

Converting a Vertical Video to Horizontal (Portrait to Landscape)

The Various Techniques

- We use Shotcut to convert a “vertical” video (shot in “portrait” mode) to a Horizontal one. In the examples we will be converting a 1080x1920 (9:16) video to 1920x1080 (16:9).
- There are various techniques:
 - 1) Simply rotate the video through 90°;
 - 2) Distort the video by expanding the width;
 - 3) Add a background or background blur to get rid of the black sidebars that would otherwise occur;
 - 4) Crop part of the video in a 16:9 ratio.

Portrait to Landscape: the Various Techniques

Original Vertical Video



Rotated Video



Distorted Video



Blurred Background Video



Other Background Video



Cropped Video

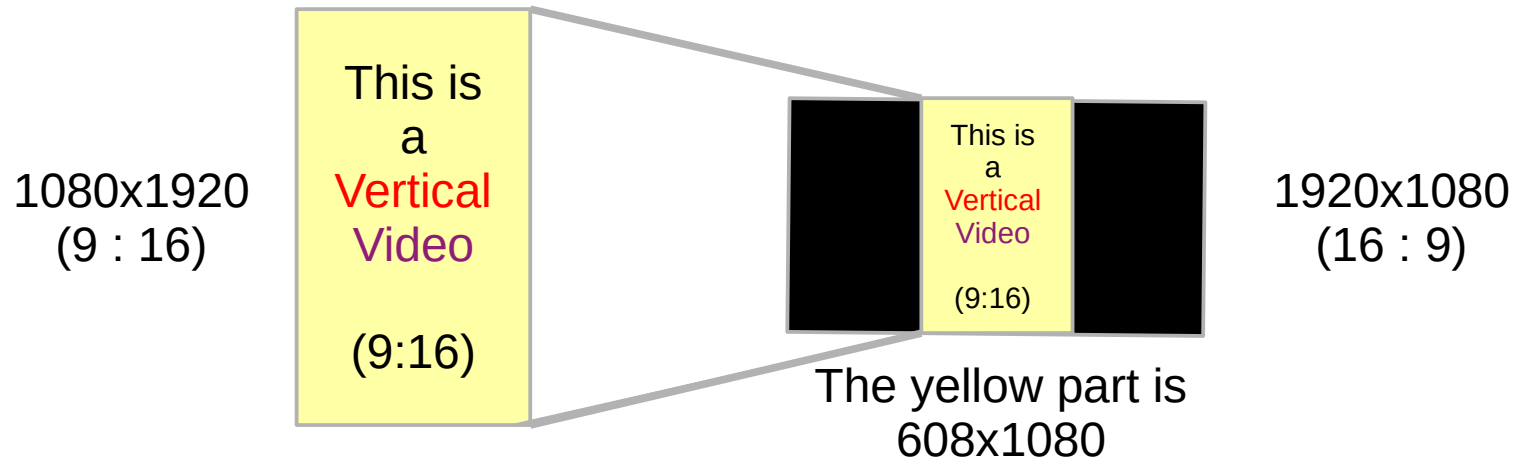


1) Rotate the video

- This is trivial. For many vertical videos the result will be that everything will be on it's side. However, if the camera was pointing downwards at the time, the video's orientation may be recorded incorrectly and this technique may be what you need.
- We simply use the "Size, Position and Rotate" filter and choose a "Rotation" parameter value of 90° or -90° and a "Zoom" parameter of 177.8% ($100\% \times 16 \div 9$).

Instructions

- Set the project's video resolution to 1920x1080 (HD 1080p) then open the vertical video. It will fill the whole of the vertical dimension but only about $\frac{1}{3}$ of the horizontal.



The Rotation

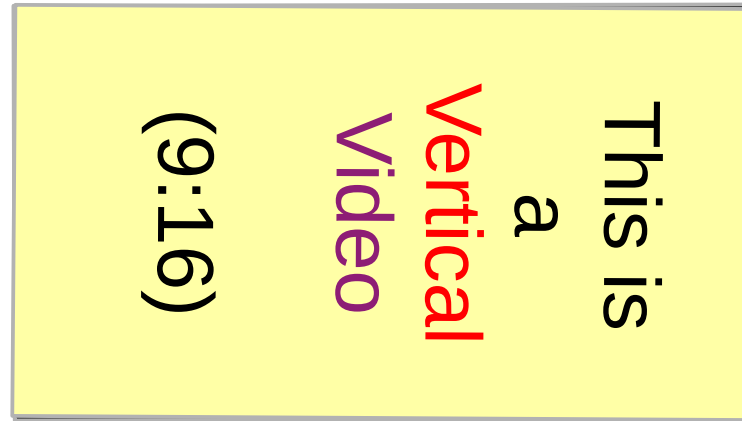
- Rotating the video through 90% (or -90%) leaves us with black bands top, left, bottom and right that we need to get rid of.



