

## PRODUCTION ON A BUDGET

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[www.urbanfox.tv](http://www.urbanfox.tv)

## UrbanFox Ltd

All of this presentation will go on our website

[www.urbanfox.tv/seminar](http://www.urbanfox.tv/seminar)

## WHAT CAMERA SHALL I BUY?

- What is your budget?
- What are you going to use it for?
- What features must you have?

## Budget

Whatever your budget – don't forget you'll need to set aside some money for a tripod, mics, lights, editing.....

Think about 50:50

So if you have £3,000 to spend on the camera – you could easily spend £3,000 on all the other stuff.

## WHAT WILL YOU USE IT FOR?

- Internet broadcasting, podcast, vodcast
  - £500 – £2,000
- Weddings, special interest videos (SIV)
  - £500 – £3,000

## WHAT WILL YOU USE IT FOR?

- Corporate, broadcast and stock footage.
  - £3,000 – £??
- Documentary or drama
  - £3,000 – £???????

## Budget

We're assuming you've got a £3,000 - £6,000 total budget.

## FEATURES...

THERE ARE 5 THINGS THAT MAKE CAMERAS GOOD

- The lens
- The imaging system
- The recording format
- Audio
- Lighting

## LENSES

- With the cheaper cameras you will have to put up with fixed lenses.
- Focus lag
- Probably won't zoom out wide enough

## LENSES

If you spend more you can get a camera with interchangeable lenses. Canon XL range, JVC HD range, Sony DSR...

But, check your budget...

...will you be able to afford a second lens?

## THE IMAGING SYSTEM

- CCD and CMOS
- More = better (max of 3)
- Bigger = better = more expensive

Sony HVR-A1 => 1/3inch CMOS £1,700  
Sony HVR-Z5 => 1/3inch 3CMOS £3,300  
Panasonic HPX301 => 1/3inch 3CMOS £8,500  
Sony PMW-EX1 => 1/2inch 3CMOS £4,680  
Sony DSR-450 => 2/3inch 3CCD £9,500

(all prices ex VAT)

## THE IMAGING SYSTEM

- SD or HD?
- SD is fine for internet stuff
- SD is often better in low light than HD equivalent
- Some do have night vision for very low light conditions.

## THE IMAGING SYSTEM

- CCD better for interlaced pictures
- CMOS better for progressive
- True progressive?
- 25f or 25p
- 24p anyone?

## THE IMAGING SYSTEM

CMOS – No smearing

- Rolling shutter
  - Skew
  - Wobble
  - Partial exposure – flash
  - Banding – fluorescent lights

<http://dvxuser.com/jason/CMOS-CCD/>

## THE RECORDING FORMAT

- TAPE
- EXTERNAL HARD DRIVES
- INTERNAL HARD DRIVES
- OPTICAL DISC RECORDING
- SOLID STATE RECORDING

## THE RECORDING FORMAT ...TAPE...

- Cheap
- Very reliable
- Proven to be archive-able
- Comes in edit friendly formats

## THE RECORDING FORMAT ...EXTERNAL HARD DRIVE...

- Great as a back-up device
- 40GB = 3hrs
- Firestore 60Gb – £850
- Sony HVR-DR60 – £500



## THE RECORDING FORMAT ...EXTERNAL HARD DRIVE...

- Expensive
- Where do you put it?
- Insecure firewire socket
- Good back-up
- Great for events longer than 1hour
- Possibility of faster workflow

## Camera outputs

FireWire used to be the way to get video and audio into an external hard drive.

Look out for cameras with:

- » HDMI
- » HDSI

## Mega bits

- DV/DVCAM (25 Mbps)
- DVCPRO (25 Mbps)
- DVCPRO 50
- DVCPRO HD (100 Mbps)
- HDV (19 + 25 Mbps)
- XDCAM EX (25 + 35 Mbps)
- AVCHD (various)
- AVC-I (50 + 100 Mbps)

## Solid State Recording

Convergent Design (Symbiosis stand)

Flash XDR - Up to 160Mbps



## THE RECORDING FORMAT ...INTERNAL HARD DRIVES...

- Only on lower cost handycams
- AVCHD Format - editable?
- Usually highly compressed
- Long recording times  
40GB = 15hours
- You must archive to a separate drive



## THE RECORDING FORMAT ...OPTICAL DISC...

- Within this budget records to DVD
- Low quality
- Hard to edit
- Avoid

## THE RECORDING FORMAT ...SOLID STATE...

- Getting cheaper
- No moving parts
- Pretty reliable
- Pretty resilient too  
(washing machine safe)

## THE RECORDING FORMAT

### SOLID STATE RECORDING

- Canon SX1 IS
- Face detection
- 10 mega pixels
- Full HD @ 30fps
- MPEG-4
- SDHC cards
- £400



## THE RECORDING FORMAT

### ...SOLID STATE...

- Panasonic P2
- DVCPRO format
- P2 still too expensive
- £1,600 - 64GB card
- 1GB = 1min HD
- No moving parts



## THE RECORDING FORMAT

### ...SOLID STATE...

- Sony PMW-EX1 & EX3
- SxS Cards (S by S)
- 16GB = 50/70mins
- 16GB card = £430
- So, not cheap



