# THE ULTIMATE GUIDE TO USING THE REVOLUTIONARY CAMERA

REL

## FINAL CUT PRO WORKFLOW

You can edit a RED project with Apple Final Cut Pro in a number of ways, and each has its own strengths. The amount of options can be overwhelming, so in this chapter we'll focus on the transcode to Apple ProRes workflow via the Log and Transfer window , which is currently favored by Apple. You'll learn how to ingest your footage properly, send it to Apple Color, work with Cinema Tools, and export using the new Share feature in Final Cut Pro. After you have the recommended workflow down pat, we'll look at some alternative methods that you might find useful for certain types of projects.

#### **System Requirements**

Final Cut Pro is optimized for the ProRes compression format. Using this format gives you real-time performance and access to your effects, assuming you meet the minimum system requirements according to Apple.

You need to be aware of a couple of issues when you're using the recommended workflow. First, there is a waiting period between shooting and editing because transcoding from R3D to ProRes takes time. The amount of time depends mainly on the speed of your system processor and the amount of RAM. I recommend an eight-core 2.26 GHz or faster Mac Pro with at least 4 GB of RAM.

The other issue with transcoding from R<sub>3</sub>D to ProRes is that once you begin color correction, you're locked into the color space and gamma, set in the Log and Transfer window. For many productions, this is not that big of a deal, and if you think about working with footage from any other non-RAW camera, that's the usual way. You can get around this limitation with an easy side trip to Cinema Tools, which you'll explore later in this chapter in the "Using Cinema Tools" section.

I recommend using Final Cut Pro 7 or later for the best performance. You'll also need RED's software, which enables support for Final Cut Pro, Color, and QuickTime. You'll find the latest version at www.red.com/support.

#### **Ingesting Footage**

This workflow will be familiar if you're used to working with other tapeless formats in Final Cut Pro such as P2 or XDCAM EX. For the best results, keep all of your original RDM folders intact and organized. The general rule of thumb is to copy all files and directories the camera makes and not to remove files, rename files, or rearrange folders. This is especially important if you're planning to do RAW color correction using Cinema Tools.

- 1. Begin the ingest process in Final Cut Pro by choosing File > Log and Transfer, or by pressing Command-Shift-8. The Log and Transfer window appears.
- 2. Specify which ProRes format you want to transcode to. Click the small gear icon in the Log and Transfer window, and choose Preferences from the Action menu.
- 3. In the Import Preferences dialog, choose the desired transcode format in the Target Format column (next to RED Digital Cinema REDCODE) (Figure 10.1). As of Final Cut Pro 7, you have a number of ProRes formats to choose from, each with a different level of quality and corresponding bitrate. The quality levels start at ProRes

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¥ P2 Plugin	Apple ProRes 422 (LT)					
P2 AVC-Intra	Apple Prolles 422 Proxy					
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Figure 10.1 Selecting a ProRes format.

422 (Proxy) and go up to ProRes 4444 (check with Apple for its exact data rates). If the footage you're ingesting is intended to be your online or final version, pick one of the higher bitrate flavors such as ProRes 422 (HQ) or 4444. Keep in mind that each level as you go up requires more storage and a faster hard drive for optimum editing performance.

If you're treating the initial edit as offline and you plan to either re-ingest the foot-

age to a higher-quality format or reconnect to the R<sub>3</sub>D files via Cinema Tools, choose one of the lower bitrate ProRes formats such as LT or Proxy. Keep in mind that those lower-quality ProRes formats can still look pretty good, especially when going out to standard-definition DVD or the Internet. We'll use ProRes 422 (HQ) for this example.

**4.** Once you've selected a ProRes format, drag and drop your RDM folders from the Finder into the Log and Transfer window. After the scanning is complete, all the shots from each folder should appear in the Log and Transfer window (**Figure 10.2**).

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Figure 10.2 RED shots loaded in the Log and Transfer window.

