

Multimedia Gear Guide

By D J Clark

INTRODUCTION

The following guide offers advice to people new to Multimedia Journalism and is designed as a guide rather than an in depth review. Before buying any new equipment I strongly suggest researching potential products online and checking there are no new releases since this was written.

The guide is divided into two sections, essential equipment and advanced equipment. In the essential section I list eight items I regard as necessary for any journalist who wants to have the option of shooting pictures, video and recording audio as well as writing a story while on an assignment. They are,

1. A camera capable of shooting video and still pictures
2. Memory Cards
3. A sound recorder
4. A computer capable of editing images, video and audio
5. A shotgun microphone for recording ambient sound, street interviews and voice overs
6. A tie clip microphone for recording interviews
7. A tripod for shooting video, timelapses and long expose pictures
8. Headphones

In the advanced section I list other equipment, mainly for video, that will enhance your creative opportunities and in some cases make your job a little easier to perform.

The list is based on advice to students signing up for one year multimedia courses I teach at Beijing Foreign University and the Asia Center for Journalism and is updated annually. Please note that I am not sponsored to promote any of the products listed or get any cut of sales made through the links provided.

Thanks also due to Dan Chung for checking the list and pointing out other products to look at.

ESSENTIAL EQUIPMENT

VIDEO ENABLED DSLR CAMERA

A camera that can shoot both still and video images

Good: Canon EOS 5D Mark III

This is not the only choice as there are lots of good DSLRs with similar capabilities as the 5D. Much depends on what lenses you have. For Canon the 1DX is probably the best quality camera for still and video but expensive and too bulky for me. The 7D & 70D are also good but with a 1.5 crop factor due to the smaller sensor. The excellent auto focus feature on the 70D is worth noting for people needing to shoot their own pieces to camera, and conduct interviews alone. For Nikon users the D800 is a good bet and has a clean output if you want to record the raw video onto a separate hard drive. It also has better headphone volume than the 5D MKIII which is a little quiet.



http://www.bhphotovideo.com/c/product/886948-REG/Canon_EOS_5D_Mark_III.html

Cheap: Panasonic Lumix DMC-GH3 Digital Camera.

The canon 700D and the Canon EOS-M are also good cameras at the cheap end (see Columbia J-School's Duy Linh Tu's setup of the EOS-M at <http://www.newsshooter.com/2013/09/27/canons-eos-m-is-good-news-for-budget-shooters-says-columbia-j-schools-duy-linh-tu/>). Having one of the smaller form factor cameras is also worth it for professionals as a low profile option as they are lightweight and don't mark you as a journalist.



http://www.bhphotovideo.com/c/product/892456-REG/Panasonic_Lumix_DMC_GH3_Mirrorless_Digital.html

All Rounder: Sony Cyber-shot DSC-RX10

This camera is getting a lot of press for providing the multimedia journalist with everything they need in a small and affordable form factor. It seems like Sony has listened to journalists in the field and tried to build an all round camera that meets their needs. The camera has a 24-200mm (35mm equivalent) F2.8 Carl Zeiss lens, built in ND filters and clickless aperture plus many more pro features. It also has additional attachments that allow you to work with XLR microphones and an external monitor. On the downside the smaller sensor makes it harder to get a shallow depth of field.



http://www.bhphotovideo.com/c/product/1009156-REG/sony_dscrx10_b_cyber_shot_dsc_rx10_digital_camera.html

Memory Cards

Good: SanDisk 32 GB SDHC Memory Card Extreme Pro

Be careful when buying memory cards as some of the cheaper cards may not be fast enough to cope with the speed at which the camera needs to write video data. In just about every workshop I run someone asks me why their camera only records 30 seconds of video then stops, and 99% of the time is because the card they have in the camera is not fast enough. It's also important to note that in some countries, where fakes abound, you need to be careful where you buy the card or you may end up with a card that is slower and has less capacity than is stated on the label. You don't want your card to fail on you just as you complete a day of shooting so don't go cheap on this one.



