Newsletter

LARRY JORDAN.BIZ

Larry's Final Cut Pro Newsletter

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Editor: Larry Jordan

Welcome to the sixth edition of my Final Cut Pro newsletter!

The goal of this newsletter is to provide information helpful to the professional user of Final Cut Pro. This newsletter publishes around the middle of each month. Past issues are not archived, but last month's issue is included as a PDF at the end of this issue. Unless otherwise noted, all references are to Final Cut Pro version 4.x, and should not be assumed to work under any other version.

Also, visit my web site -- it's a great, FREE Final Cut resource!

Newsletter Contents

Survey #1: Where are you located?

OK, I admit it. I'm dying of curiosity to learn where you are located. Please take this survey and let me know. **NOTE:** All my surveys are completely anonymous. Please vote -- no personal information is asked or retained. This is the first of four surveys in this month's newsletter.

Update 6/14: Sigh… So far, I've managed to offend readers in the UK (who do not feel part of Europe), Australia and New Zealand (who have never heard their part of the world referred to as "Oceana") and Canada (because I didn't list individual provinces). Deep, depressed sigh… I will fix these grave errors in geographical

ambiguity in future issues. Sorry.

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I Need Your Help

I am writing a book! It's my first -- a hands-on tutorial on Final Cut Pro HD -- and I need to license footage (for a modest fee) to use for screen shots and demo files. I need 2-3 minutes (DV or Beta, NTSC or PAL) of the following scenes:

- Visually interesting interviews with B-roll
- Visually interesting music video scenes
- Dramatic scene, preferably with people who can actually act

The purpose of this footage is to illustrate how to use Final Cut, so I don't want finished, edited pieces, I need some of the source footage.

If you are interested in helping, send me a representative screen shot and a brief description. You will receive credit in the book, watermark on the video, a modest license fee, and my gratitude.

Email screen shots to: larry@larryjordan.biz

Meeting Report:
Final Cut Pro HD at the L.A. Final Cut Pro Users Group.

A couple of weeks ago, Brian Meaney, Apple programming lead for Final Cut Pro, spoke at the Los Angeles Final Cut Pro Users Group about the new version of Final Cut Pro HD. While the big features of FCP HD have been discussed elsewhere at length, Brian shared some of the smaller improvements that might be of interest to you.

New Stuff

- Apple has spent a lot of time continuing to work on more and more real-time features, both for SD and HD video.
- Rotation effects are now real-time.
- 25 frame/second PAL footage can now be edited, then converted to 24 fps and output to an EDL cut-list.
- Digital Cinema Display turns your computer monitor into a full-screen viewer to watch your video. It supports dual monitors, but does not do color space conversion, so don't use this for color correction work.
- The View menu has been changed (see this article for details on the new View menu), which simplifies selecting video and audio outputs.
- LiveType projects can now be imported and placed directly on the timeline, without first rendering the LiveType movie.
- AAF export now supported for Automatic Duck, which means you can now move projects between Avid and FCP.
- FCP projects can be directly exported to Motion and from Motion back into FCP.

Stuff that's Fixed

- Print to Video and Edit to Tape: Render files are now retained, so that you don't have to re-render when outputting to tape.
- Auto-Save vault: This now saves based on the schedule you set in User Preferences. Saving (using Command-S) no longer resets the Auto-Save timer.
- Trim Edit window: Dynamic trimming no longer behaves "oddly."
- Performance has been improved throughout
- Auto-Select has been changed, again. Copy and paste now work as you expect. (See this article for more info on how copy and paste work now.)
- User Preferences: Expands to two pages, with more options, including the option to have FCP start without loading any projects.
- All menu choices now have buttons and key commands
- Print to Video has option to start recording automatically, assuming you have control over the deck.
- OS 10.3.4 has a number of Firewire fixes. Brian strongly recommends upgrading to OS 10.3.4 if you are using Firewire and upgrading to FCP 4.5
- Media Manager now has option to only capture selected clips and ignore clips outside the selection. (Read this article for more details on using Media Manager for on-lining.)

Unresolved Stuff

- Field based editing is not possible
- Digital Cinema Display does not convert RGB video to YUV color space
- There are still issues with EDL output
- There are still issues with Capture Now
- No ability to display pull-down cadence for a clip

For DV users, FCP HD coupled with OS 10.3.4 seems like a good idea. For high-end users, be sure your capture card and hard disk drivers support the new version before upgrading.

