

Side One

Side Two

What are the five categories the Format Families are divided into?

Frame sizes
Frame rates
Recording methods (3)
Color Bit Rate
Color subsampling

What are the 6 frame rates?

23.97
24 (counterpart for film)
29.97
30
59.97
60

Why is the frame rate 24 for film?

In order to transmit the signal back in the day, the numbers had to be fudged in order to fit the signal into the television. The actual signal to be brought down to 29.97.

<p>What are the three recording methods?</p>	<p>Interlaced</p> <p>Progressive</p> <p>Progressive-segmented</p>
<p>What is interlaced?</p>	<p>How the display is drawn.means that half of the screen is drawn during a refresh; the other half is drawn on the next refresh. Example: first the odd lines are displayed, then the even lines.</p>

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<p>What is progressive?</p>	<p>720p; A display format that indicates how the display is drawn. Progressive means that the entire display is drawn during every screen refresh</p>
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What is progressive-segmented?

It is a combination of interlaced and progressive

What it is color bit rate?

Short for Binary Digit. The smallest piece of binary digital data and is represented by either a 1 or a 0. The number of bits is used to describe the attributes of a pixel are used in digital video as a representation of signal quality (an 8 bit signal can have 256 levels from black to white while a 10 bit signal can have 1024 levels).

What are

Frame Recording Methods
Color bit depth

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What is HD TV?

High Definition Television. Not the same as DTV; it's actually a subset of DTV. The HDTV standard requires a screen resolution of 720p or better.

What is NTSC?

National Television System Committee or the analog television system widely utilized in the United States. Current DTV legislation calls for the NTSC system to shut down on April 7, 2009.

What is SD TV?

Standard Definition Television. A subset of DTV and the lowest resolution available at 480i (or 480-interlaced).

What is Frames per second (FPS)?

How many times per second that the display frame is created. The higher the FPS, the smoother the image will appear to the eye. Depending on the format, the FPS can vary from 24 to 60.

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What is aspect ratio?

A ratio of an image width to its height. 16:9 is a widescreen aspect as the ratio is 1.78:1. 4:3 is a typical full frame aspect on older televisions and is 1.33:1.

What is 1080p?

Ten-eighty-p is an HDTV resolution. Like 1080i, there are 1,080 horizontal lines of resolution, but they show in a progressive format. There currently is no 1080p programming, however a 1080p set will likely look better than a 1080i set (all things being equal) for faster motion and smoother video.

What is 1080i?

Ten-eighty-i is an HDTV resolution. It means that there are 1,080 horizontal lines of resolution and they are shown in an interlaced format. This is the format currently used by CBS, NBC, UPN, WB, HDNet, Discovery-HD, TNT-HD, Showtime-HD, and HBO-HD.

What is 720p?

An HDTV resolution. It means that there are 720 horizontal display lines and they are shown in a progressive format. This is the format currently used by ABC, Fox and ESPN-HD.

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What is **480p**?

Four-eighty-p is an EDTV resolution. It means that there are 480 horizontal display lines and they are shown in a progressive format. 480p is not an HDTV format.

What is color subsampling or chroma subsampling?

The use of lower [resolution](#) for the [colour](#) (*chroma*) information in an image than for the brightness (*intensity* or *luma*) information. It is used when an analog [component video](#) or [YUV](#) signal is digitally sampled.

Why subsample chroma?

Because the human [eye](#) is less sensitive to colour than intensity, the chroma components of an image need not be as well defined as the luma component, so many [video](#) systems [sample](#) the colour difference channels at a lower definition (i.e., sample frequency) than the brightness. This reduces the overall [bandwidth](#) of the video [signal](#) without much apparent loss of picture quality.

What are the three subsampling signals?

The subsampling in a video system is usually expressed as a three part ratio. The three terms of the ratio are: the number of brightness ("luminance" "luma" or Y) samples, followed by the number of samples of the two colour ("chroma") components: U/Cb then V/Cr, for each complete sample area. For quality comparison, only the ratio between those values is important, so 4:4:4 could easily be called 1:1:1; however, traditionally the value for brightness is always 4, with the rest of the values scaled accordingly.

**Luminance (yellow),
Chrominance red (Cr),
Chrominance blue (Cb)**

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What are the main controls that will affect your signal?

Pedestal
Gamma
Knee

What is GOP?

Groups of pictures

It's a type of compression. For each frame there will be one frame that is the actual frame and that's the iFrame. The only information that will be recorded is from the IFrame and not the other frames.

What are the subsampling rates?

4 4 4 best quality, but very uncompressed

4 2 2 We focus on this because it's broadcast and it's the rate for our HDVX200 cameras

4 2 0 HDV and still for broadcast

What does Pedestal control?

The Darks

What does Gamma control?

Controls brightness through the entire picture

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What is knee?

Designed to not blow out your picture, it's a limiter. It would come in handy for hot spots.

What is detail?

softens the skin tones

What is matrix?

