Below is a chart introducing the frame rates that the camera can record. We recommend using the native frame rates. (the ones containing the N such as 720pN) these only record the necessary frames progressively using less storage and don't require the user to pull out extra frames (pull down removal) after importing 23.98 or 24 frame footage.

Panasonic AG-HVX200 Camcorder Compatibility

The Panasonic AG-HVX200 P2 camcorder supports a large number of SD and HD video formats at various frame rates. The Panasonic AG-HVX200 camcorder can record on either tape or P2 cards, but some formats can only be recorded on P2 cards. The following table shows which formats are compatible with recent versions of Final Cut Pro.

Panasonic AG-HVX200 (NTSC)

Format	Recorded frame rate	Pull-down /duplicate frame pattern	Timecode	v5.1 P2	v5.1 Tape	v5.1.1 P2	v5.1.1 Tape	v5.1.2 P2	v5.1.2 Tape	v6.0 P2	v6.0 Tape
1080i60	29.97i	-	DF, NDF	1	1	1	1	1	1	1	1
1080p30	29.97i	2:2	DF, NDF	1	1	1	1	1	1	1	1
1080p24	29.97i	2:3	NDF	-	-	-	-	2	2	2	2
1080pA24	29.97i	2:3:3:2	NDF	-	-	-	-	2, 3	2, 3	2, 3	2, 3
480i60	29.97i	-	DF, NDF	1	1	1	1	1	1	1	1
480p30	29.97i	2:2	DF, NDF	1	1	1	1	1	2	1	2
480p24	29.97i	2:3	DF, NDF	2	2	2	2	2	2	2	2
480pA24	29.97i	2:3:3:2	DF, NDF	2, 3	2, 3	2, 3	2, 3	2, 3	2, 3	2, 3	2, 3
720p60	59.94p	-	NDF	1	1	1	1	1	1	1	1
720p30	59.94p	2:2	NDF	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4
720p24	59.94p	2:3	NDF	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4
720p VFR[1]	59.94p	-	NDF	4	4	4	4	4	4	4	4
720pN30	29.97p	-	NDF	1	n/a	1	n/a	1	n/a	1	n/a
720pN24	23.98p	-	NDF	5	n/a	1	n/a	1	n/a	1	n/a
720pN VFR[1]	VFR	-	NDF	1	n/a	1	n/a	1	n/a	1	n/a

[1] 720p variable frame rates: 12, 18, 20, 22, 24, 26, 30, 32, 36, 48, and 60 fps

i = interlaced, p = progressive, A = advanced pull-down, N = native frame rate (without duplicate fields or frames), DF = drop frame, NDF = non-drop frame, VFR = variable frame rate

1 - No pull-down removal is necessary; native frame rate is captured or ingested.
2 - Use Remove Advanced Pulldown command in Final Cut Pro or Cinema Tools after capture or ingest.
3 - Enable Advanced Pulldown Removal option during capture (tape) or ingest (P2).
4 - Use Frame Rate Converter (audio and timecode are removed).
   For more information, see "Using the DVCPRO HD Frame Rate Converter" on page 49.
5 - Basic editing is supported, but rendering in a sequence is not supported.
   For more information, go to http://docs.info.apple.com/article.html?artnum=303950.

What the files look like once imported into Final Cut

Frame Rate Examples			
720P24P	23.98 fps	960 x 720	00:00:26:16
720p24test	23.98 fps	960 x 720	00:00:45:01
720PN_12FPS	23.98 fps	960 x 720	00:00:16:20
720PN_18FPS	23.98 fps	960 x 720	00:00:26:04
720PN_20FPS	23.98 fps	960 x 720	00:00:18:00
720PN_DEFAULT	23.98 fps	960 x 720	00:00:24:08
1080i24P	29.97 fps	1280 x 1080	00:00:19:10
1080i24PA	29.97 fps	1280 x 1080	00:00:23:05
1080i30P	29.97 fps	1280 x 1080	00:00:15;19
1080i60i	29.97 fps	1280 x 1080	00:00:19;17
30PNDEFAULT	29.97 fps	960 x 720	00:00:51:20
720P30P	29.97 fps	960 x 720	00:00:21:08
720P60P	59.94 fps	960 x 720	00:00:22:26

Importing P2 Footage into Final Cut Pro

USING 2 FIREWIRE DRIVES IS NECESSARY FOR FILE REDUNDACY. YOU WILL NEED 2 LARGE FIREWIRE DRIVES (AT LEAST 100 GIG) FOR THIS WORKFLOW
  • You can import footage into Final Cut Pro directly from a P2 card, using a P2 card reader
  • You can also access the P2 card media by inserting the P2 card into the PCMIA slot on the Macintosh G4 laptop that is included in the Checkout equipment.

