

SHOOTING WITH THE BLACKMAGIC CINEMA CAMERA

camera tutorials & post production workflow using DaVinci Resolve



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Now for anyone that's been following the Blackmagic Cinema Camera you'll know that it works natively with the Canon EF lenses. Now the fact is you will be able to get other lenses on it - you can use adapters, so if you want to use PL lenses, if you want to use Nikon lenses, there are ways to get them on.

But straight out of the box work with your Canon EF glass and you'll be in really good shape.



EF 8 - 15mm F4L; EF 16 - 35mm F2.8L; EF 28 - 70 F2.8L; EF 70 - 200mm F2.8L; EF 100 - 400mm F4.5/5.6L

Now when you're shooting with these lenses you've got to figure a 2.3x crop factor. What does that actually mean? If you've shot standard 35mm photography you'll know what a 18mm lens gives you, you'll know what a 28mm lens gives you or a 70mm lens gives you. But you've got to multiply it by 2.3 to understand the focal length you'll be getting on this camera in relation to standard 35mm photography.

The image above shows the range of zooms I've tested on location. These are all L lenses, Canon's best glass. Below is the equivalent focal length in 35mm terms for these lenses, the 2.3 times crop factor which is so talked about.

EF 8 - 15mm - equivalent focal length in 35mm terms = 18.4 - 34.5mm

EF 16 - 35mm - equivalent focal length in 35mm terms = 36.8 - 80.5mm

EF 28 - 70 - equivalent focal length in 35mm terms = 64.4 - 161mm

EF 70 - 200mm - equivalent focal length in 35mm terms = 161 - 460mm

EF 100 - 400mm - equivalent focal length in 35mm terms = 230 - 920mm

The staggering thing is these lenses become ideal for telescopic work. For wildlife, or if you want to remain hidden from view, then put on the Canon 70 - 200mm or 100 - 400mm and you will be filming at over 900mm on the longest of these, or over 450mm on the long end of the 70 - 200mm. If you need wide use the EF 8 - 15mm which gives you an angle of view equivalent to 18.4mm. The Sigma 8 - 16mm is also highly recommended for wide angle work.

The affordable adapters I have used were bought from Amazon in the US. Use the affordable adapters at your own risk as they will be used to attach expensive lenses to the Blackmagic Cinema Camera body.

The big advantage of using the Nikon lenses - the older lenses or newer D lenses, is that you get an aperture ring to work with. When using the Canon EF lenses the aperture is controlled electronically.



With Nikon 28 - 70mm F2.8 attached.



For those who like manual control and wish to see the F-stop number in front of them, the Nikon manual lenses, new or old, can't be beat!



Nikon D lenses, all with manual iris: 50mm F1.2, 17 - 35mm, 28 - 70mm, 80 - 200mm, 80 - 400mm

Nikon 50 F1.2 - equivalent focal length in 35mm terms = 115mm

Nikon 17 - 35mm F2.8 - equivalent focal length in 35mm terms = 39.1 - 80.5mm

Nikon 28 - 70mm F2.8 - equivalent focal length in 35mm terms = 64.4 - 161mm

Nikon 80 - 200mm F2.8 - equivalent focal length in 35mm terms = 184 - 460mm

Nikon 80 - 400mm F4.5/5.6 - equivalent focal length in 35mm terms = 184 - 920mm

Shooting with the Blackmagic Cinema Camera - technical details

In terms of operation the Blackmagic Cinema Camera is very simple, particularly when considering the complexity of some of the other cameras on the market.

The menu system on the Blackmagic camera is easy to understand and to navigate around, and the external controls are minimal.

Don't regard the minimalist approach as being limiting - this is a camera that is well capable of producing high-end cinema images in a form factor small enough to hold in your hands.

External Controls



On the front of the camera there is only a single button. This is the record button. To the right of the record button is the lens mount and a button which, when pressed, releases the lens.



The back of the camera features other key controls:

Iris

The Iris button will set the iris automatically when you press the button, providing



you are using Canon EF or compatible EF lenses. You do not get a read out of the F-stop you are filming at, this is not displayed. The functionality of being able to manually set the iris with F-Stop reading is something we hope to see in a future firmware update.