http://www.bhphotovideo.com/c/product/824140-REG/SanDisk_SDSDXPA_032G_A75_Extreme_Pro_32_GB.html

Cheaper: SanDisk 32GB SDHC Memory Card Extreme

Although the San Disk Extreme Pro is faster, these are the cards that I use as they are cheaper and are fast enough and robust enough for my needs. Some professionals prefer to use lots of smaller cards rather than a 32GB card as they worry about losing too much data if one card corrupts. As cards are cheap now I go for bigger cards just in case I need the extra room but still switch them regularly on important jobs. The 5D MKIII and many other DSLRs have dual slots now so you can record the data to two cards at the same time just to be doubly sure.



http://www.bhphotovideo.com/c/product/828326-REG/SanDisk_SDRX3032GA21_32GB_SDHC_Memory_Card.html

Audio Recorder

Large: Zoom H6 Handy Recorder with Interchangeable Microphone System

This recorder has four XLR inputs and additional modules that can turn it into a whole array of recording devices. It's great for important interviews and could double as a mini mixer if you did not want to carry the extra equipment.



http://www.bhphotovideo.com/c/product/967366-REG/zoom_h6_handy_audio_recorder.html

Small: Zoom H1 Ultra-Portable Digital Audio Recorder

I can't say enough good things about this little recorder. I have been using it the last year almost on every assignment. It's small, great for ambient recordings and can act as a second mic input with a tie clip mic attached if you are doing two people interviews. No XLR though so be careful about interference if you have a mic plugged in.



http://www.bhphotovideo.com/c/product/699403-REG/Zoom_H1_H1_Ultra_Portable_Digital_Audio.html

Tripod

Large: Sachtler Ace Fluid Head with 2-Stage Aluminum Tripod & Mid-Level Spreader

Tripod's are a crucial bit of kit and choosing the right one is a personal choice that must take into account your size and willingness/ability to carry a heavy weight around with you. The Sachtler Ace is a good option for a DSLR as it is just about sturdy enough to be able to do professional movements and also has a leveling base that will make getting setup much quicker.



http://www.bhphotovideo.com/c/product/822102-REG/Sachtler_1001_Ace_Fluid_Head_with.html

Small: Gitzo Series 2 6X Leveling 4-Section Fluid Tripod Kit

I am a little isolated in the professional community for this choice but for much of my work I go with a lightweight tripod. I am normally working on my own and on my feet all day. The Gitzo is super light weight with carbon fiber legs, very quick to set up and packs down small to fit on the side of my backpack. It



reaches up to eye level of most tall men and also has a hook underneath that allows me to drape by backpack on windy days for extra stability. The hook alone can make the tripod 3 times heavier than without it, depending on what I have in the bag.

http://www.bhphotovideo.com/c/product/568862-REG/Gitzo_GT2540LLVL_GT2540LLVL_Leveling_6X_Carbon.html

With: Manfrotto 054 Magnesium Ball Head with Q2 Quick Release

Again controversially I like using a light weight fluid video head as its quick to set up shots but it does limit my camera movement options. This one from Manfrotto is cheap but its a real tradeoff from using the Sachtler. If you are just shooting video I would not recommend it but for multimedia journalists who are multitasking or for people having to carry their equipment on foot long distances it can be worth the trade off.



http://www.bhphotovideo.com/c/product/944774-REG/manfrotto_mvh500ah_pro_fluid_head.html

Microphone

SHOTGUN MIC

Off Camera: Sennheiser MKE600 - Super-Cardioid Mic Capsule with K6

According to product manager Kai Lange, “with the MKE 600, we are presenting the ideal microphone for video journalists who want to produce a report or a film in perfect video and audio quality but do not wish to resort to highly professional shotgun microphones or a separate wireless link.”



