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Monthly Final Cut Newsletter!

Newsletters

Larry's Final Cut Newsletter

Editor: Larry Jordan
Issue #25 - May, 2006

Welcome to the latest edition of my monthly Final Cut Pro newsletter. This is the May, 2006, edition.

The goal of this newsletter is to provide information helpful to the professional user of Final Cut Pro. This newsletter publishes each month. Past issues are not archived. However, key articles are posted on my website for your reference. All software references are to Final Cut Pro 5 unless otherwise noted.

Please invite your friends to visit my website -- www.larryjordan.biz. We now have over 100 tutorials to help you get the most out of Final Cut!

Newsletter Contents

- [Introducing Edit Well](#)
- [Commentary: NAB 2006](#)
- [Update tidbit](#)
- [New! On-line seminars](#)
- [Improving the look of your graphics and text](#)
- [Special Pricing: Final Cut training on DVD](#)
- [Last month's poll - Least used features](#)
- [This month's poll - Wha'cha' gonna buy?](#)
- [Warning: Text Size in Motion differs from Final Cut](#)
- [Technique: Anchor point tricks](#)
- [Reader mail](#)
- [Wrap-up](#)

Introducing *Edit Well* -- the Interactive Newsletter for Final Cut Studio

We produced our first test issue in January. Now, after six months of planning and polishing, we have partnered with Peachpit Press to create: ***Edit Well***.

Each month's issue is delivered on-line, in PDF format, and includes articles, audio interviews, video

tutorials and lots and lots of tips and techniques for the serious Final Cut user. I have the pleasure of being the Editor of this brand-new, on-line publication.

Best of all, the first issue is **FREE!**

I strongly encourage you to go to www.editwell.com and sign-up to receive the first issue. In it, you'll find articles from Tom Wolsky, Philip Hodgetts, Kevin Monahan, Mark Spencer, Bruce Nazarian and myself. Stories and information you won't find anywhere else -- including this website -- presented in a visual, entertaining, and knowledgeable way.

Plus, the first issue features an extensive audio interview with Paul Saccone, product marketing manager for Final Cut Studio, from the floor of NAB, as well as a video tutorial showing you specific techniques you can use to optimize your computer system for Final Cut.

The premiere issue is scheduled to release May 12, with new issues appearing monthly thereafter. The introductory subscription price for 12 issues is \$59.99.

[Click here to learn more \(www.editwell.com\)](http://www.editwell.com) -- and sign up for your free issue.

Changes to this newsletter

The benefit to editing a newsletter that has a budget is that I can hire the best Final Cut writers in the world to create a truly great publication. This is a real treat and I'm enjoying the opportunity.

Just because I am launching Edit Well doesn't mean this newsletter is going away. It isn't. But it is changing. Edit Well is subscription-based and each issue features several Final Cut experts sharing their knowledge about the different applications in Final Cut Studio. My feeling is that the Final Cut community will support a paid newsletter that delivers on its promise to provide timely, authoritative, well-written information you can use to improve your skills.

This newsletter will continue to be written solely by me. It will continue its tradition of providing tips, techniques, polls and commentary, but it will focus on reader mail and comments. It's my hope that these two publications can work hand-in-hand, with Edit Well presenting the in-depth articles, analysis, audio interviews, and video demos; with this newsletter allowing time for follow-up discussion.

[[Go top](#)]

Commentary: NAB 2006

By now you've read all the press coverage of the event and discovered that Apple did not announce a new version of Final Cut -- though they did spend a lot of time showing their latest version, 5.1, running on a MacBook Pro laptop.

While at NAB, I created two audio reports that were posted to my website:

- Tuesday - featuring excerpts of the Paul Saccone interview and thoughts on the show
- Friday - featuring different Saccone excerpts and highlights of the Super User Group meeting -- including a seriously-over-excited Michael Horton describing the crowd.

[Click here](#) to listen to Tuesday's report -- Quicktime movie, 3.3 MB -- 5:57 minutes. (Takes a minute to load.)

[Click here](#) to listen to Friday's report -- Quicktime movie, 6.2 MB -- 9:02 minutes. (Takes a minute to load.)

Philip Hodgetts wrote a great analysis of NAB trends for Edit Well -- remember that first issue is free -- but I wanted to chime in with my own two cents, because I saw four trends that are worthy of mention:

1. [Proliferating video formats](#)
2. [CRT monitors being replaced by LCD displays](#)
3. [Tapeless acquisition](#)
4. [Tremendous vitality in the FCP community](#)

Proliferating Video Formats

I walked past a camera manufacturer's booth that had a sign hung over their camera saying "Shoots 21 different formats!" as if that was something to be proud of.

Do you remember the old days when we struggled to deal with NTSC and PAL? The new Panasonic P2 camera shoots 81 different combinations of video formats, frame sizes, and frame rates! That's just plain way too many.

This last weekend, I spent an hour and a half on the phone with a client helping them figure out how to integrate pictures from a Sony and Panasonic camera. The brave new world into which we are rapidly plummeting is one where no two cameras seem to speak the same language.

As video editors, we are rapidly approaching the point where we are no longer bound by our creative ideas, but find ourselves restrained by how fast our editing software can be upgraded to support the latest incompatible camera format.

I'm all for "new and improved," but right now I'm feeling like technology is running amok. Do we REALLY need all these different formats? Are any of the manufacturers taking notes on the HD-DVD / Blu-Ray mess? I mean, wouldn't it be nice to pick a camera for the quality of its images without having to worry about whether it's possible to edit those images afterward?

Based on what I saw at NAB, the answer is a resounding: nope!

Sigh...

LCD Monitors are Taking Over

I met with a Panasonic rep in their booth at NAB who gets extra points for honesty and forthrightness. I have been troubled for a while with the trend of replacing CRT monitors with LCD monitors. So, I asked him why this was happening.

He told me that there is only one manufacturing plant in the world who is making the phosphor-coated glass necessary for video monitors. Consequently, they are scrambling to convert to LCD.

The problems with LCD monitors are that they don't show accurate color -- at least for a price that mere mortals can afford; and they don't show interlacing. (Interlacing is that wild flickering you often see on still frames or still images that shows up on your TV set, but never on your computer monitor.)

Based on a quick survey, the only manufacturer that currently sells CRT monitors is JVC -- their TM-H150G monitor is VERY nice, and affordable). Sony and Panasonic are both exclusively LCD.

If you plan on working in an interlaced format -- whether NTSC, PAL, or 1080i -- you need a monitor that displays interlacing. That excludes LCDs. Take a look at the JVC and see if it meets your needs.

Tapeless Acquisition

Just before I left for NAB, **Chris Hayner** sent me the following:

If I was to use either Firestore or DV Rack, how would I go about archiving at the end. Since there wouldn't be a batch list or physical tapes to recapture from? Would I have to transfer the files to a miniDV tape and some how make a batch list later? Any thoughts?

Chris, that is the \$64,000 question!

Whether we like it or not, camera manufacturers are moving to tapeless acquisition because they like the flexibility and weight-savings that tapeless provides. What they haven't done is figure out how we are supposed to archive all the footage we are collecting.

Copying your footage back to MiniDV tape only works if you are shooting DV. (By the way, be sure to use tape specifically labeled to support HDV -- MiniDV tape may not have the necessary bandwidth to support HDV.)

I am not a fan of archiving projects on hard disks. My garage is full of hard disks that no longer connect to my computer. Hard disks are great for short- and medium-term storage, but not long-term.

At the show, Rimage (www.rimage.com) was showing a Macintosh-based archiving system in conjunction with its partner, Perennity (www.perennitysoft.com). This system backed-up data to optical disk and allowed files to span multiple disks. Perennity provides media management and cataloging. The big benefit was that files are stored in native format, so they can be easily located and copied from optical media to your hard drive.