You can manually brighten or darken the exposure by pressing the iris button and arrow left to darken, arrow right to brighten up the image.



Focus

The Focus button provides a peaking control so you see which areas of the image are in focus.



Above: notice peaking on the highlights in the spoon and the perimeter of the cup. Double tap the screen (left) to zoom in and the peaking is more obvious.



You need to drive the EOS lenses in manual, as autofocus does not work. While framing your shots or while filming, press the Focus button and an outline will appear clearly showing peak areas in focus. I find



this an invaluable tool which I use all the time!
At any time double tap the screen and this will then punch in on the image. This enables you to check critical focus. Tap again to zoom back out.

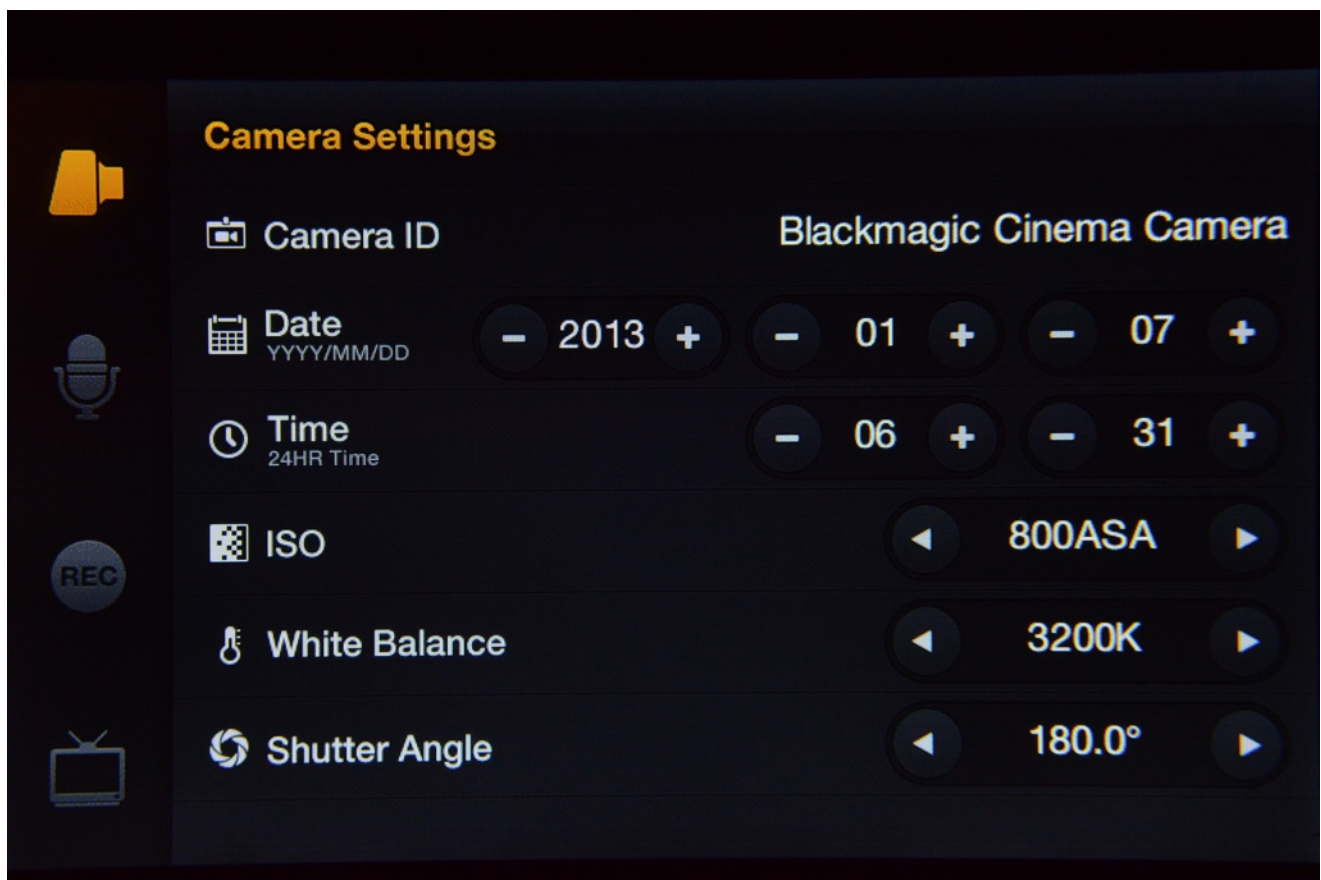
In the examples above Peaking clearly shows which areas are in focus

