

DEMOLITION



STUDIOS

Preparing HAP files

1. Hap formats

There are three main Hap codecs:

1. **Hap**. Offers the lowest data rates for playing back the most clips at a time. Gives reasonable image quality.
2. **Hap Q**. Offers improved image quality at a higher data-rate (larger file sizes).
3. **Hap Alpha**. Has similar image quality to Hap, and supports an alpha channel.
4. **Hap Q Alpha**. Improved image quality as well as alpha channel support.

Hap files are usually large and require a fast hard drive or solid state drive (SSD) for playback.

Read more about hap codecs [here](#) and [here](#).

2. Encoding with QuickTime codec

There are several options how you can produce hap encoded video files. First one is to download and install the “official” QuickTime codec from <https://github.com/Vidvox/hap-qt-codec/releases> (on Windows install [QuickTime](#) in prior)

If you were lucky and managed to install both QuickTime and Hap QuickTime codec, you can use software like Adobe After Effects, Adobe Premiere or QuickTime (Pro version needed) for encoding your videos (just select the needed Hap codec in output parameters).

3. Encoding with FFmpeg

The other way (and probably the simplest one) is to encode videos using [FFmpeg](#).

Get Windows binaries: <https://ffmpeg.zeranoe.com/builds/>

Get OS X binaries: <http://evermeet.cx/ffmpeg/> or <http://www.ffmpegmac.net/>

After downloading the FFmpeg builds, use the following commands to encode Hap videos.

- To encode with **Hap**
`ffmpeg -i movie.mov -vcodec hap -format hap movie_hap.mov`
- To encode with **Hap Q**
`ffmpeg -i movie.mov -vcodec hap -format hap_q movie_hapq.mov`
- To encode with **Hap Alpha**
`ffmpeg -i movie.mov -vcodec hap -format hap_alpha movie_hap_alpha.mov`
- **Important:** when encoding high-resolution videos it's recommended to use the so called chunked encoding mode:

```
ffmpeg -i movie.mov -vcodec hap -format hap_q -chunks 8 movie_hapq_chunked.mov
```

This will convert the input movie to Hap Q-encoded movie using 8 chunks, which means that the Hap plugin can decode the movie using 8 threads simultaneously, giving a major performance gain, as long as the storage is able to provide needed throughput.

4. More encoding ways

You can use these applications to encode Hap videos as well:

1. [HapInAVFoundation](#) (batch converter, Mac only)
It can produce Hap Q Alpha!
2. [TouchDesigner](#) (you can even bake some real-time footage with it! Read more [here](#))
3. More on Hap Alpha encoding:
<http://vdmx.vidvox.net/tutorials/working-with-hap-alpha-encoded-movies-in-vdmx>