More on Final Cut Pro HD

Ned Stolz, of LAFCPUG fame, has written an article providing even more details on FCP HD. You can view it here:

http://www.uemedia.net/CPC/editorsnet/article_8508.shtml

Technical Note: **What is Optimized Media in Final Cut Pro HD?**

New to Final Cut 4.5 (HD) is optimized media. Final Cut automatically optimizes all your digitized media files when you first open a project from an earlier version of FCP.

But, what does media optimization do and why did Apple add it? I

recently read the following description from an Apple Final Cut engineer discussing this:

> The issue of media file optimization is fundamentally about disk access time. The better your files are optimized, the more simultaneous streams of video can playback. This is really an issue targeted at high data rate video: uncompressed SD codecs and HD codecs. FCP has optimal settings for certain known codecs and if a media file does not meet those specifications, you get the warning.
>
> How important is it to optimize your file?
>
> Single video stream DV playback is well within the capabilities of most FCP systems today, especially when using 7200 RPM drives. As the number of streams increases (as when doing multi-layer effects), or if the drive is slower (PowerBooks) optimization becomes more relevant. DV files are generally already optimized by FCP, though, so you usually shouldn't experience optimization warnings unless your DV media came from significantly older versions of FCP or from a third-party app that captured or rendered the DV media.
>
> Since a majority of FCP users are still using DV, many of these issues are perhaps more information than they actually want. The simple rule is that if FCP wants to optimize your media, you should go ahead and let it. In cases where FCP can't quickly optimize a file (by going quickly through the media data and re-chunking it into optimal pieces), optimization can be more time consuming (through the media manager), so at that point you should consider how important optimizing is for your workflow. Are you doing multi-layer DV? Are you using a really slow hard disk? And most importantly, are you using high data rate video?
>
> High data rate video is really the target for the media optimization warning. Multiple streams of uncompressed video need to be optimally written to the hard disk to get the most mileage from your hard disk (likely a RAID of some kind in this case). If your students are doing layered SD or HD video, it is in their best interest to have media files that FCP considers optimized. If they aren't doing this kind of work, they may not notice a difference before and after optimization.

A Useful (FREE) Final Cut Pro Preference Utility

If you are like me, you are reluctant to take advantage of many of the cooler features in Final Cut, because when you trash preferences, they all disappear. Features like Favorite Motions, Favorite Effects and some Window layouts. Not to mention all the different preference settings that get reset back to a default when preference files get trashed.

And, while I don't trash preferences every day, I do trash them often enough that resetting preference files is a pain. On the other hand, trashing preferences fixes many bizarre and baffling problems.

What to do, what to do?

Well, I just stumbled across a neat, and FREE, little utility that allows you to back up your Final Cut preference files, so that you can keep a good set of preferences, with all your favorite settings, ready for use whenever you need it.

It's called "FCP Rescue," and here's where you can find it:

http://homepage.mac.com/a_holck/fcp_rescue/

To use it, run this utility to create backups of your current FCP preference files (assuming they are working fine currently). Then, when things turn ugly, run this utility again to replace your misbehaving preference files with the copies it made when your system was working fine.

Important note: This program simply creates back-ups of your current preference files. It doesn't determine if they are bad or good. So, if after running this utility you are still having problems, then trash your preferences manually, rebuild them from scratch, then run this utility to make another new backup.

There are other utilities out there. However, I've got this one running on my system where it seems to work fine.

Survey 2: **What Video Format Do You Use?**

Here's the second of four surveys. This one is designed to help me learn more about what video formats you are using, so I can create articles relevant to your interests. (Again, please remember this does NOT ask or retain any personal information.)

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Final Cut Pro Training

If you are looking for additional training on Final Cut Pro, please call me at **(818) 879-5105** or send an email to: larry@larryjordan.biz.

I provide a full range of training from a couple hours to polish individual skills all the way to full, hands-on intensive, multi-day courses for an entire staff

Here's my current client list.

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Technique: **How to Read Scopes**

Knowing how to read video scopes is critical to a variety of tasks with

Final Cut Pro. This technique is designed to give you a basic understanding of how to read them, because in the next technique, A Fast, Easy Method for Color Correction, I'll show you how to use scopes for color correction.