Playback controls

Note the Record button, first to the left. You can use the record button on the front or back of the camera. They do they same thing.



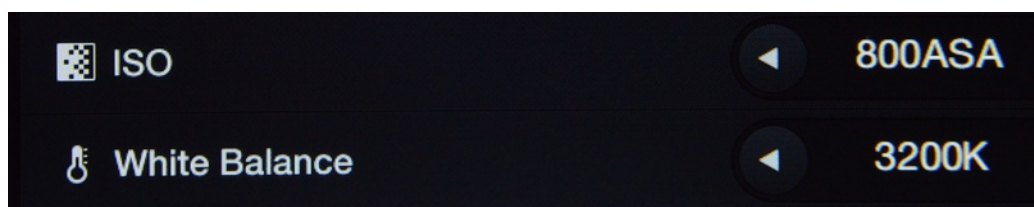
Camera Settings



Here you can give the camera an ID (useful when working with several cameras together) set the date, time, ISO, White Balance and Shutter Angle.

The most critical of these areas is ISO and White Balance, and how important these are depends on whether you choose to shoot RAW or ProRes.

When shooting RAW both exposure and white balance can be adjusted with tremendous latitude in post production.



When shooting ProRes or DNX HD, the settings you have chosen are baked into the image. The decisions you make while shooting, with regards to ISO and White Balance cannot be changed later. It is important to understand the difference between shooting compressed with ProRes or DNX HD, or completely uncompressed with RAW.

When shooting RAW whatever you set the White Balance to can be changed in post - so if you shoot Tungsten you can easily change this to Daylight or any other color temperature you choose. Similarly, the ISO which you set, for RAW recording, is only a reference. You

There are 3 essential mounts which you need for the camera: cold shoe adapter, 3/8 inch spigot, 1/4 inch reverse screw (the opposite to the hole provided in the camera). These 3 adapters will open up the ability to mount a huge range of accessories to your camera.



