

# Digital Media Fact Sheet

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## Quantities of Data:

binary (1 or 0) = 1 b (bit)  
8 b = 1 B (Byte)  
1024 B = 1 KB (Kilobyte)  
1024 KB = 1 MB (Megabyte)  
1024 MB = 1 GB (Gigabyte)  
1024 GB = 1 TB (Terabyte)  
1024 TB = 1 PB (Petabyte)

## Bit Depth:

8 bit = 256 values  
16 bit = 65,536 values  
24 bit = 1.6 Million values  
48 bit = 4.3 Billion values

## Storage Options:

zip disk = 250 MB  
usb Flash drive = 60 to 512 MB  
CD-r = 700 (\*650) MB  
DVD-r = 4.7 (\*4.3) GB  
Computer = 80-200 GB  
Firewire Drive = 40 to 250 GB  
\*actual space

## Text Storage:

1 character = 1 B (Byte)  
1 page = 8 KB  
300 pg book = 1.2 MB

## File Extensions:

MS Word = .doc  
Excel = .xls  
Text = .rtf, .txt  
Photoshop = .psd  
Web Image = .jpg, .gif, or .png  
Uncompressed Image = .tif  
Illustrator = .ai  
In Design = .indd  
Adobe PDF = .pdf  
After Effects = .aep  
Apple Movie = .mov  
Maya = .mb, .ma, .iff (file)  
Final Cut Project/Movie = .fcp  
DVD compressed video = .m2v  
Windows Movie = .avi  
Sound = .aif, .wav, .mp3, .ac3  
Flash = .fla, .swf

## Image Storage:

### Image Bit Depth

8 bit = greyscale  
8 bit = 1 RGB color channel  
16 bit = Professional Greyscale  
24 bit = 3x8 bit RGB channels  
48 bit = 3x16 bit RGB channels

### 8 Bit Grayscale

1 pixel = 1 Byte  
1 sq inch = 100 KB  
8x10" @ 300 DPI = 7 MB  
30x44" @ 150 DPI = 28 MB

### 16 Bit Grayscale

1 pixel = 2 Bytes  
1 sq inch = 200 KB  
8x10" @ 300 DPI = 14 MB  
30x44" @ 150 DPI = 56 MB

### 24 Bit RGB

1 pixel = 3 Bytes  
1 sq inch = 300 KB  
1 sq inch = 300 KB  
8x10" @ 300 DPI = 21 MB  
30x44" @ 150 DPI = 85 MB

### 48 Bit RGB

1 pixel = 6 Bytes  
8x10" @ 300 DPI = 41 MB  
30x44" @ 150 DPI = 170 MB

## Video Storage:

### DV with Stereo Audio

1 second = 3.6 MB  
1 minute = 217 MB  
1 hour = 12.7 GB

### DV no Sound

1 second = 3.4 MB  
1 minute = 206 MB  
1 hour = 12 GB

### DVD - Max Quality

1 second = 9.8 Mb or 1.2 MB  
1 minute = 74 MB  
1 hour = 4.3 GB  
1 DVD-r disc = 1 hour

### Uncompressed w/ Audio

1 second = 30 KB  
1 minute = 1.7 GB  
1 hour = 104 GB

### Uncompressed Hi-Def

1 second = 178 MB  
1 minute = 10 GB  
1 hour = 625 GB

### Web - Good Quality

1 second = 70 KB  
1 minute = 4 MB  
1 hour = 246 MB

## Audio Storage:

### For CD

44.1 KHz, 16bit, mono = 5 MB per minute  
44.1 KHz, 16bit, stereo = 10 MB per minute

### For DV

48 KHz, 16bit, mono = 6 MB per minute  
48 KHz, 16bit, stereo = 12 MB per minute

### For DVD - PCM (aif or wav):

48 KHz, 16bit, stereo = 1.5 Mb per second

### For DVD - Compressed as AC3

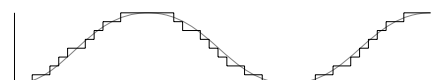
48 KHz, 16bit, Stereo or 5.1 = 448 kbps  
note: (448kb per second = 3.3 MB per minute)

### For Web, Flash, Ipod, Compressed as MP3

1 second = \*4 KB to 40 KB  
1 minute = \*240 KB to 2.3 MB  
1 hour = \*14 MB to 140 MB  
\*compression ranges from 32-320 Kbps

## Audio Data:

KHz = Horizontal Resolution of Wave (time)  
bit Depth = Vertical Res. of Wave (amplitude)



48KHz = 48,000 audio samples per second  
16bit = 65,536 possible steps of amplitude