Why use scopes? Because, it's the only way you can be sure of your video and color levels.

Waveform Monitor
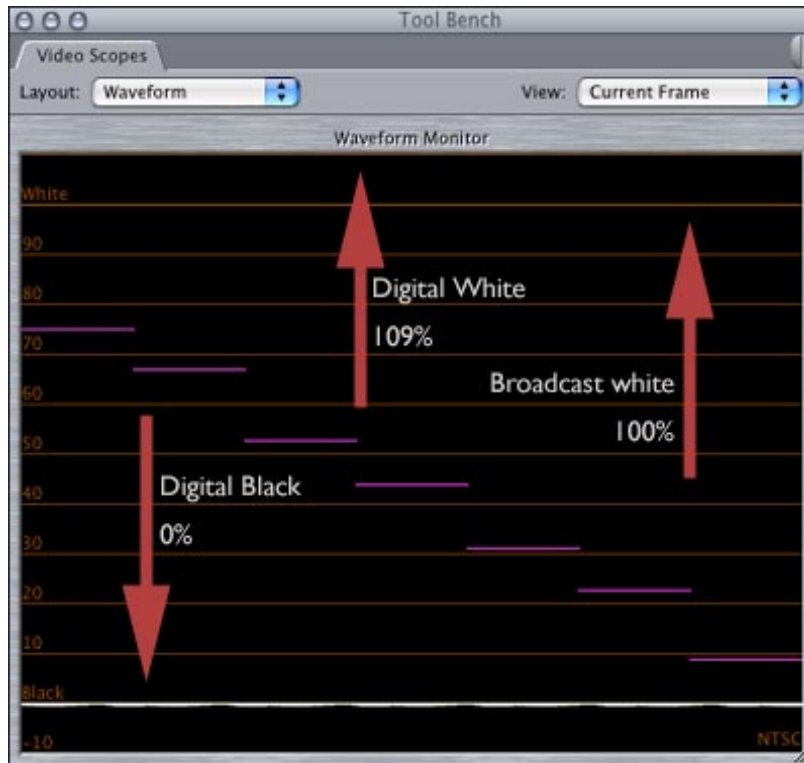
The Waveform Monitor displays the black, gray, and white levels in your picture. Think of it as a measure of your exposure. Each white dot in the scope represents the luminance, or gray-value, of a pixel in your video image.
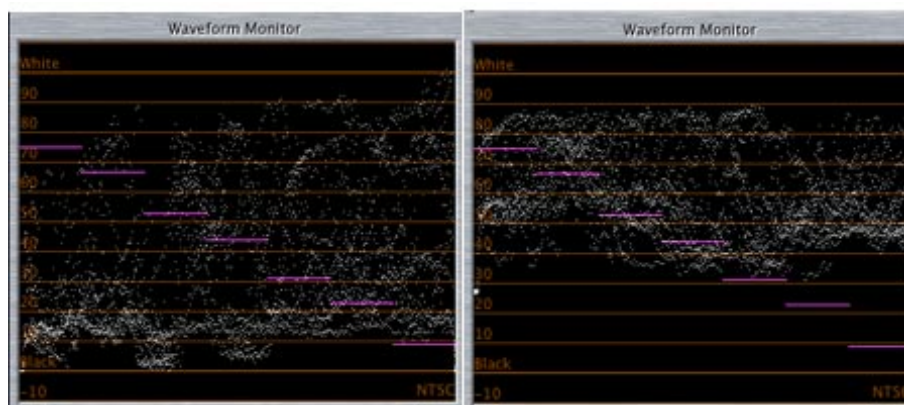

Good exposure: Note even distribution of pixels throughout image. (White dots represent luminance value of image pixels.)

Bad exposure: Note restricted range of image pixel values; nothing darker than mid-gray, nor whiter than medium-white.

A well-exposed picture will have lots of white dots at all different levels. A poorly-exposed picture will tend to have all the dots clumped in just a part of the scope.