Above: radio mic attached to reverse 1/4 inch screw

Left: light attached to cold shoe

Right top: clamp attached to 1/4 inch screw in camera

Right: clamp attached to 3/8 inch spigot

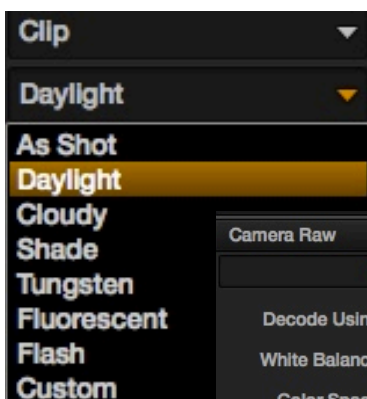




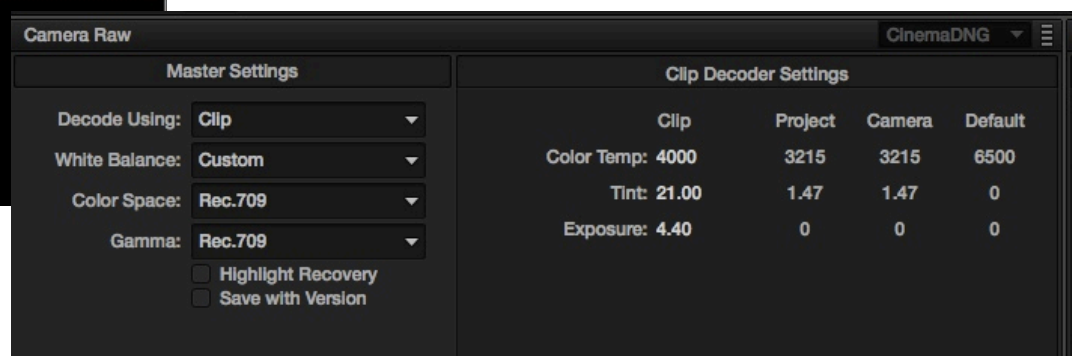
Clip Decoder Settings

	Clip	Project	Camera	Default
Color Temp:	3215	3215	3215	6500
Tint:	1.47	1.47	1.47	0
Exposure:	4.40	0	0	0

Exposure, in the above example, has been boosted by 4.4 stops

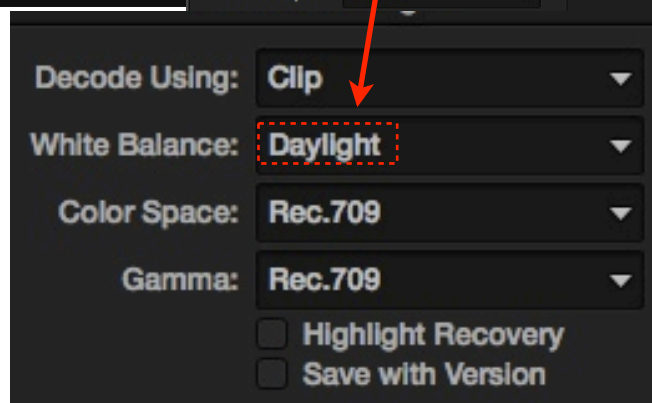
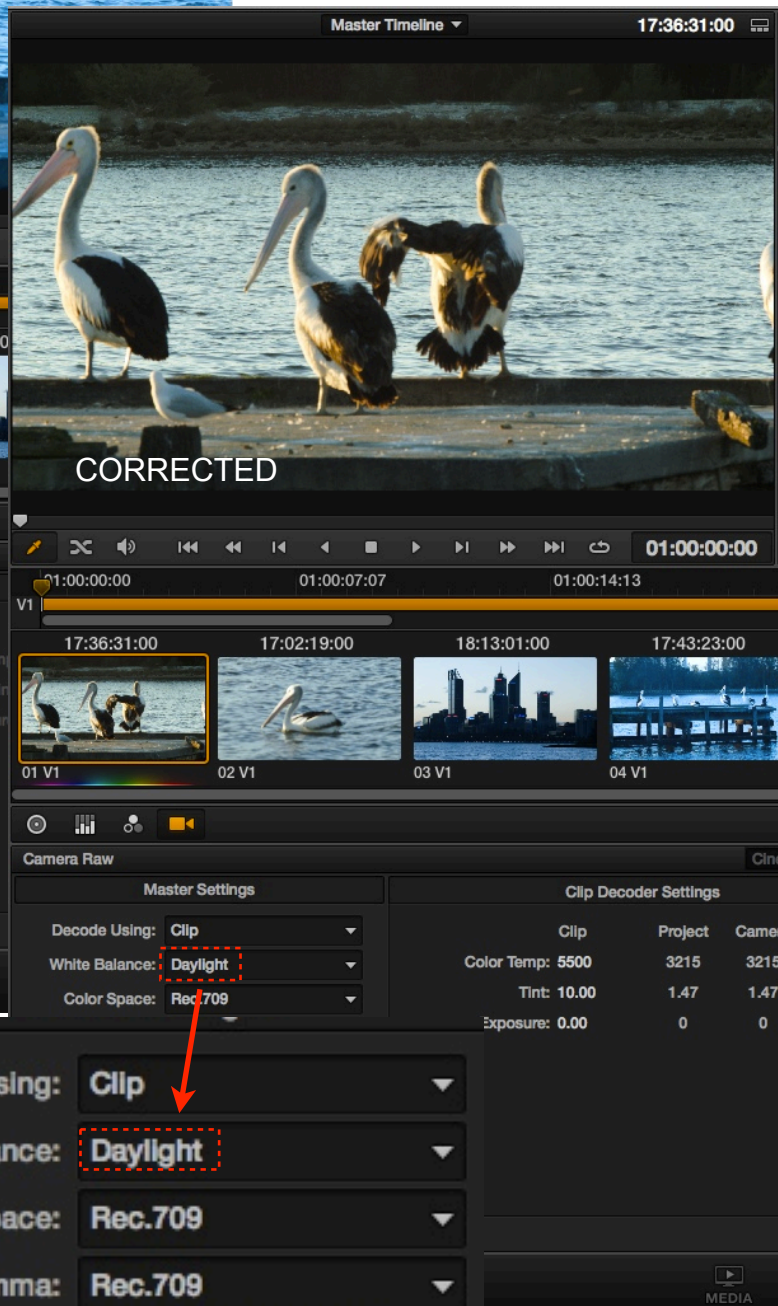


