



The Video Road

On the Road with Production Premium, Dynamic Media, and Karl Soulé.

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A ProRes workflow end-to-end

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With the radical change going on right now in the world of Final Cut Pro, I've had some FCP7 users ask me about maintaining an end-to-end ProRes workflow in Premiere Pro. There are questions whether it's even possible. Well, I'm here to show you it IS possible, and how to make it go.

What do I mean by an “end-to-end ProRes workflow”? This means ingesting ProRes clips, dropping them right to the timeline, rendering previews when necessary to a new ProRes file, and outputting back to a ProRes master. While Premiere Pro works great with a wide variety of native camera formats, there are times when this workflow is a good idea. For example, using an AJA KiPro for capture, shooting with the ARRI Alexa, or working with ProRes media from an FCP timeline.

This particular workflow does only work on a Mac system that has the ProRes encoder installed. There are a couple of ways to get this component, but unfortunately, they are not free. For most people using this workflow, you probably already have Final Cut Pro 6 or 7 installed, so you won't have to worry. If you're equipping a new Mac, you can also buy Motion 5 for under US\$50 from the App Store. This will also get you the necessary codecs.

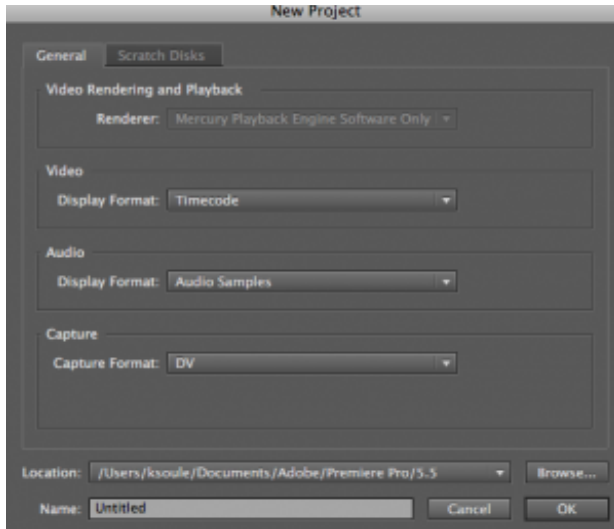
For Windows users, unfortunately, there is not a ProRes encoder component available. But that doesn't mean you can't use ProRes files. QuickTime for Windows does include the decoder. It just means that, if you render preview files in the timeline, you'll need to use another codec. So, technically, it won't be a “full” ProRes workflow, but you'll still get great results. On the bright side, Windows users have more options for Nvidia cards, which is a worthwhile investment, since it ELIMINATES the need to render previews in most cases anyway. Also you won't be able to output back to ProRes. Until a ProRes encoder is released for Windows, that's sadly going to be the case.

What makes this possible is the flexibility of Premiere Pro to input and output in pretty much any format that the system has access to. Unfortunately, since Premiere doesn't ship with ProRes encoding components, this'll take a bit of time setting up. But, once it's set up, using it is really easy.

Setting Up Timeline Presets:

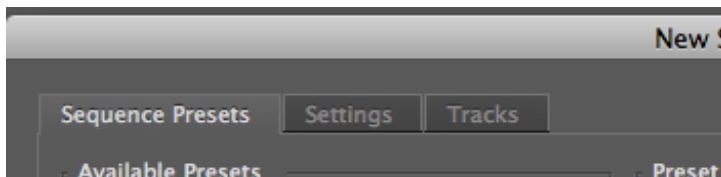
You'll need to first set up some timelines that use ProRes as the Preview File format. It's a good idea to create as many as necessary for the different resolutions and frame rates you'll be working with. For this tutorial, I'm going to show you how to make a 1080p/24 timeline preset.

Open up Premiere Pro, and set up a “dummy” project. We just need to have a blank project open to access some of the settings in Premiere. In this picture, I'm using a project called “Untitled” that I use for stuff like this.

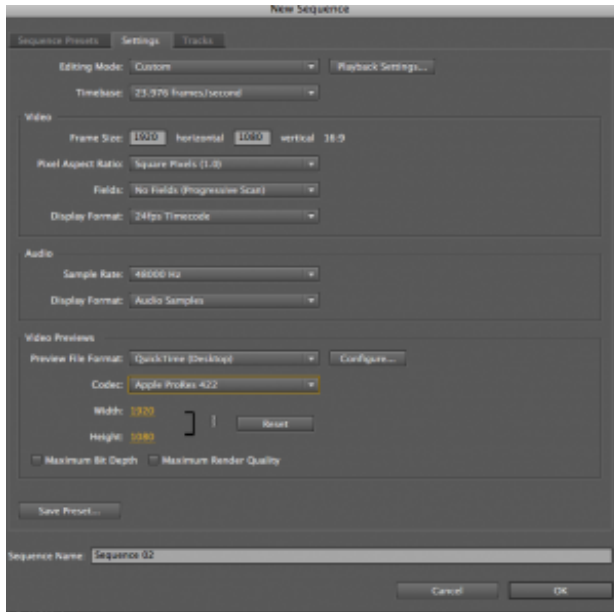


My universal "Untitled" New Project.