Further, the waveform monitor directly corresponds to the image it measures from left to right. That is, looking left to right on the scope corresponds to looking left to right in the image. This means you can look at a scope and tell immediately where the dark and bright images are and roughly where they are located in the image itself.
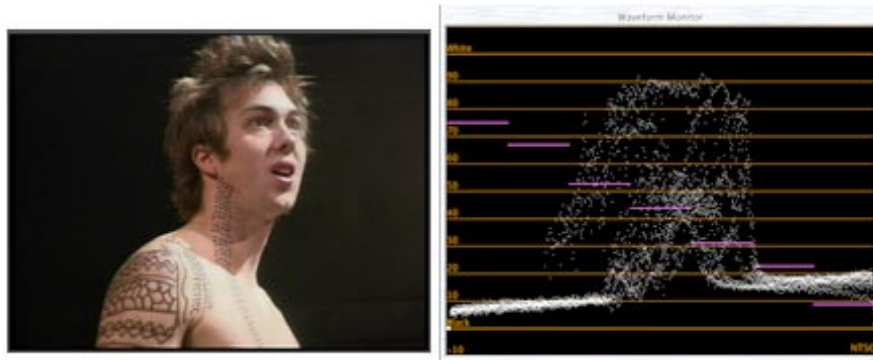
Here's an example. This close-up of a stage actor clearly shows the black background, and the close-up of his face in the center. (Images courtesy of Paul Jordan.) The heavy line slanting upward at the bottom of the scope is the dark gray of the background, with the fountain of pixels in the middle representing all the shades of gray in his body.

Notice that it is easy to see where his body is on the scope, but you can't use the scope to identify specific features. The waveform monitor only shows the specific gray-scale value of each pixel in the image, and provides its position only in terms of left-to-right. The waveform has no concept of a pixel being in the upper half, or lower half, of the frame.

Here's another example. This 3-shot shows three colorful actors. Notice how evenly the exposure covers the scope. There are whites, blacks and lots of different shades of gray. Remember, the height of the pixels on the scope represents their gray-level, with white near the top, and black near the bottom.

In general, images look better when they have lots of different gray levels, than when they all clump together.

If you are shooting DV, your levels will vary from digital black (measured as 0%) through to digital white (measured as 109%). If you are shooting Beta, your levels will vary from black at 0% to white at 100%. The area above 100% is called "super-white." If you are outputting to DV, this isn't a problem. If you are outputting for broadcast, you'll need to use the

scope to measure your levels as you adjust them, because they can't exceed 100%.

(For more information on working with white vs. super-white, read this article.)
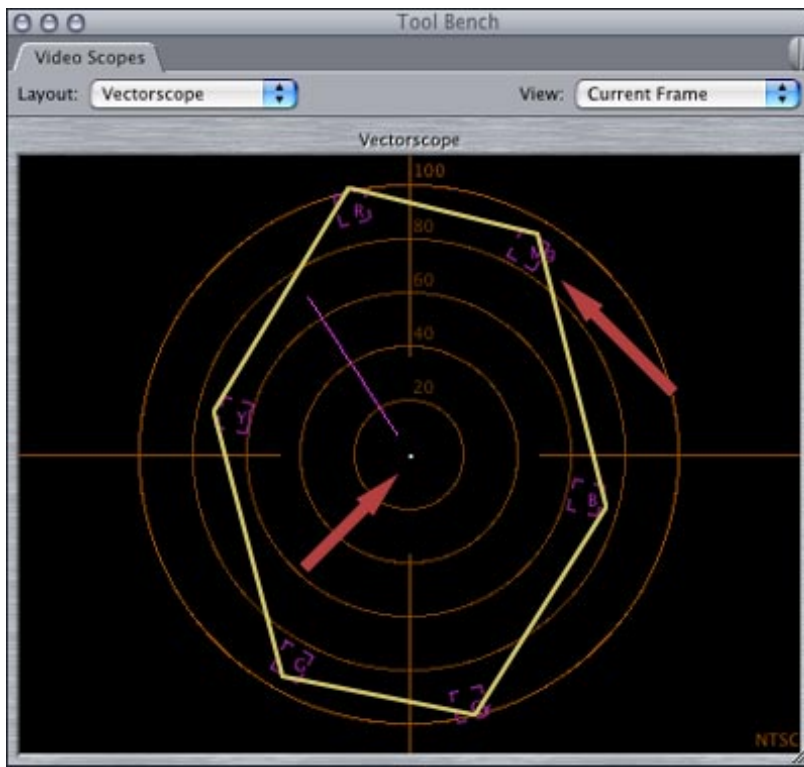
Vectorscope

