

# MULTIMEDIA EQUIPMENT

MULTIMEDIA EQUIPMENT



Jasa Santos records audio of anxious children waiting to collect candy at the annual Tabor Czech Days parade in Tabor South Dakota. Santos uses an Olympus recorder, omni-directional mic and headphones.

## Equipping multimedia journalists Video, audio and photography

By Val Hoepfner/Freedom Forum Diversity Institute

Multimedia is a loaded term, it can mean many things...video, audio, audio slideshows, photo galleries, Flash graphics, databases, 360 degree panoramas and more.

The rules of multimedia are simple: you must be accurate, tell a good story, output good audio and steady, vibrant visuals. So, how best to equip students and professionals to record audio, photographs and video?

First, audio. Audio requires a quality recorder, quality microphone and digital editing software that can take in and output stereo sound. My recommendation for audio

recorders come in three sizes, high-end, mid-range and on the cheap.

On the high end you should be looking at the **Marantz 660 PDM**. It records to a compact flash card, has XLR audio ports that allow high quality microphones, including the option to plug into sound boards and mult-boxes at press conferences and performances. The 660 sells for \$500.

For the mid-range budget the **Zoom H4 recorder** is a bargain. This recorder has four-track recording, XLR audio ports, records to a secure digital card

and is smaller than the Marantz 660. The Zoom H4 sells for \$299.

On the cheap Olympus digital recorders like the **WS-100** work. The WS-100 uses an on-board mic that is troublesome due to its sensitivity. Any hand movement on the device can create noise in your recording. The WS-100 takes a 3.5mm mini jack mic and can be downloaded directly to any computer. The downfall of this recorder is its tendency to pick up extra noise when used without a microphone and the low quality of microphones that can be used. The WS-100 sells for \$80.

Marantz PDM 660, sells for \$500 (top left)  
 Olympus WS-100, sells for \$80 (right) and the  
 Zoom H4, sells for \$299.



Quality recorders are important in providing high quality sound. In addition to the recorder you will need high quality microphones to bring out the best in each recorder. For the XLR enabled recorders like the Marantz and the Zoom I suggest two mics, a **Sennheiser stick mic** and a lavalier mic (wireless or cabled). The Sennheiser stick

mic sells for \$170 and requires an inexpensive XLR cable to connect it to the recorder.

In the lavalier department I prefer wireless mics because they can be used in many different ways. **Sennheiser G2 wireless mics** cost \$599 and come with the transmitter, receiver and a bonus cube transmitter that can be used with the stick mic to go wireless

for street interviews or in multi-boxes as the transmitter.

The Olympus WS-100 has a 3.5mm mini jack and can use any omni-directional stick mic with an 3.5mm mono plug. While Radio Shack sells a standard mono plug mic for about \$22. A higher quality mic like the Shure 8900 will give better sound quality and sells for \$69.

## Audio editing software

**Audacity** is an easy to use and free program that works on both the Mac and PC. You can download a free version of Audacity at:

[audacity.sourceforge.net](http://audacity.sourceforge.net)

Other sound editing programs include Soundtrack Pro, Garage Band, Sound Booth and others. Audacity offers multitrack, stereo audio editing for voice and music. One drawback of using

Audacity is that it does not contain pre-recorded audio loops to create music. Garage Band, Soundtrack and other audio editors allow the user to compose their own stereo music.

# VIDEO JOURNALIST



Princella Parker and Jasa Santos line up their shots and sounds along a South Dakota highway. The two American Indian Journalism Students covered Tour de Kota, an annual bicycle ride through South Dakota.

## Video Journalists Getting the most from VJ equipment

By Val Hoepfner/Freedom Forum Diversity Institute

Just like audio recording, video can be done on the highest level or on a budget. The difference is sound quality, picture quality and the ability to grab still images for print publication.

Video that is shot for both online publication and reverse-publishing in print, should be done with a high-def camera that has a 3CCD chip. The **Canon XHA1** lists for \$3200 and allows the video journalist to capture HD video that can be “grabbed” using Final Cut Pro for still images to run in print. The grabbed images are very high quality and could run six columns across the front of any newspaper.