In the New Sequence panel, ignore all the existing presets! Most people assume incorrectly that these presets are the only formats that Premiere Pro can work with. I'm going to take you into the "guts" of how a Premiere Pro timeline is set up. Find the Settings Tab near the top:



Find the Settings Tab



Custom Sequence Settings panel - where the magic happens...

This is where the real power and flexibility of Premiere Pro lies - Premiere can essentially edit any format or file type that it can decode, and this includes working with QuickTime files.

What you'll want to do here is to start by making a Timeline preset for ProRes 422 at a resolution of 1920×1080, 23.976fps. There are a lot of setting in here, so let me list them:

Editing Mode: Custom

Timebase: 23.976 frames/second

Frame Size: 1920 horizontal, 1080 vertical (should show 16:9 aspect)

Pixel Aspect Ratio: 1.0 (square pixels)

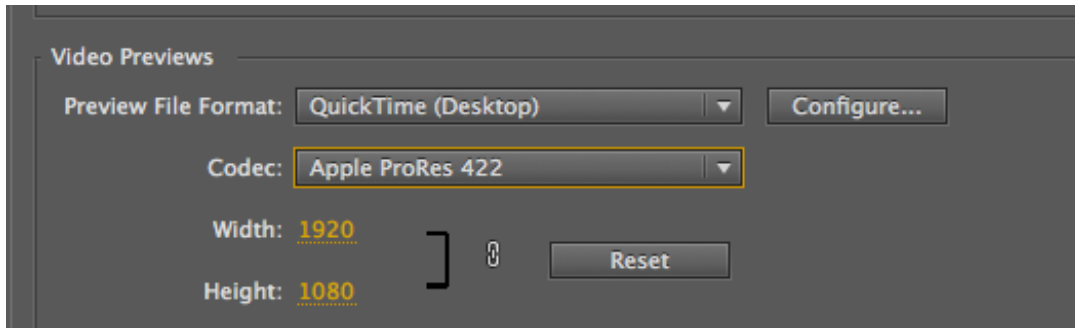
Fields: No Fields (Progressive Scan)

Display Format: 24fps Timecode

Audio: 48000 Hz

Now, up until this point, you'll notice that nothing is format-specific. All we are doing is setting up the size and frame rate all our media will conform to in the timeline. That's how Premiere operates - in general, it is *format-agnostic*, meaning that you can mix and match ANY format on ANY timeline. The main settings for any timeline are just resolution/frame rate settings, period.

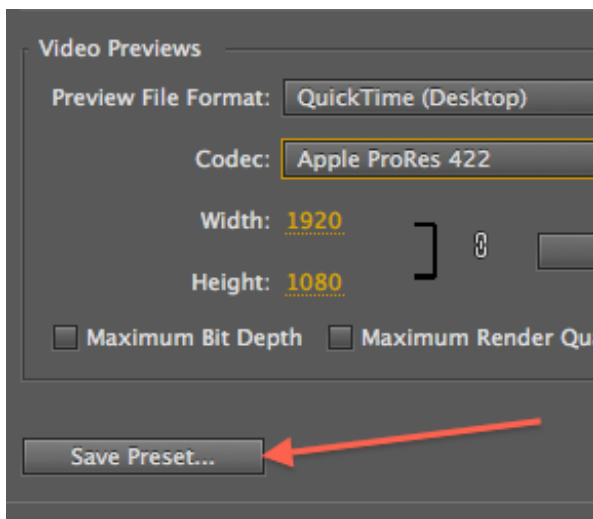
The bottom half of the panel is where formats start to play a role:



Video Previews

The Video Previews setting only affects things when you render the timeline. When you are playing back unaltered video clips on the timeline, it has no effect. If you are using GPU-accelerated effects on your clips, again, this preview file format has no effect. But for people using non-accelerated effects, or working on a system without GPU acceleration, you probably will want to render the red-bar portions of your timeline.

