Blackmagic Video Assist Recommended SD Cards

Blackmagicdesign

What SD card should I use with the Blackmagic Video Assist 4K?

It is important to use high speed UHS-II SD cards. These are some SD cards which we have tested using ProRes HQ.

The following SD cards will record at a maximum of 2160p30 inc MXF and are recommended when using HFS+ or exFAT:

- Angelbird AV Pro UHS-II 300MB/s 64GB
- Angelbird AV Pro UHS-II 300MB/s 128GB
- Lexar SDXC UHS-II 2000x 300MB/s 64GB
- Lexar SDHC UHS-II 2000x 300MB/s 32GB
- Sony SF-G64 CG64G1713 300MB/s 64GB
- Sony SF-G128 CGX281712 300MB/s 128GB
- Toshiba Exceria Pro SDXC UHS-II 64GB
- Transcend SDXC UHS-II 180MB/s 64GB
- Wise SDXC UHS-II 285MB/s 64GB
- Wise SDXC UHS-II 285MB/s 128GB

The following SD cards will record at a maximum of 2160p30 and are recommended when using HFS+ or exFAT:

- Delkin Devices SD SDHC UHS-II 250MB/s 32GB
- SanDisk Extreme Pro SDXC UHS-II 280MB/s

The following SD cards will record at a maximum of 1080p60 inc MXF and are recommended when using HFS+ or exFAT:

- SanDisk Extreme Pro 16GB SDSDXP-016G-A46
- SanDisk Extreme Pro 32GB SDSDXP-032G-A46
- SanDisk Extreme Pro 64GB SDSDXP-064G-A46
- SanDisk Extreme Pro 128GB SDSDXP-128G-A46
- SanDisk Extreme Pro 256GB SDSDXP-256G-A46

- SanDisk Extreme Pro 512GB SDSDXP-512G-A46

The following SD cards will record at a maximum of 1080p60 and are recommended when using HFS+ or exFAT:

- Lexar SDHC UHS-II 1000x 150MB/s 32GB
- Lexar SDXC UHS-II 1000x 150MB/s 64GB
- Lexar SDXC UHS-II 1000x 150MB/s 128GB
- Lexar SDXC UHS-II 1000x 150MB/s 256GB

The following SD cards will record at a maximum of 1080p30 inc MXF and are recommended when using HFS+ or exFAT:

- Lexar SDHC UHS-I 633x 95MB/s 32GB
- Lexar SDXC UHS-I 633x 95MB/s 64GB

What SD card should I use with the Blackmagic Video Assist?

It is important to use high speed UHS-1 SD cards. These are some SD cards which we have tested using ProRes HQ.

The following SD cards will record at a maximum of 1080p60 and are recommended when using HFS+ or exFAT:

- SanDisk Extreme Pro 16GB SDSDXP-016G-A46
- SanDisk Extreme Pro 32GB SDSDXP-032G-A46
- SanDisk Extreme Pro 64GB SDSDXP-064G-A46
- SanDisk Extreme Pro 128GB SDSDXP-128G-A46
- SanDisk Extreme Pro 256GB SDSDXP-256G-A46
- SanDisk Extreme Pro 512GB SDSDXP-512G-A46

The following SD cards will record at a maximum of 1080i60 using HFS+ or exFAT:

- Lexar Professional SD XC 600x 128GB
- DelkinDevices 633x 8GB

The following SD cards will record at a maximum of NTSC using HFS+ or exFAT:

- SanDisk Ultra SD HC 8GB
- SanDisk SD HC 8GB

- Transcend SD HC 8GB

The following SD cards are discontinued and are not recommended for recording on Blackmagic Video Assist:

- Panasonic SDHC Gold Series 16GB
- Panasonic SDHC Gold Series 32GB

Important Notes About SD Card Speed

Please ensure your chosen SD card is UHS-1 only. The above list are the SD cards we have currently tested, however there are many other available SD cards which will be compatible. It's worth testing your card's speed using Blackmagic Disk Speed Test to accurately measure whether your SD card will be able to record at the rate you require. Blackmagic Disk Speed Test uses data to simulate the storage of video so you can get results similar to what you'll see when capturing video to an SD card.

Installation and Operation Manual

Blackmagic Video Assist

November 2017

English, 日本語, Français, Deutsch, Español,
中文, 한국어, Русский, Italiano and Português.

Languages

To go directly to your preferred language, simply click on the hyperlinks listed in the contents below.

Welcome!

Thank you for purchasing your Blackmagic Video Assist.

We are extremely excited to have designed the Blackmagic Video Assist family of products. We think they are the perfect solution to help you shoot better video on any type of camera. Your video assist combines the best of our monitoring and recording technologies for on set monitoring and professional recording into easy to use very compact products.

Blackmagic Video Assist models can be mounted on your camera, or with the underside fold out stand you can use them on a desk for general deck and monitoring use. That's perfect for use as a master recorder for a live production switcher.

Blackmagic Video Assist has a 6G-SDI input so it will monitor Ultra HD. Blackmagic Video Assist 4K records Ultra HD on two SD cards for continuous recording and is also a powerful audio recorder, so you can mix analog audio into the SDI or HDMI recording. Your video assist is a very versatile monitor and recorder that you can use with any camera and on any project.

This instruction manual contains all the information you need to start using your video assist.

Please check the support page on our website at www.blackmagicdesign.com for the latest version of this manual and for updates to your video assist's software. Keeping your software up to date will ensure you get all the latest features! When downloading software, please register with your information so we can keep you updated when new software is released. We are continually working on new features and improvements, so we would love to hear from you!

Grant Petty

Grant Petty
CEO Blackmagic Design

Contents

Blackmagic Video Assist

Getting Started

Plugging in Power

Getting started with your video assist is as simple as plugging in power, connecting your video source, plugging in your audio and inserting an SD card.

This section shows you how to get started including:

- Plugging in Power
- Plugging in Video
- Plugging in Audio
- Inserting SD cards

To supply power, plug in the supplied power adapter to your video assist's power input on the right side panel.

With external power connected, you can also charge two LP-E6 type Lithium-Ion batteries, which can be mounted to battery slots 1 and 2 on the back panel. To plug an LP-E6 type battery into your video assist, gently press the battery against the inside top edge of the battery slot, then slide the battery down against the back panel until you feel it click and lock into place. Press the battery release button on the top panel to remove a battery. For more information on battery use and how to monitor the battery power remaining, refer to the 'settings' section in this manual.

To power on the unit, press the power button on the right side panel. Press and hold to power off.
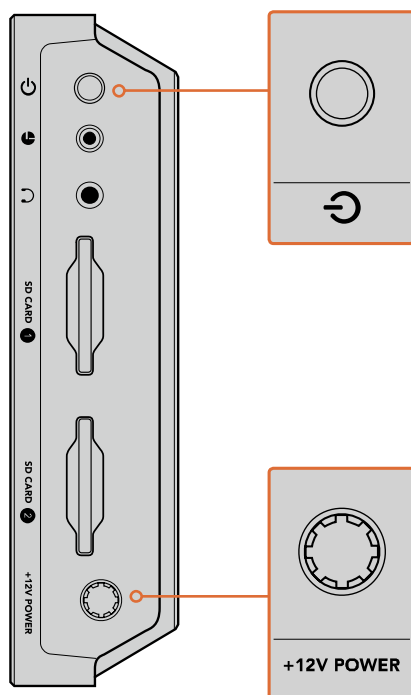
Connect external power to the +12V power input.
Press the power button to turn the unit on.
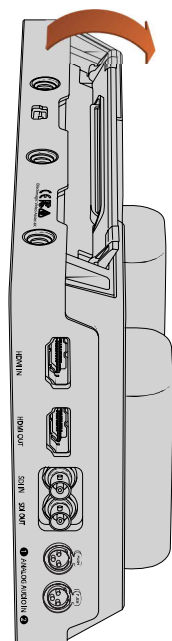
A kickstand is provided so you can mount the unit on your desk. Simply lift the edge of the stand and gently swing it into the open position.

Your video assist uses common LP-E6 type batteries.

Plugging in Video

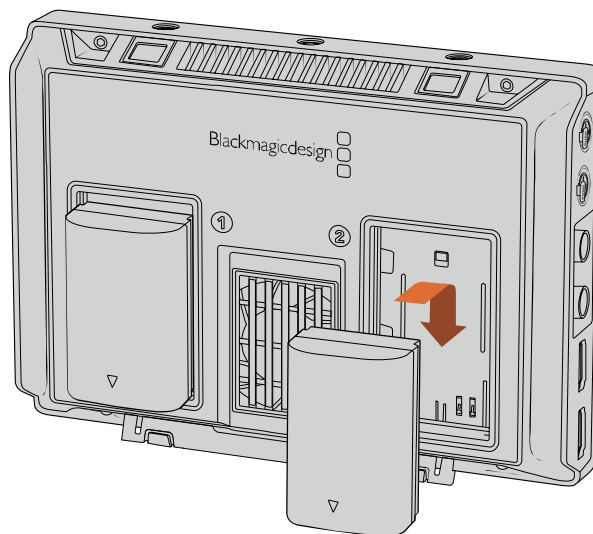The next step is to plug your SDI or HDMI source video into the Mini BNC, BNC or HDMI input. The unit will auto detect the SDI or HDMI input depending on what you connect first. Mini BNC to regular BNC cables can be purchased from your nearest professional video equipment stores. Mini BNC connectors are also commonly known as DIN 1.0/2.3 connectors.
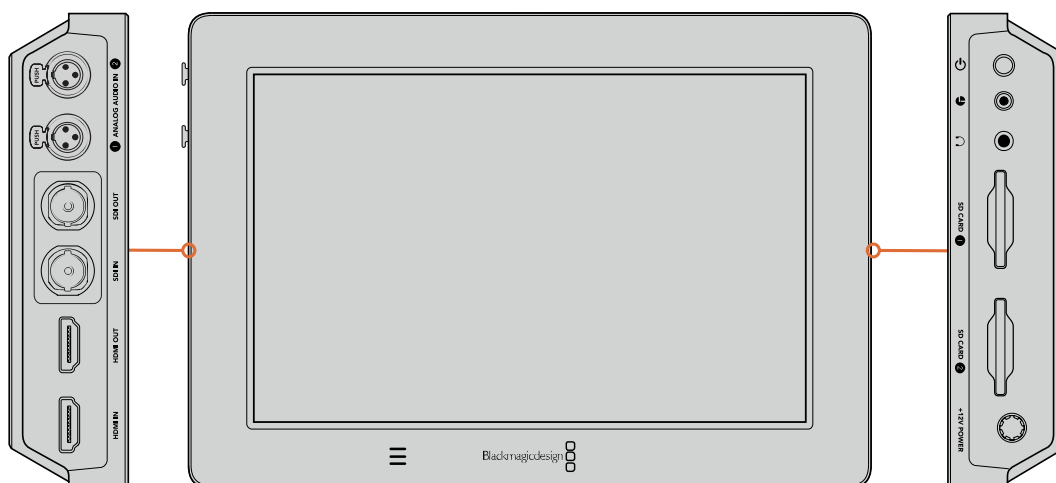
Connect your source video to the SDI or HDMI input on the left side. Connect an HDMI TV or SDI monitor by plugging into the HDMI or SDI output. You can listen to the audio on your clips during recording and playback by plugging a headset into the headset jack. On Blackmagic Video Assist 4K you can also listen to your audio during playback via the built in speaker below the LCD.

Plugging in Audio

When plugging in your video, audio is also connected as it's embedded in the SDI or HDMI video signal. However, Blackmagic Video Assist 4K also has built in mini XLR connectors so you can plug in external balanced analog audio as well.

> **NOTE** On Blackmagic Video Assist 4K you can set the audio settings to record analog channels 1 and 2, or choose one channel analog audio and one channel SDI or HDMI audio, depending on your source video. For more information about analog audio and adjusting levels refer to 'Audio Settings' in the 'Settings' section.

Inserting SD Cards

To start recording clips, you need to insert a compatible SD card.

For high quality HD recording, we recommend high speed UHS-I SD cards. However, if you are recording standard definition or lower bit rate, lower quality compression you might be able to use slower cards. Generally the faster the cards, the better.

If you are recording Ultra HD on Blackmagic Video Assist 4K, then we recommend high speed UHS-II type SD cards. These cards need to be capable of write speeds above 110MB/s for recording up to Ultra HD 2160p30. Blackmagic Video Assist 4K also has two SD card slots. You can record to either one, or insert two SD cards for continuous recording or fast media change overs.

Before using your cards, you will need to format them to either HFS+ or exFAT formats. It's easy to format your media via the 'storage' settings. Refer to the 'settings' section for more information on storage settings.

If you want to, you can format your cards using a Mac OS or Windows computer. When using your media on Mac OS then you can use HFS+ which is the Mac disk format. If you are using Windows then you should use exFAT format, which is the Windows disk format and Mac OS computers can also read exFAT format.

To plug in an SD card:

1   Hold the card with gold connectors facing the LCD and align it with the SD card slot.

2   Gently push the card into the slot until you feel it lock firmly into place.

To remove the card, gently push until you feel it click, then release. The card will eject a short distance, allowing you to hold the edge of the card and remove it from the slot.
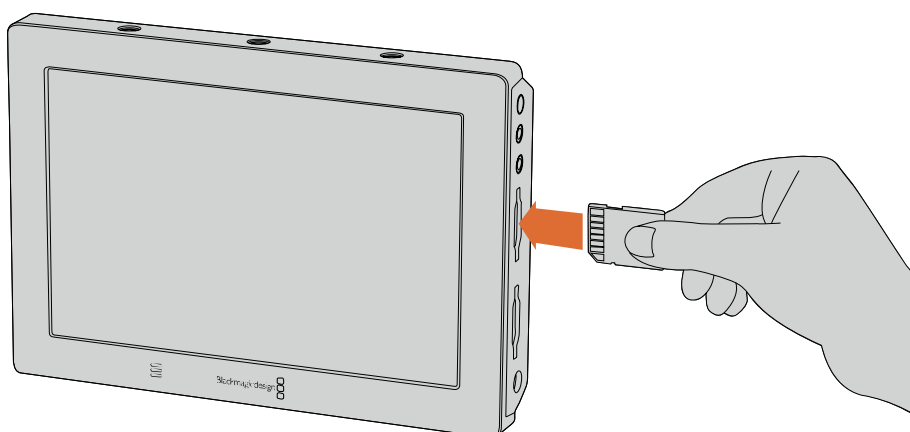
To start recording you'll need to insert an HFS+ or exFAT formatted UHS-I or UHS-II SD card. You can easily format your SD card using the 'storage' settings in the touchscreen menu.

That's all there is to getting started. With power, video and a formatted SD card you can now start recording!

Recording

To start recording straight away, simply swipe the touchscreen up or down to reveal the on screen display, then tap the circular 'record' icon at the bottom of the LCD. The 'record' icon will become a square 'stop' icon during recording. Tap the stop icon to stop recording.

While recording, the timecode counter in the status strip will continuously update, showing you the duration of your clip. When the on screen display is hidden on your video assist, a small record indicator will be displayed at the bottom of the LCD so you can easily confirm you're recording.

You can record your clips to QuickTime files using Apple ProRes and Avid DNx codecs.

You can also set your video assist to use 'timecode' or 'SDI/HDMI start/stop' trigger recording. This lets you start and stop recording triggered by information received via the HD-SDI or HDMI signal. For information on how to set your chosen codec, or to enable trigger recording, refer to the 'settings' section in this manual.

To start recording, simply swipe the touchscreen up or down to reveal the on screen meters, then tap the 'record' icon. Tap again to stop recording.

> **NOTE** When recording from an HDMI or SDI camera, make sure the output is clean with overlays turned off as any overlays that are present in your camera's video output will be recorded with your image. Please refer to the section titled 'recording clean HDMI from DSLR cameras' for more information.

Remote Control via the LANC Connector

On Blackmagic Video Assist 4K you can start and stop recording remotely using an external LANC controller. Simply plug the LANC controller into the 2.5mm LANC input on the right side of the unit.

Continuous Recording

Blackmagic Video Assist 4K supports continuous recording using 2 SD card slots. If you are recording an important event and you don't want to stop recording, simply insert a formatted SD card in slot 2. When the first card is full, your video assist will automatically switch over to the second card. There will be no frames dropped in the process. For example, if the first segment on card 1 stopped at 00:40:01:00, the recording on the second card will start at 00:40:01:01.

When editing your clips on the timeline, simply place the second clip against the tail of the first and they will play through the recording as if it is one complete clip.

Having SD cards inserted in both slots also lets you quickly change media. If you want to stop recording at a defined moment, you can simply stop recording, choose 'card 2' in the storage settings, then tap record again.

> **TIP** For continuous recording or fast slot change overs using Blackmagic Video Assist 4K, make sure your cards are formatted before you start your recording.

Recording Clean HDMI from DSLR Cameras

Some DSLR cameras record 8-bit video internally, and some can provide a clean video image via their HDMI output. By plugging the DSLR camera's HDMI output into your video assist, you can bypass the camera's internal compression and record using high quality 10-bit ProRes or Avid DNx codecs. Some DSLR cameras can output 10-bit 4:2:2, which is higher quality video than their internally recorded 8-bit 4:2:0 compression.

Many DSLR cameras are also limited to short recording durations, so an added benefit of recording externally is bypassing these recording limitations. This is particularly helpful when recording live events or interviews for documentaries.

