

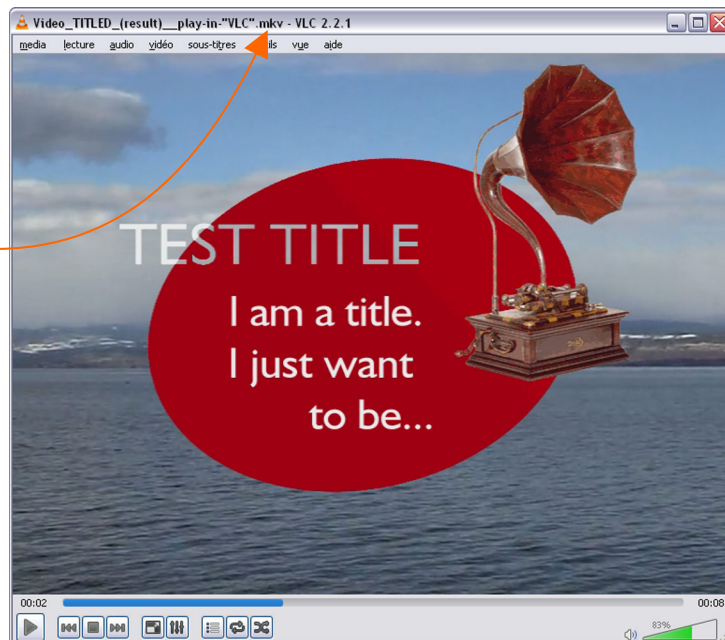
# [how to] Overlay image title(s) on AVC H.264 video – without recoding

OCT. 30<sup>TH</sup>, 2015

the new container will be  
– and *has to* be (darn) **.mkv**

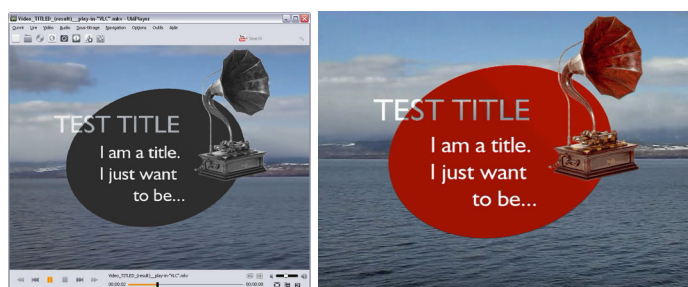
quick steps summary · to simply test "the toolbox", using attached example, start off step 5

**tools** • **Windows** based PC; tested OK under old Win. **XP**  
• **Photoshop** (commercial) or **Fotografix** (free) or else • **tsMuxer** • **BDSup2sub** (+ **Java... portable**) • **MediaInfo** • **MKVToolNix GUI**



No! I~do~not recommend gadget ☹ / rowdy titling;

but here, just testing: 1. "VLC" and 2. rendering of 256-color mode, since the overlaid ".png" image is automatically converted to 256 only (maximum allowed by Blu-ray image subtitles).



"VLC": though not the fastest player, is what works best in this case, with "Media Player Classic Home Cinema".

"U-Mplayer" (left) : title = greyscale only (underlay video stays in color). "PotPlayer" (center) : ~"OK", not as good as VLC & MPC HC...

! 3. transparency: don't convert by yourself the title image to "indexed 256 colors". If *you* do, edges of shapes pixelate like hell. Just let it occur (whether you want or not...) in BDSup2sub.