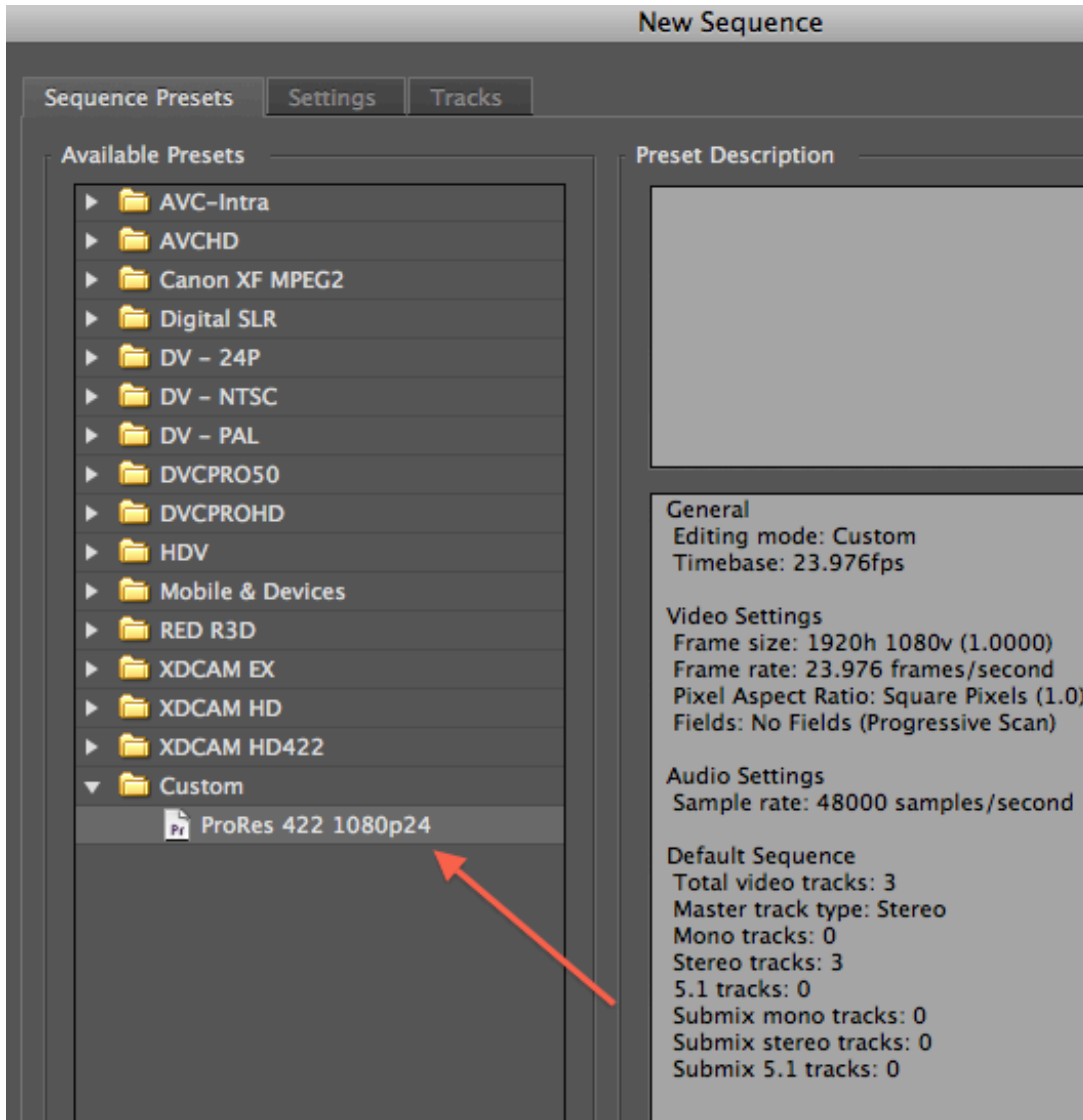
Set the Preview File Format to QuickTime (Desktop) and set the Codec to Apple ProRes 422. Also, make sure the Width and Height match the other timeline settings. Now, STOP! BEFORE you hit the OK button, locate the Save Preset button:



Save your new Preset!

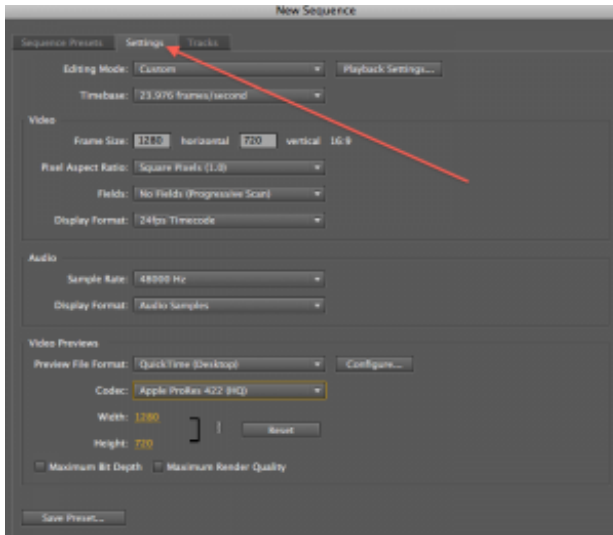
To make this easy, you'll want to be as descriptive as possible in saving your preset. I recommend using a naming convention, and WRITE IT DOWN as you make these. That way, all of your ProRes timeline presets will have easy-to-understand, logical names. I'm going to call this one "ProRes 422 1080p24." If you need some additional descriptive help, make whatever notes you like in the Description field. This information will be visible each time you select the preset.