To make the most of this feature, you will need to set your camera to output a clean image with overlays turned off. This is normally done by changing your DSLR camera's HDMI output settings so it does not show any status information in the video signal. This is important because if there are any overlays visible in your image via the HDMI output they will be recorded in your video, which you probably don't want.

To check the DSLR camera overlays are not visible:

1 Swipe the touchscreen up or down to hide the on screen meters so you can monitor only your DSLR camera's image. On Blackmagic Video Assist 4K the status display at the top of the LCD is independent and separate from the image. This means you can monitor the entire image cleanly and still have the status display visible.

2 With the on screen meters hidden, carefully check the DSLR camera's output video does not show any information other than your clean video image. If you can see camera overlays on your video assist's LCD, change the HDMI output or display menu settings on your camera so HDMI overlays are turned off.

With a clean HDMI output from your camera you can now record better quality video!

Playback

Swipe the touchscreen up or down to reveal the on screen meters, then tap the playback transport control icons at the bottom of the LCD.

To play your clips, tap the 'play' icon.

During playback, tap the 'pause' icon to momentarily 'freeze' the playback on a frame of video. Tap again to resume playback.

You can skip backwards or forwards through your clips by repeatedly tapping the forward or reverse skip icons. Tapping reverse skip once will restart the current clip.

During playback you can scrub your clip forwards or backwards by dragging the scrubbing slider left or right. Tap the LCD to reveal or hide the slider.

Looping playback

Tap the loop icon once to set your video assist to play back the current clip on a continuous loop.

Tap again to play all your recorded clips on a continuous loop.

Tap a third time to turn loop off.

Shuttle through your clip by dragging the scrubbing slider forwards or backwards. During playback mode, a panel will appear near the top left corner of the screen. This panel displays the number of clips recorded on your SD card, the current clip being played and the duration of the clip.

Settings

Changing Settings using the Touchscreen

Your video assist features a built in touchscreen. The touchscreen is used to monitor your video and audio, plus change settings.

You can change most settings by tapping on the icons in the status strip at the top of the LCD. Audio settings, such as levels adjustment or headphone volume, can be adjusted by swiping the touchscreen up or down to reveal the on screen meters at the bottom of the LCD, then tapping the audio meters.

Tap outside of the settings to hide a settings window. Swipe left or right, or tap the 'back' icon to hide the storage settings.

To change settings:

1   Tap the setting you wish to change in the status strip or on screen meters.

    For example, if you want to set the recording codec, tap the codec indicator in the status strip to open the codec settings. If you want to adjust audio levels, simply tap on the audio meters.

2   In your chosen settings window, tap the menu buttons, arrows or slider icons to choose from the available settings. Tap outside the window to close the settings.

Overlays

Tap the overlays icon to open the zebra, focus peaking, guides and grid settings.
These settings let you display overlays on the LCD to help with exposure, focus, composition and framing when connected to a camera.

Overlay features are not visible via the SDI or HDMI output.

Zebra

The zebra feature helps you achieve optimum exposure by displaying diagonal lines over areas of the video that exceed your set zebra level. For example, if you set the zebra level to 100%, you'll know that any area of the image displaying the zebra pattern will be clipped. If you set the zebra to 90%, you can feel confident that you have some extra exposure headroom to protect the highlights in your shot.

> **TIP** You can also set the zebra to highlight areas of your image that represent specific video levels on a waveform, for example setting the zebra for 50% means you can visually identify which regions of your image will appear at approximately 50% on a waveform scope.

To turn the zebra feature on and change the zebra level, tap the left and right arrows or drag the slider in the 'zebra' setting.

Focus Peaking and Focus Assist

Focus peaking and focus assist settings give you powerful tools to help focus your images fast. Focus peaking displays edge lines on the sharpest areas of the image. Sensitivity settings let you change how strong the lines are.

To turn edge lines on and change the sensitivity settings, tap the left and right arrows or drag the slider left or right. Sensitivity levels include 'low', 'medium' or 'high'. In images with lots of detail and high contrast, the lines can be distracting, so in these conditions you can select 'low' or 'medium'. Alternatively, for low contrast shots with less detail, select 'high' so the lines are stronger and easier to see.

Changing the color of the edge lines can also make them easier to see in conditions where their color may match the image. To change the color, simply tap the left and right arrows in the 'focus line color' setting.

Edge lines are extremely effective. They can be so pronounced that you can even monitor the depth of your focal plane, plus watch it move closer or further into your shot as you adjust your camera's focus ring.

For more information on selecting focus assist tools, refer to the 'monitor settings' section in this manual.

Guides

The frame guides feature provides aspect ratio overlays for various cinema, television and online standards. Tap the 'guides' menu button, then tap the left or right arrows, or drag the slider icon left or right to choose a guide or to turn the guides off.

You can choose from the following frame guides:

HDTV
Displays action and title safe regions of your image within a 1.78:1 aspect ratio compatible with 16:9 HD television and computer screens.

4:3
Displays the 4:3 aspect ratio compatible with SD television screens, or to help frame shots when using 2x anamorphic adapters.

2.40:1, 2.39:1 and 2.35:1
Displays the broad widescreen aspect ratio compatible with anamorphic or flat widescreen cinema presentation. The three widescreen settings differ slightly based on the changing cinema standards over time. 2.39:1 is one of the most prominent standards in use today.

1.85:1
Displays another common flat widescreen cinema aspect ratio. This ratio is slightly wider than HDTV, but not as wide as 2.39:1.

Grid

The grid feature displays a 'thirds' overlay with two vertical and horizontal lines placed in each third of the image. Tap 'on' or 'off' to view or hide the thirds overlay.

Thirds are an extremely powerful tool to help compose your shots. For example, the human eye typically looks for action near the points where the lines intersect, so it's helpful to frame key points of interest in these zones.

> **TIP** An actor's eyeline is commonly framed along the top third of the screen, so you can use the top horizontal third to guide your framing. Thirds are also useful to maintain framing consistency between shots.
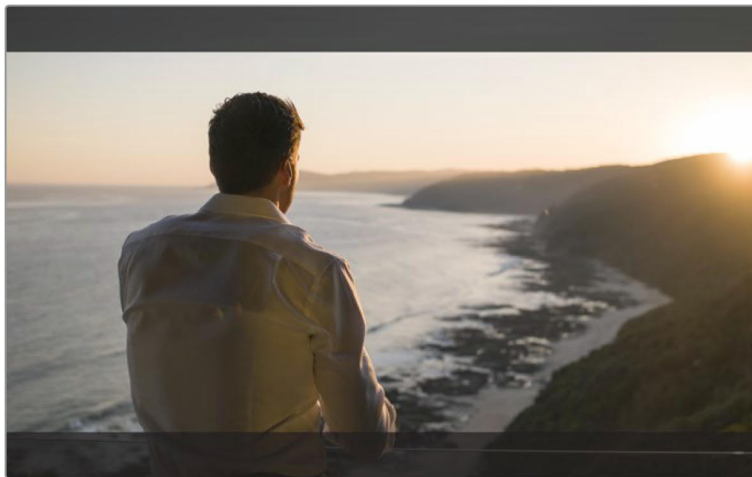
2.39:1 frame guides are useful for framing shots to suit a popular flat widescreen cinema format.

False Color

The false color feature displays color overlays on your image that represent exposure values. The color values correspond to optimum exposure settings, for example pink for Caucasian skin tones and green for 38.4% middle grey. False color is also helpful to know when shadows and highlights are near clipping or clipping.

With a range of tonal values on the LCD at once, this gives you a broader overview of your exposure which you can use to refine lighting on set, or make exposure changes to compensate.

We have included a chart in this section that shows how the colors correspond to specific tonal values.

False Color Chart
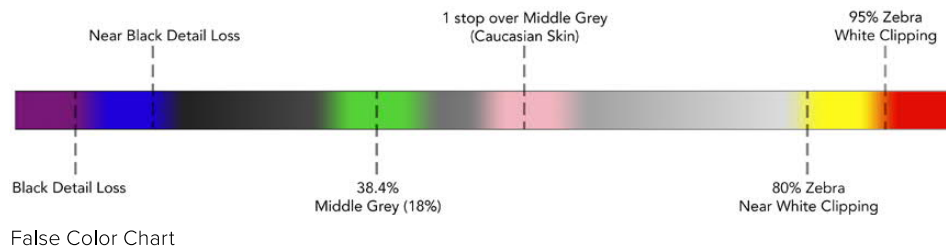
Video Format and Frame Rate

Input video resolution and frame rate is displayed in the 'Format' section of the status strip. For example, 2160p29.97, 2160p25, 1080p59.94, etc.

The following video input and output formats are supported:

Supported Input and Output Formats

6G-SDI Input and Output
525i59.94 NTSC, 625i50 PAL
720p50, 720p59.94, 720p60
1080PsF23.98, 1080PsF24
1080i50, 1080i59.94, 1080i60
1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60
2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30

HDMI Input and Output
525i59.94 NTSC, 625i50 PAL
720p50, 720p59.94, 720p60
1080i50, 1080i59.94, 1080i60
1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60
2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30 (Blackmagic Video Assist 4K)

Codec

Tap the 'codec' indicator to open the relevant settings, then tap the arrow icons or slider to make your selection. The codecs available depend on the model you are using. For example, both models can record HD video to Apple ProRes and Avid DNxHD codecs with a range of bit rates. Blackmagic Video Assist 4K also lets you choose ProRes and DNxHR codecs for Ultra HD recording.

ProRes codecs are recorded as QuickTime files. DNx files can be recorded as QuickTime or native MXF files. Refer to the table in this section for more details regarding the codec options.

Supported Codecs

Clips are recorded as QuickTime files except for DNx MXF files where MXF appears in the codec name.

Blackmagic Video Assist		Blackmagic Video Assist 4K	
Codecs	Bit Depth	Codecs	Bit Depth
ProRes 422 HQ	10	ProRes 422 HQ	10
ProRes 422	10	ProRes 422	10
ProRes 422 LT	10	ProRes 422 LT	10
ProRes Proxy	10	ProRes Proxy	10
DNxHD 220x	10	DNxHD 220x	10
DNxHD 145	8	DNxHD 145	8
DNxHD 45	8	DNxHD 45	8
DNxHD 220x MXF	10	DNxHR HQX	10
DNxHD 145 MXF	8	DNxHR SQ	8
DNxHD 45 MXF	8	DNxHR LB	8
–	–	DNxHD 220x MXF	10
–	–	DNxHD 145 MXF	8
–	–	DNxHD 45 MXF	8
–	–	DNxHR HQX MXF	10
–	–	DNxHR SQ MXF	8
–	–	DNxHR LB MXF	8

Timecode

The timecode counter displays the duration of your clips in hours:minutes:seconds:frames.

Trigger Record

Tap the 'trigger record' indicator to select between timecode run or SDI/HDMI trigger recording. This lets you start and stop recording triggered by information received over the SDI or HDMI connection. To disable trigger recording, select 'never'.

> **T/C Run**
> When timecode run is selected, your video assist will start recording as soon as it detects running timecode from your SDI or HDMI source. Recording will stop when the timecode has ceased. This feature is useful when connecting cameras that don't support SDI start/stop trigger recording. You may need to set your camera's timecode setting to 'record run' to make sure timecode only runs while your camera is recording. If your camera's timecode is set differently, for example time of day timecode, the timecode is always running and will continuously trigger the recording on your video assist.

SDI/HDMI

This setting will set your video assist to start and stop recording when you press the record start and stop button on your camera. For SDI/HDMI start/stop trigger recording you will need to use a camera that can trigger the record function via HD-SDI or HDMI. Cameras which support trigger recording may include menu options such as 'trigger rec', HD-SDI remote I/F' or 'SDI remote start/stop trigger'.

Source

Displays the connected SDI or HDMI input source. The unit will use the first source connected. If you have another source connected, your video assist will swap over to the other if the signal from the original source is lost for a brief period of time. This can be useful for redundancy if you need to run a back up signal.

Card

Displays the status of the SD card currently selected in the storage settings.

Blackmagic Video Assist 4K has 2 SD card slots. To choose a card to record to:

1   Tap the 'card' status or swipe the touchscreen left or right to open the 'storage' settings.

2   In the storage settings simply tap the 'card 1' or 'card 2' icon near the top left of the touchscreen.

You can also format your cards in the storage settings by tapping the 'format card' icon underneath the information for each card.

Below is a list of the different indicators that may appear in the card status. The status indicators are:

Loading
When inserting an SD card, the indicator will display 'loading' to let you know the unit is verifying your card.

Ready
When a formatted SD card is verified, the status will display 'ready' to indicate your card is ready to record.

Format
If your SD card needs to be initialized, the indicator will flash 'format' to prompt you to format the card. Tap the 'card' indicator or swipe the touchscreen left or right to open the 'storage' settings where you can format your card. For more information refer to the 'about SD cards' section.

No card
This indicator is displayed when there is no card inserted in the selected SD card slot.

Card full
The 'card full' indicator will flash for approximately three minutes prior to stopping record when an SD card has used its maximum recording space.

When your card is full, the indicator will turn solid red and the recording will stop. Your video assist will then save the last recorded file.

If you have a formatted card in slot 2 of Blackmagic Video Assist 4K, the unit will automatically switch over to slot 2 and continue recording to your second card.

Record Time Remaining
While in playback mode, the status indicator will display the record time remaining for your SD card.

Battery Level Remaining

Displays the amount of power remaining in your batteries. Tap the battery icon to open a larger display with more precise information about your battery levels.

During operation, your video assist will use the battery with the lowest charge first, then swap over to the other when depleted without interruption. When recharging batteries, both will charge simultaneously. Batteries will take approximately 3 hours to fully charge when not in use depending on battery type and conditions.

On Blackmagic Video Assist, two fully charged Canon LP-E6 batteries will supply power for approximately 180 minutes of record time. Blackmagic Video Assist 4K will run on two fully charged batteries for approximately 80 minutes of record time.

Zoom

The zoom feature lets you zoom into your image so you can carefully check your focus when connected to a camera, or study fine details in your video image. The zoom feature can be used when framing a shot before recording, or during playback, but is disabled while recording a clip.

To turn the zoom feature on, simply tap the zoom icon located underneath the battery level remaining indicator. To turn zoom off, tap the icon again. The zoom feature can be used when monitoring Ultra HD or HD video.

Volume and Analog Audio Levels

Speaker Volume

To adjust the volume for the built in speaker on Blackmagic Video Assist 4K, swipe the LCD up or down to reveal the on screen meters, then tap the audio meters to open the volume and analog audio level settings. Simply drag the volume slider to increase or decrease the volume.

> **TIP** To avoid potential feedback when a microphone is connected, the speaker is enabled during playback, but is disabled while your Blackmagic Video Assist 4K is recording or monitoring the video input.

Headphone Volume

To adjust the headphone volume, simply tap on the audio meters at the bottom right of the on screen display. On Blackmagic Video Assist 4K, the speaker volume setting will change to 'headphone' as soon as you plug in a pair of headphones, then you can adjust the volume just as you would for the speaker volume.

Analog Audio levels

On Blackmagic Video Assist 4K, analog audio levels via the XLR inputs can be adjusted by dragging the sliders for each input. The level range you can adjust on each input is +10dB to +65dB.
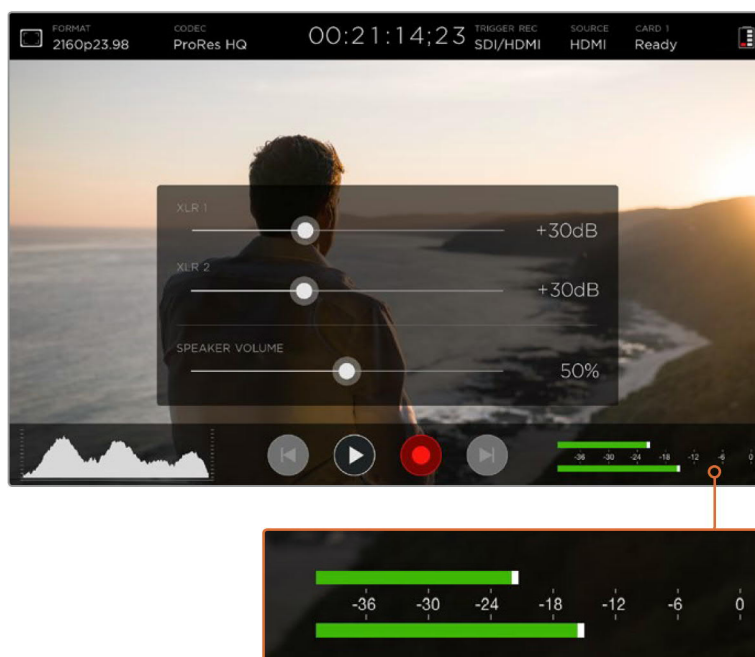
To record optimum audio without clipping, adjust the sliders on each input until the levels are peaking between -20 and -12dBFS on the XLR input audio meters.

Refer to the 'monitoring using on screen meters' section for more information.

Storage, Monitor, Display, Audio and Setup Settings

Swipe the touchscreen left or right to open additional settings and information. Here you can monitor storage information for your SD card, format your card, adjust monitor and display settings, plus change the date and time. On Blackmagic Video Assist 4K, you can also adjust audio settings. To hide the settings and return to your video image, swipe left or right, or tap the 'back' icon at the bottom left corner on Blackmagic Video Assist 4K.