Quantum (www.quantum.com) was showing its SDLT 600A tape storage system, also Mac-based. Each DLT tape stores 300 GB of data and backs up at the rate of 36 MB per second. The big benefit was that Quantum has been around since forever, as has the DLT format.

However, both systems were pricey -- hovering around the \$8,000 mark, excluding media. These prices make it hard for the individual editor, or small project studio, to afford adequate backup.

FCP is Everywhere

In spite of my grumbling, there was lots of good news -- led by Apple's announcement that they have over 500,000 FCP users around the world. Plus, it seemed that everywhere I went on the show floor, Final Cut was demoing new products.

This tremendous vitality in Final Cut is vastly reassuring as we make the transition into High-Def. FCP is not relegated to some small corner, but is, instead, front-and-center as NLE editor of choice. This means that we can look forward to more choices and more products that support Final Cut, rather than looking nervously over our shoulder waiting for the other shoe to drop.

I'm reminded of that ancient Chinese curse: "May you live in interesting times." Whew! They just can't get more interesting than this.

[[Go top](#)]

Update tidbit

If you are waiting to upgrade to OS 10.4 based on my opinions, I am now satisfied that upgrading to OS 10.4.6 is fine for running FCP. I would strongly urge, however, that if you are running FCP HD, that you remain on OS 10.3. Make sure, if you are running any capture cards or RAID's that they are approved for the OS version to which you plan to upgrade. Make sure of this BEFORE you upgrade your system.

Also, while the jury is still out on FCP 5.1, I am not hearing any major complaints. I've ordered my copy, but my disks have not arrived yet.

Notable Quote

Dave Muehsam, a long-time reader in Pennsylvania, writes:

Perusing one of my old tractor books the other evening, I found a 50 year-old quote that nicely sums up your philosophy on software upgrades. The John Deere Company joined forces with their long-time rival McCormick Deering Company in trying to persuade farmers to give up their horses in favor of tractors. As a kind of compromise point between the farmers and the techno-geeks the following saying was born: "Be not the first by which the new is tried, nor the last to lay the old aside." Apropos.

Larry Presents His Final Cut Seminars On-line!

Since we finished our Winter Seminar Tour, I've had a lot of requests for more training from around the world. Our staff is currently working on two seminar tours -- one a six-city tour in Australia and the other a twelve-city tour in North America, both later this year.

However, our Winter Tour didn't begin to meet the need. So, I'm delighted to announce that we are now offering web-based seminars!

Our first event is **Monday, May 22**, and shows you how to optimize your system for Final Cut. This hour-and-a-half event allows you to watch, learn, *AND* ask questions.

We are offering it twice: **10:00 AM** California PDT and **6:00 PM** PDT.

This is very cool stuff -- world-class training brought directly to your web browser. We've been testing this for the last month and I'm really excited to be working with this new technology.

To learn more about the agenda, and to register, click here: www.larryjordan.biz/sem/webinar.html

[[Go top](#)]

Article: Improving the Look of Your Graphics and Text

Video is really, really good at showing motion and emotion. It's not so good at displaying text.

One of the discouraging facts of life is that we create all these great graphics on our computers only to see them destroyed when they get transferred to video. (Well, OK, maybe not destroyed, but really, really different.)

Is there anything we can do to change this situation? Well, um, no. But, there are things you can do to improve the look of your graphics and text when they are displayed on video. And that's what this technique is about.

First, I'll explain how video and computers are different, then wrap up with a series of specific suggestions you can use to improve the look of your text.

In the beginning

Video was invented about forty years before computers; which means that computers were able to improve on the lessons we learned during the development of video. Because of this, there are six major differences between graphics on video and graphics on the computer. Keeping these in mind will help you improve the look of your text.

These seven differences are:

- Video is fixed resolution, computer resolution varies
- Video displays interlaced images, computers display progressive images
- Video gamma is different from computer gamma
- Video white is grayer than computer white
- Video uses YCrCb colors, which are more restrictive than the computer's RGB colors
- Video colors are not as precise as computer colors
- Video pixels are rectangular, the computer's are square

Let's take a look at each of these and see what problems they cause.

Fixed Resolution

Regardless of the size of our video monitor, all SD video is 720 x 480 pixels (720 x 486 for you broadcast types and 720 x 576 for PAL). If you do the math, this works out to about 0.3 megapixels -- a far cry from even a cheap digital still camera's 4, 6 or 8 megapixels.

This limited number of pixels means that your image quality varies by screen size. The bigger the screen, the grainier the image. Also, because there are so few pixels, lines that are nearly horizontal or vertical will show serious "stair-stepping," in a way that the same line on the computer will not.

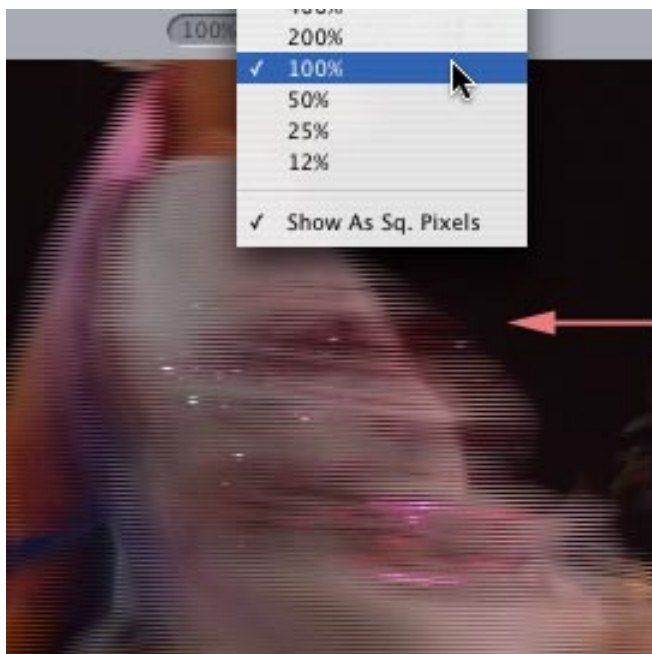
This means that, graphically, we need to avoid using very fine detail or lots of thin or swirly lines. Video just doesn't have enough pixels to draw the image accurately.

Interlacing

NTSC, PAL, and some HD formats are interlaced. This means that while we see many complete images each second, each image, or field, is not complete in and of itself. Instead, the video monitor displays the image in two parts -- first all the odd lines of the image, then all the even lines.

This means that in the US, we are not seeing 30 images per second, but, instead, are seeing 60 half-images per second. These "half-images" are called "fields." (PAL displays 25 images per second, composed of 50 half-images, or fields.) Essentially, interlacing means that the vertical resolution of our image is instantly cut in half, because we are only seeing 1/2 the image at any given instant.

The result of using fields is that we have even less image data to work with. Thin lines flicker wildly because they are in one field, and not the other. Curved lines look even more stair-stepped. A moving object has weird horizontal lines radiating out from each edge that you can see on the computer, but not on the video monitor.



FCP suppresses displaying interlace lines UNLESS you show your image at 100% size in either the Canvas or Viewer. This picture illustrates what interlacing looks like; the red arrow points to the horizontal interlace lines.

Video gamma is different from computer gamma

This was illustrated in a message from Joe Sphinx:

Hey Larry, this sounds like a stupid problem, but I'm having an FCP 5 problem. I captured hdcam material via decklink card in FCP 5 at dv resolution for offline. then wanted to export stills from the timeline as uncompressed tiffs with quicktime conversion. when having done this, pics come out darker than what is represented on timeline and external monitor. Any ideas around this?

Larry replies: Yup. The computer does not display the same color levels as video. Each use a different gamma (or mid-tone gray) setting. The standard gamma for the Mac is 1.8. The standard gamma for video is 2.2, which is darker than 1.8. You can compensate by load your stills into PhotoShop and setting the mid-tone gray setting in Levels to 1.2. However, don't change the gamma setting on stills you want to reimport into your FCP project, or they won't match your existing footage.