  • Click here for info on how to attach a P2 card reader using USB 2.0 cable

ONCE THE CARD READER IS MOUNTED ON DESKTOP INSERT P2 CARD AND DRAG OFF THE FOLDER "CONTENTS" AND THE FILE LABELED LASTCLIP.TXT see example below. All the files on the P2 card will be in labeled the same way so make a new folder for each card and copy the card contents to that folder. This is the first level of backing up your files.

CONTENTS	→	60 gig ... ⏏	Feb 13 card 01
LASTCLIP.TXT			Render Files

Copy P2 Card contents to   *New folder on Back up Firewire HD Labeled with the date and # of*
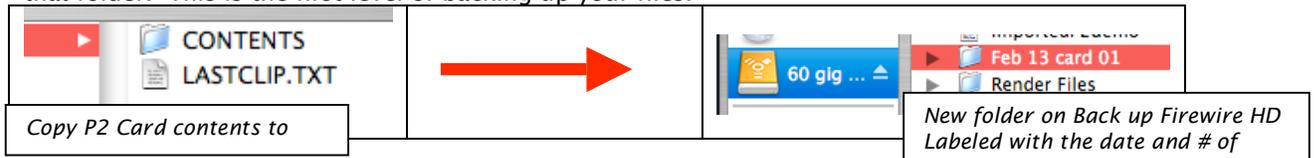
  • The Second level in file back up is to import them into Final Cut Pro
  • In Final Cut Pro, Set your "Scratch Disk" to 2nd firewire drive that you will use for editing.
  • Choose Final Cut Pro > System Settings, then click the Scratch Disks tab.
  • Choose a scratch disk to determine where ingested media will be stored.
  • In the Final Cut Pro Browser, choose a logging bin where ingested clips will be stored
in your project.
  • Choose File > Log and Transfer (or press Command-Shift-8).
  • Any mounted P2 cards and disk images appear in the Browse area.

IMPORTING P2 FOOTAGE INTO FINAL CUT PRO 6

Click this Icon to add a folder of P2 media to Log and Transfer Window

Click to access preferences

Click "Add Clip or Selection to Queue" to start bringing media into project

Fill in information about clip before adding it Queue
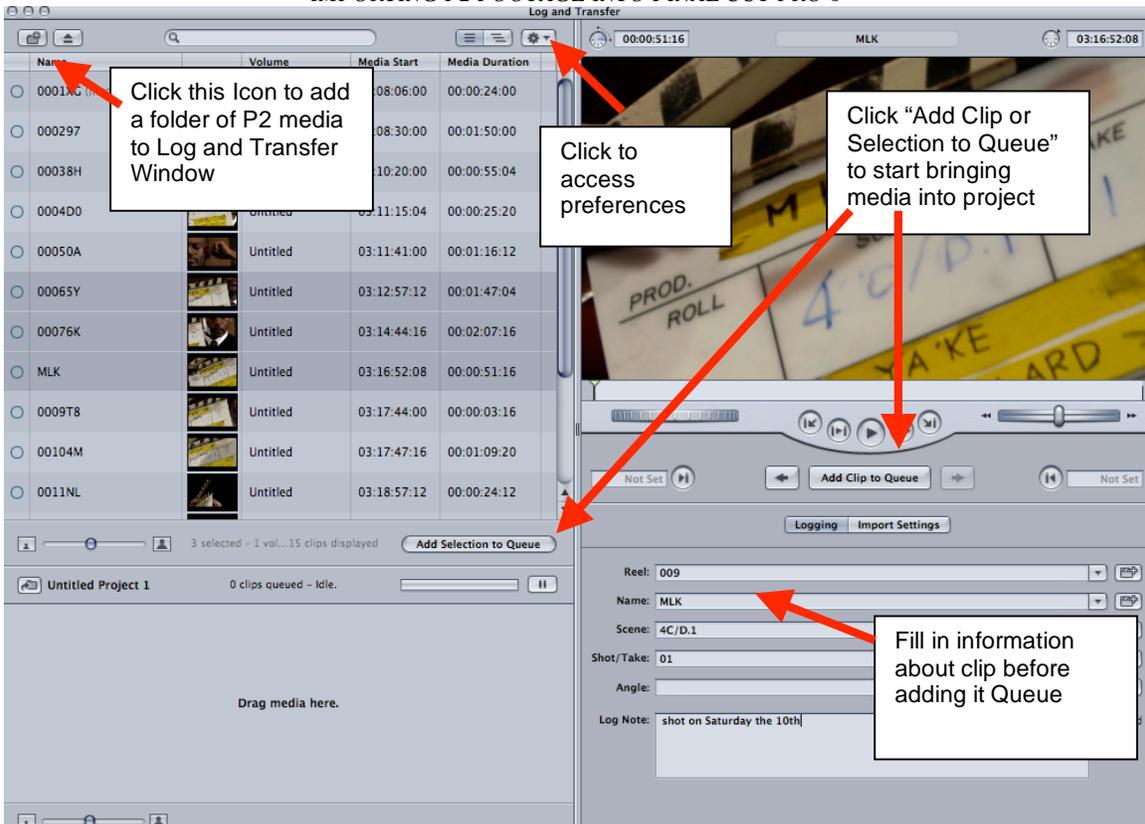
- If necessary, add additional P2 folders from the Finder. Click the Add Folder button in the upper-left corner of the Browse area, choose a P2 folder, then click OK.
- Check the preferences in the Log and Transfer window an make sure Remove Advanced Pulldown and Duplicate Frames is checked. This will enable FCP to remove the frames not necessary and import footage at the right frame rate.
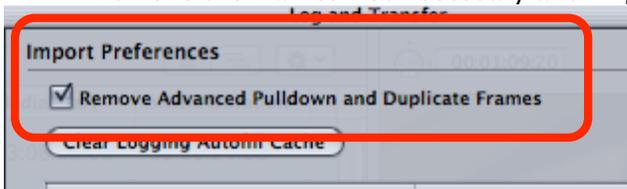
PLEEEEESE NOTE IF YOU SHOT IN ANY FRAME RATE OTHER THAN THE "N" NATIVE FRAME RATES THEN DO NOT!!! HAVE THIS BOX CHECKED. LEAVE IT UNCHECKED BECAUSE YOUR FOOTAGE WILL LOOK STUTTERY AND OUT OF SYNC.

