

**Summary: Video Compression Speed Test**

		Adobe Media Encoder		Apple Compressor				HandBrake		MPEG StreamClip		Telestream Episode v6.4.6		Sorenson Squeeze 10 Pro	
		VBR 1-pass	VBR 2-pass	Single Instance VBR 1-pass	Multiple Instance VBR 1-pass	Single Instance VBR 2-pass	Multiple Instance VBR 2-pass	VBR 1-pass	VBR 2-pass	VBR 1-pass	VBR 2-pass	VBR 1-pass	VBR 2-pass	VBR 1-pass	VBR 2-pass
<b>Comparison Percentages</b>															
New Mac Pro		100.0%	155.1%	78.5%	145.7%	203.9%	175.8%	47.2%	92.3%	91.9%	N/A	114.0%	221.3%	123.3%	120.2%
21" iMac		100.0%	141.2%	34.2%	68.1%	70.3%	258.3%	44.5%	88.2%	106.7%	N/A	106.8%	210.2%	107.0%	174.6%
Indicates Fastest	Indicates Slowest														
<b>Actual Times (Minutes:Seconds)</b>															
New Mac Pro	Total Time	59:39	92:30	46:51	86:55	121:36	104:52	28:08	55:03	54:50	N/A	68:00	132:00	73:33	71:41
	Average	14:55	23:08	11:43	21:44	30:24	26:13	07:02	13:46	13:43	N/A	17:00	33:00	18:23	17:55
21" iMac	Total Time	86:07	121:38	29:29	58:39	60:30	222:26	38:18	75:59	91:51	N/A	92:00	181:00	92:09	150:23
	Average	21:32	30:25	07:22	14:40	15:08	55:37	09:35	19:00	22:58	N/A	23:00	45:15	23:02	37:36
<b>Average time to compress 1 minute of each source codec averaged across both computers and all settings (Minutes:Seconds:Milliseconds)</b>															
	Source Minutes	Compression Time per Source Minute (Minute:Second:Millisecond)													
XDCAM EX	8.967	00:48.734	01:20.796	00:24.367	04:03.225	02:35.905	01:51.799	00:18.066	00:33.344	00:57.600	N/A	00:26.765	00:50.184	01:04.587	01:18.254
ProRes 422 HQ	52.83	00:27.887	00:38.274	00:16.515	00:24.058	00:39.324	01:10.258	00:12.942	00:25.568	00:28.189	N/A	00:30.380	00:59.909	00:34.421	00:41.600
ProRes 4444	37.58	00:26.330	00:44.053	00:08.688	00:19.545	00:16.205	00:37.068	00:12.334	00:24.761	00:24.095	N/A	00:35.923	01:09.452	00:20.089	00:41.645
<b>Average time, per System, to compress one minute of ProRes 422 HQ</b>															
	Source Minutes	Compression Time per Source Minute (Minute:Second:Millisecond)													
Mac Pro	52.83	00:44	00:33	00:19	00:28	00:51	00:41	00:11	00:21	00:20	N/A	00:27	00:52	00:33	00:29
21" iMac	52.83	00:34	00:43	00:14	00:20	00:28	01:40	00:15	00:30	00:36	N/A	00:34	01:08	00:36	00:55