- 1 Modify "**Test-subtitles.srt**" to the timestamps & durations *you* want (never mind texts). And drop it to **tsMuxer**, check "**Demux**", click "**Start demuxing**" – to generate "**Test-subtitles.sup**".
- 2 Drop "**Test-subtitles.sup**" to **BDSup2sub** > OK, select "**XML/PNG**". Save/export, to generate "**Test-subtitles\_exp.xml**" + "**Test-subtitles\_exp\_0001.png**", etc. Quit BDSup2sub.
- 3 Check your video image size = width × height in pixels, using **MediaInfo**.
- 4 Create title, using **Photoshop** or **Fotografix**: same size as video; resolution: **72 dpi**. **Mode: RGB**. **Don't convert to "indexed / 256 colors"!** Background: **TRANSPARENT**. Save to ".png" format > "None" (= not "Interlaced") > name: "**Test-subtitles\_exp\_0002.png**", OK to replace the existing.
- 5 Drop "**Test-subtitles\_exp.xml**" to **BDSup2sub**. Top left, select (Subtitle) "**2**". Bottom right, double click small preview. Center (or position) image using the sliders. And so on, with titles #3, #4... Top of main window: "Output format" field: select "**SUP(BD)**". Then, File > Export/save. Accept "**Test-subtitles\_exp\_exp.sup**".
- 6 Drop "**\_Video\_orig.mp4**" (my sample) or your own **and** "**Test-subtitles\_exp\_exp.sup**" to **MKVToolNix GUI** > OK to "Add as new input files". Modify file name to "**Video\_RESULT.mkv**" or else; click "**Start muxing**".

— end of summary 1

*"How to add an **image** title (or several) **losslessly and-in-a-snap** 😊 to... tons \* of videos, waiting to be fully converted, knowing that I (of course) lack spare time to recode?"* \* one by one / no batch (come back in ten ~~days~~ years)

So, in short: some friends' request, that I couldn't satisfy for "a while" and until lately. Thanks to the valuable help I found at [videohelp.com](http://forum.videohelp.com) \*\*, I can finally suggest some kind of ('luxury') treat, to those "raw" or bare "flicks".

\*\* <http://forum.videohelp.com/threads/374839-Overlay-picture-on-AVC-vid-in-MP4-NOT-hardcoded?p=2415545>

I had to switch to ".mkv" container, though, instead of ".mp4" (compatible only with ".idx + .sub" DVD poor color image subtitles / new MP4 version badly needed!)... I doubt ".mkv" videos are as widely compatible as ".mp4". But "well", with no recoding: main requirement...

~ Hey: BTW, thanks ♥ in advance: to anyone who'd simplify or improve "my" method (yet somewhat tedious). ~

### —— goal

- **Soft** overlay a title on the 1<sup>st</sup> seconds of AVC H.264 videos = without recoding anything, since *good* recoding takes a looong time, especially HD & Full HD videos;

- + : title using an image or several, instead of plain text and, in this case, of free shape instead of rectangular or square:

by exploiting the *transparency* \* option of ".png" format pictures, and ".mkv" video container compatibility with Blu-ray **image** subtitling.

\* Unless I'm mistaken, no gradual transparency: any zone of an image must be either 100% transparent, or 100% opaque. Intermediate transparency works with ".idx + .sub" DVD subtitling, which also allows overlaying images, but in 3 colors only (+ transparency = "4").

### —— restrictions, if any?

- **Some for sure!** .mkv container required, instead of .mp4, but rewrapping in .mkv (= simple "remux") does not recode. Therefore, besides being lossless, it's very fast; though **not** quite "*in~a~snap*"... yet? 😊

**but:** .mkv videos might be incompatible with several standalone players, including cell phones...

- Tested Windows based players: "**VLC 2.2.1 32-bit**" & "**Media Player Classic Home Cinema**": OK, and smooth display despite 256-colors title;

"**PotPlayer**": OK, and smooth... according to its own subtitle &/or video display settings (see attached screenshots); or pixelated shapes edges including characters (due to stingy 256-color mode), under some other settings;

"**S-M & U-Mplayer**": smooth display but greyscale only (underlay/main video stays in full color). + bug: subtitles sometimes won't display until user scrolls back to the beginning of the video...

- **Manipulations:** more complex than inserting a simple plain text .srt subtitle file using "Yamb/MP4box". Tools: free except "Photoshop" (can be replaced).

## other no-recode solutions?

- Besides inserting an .srt subtitle file into .mp4 contained videos, which is by far the simplest solution – but: no large characters nor free positioning unless setting the player itself,
- a title clip can be added: joined without recoding to the beginning of the film (+ as end credits). That *sounds* easy enough, besides allowing sophisticated titling or credits, since it's a video in itself...

