

BCC UpRez

This filter is used to uprez source clips (SD to HD for instance) with superior results, especially when compared with the result from a host standard scale transformation.



Herewith is a brief description of correct usage of the filter when uprezzing from SD to HD within the Apple Final Cut Pro, Adobe After Effects and Avid Media Composer hosts and beneath this you will find a complete description of each parameter.

Final Cut Pro Host

- before starting the project, it's important to set the FCP preferences as follows:
 - **FCP User Preferences>Edit tab>Auto Conform Sequence = Never**
 - **FCP User Preferences>Edit tab>Always Scale Clips to Sequence Size = Off**

There are two available workflow options for the BCC UpRez filter in FCP: you can either drag a clip from the project bin into the filter's image Well Layer or you can drag a nested sequence onto the image Well Layer. The desired workflow option is set by clicking on the Workflow pop-up menu in the UpRez filter user interface and selecting the workflow that is best suited to the project that you are working on.

- The most natural way to apply the filter is to apply it a slug, **but this will only work in a square pixel sequence**. If you are using a non-square pixel sequence, apply the filter to either an unanimated BCC Generator or a video clip whose project size, PAR and frame rate match that of the sequence.

If you elect to use the **Well Layer workflow**, you should follow these instructions:

- create an HD sequence
- generate an HD slug in the HD sequence (for non-square sequences see note above)
- drag the BCC UpRez filter onto the HD slug
- double click the slug in the FCP timeline to access the BCC UpRez filter controls
- set the Workflow option in the UpRez filter to Well Layer
- drag the media to be uprezzed from the project bin onto the Source Layer Image Well in the UpRez filter
- in the Filter control panel, twirl down the Transform group and select "Fill Frame (Crop)" from the Framing options pop-up
- twirl down the Quality group and select Magic Sharp from the Method pop-up
- set the sharpness level to 25 and observe the result, then increase or decrease the sharpness parameter value as necessary

If you elect to use the **Nested Sequence workflow**, you should follow these instructions:

- import the SD source clip to be uprezzed into an FCP project
- create an HD sequence and name it HD Source
- create a second HD sequence and name it HD UpRez
- drag the SD source clip into the HD Source sequence
- drag the HD source sequence into the HD UpRez sequence - this is now a nested sequence
- apply the BCC UpRez filter to the HD Source sequence in the HD UpRez timeline
- right-click on the nested HD Source sequence in the HD UpRez timeline and select "Open in Viewer"
- click on the tab in the source monitor labeled "Filters"
- in the Filter control panel, twirl down the Transform group and select "Fill Frame (Crop)" from the Framing options pop-up
- twirl down the Quality group and select Magic Sharp from the Method pop-up
- set the sharpness level to 25 and observe the result, then increase or decrease the sharpness parameter value as necessary

Important note: If you are using the **Nested Sequence workflow**, you must artificially re-interpret the source clip pixel aspect ratio in FCP to match the pixel aspect ratio of the final project and you must do this **BEFORE** you add the source clip to the source sequence. You must then set the source pixel aspect ratio in the UpRez filter itself to the "true" source aspect ratio - whatever the source clip genuinely uses as an aspect ratio - e.g. 0.9 for D1 etc.

Adobe After Effects Host

In After Effects, we apply the filter to a solid that is the final destination size and select the clip to be uprezzed from the comp timeline. Here's how:

- create an HD composite
- import the SD clip to be uprezzed into the AE project window
- drag the SD clip into the HD timeline and click on the eyeball to hide the video
- create a new HD sized solid layer in the HD comp
- apply the BCC UpRez filter to the solid layer
- go to the filter's effect controls and twirl down the source layer group
- select the SD clip from the Source Layer pop-up
- twirl down the Transform group and select "Fill Frame (Crop)" from the Framing options pop-up
- twirl down the Quality group and select Magic Sharp from the Method pop-up
- set the sharpness level to 25 and observe the result, then increase or decrease the sharpness parameter value as necessary

Avid Media Composer Host

In Avid MC, we apply the filter to an SD source clip in an HD timeline. Here's how:

- create an HD timeline in Avid MC
- import the media that is to be uprezzed into the HD timeline bin
 - **It's important to import the media at its native size so you should click on the options button in the media import dialogue box and select the "Do Not Resize Smaller Images" option**
- the imported SD clip is now centered in a black HD frame
- cut the imported clip into the timeline
- drag the BCC UpRez filter onto the SD clip in the HD timeline
- go into effects mode to access the filter parameters
- twirl down the Transform group and select "Fill Frame (Crop)" from the Framing options pop-up
- twirl down the Quality group and select Magic Sharp from the Method pop-up
- set the sharpness level to 25 and observe the result, then increase or decrease the sharpness parameter value as necessary

BCC UpRez Filter Parameter List

- **Workflow pop-up** - determines whether the filter will use media pulled directly from the FCP project bin or from a nested sequence
 - Well Layer** - this option requires the user to drag media from the project bin directly into the filters Source Layer Image Well
 - Nested Sequence** - this option requires the user to drag a nested sequence containing the media into the filters Source Layer Image Well
- **Source Group** - Contains parameters that affect the filtered source image
 - Source Layer (Adobe only)** - Displays a list of all layers in the current comp. Select the layer to UpRez from this list.
 - Source Pixel Aspect Ratio pop-up** - Used to set the Pixel Aspect Ratio (PAR) of the source clip
 - Source Size pop-up (Apple / Avid only)** - Used to set the source size
 - Source Width (Apple / Avid only)** - Additional control used to set the source width
 - Source Height (Apple / Avid only)** - Additional control used to set the source depth
- **Transform Group** - Contains parameters for controlling the scale transformation of the clip
 - Frame Size pop-up (Adobe only)** - Contains a list of image size standard formats. Used to set the final image size
 - Result Width (Adobe only)** - Used to set width of the final size - available when Custom Size is selected in Frame Size pop-up
 - Result Height (Adobe only)** - Used to set height of the final size - available when Custom Size is selected in Frame Size pop-up
 - Lock Height to X** - Links X and Y values - available when Custom Scale is selected in Frame Size pop-up
 - Scale X** - Used to set width of the final size - available when Custom Scale is selected in Frame Size pop-up
 - Scale Y** - Used to set height of the final size - available when Custom Scale is selected in Frame Size pop-up
 - Center** - Used to set the center position of the result
 - Framing pop-up** - Includes 3 options that determine how the result is framed
 - Fit in Frame (Letterbox)** - Scales the image to fill the final size without any distortion or cropping
 - Fill Frame (Crop)** - Scales the image to fill the final size, cropping the image to avoid distortion
 - Distort to Fit (Stretch)** - Scales the image to fill the final size, distorting the image if necessary
- **Quality Group** - Contains the parameters for controlling the final image quality
 - Method pop-up** - Includes the following 7 options that determine the image sharpness / smoothness:
 - Draft**
 - Fast**
 - Sharp**
 - Standard**
 - Smooth**
 - Magic Smooth**
 - Magic Sharp**
 - Sharpness** - The value here determines the amount of sharpness / smoothness that is applied to the image