iMac - Compression Comparison

Type of File	Source File Size	TRT	Source Codec	Source Image Size	File Name	File Size (in MB)			Adobe Media Encoder (21" iMac 1-pass)			Adobe Media Encoder (21" iMac 2-pass)			Compressor 4.2 21" iMac (1-pass Single Instance)			Compressor 4.2 21" iMac (1-pass Multiple Instances)			Compressor 4.2 21" iMac (2-pass Single Instance)			Compressor 4.2 iMac (2-pass Multiple Instances)			HandBrake (1-pass VBR)		HandBrake (2-pass VBR)		MPEG StreamClip (1-pass VBR)		MPEG StreamClip (2-pass VBR)		Episode (1-pass VBR)		Episode (2-pass VBR)		Squeeze (1-pass VBR)		Squeeze (2-pass VBR)	
						Maximum	Minimum	Average	Time to compress with YouTube HD 720 setting	File Size (in MB)	Time to compress with YouTube HD 720 setting	File Size (in MB)	Time to compress with YouTube HD 720 default setting	File Size (in MB)	Time to compress with YouTube HD 720 default setting	File Size (in MB)	Time to compress with YouTube HD 720 default setting	File Size (in MB)	Time to compress with YouTube HD 720 default setting	File Size (in MB)	Time to compress with YouTube HD 720 setting	File Size (in MB)	Time to compress with YouTube HD 720 setting	File Size (in MB)	Time to compress with YouTube HD 720 setting	File Size (in MB)	Time to compress with YouTube HD 720 setting	File Size (in MB)	Time to compress with YouTube HD 720 setting	File Size (in MB)	Time to compress with YouTube HD 720 setting	File Size (in MB)	Time to compress with YouTube HD 720 setting	File Size (in MB)	Time to compress with YouTube HD 720 setting	File Size (in MB)	Time to compress with YouTube HD 720 setting	File Size (in MB)	Time to compress with YouTube HD 720 setting	File Size (in MB)	Time to compress with YouTube HD 720 setting	File Size (in MB)
QuickTime Movie	2.33 GB	8m 58s	XDCAM EX	1280 x 720	2RG ep10	955.5	659.2	702.0	7m 8s	668	13m 13s	678.6	1m 30s	662.6	18m 20s	665.5	3m 11s	682.6	17m 30s	680.1	3m 18s	659.2	6m 8s	683.5	10m 3s	955.5	14m 26s	768.2	5m	671.4	9m	679.3	11m 56s	676.2	14m 28s	697.8						
Quick Time Movie	14.87 GB	4m 45s	ProRes 422 HQ	1920 x 1080	Tour	373.2	342.8	361.5	4m 44s	342.8	8m 49s	363.2	3m 11s	360.5	5m 17s	360.5	6m 25s	362.9	14m 10s	356.2	3m 48s	353.4	7m 29s	361.9	9m 13s	372.5	16m 56s	370.0	6m	357.1	13m	359.9	7m 28s	373.2	15m 26s	366.3						
QuickTime Movie	46.83 GB	37m 35s	ProRes 4444	1280 x 720	Craft 01	1,669.1	418.4	1,065.6	19m 34s	1,658.9	31m 50s	1,669.1	3m 54s	1,208.3	5m 28s	1,208.3	8m 12s	1525.76	29m 27s	859.7	8m 49s	418.4	17m 20s	838.1	18m 3s	736.9	40m 25s	689.3	27m	758.1	53m	1,157.1	17m 0s	767.1	39m 55s	1,423.36						
QuickTime Movie	79.07 GB	48m 5s	ProRes 422 HQ	1920 x 1080	Interviews	3,942.4	0.0	3,770.7	54m 41s	3,799.0	1h 7m 46s	3,799.0	20m 54s	3,727.4	29m 34s	3,727.4	42m 42s	3,758.1	2h 41m 19s	3,737.6	22m 23s	3,747.8	45m 2s	3,747.8	54m 32s	3,727.4	N/A	N/A	54m	3,737.6	1h 46m	3,737.6	55m 45s	3,942.4	80m 34s	3,829.76						
					Total Time				86m 7s		121m 38s		29m 29s		58m 39s		60m 30s		222m 26s		38m 18s		75m 59s		1h 31m 51s		71m 47s		92m 0s		3h 1m 0s		92m 9s		150m 23s							
					Average				21m 32s		30m 25s		7m 22s		14m 40s		15m 8s		55m 37s		9m 35s		19m 0s		22m 58s		23m 56s		23m 0s		45m 15s		23m 2s		37m 36s							
<b>NOTES</b>																																										
* Compressor HD720 default setting used. AME changed bit rate from default of 16 mbps to 10 mbps to match Compressor														<b>Versions</b>																												
* AME default YouTube 720p setting changed to VBR 2-pass at 10 mbps to match Compressor settings.														Adobe Media Encoder CC 2014																												
* Since not all source files were the same image size, all files were scaled to the same compressed image size of 1280 x 720														Apple Compressor 4.2																												
* Compressor creates QuickTime movies for YouTube, AME creates MP4 movies.														HandBrake 0.10.a																												
* iMac compression done on a Late 2013 21" iMac 3.1 GHz Intel Core i7 with 16 GB of RAM, NVIDIA GeForce GT750M GPU with 1024 VRAM														MPEG Streamclip 1.9.2																												
* The 21" iMac only supports 1 additional instance of Compressor.														Telestream Episode 6.4.6																												
* No other tasks were running during these compression tests, except for Numbers (to record results) and iTunes Radio (to keep me awake.)														Sorenson Squeeze Desktop 10 Pro																												
* All files stored on internal storage. Files stored on external single-drive storage tend to compress about 15% slower.																																										
* The goal in this test was to compare compression speeds and resulting file sizes using common settings. Bit rates this high should yield excellent image and audio quality.																																										
* Compressed files larger than 1 GB were converted to MB by multiplying the file size in GB by 1024.																																										