Once you have saved your preset, Premiere Pro will take you back to the Sequence Presets panel, and you should see your shiny new preset appear at the bottom, in the Custom folder:



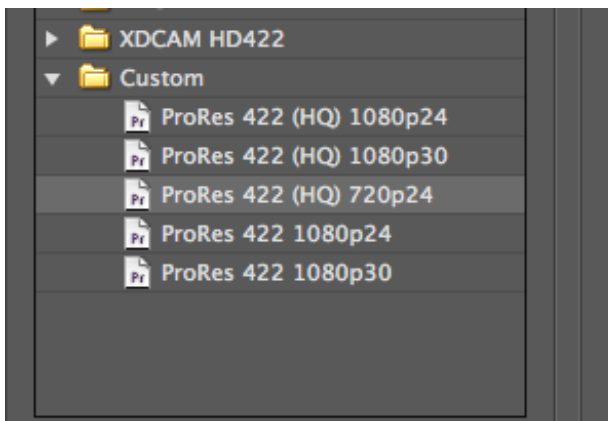
Your shiny new ProRes 422 1080p24 preset!

Now that you understand the steps to create your first ProRes preset, you'll want to repeat these steps again for each type of ProRes format, size and resolution you typically work with. Go back to the Settings tab at the top, and modify the settings again to make another preset. Then save and name the second new ProRes preset.



Back to the Settings Tab. Wash, Rinse, Repeat.

You may want ProRes 422 (HQ) presets, 1280x720 presets, or frame rates other than 23.976fps. This is up to you, and totally dependent on what type of ProRes clips you are working with. On my system, these are the presets I've created:



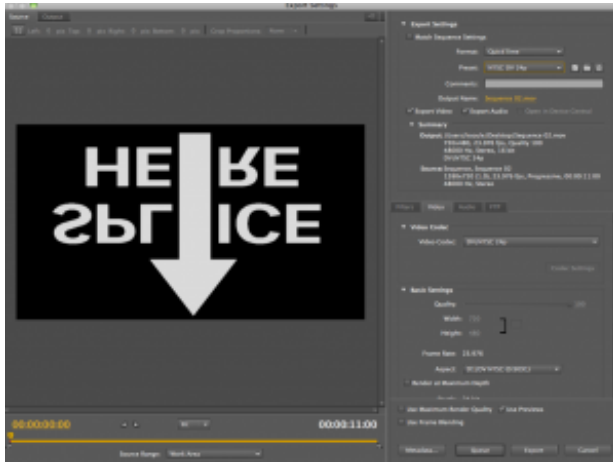
Just a sample of potential ProRes presets you can create.

Setting Up Output Presets:

Just like the Timeline Presets, we will need to set up some Export Setting Presets for ProRes as well. To do this, we need a timeline with at least one clip in it so that we can access the Export Settings panel.

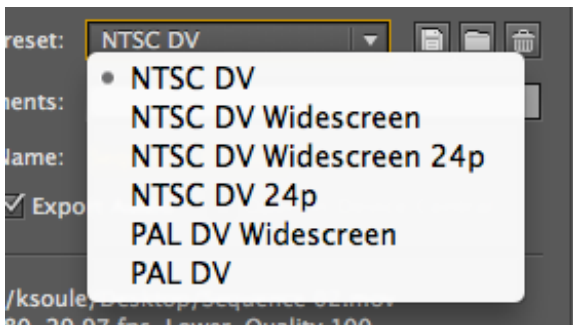
Go ahead and choose one of your ProRes Timeline presets so that the full Premiere Pro interface opens up. Import a clip, any clip, and drop it onto the timeline. If you have no clips on this system, you can just create a Countdown Leader file by choosing File-New-Universal Counting Leader. Drop it onto the timeline.

Now, with the timeline selected, go to File-Export-Media.