The White Balance can also be customized. Click the drop-down menu for White Balance and you can choose Daylight or Tungsten or a host of other settings. If you select Custom you can then enter any value choose.





Then, you now need to correct the images. In this example the white balance needs to be changed.



Once you are done correcting the images you then need to output these.



As described earlier, you can choose to Deliver a single clip, a range in the Timeline, or the entire Timeline. Once you have defined exactly what you wish to Deliver you then need to set the parameters of the file to export.





www.moviemachine.tv

Movies to View

* Grant Petty Interview (part 1) - recorded Melbourne, Australia August 2012

<http://tinyurl.com/ahtadv5>

* Grant Petty Interview (part 2) - recorded Melbourne, Australia August 2012

<http://tinyurl.com/c4hef8j>

* Grant Petty Interview (part 3) - recorded Melbourne, Australia August 2012

<http://tinyurl.com/ctkn3r7>

* Shooting with the Blackmagic Cinema Camera - recorded Perth, Australia August 2012

<http://tinyurl.com/aecum4n>

* Shooting with the Blackmagic Cinema Camera: (part 2) - recorded London, UK Oct 2012

<http://tinyurl.com/b63qrcu>

* John Brawley Interview - recorded IBC Amsterdam, September 2012

<http://tinyurl.com/aqxt9lk>

* Peter Barber Interview - recorded at IBC Amsterdam, September 2012

<http://tinyurl.com/axg9j5g>

* One Night in Barcelona - recorded, Barcelona, Spain, November 2012

<http://tinyurl.com/chpqn33>

* Rick Young - Cinema Presentation - recorded Manchester, November 2012 (Part 1)

<http://tinyurl.com/d295j2h>

* Rick Young - Cinema Presentation - recorded Manchester, November 2012 (Part 2)

<http://tinyurl.com/bgrrybm>



This book is jam-packed with information about the Blackmagic Cinema Camera. Rick Young takes you on a journey from the first time he touched the camera to outputting cinema quality 2K files. This book gives you all the information you need to work with the camera and post produce images using DaVinci Resolve. A complete workflow is provided for shooting and outputting cinema quality.

Featuring: Cinema Workflow - output and edit 2K files for cinema production ** Technical run-through of the Blackmagic Camera ** Vital information about using Canon and Nikon lenses ** Using clamps, attachments, external batteries, and rigging the Blackmagic Cinema camera for your specific needs ** Working with audio ** Detailed description of using RAW vs ProRes and the distinct advantages which RAW brings ** DaVinci Resolve workflow: quick run-through of what you need to know to get your 2.5K footage in and out of Resolve and exported for use in the NLE of choice ** Interviews with those involved with the development of the camera, including: Grant Petty - CEO Blackmagic Design; Peter Barber - Co-founder Blackmagic Design, John Brawley – Cinematographer.

[Links to movies showing the Blackmagic Camera in use, on location.](#)



Thanks to everyone at Blackmagic Design, Viral Mistry, Ken Stone, Fiona Young