However, the waveform monitor does not tell us anything about the color in a picture. For that, we need to use the Vectorscope.
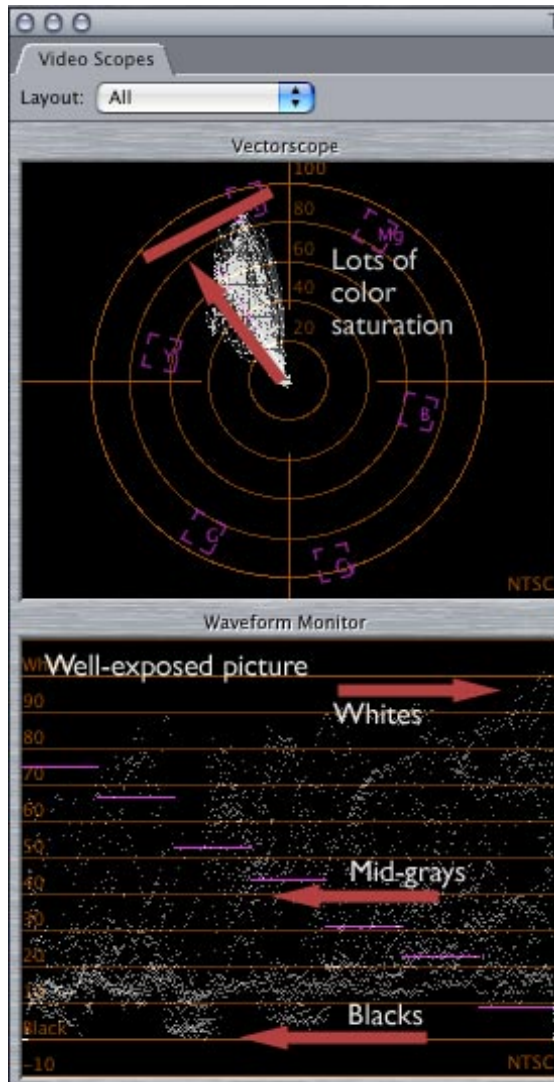
The Vectorscope shows colors in two dimensions: the shade of the color, represented by where the color falls around the circle and the amount of color, represented by how far the color is out from the center.

On the vectorscope, black, white, and all shades of gray are represented by a single dot in the center of the circle. A fully-saturated color would be out near the edge of the circle.

One of the real values in using the vectorscope is that it helps us keep our colors, "legal." Just as there are whites that are too white to be "broadcast-legal," so, also, there are colors which are too intense to be safe.

There are six boxes in the vectorscope, representing red (upper left), yellow, green, cyan (lower right), blue and magenta. A color can be considered "broadcast-safe" if it falls within a loosely-defined rectangle drawn by connecting the tops of each of the six color boxes in the vectorscope.

Highly saturated, but still safe, colors.

Here is our first example, again. Notice that the colors are saturated (radiating far out from the center of the circle) and skewed toward yellow-red.

Color with little saturation but right along the flesh-tone line.

Here's our second example, Notice the colors are much less saturated, though still pointing toward yellow-red, because the principal color in the shot is skin-tone.

One other things. See the purple line, at about a 45 degree angle from the top? This represents flesh tone. The magical thing about this line is that, in general, regardless of whether the skin of your talent is black, white, red, yellow or brown, their skin tone will fall on or near this line. This is because everyone has the same red blood under their skin, which provides the dominant color to skin. Knowing this makes color-balancing a whole lot easier.

Now that you know the basics of reading the two most important video scopes, you can use this knowledge to take your projects to the next level in quality.

Tips: FCP Tips from the Classroom

During a recent Final Cut Pro class, my students kept discovering new ways to get more out of FCP. In fact, it turned into a contest. Since they got so excited, I wanted to share these shortcuts with you. These work in FCP 4.1 and 4.5.

> *Jason:* If you want to trim an edit in multiple-frame increments, hold down the Shift key and type a period to trim downstream, or Shift-comma, to trim upstream. You can set the amount of frames trimmed using multiple-frame trimming in Final Cut Pro > User Preferences.