Storage Settings

The storage settings let you monitor the capacity of your inserted SD cards, format type, for example HFS+ or exFAT, and the amount of free space available. You can also format your cards directly using your video assist. For information on formatting SD cards, refer to the 'about SD cards' section.
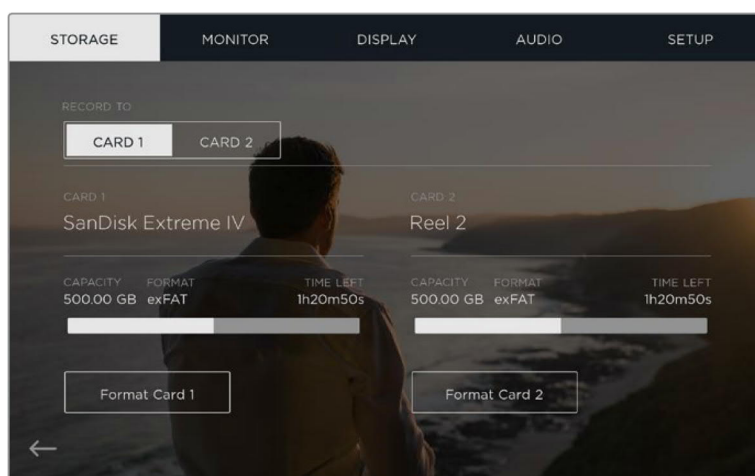
Monitor Settings

In the monitor settings, you can choose from two different types of focus assist tools, enable anamorphic de-squeeze and blue only, plus change the rotation of the display based on the physical positioning of the unit.

Focus Assist

Select 'lines' to display colored outlines around sharp areas of the image, or 'peaking' to display exaggerated sharpening detail around the areas of the image that are in focus.

Focus Line Color

This setting lets you change the color of the focus assist lines to green, red, blue, or white. Changing the color of the focus assist lines can help make them easier to see against similar colors in your image.

Anamorphic De-squeeze

Blackmagic Video Assist 4K features an 'anamorphic de-squeeze' setting. This allows you to correctly display horizontally 'squeezed' images from a camera using an anamorphic lens. The de-squeeze amount required to correct your image will vary, as each anamorphic lens has a different squeeze factor. You can select the de-squeeze amount of '1.33x', '1.66x', '2x' to correspond with the level of squeeze on different anamorphic lenses. Select 'off' to disable the setting.

Screen Rotation

If you want to disable the automatic display rotation, simply set this setting to 'none'. Now the display will stay locked to the current position even if you turn it upside down.

You can also set the display to flip 180°. This will keep it locked to that position and is helpful when the unit is mounted to a camera rig in an upside down position.

To enable the automatic screen rotation, select 'auto'.

Blue Only

Blackmagic Video Assist 4K features a 'blue only' mode that displays only the blue channel, represented as a black and white image. If there is noise in a digital video signal, it is most visible within the blue channel, so you can easily check for noise by using this feature. The black and white image can also be used for assistance when checking camera focus. To enable 'blue only' mode, select 'on'.
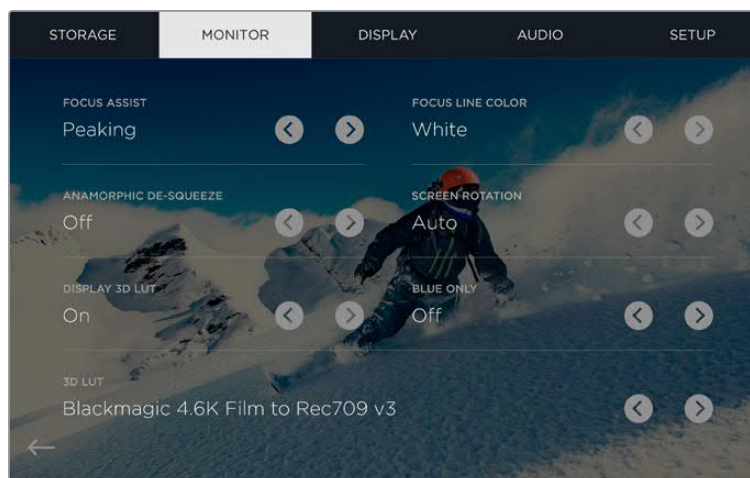

Set the 'Display 3D LUT' setting to 'on' and tap the left or right arrows in the '3D LUT' setting to select which 3D LUT to display when monitoring your input source or during playback

Display 3D LUT

Your video assist can display the input video with 3D LUTs applied to the image. A 3D LUT is only used on the display and not actually recorded into the video itself, so you don't need to worry that your recorded image will have the look permanently applied. However, if you want to apply the same LUT to your image in DaVinci Resolve, you can simply import the exact same LUT .cube file used in your video assist into DaVinci Resolve and apply it to your grade.

This gives you powerful options such as matching a look in post that you monitored on set, or conforming to a specific color profile. Refer to the DaVinci Resolve instruction manual for more information on how to use 3D LUTs in your color correction, including exporting LUTs as .cube files so you can import them into your video assist.
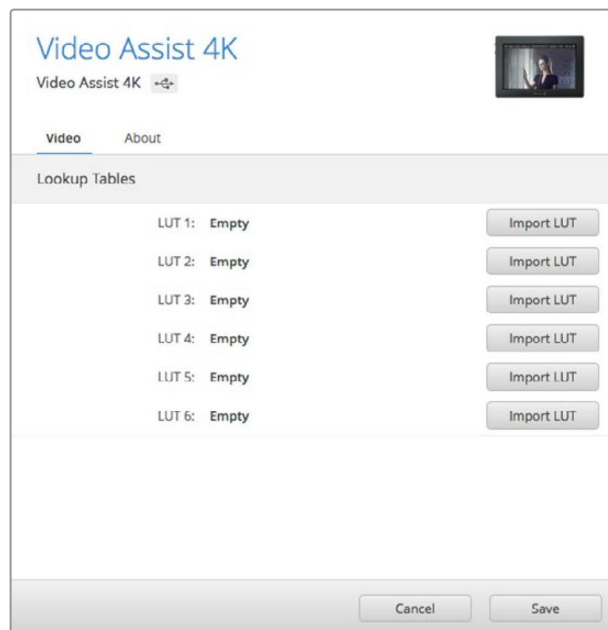
You can import up to six 3D LUTs using the Blackmagic Video Assist Setup software utility.

To import a 3D LUT:

1   Connect your video assist to a computer with Blackmagic Video Assist Setup installed.

2   Launch the setup software and open the settings for your video assist by clicking on the circular settings icon.

3   In the 'video' tab, you will see 6 empty slots you can use to import 3D LUTs. Simply click on the 'import LUT' button for an empty slot and choose a LUT .cube file from your computer. Click 'open' to confirm your selection.

4   Make sure you 'save' your new settings by clicking the 'save' button on the bottom right corner.

To monitor your video using LUTs:

1   Open the 'monitor' settings on your video assist by swiping left or right on the touchscreen, then tapping 'monitor' in the menu bar.

2   Turn the 'Display 3D LUT' setting to 'on' by tapping its left or right arrows. Tap again to disable the LUTs.

3   In the '3D LUT' setting, tap its left or right arrows to select the slot you imported the LUT into, or keep tapping to select a different one if you have other LUTs in different slots.

Swipe left or right, or tap the 'back' arrow at the bottom left of the touchscreen, to return to your source image. Now you can monitor your input video with the 3D LUT applied. You can even use 3D LUTs when monitoring playback.
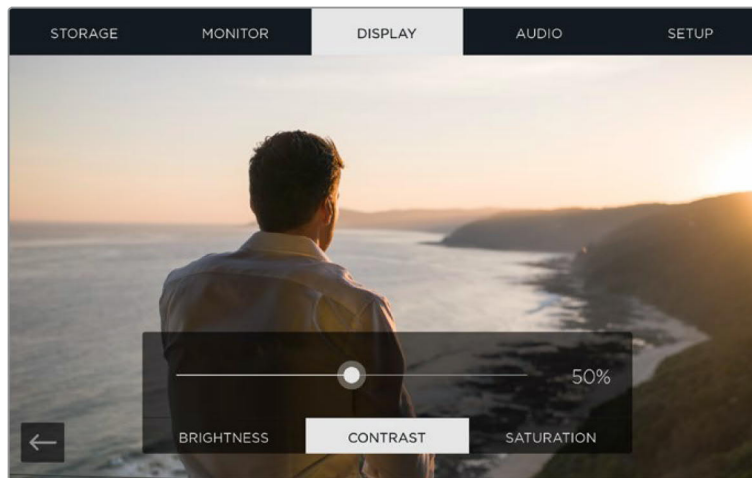
Display Settings

Tap the 'display' setting icon to open the display settings. Here you can easily adjust the LCD brightness, contrast and saturation. Tap the setting you want to adjust, then drag the slider icon to the left or right.

Brightness
Adjusts the general brightness of the LCD. For example, if you are outside in bright conditions, increase the LCD brightness to make it easier to view.

Contrast
Increases or decreases the range between the bright and dark areas of the image. High contrast can reveal detail and depth in the image, and low contrast can make the image appear soft and flat.

Saturation
Increases or decreases the amount of color in your displayed image.

All settings will be remembered when the unit is powered off. It's also worth mentioning that any changes to these particular settings will affect the image displayed on the LCD, but not your recorded video.

Audio Settings

Blackmagic Video Assist 4K is also a powerful audio recorder. Each XLR input has independent settings such as:

1 **XLR Line, XLR Mic or Video**
When connecting professional audio equipment other than microphones to the analog XLR inputs, make sure you set the recording level to 'XLR line'. Most professional audio equipment outputs 'line' level audio which is a stronger signal compared to 'mic' level.

Alternatively, when connecting microphones to the XLR inputs, set the respective input to 'XLR mic' level. This is because microphones typically output a signal that is slightly weaker in strength compared to equipment with line level output, so the signal is boosted slightly by your Blackmagic Video Assist 4K to optimize the recording level.

If you want to bypass the XLR analog inputs and maintain the embedded SDI or HDMI channels 1 and 2 from your source video, select 'video'.

> **NOTE** Blackmagic Video Assist 4K remembers your settings even after power cycling. Make sure you reset your audio settings when changing your connections.

2 XLR Padding

If you are shooting in a noisy environment or near unpredectably loud sounds, you can set the XLR padding feature to 'on'. This will drop your audio levels down by a small amount and give you slightly more range in levels which may help you prevent clipping. If you are shooting in normal audio conditions, set this feature to 'off'.

3 Phantom Power

When connecting microphones that are not self powered, you can power them using phantom power via the XLR connector. Simply turn the setting to 'on'.

> **NOTE** Make sure you have phantom power turned 'OFF' when using microphones that are battery powered as some battery powered microphones can be damaged when phantom power is supplied.

Setup Settings

Setup lets you set the language, set the date and time for your video assist's internal clock, plus displays the device name, and the internal software version currently installed on the unit. Video Assist also has a setting for HDMI range.
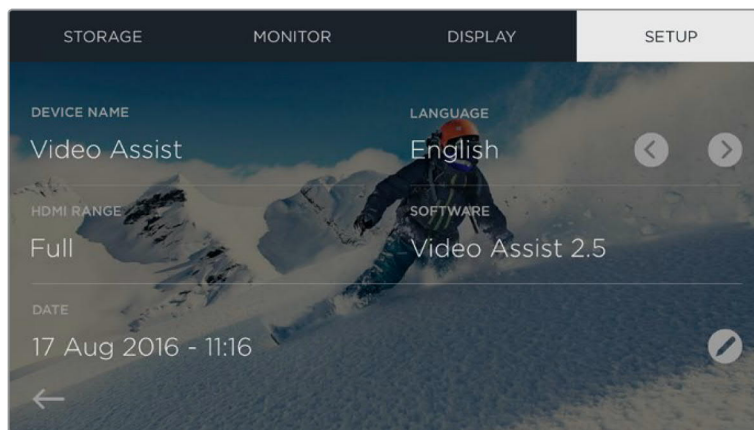
The setup settings page on Video Assist has an additional 'HDMI range' setting

Language

Tap the left or right arrows to switch between 'English' and a different language that you have loaded. Refer to 'Blackmagic Video Assist Setup' for more information.

HDMI Range

The Video Assist HD model has an HDMI range selector, which allows you to specify the type of signal being input to the unit. For an accurate display of your image, the input range you select on your Video Assist HD needs to match the output range for the signal being output from your source. For example, select 'full' when your source video is being output as full data range, or 'video' when your source video is being output as video range.

Select 'auto' if you are not sure which setting to choose, and the selection will be made automatically by the unit. Note that Blackmagic Video Assist 4K does not have this setting and selects the HDMI range automatically.

Setting the Date and time

When these settings are maintained and accurate, useful information is recorded in your clip files to inform you of the date and time each clip was recorded.

To adjust the date and time settings:

1   Tap the 'pen' icon to edit the settings.

2   Tap the day, month, year or time edit arrows to change a setting.

3   Tap 'save' to confirm the change.

Monitoring using on screen meters

Your video assist features useful on screen meters such as a histogram and audio levels meter so you can check your exposure and luminance range on cameras, plus monitor the level of your source audio.

Histogram

The left side of the on screen meters displays a histogram showing the distribution of the luminance in your video. Pure black is on the far left side of the display and pure white is on the far right of the display. When the video signal sharpens to a point at the bottom edges within these limits you'll know your shadows and highlights are not clipping, which means details in the tonal ranges of your video are preserved.
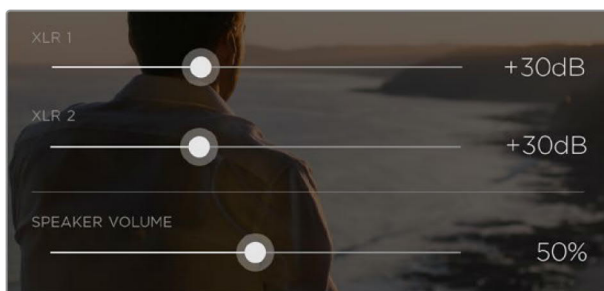

Audio Meters

The right side of the on screen meters displays audio meters showing audio levels for channels 1 and 2 of the input source. The display is calibrated to dBFS units and features peak hold indicators which stay visible for a short time so you can clearly see the maximum levels reached.

To achieve optimum audio quality, ensure your audio levels do not reach 0 dBFS. This is the maximum level, meaning that any audio that exceeds this level will be clipped, resulting in distortion. Ideally your peak audio levels should fall in the upper end of the green zone, between -20 and -12dBFS. If your peaks enter into the yellow or red zones, corresponding to -12 and -6dBFS your audio is in danger of clipping.
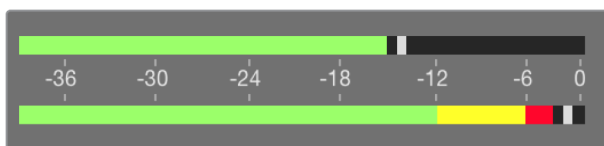
Channel 1 on top with the peak audio levels falling in the upper end of the green zone and levels in danger of clipping on channel 2

On Blackmagic Video Assist 4K, tap on the audio meters to reveal the analog audio level sliders. Drag the sliders left and right to decrease or increase the audio levels for each channel.

To adjust your analog audio levels on Blackmagic Video Assist 4K, simply tap the audio meter and then drag the sliders for each channel left or right.

> **NOTE** To record audio plugged into the XLR connectors on Blackmagic Video Assist 4K, select 'XLR line' or 'XLR mic' in the audio settings.

Video Scopes

Blackmagic Video Assist 4K has a set of four real time video scopes that you can use to monitor the internal data levels of your video signal. You can choose to display a waveform, parade, vectorscope or histogram. Using these scopes you can monitor your tonal balance and check the levels of your video to avoid crushing your blacks and clipping the highlights, plus monitor any potential color cast in your clips.

Each scope provides an accurate graphical analysis of the various characteristics of the video signal, showing you the relative strength and range of individual video components including luma, chroma, saturation, hue, and the red, green, and blue channels that together, comprise the color and contrast of your video signal.

The video scopes menu bar showing the scope display options

Enabling the scopes

To access the video scopes, tap the histogram in the lower left of the screen on your Video Assist 4K. This will open the 'display select' menu bar at the bottom of the screen. From here, you can choose the scope you want, for example, waveform, parade, vectorscope or histogram. To view the video image without a scope, select 'video'.

Tap outside of the 'display select' menu bar to close the menu.

Adjusting the scopes

With a scope selected, tap inside the image to open the adjustment sliders and video icon.
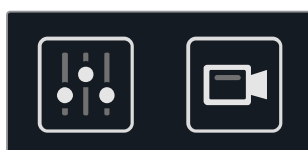
The adjustment sliders and video icons

Tapping the adjustment sliders icon opens the brightness and opacity sliders on the left of screen.

The two sliders let you refine the brightness and opacity of the scope against the underlying video image.

Brightness — Adjust the brightness to make fine details in the scope graph more or less defined.

Opacity — Adjust the opacity to set the amount of transparency for the scope.

Making adjustments to both settings lets you find the perfect combination so you can monitor the video and scopes at the same time.

