

Summary: Adobe Media Encoder CC 2014 vs. Apple Compressor 4.2

		Adobe Media Encoder 2014		Adobe Media Encoder 2015 (Spring)		Adobe Media Encoder 2015 (Fall)		Compressor 4.2	
		1-pass	2-pass	1-pass	2-pass	1-pass	2-pass	Single Instance 1-pass	Single Instance 2-pass
Percentages									
21" iMac		8.0%	50.1%	100.0%	78.5%	-6.1%	88.1%	-63.0%	-24.1%
15" MacBook Pro				100.0%	92.9%	6.0%	141.3%	-60.1%	-22.3%
Indicates Fastest									
Actual Times (Minutes:Seconds)									
21" iMac	Total Time	86:07	119:40	79:43	142:16	74:49	149:57	29:29	60:30
	Average	21:32	29:55	19:56	35:34	18:42	37:29	07:22	15:08
15" MacBook Pro	Total Time			69:11	133:28	73:21	166:56	27:35	53:47
	Average			17:18	33:22	18:20	41:44	06:54	13:27
Average time to compress 1 minute of each source codec with each setting (Minutes:Seconds:Milliseconds)									
	Source Minutes			Compression Time per Source Minute (Minute:Second:Millisecond)					
XDCAM EX	8.967	00:47.731	01:28.101	00:46.392	01:32.339	00:46.114	01:37.190	00:08.866	00:38.474
ProRes 422 HQ	52.83	00:33.740	00:42.447	00:27.054	00:49.754	00:25.208	00:55.054	00:13.283	00:26.363
ProRes 4444	37.58	00:31.240	00:50.692	00:31.732	00:58.196	00:36.402	01:14.987	00:06.094	00:12.520
422 HQ Speed improvement		0%		20%		25%			

NOTES

The compression speed AME 2015 (Spring) was set at 100% for each system and provided the baseline against which all other speeds were compared.

Speeds in red are slower than the baseline, speeds in green are faster than the baseline. The two green rectangles indicate the fastest speed overall.

Compression speeds for different codecs are listed in the table at the bottom. The most dramatic speed improvements for AME were with ProRes 422 HQ files.

Test files, compression settings, operating system, RAM and hardware were the same for all tests.

21" iMac - Compression Comparison

Type of File	Source File Size	TRT	Source Codec	Source Image Size	File Name	Adobe Media Encoder 2014 (Fall)				Adobe Media Encoder 2015 (May)				Adobe Media Encoder 2015 (Nov)				Apple Compressor 4.2			
						21" iMac 1-pass		21" iMac 2-pass		21" iMac 1-pass		21" iMac 2-pass		21" iMac 1-pass		21" iMac 2-pass		Compressor 4.2 21" iMac (1-pass Single instance)		Compressor 4.2 21" iMac (2-pass Single instance)	
						<i>Time to compress with YouTube HD 720 setting</i>	<i>File Size</i>	<i>Time to compress with YouTube HD 720 setting</i>	<i>File Size</i>	<i>Time to compress with YouTube HD 720 setting</i>	<i>File Size</i>	<i>Time to compress with YouTube HD 720 setting</i>	<i>File Size</i>	<i>Time to compress with YouTube HD 720 setting</i>	<i>File Size</i>	<i>Time to compress with YouTube HD 720 setting</i>	<i>File Size</i>	<i>Time to compress with YouTube HD 720 default setting</i>	<i>File Size</i>	<i>Time to compress with YouTube HD 720 default setting</i>	<i>File Size</i>
QuickTime Movie	2.33 GB	8m 58s	XDCAM EX	1280 x 720	2RG ep10	07:08	668	13:10	678.6	06:52	668 MB	13:10	678.6 MB	06:53	669.6	15:45	678.7	01:30	662.6 MB	03:11	682.6 MB
Quick Time Movie	14.87 GB	4m 45s	ProRes 422 HQ	1920 x 1080	Tour	04:44	342.8	09:09	363.2	04:55	342.8 MB	08:14	363.2 MB	04:56	352.2	09:53	362.8	03:11	360.5 MB	06:25	362.9
QuickTime Movie	46.83 GB	37m 35s	ProRes 4444	1280 x 720	Craft 01	19:34	1620	31:45	1630	23:59	1.62 G	43:53	1.63 GB	24:14	1.66 GB	48:34	1.65 GB	03:54	1.18 GB	08:12	1.49
QuickTime Movie	79.07 GB	48m 5s	ProRes 422 HQ	1920 x 1080	Interviews	54:41	3710	65:36	3710	43:57	3.71 GB	76:59	3.71 GB	38:46	3.71 GB	75:45	3.72 GB	20:54	3.64 GB	42:42	3.67 GB
				<i>Total Time</i>		<i>86:07</i>		<i>119:40</i>		<i>79:43</i>		<i>142:16</i>		<i>74:49</i>		<i>149:57</i>		<i>29:29</i>		<i>60:30</i>	
				<i>Average</i>		<i>21:32</i>		<i>29:55</i>		<i>19:56</i>		<i>35:34</i>		<i>18:42</i>		<i>37:29</i>		<i>07:22</i>		<i>15:08</i>	
NOTES																					
* Compressor HD720 default setting used. AME changed bit rate from default of 16 mbps to 10 mbps to match Compressor																					
* Since not all source files were the same image size, all files were scaled to the same compressed image size of 1280 x 720																					
* Compressor creates QuickTime movies for YouTube, AME creates MP4 movies.																					
* 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																					
* All files were compressed one file at a time. No other tasks were running during these compression tests.																					
* 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.																					