> *Matt:* If you want to create a new bin or sequence inside another bin, control-click on the folder into which you want to store the new bin or sequence and select, "New Bin," or "New Sequence."

> *Larry:* Double-clicking a clip's image in the Canvas will open it in the Viewer. This is the same as double-clicking a clip in the Timeline to load it in the Viewer.

> *Dan:* Typing the F6 key, followed by a number, moves the video patch panel (or targeting) selector in the Timeline to that track number. For example, typing F6 - 3, moves the left video patch (labeled V1) to V3 of the Timeline. F7, plus a number, targets the A1 patch and F8, plus a number, targets the A2 patch. (This is easier to see than to explain. Type F6, then 2, and watch how the V1 target track moves to V2.)

> *Jeff:* You can use the range selection tool (G-G-G) to select a range within a clip, then apply a filter to a clip. To have multiple filters overlap, select a range, apply a filter, then select another range and apply another filter. You can have an unlimited number of ranges, each with its own filter applied.
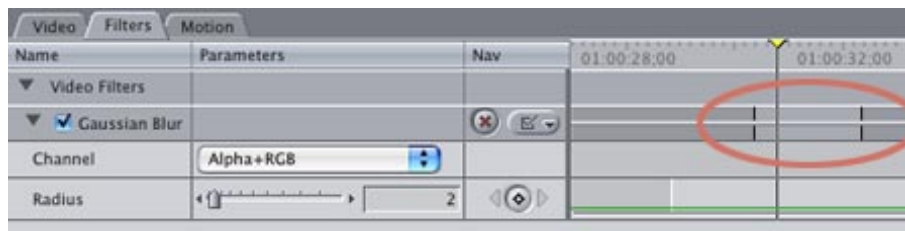
Dan: If you want to limit the range of a filter AFTER you've applied it, double-click a clip to load it into the Viewer and click on the Filter tab. Grab and drag the two black vertical lines at the top of the Filter to alter the range of the clip to which the filter applies.

Ain't education a wonderful thing?

Final Cut Pro Support Options Updated

If you are looking for support to keep your editing systems running smoothly with Final Cut Pro, I've recently updated a variety of support options available.

In addition to on-site training and support, I can now provide:

- Support contracts (both month-to-month and long-term)
- Telephone support
- Email support
- Remote computer support

Click here for more information -- or call: **(818) 879-5105.**

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Technique: **How to Stripe Tapes with Timecode**

Last month I wrote about why you might want to stripe your blank video tapes (though Mark Spencer disagrees, as you'll read in a minute). So, this technique explains how to stripe your tapes.

If you have a Firewire deck, or camera, and want to make sure you have continuous timecode and black recorded on the whole tape, you could simply load a new tape, press record and walk away. However, with a camera, the mike may remain hot and record a lot of audio you may not want to keep.

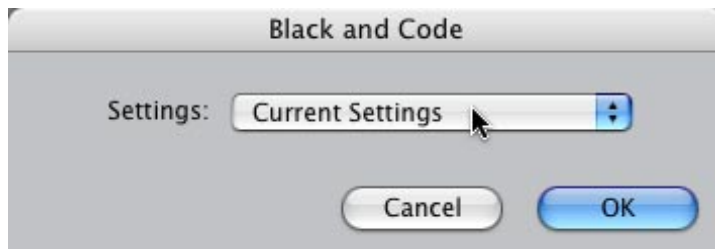Here's a better way: use the "Black and Code" button in the Edit to Tape window.