Lowering the opacity slider allows you to see the video image and the scope at the same time

Tapping the video icon displays the scopes full screen, while displaying the video image in the top right corner. This provides another option to view both scopes and the video image at the same time, but lets you study the scopes in greater detail.
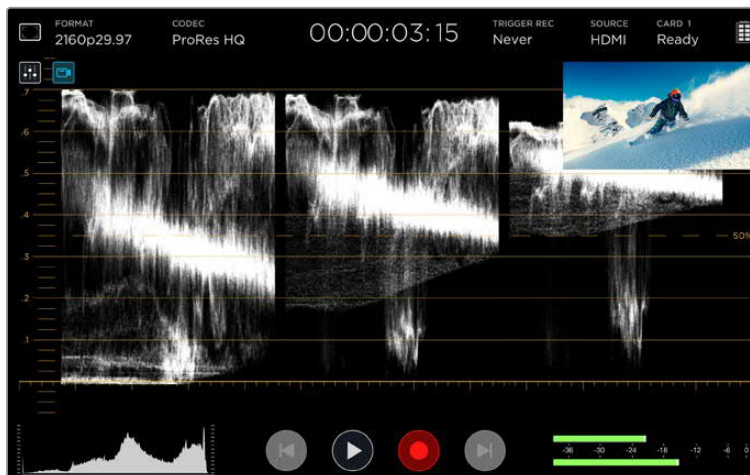
Tapping the video icon will display the scopes full screen with the video image in the top right corner of the screen
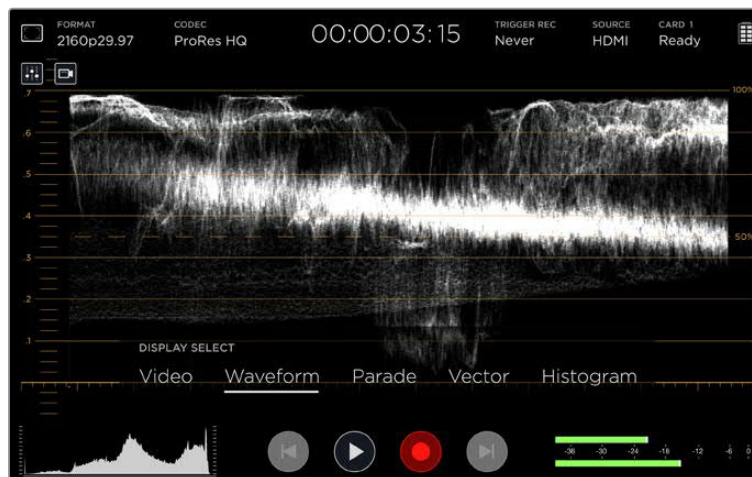
Waveform

The waveform display provides a digitally encoded waveform similar to traditional luminance waveform monitors, which is used to monitor the luma or brightness levels of your video signal.

The bottom of the graph indicates the black level, or shadows, of the image, while the top of the graph indicates the white level, or highlights. The range between the top and bottom of the graph indicates the overall contrast ratio of the image you're evaluating. Depending on your footage, your waveform will look different. If you are monitoring video which is high contrast, you might not see any values in the mid grays.

For perfect video levels without clipping, you will want to make sure the blacks in your waveform do not drop below 0% and the whites do not exceed 100%. If the levels exceed these boundaries, the video image will be clipping and you will see the results as lost detail in the shadows and highlights of your image.

The waveform monitor is a graphical representation of the image, showing luma values corresponding to the same horizontal position within the video image. For example, if filming an outdoor scene where the left side of your sky is overexposed, you will see the left side of the waveform graph above 100%.


The waveform display showing luminance values

RGB Parade

The RGB parade shows separate waveforms displaying the luminance of each red, green and blue color channel. By showing a comparison of each channel, the parade scope makes it possible to monitor the levels of each channel, plus spot color casts by comparing the highlights, midtones and shadows between each channel. For example, if the shadows are higher in the blue channel, your blacks will have a shade of blue to them.

Having the ability to see how the differences between all the tonal ranges compare within each channel gives you an extremely detailed overview of color in your image. You can immediately spot white balance issues and color casts, and because the parade scope shows a waveform for each channel, you can also see if one specific color channel is clipping, which you may not see if you are looking at a single combined waveform.

The three separate RGB waveforms follow the same principles displayed in the waveform scope, with the top, middle and bottom positions representing the highlights, mid tones and shadows along the horizontal axis of the video image.
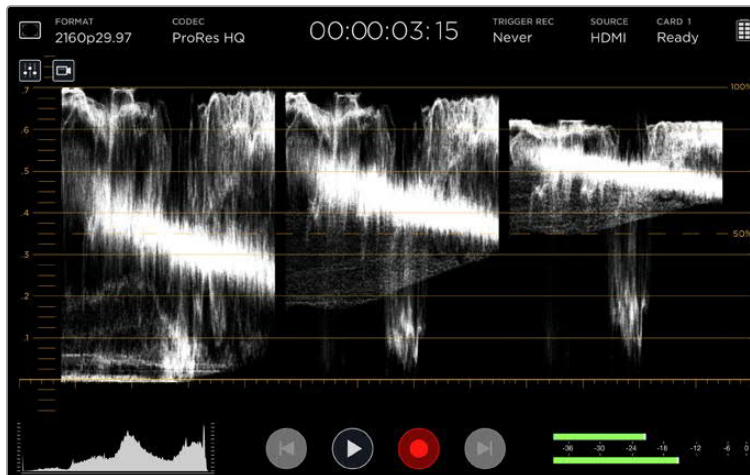
The RGB parade displays separate waveforms displaying
the luminance of the red, green and blue channels

Vectorscope

The vectorscope measures the overall range of color hue and saturation within an image.
Blackmagic Video Assist 4K has a traditional vectorscope, emulating a trace drawn graph, with
100 percent color bar saturation targets positioned at the graticule markers surrounding the graph.

Heavily saturated colors in the frame stretch those parts of the graph closer to the edge, while
less saturated colors remain closer to the center of the vectorscope, which represents 0
saturation. By judging how many parts of the vectorscope graph branch out at different angles,
you can see how many hues there are in the image, with the specific angle of each part of the
graph showing you which hues they are.

Additionally, by judging how well centered the middle of the vectorscope graph is relative to the
center of the vectorscope, you can get an idea of whether there is a color imbalance in the
image. For example, if the vectorscope graph is off centered, the direction in which it leans lets
you know that there is a color cast or tint in your image.

While color balance can be monitored on both the RGB parade display and vectorscope
display, color balance issues will often be easier to see in the vectorscope display.
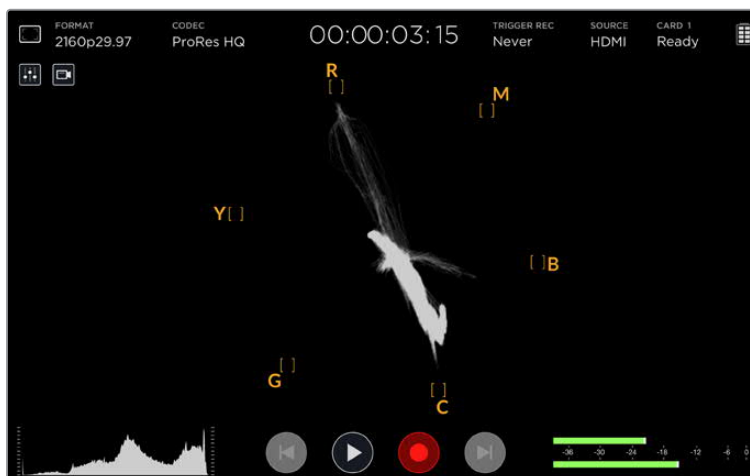
The vectorscope displays the overall range of
color hue and saturation within the image

Zooming into the Vectorscope Graph

The 'zoom' feature on the vectorscope display lets you magnify the graph so you can get a closer look at the color information in your image. This is helpful when monitoring images that are desaturated, as they can typically appear as a small cluster of data around the center of the chart.

To zoom into the vectorscope display:

1   Tap the screen to reveal the magnifying glass icon.

2   Tap the magnifying glass icon once for 2x magnification. Tap again for 4x magnification.

3   Tap a third time to return to standard viewing size.

If you want to hide the magnifying glass, simply tap outside of the icon.

Histogram

The histogram shows the distribution of the luminance or the black to white information along a horizontal scale, and lets you monitor how close the detail is to being clipped in the blacks or whites of the video. The histogram also lets you see the effects of gamma changes in the video.

The left edge of the histogram displays shadows, or blacks, and the far right displays highlights, or whites. If monitoring the image from a camera, when you close or open the lens aperture you will notice the information in the histogram moves to the left or right accordingly. You can use this to check 'clipping' in your image shadows and highlights, and also for a quick overview of the amount of detail visible in the tonal ranges. For example, a tall and broad range of information around the middle section of the histogram corresponds to good exposure for details in the midtones of your image.
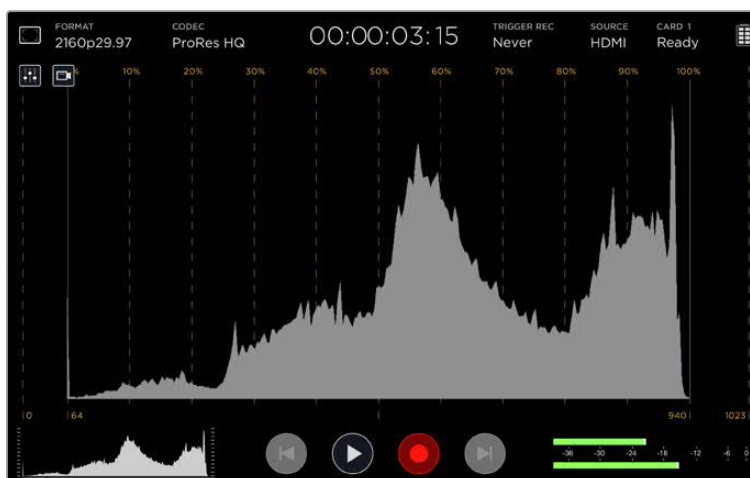
The histogram shows the distribution of the luminance, or the black to white information along a horizontal scale

Your video is likely being clipped if the information bunches to a hard edge at 0% or above 100% along the horizontal scale. Video clipping is undesirable when you are shooting, as detail in the blacks and whites must be preserved if you subsequently want to perform color correction in a controlled environment. When shooting, try to maintain your exposure so information falls off gradually at the edges of the histogram with most forming around the middle. This will give you more freedom later to adjust colors without whites and blacks appearing flat and lacking in detail.

About SD Cards

Choosing a Fast SD Card

It's important to use high speed UHS-II SD cards for Ultra HD and HD recording, or UHS-1 cards for HD recording. These cards are rated for fast data speeds and support larger storage sizes.

For Ultra HD recording on Blackmagic Video Assist 4K, you will need to use the fastest UHS-II cards available. We have included a table below that shows the latest compatible SD cards for recording Ultra HD, HD and SD video. It's worth regularly checking the latest version of this manual for more up to date information and can always be downloaded from the Blackmagic Design website at www.blackmagicdesign.com/support

The following table contains SD cards we have tested and are able to record video up to a given maximum format on Blackmagic Video Assist 4K.

Compatible SD Cards

| Maximum Supported Format	Manufacturer / Model	Size
Ultra HD 2160p30 inc MXF	Transcend SDXC UHS II 180MB/s	64GB
Ultra HD 2160p30 inc MXF	Lexar SDXC UHSII 2000x 300MB/s	64GB
Ultra HD 2160p30 inc MXF	Lexar SDHC UHSII 2000x 300MB/s	32GB
Ultra HD 2160p30 inc MXF	Toshiba Exceria Pro SDXC UHSII	64GB
Ultra HD 2160p30	Delkin Devices SD SDHC UHSII 250MB/s	32GB
Ultra HD 2160p30	SanDisk Extreme Pro SDXC UHSII 280MB/s	64GB
HD 1080p60 inc MXF	SanDisk Extreme Pro UHS I 95MB/s	64GB
HD 1080p60	Lexar SDHC UHS II 1000x 150MB/s	32GB
HD 1080p60	Lexar SDXC UHS II 1000x 150MB/s	64GB
HD 1080p60	Lexar SDXC UHS II 1000x 150MB/s	128GB
HD 1080p60	Lexar SDXC UHS II 1000x 150MB/s	256GB
HD 1080p30 inc MXF	Lexar SDHC UHS I 633x 95MB/s	32GB
HD 1080p30 inc MXF	Lexar SDXC UHS I 633x 95MB/s	64GB

Most UHS-I and UHS-II SD cards should be fast enough to record compressed HD video up to 60 frames per second, however it's worth testing your card's record speed to be sure. You can do this using Blackmagic Disk Speed Test software which can be downloaded from the Blackmagic Design support center. For information on using Disk Speed Test, refer to 'checking disk speed' in this section of the manual.

Formatting SD Cards using your Video Assist

It's very easy to format your SD card using the storage settings. You can format your card using HFS+ or exFAT formats.

HFS+ is also known as Mac OS Extended. It is the recommended format as it supports "journaling". Data on journaled media is more recoverable and less likely to be corrupted. HFS+ is natively supported by Mac OS.

ExFAT is supported natively by Mac OS and Windows without needing to purchase any additional software. However, exFAT does not support journaling which means data is less protected against the rare event your media card is corrupted.
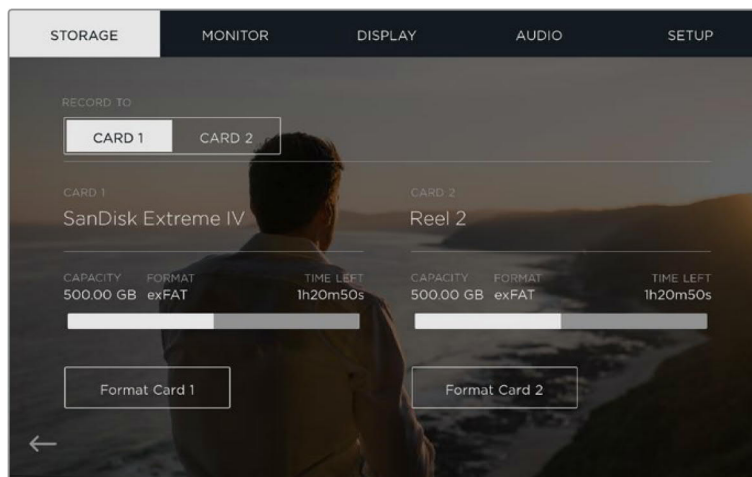
Your video assist can format your SD cards in HFS+ or exFAT formats using the 'storage' settings. Swipe the touchscreen left or right to open the 'storage' settings menu.

To format your SD card:

1   Swipe the touchscreen left or right, or tap the card status display to open the storage settings.

2   Tap the 'format card' icon. On Blackmagic Video Assist 4K, tap the icon that corresponds with your selected card. For example, 'format card 1' or 'format card 2'.

3   Tap the left and right arrows to select your desired HFS+ or exFAT format type, then tap the 'format card' icon again.

4   A warning will appear asking you to confirm the format. If your SD card contains data already recorded, make sure you back it up before formatting as this action cannot be undone. Tap 'format card' to continue, or 'cancel' to cancel the format.

5   A progress bar shows you the progress of the format. 'Formatting complete' will appear when the format is done.

6   Tap the 'ok' icon to return to the storage settings.

Formatting SD Cards using a Computer

SD cards can also be formatted using a Mac OS or Windows computer.

Preparing SD Cards on a Mac OS computer

Use the 'disk utility' application included with Mac OS to format or initialize your SD card in the HFS+ or exFAT formats. If your SD card already has files recorded on them, remember to back up your media as all data will be lost when it is formatted.

1 Plug an SD card into your computer's SD card slot or via an SD card reader.

2 Go to 'applications/utilities' and launch 'disk utility'.

3 Click on the disk icon of your SD card and then click the 'erase' tab.

4 Set the format to 'Mac OS extended (journaled)' or "exFAT".

5 Type a 'name' for the new volume and then click 'erase'. Your SD card will quickly be formatted and made ready for use.
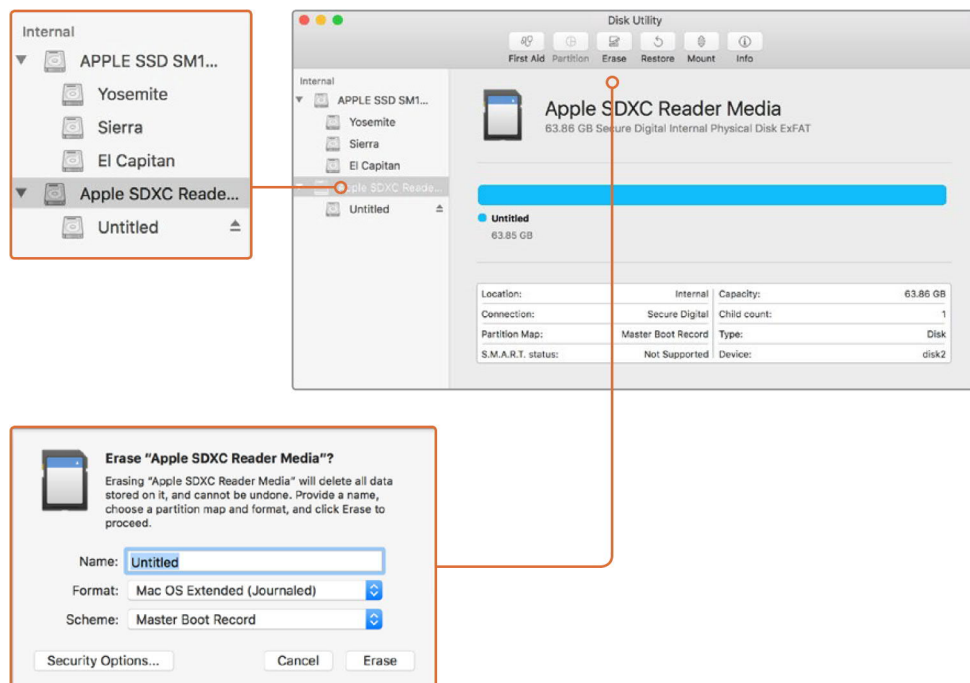

Use 'disk utility' on Mac OS to erase your SD card in the Mac OS extended (journaled) or exFAT format.

