

**The Problem:** Once uploaded to the Internet the quality of HD video is often limited by bandwidth, Internet speeds, file size and formats. The result can often lead to a poor streaming experience for the online audience. So how can this be prevented?

## The Best Video File Format to Use:

Traditionally, the best solution to the problem of streamability versus quality was the .FLV format. However, given the rise of the HTML5 browser standard (that can play H.264, not .FLV) and mobile devices like the iPhone (that don't support Flash), .FLV is not such a good option anymore. The same is true of the .WMV format, which is generally only supported by Microsoft products (Windows Media Player, Silverlight, Zune).

Nowadays, you need a format that offers small file sizes at high quality, compatibility across many devices, and the ability to be streamed on various online video sharing websites.

The solution we recommend is the H.264 codec with AAC audio, packaged into an .MP4 container. This offers all the quality and resolution of a .MOV file, at a much smaller file size and with none of the streaming problems. It will play on a far larger array of devices and looks great on YouTube or Vimeo, at all resolutions.

## Recommended Online Video Format Settings:

### Mobile

- Video Format: *.MP4*
- Video Codec: *H.264*
- Video Size: *480 x 270*
- Framerate: *25 fps*
- Key Frames: *Auto*
- Audio Codec: *AAC*
- Audio Bitrate: *96 kbps*
- Audio Samplerate: *44.100kHz*
- Total Bitrate: *400 kbps*
- Encoding: *Two-Pass*
- Video Quality: *50%*
- Approx File Size: *3.0 MB/min*

### Standard Definition

- Video Format: *.MP4*
- Video Codec: *H.264*
- Video Size: *720 x 405*
- Framerate: *25 fps*
- Key Frames: *Auto*
- Audio Codec: *AAC*
- Audio Bitrate: *128 kbps*
- Audio Samplerate: *44.100kHz*
- Total Bitrate: *1000 kbps*
- Encoding: *Two-Pass*
- Video Quality: *60%*
- Approx File Size: *7.5 MB/min*

### High Definition

- Video Format: *.MP4*
- Video Codec: *H.264*
- Video Size: *1280 x 720*
- Framerate: *25 fps*
- Key Frames: *Auto*
- Audio Codec: *AAC*
- Audio Bitrate: *192 kbps*
- Audio Samplerate: *44.100kHz*
- Total Bitrate: *2000 kbps*
- Encoding: *Two-Pass*
- Video Quality: *60%*
- Approx File Size: *15.0 MB/min*

## Glossary

**.FLV:** Flash Video is a file format used to deliver video over the internet using Adobe Flash Player. Not compatible with iPhone or iPod

**H.264 [A.K.A. MPEG-4 Part 10 or AVC]:** A standard for video compression compatible across a wide variety of devices and applications.

**.WMV:** Windows Media Video is a file format developed and controlled by Microsoft.

**.MP4:** The official multimedia container for MPEG-4 video and audio.

**AAC:** Advanced Audio Coding is a MPEG audio standard.

**.MOV:** A video container format developed by Apple for QuickTime.

**Codec:** A Coder/Decoder is a piece of software or a driver that adds support for a certain video or audio format for your operating system.

**Framerate:** The number of frames a second of video contains.

**Key Frames:** A full frame that, unlike a Delta Frame, does not rely on preceding frames and therefore refreshes picture quality.

**Bitrate:** The size, over time, of a video or audio stream.

**Samplerate:** How frequently a digital conversion samples its analogue source (1Hz = 1 sample per second).

**Encoding:** The compression of a file to another format.

## Further Reading:

<http://www.longtailvideo.com/support/jw-player/26/web-video-compression>