

Battery Life

The results of my battery tests, using a Hawk-Woods BP-98UX, which is rated at 98Wh. I recorded the TV so there would be some motion to process:

Reso	Comp.	Screens	Runtime
12k 16:9	CBR 8:1	Both 50%, no dimming	83m
8k 16:9	CBR 8:1	Both 50%, no dimming	98m
4k 16:9	CBR 5:1	Both 50%, no dimming	96m
4k 16:9	CBR 5:1	Internal only 50%, no dimming	109m
8k 16:9	CBR 8:1	Both 50%, dimming 1 minute	100m

Recording

Actual resolutions delivered by the camera in various aspect ratios:

Reso	Aspect Mode	Video Width	Video Height	Actual Aspect
12k	3:2	12,228	8,040	1.52
12k	16:9	12,228	6,912	1.77
12k	17:9	12,228	6,480	1.89
12k	2.4:1	12,288	5,112	2.40
12k	6:5	9,648	8,040	1.20
9k	3:2	9,408	6,264	1.50
9k	16:9	8,688	4,896	1.77
9k	17:9	9,312	4,896	1.90
9k	2.4:1	9,312	3,864	2.41
9k	6:5	7,680	6,408	1.20
8k	3:2	8,192	5,360	1.53
8k	16:9	8,192	4,608	1.78
8k	17:9	8,192	4,320	1.90
8k	2.4:1	8,192	3,408	2.40
8k	6:5	6,432	5,360	1.20
4k	3:2	4,096	2,680	1.53
4k	16:9	4,096	2,304	1.78
4k	17:9	4,096	2,160	1.90
4k	2.4:1	4,096	1,704	2.40
4k	6:5	3,216	2,680	1.20

Compression Modes

Compression modes available in each resolution:

Reso	Constant Bitrate	Constant Quality
12k	3:1, 8:1, 12:1, 18:1	Q0, Q1, Q3, Q5
9k	3:1, 8:1, 12:1, 18:1	Q0, Q1, Q3, Q5
8k	3:1, 5:1, 8:1, 12:1	Q0, Q1, Q3, Q5
4k	3:1, 4:1, 5:1, 6:1	Q0, Q1, Q3, Q5

Frame Rates

The frame rates available in normal recording modes:

Resolution	Aspect	Available Rates
12k	Most	23.98, 24, 25, 29.97, 30
12k	17:9	23.98, 24, 25, 29.97, 30, 50
12k	2.4:1	23.98, 24, 25, 29.97, 30, 50, 59.94, 60
9k Super 35	3:2, 6:5	23.98, 24, 25, 29.97, 30, 50
9k Super 35	other	23.98, 24, 25, 29.97, 30, 50, 59.94, 60
8k / 4k	all	23.98, 24, 25, 29.97, 30, 50, 59.94, 60

The maximum frame rates available in off-speed recording (the minimum is 12 FPS); slowdown factors given are relative to a 24FPS timeline:

Resolution	Aspect Ratio	Max Rate	Slow-down
12k	3:2	40	1.67
12k	16:9	45	1.88
12k	2.4:1	60	2.50
9k Super 35	3:2	50	2.08
9k Super 35	16:9	65	2.71
9k Super 35	2.4:1	80	3.33
8k / 4k	3:2	72	3.00
8k / 4k	16:9	84	3.50
8k / 4k	2.4:1	112	4.67

Bit Rates

All bit rates shown here are indicative only, as measured in my river test. Actual bit rates will vary — perhaps significantly — depending on the subject you film. All of these rates were captured with the same scene, which contained moderate motion, to give you an idea of what you might expect. I did not test all modes, as that is simply too many.

In 12k:

Format	Comp	Bit Rate		GB/hr	min/TB
12k 3:2	CBR 8:1	3,586 Mb/s	448.2 MB/s	1,614 GB/h	37 m/TB
12k 3:2	CBR 18:1	1,596 Mb/s	199.5 MB/s	718 GB/h	84 m/TB
12k 3:2	VBR Q3	3,870 Mb/s	483.8 MB/s	1,742 GB/h	34 m/TB
12k 16:9	CBR 3:1	6,266 Mb/s	783.2 MB/s	2,820 GB/h	21 m/TB
12k 16:9	CBR 8:1	3,081 Mb/s	385.1 MB/s	1,386 GB/h	43 m/TB
12k 16:9	CBR 12:1	2,061 Mb/s	257.6 MB/s	928 GB/h	65 m/TB
12k 16:9	CBR 18:1	1,375 Mb/s	171.9 MB/s	619 GB/h	97 m/TB
12k 16:9	VBR Q1	5,451 Mb/s	681.4 MB/s	2,453 GB/h	24 m/TB
12k 16:9	VBR Q3	3,404 Mb/s	425.6 MB/s	1,532 GB/h	39 m/TB
12k 16:9	VBR Q5	2,293 Mb/s	286.6 MB/s	1,032 GB/h	58 m/TB
12k 2.4:1	CBR 8:1	2,277 Mb/s	284.6 MB/s	1,024 GB/h	59 m/TB
12k 2.4:1	CBR 18:1	1,019 Mb/s	127.4 MB/s	459 GB/h	131 m/TB
12k 2.4:1	VBR Q3	2,540 Mb/s	317.5 MB/s	1,143 GB/h	53 m/TB