Preparing SD Cards on a Windows computer

The 'format' dialog box can format an SD card in the exFAT format on a Windows PC. Remember to back up anything important from your media as all data will be lost when it is formatted.

1 Plug an SD card into your computer's SD card slot or via an SD card reader.

2 Open the 'start menu' or 'start screen' and choose 'computer'. Right-click on your SD card.

3 From the contextual menu, choose 'format'.

4 Set the file system to 'exFAT' and the allocation unit size to 128 kilobytes.

5 Type a volume label, select 'quick format' and click 'start'.

6 Your SD card will quickly be formatted and made ready for use.
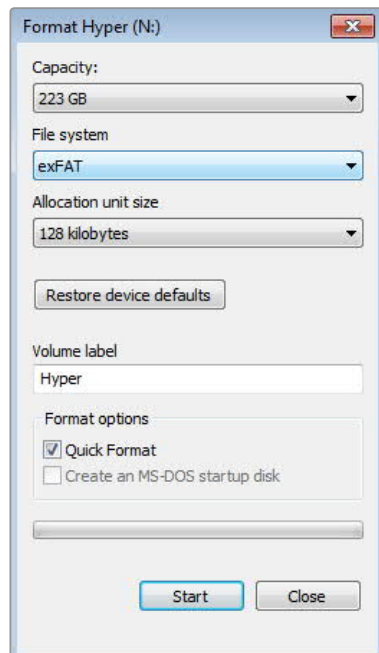
Use the 'format' dialog box feature in Windows
to format your SD card in the exFAT format

Working with Files from SD Cards

You can access your ProRes or DNx files straight from your SD cards with any Mac OS or
Windows computer that features an SD card slot or by using an SD card reader.

1   Remove the SD card from your video assist and insert it into the SD card slot of your
     computer, or SD card reader. The SD card can be accessed the same way as you
     would an external hard drive, USB drive or any other media storage device attached to
     your computer.

2   Double click on the SD card to open it and you should see a list of QuickTime or
     MXF movie files.

3   Now you can simply drag the files you want from the card onto your desktop or another
     hard drive, or you can access the files straight from the card using your NLE software.

4   Before you physically remove the SD card from the SD card slot, it's always a good idea
     to eject the card safely using either Mac OS or Windows first.
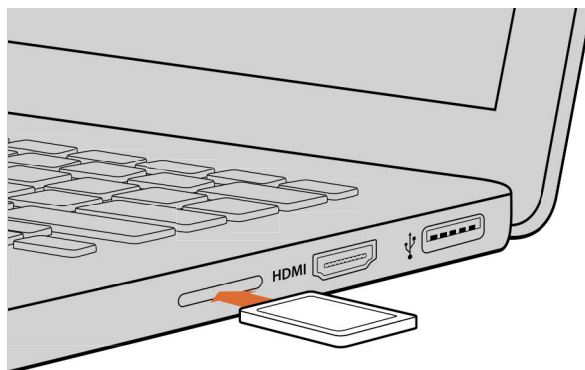
Insert your SD card into any computer with an
SD card slot to access your clips immediately.

Checking Disk Speed

Blackmagic Disk Speed Test is a fun application that measures the read and write performance of storage media, then displays the results using video formats.

If you have ever wondered whether your storage media is suitable for recording ("write") or playback ("read") of a particular video format, you can use Disk Speed Test to find out. Test the performance of your media drives with a single click of the 'start' button! Disk Speed Test will even show you how many streams of video your storage is capable of handling.

Blackmagic Disk Speed Test software is available to download from the Blackmagic Design support center at www.blackmagicdesign.com/support.


Use Blackmagic Disk Speed Test to find out the performance of your SD card.

Blackmagic Disk Speed Test interface.

Blackmagic Video Assist Setup

Blackmagic Video Assist Setup contains two configuration tabs labeled 'video' and 'about'. These tabs let you import 3D LUTs into your video assist, change the name of the unit, and set the language of your video assist's user interface.
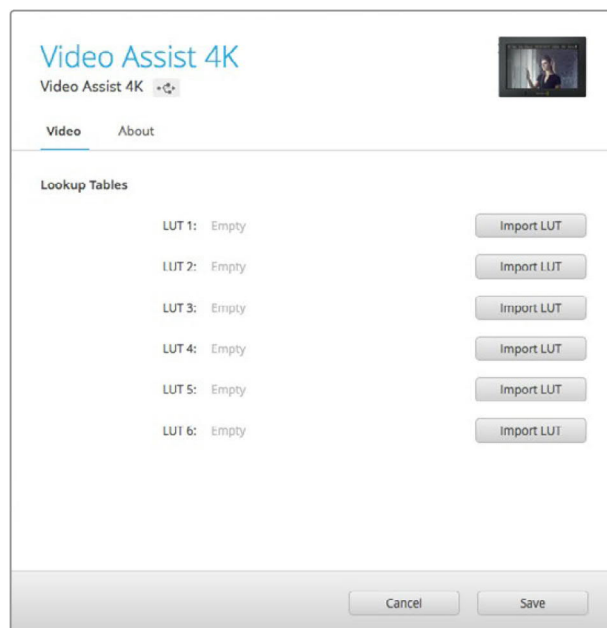
The video settings let you import 3D LUTs into your video assist

Video Settings

3D LUTs can be imported into your video assist so you can display the video with color corrected looks applied. 3D LUTs can be generated as .cube files in DaVinci Resolve and you can find more information in the DaVinci Resolve manual.

Refer to the 'storage, monitor, display, audio and setup settings' section in this manual for information on 3D LUTs and how to import them using Blackmagic Video Assist Setup.

About Settings

Use this tab to view information about your video assist such as the currently installed internal software, and the name of the unit.

To change the name, click inside the 'name' edit box and type in a new name using your computer keyboard.

Changing the Language

To change the language of your video assist's user interface, click on the current language drop down menu and select a new language you would like to use.

To confirm your selection, click 'load'. Your chosen language will now be displayed on your video assist.
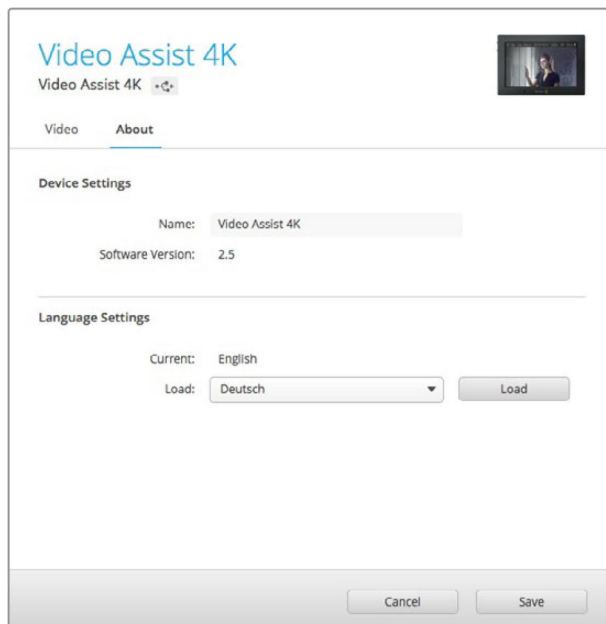
Choose a new language from the language settings drop down menu

Your video assist's user interface can be displayed in several different languages
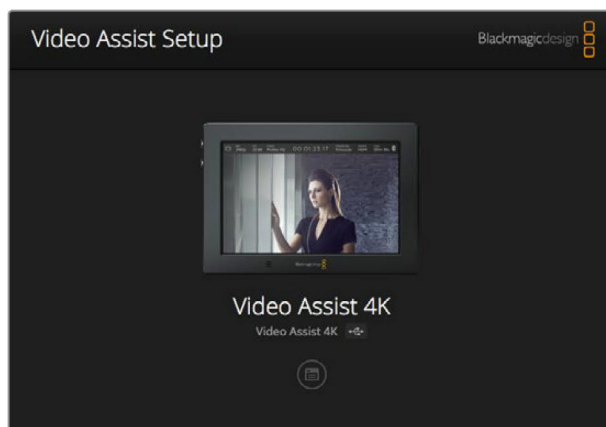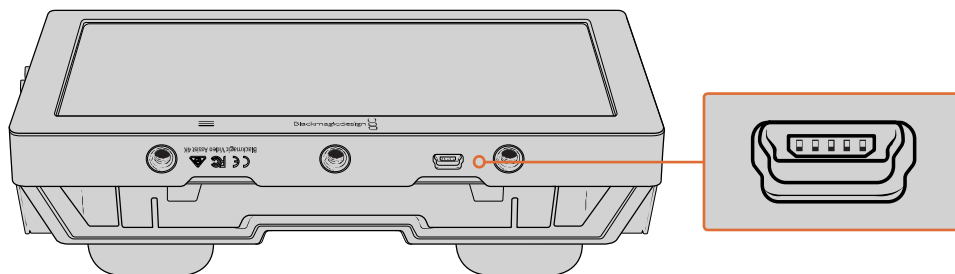
Updating the Internal Software

Ocasionally, updates for your video assist's internal software will be available on the Blackmagic Design website. We recommend downloading the software and updating your video assist so you can benefit from new features and improvements.

To update the internal software using Mac OS:

1 Download and unzip Blackmagic Video Assist Setup.

2 Open the resulting disk image and launch the Blackmagic Video Assist Setup Installer. Follow the onscreen instructions.

3 After installing the latest Blackmagic Video Assist Setup, connect a USB cable from your Video Assist to your computer.

4 Launch Blackmagic Video Assist Setup and follow any onscreen prompt to update the internal software. If no prompt appears, the internal software is up to date and there is nothing further you need to do.

### To update the internal software using Windows:

1 Download and unzip Blackmagic Video Assist Setup.

2 You should see a Blackmagic Video Assist Setup folder containing this manual and the Blackmagic Video Assist Setup installer. Double-click the installer and follow the onscreen prompts to complete the installation.

3 After installing the latest Blackmagic Video Assist Setup, connect a USB cable from your video assist to your computer.

4 Launch Blackmagic Video Assist Setup and follow any onscreen prompt to update the internal software. If no prompt appears, the internal software is up to date and there is nothing further you need to do.

To update the internal software on your video assist, plug into your computer via the USB port, then download and launch the latest Blackmagic Video Assist Setup. Follow any on screen prompts. If no prompt appears, your internal software is already up to date.

Using DaVinci Resolve

Recording clips with your video assist is only part of the process of creating film and television content, and just as important is the process of media backup and management as well as editing, color correction and encoding final master files. DaVinci Resolve for Mac OS and Windows is included with your video assist so you have a complete solution for recording and post production!
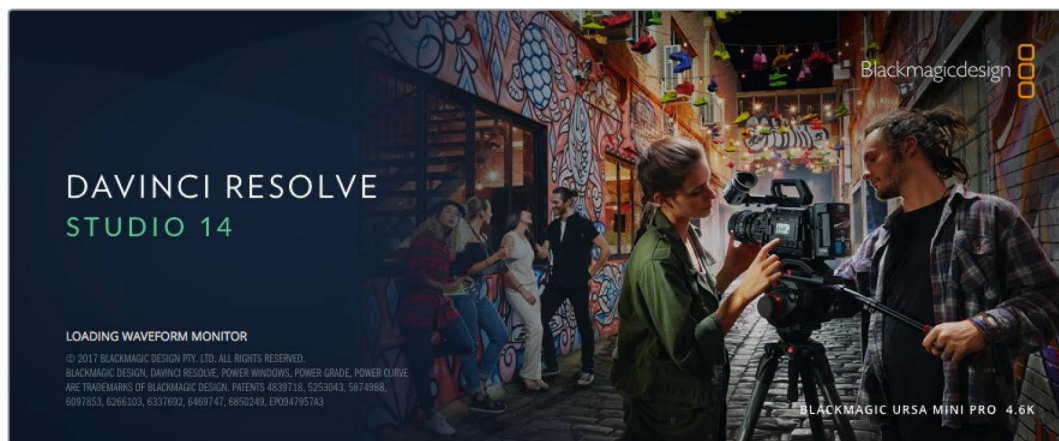
NOTE We recommend using the latest version of DaVinci Resolve for accurate color treatment of clips recorded with your Blackmagic Video Assist. For example, version 14 or later will ensure accurate color.

After connecting your SD card to your computer, you can use DaVinci Resolve's 'clone' tool, in the 'media' page, to create running backups as you shoot. This is recommended as any type of media is susceptible to becoming damaged or developing a fault so creating backups ensures your shots will be immune to loss. Once you have used DaVinci Resolve to back up your media, you can then add your clips to the DaVinci media pool, then edit, color correct, and finish your production without ever having to leave DaVinci Resolve.

DaVinci Resolve is the same tool used on most major blockbuster movies, so it's much more than a simple NLE software tool, as it has extremely advanced technology built in for high end digital film. You get the advantage of this technology when you use DaVinci Resolve to edit and color correct your work.

Included here is information on how to get started using DaVinci Resolve with your recorded clips. Of course, DaVinci Resolve is extremely advanced and includes a lot more features than you immediately see when first looking at its user interface. To learn more about how to use DaVinci Resolve, please check for the DaVinci Resolve instruction manual pdf file on the DaVinci Resolve software disk, or check online for the many training courses and tutorial videos available.
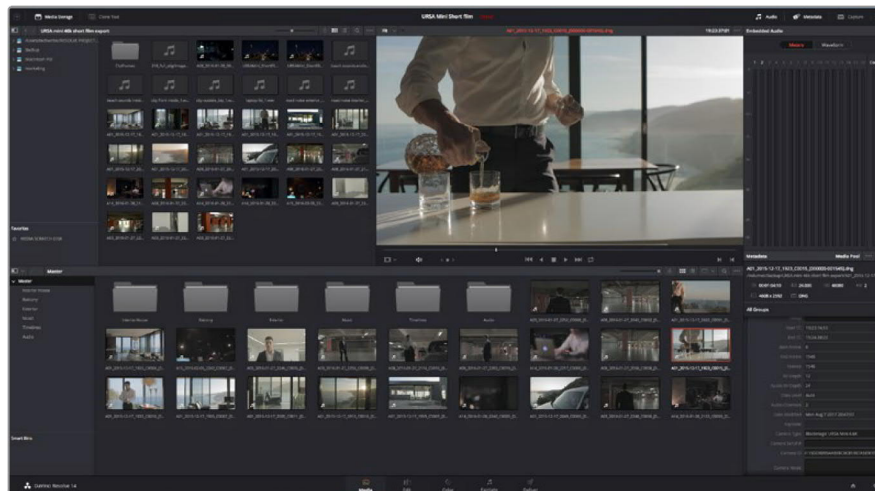
Importing your Clips

To start editing your clips, you'll first need to import them into the media pool:

1   Launch DaVinci Resolve. If this is the first time you've opened DaVinci Resolve, wait for the Project Manager to appear, and double click the 'untitled project' icon in the project manager window.

    If you have enabled the multi-user environment in previous versions of DaVinci Resolve, then the log in window will appear. To login as one of the listed users, double click the user icon. To add a new user, click 'add new' at the bottom left of the log in window and create a new user by entering a user name and clicking 'setup new user'.

    Then double-click the user icon to proceed to the Project Manager. Now click 'new project', enter a title for your project and click 'create'. This will add your new project to the project manager. Double click on your project to open it.

2   You'll now see the 'media' page with a 'media storage' browser at the top left. The 'media storage' browser displays all your linked media folders from where you'll drag your clips and drop them into the media pool.

3   If your clip folder doesn't appear in the library, you'll need to add it. This is easily done by right clicking inside the 'media storage' browser area, selecting a drive or folder path and clicking 'open'.

4   In the 'media storage' browser, click on your newly added clip folder. Now simply drag your clips from your storage folder and drop them into the media pool. If the untitled project settings are different to your clip settings, you'll be prompted to either change the project settings to match your clips, or leave the settings as they are. To get started quickly, click 'change'. Now your project settings match your clips.


To import your clips, simply drag them from the 'media storage' browser and drop them into the media pool. You can also drag and drop files from your desktop

Editing your Clips

With your clips in the media pool, click on the 'edit' tab to open the edit page.

Now you can start building your edit!