... but!: impossible when you can't apply the *precise* technical specifications of the main video to the title clip ("good luck"...). In practice & many cases, only filming something that will become a title clip – using the same! equipment that was used to shoot the main film –, allows *quick join* of both videos...

## 6 steps (+ "gear")



- **Windows** based PC; tested OK under old Win. XP
- **Photoshop** (commercial) or **Fotografix** (free) or else
- **tsMuxer**
- **BDSup2sub** (+ **Java... portable**)
- **MediaInfo**
- **MKVToolNix GUI**

Tools: all free except **Photoshop** (old v° 7 or 8 = way advanced enough), that can be replaced with ultra lightweight freeware **Fotografix** (or "**Paint.NET**"). Or any still bitmap image editor that opens & saves to .png format.

Note • once done with steps 1 to 3, "**Test-subtitles\_exp\_0001.png**" to "**Test-subtitles\_exp\_0006.png**" are ready to title more videos:

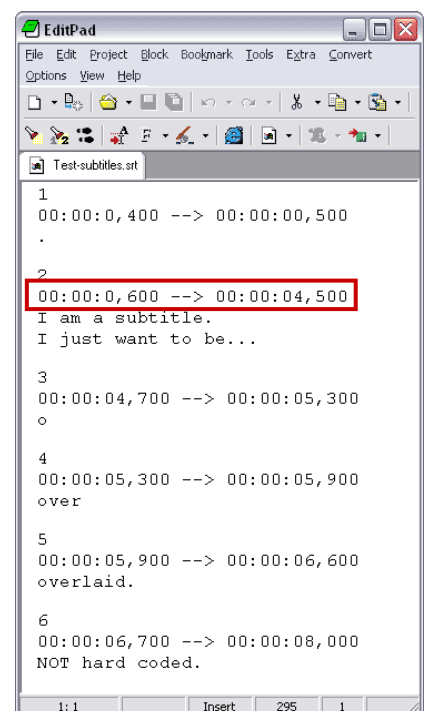
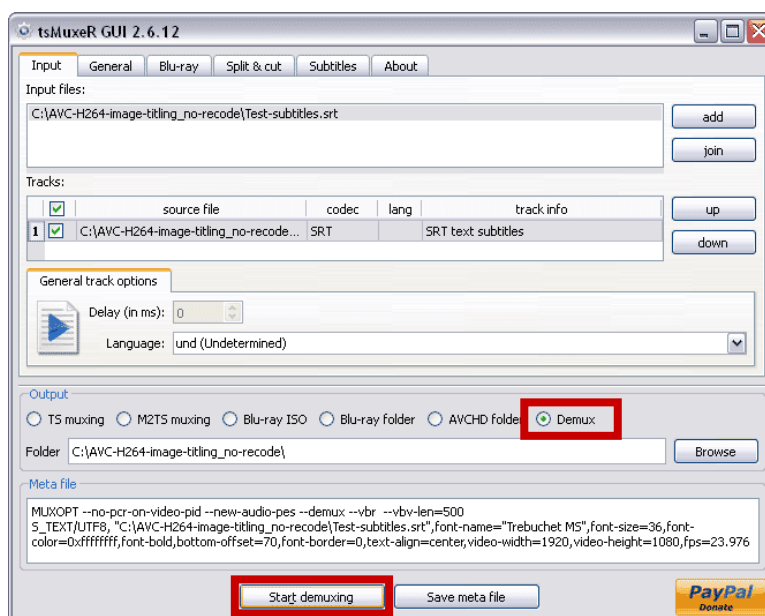
unless you want to change title(s) display time & duration, further modifications don't require steps 1 to 3 anymore, but 4 to 6 only:

