

# General DVD Limitations

## Project

- *DVD Regions\**

| Region code | Area   |
|-------------|--|
| 0           | Informal term meaning "worldwide". Region 0 is not an official setting; discs that bear the region 0 symbol either have no flag set or have regions 1–6 flags set. Region 0 is commonly referred to as "Region Free", especially when talking about DVD players. |
| 1           | United States, Canada, Bermuda, U.S. territories   |
| 2           | <u>Europe</u> (except Russia, Ukraine, and Belarus), Middle East, Egypt, Japan, South Africa, Swaziland, Lesotho, Greenland, French Overseas departments and territories   |
| 3           | Southeast Asia, South Korea, Taiwan, China (Hong Kong, Macau)  |
| 4           | Mexico, South America, Central America, Caribbean, New Zealand, Australia, Papua New Guinea and much of Oceania  |
| 5           | Bangladesh, India, Nepal, Afghanistan, Sri Lanka, Ukraine, Belarus, Russia, Pakistan, Africa (except Egypt, South Africa, Swaziland, and Lesotho), Central and South Asia, Mongolia, North Korea   |
| 6           | China  |
| 7           | Reserved for future use, MPAA-related DVDs and "media copies" of pre-releases in Asia  |
| 8           | International venues such as aircraft, cruise ships, etc.  |
| ALL         | Region ALL discs have all eight flags set, allowing the disc to be played in any locale on any player.   |

- *NTSC and PAL territories\*\**



- *A project can only be either PAL or NTSC not both*

## Menus

Following are the menu-related limitations.

- *Support for motion and static menus*
- *Maximum number of menus in a project:* 10,000 (there is however a 1gig overall limit on menus and its advisable to limit the amount of menus as they eat into the disc capacity lowering video quality).
- *Minimum number of menus in a project:* 0
- *Menu aspect ratio support:* 4:3 and 16:9 menus can be used in the same project.
- *Maximum number of buttons on a DVD 4:3 menu:* 25
- *Maximum number of buttons on an SD DVD 16:9 menu:* 18

## Tracks

Following are the track-related limitations.

- *Maximum number of movies per disc, in a project: 99*
- *Maximum number of video streams in a track: 9 (multi angle)*
- *Minimum number of video streams in a track: 1*
- *Maximum number of audio streams in a track: 8*
- *Maximum number of subtitle streams in a track: 32*
- *Maximum number of chapter markers in a track: 99*

#### Video Support

- *MPEG-1: NTSC, 29.97 fps, 352 x 240, 4:3, Bit rate: 1.856 Max.*
- *MPEG-1: PAL, 25 fps, 352 x 288, 4:3, Bit rate: 1.856 Max.*
- *MPEG-2: NTSC, 29.97 fps, 720 x 480, 4:3/16:9, Bit rate: 9.800 Max.*
- *MPEG-2: PAL, 25 fps, 720 x 576, 4:3/16:9, Bit rate: 9.800 Max.*

#### Audio Support

- *Dolby® Digital (up to 5.1 channels)*
- *WAVE/AIFF (PCM) 16/20/24-bit, 48 kHz (up to 5.1 channels only in Scenarist)*
- *MPEG-1 Layer 2 (up to 8 channels)*
- *DTS (up to 6.1 channels)*
- *DVD-compliant bit streams*

### Appendix

- *DVD Regions\**  
[http://en.wikipedia.org/wiki/Dvd\\_regions](http://en.wikipedia.org/wiki/Dvd_regions)
- *NTSC and PAL territories\*\**  
<http://en.wikipedia.org/w/index.php?title=File:PAL-NTSC-SECAM.svg&page=1>