1   You'll first need to create a new timeline. Right click anywhere within the media pool and choose Timelines > New Timeline. When the dialog box appears, click the 'create' button.
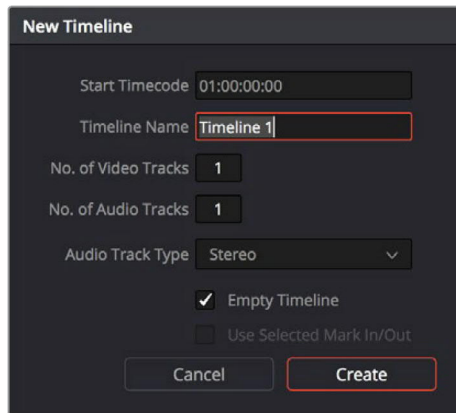

To start editing your clips, you'll need to create a new timeline. The timeline is the stage upon which all your editing will take place

2   Double click a clip in the media pool to open the clip in the source viewer. Use the mouse pointer to scrub the play head in the source viewer left and right until you find the start frame you want for the clip. Mark the in point with the 'I' shortcut. Do the same for the end frame using the 'O' shortcut.

3   Go to the timeline and position the timeline play head where you want your clip to be inserted.

4   To insert the clip onto the timeline, click inside the source viewer then drag the mouse pointer across to the timeline viewer. A list of edit options will appear. Select the type of edit you want.

Your clip will be placed onto the timeline using the edit type you selected. You'll find a description of each edit type and how to use them in the DaVinci Resolve manual.

A faster way to add clips to your edit is by dragging them from the media pool and dropping them directly onto the timeline where you can adjust your in and out points, position your clips, try different plug in effects, titles, and more. This particular workflow is like using the timeline as an artist's palette.
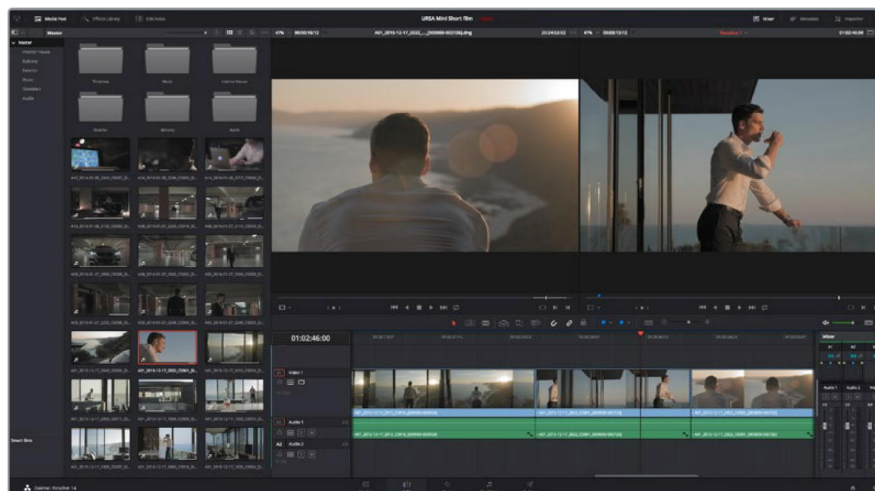

The 'edit' page. You can trim your clips, change their order, move them around and add transitions between them using the timeline editor

Trimming Clips

When editing clips you'll want to trim them to include only the specific actions you want in each shot. There are various ways, but the easiest is to adjust the clips' in and out points on the timeline:

1   After adding clips to your timeline, hover your mouse pointer over the start of a clip until the pointer becomes a 'trim' icon.

2   When the 'trim' icon appears, click on the start of your clip and drag it forwards or backwards to trim the in point. Watch the timeline monitor as you trim to find the edit point.

3   Now click and drag the end of your clip to adjust the out point.

The zoom slider is located above the timeline, to the right of the tools that are centered in the toolbar. By dragging the slider left and right you can zoom in and out of your timeline to make fine adjustments.
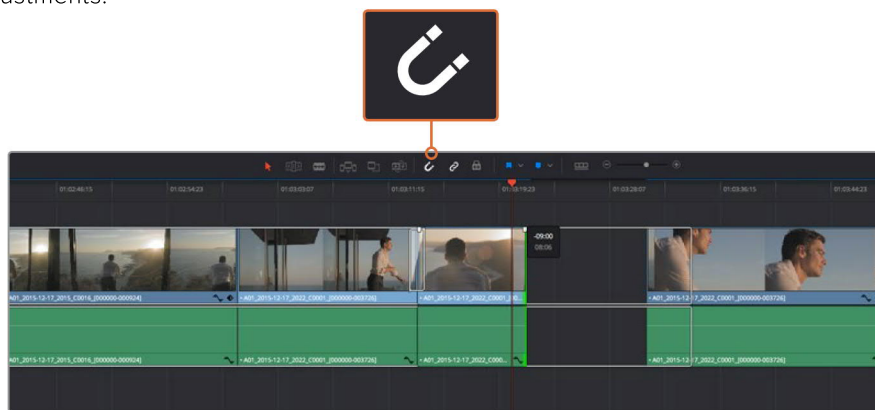
Trim your clips by dragging their start and end points left or right, and press the 'snapping' button in the toolbar to turn snapping on or off

Snapping is a helpful feature to keep your clips held tightly against each other, but can be disabled for greater precision when fine tuning edits. Press the 'N' key to quickly turn snapping on or off.

Mapping Keyboard Shortcuts

If you are familiar with keyboard shortcuts used in other editing software, you can setup DaVinci Resolve to use the same shortcuts. You also have the ability to create your own custom sets of keyboard shortcuts to increase speed and optimize your workflow.

To map your own keyboard shortcuts:

1   Open DaVinci Resolve> Preferences and select the 'user' panel at the top, then select 'keyboard mapping' from the settings list.

2   Select the shortcut you want to change from the categories provided, for example timeline cut and paste shortcuts will be in the 'edit' category.

3   Click on the shortcut once to highlight the setting. Double click on the shortcut to enable the change.

4   Press your new shortcut keys on the keyboard. If you make a mistake you can easily undo the change by clicking the 'undo' icon next to the setting.

5   Click 'save' to confirm your new shortcut setting.
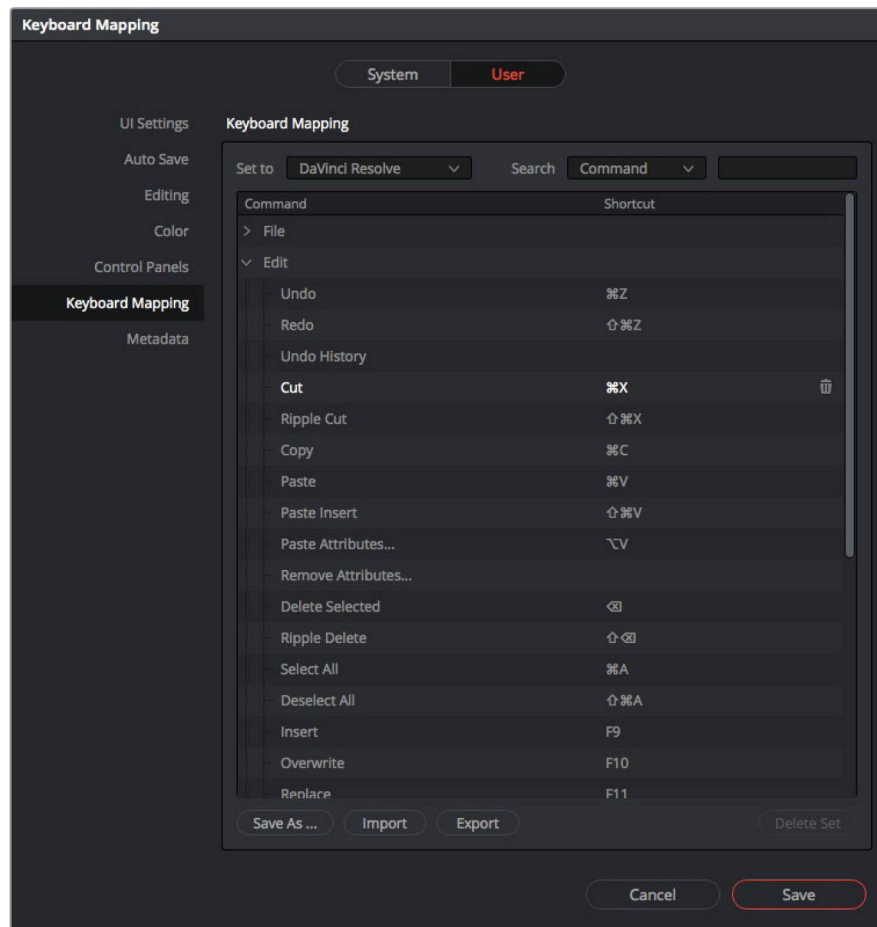
Use the 'set to' drop down menu to choose one of the keyboard shortcuts
you may already be familiar with from other editing software

Adding Transitions

A transition is a visual effect used to bridge one clip to another in a pleasing way, for example
dissolves, wipes, dips to color, and more. These can add a layer of excitement to your edit.
Transitions don't always have to be joining two clips, for example you can apply a dissolve
transition to the end of one clip to create a quick and easy fade to black.
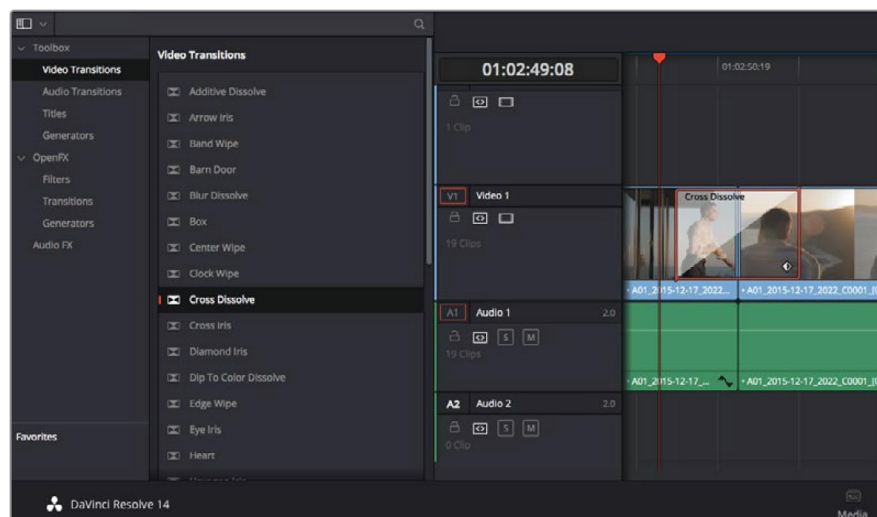
The transitions palette contains many types of transition effects

To add a dissolve transition between two clips:

1   Make sure there are two clips edited right next to one another on the timeline. Click the 'effects library' button in the UI toolbar at the top of the 'edit' page, and make sure the 'toolbox' panel is open.

2   Click on the 'cross dissolve' transition, drag it to your timeline and hover it over the edit point between two clips. You'll see the mouse pointer highlight both the end section of the first clip, and the start of the second. Drop the transition onto the clips. It's important both clips have enough length before and after their edit points to make room for the dissolve.

You now have a smooth transition mixing from one clip to the other. If you want to adjust the length of the transition you can lengthen or shorten its start and end point using a similar approach to trimming a clip. Hover your mouse pointer over the start or end of the transition until the transition 'trim' icon appears, then drag it left or right.
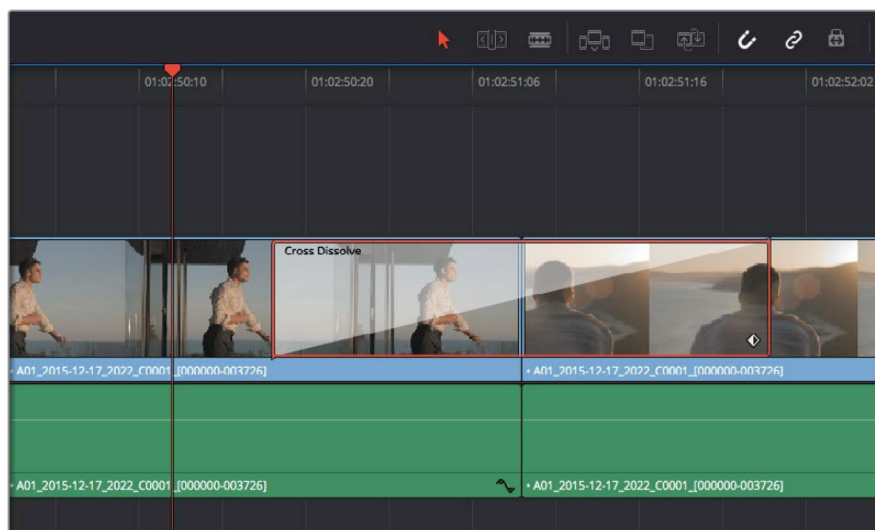
Simply drag and drop transitions between adjoining clips

Adding Titles

You can place a title on any video track just as you would a clip. If you run out of tracks you can easily add new ones by right clicking next to an existing track name and selecting 'add track'.

To create a title:

1   Scroll down towards the middle of the toolbox in the 'effects library' located underneath the media pool and you'll see the 'titles' generators. Use the scroll bar to reveal more 'titles' options.

2   Drag and drop a text title on the empty video track above the clip you want the title to appear. You can even drop your title next to a clip on Video 1 if you just want it to appear over black. To see the title, make sure the timeline playhead is on the title.

3   Double click on the title clip. The 'inspector' will appear showing you the settings for your title. Type your title into the 'text' field.

You can choose from a variety of fonts and adjust the appearance of your title by changing settings such as color, size, alignment, position, and more. Transitions can be added to titles, just like they can for clips

Drag a title type from the 'titles' palette and drop it on an empty track

Color Correcting your Clips

Once you have edited your sequence of clips, you can start color correcting. This is best begun after you have finished editing your sequence so you can maintain a consistent look, but part of the fun of DaVinci Resolve is being able to move between the edit and color page to make fine adjustments and discover new creative choices.

With the 'color' page you get absolute control over the look of your clips

First, click on the 'color' tab to open the 'color' page.

You'll see the color wheels, curves palettes and general color correction tools as well as the preview and nodes window. Don't feel overwhelmed by the vast array of features in front of you, they are all there to help you get the most amazing looking pictures. The DaVinci Resolve manual will show you exactly what the tools are for and how to use them in easy to follow steps. You'll learn the same techniques the professionals use in high end color correction facilities.

Generally, the first thing you'll want do is optimize the shadows, mid tones and highlights in your clips. In other words adjust the 'lift', 'gamma' and 'gain' settings. This will help get your pictures looking their brightest and best with a clean, uniform starting point from where you can begin grading the 'look' of your film.

Using Scopes

Most colorists make creative color choices by focusing on the emotion and the look they want their program to have and then simply work using the monitor to achieve that look. You can look at everyday objects and how different types of light interact with them to generate ideas on what you can do with your images and a little practice.
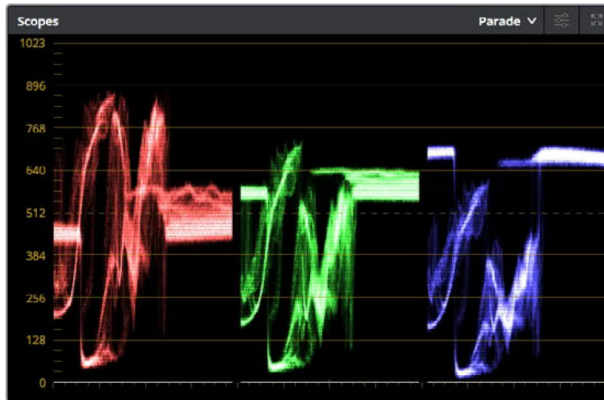
The parade scope helps you optimize highlights, mid tones and shadows

The 'lift', 'gamma', 'gain' and 'offset' color wheels give you total control over the color and tonal balance of your clips. To make a uniform adjustment to all colors for each tonal region, drag the dial underneath the color wheels back and forth.

Another way to color grade is to use the built in scopes to help you balance shots. You can open a single video scope by clicking the 'scope' button, which is the second from the right on the palette toolbar. You can choose to display a waveform, parade, vectorscope and histogram. Using these scopes you can monitor your tonal balance, check the levels of your video to avoid crushing your blacks and clipping the highlights, plus monitor any color cast in your clips.

The 'color wheels' palette contains the 'lift', 'gamma' and 'gain' controls which will generally constitute your first adjustment. These should resemble controls you've seen in other applications for doing color and contrast adjustments. For more accurate control of each color using a mouse, you can change the color wheels to 'primaries bars' which let you adjust each color and luminance channel for the lift, gamma and gain controls separately. Simply select 'primaries bars' from the drop down menu near the top right of the color wheels.

1 **Adjusting the 'lift'**
   With your first clip selected on the color timeline, click on the 'lift' dial underneath the first color wheel. Slide it back and forth and watch how it affects your image. You'll see the brightness of the dark regions of your picture increase and decrease.

   Set it to where you want the dark areas to look their best. If you decrease the lift too much, you'll lose details in the blacks and you can use the parade scope to help avoid this. The optimal position for blacks on the waveform is just above the bottom line of the parade scope.

2 **Adjusting the 'gain'**
   Click on the 'gain' dial and slide it back and forth. This adjusts the highlights which are the brightest areas of your clip. The highlights are shown on the top section of the waveform on the parade scope. For a brightly lit shot, these are best positioned just below the top line of the waveform scope. If the highlights rise above the top line of the waveform scope, they will clip and you will lose details in the brightest regions of your image.