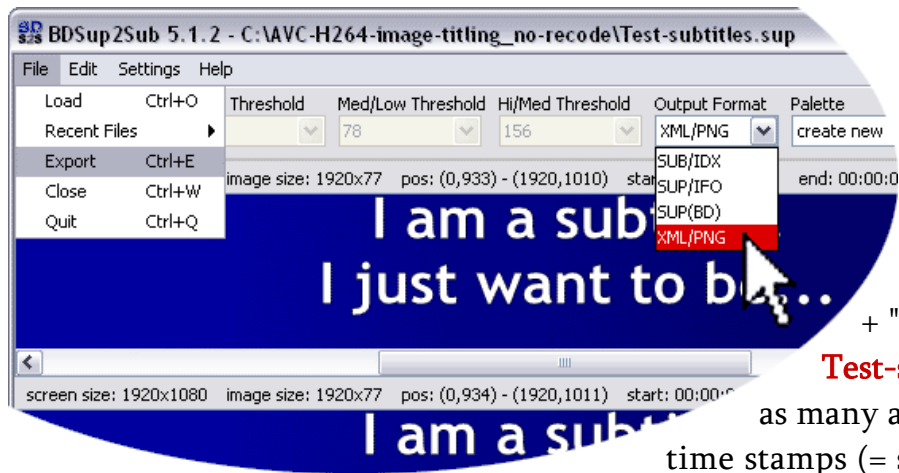
to title another video: just modify the PNGs and start off step 4.

To begin with, you could simply **quick test** "the toolbox": from step 5 on, using the attached example.

**1** Modify "**Test-subtitles.srt**" using **Notepad** or any plain text editor, to the **timestamps & durations** *you* want; never mind the subtitles themselves: they won't be used.

Drop "**Test-subtitles.srt**"  
onto **tsMuxer**,  
check "**Demux**",  
click "**Start demuxing**"  
to generate  
"**Test-subtitles.sup**".



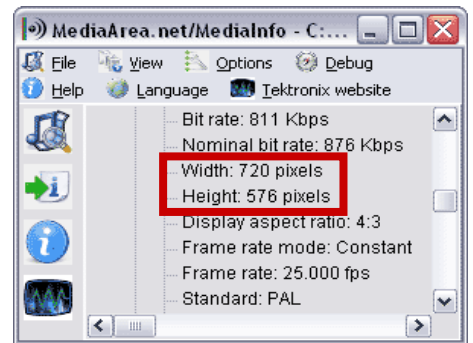


2 Drop "Test-subtitles.sup" to BDSup2sub > OK. Select "XML/PNG" (at top). Menu File > Save/export, to generate "Test-ubtitles\_exp.xml"

+ "Test-subtitles\_exp\_0001.png, Test-subtitles\_exp\_0002.png", etc.:

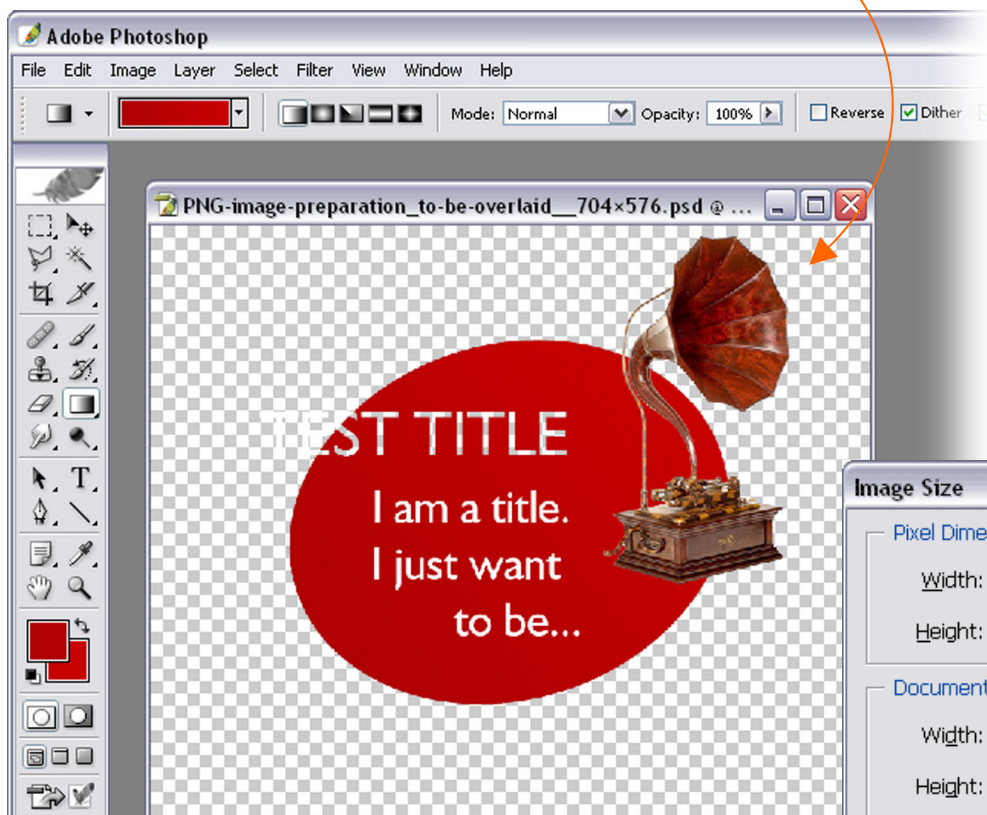
as many as "Test-subtitles.srt" contains time stamps (= subtitles). And quit BDSup2sub.

