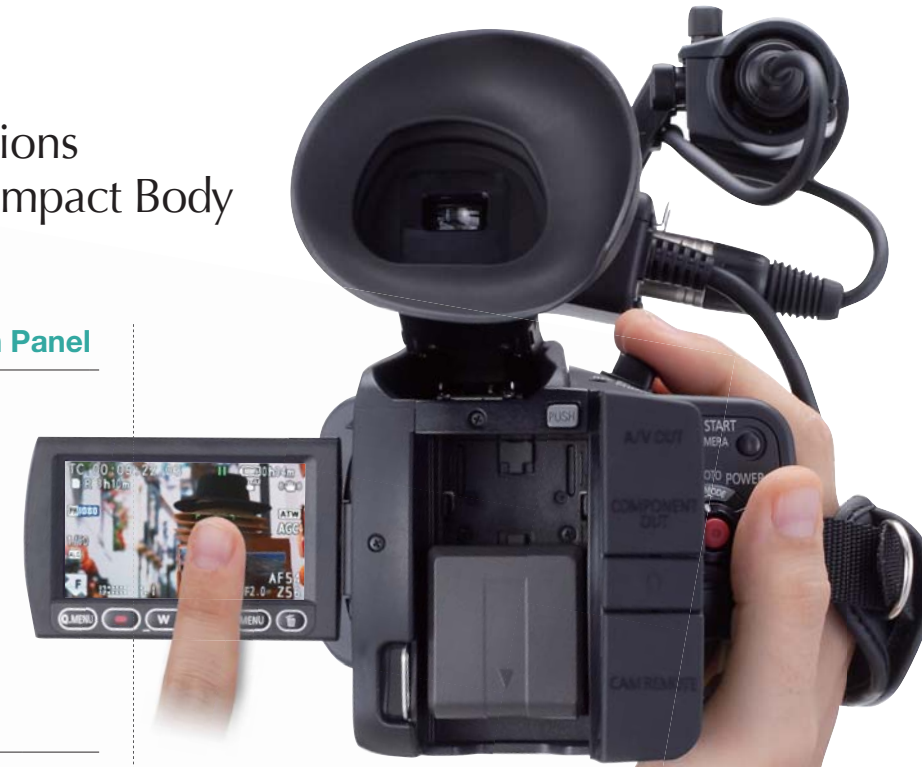
Image data is recorded as a file for each scene. Thumbnail images and file information are automatically attached to each file to enable smooth, easy confirmation and deletion of files displayed on the LCD monitor.



A Wide Range of Assist Functions for Easy HD Shooting in a Compact Body

Intuitive, Easy Operation 2.7-inch Wide LCD Monitor with Touch Panel

The 2.7-inch, 230,000-dot (approx.) LCD monitor is especially convenient when shooting wide-screen images. Just use a finger on the touch panel screen to start playback, make menu settings, and even focus the camera. You can rotate the LCD monitor 270 degrees for easier viewing when shooting low-angle or other difficult shots. This lets you check the framing and parameter display on the LCD monitor as you shoot.



Quick, Easy Focusing HD Focus Assist

Centre zoom/Focus bar function

The centre zoom function enlarges the centre of the frame for better visibility, and HD focus assist displays a bar that grows and shrinks to indicate the degree of focusing.



Image with before centre zoom



Image with after centre zoom

Push auto function

Pressing the Push auto button in manual mode temporarily activates the Auto Focus (AF) system for quick focusing.

Face detection function

The AG-HMC41 is the first professional model to include the Face detection function. It "recognises" faces near the centre of the screen and focuses on them.*1



Image with Face detection function

Touch Auto Focus (AF) function

This function lets you focus by simply touching the subject on the LCD monitor. A green frame appears around the subject for quick, easy focusing.*2

*1: The AG-HMC41 does not offer AF tracking.

*2: In manual focus mode, the focus frame disappears once the camera has locked onto the subject.

Iris Adjustment and Zoom Operation Manual Focus Ring

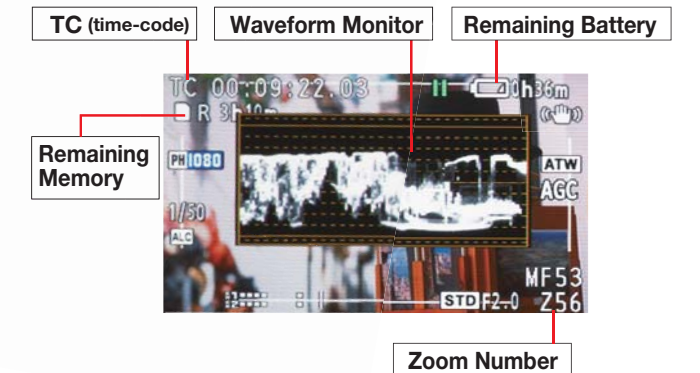
The manual focus ring can be used to control the iris too, by switching the Focus Ring (Focus/Iris) selector. Use it whichever way best fits the shooting situation. For example, you can set the camera to Auto Focus and use the manual focus ring to control the zooming. You can also add backlight correction or spotlight correction to the auto aperture function.