3 **Adjusting the 'gamma'**
   Click on the 'gamma' dial underneath the color wheel and slide it back and forth. As you increase the gamma you'll see the brightness of the image increase. Notice the middle section of the waveform will also move as you adjust the gamma. This represents the mid tones of your clip. The optimal position for mid tones generally falls between 50 to 70% on the waveform scope. However, this can be subjective based on the look you are creating and the lighting conditions in the clip.

You can also use the curves palette to make primary color corrections. Simply click to create control points on the diagonal line inside the curve graph, and drag them up or down to adjust the master RGB contrast at different areas of image tonality. The optimum points to adjust are the bottom third, mid, and top third of the curve line.

There are many more ways of doing primary color correction in DaVinci Resolve. Check the DaVinci Resolve manual to learn how to use them all.

The curves palette is another tool you can use to make primary color corrections, or enhance specific areas of your clip when using a power window

Secondary Color Correction

If you want to adjust a specific part of your image then you need to use secondary corrections. The adjustments you have been doing up until now using the color wheels and lift, gamma and gain adjustments affect the whole image at the same time and so they are called primary color corrections.

However if you need to adjust specific parts of your image, say for example you wanted to improve the color in the grass in a scene, or you wanted to deepen the blue in a sky, then you can use secondary corrections. Secondary color corrections are where you select a part of the image and then adjust just that part. With nodes, you can stack multiple secondary corrections so you can keep working parts of your image until everything is just right! You can even use windows and tracking to allow the selections to follow movement in your images.

Qualifying a Color

Often you'll find a specific color in your clip can be enhanced, for example grass by the side of a road, or the blue in a sky, or you may need to adjust color on a specific object to focus the audience's attention on it. You can easily do this by using the HSL qualifier tool.
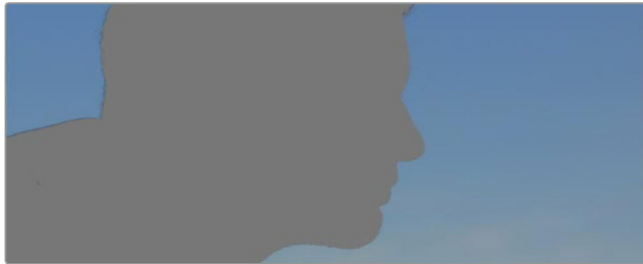
Using the HSL qualifier to select colors in your image is helpful when you want to make areas of your image 'pop', to add contrast, or to help draw the audience's attention to certain areas of your shot

To qualify a color:

1   Add a new serial node.

2   Open the 'qualifier' palette and make sure the 'color range' sample eyedropper tool is selected.

3   Click on the color in your clip you want to affect.

4   Usually you'll need to make some adjustments to soften the edges of your selection and limit the region to only the desired color. Click on the 'highlight' button to see your selection.

5   Adjust the 'width' control in the 'hue' window to broaden or narrow your selection.

Experiment with the high, low and softness controls to see how to refine your selection. Now you can make corrections to your selected color using the color wheels or custom curves.

Sometimes your selection can spill into areas of the shot you don't want to affect. You can easily mask out the unwanted areas using a power window. Simply create a new window and shape it to select only the area of color you want. If your selected color moves in the shot, you can use the tracking feature to track your power window.

Adding a Power Window

Power windows are an extremely effective secondary color correction tool that can be used to isolate specific regions of your clips. These regions don't have to be static, but can be tracked to move with a camera pan, tilt or rotation, plus the movement of the region itself.


Use power windows to mask out areas you don't want to be affected by the HSL qualifier secondary adjustments

For example, you can track a window on a person in order to make color and contrast changes just to that person without affecting his or her surroundings. By making corrections like this you can influence the audience's attention on areas you want them to look at.

To add a power window to your clip:

1 Add a new serial node.

2 Open the 'window' palette and select a window shape by clicking on a shape icon. Your selected window shape will appear on the node.

3 Resize the shape by clicking and dragging the blue points around the shape. The pink points adjust the edge softness. You can position the shape by clicking the center point and moving it to the area you want to isolate. Rotate the window using the point connected to the center.

Now you can make color corrections to your image in just the area you want.
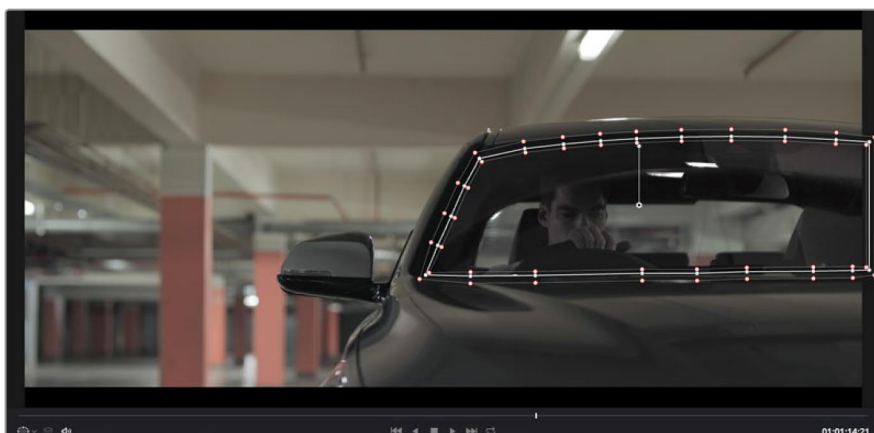
Power windows let you make secondary corrections to specific parts of your image

Tracking a Window

The camera, object or area in your shot may be moving, so to make sure your window stays on your selected object or area, you'll need to use DaVinci Resolve's powerful tracking feature. The tracker analyzes the pan, tilt, zoom and rotation of the camera or object in your clip so you can match your windows to that movement. If this isn't done, your correction can move off the selected target and call attention to itself, which you probably don't want.

You can track objects or areas in your clip using the tracker feature so power windows can follow the action

To track a window to a moving object:

1   Create a new serial node and add a power window.

2   Go to the start of your clip and position and size the window to highlight just the object or area you want.

3   Open the 'tracker' palette. Select the pan, tilt, zoom, rotate, and perspective 3D settings appropriate for the movement in your clip by checking or unchecking the relevant 'analyse' checkboxes.

4   Click on the 'forward' arrow to the left of the checkboxes. DaVinci Resolve will now apply a cluster of tracking points on your clip and then step through the frames to analyze the movement. When the tracking is done, your power window will follow the path of the movement in your clip.

Most of the time automatic tracking is successful, but scenes can be complex and sometimes an object can pass in front of your selected area, interrupting or affecting your track. This can be solved manually using the keyframe editor. Refer to the DaVinci Resolve manual to find out more.

Using Plugins

While making secondary color corrections you can also add OpenFX plugins to create fast, interesting looks and effects using the 'color' page, or imaginative transitions and effects on your clips on the 'edit' page. OFX plugins can be purchased and downloaded from third party suppliers.

After installing a set of plugins, you can access them on the color page by opening the OpenFX inspector to the right of the 'node editor' Simply click the 'OpenFX' button to open the OpenFX inspector, create a new serial node and drag and drop a plugin onto the new node. If the plugin has editable settings, you can adjust these in the adjoining 'settings' panel.

In the 'edit' page you can add plugin generators and transitions to clips by opening the 'OpenFX' panel in the 'effects library' and dragging your selected plugin onto the video track above your clip on the timeline.
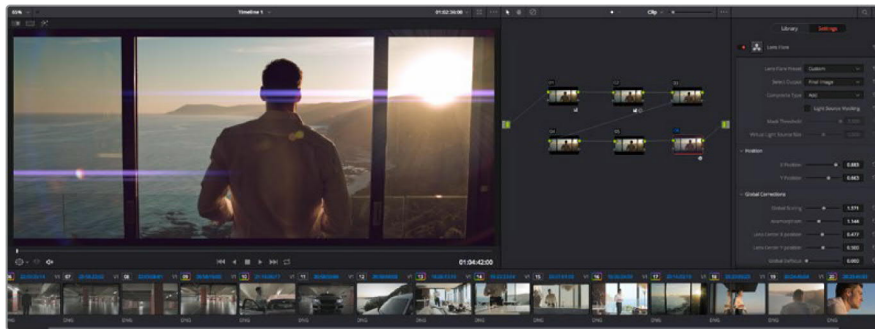
OFX plugins are a quick and easy way to create an imaginative and interesting look

Mixing Your Audio

Mixing Audio in the Edit Page

Once you have edited and color corrected your project, you can begin to mix your audio. DaVinci Resolve has a helpful set of features for editing, mixing and mastering audio for your project directly in the 'edit' page. For projects requiring more advanced audio tools, the Fairlight page provides you with a full audio post production environment, and if you are already familiar with the edit page and want to move straight to Fairlight, skip this section and move onto the next.

Adding Audio Tracks

If you are working in the edit page and want to mix a basic sound edit with lots of sound effects and music, you can easily add more audio tracks when you need them. This can be helpful when building your sound, and separating your audio elements into individual tracks, for example, dialogue, sound effects and music.

To Add an Audio Track to the Edit Page:

1   Right click next to the name of any audio track on your timeline and select 'add track'. This will add a track to the bottom of the track list. Alternatively select 'add tracks' and select the location you would like the new track placed.

2   Select the type of audio track you want, such as stereo, mono, 5.1 or adaptive.

Your new audio track will appear on the timeline.

Adjusting Audio Levels in the Timeline

Each clip of audio in the timeline has a volume overlay that lets you set that clip's level by simply dragging it up or down with the pointer. This overlay corresponds to the Volume parameter in the Inspector.
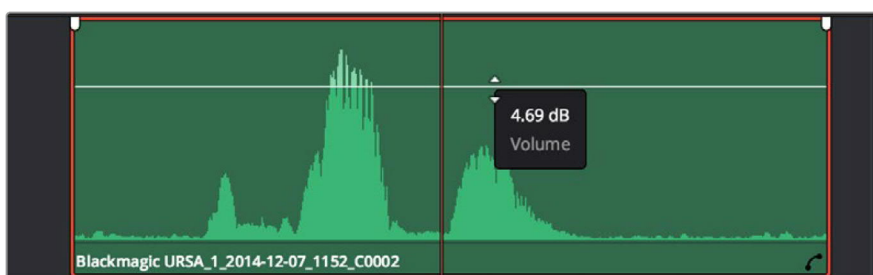

Dragging a volume overlay to adjust the clip level

For projects requiring more advanced audio tools, the Fairlight page provides you with a full audio post production environment.

The Fairlight Page

The 'Fairlight' page in DaVinci Resolve is where you adjust your project audio. In single monitor mode, this page gives you an optimized look at the audio tracks of your project, with an expanded mixer and custom monitoring controls that make it easy to evaluate and adjust levels in order to create a smooth and harmonious mix. Don't feel overwhelmed by the vast array of features in front of you, they are all there to help you deliver the best audio quality for your project.
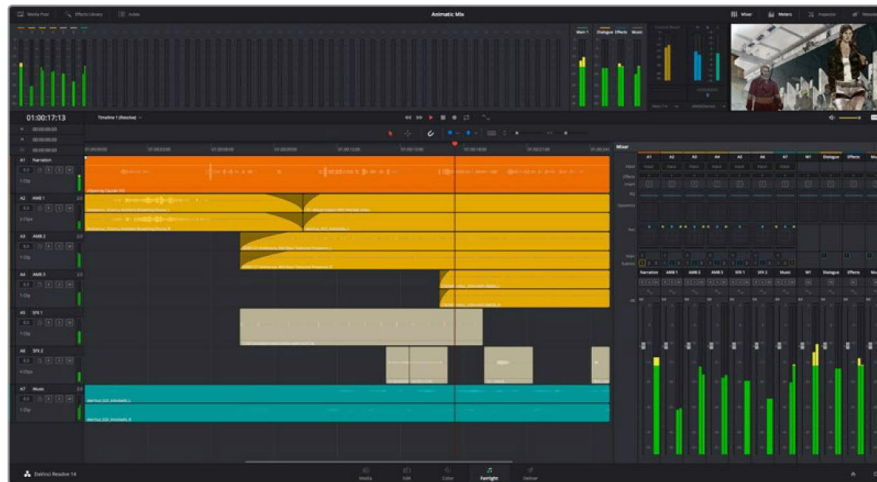
This guide provides a basic overview of the features on the Fairlight page, but to learn more about all the details for each feature, refer to the DaVinci Resolve manual. The DaVinci Resolve manual provides details on the purpose of each tool and describes how to use them in easy to follow steps.

The Audio Timeline

Track Header

At the left of each track is a header area that displays the track number, track name, track color, audio channels, fader value and audio meters. The track header also contains different controls for locking and unlocking tracks, plus solo and muting controls. These controls can help to keep your tracks organized, and let you preview individual tracks one at a time.

Tracks

Each track on the Fairlight page is divided into lanes, which show each individual channel of clip audio for editing and mixing. The edit page hides these individual audio channels, displaying only a single clip in the timeline to make it easier to edit multi channel sources without needing to manage a huge number of tracks.
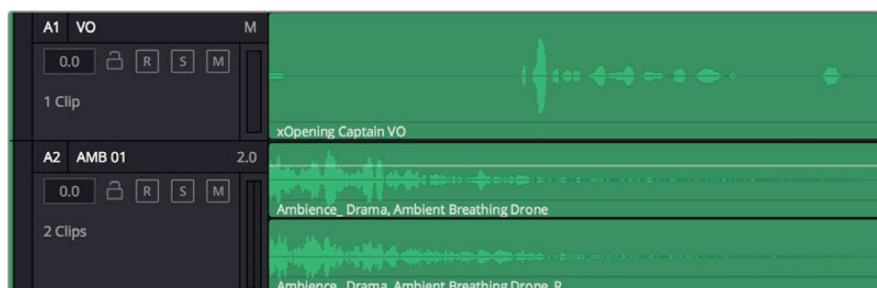
The track header on track A1 indicates a mono track with a single lane for mono audio, whilst track A2 indicates a stereo track with two lanes to accommodate stereo audio

What is a Bus?

A bus is essentially a destination channel to which you can route multiple audio tracks from the timeline, so that they are mixed together into a single signal that can be controlled via a single channel strip.

Main Bus

'Main busses' are typically the primary output of a program and each new project you create starts out with a single 'main bus', to which all tracks are routed by default. The 'main bus' combines all of the tracks in the timeline into one signal so that you can adjust the overall level of the audio mix once you have adjusted the level of each individual track.

Sub Bus

'Sub busses' allow you to combine multiple tracks of audio that belong to the same category such as dialogue, music or effects so that everything in that category can be mixed as a single audio signal. For example, if you have five dialogue tracks, you can route the output of all five dialogue tracks to a 'submix bus', and the level of all dialogue can then be mixed with a single set of controls. This submix can be rendered separately or sent to the main bus for render.

The Mixer

Each audio track in your timeline corresponds to an individual channel strip in the Mixer, and by default there's a single strip on the right for the 'main bus' labeled 'M1'. Additional channel strips will appear on the right hand side with a set of controls for each additional 'main' and 'submix bus' you create. A set of graphical controls allows you to assign track channels to output channels, adjust EQ and dynamics, set levels and record automation, pan stereo and surround audio, and mute and solo tracks.


The audio mixer, with channel strips corresponding
to the tracks in the timeline

Using the Equalizer to Enhance your Audio

After adjusting the audio levels of your audio clips in your project, you may find that the audio needs further finessing. In some cases you may find that the dialogue, music and sound effects are competing for the same frequency on the audio spectrum, making your audio too busy and unclear. This is where using EQ can help, as it allows you to specify the parts of the audio spectrum that each track occupies. You can also use an equalizer to help remove unwanted elements from your audio by isolating and reducing the level on particular frequencies that contain low rumbles, hums, wind noise and hiss, or simply to improve the overall quality of your sound so it is more pleasing to listen to.

DaVinci Resolve provides EQ filters that can be applied at a clip level to each individual clip or at the track level to affect entire tracks. Each audio clip in the timeline has a four band equalizer in the inspector panel, and each track has a 6 band parametric equalizer in the mixer panel. The graphical and numeric controls for boosting or attenuating different ranges of frequencies, and different filter types allow you to define the shape of the EQ curve.
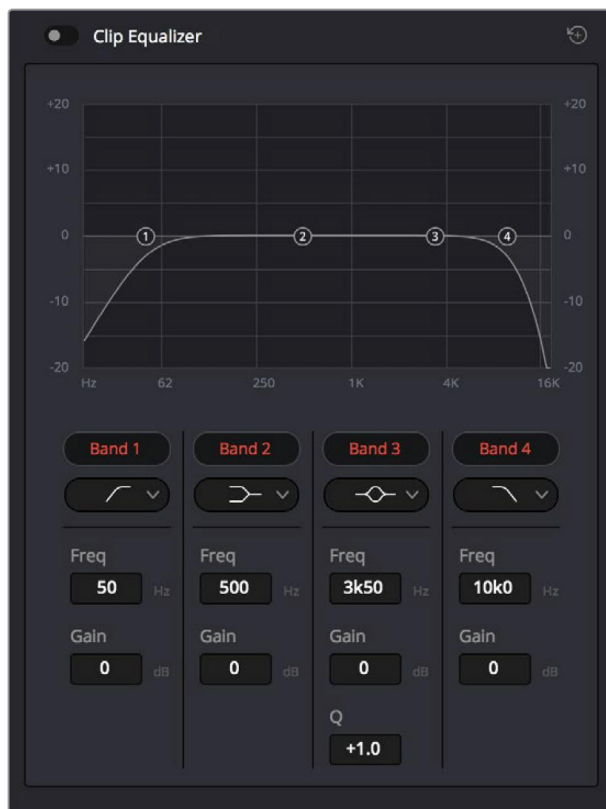
The four band equalizer can be applied
to every clip in the timeline

Outer bands let you make band filter adjustments using hi-shelf, lo-shelf, hi-pass and lo-pass filters. A pass filter affects all the frequencies above or below a particular frequency, by removing those frequencies completely from the signal. For example, a high pass filter will allow the high frequencies to pass through the filter whilst cutting the low frequencies.
Any frequencies outside the cutoff frequency are cut gradually in a downward sloping curve.