Connect your deck, or camera, and turn it on. Put in a new tape you want to erase.
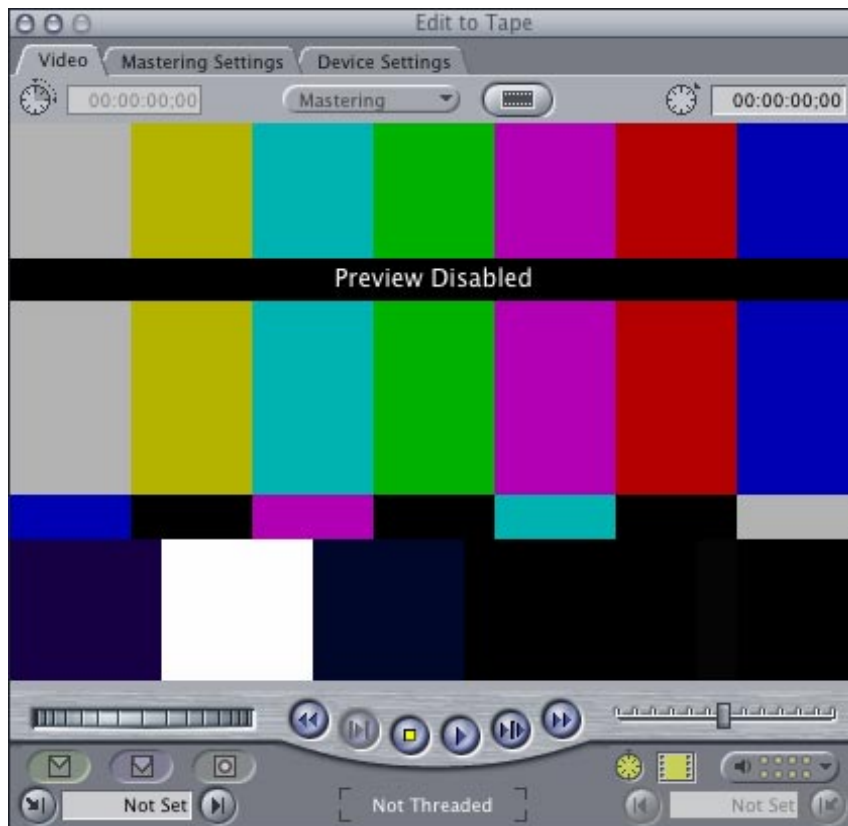
Then, open the Edit to Tape window.
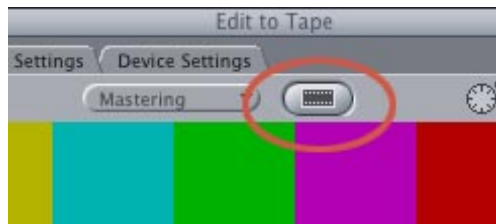
At the top center of the window is a SMALL icon that looks like a squashed bug. This is the "Black and Code" button. Click it.

The first dialog allows you specify the video setting you want to use. Select the setting that most closely represents your average sequence setting (DV NTSC 48K for the US, for instance.)

A second dialog will appear if you have a deck that allows setting timecode (which means virtually all Beta decks and very high-end DV decks), where you can specify the starting timecode for the tape, as well as whether you want it to be drop-frame, or non-drop frame.

You are about to erase the entire tape with black frames and time code, click OK to start.

Cancel   OK

Third, a warning dialog appears saying you are about to erase your entire tape. Click OK. Black and coding occurs in real-time. So, if you've loaded a one hour tape, come back in an hour, rewind the tape and you're ready to go.

Simple.

Reader Response: Striping Tapes.

While I am a big believer in striping tapes, Mark Spencer, an Apple-Certified Instructor in the San Francisco Bay area, is not. Here are his comments:

> I must disagree with you regarding striping of miniDV tapes.
>
> If you prestripe a miniDV tape it is true that when recording, the camera will pick up on the existing timecode that it sees. However, it will start with that timecode and then WRITE NEW TIMECODE from there on out. You'd think the new timecode would exactly match the prestriped timecode because they started at the same point, but you can easily get drift of a frame or two, enough to trip up FCP and create timecode breaks that are extremely hard to locate.
>
> If you don't prestripe, you save wear and tear on the tape and the deck/camera, and if you do get a timecode break it's easy to detect because the counter resets to zero.
>
> Let me know what you think.

- - -

Also, Tom Wolsky wrote in to provide an additional perspective:

> As far as striping the tape goes, this works well for DV, but should not be recommended for use with professional cameras. Most pro cameras have addressable TC so the the newly recorded TC may not match the underlying TC. Also professional cameras do not use the miniDV system of reading existing TC, rather they use record run, find the end of the previously recorded material and continuing recording TC from the last number the camera wrote. You'll often see inexperienced camera people using a pro camera, backing into existing material to pick up the TC and then wondering why there is a TC discontinuity, a jump in the timecode number. For a professional HD camera, prestriping is probably not a good idea, but it has nothing at all to do with lubricants.