1920 x 1080
(16 : 9)

Black Band Removal

- Remove the black bands by setting the filter's "Zoom" parameter to 177.8% ($100\% \times 16 \div 9$)



1920 x1080
(16 : 9)

2) Distort the video by Expanding the Width

- This is trivial. As a result everything will become squat and fat. For most videos this technique will not be the one to use.
- Again set the video mode to 1080p HD and open the vertical video.
- We simply use the “Size, Position and Rotate” filter and set the “Size Mode” parameter to “Distort” and then the “Size: Width” parameter to 1920. Make sure that the “Position” parameters are set to 0,0.

The “Crop: Source” Filter

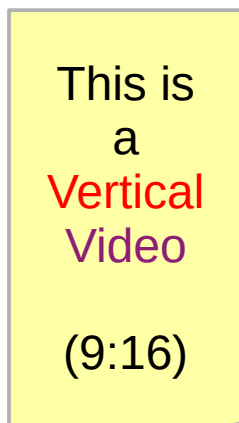
- The diagram below shows what happens when you apply the “Crop: Source” filter:

With “Crop: Source”

1920x1080
(16 : 9)

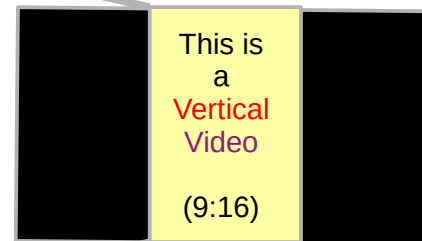


1080x1920
(9 : 16)



Without “Crop: Source”

1920x1080
(16 : 9)



The yellow part is
608x1080

Crop: Source – What Does it Do?

- When you open the vertical video in the 1920x1080 mode Shotcut effectively downscales the video so it fits fully in the vertical dimension (but not the horizontal), i.e. converts the 1080x1920 video to 608x1080.
- When you use the “Crop: Source” filter, Shotcut effectively upscales the original video, converting a part of it (initially the centre part) to 1920 x 1080 so it fits fully in the horizontal dimension, and “invisibly overflows” in the vertical dimension (since the video’s vertical dimension is greater than 1080). It does not distort the video.
- You may choose which part of the vertical video you want to use by ticking the “Centre” parameter and modifying the “Centre bias” parameter.

3) Add a Background or Background Blur

- There are 3 ways of doing this:
 - Use the “Blur: Pad” filter (Shotcut version 20.09.13 onwards);
 - Put the video on tracks V1 and V2, then apply the “Crop: Sorce” filter, then on the same clip apply one or more of the “Blur: Box”, “Blur: Gaussian”, “Blur: Exponential”, “Blur Low Pass” filters;
 - As in the 2nd method but add a different(landscape) video on V1.
- The advantage of the 1st method is that it is simple and computationally inexpensive;
- The advantage of the 2nd and 3rd methods is that any filters subsequently applied to the video (V2) do not apply to the V1 (background) clip.

4) Crop Part of the Video in a 16:9 Ratio

- There are 2 ways of doing this:
 - Use the “Crop: Source” filter;
 - Use the “Size, Position & Rotate” filter.
- The advantage of the 1st method is that it is simple and computationally inexpensive;
- The advantage of the 2nd method is that you are not limited to a specific area of the video; you can use keyframes to show different areas of interest throughout the video.

Instructions

- As stated earlier, for “Crop: Source” filter, tick the “Centre” parameter and change the “Centre bias” parameter to choose which part of the vertical video you want to use.
- For the “Size, Position & Rotate” filter set the “Zoom” parameter to 317.7% or greater to fill the whole video area. Then modify the “Position: Vertical” parameter to choose which part of the vertical video you want to use.

Thank you for watching this presentation
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