Export Settings Dialogue Box

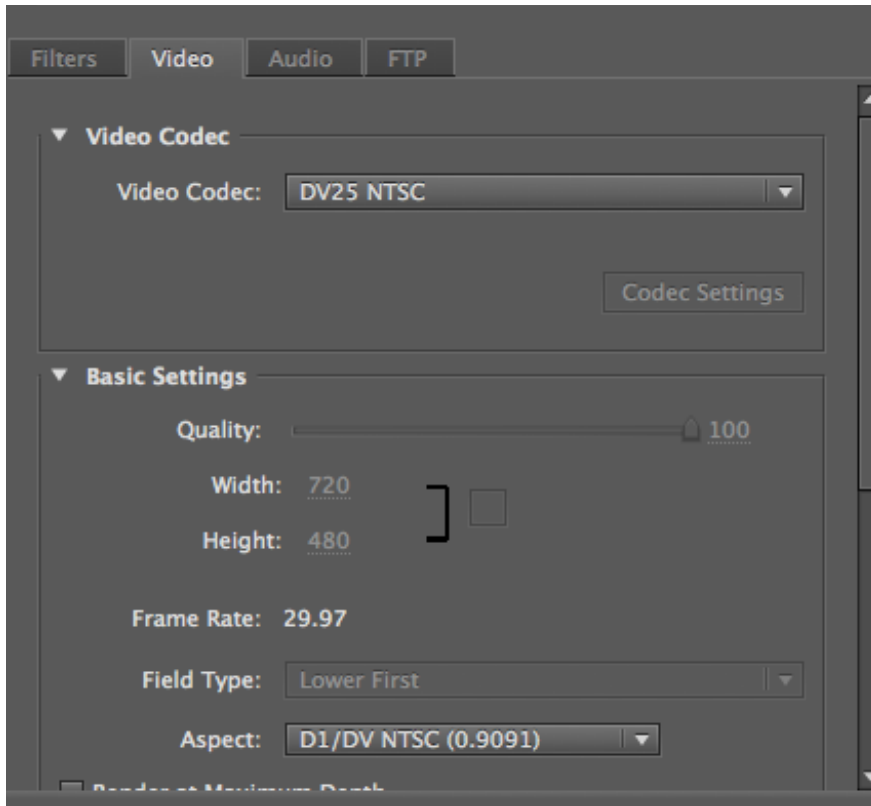
In the upper right of the panel, Choose Format: QuickTime. Then, click on the Preset button, and look at the puny list of QuickTime presets that Premiere Pro ships with. I've had several people assume from this list that Premiere Pro can only export DV format QuickTime files! NOT SO!!



Is this all QuickTime can do? OF COURSE NOT.

To access other QuickTime formats and flavors, including ProRes, we need to create additional QuickTime Presets. These are one-time setups - in the future, we can just choose the preset and output without additional setup.

To get started, head down to this part of the Output Settings screen, and click on the Video tab:



Where the Output Magic happens...

We are going to make a matching Output Preset for our earlier ProRes 422 1080p24 Timeline Preset.

Change the Video Codec to Apple ProRes 422.

Change the Width to 1920.

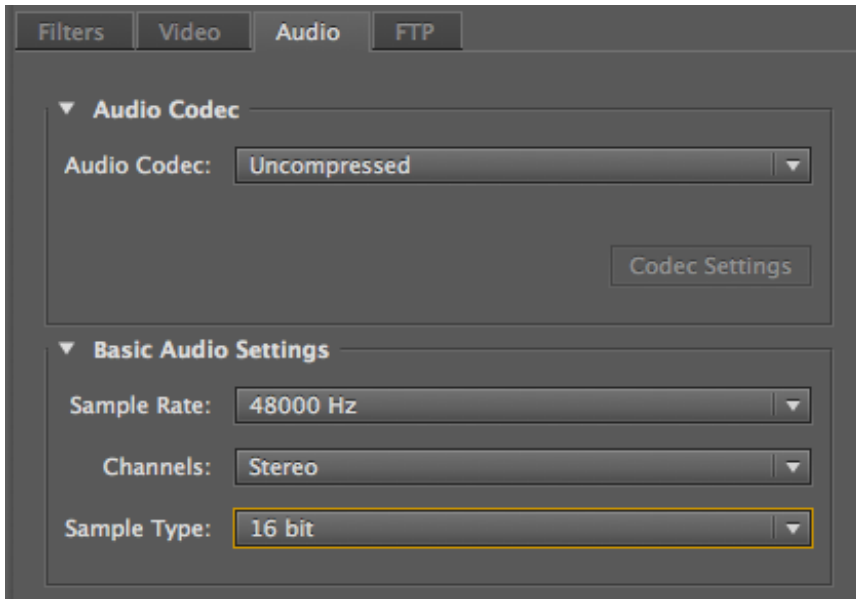
Change the height to 1080.

