

# How to add subtitle to your videos with FFmpeg

In this tutorial, we'll explain step-by-step how to change the appearance of subtitles with FFmpeg. This includes font size, font, colors, etc.



## Understanding code and default appearance

In this tutorial, we won't go back over the steps required to add a subtitle to your video. For that, we refer you to our article on how to add subtitles to your videos with FFmpeg before continuing your reading here.

To change the appearance of the characters, you'll need to rethink a few things. This includes the text file that's supposed to support the details of subtitle content, temporality and appearance.

Here's the text file that served as the database for subtitle information in the previous tutorial:

```
1
00:00:01,00 --> 00:00:02,70
This is an example

2
00:00:02,80 --> 00:00:05,20
To show how to add subtitles with FFmpeg
```

Details of the order of appearance, time of appearance and content of the subtitles are given. However, it doesn't specify any details about the appearance of the subtitles.

To change the appearance of subtitles, we'll modify this text file by adding new attributes.

# List of attributes for customizing the appearance of subtitles with FFmpeg.

## Font

- **Fontname:** Font name (e.g. Arial, Times New Roman, etc.).

## Font size

- **Fontsize:** Font size (e.g. 20 for a 20-point font size).

## Color

- **PrimaryColour:** Primary color of subtitles (e.g. "&H00FFFFFF" for white in ARGB format).
- **SecondaryColour:** Secondary subtitle color (e.g. "&H000000FF" for blue in ARGB format)
- **OutlineColour:** Text outline color (e.g. "&H80000000" for a semi-transparent outline in ARGB format)
- **BackColour:** Subtitle background color (ex: "&H40000000" for a semi-transparent background in ARGB format)

To find the ARGB code for a color in HEX format, go to this [color converter](#) and simply add "&H" in front of the result to add it to your text file listing subtitle data.

## Text style

- **Bold:** Makes text bold (1 to enable, 0 to disable)
- **Italic:** Makes text italic (1 to enable, 0 to disable)
- **Underline:** Underlines text (1 to activate, 0 to deactivate)
- **StrikeOut:** Strikes out text (1 to activate, 0 to deactivate)

## Borders

- **Outline:** Text outline thickness (e.g. 2 for a 2-pixel outline).
- **BorderStyle:** Border style (0 for none, 1 for single border)

## Alignment

- **Alignment:** Horizontal alignment of subtitles (e.g. 2 for center, 7 for bottom of screen).

## Spacing

- **MarginL, MarginR, MarginV:** Left, right and vertical text margins (e.g. 20 for 20 pixels).

## Special effects

- **Karaoke:** Sets text to karaoke mode (1 to enable, 0 to disable)

## Determining the appearance of subtitles, the example

Now that we know all the attributes that can be used to modify the appearance of subtitles with FFmpeg, we're going to **determine which ones we want to play with** to give our subtitles their final appearance:

- **Font:** we'll choose Britannic Bold \*
- **Size:** we'll choose 24 points
- **Text color:** yellow
- **Text outline color:** black

\* To choose the font, first make sure it's registered on your computer. Go to the folder where the fonts are stored. In the search bar of your Windows browser, type "**C:\Windows\Fonts**".

Once you've made your choices, **go to the text file** containing all the subtitle data. Then **modify it so that it looks like our example**:

```
Unset
[Script Info]
Title: Default Aegisub file
ScriptType: v4.00+

[V4+ Styles]
Format: Name, Fontname, Fontsize, PrimaryColour, SecondaryColour, OutlineColour,
BackColour, Bold, Italic, Alignment

Style: Default,Britannic Bold,24,&H000000,&H00FFFF,&H00000000,&H99000000,-1,0,6

[Events]
Format: Layer, Start, End, Style, Name, MarginL, MarginR, MarginV, Effect, Text
Dialogue: 0,0:00:01.00,0:00:02.70,Default,,0,0,0,,This is an example.
Dialogue: 0,0:00:02.80,0:00:05.20,Default,,0,0,0,,To show how to add subtitles with
FFmpeg.
```

Remember to modify the elements to suit your needs.

## Add subtitles to video with FFmpeg

Once your text file is complete and you've saved it in the folder where the original video can be found, all that's left to do is **open a command prompt**. (**Under Windows, click on Win + R. Search for cmd and press Enter**).

In the command window, **access the directory where your video file and subtitle text file are located** using the "cd" command. In our case, we'll enter :

```
Unset
```

```
cd C:\Users\Vlad\Documents\Subtitles
```

Once you're in the directory containing the video and subtitle files, you can **use the FFmpeg command to add subtitles to the video**. Here's the command you can use:

```
Unset
```

```
ffmpeg -i YOUR_VIDEO.mp4 -vf "ass=YOUR_TEXT_FILE.txt" -c:a copy -c:v libx264 -crf 23 -preset veryfast OUTPUT_VIDEO.mp4
```

In our example, here's the codec we apply at the command prompt:

```
Unset
```

```
ffmpeg -i VIDEO.mp4 -vf "ass=subtitle_file.txt" -c:a copy -c:v libx264 -crf 23 -preset veryfast OUTPUT_VIDEO_COLORED.mp4
```

We obtain this as the outcome:



#### References:

David, J. (2023, July 25). *How to add subtitle to your videos with FFmpeg*. abyssale. Retrieved June 26, 2024, from <https://www.abyssale.com/generate-video/how-to-add-subtitles-to-videos-with-ffmpeg>