**BDSup2sub requires "Java" · NO "thanks" · see last page**

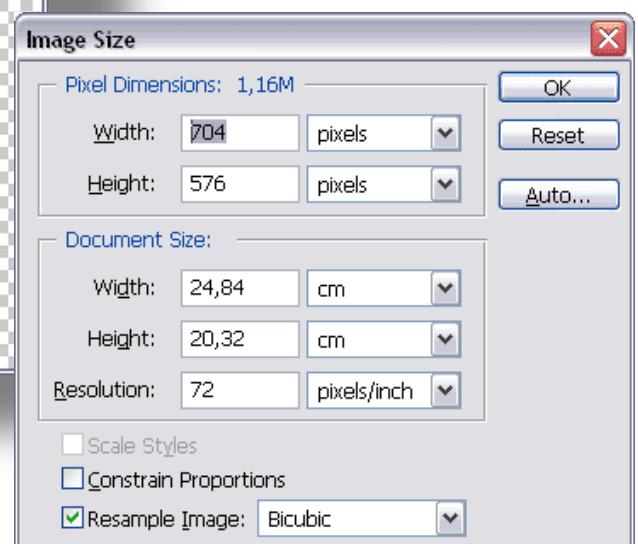


3 Unless you already know for sure, drop your video onto MediaInfo, to check + note its image size = width × height in pixels.

4 Create your title (or several), using Photoshop or Fotografix, of same size in pixels as your video (here 720 × 576 px., in fact 704 px. in my case), resolution: 72 dpi. **Mode: RGB; don't convert to "indexed / 256 colors"!** Background: TRANSPARENT.



I had to resize the width only, to 704 px., to compensate stretching to 768 px. of final display (PAL), that squished the title images...



*no Photoshop guide: off-topic...*



First image: leave blank (= transparent), resize to **8 × 8** pixels, and save as is, to: "**Test-subtitles\_exp\_0001.png**", OK to replace. Why blank? To **try** waking up lazy audiovisual players, which sometimes start displaying subtitles from #2 on, forgetting the very first one...

Type your title text to a next image, paste pictures of any shape onto it... **If you want to keep a transparent background (= your video, later), don't "flatten the layers"**.

Those title images should be and stay in **RGB** color mode: **do NOT convert them to "indexed 256 colors" mode**. It will occur automatically later & anyway. But, if **you** do, the edges of all shapes including characters **pixelate**!

With **Photoshop**, just "Save AS", to ".png" format > "**None**" (= not "Interlaced") > "**Test-subtitles\_exp\_0002.png**", OK to replace.