Change the Frame Rate to 23.976

Change the Field Type to Progressive.

Change the Aspect to Square Pixels (1.0)

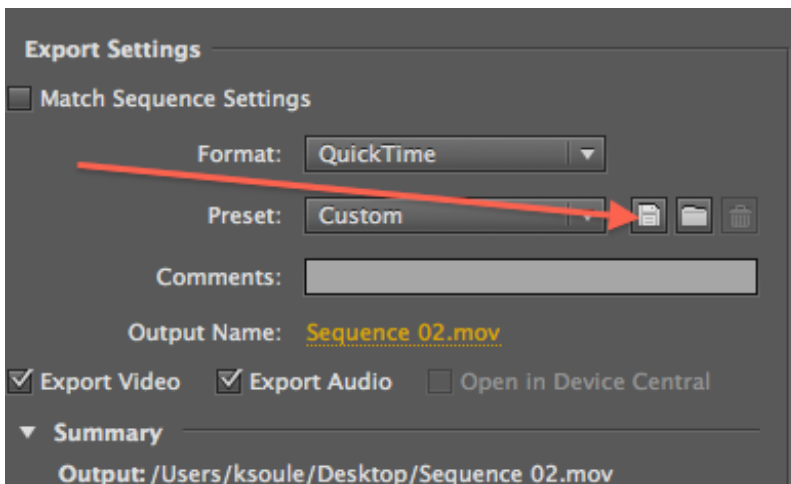
Now switch to the Audio Tab:



Audio Settings Tab

Change the Sample Type from 16-bit to 24-bit. This will match most source ProRes files, but if you know that your source media uses a different sampling rate, use that.

Double-check your settings in the Video Tab one more time, and if everything looks good, save your preset by clicking here:



