



Recommended upload encoding settings

Below are recommended upload encoding settings for your videos on YouTube.

Container: MP4



- No Edit Lists (or the video might not get processed correctly)
- moov atom at the front of the file (Fast Start)

Audio codec: AAC-LC



- Channels: Stereo or Stereo + 5.1
- Sample rate 96khz or 48khz

Video codec: H.264



- Progressive scan (no interlacing)
- High Profile
- 2 consecutive B frames
- Closed GOP. GOP of half the frame rate.
- CABAC
- Variable bitrate. No bitrate limit required, though we offer recommended bit rates below for reference
- Chroma subsampling: 4:2:0

Frame rate



Content should be encoded and uploaded in the same frame rate it was recorded.

Common frame rates include: 24, 25, 30, 48, 50, 60 frames per second (other frame rates are also acceptable).

Interlaced content should be deinterlaced before uploading. For example, 1080i60 content should be deinterlaced to 1080p30, going from 60 interlaced fields per second to 30 progressive frames per second.

Bitrate



The bitrates below are recommendations for uploads. Audio playback bitrate is not related to video resolution.

Recommended video bitrates for SDR uploads

To view new 4K uploads in 4K, use a browser or device that supports VP9.

Type	Video Bitrate, Standard Frame Rate (24, 25, 30)	Video Bitrate, High Frame Rate (48, 50, 60)
2160p (4k)	35-45 Mbps	53-68 Mbps
1440p (2k)	16 Mbps	24 Mbps
1080p	8 Mbps	12 Mbps
720p	5 Mbps	7.5 Mbps
480p	2.5 Mbps	4 Mbps
360p	1 Mbps	1.5 Mbps

Recommended video bitrates for HDR uploads

Type	Video Bitrate, Standard Frame Rate (24, 25, 30)	Video Bitrate, High Frame Rate (48, 50, 60)
2160p (4k)	44-56 Mbps	66-85 Mbps
1440p (2k)	20 Mbps	30 Mbps
1080p	10 Mbps	15 Mbps
720p	6.5 Mbps	9.5 Mbps
480p	Not supported	Not supported
360p	Not supported	Not supported

Recommended audio bitrates for uploads

Type	Audio Bitrate
Mono	128 kbps
Stereo	384 kbps
5.1	512 kbps

Resolution and aspect ratio



The standard aspect ratio for YouTube on desktop is 16:9. When uploading other aspect ratios (vertical, square, etc.), the player automatically adapts itself to the size of the video, providing the optimal viewing experience based on the aspect ratio and device.

Learn how to [use resolution and aspect ratios](#) correctly.



Learn how to use [Spatial Audio](#), [360 video](#), and [virtual reality video](#) so your viewers can experience your video's sound in all directions, just like real life.

Was this helpful?

Yes

No

Upload videos

- Set default upload settings
- Disable upload notifications
- Schedule video publish time
- Use formatting tags
- Video resolution & aspect ratios
- Supported YouTube file formats
- Use hashtags for video search