- - -

Larry responds: In thinking about this issue further, I realized that when shooting video using professional-grade cameras, I don't stripe tapes, because I want to take advantage of setting the timecode in the camera so that the timecode hours reflect the number of the tape being shot (i.e. hour 2 = tape #2).

However, when shooting with DV cameras, I do try to stripe them prior to shooting. When doing post-production, I stripe both DV and professional-grade tapes when creating show masters.

If anyone has experience to back up Mark's comments, I'd like to hear from you.

Survey #3: What Version of FCP are You Using?

It's time for our third survey. This one asks what version of Final Cut Pro you are using. To take it, please click here:

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More Reader Responses

Regarding the [article update last month on Auto-Select](#), David Bogie writes regarding Lisa Brenneis' comment about all the "Special Rules" regarding how Auto Select works.

> "All these special rules," I could not have described the problem any better. Special rules do not make a job easier or a tool more directly useful. The concept and implementation of Auto Select indicate to me how far out of touch with their users FCP's designers have become.
>
> I can think of only two ways to make Auto Select useful: a) Turn it off, or b) Show a convenient grid of track lights in the Viewer that know the secret rules and clearly indicate where edits will occur.

- - -

Ed Yost points out a problem with FCP and field edits:

> When cutting between shots of episodes and an interview you will see what looks like a light flash or even a flash frame or one field when you are cutting on the cut of a previously edit piece. I've come to the conclusion this is none of the above, but, it is caused by cutting out of field dominance.
>
> I.E. you would normally be cutting each frame on field one (or two) but not one, two, one.

As I'm sure you know NTSC has two fields for every frame. And when a edited master is on-lined you must have that master be either field one or field two dominate or editing on all cuts either field one or field two but not both.

At most times you only see this as a problem when putting a cut too close to the edge of a cut from a previously edited master at which time you'll see it as a flash frame or one field of the previous shot.

However, the above described flashing is also caused by source masters being opposite field dominance.

Most online facilities correct for this and my experience with Avid is there is a way to monitor this and correct for it.

Here is my question: Can FCP see each field and can this be corrected? Can you slip a edit one field?

Larry responds: In my recent conversations with Apple engineers, they told me that FCP does not provide field edits, nor allow you to select on which field an edit will occur. This is something they are considering for the future.

- - -

Finally, Tom Wolsky wrote to clarify the [Replace Edit technique](#) in last month's issue:

Replace edit ignores any marked I/O either in the Timeline or in the clip in the Viewer. It simply executes the edit based on the current frame under the playhead in the viewer and in the timeline.

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Article Update: Organizing Your FCP Projects

A few months ago, I wrote an article about how to archive your Final Cut Projects. It was very well received, but, somehow, something still bothered me about it. As time went by, I realized I was really disagreeing with what I first wrote.

Finally, I couldn't stand it any longer -- so I significantly rewrote the article.

Read the new, revised version here, under a new title: [Organizing your FCP Projects.](#)

Article Update: Tips on Multi-Channel Output

I was wrestling recently with a 4-channel DigiBeta audio output from Final

Cut and could not get it to work properly. When I finally DID get it working, I re-read my article on multi-channel output and realized that I'd left out a significant step.

So, if working with more than the standard two channel audio output is important to you, spend a few minutes reading this updated article: Tips on Outputting Multi-channel Audio.

Survey #4:
How many Final Cut edit stations are in your facility?

It's time for our fourth, and final, survey. This one wants to know how many Final Cut edit stations are in your facility.

During the next month, there will be new surveys posted to the web site about once a week. So, check back from time to time to see what's new.

Here's the commercial that supports this newsletter.

I provide system design, consulting, editing, training and support for Final Cut Pro and DVD Studio Pro.

If you need help, I'd appreciate it if you would give me a call, (818) 879-5105, or send me an email -- larry@larryjordan.biz.

Here's my list of the services. My client list speaks for itself.

Thanks.

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Wrap-up

Well, that's it for this edition of the newsletter. Let me know what you think, and tell your friends to subscribe.

Planned for next month (and, yes, this changes even AFTER the last minute - as long-time subscribers have noticed):

- Using the Pen tool to smooth curves and improve motion graphics
- Tips on outputting OMF for audio sweetening
- Compressor settings for better looking DVD video
- Another "Client Report"
- Reader feedback -- so send your comments in!
- And more.

Thanks -- and have fun editing!

Larry

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