TV White is Actually Gray

Video was invented in an analog world -- computers are digital. Consequently, they don't use the same black and white points.

Digital black is displayed at 0% on FCP's Waveform monitor. Digital white is displayed at 109%. ([Here's a good article on how to read scopes.](#))

However, digital black to white is too great a range for analog video, which include broadcast and DVD duplication. When you are creating graphics or text for video, set your black level to zero on the Waveform monitor, but keep your white level to 92% (235 in PhotoShop's color picker).

This is called keeping your white levels "broadcast safe." You can clamp your white levels to the correct value by applying the Broadcast Safe filter (**Effects > Video Filters > Color Correction > Broadcast Safe**).



You can tell if your white levels are too hot by selecting either the Canvas or the Viewer and choosing **View > Range Check > Excess Luma**. If you see a yellow warning triangle, your white levels are too hot. A green check-mark means they are OK.

You can see this, as well, by looking at your video on the Waveform monitor. If any white pixels are above the 100% White line, your white levels are too hot.

Excess white levels will cause white text to shimmer, tear, or break-up. It can also cause a buzz in the audio. It also means that your video will be rejected for broadcast, as well as by most cable outlets and duplication facilities. You'll need to reduce your white levels and re-output.

Shooting, editing, and outputting on DV -- since that is all digital -- does not require clamping, or restricting, your white levels to 100%. However, if you then compress your file for DVD, you'll find that the process of compression converts your images into a broadcast safe format, which may, or may not, give you the

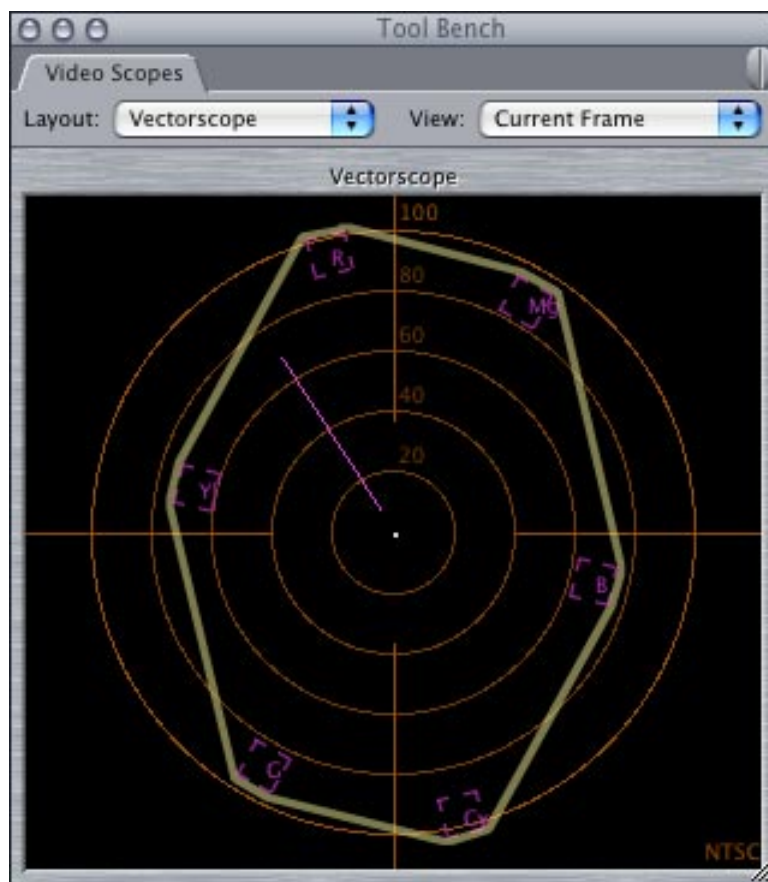
results you expected.

Video can't display as many colors as your computer

Computers use an RGB color space, digital video uses YCrCb (analog video uses YUV). Both video color spaces are more restrictive than the computer. In other words, you can easily create colors on the computer that can't be displayed in video. Saturated yellows and blues come instantly to mind.



You can tell if your chroma levels are too hot by selecting either the Canvas or the Viewer and choosing **View > Range Check > Excess Chroma**. If you see a yellow warning triangle, your white levels are too hot. A green check-mark means they are OK. (These symbols look remarkably similar to the white level symbols I just discussed -- that's because they are.)



You can see this, as well, by looking at your video on the Vectorscope. If you connect the tops of the six targets, representing the six primary and secondary colors, if any white pixels exceed the boundaries of that rectangle, your chroma levels are too hot.

Excess chroma levels, like excess white levels, will cause colors to shimmer, tear, or break-up. It can also cause a buzz in the audio. It also means that your video will be rejected for broadcast, as well as by most cable outlets and duplication facilities. You'll need to reduce your white levels and re-output.

Video colors are not as precise as computer colors

Through a process called "color-sampling," the colors of adjacent video pixels are averaged to reduce file size. The problem with color sampling is that the quality of your image is often degraded. Worse, it gets harder to pull a clean chroma-key, or to do good color correction.

Here are two articles on my website that describe this problem in more detail:

- [DV, Color Space and Chroma-keying](#), by Larry Jordan
- [What is Color Sampling](#), by Graeme Nattress

The key issue with color sampling is that we don't have the same precision with color in video that we do with the computer. This is, generally, not an issue when we are shooting pictures, but becomes a significant concern when doing effects compositing, color correction, chroma-key, or adding text.

Video pixels are rectangles

Of all the problems between computers and video, this one causes the most confusion. While most High-Def video uses square pixels, NTSC and PAL do not. Both are rectangles, an NTSC pixel is tall and thin, while a PAL rectangle is short and fat.

This means that when we create graphics on our computer, we sometimes need to take this into account. I say sometimes because Final Cut is inconsistent in how it deals with imported graphics. Here's the scoop: if you are creating single layer graphics, such as scans or text supers, to import into FCP, you must adjust your image size for the difference between square and rectangular pixels. If you are creating multi-layer PhotoShop graphics, you don't.

Here's a table that will help you better plan your images. This assumes you want all images imported full-screen with no moves on the image. (These numbers came from Apple's web site.)

Video pixel dimensions

Video format	Single layer	Multi-layer	Video image
DV (4:3)	720 x 540	720 x 480	720 x 480
DV (16:9)	853 x 480	720 x 480	720 x 480
SD (4:3)	720 x 547	720 x 486	720 x 486
SD (16:9)	853 x 486	720 x 486	720 x 486
PAL (4:3)	768 x 576	720 x 576	720 x 576
PAL (16:9)	1024 x 576	720 x 576	720 x 576
DVD (4:3)	720 x 534	720 x 534	720 x 480
DVD (16:9)	853 x 480	853 x 480	720 x 480

Sigh... It's enough to drive you completely nuts.

By the way, if you want to create an SD image for camera moves, a size that I recommend is 1800 x 1350 x 72. This works great for moves on scanned images.

HDV is a special case

Joe Ruscitto writes:

I would like to ask you some further questions concerning HDV. I still am somewhat confused, about still photographs that are going to be imported into an HDV project. What am I resizing these pictures to? Is it 1440x 1080 or is 1920 x 1080. These stills have been scanned at a high resolution so they do need to be resized for FCP. Are we also dealing with square and non-square pixels?

The other question concerns some if the footage was shot DV 16x9. Should I be capturing using the NTSC DV anamorphic codec. That is somewhat confusing to me. How will this cut together in the HDV sequence. The aspect ratio will still be 720 X480. Does this footage have to be scaled up to be compatible with the HDV footage in the sequence?

Larry replies: I TOLD you this was a mess!

- HDV uses square pixels. If you want to import an image into an HDV sequence, size it to 1920 x 1080 x 72
- To capture DV 16x9, select the ""DV NTSC - Anamorphic" Easy Setup in FCP 5
- To combine DV and HDV footage on the same timeline, you need to decide if you want to output HDV or DV. Whichever you decide, the other format will need to render before it will play back. Up-rezing DV footage to HDV will NOT make it look better.