<http://www.dslrnewsshooter.com/2012/09/05/new-sennheiser-mke600-xlr-shotgun-mic-designed-for-video-journalism/>

On Camera: Sennheiser MKE 400 Compact Video Camera Shotgun Microphone

Getting the on camera mic right is very important. Too long at the back and it will get in your eye when trying to shoot stills, too long at the front and it will show up in your wide angle shots. There is a cheaper Rode video mic but the rubber bands that holds it to the bracket keep coming off and are a pain to put back. The MKE 400 is also breakable but mine has lasted a couple of years of heavy work with the help of a tube of superglue.



http://www.bhphotovideo.com/c/product/534023-REG/Sennheiser_MKE_400_MKE_400_Compact_Video.html

On Camera with Sound Recorder Built In: Shure VP83F LensHopper Shotgun Microphone with Integrated Flash Recorder

This microphone combines both a sound recorder and a small form shotgun microphone, excellent for saving space and can also give you back up when using the shotgun for ambient and street interviews.



http://www.bhphotovideo.com/c/product/966010-REG/shure_vp83f_condenser_shotgun_mic.html

Tie Clip Microphone

Good: Sony ECM-77B - Miniature Omni-Directional Lavalier Condenser Microphone

This is a standard professional lav mic but it needs to be used with professional kit. For DSLR work you will need a mixer as it is XLR and not powerful enough to use with the Tascam or the Zoom H4N.



http://www.bhphotovideo.com/c/product/49332-REG/Sony_ECM77B_ECM_77B_Miniature_Omni_Directional.html

Cheap: Audio-Technica ATR3350 Omnidirectional Condenser Lavalier Microphone

A very cheap but remarkably solid option. It comes with a good length cable and extra power too.



http://www.bhphotovideo.com/c/product/664437-REG/Audio_Technica_ATR3350_ATR3350_Omnidirectional_Condenser_Lavalier.html

Also Consider: I also like the Giant Squid mics which I have a few of as backups. They are robust and good value.



<http://www.giant-squid-audio-lab.com/>

And for those with smart phones it maybe worth getting a Rode smartLav which will plug into your phone and give you a surprisingly good extra option with the APP that comes with it.



http://www.bhphotovideo.com/c/product/922914-REG/rode_smartlav_smart_lav_lav_mic_for.html

ADVANCED EQUIPMENT

Video Camera

All Rounder: Sony NEX-EA50UH Camcorder with 18-200mm Servo Zoom Lens

If you are only needing the camera for video this is a great option. Getting a DSLR for video maybe cheaper but by the time you buy all the extra add ons you will need a camera like this will probably work out cheaper too. No need for the mini mixer, external mic, monitor, steady rig etc and you still have interchangeable lenses and a large sensor for the DSLR short depth of field look.



http://www.bhphotovideo.com/c/product/887069-REG/Sony_nex_ea50h_Sony_NEX_EA50_Camcorder_with.html

Moving Up from a Canon DSLR: Canon C100

For those with Canon lenses you will either need an adaptor for the Sony cameras or maybe the Canon C100 is a better alternative (though you will still need some extra gear).



http://www.bhphotovideo.com/c/product/889545-REG/Canon_EOS_C100_EF_Cinema.html

For the Creative: Blackmagic Design Blackmagic Pocket Cinema Camera

This cheap camera shoots Cinema DNG Raw full HD format that allows you a lot more options in post production. With adaptors it can take most lenses you may already have making it extremely adaptable.



http://www.bhphotovideo.com/c/product/964117-REG/blackmagic_design_blackmagic_pocket_cinema_camera.html

Point of View Cameras

Good: Go Pro

Simple but great point of view cameras with lots of accessories and attachments to get them into places you would never think of putting a camera. They have four basic functions, video, stills, timelapse and timer. Don't think you can replace a DSLR with them though as HD they are but good quality they are not, particularly in low light situations.



http://www.bhphotovideo.com/c/product/1003301-REG/gopro_chdhx_302_hero3_black_edition_adventure.html

Wireless System

Good: Sennheiser EW112-p G3 Camera Mount Wireless Microphone System

These are compact and very robust making them a favorite for many professional video shooters. The one downside for DSLR users without a headphone jack is they don't have provide one for you which would give you another place to monitor the sound from if you were plugging them straight into the camera.