*Use the menu to select whether the ring controls the iris or the zoom.

Adjust the Image Quality While Watching the Signal Level Waveform Monitor Display

A horizontal analysis of the input signal's brightness level can be displayed on the monitor. This lets you adjust the standard black and white levels while checking the Waveform Monitor (WFM), making it easy to get highly accurate adjustments.

Easy-to-see LCD



Remaining Memory

Zoom Number

Displayed from Z00 to Z99. Handy for remembering the angle of view.

Convenient for Low-angle Shooting Tilt-up Viewfinder

The viewfinder can be tilted upward about 70 degrees, and the large eyecup is excellent for blocking out light from the sun and other sources.



about 70 degrees

Perfect for a Host of Applications Enhanced Interfaces for Professional Uses

On-site Recording and Monitoring Convenient Recording Functions

Interval REC

You can make automatic, intermittent recordings at set intervals from one frame per second to one frame every two minutes. For example, use Interval REC to record operations at a construction site, to shoot sunsets, or to capture time-lapse recordings of growing plants.

*The maximum recording interval is 24 hours.



Time stamp

You can insert time and date information into the video signal. This could be convenient, for example, when observing animals over an extended period, in certain academic uses, in surveillance, court reporting, legal depositions or law enforcement applications.

*Only for motion images.



Wide Range of Settings Slow Shutter and Synchro Scan Functions

The slow shutter function uses image accumulation to allow shutter speeds with frame rates reduced by half or more. The accumulation method provides bright-colour images with less noise than those captured using conventional gain-up, so you get the higher sensitivity needed for nighttime shooting without illumination. And the Synchro Scan function is ideal for capturing images on monitors.

One-touch Operation of Key Functions Three User Buttons

The AG-HMC41 lets you assign any three of the following 14 functions to the three User buttons for instant access.

- INH
- (PUSH) AF
- BACKLIGHT
- SPOTLIGHT
- BLACKFADE
- WHITEFADE
- ATW
- ATW LOCK
- HIGH GAIN
- D.ZOOM
- EVF DTL
- SHOT MARK
- LAST CLIP
- WFM

Other Professional Features

- **White balance:** 2-value memory (channel A, channel B), 2-value preset (3200k, 5600k) and Auto Tracking White (ATW).
- **Mode check:** Displays a list of the camera settings on the viewfinder and monitor.
- **Zebra:** Select any two levels from among 50% to 105%, in 5% steps.
- **Centre marker:** Provides an accurate numeric display of the brightness at screen centre.
- **Colour bar:** Provides a useful test pattern for setting up your monitor and 1 kHz, audio test tone.
- **TC/UB recording:** Provides a built-in SMPTE time-code generator.
- **Camera remote:** Controls zoom, rec, focus and iris. Allows use of any camera remote controller that is compatible with the AG-DVX100/HVX200/HMC150 series.
- **Smooth zoom stop:** Use the menu to select standard or smooth zoom stopping.

Professional Audio Quality Detachable XLR adapter (option)

The AG-HMC41 comes equipped with a built-in stereo microphone and a 3.5mm EXT. mic-in jack. Adding the optional AG-MYA30G XLR adapter provides compatibility with professional-use XLR terminals for audio output from microphones and Public Audio (PA) systems in studios and auditoriums. Line recording and +48V Phantom powered microphone recordings are possible from the XLR terminals. Featuring two XLR audio input terminals and level controls, the adapter lets you independently switch ch 1 or ch 2 to microphone or line input, with each having its own level adjustment. (Input 2 can be assigned to both ch 1 and ch 2.)



SD Down-conversion Output Recording or Playback Images

The AG-HMC41 is equipped with both component (Mini D4) video outputs and AV output (AV multi terminals), allowing HD images to be down-converted and output as SD images while they are being recorded or played. At the same time, a 16:9 or 4:3 aspect ratio can be selected for side crop, letterbox, or squeeze images. Audio output (AV multi terminals 2 channels) enables a wide variety of applications, such as viewing on an external monitor or SD dubbing.



Side crop Letterbox Squeeze

Monitor Connection HDMI Output Terminal

The AG-HMC41 is equipped with an HDMI (High Definition Multimedia Interface) output terminal for digital transferring of high-quality HD video and audio signals.

*The AG-HMC41 cannot output HDMI, component and composite signals at the same time. Also, a separately purchased cable may be required for connecting the AG-HMC41 to a professional monitor.

PC Connection via USB 2.0 (Type mini B)

The standard USB terminal (Type mini B) allows the AG-HMC41 to connect to a Windows PC/Mac in device mode. This lets a Windows PC/Mac installed with the provided AVCCAM Viewer software to upload, copy, and write HD video files, as well as transfer them to AVCHD-compatible editing software for HD production.