Tips to Improve your Text

So, given all these constraints, it's a wonder we can create anything on our computers that displays properly on video. But, we can. And here are some tips that can help.

1. Avoid lines thinner than 4 pixels, they will flicker
2. Avoid lines that are almost horizontal or almost vertical, they will stair-step
3. Avoid fancy, curvy fonts like Harrington, Chancery, or Savoye
4. Avoid fonts with very thin bars or serifs, such as Engravers, Baskerville, or Modern
5. Avoid point sizes smaller than 24 points
6. Avoid saturated colors, use the Vectorscope if you are unsure
7. Avoid whites brighter than 92% (235 in PhotoShop)
8. Always use drop shadows on any text you want your viewers to read
9. Always keep any text you want viewers to read inside Title Safe
10. Keep text on screen long enough for you to read it three times.

Remember that text *a/ways* looks better on your computer screen than it does on a TV set. So, if you can't read it inside Final Cut, your viewers won't be able to read it either.

Special Pricing on all Final Cut Training DVDs

I am delighted to announce that we are now offering special \$99 pricing on all our Final Cut training DVDs for the month of May. This is a savings of \$50 per title!

- Essential Editing - \$99 ([click for contents](#))
- Essential Effects - \$99 ([click for contents](#))

- Beyond the Basics - \$99 ([click for contents](#))



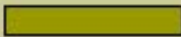

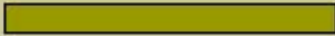




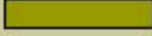



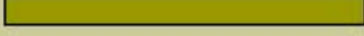
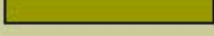
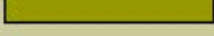
Thanks to a special arrangement with Lynda.com, the publisher of all our DVD titles, we are able to offer these prices through the end of May. If you've been interested in taking your Final Cut skills to the next level, this is a great time to start -- and you save money!

[Click here to go to our store to learn more \(www.larryjordan.biz/store/index.html\)](http://www.larryjordan.biz/store/index.html)

[[Go top](#)]

Last month's poll -- Least used features

Last month, I tried something a little different -- asking you what your least used features of Final Cut were. With almost 400 responses, XML export led the pack, or whatever the analogy is when you do something less than anything else. Um, anyway, here are the results:

What Final Cut feature(s) do you use LEAST (pick up to five)?			
		Percent	Votes
Media manager		5%	93
Render manager		3%	57
Channel filters		6%	95
Distorting a clip		3%	59
Changing clip timecode		11%	178
Making clips offline		6%	97
Auto-Save Vault		1%	30
XML export		14%	229
DV Start/Stop Detection		7%	114
Audio Peak Detection		5%	82
Variable speed changes		2%	40
Composite modes		1%	26
Video scopes		2%	41
External control surfaces		12%	192
Customize buttons		7%	118
Customized keyboard		7%	124
Other		0%	7
Total Votes			371

Other	0%	7
Total Votes		371

The top (bottom?) six features are:

1. XML Export
2. External control surfaces
3. Changing clip timecode
4. Customizing the keyboard
5. Customizing buttons
6. DV Start/Stop detection

Why, who knew such disuse lurked amidst all the menus of Final Cut?

Thanks to everyone for responding -- I always enjoy looking over these results. If you want to see the results of past surveys, [click here](#).

This month's poll - Wha' cha' gonna buy?

With Apple's transition to Intel processors, plus the increased speed they provide, this month I'm interested in learning what's the next computer you plan to buy, that is, when the time comes to upgrade your Final Cut system.

Not all these systems have been announced, so don't call me asking where to buy one.

I'd like to learn how many of you plan to edit on laptops -- which are more than fast enough to edit DV -- versus tower systems. And with even the lower-cost systems more than fast enough to edit video, I'm interested in learning whether there is a significant interest in using the entry-level systems for editing.

Here's what the survey looks like:

#27 - Upgrading to Intel/Mac

What computer are you thinking of buying, when you next upgrade your Final Cut system? (Not all these systems are announced.)

- Already purchased an Intel/Mac
- iMac (Intel)
- Intel/Mac iBook
- MacBook Pro (laptop)
- Intel/Mac tower
- No plans to upgrade this year

Vote

Click here to vote in this month's poll: <http://www.pollmonkey.com/p.asp?U=7265528827>

[[Go top](#)]

Warning: Text size in Motion differs from Final Cut

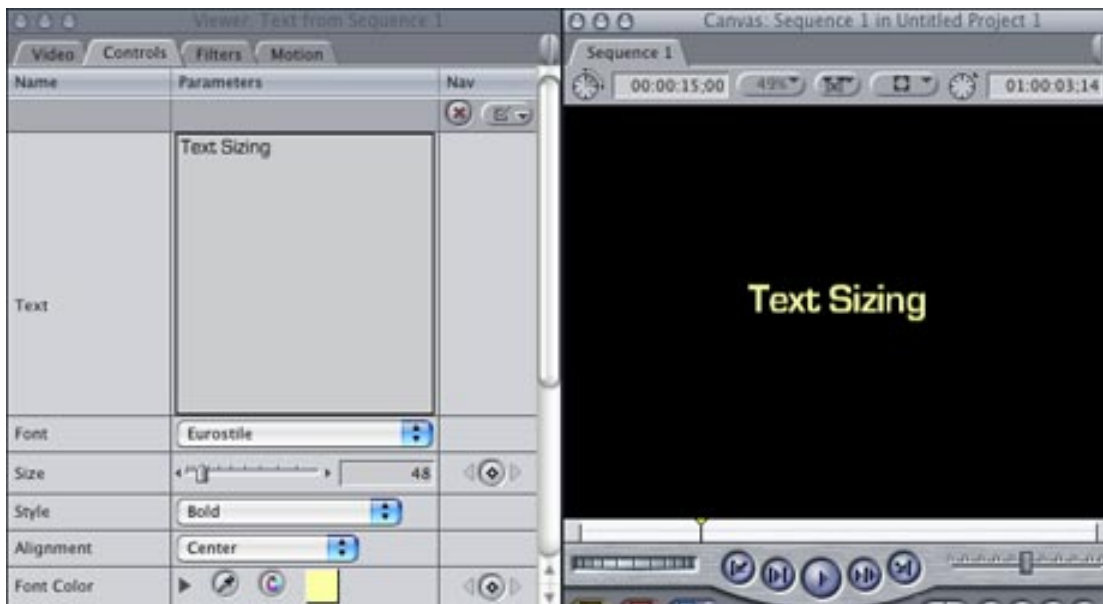
This warning started innocently enough when a client handed me a puzzle: Text created in Motion does not match the same text created in Final Cut.

Let me prove this with a test.



Open Motion and create a text field. Enter some text, say "Text Sizing." Set it to Eurostyle - Bold - 48 points, leave tracking and line spacing set to 0. Make a point to center the text in the middle of the Motion project.

Save your Motion project, so you can open it in Final Cut.



Now, open Final Cut Pro (I'm using version 5.0.4) and create a text clip with the exact same specs. (I made it yellow so you can see it easily in this comparison.) Make a point to place the clip at an origin of 0,0 -- dead center in the frame.



Superimpose the two clips and, voilà, the two text clips DON'T match! Not only are the fonts different sizes, but they are in different parts of the frame.

This flies in the face of everything I ever understood about the commonality of fonts on the Macintosh. Fonts have always matched between applications -- but, somehow, between these two, they don't. Final Cut fonts are both smaller and lower.

Be forewarned.