In 9k:

Format	Comp	Bit Rate		GB/hr	min/TB
9k 3:2	CBR 8:1	2,147 Mb/s	268.4 MB/s	966 GB/h	62 m/TB
9k 3:2	CBR 18:1	957 Mb/s	119.6 MB/s	430 GB/h	139 m/TB
9k 3:2	VBR Q3	2,487 Mb/s	310.9 MB/s	1,119 GB/h	54 m/TB
9k 16:9	CBR 3:1	3,678 Mb/s	459.7 MB/s	1,655 GB/h	36 m/TB
9k 16:9	CBR 8:1	1,552 Mb/s	194.0 MB/s	698 GB/h	86 m/TB
9k 16:9	CBR 12:1	1,040 Mb/s	129.9 MB/s	468 GB/h	128 m/TB
9k 16:9	CBR 18:1	690 Mb/s	86.3 MB/s	311 GB/h	193 m/TB
9k 16:9	VBR Q1	2,920 Mb/s	365.0 MB/s	1,314 GB/h	46 m/TB
9k 16:9	VBR Q3	2,019 Mb/s	252.3 MB/s	908 GB/h	66 m/TB
9k 16:9	VBR Q5	1,630 Mb/s	203.7 MB/s	733 GB/h	82 m/TB
9k 2.4:1	CBR 8:1	1,314 Mb/s	164.3 MB/s	591 GB/h	101 m/TB
9k 2.4:1	CBR 18:1	586 Mb/s	73.3 MB/s	264 GB/h	227 m/TB
9k 2.4:1	VBR Q3	1,490 Mb/s	186.3 MB/s	671 GB/h	89 m/TB

In 8k:

Format	Comp	Bit Rate		GB/hr	min/TB
8k 3:2	CBR 8:1	1,593 Mb/s	199.1 MB/s	717 GB/h	84 m/TB
8k 3:2	CBR 12:1	1,067 Mb/s	133.4 MB/s	480 GB/h	125 m/TB
8k 3:2	VBR Q3	3,722 Mb/s	465.3 MB/s	1,675 GB/h	36 m/TB
8k 16:9	CBR 3:1	3,646 Mb/s	455.7 MB/s	1,641 GB/h	37 m/TB
8k 16:9	CBR 8:1	1,377 Mb/s	172.2 MB/s	620 GB/h	97 m/TB
8k 16:9	CBR 12:1	918 Mb/s	114.8 MB/s	413 GB/h	145 m/TB
8k 16:9	VBR Q1	4,501 Mb/s	562.6 MB/s	2,025 GB/h	30 m/TB
8k 16:9	VBR Q3	2,995 Mb/s	374.4 MB/s	1,348 GB/h	45 m/TB
8k 16:9	VBR Q5	2,071 Mb/s	258.9 MB/s	932 GB/h	64 m/TB
8k 2.4:1	CBR 8:1	1,021 Mb/s	127.7 MB/s	460 GB/h	131 m/TB
8k 2.4:1	CBR 12:1	681 Mb/s	85.1 MB/s	306 GB/h	196 m/TB
8k 2.4:1	VBR Q3	2,263 Mb/s	282.9 MB/s	1,019 GB/h	59 m/TB

In 4k:

Format	Comp	Bit Rate		GB/hr	min/TB
4k 3:2	CBR 3:1	1,065 Mb/s	133.1 MB/s	479 GB/h	125 m/TB
4k 3:2	CBR 6:1	652 Mb/s	81.5 MB/s	293 GB/h	204 m/TB
4k 3:2	VBR Q3	1,860 Mb/s	232.5 MB/s	837 GB/h	72 m/TB
4k 16:9	CBR 3:1	919 Mb/s	114.9 MB/s	414 GB/h	145 m/TB
4k 16:9	CBR 6:1	574 Mb/s	71.8 MB/s	259 GB/h	232 m/TB
4k 16:9	VBR Q1	2,146 Mb/s	268.3 MB/s	966 GB/h	62 m/TB
4k 16:9	VBR Q3	1,640 Mb/s	205.0 MB/s	738 GB/h	81 m/TB
4k 16:9	VBR Q5	1,400 Mb/s	175.0 MB/s	630 GB/h	95 m/TB
4k 2.4:1	CBR 3:1	677 Mb/s	84.7 MB/s	305 GB/h	197 m/TB
4k 2.4:1	CBR 6:1	407 Mb/s	50.8 MB/s	183 GB/h	328 m/TB
4k 2.4:1	VBR Q3	1,222 Mb/s	152.8 MB/s	550 GB/h	109 m/TB