

GY-HM700 Review

Filmmaker Markus Rosentreter puts the JVC GY-HM700 through its paces and looks at why FCP users will especially love this camera.

The JVC GY-HM700 is more than just a well-designed piece of kit. It is also a clever piece of equipment from the JVC stable as it combines some of the most recent technologies to hit the market and integrates them into a smart package.

First off, it supports the 720p format but the presence of a spatial offsetting brings it up to 1920×1080 which it can record in for the first time.



Secondly, it records to the Sony XDCAM EX codec at 19, 25 or 35mbps packed in the QuickTime (.mov) wrapper.

This along with inexpensive SDHC cards has been combined to import the footage straight from the camera into Final Cut Pro for instant editing.

This is the kind of solution end users desire when deadlines are tight and quality matters - from camera to edit within seconds.

Furthermore, if a user runs out of space on the current card, there is a hot swappable second slot for another card. This feature works well if you have longer recordings as it allows you to switch from one card to another without interruption. We used a 16 GB card but SDHC cards are available with capacities of up to 32 GB giving up to six hours recording time with two 32 GB cards.

The bit rates of the codec are variable from 19, 25 up to 35 Mbps and support all HD formats (1080i50/60, 1080p24/25/30 and 720p24/25/30/50/60).



As another option, JVC also provides an SxS module on the back of the camera to enable simultaneous recording for an immediate second copy of your footage. It ensures a safe backup should anything happen to the SDHC card.

Besides this, the MP4 wrapper format used for recording onto SxS media allows the user to import the files directly into Avid or Premiere Pro, which covers most of the professional non-linear editing systems.

This is a user-friendly camera. In the menu, you can find all the usual suspects to give you the celluloid look that most filmmakers crave. This can be accessed via an LED ring, which offers fast control to shutter speed and other AE level controls.

Right below the menu is also the status button, which gives a quick overview of the remaining card space, the audio meter and the assigned user buttons. In short, the layout of the buttons is a significant improvement over previous versions.

JVC has consistently worked towards offering the film look even in its previous GY HD200 series, but this time without the compression of HDV, which is a big step towards providing better image quality.

For a quick check to review the last clip shot, a user merely has to depress the RET button behind the zoom. This is very handy.



If a user does not want to use additional headphones or cables, an earpiece mounted on the camera handle can be utilised for audio crosscheck. This little feature comes in handy for quick or spontaneous interviews.

In the meantime, the variable frame-rate guarantees smooth slow motion recordings in 720p mode at 60 frames per second. It overcranks and undercranks in 720p although only in five steps. At 25p, the slowest it will shoot is 50fps and at 30p, 60fps.

From my point of view, one of the highlights of this camera is the truly progressive CCDs, which allow you to shoot film-like footage in 24p.

A newly developed spatial offsetting allows the 1/3 camera block to record in full 1920x1080 in very crisp quality. Nevertheless, if you compare the CCD to CMOS, you will always experience some light loss and in low light, the camera will suffer.

The new spot meter detects the brightest and darkest part in the picture and helps the user control the dynamic range within the frame.

The values are presented in percentage, which is helpful but it also changes quickly from one value to another. This special feature is a great improvement for video shooting as the dynamic range is very limited in comparison to film cameras.



It would be appropriate to say that this camera can be used for several different kinds of field shoots, with most of the advantages of a broadcast camera.

Besides the HD-SDI out, the camera also offers a composite and component output. This is ideal if you use the camera with a Matrox or an AJA I/O card to record uncompressed HD or SD onto your computer.

Alternatively, you can just plug it into any common field monitor.

However, the inclusion of a large 4.3" LCD screen on the camera offers a great quality picture and is quite remarkable with its 800x480 pixel resolution. But a good cameraman will always use the viewfinder to define his frame and with a resolution of 1.2 Megapixels on a digital interface, the LCOS (liquid crystal on silicon) viewfinder gives crisp and clear pictures to make focusing easier.

The only broadcast drawback could be the lack of TC in/out for multi-cam shoots.

The camera I tested was only a prototype shipped with a Fujinon lens, which doesn't come close to the quality this camera deserves. The new model comes with a high-end Canon 14x HD lens that has an open aperture of f1.6 throughout the full 14x zoom range. The Canon lens will help users maximise the potential of the GY-HM700.

One feature that is truly impressive is the 1/3" bayonet mount and the flexibility to use different lenses.

I personally use 35mm adapters, but prefer to work around this as much as possible. As the camera only weighs 3.6kgs, the balance is not tiring at all, so it would be a shame to add additional front weight with a heavy adapter and an extra lens.

One of the things I experienced with my test shots in Dubai was that one ND filter would not suffice for outdoor shoots. Make sure you take an additional ND filter with you. It's the only way to keep the iris open and the DOF narrow. The smaller version of this camera, the GY-HM100, works with the same principle of SDHC cards and is already on the market. At 1.4kgs, it is the smallest professional 3CCD camcorder available today.

With these two cameras, JVC covers a broad range from the prosumer market all the way up to the professional sector. The concept of the inexpensive SDHC cards and the QuickTime .mov recording definitely resolves headaches of finding affordable storage solutions and easy to transfer codecs. This is a huge step forward and will make the



well-known mini DV tape obsolete. I personally believe this camera will prove very popular and was particularly impressed by the keying abilities of its codec.

Since recordings are made with MPEG-2 Long GOP (Group Of Pictures) it still gives enough information to key slower movements. If you have faster movements, the best way will be the HD-SDI option where you record to a third party I/O card uncompressed, because the colour subsampling is similar to mini DV at 4:2:0 and often won't be enough for accurate keying.

The weight of the camera was perfect to use on a steadycam, and since the camera is well balanced, the set-up for it was easy as well. I got used to the focus assistant, which indicates in colour the focused area. With use of the macro on the lens, this gives the user an accurate focus on close objects.

In summary, I was pleased with the features and abilities of the camera, but really amazed with the easy workflow in postproduction. The JVC GY-HM700 is not only an eye-catcher, but a professional all-rounder.

All features allow the operator to focus on the most important aspect, which is creativity. With this in mind, I'm looking forward to shooting my next project with this camera.

To conclude, as the world's first cameras to record native QuickTime files so you can start editing immediately, the GY-HM700 offers the quickest shoot-to-edit workflow solution in the market. At an attractive price point, one couldn't ask for more.

Article courtesy of [Digital Production](#).