[[Go top](#)]

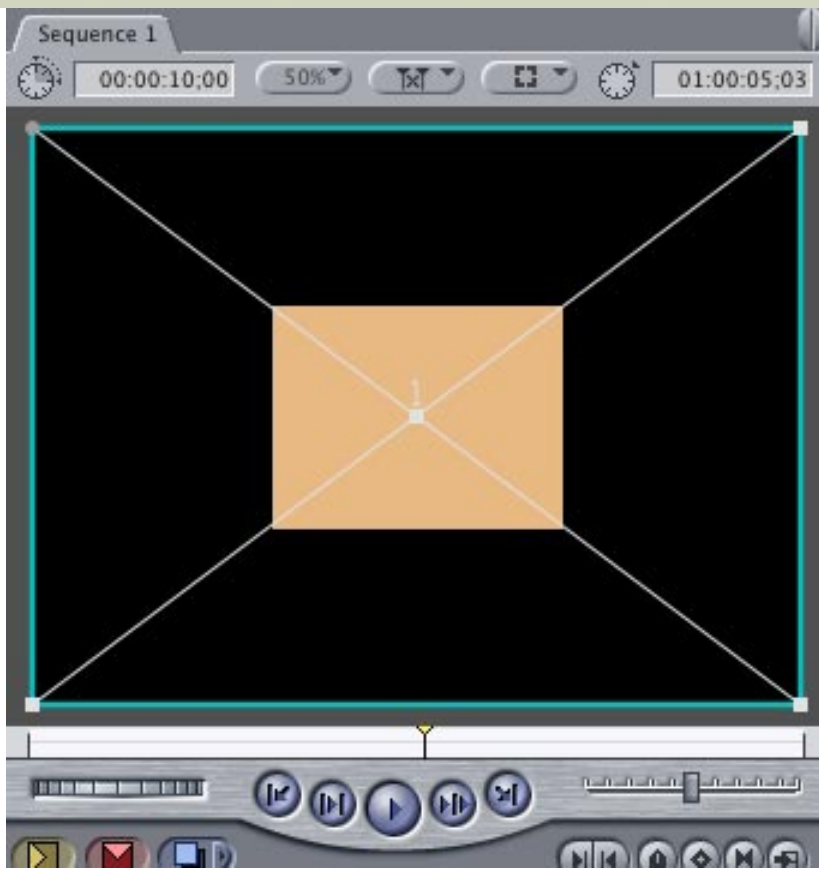
Technique: Anchor Point tricks

This next tip was sparked by an idea suggested in "Advanced Color Correction and Effects in Final Cut Pro 5," written by Alexis Van Hurkman and DigitalFilm Tree.

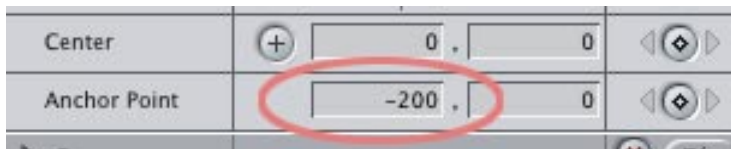
Have you ever wondered what the Anchor Point does in the Motion tab? Well, I always thought of this as the point around which an image revolves. While true, the anchor point actually does a lot more -- it is the point around which "all motion parameter transformations are centered."

Hmmm..., I wondered, what that means in English?

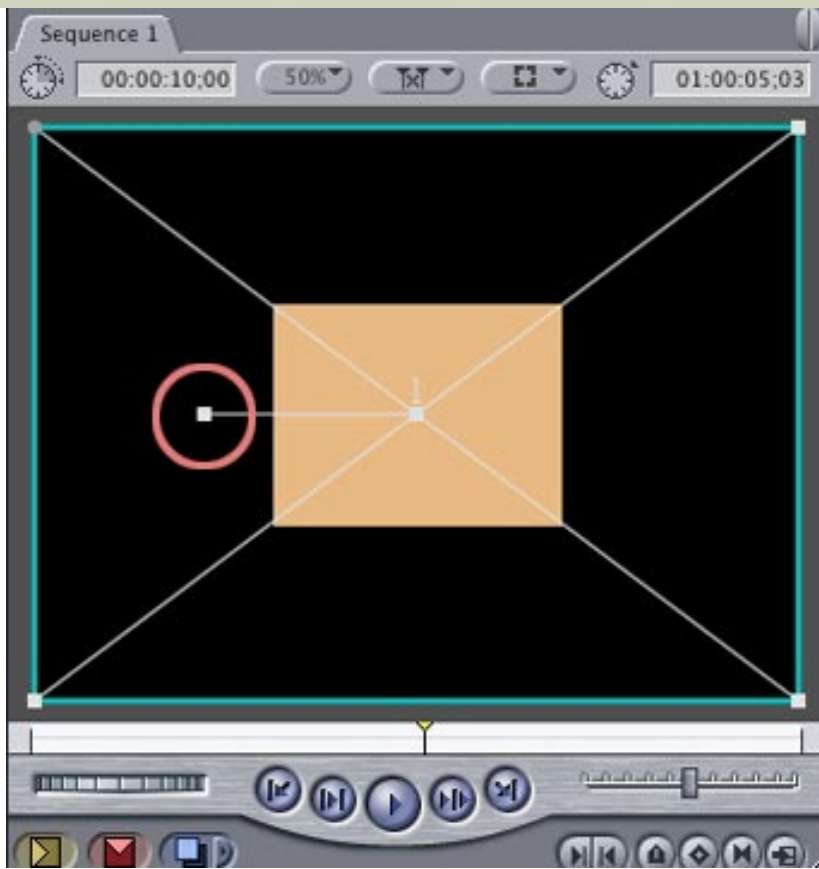
Well, let's play for a few minutes and discover what this can do.



I have created a rectangular shape and colored it tan because I was tired of white. I then edited it to the Timeline and double-clicked it to load it into the Viewer. Then, I selected the Canvas and, from the View menu in the Canvas, chose "Image + Wireframe." (Yes, there are other ways to do this, I just wanted to show you something different.)

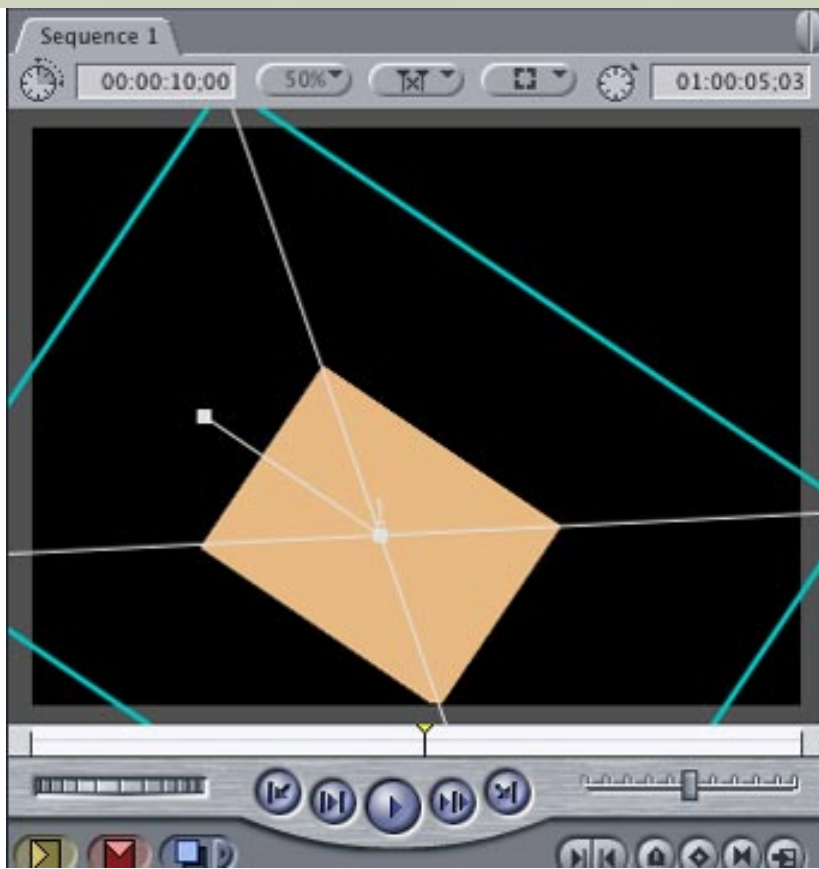


Click the Motion tab and change the setting in the LEFT anchor box to -200.