http://www.bhphotovideo.com/c/product/618739-REG/Sennheiser_EW_112P_G3_A_EW112_p_G3_Camera_Mount.html

Cheaper: Sony UWP-V1 Wireless Lavalier Microphone

These are a little larger than the sennheiser but do come with a headphone socket. As with the mini mixer the headphone out will only let you monitor the signal into the wireless unit and not what the camera is recording but it is better than nothing if you are using a DSLR without a headphone jack.



http://www.bhphotovideo.com/c/product/553681-REG/Sony_UWP_V1_3032_UWP_V1_Wireless_Lavalier_Microphone.html **Mini**

Mixer

Good: Juiced Link Riggy Micro

DSLR's are notoriously bad at dealing with the sound requirements of video. A mini mixer gives you four of the missing links. XLR connectors will make your audio signal more stable as the extra earth wire will help eliminate static and annoying interference from mobile phones etc and at the same time give you access to a whole array of professional microphones and other audio products. Secondly the mixer will give you a stronger signal into the camera which means you don't have to max out the in camera levels to get audio at decent levels and degrading the quality of the sound. Thirdly it will give you a headphone socket so you can monitor the sound. This is not perfect as this is the audio going through the mixer and not what the camera is recording but better than nothing. Fourthly it gives you multiple inputs so you can mic up the interviewer as well as the interviewee, do a two person interview or use a shotgun and a lav to get a fuller sound.



http://www.bhphotovideo.com/c/product/857043-REG/juicedLink_RM333_RM333_Riggy_Micro_Low_Noise.html

Cheap: RedShark Audio RA90



A slightly cheaper version of the Juiced link with a single XLR audio channel input.

<http://redsharkaudio.com>

ND Filter

Good: Heliopan 77mm Variable Gray ND Filter

ND faders are a must for DSLR video shooters wanting to get maximum benefit from the large sensors. With the shutter speed fixed in most cases the ND fader gives you another way to bring down the light levels so you can open your aperture up and get shallow depth of field.



http://www.bhphotovideo.com/c/product/765517-REG/Heliopan_707790_77mm_Vario_Neutral_Density.html

Cheap: Polaroid 77mm Neutral Density Fader Filter

This is not something that you want to go cheap on if possible as it's an add on that will directly effect the quality of your shots. However the Heliopan is expensive and a cheaper option like the polaroid can still make a big difference to the look of your video.



http://www.bhphotovideo.com/c/product/839843-REG/Polaroid_PLFILFDND77_77mm_Neutral_Density_Fader.html

Light

Good: Cineroid L2C-3K5K On-Camera LED Light

These are expensive for their small size but are very small yet powerful with lots of options.



http://www.bhphotovideo.com/c/product/827816-REG/Cineroid_L2C_3K5K_L2C_3K5K_On_Camera_LED_Light.html

Cheap: Z96

A real favorite in China and for a reason beyond me much cheaper too their than in the west. It's a simple but adaptable light that has the option to pop on a magnetic diffuser and warm filter. To power them you can choose between a sony camcorder battery or double A's. Better still you can clip together multiple lights to make a panel.



http://www.ebay.com/itm/96-LED-Video-Light-for-DV-Camcorder-Camera-Studio-Lighting-Z96-Battery-LF112-/190720872931?pt=LH_DefaultDomain_0&hash=item2c67d991e3

Also Consider: Westcott Ice Light

This small form factor tube light is excellent for lighting interviews as the tube gives very little fall off onto a wall behind the subject and is also a very soft light.



Also Consider: Lollipop

I normally carry at least one of these, sometimes two. They are very light weight, easy to set up and can hold a go pro camera, a light, a monitor, a microphone etc. They do break easily but are cheap so always good to have a small stock of them.