A shelf filter is less aggressive, and is useful when you want to shape the overall top end or low end of the signal without completely removing those frequencies. The shelf filter boosts or cuts the target frequency and every frequency either above or below it evenly, depending on whether you use a high shelf or low shelf.

The middle sets of band controls let you make a wide variety of equalization adjustments, and can be switched between lo-shelf, bell, notch, and hi-shelf filtering options.

Bell

Bell filters boost or cut frequencies around a given center point of the bell curve, and as the name suggests the shape of the curve is like a bell.

Notch

Notch filters allow you to specifically target a very narrow range of frequencies. For example, removing a mains hum at 50 or 60Hz.

Lo-Shelf

Low shelf filters boost or cut the target frequency at the low end, and every frequency below it

Hi-Shelf

High shelf filters boost or cut the target frequency at the high end, and every frequency above it

To add EQ to an individual clip:

1   Select the clip in the timeline that you want to add the EQ filter to.

2   Click on the inspector and then click the 'clip equalizer' enable button.

To add EQ to a track:

1   Double-click in the EQ section for one of your tracks in the mixer to open the equalizer for that track.

2   Select the band filter type from the drop down menu for the band you want to adjust.

The EQ section in the mixer panel indicating an
EQ curve has been applied to track one

The 6 Band parametric equalizer that can be applied to every track

Once you have added EQ to your clip or track, you can adjust the EQ for each band. Note that controls may vary depending on which band filter type is selected.

To adjust the EQ for a band filter:

1   Select the band filter type from the drop down menu for the band you want to adjust.

2   Adjust the 'frequency' value to select the center frequency of the EQ adjustment.

3   Adjust the 'gain' value to boost or attenuate the frequencies governed by that band.

4   Use the 'Q factor' value to adjust the width of affected frequencies.

Use the reset button to reset all controls in the EQ window to their defaults.

Fairlight has many controls you can use to improve the quality of each audio track. You can add more tracks and arrange buses to organize them, plus add effects like delay or reverb, and generally perfect your audio mix.

Mastering your Edit

So now you have edited, graded your clips and mixed your audio, you'll want to export a render of your edit in the 'deliver' page. This page lets you select the range of clips you want to export, plus the format, codec and resolution you want. You can export in many types of formats such as QuickTime, AVI, MXF and DPX using codecs such as 8-bit or 10-bit uncompressed RGB/YUV, ProRes, DNxHD, H.264 and more.

The 'deliver' page is where you export your edit. You can select from many different video formats and codecs

To export a single clip of your edit:

1   Click on the 'deliver' tab to open the deliver page.

2   Go to the 'render settings' window on the top left of the page. In the 'format' settings, select 'single clip'. You can now choose from a number of export presets, for example YouTube, Vimeo and audio presets, or you can set your own export settings manually by leaving it set to the default 'custom' preset and entering your own parameters. For this example, select YouTube, then click on the arrow next to the preset and select the 1080p video format.

     The frame rate will be locked to your project frame rate setting.

3   Underneath the presets you will see the timeline filename and the target location for your exported video. Click the 'browse' button and choose the location where you want to save your exported file.

4   Immediately above the timeline, you'll see an options box with 'entire timeline' selected. This will export the entire timeline, however you can select a range of the timeline if you want to. Simply choose 'in/out range' and then use the 'i' and 'o' hot key shortcuts to choose the in and out points in your timeline.

5   Go to the bottom of the 'render settings' and click on the 'add to render queue' button.

Your render settings will be added to the render queue on the right side of the page. Now all you have to do is click 'start render' and monitor the progress of your render in the render queue.

When your render is complete you can open the folder location, double click on your new rendered clip and watch your finished edit.

Post Production Workflow

Working with 3rd Party Software

If you have your own favourite editing software you'd like to use, you can easily copy your clips to an internal/external drive or RAID and then import your clips into the software.

If you want to, you can even edit your clips directly from the SD card.

Using Final Cut Pro X

To edit Apple ProRes clips using Final Cut Pro X, you need to create a new project matching your clips' video format and frame rate. For this example, clips are set using ProRes 422 1080p25.

1   Launch Final Cut Pro X, go to the menu bar and select 'file/new project'. A window will open containing project settings.

2   Name your project and select the 'custom' checkbox.

3   Set the 'video properties' settings to 1080p HD, 1920x1080 and 25p.

4   Set your 'audio and render properties' settings to 'stereo, 48kHz, and Apple ProRes 422

5   Click 'ok'.

To import your clips into your project, go to the menu bar and select 'file/import/media'. Choose your clips from your SD Card. You can now drag your clips onto the timeline for editing.
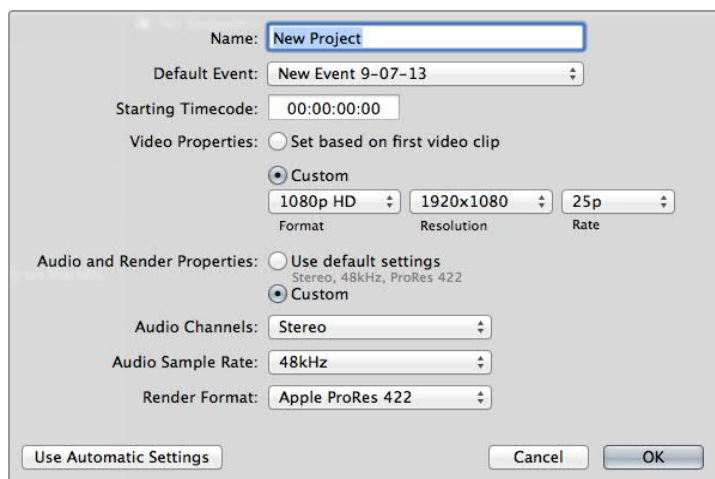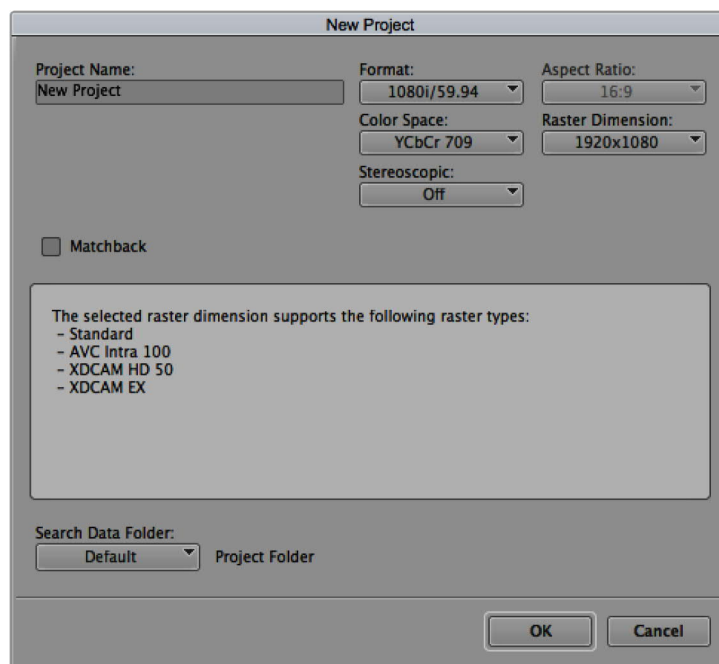

Final Cut Pro X project settings.

Using Avid Media Composer

To edit your clips using Avid Media Composer 7, create a new project matching the clip's video format and frame rate. For this example, clips are set using 1080i59.94.

1   Launch Media Composer and the 'select project' window will appear. Click the 'new project' button.

2   In the 'new project' window name your project.

3   Go to the 'format' dropdown menu and select 1080i/59.94.

4   Go to the 'color space' dropdown menu and select YCbCr 709.

5   Go to the 'raster dimension' dropdown menu and select 1920x1080. Click 'ok'.

6   Select 'tools>background services' and click the 'start' button if background services are not already running and then click 'ok'.

7   Select the media bin where you wish to import your files.

8   Select 'file>AMA link...' and select the files that you wish to import and then click 'ok'.

When the clips appear within the media bin you can drag your clips onto the timeline and begin editing.

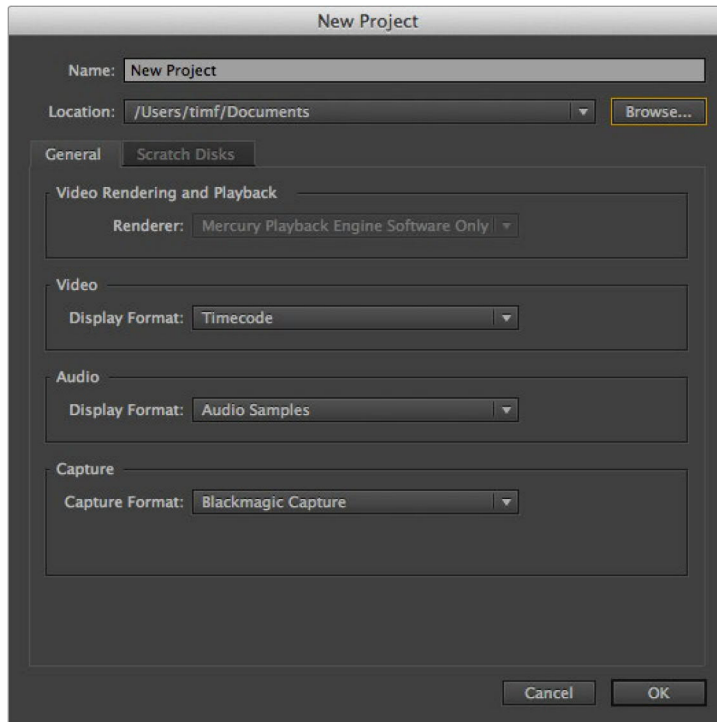Setting the project name and project options in Avid Media Composer 7.

Using Adobe Premiere Pro CC

To edit your clips using Adobe Premiere Pro CC, you need to create a new project matching your clips' video format and frame rate. For this example, clips are set using ProRes 422 HQ 1080p25.

1   Launch Adobe Premiere Pro CC. In the 'welcome' window select 'create new/new project'. A window will open containing project settings.

2   Name your project. Choose the location for your project by clicking 'browse' and selecting your desired folder. Once you've selected your location folder click 'ok' in the 'welcome' window.

3. Go to the Adobe Premiere Pro CC menu bar, select 'file/import' and choose the clips you want to edit. Your clips will appear in the 'project' window.

4. Drag the first clip you wish to edit onto the 'new item' icon at the bottom right of the 'project' window. A new sequence will be created matching your clip settings.

You can now drag your clips onto the sequence timeline for editing.

Setting the project name and project options
in Adobe Premiere Pro CC.

Using Autodesk Smoke 2013

To edit your clips using Autodesk Smoke 2013, create a new project matching the clips' video format, bit depth, frame type and frame rate. For this example, clips were recorded using ProRes 422 HQ 1080p25.

1. Launch Smoke and the project and user settings window will appear. Click on the 'new' button under the project heading.

2. The 'create new project' window will open. Name your project.

3. From the resolution dropdown menu, select 1920x1080 HD 1080.

4. Make sure bit depth is set to 10-bit and frame type is progressive.

5. From the config template dropdown menu select 1920x1080@25000p.cfg.

6. Leave the 'preferred format' set to ProRes 422 HQ and click 'create'.

7. Click on the 'new' button under the user heading.

8. When the 'create new user profile' window opens, type your user name and click 'create'.

9. When the project and user settings window reopens, click the start button.

10. From the menu bar, select 'file>import>file' and select your clips to import.

11 Once the clips appear in the media library you can drag your clips onto the timeline and begin editing.
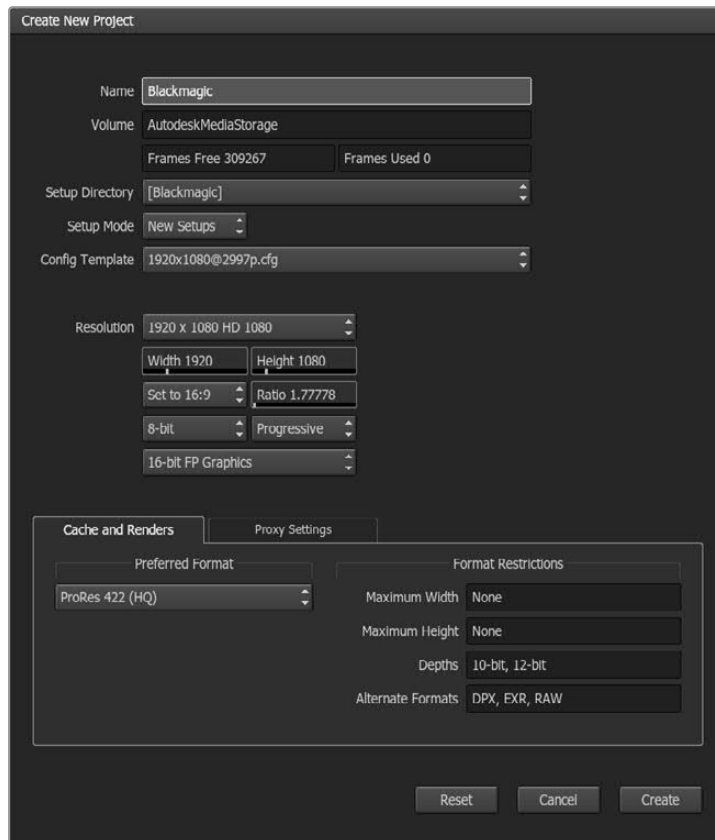
Setting the project name and project options in Autodesk Smoke 2013.

Help

Getting Help

The fastest way to obtain help is to go to the Blackmagic Design online support pages and check the latest support material available for your video assist.

Blackmagic Design Online Support Pages

The latest manual, software and support notes can be found at the Blackmagic Design support center at www.blackmagicdesign.com/support.

Blackmagic Design Forum

The Blackmagic Design forum on our website is a helpful resource you can visit for more information and creative ideas. This can also be a faster way of getting help as there may already be answers you can find from other experienced users and Blackmagic Design staff which will keep you moving forward. You can visit the forum at https://forum.blackmagicdesign.com

Contacting Blackmagic Design Support

If you can't find the help you need in our support material or on the forum, please use the "Send us an email" button on the support page to email a support request. Alternatively, click on the "Find your local support team" button on the support page and call your nearest Blackmagic Design support office.

Checking the Software Version Currently Installed

To check which version of Blackmagic Video Assist software is installed on your computer, open the About Blackmagic Video Assist Setup window.

- On Mac OS, open Blackmagic Video Assist Setup from the Applications folder. Select About Blackmagic Video Assist Setup from the application menu to reveal the version number.

- On Windows 8, open Blackmagic Video Assist Setup from the Blackmagic Video Assist Setup tile on your Start page. Click on the Help menu and select About Blackmagic Video Assist Setup to reveal the version number.

- In Windows 8.1, select the down arrow icon from the 'start' screen, and scroll down to the Blackmagic Design folder. From here you can launch Blackmagic Video Assist Setup.

- In Windows 10, click the start button and select 'all apps'. Scroll down to the Blackmagic design folder. From here you can launch Blackmagic Video Assist Setup.

How to Get the Latest Software Updates

After checking the version of Blackmagic Video Assist Setup software installed on your computer, please visit the Blackmagic Design support center at www.blackmagicdesign.com/support to check for the latest updates. While it is usually a good idea to run the latest updates, it is wise to avoid updating any software if you are in the middle of an important project.

Warranty

12 Month Limited Warranty

Blackmagic Design warrants that this product will be free from defects in materials and workmanship for a period of 12 months from the date of purchase. If a product proves to be defective during this warranty period, Blackmagic Design, at its option, either will repair the defective product without charge for parts and labor, or will provide a replacement in exchange for the defective product.

In order to obtain service under this warranty, you the Customer, must notify Blackmagic Design of the defect before the expiration of the warranty period and make suitable arrangements for the performance of service. The Customer shall be responsible for packaging and shipping the defective product to a designated service center nominated by Blackmagic Design, with shipping charges pre paid. Customer shall be responsible for paying all shipping charges, insurance, duties, taxes, and any other charges for products returned to us for any reason.

This warranty shall not apply to any defect, failure or damage caused by improper use or improper or inadequate maintenance and care. Blackmagic Design shall not be obligated to furnish service under this warranty: a) to repair damage resulting from attempts by personnel other than Blackmagic Design representatives to install, repair or service the product, b) to repair damage resulting from improper use or connection to incompatible equipment, c) to repair any damage or malfunction caused by the use of non Blackmagic Design parts or supplies, or d) to service a product that has been modified or integrated with other products when the effect of such a modification or integration increases the time or difficulty of servicing the product.
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