15" MacBook Pro - Compression Comparison

Type of File	Source File Size	TRT	Source Codec	Source Image Size	File Name	Adobe Media Encoder 2015 (May)				Adobe Media Encoder 2015 (Nov)				Apple Compressor 4.2			
						15" MacBook Pro (1-pass)		15" MacBook Pro (2-pass)		15" MacBook Pro (1-pass)		15" MacBook Pro (2-pass)		15" MacBook Pro (1-pass Single instance)		15" MacBook Pro (2-pass Single instance)	
						Time to compress with YouTube HD 720 setting	File Size	Time to compress with YouTube HD 720 setting	File Size	Time to compress with YouTube HD 720 setting	File Size	Time to compress with YouTube HD 720 setting	File Size	Time to compress with YouTube HD 720 default setting	File Size	Time to compress with YouTube HD 720 default setting	File Size
QuickTime Movie	2.33 GB	8m 58s	XDCAM EX	1280 x 720	2RG ep10	07:00	668 MB	14:26	678.6 MB	06:54	669.6	13:18	678.7	01:09	662.6 MB	02:34	682.6 MB
QuickTime Movie	14.87 GB	4m 45s	ProRes 422 HQ	1920 x 1080	Tour	06:20	342.8 MB	11:24	365.9 MB	05:35	352.3	11:14	365.9	03:36	360.5 MB	06:55	362.9 MB
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QuickTime Movie	79.07 GB	48m 5s	ProRes 422 HQ	1920 x 1080	Interviews	40:05	3.71 GB	78:37	3.71 GB	39:30	3.71 GB	97:02	3.72 GB	19:06	3.64 GB	36:49	3.67 GB
				<i>Total Time</i>		<i>69:11</i>		<i>133:28</i>		<i>73:21</i>		<i>166:56</i>		<i>27:35</i>		<i>53:47</i>	
				<i>Average</i>		<i>17:18</i>		<i>33:22</i>		<i>18:20</i>		<i>41:44</i>		<i>06:54</i>		<i>13:27</i>	
NOTES																	
	* Compressor HD720 default setting used. AME changed bit rate from default of 16 mbps to 10 mbps to match Compressor																
	* Since not all source files were the same image size, all files were scaled to the same compressed image size of 1280 x 720																
	* Compressor creates QuickTime movies for YouTube, AME creates MP4 movies.																
	* MacBook compression done on a Late 2013 15" Retina MacBook Pro 2.6 GHz Intel i7, 16 GB RAM, NVIDIA GeForce GT750M GPU with 2048 VRAM.																
	* Prior tests proved Compressor running as a single instance was much faster than multiple instances for MacBook Pros and iMacs.																
	* Only one file was compressed at a time. No other tasks were running during these compression tests.																
	• 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.																