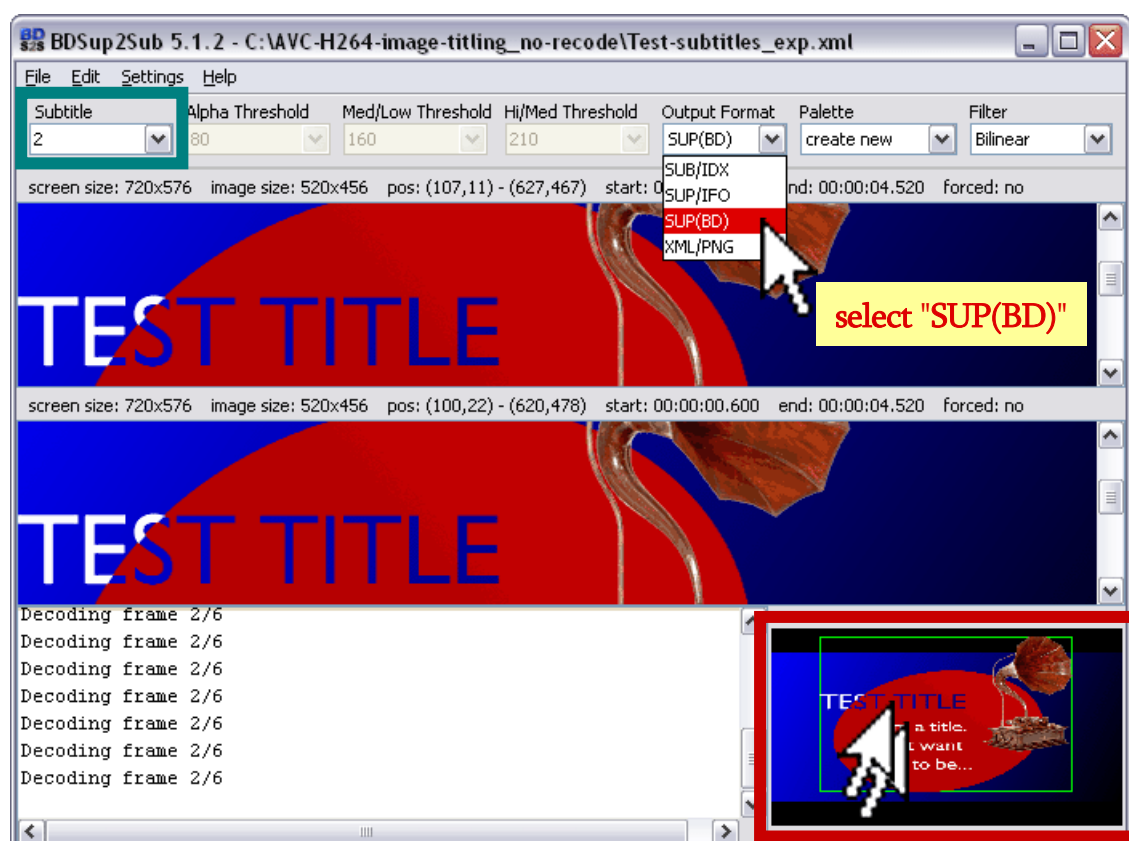
Or with **Fotografix**: once you've typed some text, if you want to enlarge or reduce it **afterwards** (not recommended / square + oblique arrow tool), first: right click that text layer (far right) > **Rasterize layer**. Then, Save AS "**Test-subtitles\_exp\_0002.png**" > OK to replace.

Create as many images as the number of ".png" you generated in the first place (6, in my test), and replace them all; you can also create one image only – knowing that you may always delete some later, if needed.

You could skip this, as BDSup2sub is wisiwig, but you might spend more time on layout settings... Open "**Test-subtitles\_exp.xml**" on Windows "**Notepad**" or any plain text editor, to check its contents, that usually need editing:

I replaced all widths with **704**, except 1<sup>st</sup> subtitle, corrected to **Width="8"** **Height="8"**; replaced all **X** and **Y** coordinates with **0**, except 1<sup>st</sup> subtitle: **X="356"** **Y="532"**; last correction: **<Format VideoFormat="576i"**. And save.