## THE RECORDING FORMAT

### ...SOLID STATE...

- Cheap Kensington reader with SD card work around
- 16Gb=£28.99 inc VAT

Loads of info including a compatibility list from Guy Barwood  
<http://tinyurl.com/d4m8wt>



## THE RECORDING FORMAT

### ...Hybrids...

- Sony HVR-Z5 & Z7
- Mini DV tape...and...
- Compact Flash too - using the HVR-MRC1K



## Retailers

- [www.creativevideo.co.uk](http://www.creativevideo.co.uk)
- [www.mitcorp.co.uk](http://www.mitcorp.co.uk)
- [www.visuals.co.uk](http://www.visuals.co.uk)
- [www.top-teks.co.uk](http://www.top-teks.co.uk)
- [www.prokit.co.uk](http://www.prokit.co.uk)

## Tripods

- Spend as much as possible (£200 - £700)
- Weight (carbon fibre is expensive)
- Robust - outlive the camera
- Min and Max height
- Easy to use leg adjustments

## Tripods

- Video NOT a photographic tripod
- Mid level or ground level spreader
- Spirit level
- Quick release hot shoe
- Pan and tilt head
- Separate pan and tilt head frictions

## Alternative Support

The Pod  
[www.jessops.com](http://www.jessops.com)



Double Bean bag

[www.wildlifewatchingsupplies.co.uk](http://www.wildlifewatchingsupplies.co.uk)

## Alternative Support

- Monopod (Manfrotto 560B 561B)
- Magic arm with Superclamp

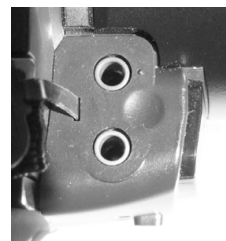


## FEATURES...

THERE ARE 5 THINGS THAT MAKE  
CAMERAS GOOD

- The lens
- The imaging system
- The recording format
- Audio
- Lighting

## IF YOU ONLY HAVE A MINIJACK MIC INPUT



## Then you may need an XLR adapter...

A BeachTek box (DXA-4)



## Cheap Alternative



## Basic Sound Kit

• Gun mic (hypercardioid)  
great for noisy places

- Sennheiser 416P  
– [www.mcdauctions.co.uk](http://www.mcdauctions.co.uk)
- Sennheiser ME66 (K6)
- Rode NTG1 and 2
- Beyerdynamic MCE 86



## Basic Sound Kit

- Personal mic (Tie, clip, lavalier)
- Omni directional – good for interviews
- Sony ECM77 or ECM88
- Tram TR-50
- Sanken COS-11



## Basic Sound Kit

Radio mic

Sennheiser Evolution  
(EW112-p G2)



## Basic Sound Kit

- Sony UWP-C1 series
- Diversity System



## Basic Kit

- XLR-XLR cables  
30cm, 1m, 2m, 3m  
(quad flex)
- Closed Headphones
  - Sennheiser HD25



## Sound Equipment

- [www.ltf-uk.com](http://www.ltf-uk.com)
- [www.creativevideo.co.uk](http://www.creativevideo.co.uk)
- [www.canford.co.uk](http://www.canford.co.uk)

## FEATURES...

I THINK THERE ARE 5 THINGS  
THAT MAKE CAMERAS GOOD

- The lens
- The imaging system
- The recording format
- Audio
- Lighting

## Lighting kit

Lights are tools. You need the correct  
light to do a specific job well.

SO...

Please don't buy three identical lamps

## Interview kit

- Hard light
  - Dedo aspheric2 (150W)
- Soft Light
  - Lowell Rifa 44 (300W)



## Interview Kit

- Around £1,000 +VAT





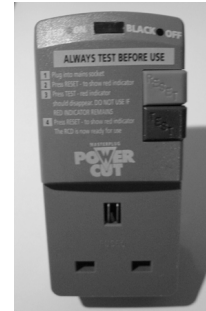
## LED On-Camera Light

- Cool light
- 0-100% dimmable
- No colour temp change
- Lamp life 10,000 hours
- Very low battery consumption (11W)
- LitePanels LP Micro £246 ex vat



## Lighting Kit Extras

- RCD
- Circuit tester



## Lighting Kit Extras

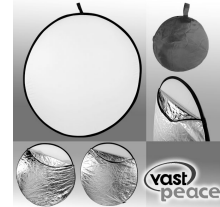
- Daylight colour-correction gel
- Extension leads
- Magic arm

[www.studiolighting.co.uk](http://www.studiolighting.co.uk)



## RUN OUT OF MONEY?

- ...buy a reflector
- Search for 5 in 1 reflector on eBay
- Don't buy one that is too big unless you have an assistant to hold it.



## Trolley

- Folding sack truck (eBay)
- Carries 50-90Kg Load

Plus

- A good suitcase on wheels
- A rucksack - so you always know where your kit is



## FEATURES...

THERE ARE 5 THINGS THAT  
MAKE CAMERAS GOOD...

Actually, can we make that  
six ...

EDITING

You're not buying a computer...  
...you're buying an edit suite

BUY A MAC



The new Intel models (will run Windows too)

Buy a refurbished Mac ... <http://tinyurl.com/227sxz>

RAM

Get lots of it

[www.crucial.com](http://www.crucial.com)

Hang on a minute...  
I've thought of another  
thing that makes your video  
look good...

The person operating it

## Postcard

- Training contact details
- W.A.F.F.L.E mnemonic



Any questions?

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