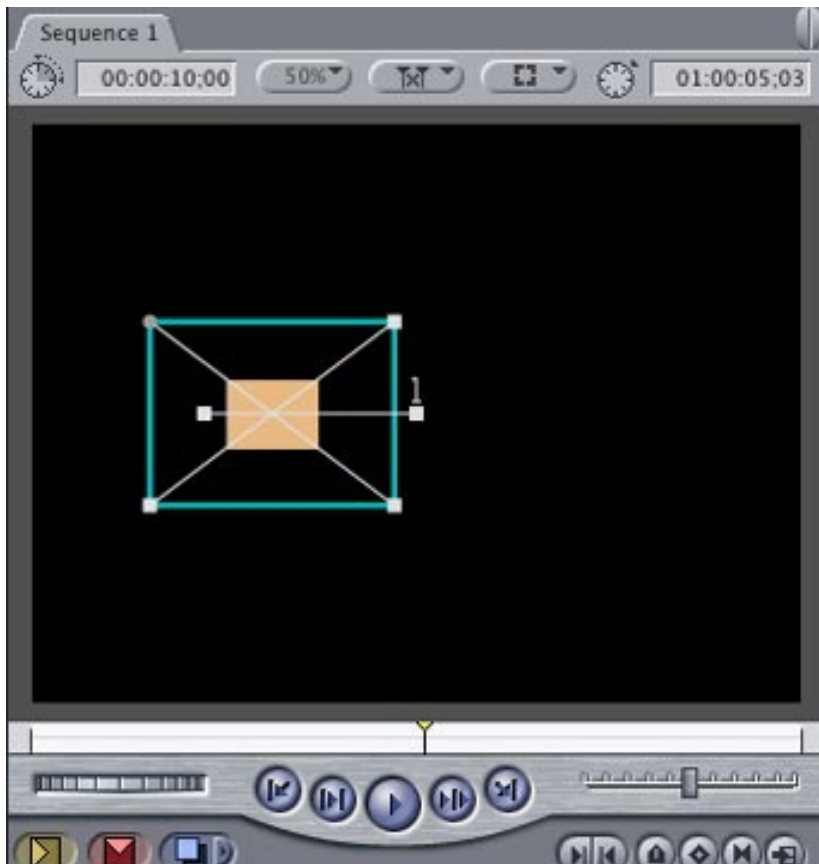


Notice that a new white dot appears in the Canvas with a line connecting it to the center of your image. This new dot is the anchor point. You can grab the anchor point with your Arrow tool and drag it anywhere you'd like. (If you don't see the white dot, be sure the clip is selected in the Timeline.)

When you are done dragging, reset the Anchor boxes so they read -200, 0. Make sure the clip is still selected in the Timeline.

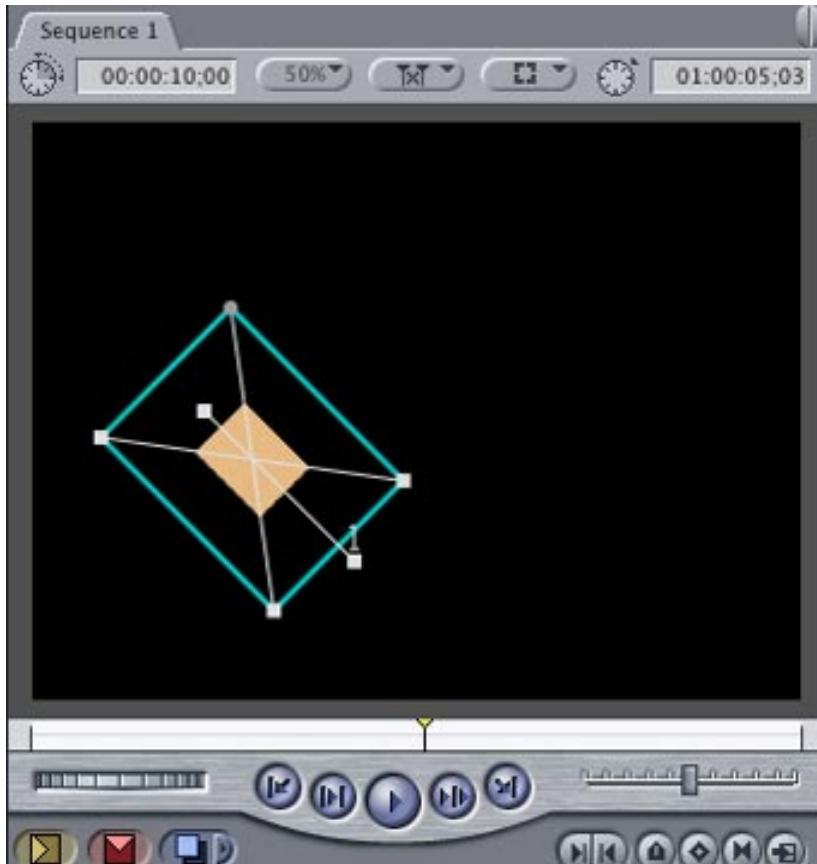


To see the kinds of effects you can create by changing the anchor point, move the hands of the rotation clock. Notice that your image is rotating around the anchor point. Cool, but not life-changing.



However, watch what happens when you drag the Scale slider -- notice that the image scales from it's

original position at the center and gradually recedes into the anchor point? This is VERY cool, because simply changing the location of the anchor point means any image can disappear into any point in the frame by only two keyframes to change the scale.



For extra credit, watch what happens when you change both rotation and scale at the same time.

Very cool -- and very easy!

[[Go top](#)]

Reader Mail

Reader mail is enormous this month, so I've moved it to a separate page. [Click here to read it.](#))

Wrap-up

Well, that wraps it up for this issue. The next issue will be released after NAB, so I can cover whatever happens there. We've got some exciting stuff planned for the next few months and I'm looking forward to telling you about it.

Please [register](#) for one of our [on-line seminars](#) - especially if you are frustrated with the speed or performance of your computer system. The first one is May 22.

Or, if you want to jump-start your Final Cut skills, save \$50 by buying one of our DVD titles before May 30. [Click here for our store.](#)

Finally, remember to share your opinions in our monthly poll. Click here to vote: <http://www.pollmonkey.com/p.asp?U=7265528827>

I'm grateful for all your comments and questions. I love hearing from you because when you share your ideas and suggestions, we all learn.

Thanks and edit well.

Larry

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Newsletters

Larry's Final Cut Pro Newsletter

Reader Mail

[Click here to return to main newsletter](#)

Reader Mail

- [New FCP User Group in Sweden](#)
- [HDV and chroma-keying](#)
- [Cinema tools question](#)
- [PAL and color space](#)
- [FireWire to monitor drop-outs](#)
- [Audio normalization](#)
- [Comments on HDV](#)
- [Compressing HDV, H.264 and MPEG-2](#)
- [Recording on a Firestore deck](#)
- [More compression problems](#)
- [Crashing in FCP 5](#)
- [Displaying timecode](#)
- [A countdown clock](#)
- [Setting computer monitor gamma](#)
- [Weird, but it works](#)
- [Empty render manager](#)
- [Two-color scrolling text](#)
- [DVD Studio Pro trick](#)
- [Looking for a combo deck](#)
- [Converting 16:9 to 4:3](#)

Well, we have an unusually large mail bag this month - so large, it needs it's own page. So, let's plunge right in.

New FCP User Group in Sweden

Erik Lindahl writes:

I'd just like to announce that Final Cut Pro User Group Sweden (FCPUG.se) has just become an official Apple MUG. We're the only Final Cut User Group currently active in

Sweden.

Final Cut Pro User Group Sweden (FCPUG.se) is a community for creative enthusiasts as well as people in the film production industry. Our goal is to as a group increase our knowledge in the thing we love - to produce film and other moving media.