It's the overall control control; color saturation

**What is
synchroscan?**

Mode to get a clear picture of computer monitors

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What is Gain?

Increasing sensitivity of the camera to receive the light that it gets the downside is more noise

What are the two main aspect ratios?

16:9
4:3

What is responsible for?

They developed time code

What is depth of field?

It's the range front of the camera that's in focus light, distance, F stop affect these.

* Smaller cameras have a large depth of field. It's like the prosumer cameras under 10k range.

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What is a cookie?

It's a shadow maker - a piece of cardboard, foam core, or metal cookie is short for cookilorous (spell?), we can make it seem as if sunlight hitting venetian blinds in the room, lights with blue gell, we can simulate sun light

What does a typical light kit include?

3 lamps, one for key, fill, and back light, and a fourth for set

What is the difference between: 4 4 4; 4 2 2; 4 1 1; 4 2 0

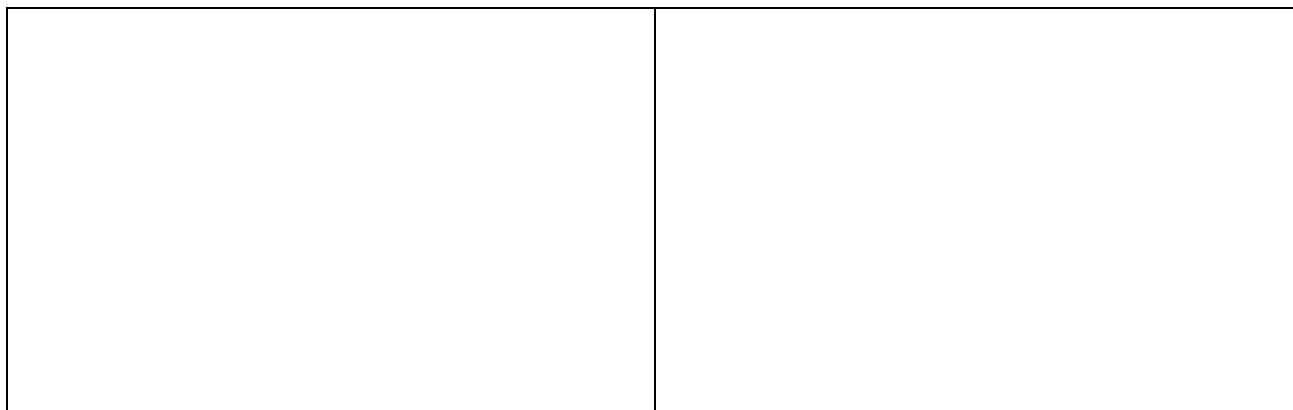
4 4 4 - relative to brightness we have not reduced the sampling, it's an uncompressed signal. If you have cameras that shoot uncompressed it will have this value.

4 2 2 - means that relative to the brightness one half of the red and one half of the red will be sampled.

Brightness is reduced by half.

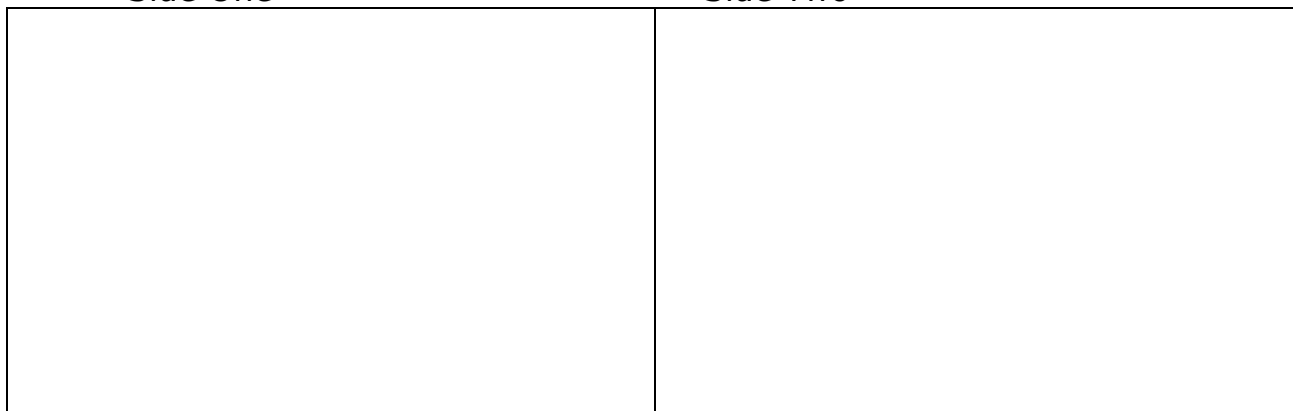
4 1 1 - means that relative to the brightness we're reducing red and blue by 1 quarter.

4 2 0 - when we sample red and blue we'll sample red twice and blue twice, but we'll sample brightness four times.



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