If using the FS-100 Firestore, the frame rate on the camera will always need be set to 59.94 or 29.97 or else the Firestore won't work.

See helpsheet on using the HVX-200 with the Firestore.

Example of clips imported into FCP without Pulldown removed:

Frame Size	Vid Rate	Compressor	Data Rate
960 x 720	59.94 fps	DVCPRO HD 720p60	14.1 MB/sec
1280 x 1080	29.97 fps	DVCPRO HD 1080p30	14.1 MB/sec
960 x 720	59.94 fps	DVCPRO HD 720p60	14.1 MB/sec
960 x 720	59.94 fps	DVCPRO HD 720p60	14.1 MB/sec
1280 x 1080	29.97 fps	DVCPRO HD 1080p30	14.1 MB/sec
1280 x 1080	29.97 fps	DVCPRO HD 1080p30	14.1 MB/sec

Example of same clips imported off of the FS-100 with the Pulldown Box checked.

Log and Transfer

Import Preferences

☑ Remove Advanced Pulldown and Duplicate Frames

(Clear Logging Autofill Cache)
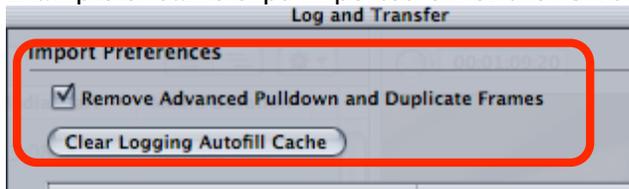
REMEMBER TO ONLY REMOVE PULLDOWN IF YOU SHOT IN THE "NATIVE" FRAME RATES. IF YOU ARE NOT SURE THEN LEAVE IT UNCHECKED.

Frame Size	Vid Rate	Compressor	Data Rate
1280 x 1080	29.97 fps	DVCPRO HD 1080p30	14.1 MB/sec
960 x 720	23.98 fps	DVCPRO HD 720p60	5.7 MB/sec
960 x 720	23.98 fps	DVCPRO HD 720p60	5.7 MB/sec
960 x 720	23.98 fps	DVCPRO HD 720p60	5.7 MB/sec
1280 x 1080	29.97 fps	DVCPRO HD 1080p30	14.1 MB/sec
1280 x 1080	23.98 fps	DVCPRO HD 1080p30	11.3 MB/sec
1280 x 1080	23.98 fps	DVCPRO HD 1080p30	11.3 MB/sec

Notice the frame rate and data rate has changed. This means that less storage will be used and quality will be the same because the duplicate frames are removed.

- Select a clip in the Browse area of the Log and Transfer window to view it in the Preview area.
- In the Preview area, set In and Out points to identify the media you want to ingest.
- By default, a clip's Reel property is the same as the name of the P2 volume where it is
  stored.
- Change the clip's Reel property in the Preview area.
- Change the P2 clip name to a more meaningful name than the default name assigned by the P2 camcorder. Add descriptive information about each clip in the logging fields..
- Click Import Settings in the Logging area, then select the video and audio channels
  To start importing into FCP
- In the Browse area, select one or more clips, then click Add Selection to Queue or In the Preview area, click Add Clip to Queue.
- Watch the Transfer Queue area to see the status of your ingested media.

- Don't forget to eject the icon of the P2 card hard drive icon first before ejecting the card or disconnecting the USB cable.