The Indianapolis Star, Dallas Morning News, Detroit Free Press, Army Times, San Jose Mercury News, Miami Herald and many other newspapers are making the switch from all digital still cameras to include one digital video camera in each photographer’s kit. Former Dallas Morning News video journalist, David Leeson is an advocate of making the switch to shooting as much video as possible, grabbing frames for still images to be used in print. Leeson has been shooting this way almost four years and says the first frame grab Pulitzer Prize is within sight.

A less expensive option for video journalism is the Canon Vixia HV30. It is a one CCD video camera that allows for a shotgun mic and use of Beachtek boxes that allow XLR stereo microphones to be used. The HV30 sells for about \$600 and fully outfitted with both stick and wireless mics costs less than \$1,800.

The HV30 is a simple to use, small video kit that is perfect for beginners and reporters that don’t want to be weighted down by equipment.

The Canon HV30 (top) is compact and fully outfitted costs less than \$1,800. The Canon XHA1 is a 3CCD HD camera that can be used to shoot video documentaries and allows for frame grabs that carry the front page of any newspaper.



## Video editing software

No matter which video camera you equip video journalists with you will need a video editing software. There are plenty of options out there including Final Cut Pro, Final Cut Express, Adobe Premiere, Avid Pro, Sony Vegas and iMovie.

Video editing software comes in all price ranges starting at about \$300 and climbing to \$5,000 per copy.

The bottom line is you will be running multimedia software on a Mac and the best program for Mac editing is the Final Cut family.

Final Cut Pro sells for \$1,299 and comes with Soundtrack Pro, Motion, Live Type, etc. It is best for video journalists who want shoot and edit in high-def.

Final Cut Express is a bargain, for \$199. It does not come with a sound editor but it gives you plenty of power to edit DV video and HD video.

FCP users can also easily import photography and audio to create documentary photography videos like those seen on Mediastorm.org.



## Video from still cameras

### Canon 5D Mark II, Nikon D90

By Val Hoepfner/Freedom Forum Diversity Institute

Since video journalism became part of their jobs, photojournalists have been hoping for a professional-quality hybrid camera that would allow them to shoot still photographs and video at the same time, with the same camera. There are two such cameras on the market now: the Canon EOS 5D Mark II and the Nikon D90. Both cameras shoot still images and video and both cameras record to digital flash cards rather than tape.

The 5D MKII is a 21.1 megapixel camera and captures Hi-Def video at 1920×1080. The 5D MKII sells for about \$2,600.

The Nikon D90 is much the same as the Canon 5D. It shoots video and still images. The D90 is a 12.3 megapixel camera and records Hi-Def video at 1280×720. One difference between the two is that the Canon records its audio in stereo and the Nikon D90 records audio in mono. That's not a huge issue when video is intended for the web but the Nikon sound is a bit hollow. The main difference is price. The Nikon D90 sells (body only) for \$999.

The cameras are a huge step forward in technology. Having both video and still technology in one camera means no more painful decisions to choose between a video camera and a still camera.



## Going tapeless

Tapeless video cameras are affordable alternatives to video tape is captured in real time. Cameras by Canon, Sony, Panasonic, Samsung, Sanyo, Pure Digital Flip flooded the market in 2008.

The most popular digital video camera in this class is the Canon Vixia HF 11 which has an 32GB internal hard drive and also records to a secure digital card. The HF 11 records full HD video (1920x1080) and sells for about \$900.

The Sony HDR-CX12 records to a secure digital memory card in full HD (1920x1080) and sells for about \$850.

If you are looking for a small, inexpensive and easy to use digital video camera for web use the Pure Digital Flip MinoHD is a good choice. The MinoHD holds up to 60 minutes of HD video (1280x720) on an internal hard drive. The MinoHD costs about \$220.



### Tapeless Cameras

At right, Pure Digital's MinoHD in black and pink. The Flip MinoHD costs about \$220. Below, Canon Vixia HF 11 shoots full HD, has dual recording modes and sells for about \$850.