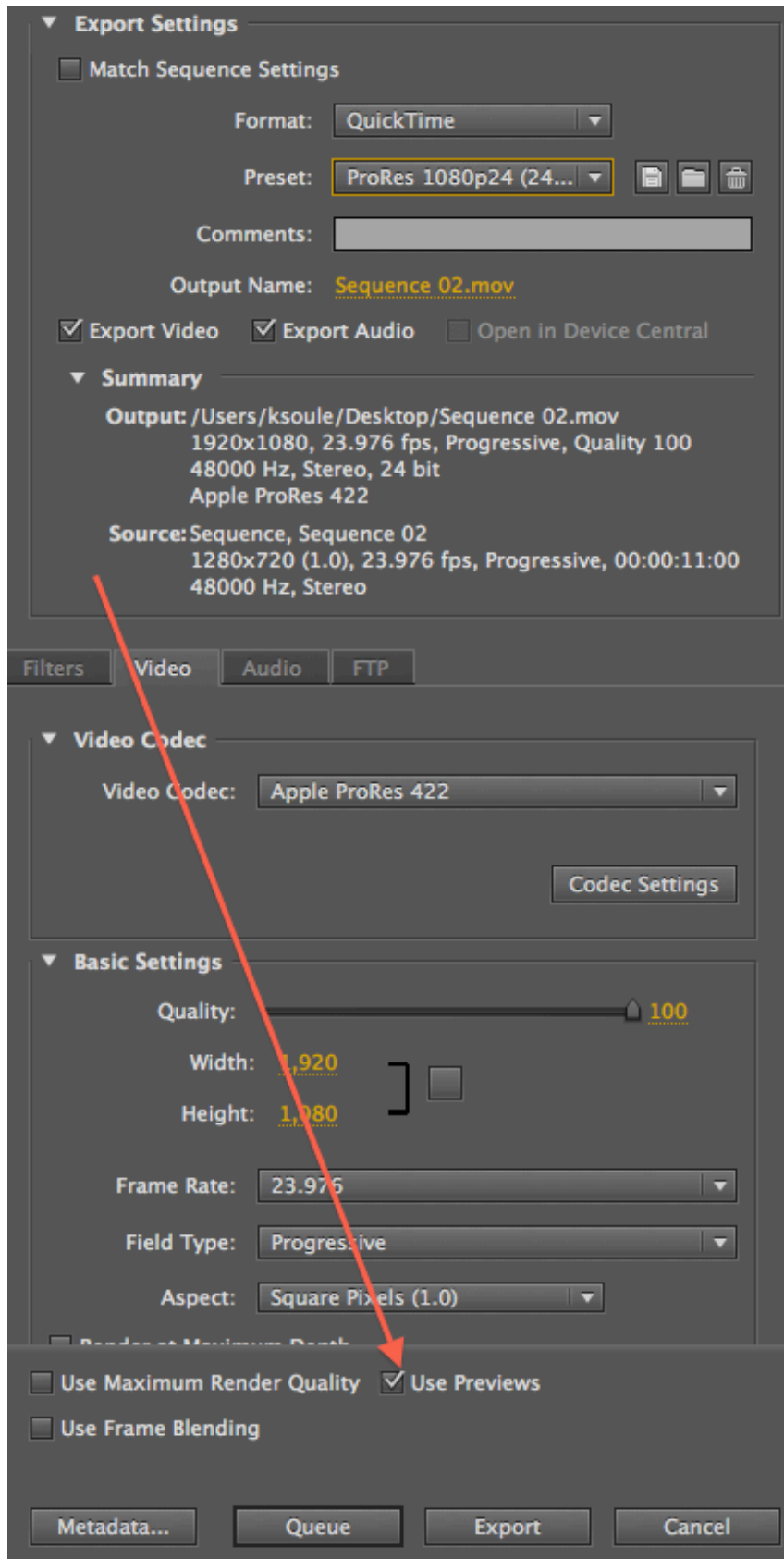
Click to save your Output Preset

Again, make sure and give your preset a descriptive file name. I'm calling mine "ProRes 422 1080p24 (24-bit Stereo)."

Now, when it's time to output, I can output a ProRes master that matches my source footage, my preview files, and my Timeline Settings.

Oh, one last tip for longtime FCP users - I've heard from FCP users that they are used to ProRes outputs taking less time.

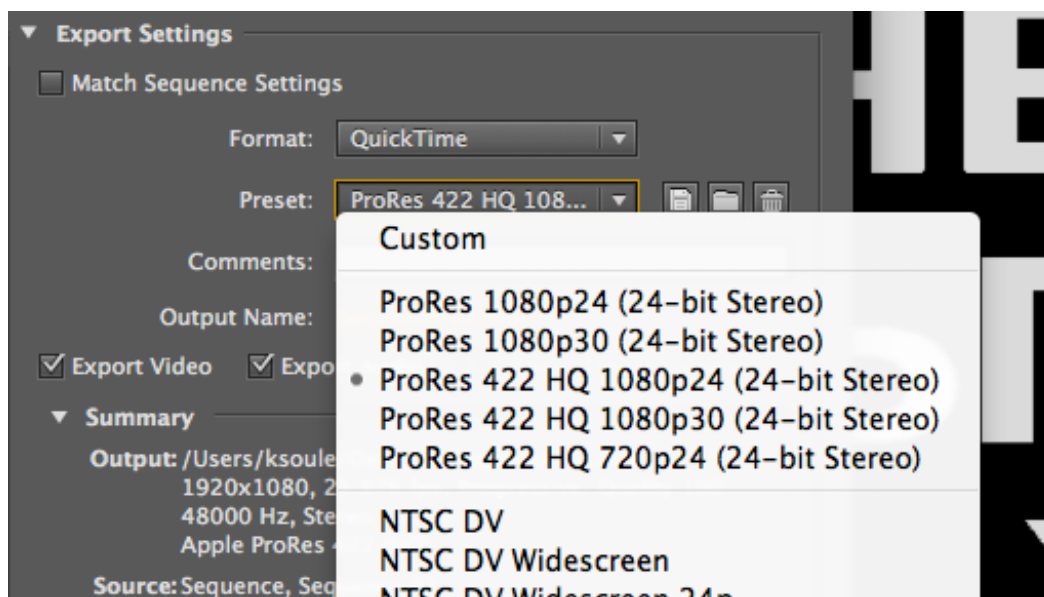
That's probably because, by default, FCP uses the preview files, and just copies the frames into the output file. To make Premiere Pro mimic this behavior, you need to check this box:



Check this box to use your ProRes Preview files.

Because a lot of native file formats are extremely lossy, Premiere, by default, doesn't use the previews for final output. It prefers to re-render the effects in the timeline from scratch to get the maximum quality. But, with an end-to-end ProRes workflow, that's not really necessary. So, using the preview files will speed up the output when going back to the same ProRes format.

You'll want to make a number of different Output Presets following these steps - one for each format of source material. Again, I've created output presets that match the same timeline presets:



My ProRes output Presets

Whew! Okay, now the hard part is done! In actual use, now you can open up Premiere Pro any time, choose a ProRes timeline, and start editing. Previews will automatically be in ProRes format, and when you choose to output your timeline, you can output to the same ProRes format by choosing QuickTime, and then choosing the appropriate preset from your list of ProRes presets. End-to-End Workflow!



Posted by Karl Soule on August 04, 2011 9:21 AM | [Permalink](#)

COMMENTS

Very nicely done! The transition from Easy Setup to Adobe set everything up custom is definitely one of the harder aspects of getting things to work correctly in Premiere Pro.