**5** Drop "**Test-subtitles\_exp.xml**" to **BDSup2sub**. "**Convert resolution**": not needed since "**Test-subtitles\_exp.xml**" corrected as above. You can check (?) "**Fix too short frames**"... > OK.



The first subtitle displayed is the "dummy": transparent image (I made it last 1/10<sup>th</sup> of a second only, on screen; in "Test-subtitles.srt", 2<sup>nd</sup> line: 00:00:0,400 --> 00:00:00,500)...

Top left, select (Subtitle) "2".

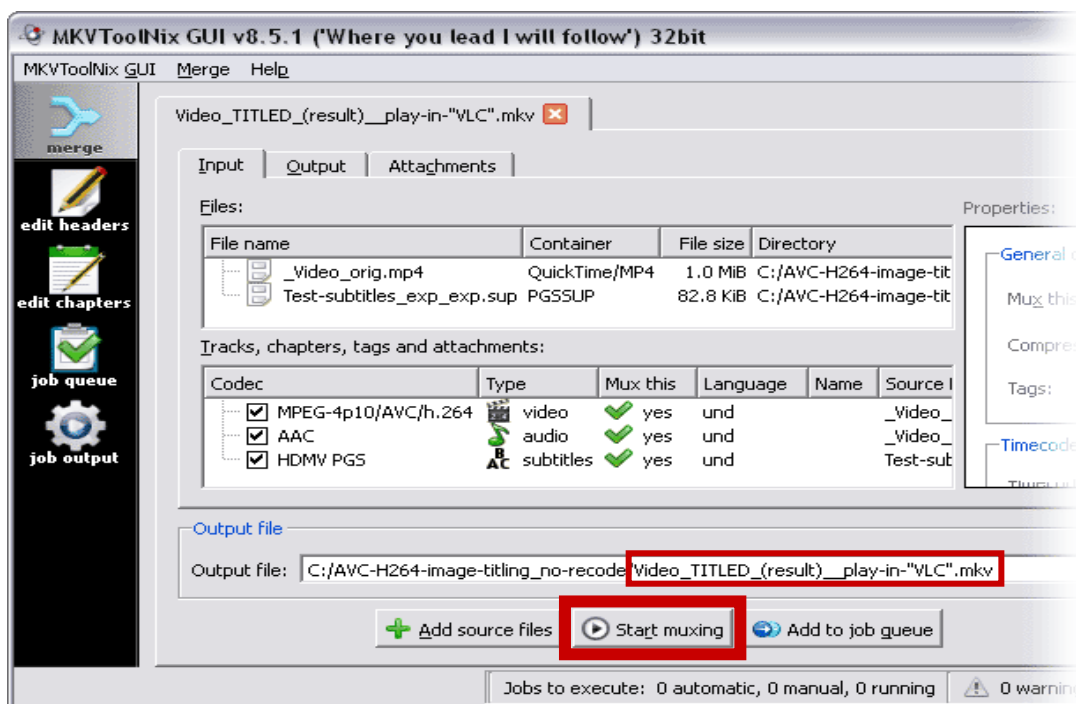
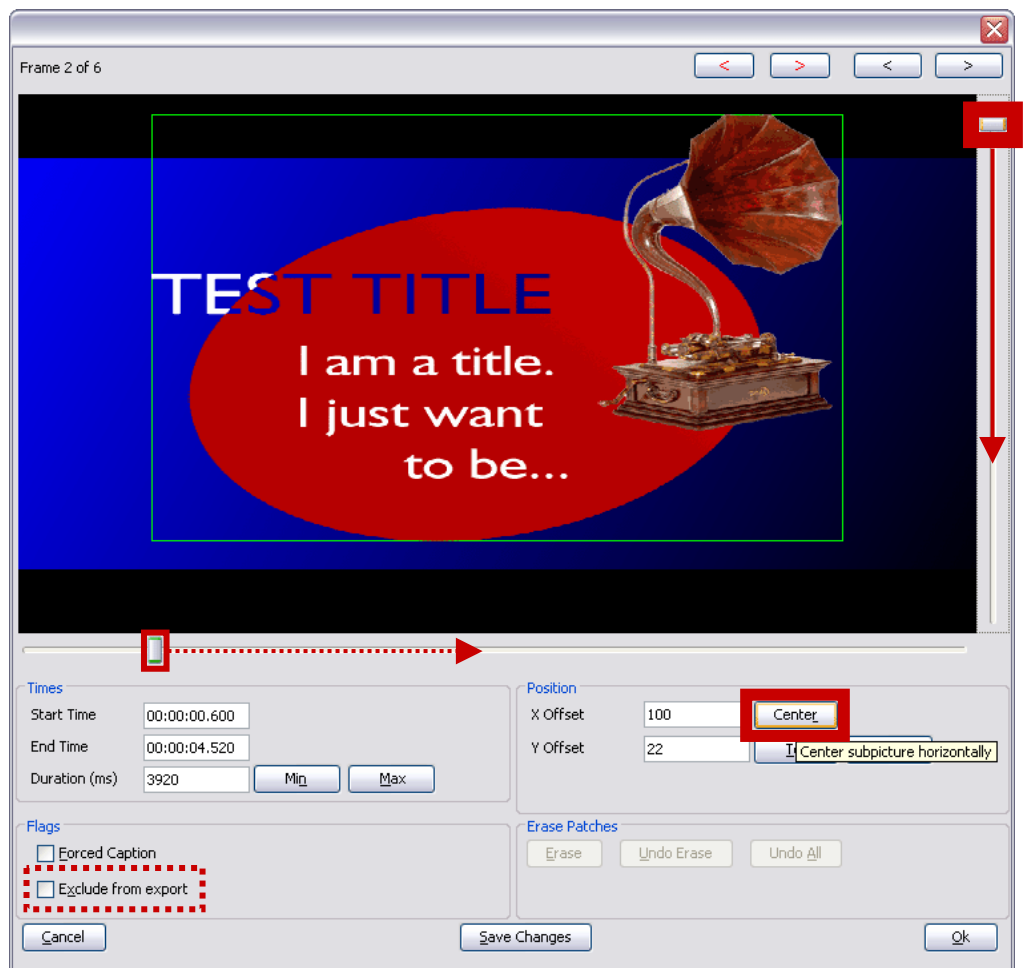
Bottom right, double click this preview.

