Choosing a Frame Rate

Movies on film are almost exclusively projected at 24 fps. Television, however, does not have an internationally accepted frame rate. In Europe and many other countries, PAL and SECAM use 25 fps, whereas NTSC video in North America and Japan uses 29.97 fps. Other common frame rates are usually multiples of these.

Note: Converting video formats from one frame rate to another is technically challenging, and there are often unwanted visual side effects. This is especially true when the frame rates do not evenly divide. For example, converting 30 fps to 60 fps is fairly easy to do, but converting 29.97 fps to 25 fps is much more difficult. Making sure audio stays in sync throughout the conversion is yet another challenge.

Some digital video formats support several frame rates within a single format, allowing variable frame rate video recording and film (24 fps) compatibility.

Frame rate	Media	Description
24 fps	Film; high definition video	This is the universally accepted film frame rate. Movie theaters worldwide almost always use this frame rate. Many high definition formats can record and play back video at this rate, though 23.98 is usually chosen instead (see below).
23.98 (23.976) fps	Film; high definition video with NTSC compatibility; NTSC	This is 24 fps slowed down by 99.9% (1000/1001) to easily transfer film to NTSC video. Many high definition video formats (and some SD formats) can record at this speed, and it is usually preferred over true 24 fps because of NTSC compatibility.
25 fps	PAL; high definition video	The European video standard. Film is sometimes shot at 25 fps when destined for editing or distribution on PAL video.
29.97 fps	NTSC; high definition video	This has been the color NTSC video standard since 1953. This number is sometimes inaccurately referred to as 30 fps.
30 fps	High definition video; early black-and-white NTSC video	Some high definition cameras can record at 30 fps, as opposed to 29.97 fps. Before color was added to NTSC video signals, the frame rate was truly 30 fps. However, this format is almost never used today.
50 fps	PAL; high definition video	This refers to the interlaced field rate (double the frame rate) of PAL. Some 1080i high definition cameras can record at this frame rate.
59.94 fps	High definition video with NTSC compatibility	High definition cameras can record at this frame rate, which is compatible with NTSC video. It is also the interlaced field rate of NTSC video. This number is sometimes referred to as 60 fps, but it is best to use 59.94 fps unless you really mean 60 fps.
60 fps	High definition video	High definition equipment can often play and record at this frame rate, but 59.94 fps is much more common because of NTSC compatibility.

Important: Many people round 29.97 fps to 30 fps, but this can lead to confusion during post-production. Today, it is still very rare to use a frame rate of 30 fps, but very common to use 29.97 fps. When in doubt, ask people to clarify whether they really mean 30 fps, or if they are simply rounding 29.97 fps for convenience.