I would like to move away from an end to end ProRes workflow, but for the time being a lot of our materials will be ProRes so this is a fantastic resource for all of us. Thanks!

Posted by: [Walter Biscardi](#) | [August 04, 2011 11:28 AM](#)

Very nice ! But now i want to output this ProRes timeline to my Blackmagic or AJA board during edit.

Can this be done without the AJA or Blackmagic presets?

Posted by: Paul Jay | [August 04, 2011 7:38 PM](#)

Hi Paul,

Very good question! I can't do screen grabs of AJA components right now, since my desktop computer with my Kona card is halfway across the Pacific! 😊 But, I can walk you through it.

In the New Sequence Setup tab, look for a button marked Playback settings. Click that button. If you have an AJA or BMD card installed, you should be able to choose it under the Realtime Playback External Device menu. Add that to your presets, and it should work the same as using the presets that ship with the cards.

Posted by: Karl Soule | [August 05, 2011 12:08 AM](#)

Looks good! But one question: if you want to incorporate Video Preview files in your render output, shouldn't you check Maximum Render Quality in the Previews pane?

Posted by: [Harry Creemers](#) | [August 05, 2011 12:23 PM](#)

You, good sir, are absolutely correct! See my follow-up posting that explains that. Thanks for reading!

Posted by: Karl Soule | [August 05, 2011 1:56 PM](#)

Hi Karl,

Thanks for this - so helpful. Trying to get a feature off the ground and will be shooting ProRes 4444 on the Alexa so this is crazy useful as I am stepping away from FCP now.

Question: in the settings - preview file format: configure

If you hit configure it gives you a gamma option - Automatic or None. I'm guessing None. Is that right? Does this help avoid the famous Quicktime gamma shift?

Thanks for your help!
WILL.

Posted by: Will Gilbey | [August 19, 2011 7:28 AM](#)

Thanks. I'm switching from FCP to Premiere and this is very helpful.

Posted by: [Tom](#) | [September 04, 2011 3:33 PM](#)

Thank you, thank you, thank you.

Posted by: Gates Bradley | [September 08, 2011 7:45 PM](#)

I'm not using Prores but am thinking about getting an Atomos field recorder. Your stepping through the Premiere workflow is very helpful. Also, your tone is so friendly you're the type of guy to have a beer with sometime. Thanks!

Posted by: [Steven Schwartz](#) | [September 15, 2011 11:58 AM](#)

Hi Steven,

One thing to be aware of when using the Atomos field recorder - We've had some reports that the default 4-channel audio format it records to can cause some incompatibility problems in CS5 and CS5.5. We've just released a free update - 5.5.1, that addresses this issue. So, either make sure you have the latest update, or set the Atomos to 2-channel audio recording. Thanks for reading!

Posted by: Karl Soule | [September 19, 2011 7:04 AM](#)

One issue: even though I've selected square pixels on both ends of the workflow and everything is clearly HD 16/9, Premiere always wants to add black bars to quicktime exports and to bump it up to an odd aspect ratio. Same weird behavior occurs in DVD exports where it adds black bars to the sides of projects.

Any idea about what's happening?

Posted by: cbap | [April 11, 2012 7:46 PM](#)

The "official" DVD specification actually includes a 4-pixel "pillarbox" on the left/right edge. As part of a commitment to official BBC and Orange Book standards, started in CS4, Premiere adds this pillarboxing when using the default MPEG-2 DVD presets.

In CS6, there is actually a way to turn this off. In the output tab, there are now options for "Scale to Fill" and "Stretch to Fill", which will eliminate the need for the black bars on the left and right.

Posted by: Karl Soule | [October 01, 2012 2:04 AM](#)

Great tip Karl, thank you!

Unfortunately, I don't have "QuickTime (Desktop)" as an option in my Preview File Format selection (in either CS5.5 or CS6). Yes, I do have QuickTime installed.

What have I missed?

Posted by: [Jay](#) | [May 08, 2012 2:47 PM](#)

Sorry - yes, it's a Mac-only option, until there's an encoder for Windows.

Posted by: Karl Soule | [October 01, 2012 2:04 AM](#)

Great post, something so simple to do, yet well explained and easy to follow. Well done. Much appreciated, glad to be switching over from FCP

Posted by: [Devon](#) | [April 23, 2013 11:33 PM](#)

Keep in mind that the next version of Premiere Pro will have 64-bit ProRes built-in, and won't be reliant on QuickTime. This means that Windows users will be able to ingest ProRes, and Mac users will be able to ingest and export ProRes. Stay tuned for a full blog post with details.

Posted by: Karl Soule | [April 24, 2013 12:27 AM](#)

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It's a long and winding road.