Here, in 4:3 aspect ratio or close, BDSup2sub still displays a 16:9 AR... Never mind.

Use **sliders** to move the image, or click "**Center**" (horizontally) button, to center the image; or whatever layout you want > OK. And so on, with titles #3, #4...

Note · after double click on preview, you can still check "**Exclude from export**" (bottom left), to deactivate a title.

Click OK > back to main window, top: "**Output format**" field: **this time, select "SUP(BD)"**. Then, menu File > Export/save. Accept "**Test-subtitles\_exp\_exp.sup**" (or type any name) > Save.



6 Drop "**\_Video\_orig.mp4**" (my sample) or your own video **and** "**Test-subtitles\_exp\_exp.sup**" to **MKVToolNix GUI** >

OK to default option: "**Add as new input files**".

Bottom field: modify file name to "**Video\_RESULT.mkv**" or "**Video\_TITLED.mkv**"; click "**Start muxing**".

**BDSup2sub requires "Java"... If you don't have it installed and would rather avoid running that "stuff" permanently, use "Java portable"**. Tested OK under Win. XP. Download from [http://portableapps.com/apps/utilities/java\\_portable](http://portableapps.com/apps/utilities/java_portable) Create a folder, name it (for instance) "**Java\_port**". Click "**jPortable\_8\_Update\_66.paf.exe**" and "install" (simple decompression) to that new folder. Next, **copy** this:

```
@echo off
set BDSup2sub=bin\javaw.exe -jar BDSup2Sub.jar
start %BDSup2sub%
```

Paste it to Notepad or any plain text editor. Save to "**BDSup2sub.txt**". Then, modify the extension to: "**BDSup2sub.bat**". Move **BDSup2sub.bat** + **BDSup2Sub.jar** to "**Java\_port**" (main folder); click "**BDSup2sub.bat**" to launch.