<http://www.faith-photo.com/product.php?list=series&id=4>

Viewfinder

Good: Zacuto Z-Finder Pro 2.5x

I bought one of these soon after they were released and have used it almost daily ever since. It's expensive but solidly built and makes the task of focussing in bright light so much easier. I prefer to use the clip on rather than attaching a mount to the camera as this way I can quickly flip it off to shoot stills.



http://www.bhphotovideo.com/c/product/682687-REG/Zacuto_Z_FIND_PRO2_Z_Finder_Pro_2_5x.html

Cheap: Perfect Viewfinder

As a fraction of the Zacuto price this still makes a good option though prepare for it not to last too long as the build is a little shaky. The option to flip the eye piece can be useful for interviews as it allows you still to be able to check focus without having to put your eye up to the back.



<http://item.taobao.com/item.htm?id=8483663080>

Intervalometer

Good: Canon Timer Remote Controller

Not needed by Nikon users or those with magic lantern installed on their cards, the intervalator allows DSLR filmmakers to shoot timelapses. Great for moving clouds across a landscape or a busy road junction to show time passing. It's light weight and cheap so should be in everyone's bag just in case.



http://www.bhphotovideo.com/c/product/164271-REG/Canon_2477A002_Timer_Remote_Controller_TC_80N3.html

Cheap: Vello ShutterBoss Timer Remote for Canon with 3-Pin Connection



http://www.bhphotovideo.com/c/product/749827-REG/Vello_RC_C2_ShutterBoss_Timed_Remote_for.html

Camera Straps

Good: BlackRapid RS DR-1 Double Strap

A friend tried to persuade me to use these straps for a year before finally I did and I have never looked back since. They are comfortable to wear, quick to use and when combined with a tripod baseplate make it very fast to unclip and drop onto a tripod. I use the dual ones for two cameras with the option to also just use a single strap. Well worth the investment for anyone who has to do a lot of walking with their cameras.



http://www.bhphotovideo.com/c/product/645448-REG/Black_Rapid_RSD_1BB_RS_DR_1_Double_Strap.html

Focus Controller

Good: Okii Systems FC1 USB Focus Controller

I prefer an electronic focus controller to a physical one but it is more expensive and only works on the Canon DSLRs. The Okii has lots of controls built in, enabling you to set up electronic focus shifts from one place to another. As I am doing mainly news I use it more for adjusting focus during interviews and starting and stopping my recordings than setting up complex focus shifts. Once I have set up my camera for the interview I can sit with a small monitor in front of me and the focus controller in my hand allowing me to make adjustments to focus if the subject moves without having to lean over to the camera and potentially move it. The Okii also screws onto my rig and can be used as an alternative to manually holding the lens.



http://www.bhphotovideo.com/c/product/854219-REG/Okii_FC1_FC1_USB_Focus_Controller.html

Cheap: V-Wheel

There are many cheap alternatives to an electronic focus controller. But bear in mind you will need to fix gears to all your lenses for them to work.



http://www.aputure.com/en/product/v_wheel_new.php

Monitor

Good: Marshall Electronics 7" High-resolution Field Monitor

Monitors really make a huge difference to your way of working as focus has always been an issue for DSLR shooters. Two big advantages are the ability to see what you are shooting much more clearly, even in bright light and the fact you can tilt a monitor to get it exactly where you want it to be. Some monitors also allow you to zoom to check focus while you are shooting and to change the color contrast etc. The more you spend the crisper the monitor and the less you have to worry about missing focus.



<http://www.smallhd.com/products/ac7/>

Cheap: Ruige TL-S500HD

This is my Chinese made monitor which I have been very happy with so far.