As Sweden's only Final Cut Pro forum our main interest is surrounding post-production with Final Cut in the center. The goal is however to cover as much of the post-work as possible, including editing, compositing/visual effects, compression, DVD-authoring and delivery. We're also keen on having non-pros in our community. Of course we also see the whole area of video/filmproduction with burning interest as well.

In the long run we want to build a knowledge-bank through attracting both the technical and creative brains to our community.

Our website is located at: <http://www.fcpug.se>

It currently features a large online forum with news-coverage and other online-related items to come to shortly Real-life meetings will be held at least twice a year.

Regards,
Erik Lindahl
Founder FCPUG.se

Larry replies: Welcome! And thanks for letting me know.

[[Go top](#)]

HDV and Chroma-keying

Matt Davis writes:

In last month's newsletter, you talked about the poor quality of chroma in HDV, I would agree with you, but I wouldn't go as far as to say that one should never shoot HDV in a chroma-key studio.

I've achieved better results than DV by shooting HDV, then scaling it down to a SD DVCPRO-50 timeline. The low resolution of HDV chroma is smoothed out by the scaling, and the 4:2:2 color space of DVCPRO-50 preserves that info.

Okay, so that may not be 'HD' but HDV has a lot to offer the Standard Def world. :)

Larry replies: Now that's an interesting way to get more color information into an image.

By the way, [Serious Magic](#) was showing it's PC-based chroma-keyer working on a MacBook Pro at NAB using Boot Camp; which was truly amazing. And [Ultimatte](#) was showing how it's keyer can pull clean keys even from DV footage.

[[Go top](#)]

Cinema Tools Question

David Ransley writes:

I have just finished creating a Neg Cut list using Cinema Tools and I ran into a problem that I did not foresee.

From the edit I created five EDLs (reels 1 to 5) and I thought that I would be able to select them as a group from Cinema Tools. Unfortunately I was not able to do this and I had to combine the EDLs into one.

Is it possible to have Cinema Tools select a group of EDLs and create one cut list? It can be done on Avid and with other Neg cut programs.

Larry replies: I have no idea -- but if a reader knows the answer, I'm happy to pass it along.

[[Go top](#)]

PAL and color space

Aaron Eoff, of Nu Vue Media, writes:

Larry I enjoyed your article on HDV. In fact I've started a collection of articles from various sources about HDV. One thing that I've seen suggested a lot is to shoot in PAL or 50i and then slow down audio by 4%. Not only do you get a 24p look but also the color space is preserved at 4.2.2. I don't have my folder in front of me right now so some of what I'm saying may not be accurate. So what do you think of this workflow?

Larry replies: Slowing down video has NO impact on color sampling. Shooting HDV creates a 4:2:0 color sample, which contains significantly less color information than, say, DVCProHD or standard PAL.

As well, slowing video won't create the "24-frame" look. That look is created when you first capture the image, not by slowing it down. Finally, even if you slow it down, you still need to play it at 25 fps in order to view it on any PAL monitor.

In other words, you can't get there from here.

[[Go top](#)]

Firewire to Monitor Drop-outs

Jacob Hodgman, from Adelaide, Australia, writes:

We have had a recurring problem where our external video output from FCP starts to get glitchy and then the external monitor drops out altogether. We used to try restarting/refreshing video connections, with mixed results. We were starting to think it was a problem with the Firewire cable itself. Until this morning.

We have 6 external hard drives running through 2 Firewire hubs attached to the Mac, with the Firewire cable from our DV deck also running into one of the hubs.

We had 4 drives into one hub and 2 into the other. The Firewire from the DV deck was running into the hub with 4 drives attached.

Swapping it to the hub with only two drives attached has solved our problem.

Obviously there is some kind of bandwidth/congestion/info overload going on, so I would suggest keeping the external output Firewire connection on a hub with as little other info as possible, to maintain a good output.

Hope this helps someone!

Larry replies: A very cool tip. Thanks!

[[Go top](#)]

Audio Normalization

Dave Chalmers, from Edinburgh, writes:

You mention the use of normalization (or normalization as you would say) and I often use STP to normalize audio clips for podcasts etc. However I have also had great success using the 'Adaptive Limiter' plugin in STP to boost the levels, but protect against clipping at the same time. It would be great to do a quick tutorial on that plugin in STP.

One note of caution. If you apply this effect plugin to a whole clip as a realtime effect using the inspector, then select 'bounce to action' STP will crash. (or at least my copy does!!). However if you select PROCESS...EFFECTS....DYNAMICS and apply it directly to the clip that way it works fine. Go figure!

Larry replies: Dave, I am a huge fan of using Limiters, rather than normalization -- though I tend to use the Limiter, rather than the Adaptive Limiter, because it is simpler and provides greater control over output level.

I just wrote a tutorial on how to use the Limiter for Edit Well ([click here to get your free first issue](#)) and hope to cover more of the audio filters there as well.

[[Go top](#)]

Comments on HDV

Eric Wenocur, from Lab Tech Systems, writes:

I'm an engineer currently wrangling with the whole HD transition, which includes lots of people running around thinking it's so amazing that they can shoot *HD* for so little money! I'm glad you chose to bring back some realism to the subject.

[Regarding you comment about HDV shooting 1440 x 1080,] Note that some other "professional HD" formats, such as HDCam, also shoot in 1440. The general consensus I have gathered is that the subsequent up-sampling to 1920 is not a big problem (although it still ticks me off).

There is also the issue of the imager size. Lots of people are buying these teeny-tiny HDV cameras with 1/3" imagers. This can be a problem shooting at high F-stop settings because of diffraction limiting resolution (see link below). There are also problems with sharpness because less light is captured, and depth of field may be too large for some applications. At least I think that's the gist--camera optics are not my area.

http://www.tvtechnology.com/features/Masked-Engineer/f_mario_orazio-08.17.05.shtml

Heavy compression [in HDV] is also prone to more artifacts when any changes are made to the image (dissolves, compositing, etc.) and in many cases video goes through several stages of compression/decompression into different formats as it moves from acquisition to delivery.

Larry replies: These are all good comments. Keep in mind that we are all still discovering what HDV can, and can't, do. It certainly isn't a perfect format. But, if you understand it's limitations, it can be a very inexpensive way to make the step up to HD.

[[Go top](#)]

Compressing HDV, H.264 and MPEG-2

Daniel Yu writes:

I thought I'd share the results of my experiments. I took a 4 minute HDV timeline in FCP5, and first converted directly to MPEG2 using Compressor (high quality 16:9 setting). Next I tried the H264 export. The first thing I found is that if I used "Quicktime conversion" in FCP to convert to H264, the aspect ratio never comes out right. The picture looks "squished", like it was anamorphically squeezed. I tried the 720x480 size, and it distorts the aspect ratio (squeezed, rather than just a 16x9 image letter-boxed into a 4:3 frame). So instead, I used Compressor to create the H264 clips (similar to the workflow for creating what DVDSP calls "HD-DVDs"). As I have read, this process is VERY time-consuming. It took 12 hours (on a dual G5) to compress 4 minutes of video! But the result looks good, perfect aspect ratio, no

distortion. I then put this H264 clip back into Compressor, and repeated the MPEG2 export I had done earlier. Now I created a new DVDSP project with just these two clips, and then burned a DVD, so that I could compare the two videos on a broadcast monitor.

So here's the punch-line. I scrutinized both clips very carefully. Now granted, the clips didn't have much movement in them. But after multiple viewings, I really can't tell them apart. I tried looking at the files themselves at full screen on a 23-inch Cinema Display and couldn't see any significant differences. I do have to say though, that the clips look pretty darn good, considering they are SD.

So this reassures me in some ways. The H264 process is WAY too time-consuming using Compressor at least (3 hours per minute of video!). So I'm happy that I will not plan to do that again.