**NOTE** You have the option to ingest with or without audio by clicking the Import Settings button under the Log and Transfer preview area. I suggest simply bringing everything in as it was shot.

- 5. Select the clips you want to ingest, or press Command-A to select them all.
- 6. Click the Add Selection to Queue button.

Final Cut Pro will begin to ingest the clips one at a time. This is likely to take a while, depending on how many clips you plan to import and how long they are. Ingested clips will appear in your Project window (**Figure 10.3**).

**7.** Repeat as needed for each reel. When the process is complete, close the Log and Transfer window. All clips are transcoded to ProRes at 2K in Final Cut Pro.



Figure 10.3 RED ProRes clips viewed in the Project window.

## Editing

Once you've ingested your footage, editing RED footage in Final Cut Pro isn't too different from editing other types of footage.

- 1. To start editing, create a new sequence by choosing File > New > Sequence, or press Command-N.
- 2. Drag a single clip into the new sequence.

**3.** When prompted to change the sequence settings to match the clip settings, click Yes. Your resulting sequence settings should look something like **Figure 10.4**.

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Name: ProResHQ	Sequence01	
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Frame Size:	Width Height Aspect Ratio	
Pixel Aspect Ratio:	Square 4	Anamorphic 16:9
Field Dominance:	None :	
Editing Timebase:	23.98	
QuickTime Video Se	ttings	Audio Settings
Compressor:	Apple ProRes 422 (HQ)	Rate: 48 kHz
Quality: •	₩ 100 %	Depth: 16-bit
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Figure 10.4 Sequence settings for 2K ProRes 16:9 footage.

The nice aspect of transcoding is you get excellent performance with all your real-time filters and effects via the extensive ProRes support in Final Cut Pro. If you can live without the RAW workflow for color correction, you can use 2K ProRes transcoded files as your master for high-definition and standard-definition projects. If you do need to go RAW, say for extensive visual effects or a 4K film finish, refer to the "Using Cinema Tools" section of this chapter.

## **Color Correcting**

Once you've completed an edit with Final Cut Pro, you can send it to Apple Color for color grading. Technically, a locked edit is not essential for color correction, but it's much simpler and avoids redoing work. (For other color-correction applications, refer to Chapter 13.) The color space and gamma latitude of ProRes files are sufficient to finish for high-definition, and this process is easier and quicker than accessing the native RAW metadata.

For a majority of RED projects, especially those destined for DVD, HD, or the Web, you'll be all set with this method and can begin working in Color right away. For more critical projects, however, you'll want to access the power of the RED RAW workflow with Cinema Tools.

#### **Final Cut Pro Workflow**

Read more about Final Cut Pro and other workflows with RED in RED: The Ultimate Guide to Using the Revolutionary Camera, www.peachipt.com/red

#### SENDING TO COLOR

To go from a transcoded 2K edit in Final Cut Pro into a ProRes color-correction session in Color, the simplest method is the following:

- 1. In Final Cut Pro, select the sequence you want to correct in Color by clicking it in the Project window.
- 2. Choose File > Send to Color.

Color should start up, and your Timeline should load automatically. If you've set up everything properly, your Color project settings should look like **Figure 10.5** (your own project settings will vary).

Frame Rate: 23.98
Resolution Presets: 2048 X 1152 2K 16:9
Width 2048 Height 1152
Printing Density: Linear (O Black - 1023 White)
Render File Type: QuickTime
Deinterlace Renders
Deinterlace Previews
OuickTime Export Codecs: Original Format

Figure 10.5 Project settings for a ProRes 2K project in Color.

**3.** Confirm that your resolution and frame rate match your Final Cut Pro sequence settings. If not, you can manually reenter them. This might, however, indicate an incorrect setting in the original sequence, so go back and re-check your settings.

**TIP** For projects destined for DPX and film output, Color works best with simplified Timelines from Final Cut Pro. Stick with standard dissolves, and remove speed and motion effects. You should create those after a Color session, because many of these effects will be discarded when you export directly from Color to the image sequence formats.

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