- After all the footage is imported in to Final Cut Pro choose the correct *FCP Easy Setup* before editing the footage. To check the frame rate of the imported files right click on the file and select >Item Properties > Format

- The format properties of the clip will be displayed and from that information choose the correct FCP Easy Set-Up to keep all the editing timelines in the native Compressor and Vid Rate.
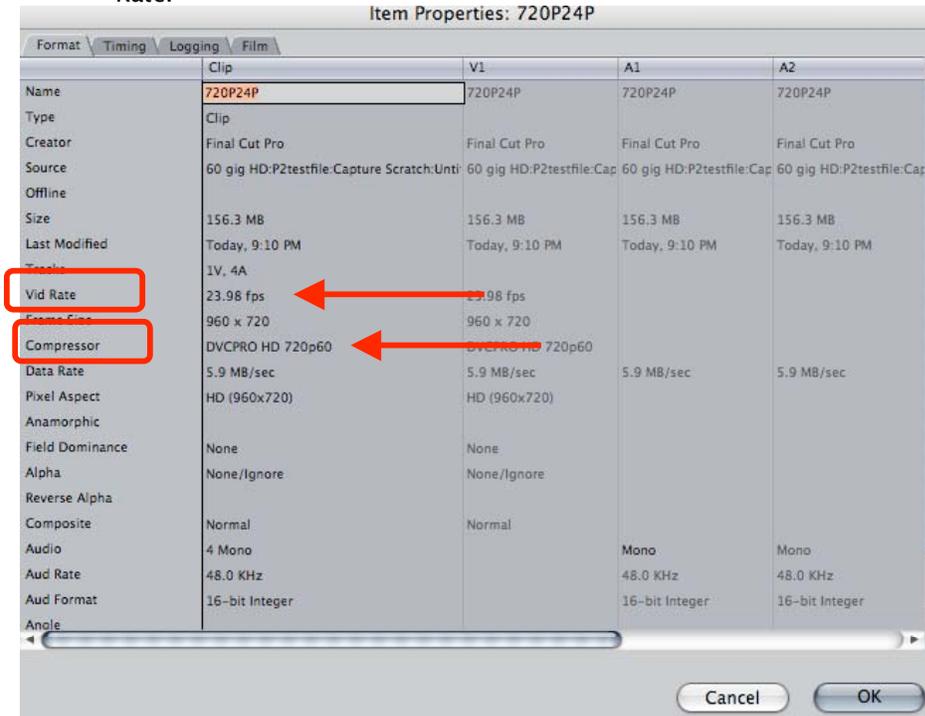
- For example the Item Properties from the clip above shows a Vid Rate of 23.98 and a Compression using the DVCPro HD codec. To edit natively with this clip one would choose the DVCPro HD 720p24 Codec.
- In Final Cut Pro go to >Final Cut Pro>Easy Setup and choose this Easy Set Up
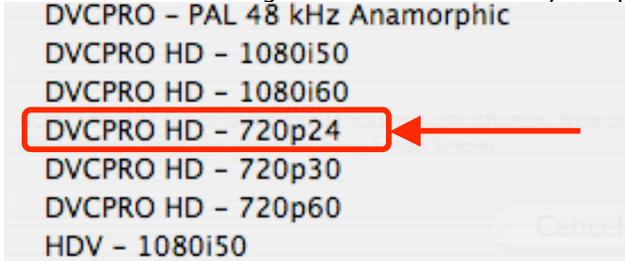
- Or if using a AJA Kona Card choose
- >Final Cut Pro>Easy Setup and choose this Easy Set Up

AJA KONA 2– 1080psf 24 DL 10 Bit Uncompressed
AJA KONA 2– 1080psf 24 DL 10 Bit Uncompressed
AJA KONA 2– 1080psf 24 DVCPro HD
AJA KONA 2– 720p 23.98 10 Bit Varicam
AJA KONA 2– 720p 23.98 8 Bit Varicam
AJA KONA 2– 720p 23.98 DVCPro HD Varicam
AJA KONA 2– 720p 25 10 Bit Varicam
AJA KONA 2– 720p 25 8 Bit Varicam
AJA KONA 2– 720p 25 DVCPro HD Varicam
AJA KONA 2– 720p 59.94 10 Bit Uncompressed

Attention – This clip does not match this sequence's settings or any of your sequence presets.

For best performance your sequence and External Video should be set to the format of the clips you are editing.

Change sequence settings to match the clip settings?

No   Yes

- **ONE IMPORTANT NOTE: IF YOU GET THIS MESSAGE AND NEED TO RENDER YOUR TIMELINE TO PLAY YOUR FILES YOU ARE IN THE WRONG FRAME RATE. CHECK THE FILE AGAIN AND MAKE SURE YOU ARE EDITNG NATIVELY TO THE FRAME RATE AND COMPRESSION**