Larry replies: One of the benefits of upgrading to the version of Compressor shipping with Final Cut Studio 5.1 is much faster performance, according to Paul Saccone. This is a good illustration of why better performance is so necessary.

[[Go top](#)]

Recording on a Firestore deck

Daniel Kohl writes:

Your news letter is the best thing ... since I don't know what. I just wanted to ask you about some thing you suggested in last month's newsletter:

"Here's another interesting idea. The Canon XL H1 has an HDSDI port on the camera. If you record to a hard disk, such as the FireStore, ..."

Which FireStore can capture HDSDI? You might want to clarify that.

Larry replies: Focus Enhancements showed it at NAB. It's the Firestore FC-C and it's scheduled for release in Q3, 2006. (<http://www.focusinfo.com/>)

[[Go top](#)]

More compression problems

Beau Leland writes:

Just read over your article on the hazards of using a 2-pass encode using compressor two. Very interesting, but I experienced something maybe even stranger. I had a sequence in my timeline where a piece of footage is playing and then it freeze frames at a particular point so that I could put in a super over this still frame of the footage. In the timeline, it is perfect.

However, when I exported using compressor (before I read your article) using a 90 min 2-pass 16:9 setting, my freeze frame had shifted to an entirely different frame! I double checked my timeline to see if it was my error, but sure enough it was correct in my FCP timeline. I should also note that in addition to a 2-pass, I had also exported a QT movie within Final Cut, and that one was correct, and so was a 90 min 2-pass 4:3 version I did. So this problem was unique to the 2-pass 16:9 compressor version. Any idea what's up with that?

Larry replies: I really DON'T like exporting using Compressor. It seems to cause far more problems than it solves. I always recommend first exporting as a QuickTime movie, then compressing the QuickTime. Much faster and much more reliable.

[Here's an article](#) that covers this in more detail.

[[Go top](#)]

Crashing in FCP 5

Pat Berning writes:

I'm using FCP5 and having a lot more crashes than with FCP 4.5, usually accompanied by some clip becoming heavily "pixelized". I'm running on Panther OSX 3.9. on a G5. I have tried trashing preferences but it does not help. Will Tiger sort this out or is it something else? Most frustrating.

[Then a few hours later, Pat reported back in] Just a little update. Someone suggested that the problem was corrupted render files and I also noticed that the pixelizing occurred at the end of some of the clips that I had faded with the pen tool. Resetting the fade removed the pixels and trashing the render files has left me with a few hours of work without a problem... so far.

Larry replies: Deleting render files when you are having playback problems and re-rendering is a very good idea -- and one that I wanted to share with other readers.

[[Go top](#)]

Displaying timecode

Steffie Prietzsch writes:

Is there a way to display the current time code of a timeline sequence on an external monitor ? (So the client can see where we are in the story). When I edit with clients who are used to an analog set up, they always ask for this. Of course we have established a workflow in which I tell them the TC, i.e. at the start and end of interviews, but it's tedious.

Larry replies: There's no way to display sequence timecode on an external monitor using DV, without first

adding a Timecode filter and rendering your sequence.

[[Go top](#)]

A countdown clock

Ed Kaufholz writes:

For the person looking for a countdown clock on screen, it's a \$10 plug-in that should work:

http://www.digital-heaven.co.uk/fcplugins/dh_counter.php

Larry replies: Thanks!

[[Go top](#)]

Setting computer monitor gamma

Carl Bradshaw writes:

I have been reading through a few articles on your site, as I have been researching gamma settings for my Apple Cinema Display (23") today. In particular, your article describing preparation of Photoshop images recommends:

... then, as a last step, open the Levels adjustment in PhotoShop or PhotoShop Elements and set the gray setting to 1.2. This darkens your image to match the standard video setting.

Would this assume a 'Mac default' system gamma of 1.8?

I ask because I am trying to determine if there is greater benefit in having my system gamma set at 2.2 or 1.8. The Mac OS X monitor calibration assistant mentions 2.2 as 'TV gamma', and recommends setting the 2.2 target if the destination is for video/TV. Is there any benefit in keeping the old 'print' gamma of 1.8, when I use the Mac almost exclusively for Final Cut Pro? I fully understand that a calibrated external TV/monitor is the only real acid test of the output image, but I am trying to decide if the 2.2 OS monitor setting gives me a closer approximation of the final result, for rough cut editing.

So, do you use 2.2 or 1.8 as your OS X gamma target?

Larry replies: 2.2 is the gamma setting that most closely matches video. My illustration assumed the standard Mac gamma of 1.8. My system is set to a gamma of 2.2. ([See my earlier article](#) on how video and computer images are different.)

[[Go top](#)]

Weird, but it works

Mark Palmer writes:

You might already know this but i discovered that when i bring in a dvcpro 50 native file and but it on my time line in a dvcpro 25 the render bar turns orange and when i play it -- smooth as ice no drop frames and i can see it on my NTSC monitor running through my XL1S -- poor mans way of monitoring dvcpro 50 with a dv time line--works great.

Larry replies: Weird. Interesting, but weird.

[[Go top](#)]

Empty Render Manager

Todd Burns, from Cincinnati, writes:

Hi Larry, I'm a former "Final Cut" student of yours (Santa Monica 4/2004). My question? When I go to Render Manager it's totally empty? There should be tons of renders in there... but there aren't any. Any help would be greatly appreciated...

Larry replies: Sounds to me like you've changed the location of your scratch disks. FCP's render manager only tracks files in the current scratch disk location.

[[Go top](#)]

Two-color scrolling text

Paul Delcour, from Hilversum, The Netherlands, writes:

just read your tips on the scrolling text in colour. One problem: it only works with single lines. As soon as I have say two editors, things get out of line. Any suggestions? Otherwise Livetype? But that program is so painstakingly slow. I use a G4 2 x 1,25GHz with 2 Gb ram.

Larry replies: Yup, just put in an extra carriage return in the text on the side that DOESN'T have the extra line so that text stays aligned. It's a bit of extra work, but it solves the problem.

[[Go top](#)]

DVD Studio Pro trick

John Warner, from Asheville, NC, writes:

While reviewing your DVD Studio Pro 3 training DVD, I have discovered that on large projects (video of one hour or more), the storage requirements are typically at 4 gigs (as viewed in the disk meter) and double when you then drag the video track from assets to the menu to create the chapter index.

There is a better way. Instead, grab the track within the Graphical Window and hold it until it ghosts then move it over to the main menu. Hold until the drop down menu offers the choice for build chapter index. This technique will only add a couple of hundred megs to the overall project memory vs the doubling of memory (to nearly 8 gigs) if you had dragged the video track from assets to the menu to create the chapter index.

Larry replies: Cool.

[[Go top](#)]

Looking for a Combo Deck

Wayne Houchin writes:

I am an independent editor and am looking for a good deck. I shoot MiniDV & HDV & edit on a Mac. Do you have any suggestions?

Larry replies: At this point, in order to be sure your HDV video will play, you need to buy an HDV deck from the same manufacturer as your camera. There are way too many reports of inability to playback when mixing decks and cameras between manufacturers. Most HDV decks will also play MiniDV tape -- but not necessarily DVCAM or DVCPRO-25.

[[Go top](#)]

Converting 16:9 to 4:3

Raul Portillo writes:

Hello Larry, I've seen you at LAFCPUG a couple of times and I just wanted to thank you for your great advice and knowledge.

We just tried the new Panasonic AG-VHX200, we shot on HD 720p30 that is 16:9 but I also need to output to 4:3 (not letter-boxed, I'm OK with losing the sides), can this be done in Final Cut?

Larry replies: Yes. Here are the steps:

- Create a nest of your finished sequence (**Sequence > Nest Items**)
- Load that nest into a new 4:3 sequence
- **Option+double-click** the sequence to open it into the Browser and zoom it to 135%.

You now have a centered 4:3 picture from your sequence, ready for output.

[[Go top](#)]

[Click here to return to main newsletter](#)