On-Camera LCD Monitor

TL-S500HD

Apply to HD/SLR/HDV shooting

Business level HD monitor



<http://item.taobao.com/item.htm?spm=0.0.0.34.3d823d&id=13652936890>

Support Rig

Good: Zacuto Recoil DSLR

The great thing about rigs is that they are extremely adaptable and you don't need to have a single unit from one company. My rig is made up of components from four different companies which all bolt together to form one (multicolored) unit. In essence the rig should comprise of a base plate sitting on two metal rods to which you can bolt things. Handles for holding the rig off the tripod. A shoulder pad with a counter balance to allow you to use a DSLR as a shoulder mounted camera. A focus finder, either connected to your lenses or plugged into the USB socket of the camera (Canon only) and a bracket to attach your monitor. You may need extra places to plug additional extras like microphones, mini mixers and radio receivers.



<http://store.zacuto.com/dslr-recoil/>

Cheap: Aputure MagicRig

Rigs come in all shapes and sizes and can be built slowly as you develop your video skills and add extra equipment. This is a good starting point as a simple brace that allows you to hold the camera more steady. Add a viewfinder and you have a great light weight run and gun rig.



http://www.aputure.com/en/product/apututre_magicrigv1.php

Slider

Good: Pocket Dolly

Slider's and jibs are extra weight and hassle to set up but can really lift your video. Movement sets apart straight forward news assignments to make them look more cinematic and combine this with the short depth of field the large sensors bring and you can elevate a straight forward assignment into a video that looks amazing. The pocket dolly is expensive for its small size but robust and will give you a unique look that news crews shooting from tripods can not match.



<http://www.kesslercrane.com/product-p/100161.htm>

Cheap: Varavon Slide Cam Lite

This is the slider I use. Small and light enough to fit alongside my tripod in the backpack yet of a good enough build to give me a smooth slide.



http://www.bhphotovideo.com/c/product/886860-REG/Varavon_VASC_SLLITE600_SLIDE_CAM_LITE_600.html

Mini Jib

Good: iFootage M1 MKII Mini Crane Jib Carbon Fibre

A mini jib takes a little more space but it gives you far more options than the slider. To really be able to control the mini jib you are going to also need an external monitor and either a long HDMI cable or a wireless transmitter for the signal so you can see the shots you are getting. It also takes more effort to set it up and operate so not something for a breaking news story. Remember you still need a tripod too to complete the setup process.



<http://www.3dbroadcastsales.com/products/iFootage-M1-MKII-Mini-Crane-Jib-Carbon-Fibre.html>

Also Good: Kessler pocket travel jib

Kessler
PocketJib™
TRAVELER
MADE IN USA



http://www.kesslercrane.com/product-p/pocket_jib_traveler.htm

My Tripod Bag

Below is a photograph of my tripod bag, that fits the Gitzo tripod with Manfrotto head, plus a Varavon slider and a iFootage M1 MKII Mini Crane Jib Carbon Fibre. The bag light enough to sling over my shoulder yet gives me lots of creative options.

With a 70D mounted on the iFootage Crane on top of the Gitzo with a Ruige TL-S500HD monitor and using my camera bag for stabilisation.



Bag

Backpack: Lowepro DSLR Video Fastpack 250 AW

Over the past 20 years I have tried a large number of bags and have a cupboard full of rejects to prove it. The lowepro fastpack 250 is without doubt the best I have ever had. It's spacious enough to fit everything I use on a normal assignment, including my 15 inch laptop and a tripod. It's pretty secure which is important for a pack on your back in busy places and it's comfortable to wear. My only grumble is the straps sometimes slip but I have fixed that with an extra chest strap.



http://www.bhphotovideo.com/c/product/823535-REG/Lowepro_LP36393_PAM_DSLR_Video_Fastpack_250.html

Wheels/Backpack: Think Tank Airport TakeOff Rolling Camera Bag

This is expensive for a suitcase but well worth it in my book. This is my standard travel bag or when I am using a car to shoot from. The build is very solid and has backpack straps in case I ever have to carry it long distances. For flights I love the front compartment which fits another thinktank laptop bag which can easily be pulled out for airport security and when sitting in your seat. Can also be used as a small bag for carrying the laptop around in once you reach your destination.



http://www.bhphotovideo.com/c/product/847298-REG/Think_Tank_498_Airport_TakeOff_Rolling_Camera.html