

Mosaizer Pro Tutorial

A car logo from 5000 beer corks



Here you learn how to make a photorealistic picture from a 32Bit alpha mask. We will show how to effectively apply a shadow effect and enhance the 3D impression by optimizing the size of the cells. Finally, we will demonstrate how the cell and mask rotation effect is applied to give the finishing touch. Drink? Don't drive...

A car logo from 5000 beer corks

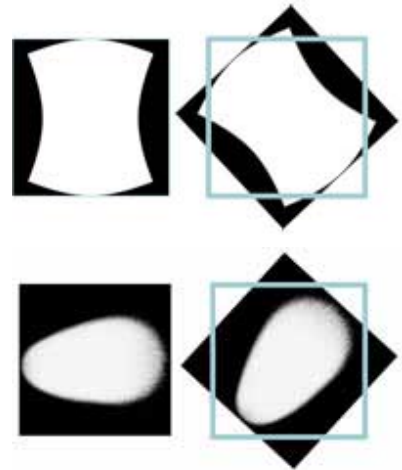
About rotating masks and cells

A three-dimensional effect is a combination of several settings: 3D shadow, 32Bit Overlay mask and rotating masks and cells. The use of masks and 3D shadow is explained in other tutorials, here we focus on effectively applying an additional random effect by rotating the picture in each cell.

The cell rotation is set by checking the box 'Cell rotate'. Rotating cells require also rotating masks when applied. If a mask is rotated, parts of the rotated cell is cut off, because the circle diameter is smaller than the diagonal dimension of the mask. As a consequence only masks that can *fully rotate within the circle of rotation* can be used.

The picture on the right explains this:

- the top picture shows a rotated mask where some parts are cut off by the rotation (outside the blue square).
- the bottom picture has a good fit inside the blue square when it is rotated. These are called the brush masks, since these are typically designed to allow for mask rotation by Mosaizer Pro ('rotationally symmetric').



The selected 32Bit Alpha mask in this tutorial is a rotationally symmetric mask.

Requirements

Just a few requirements apply: a rotational symmetric 32Bit alpha mask, a source picture and a picture library. Since we need beer coaster pictures, it is recommended to create or download a library of beer coasters. The library that we used can be freely downloaded from the internet (we are not allowed to provide the internet address – but it may be helpful to search for 'beercoas.zip' in Google).

The steps to make a car logo from 5000 beer corks

Step 1: select a source picture and a picture library

There are two ways to select a source picture: open an existing picture or add a new picture. For basic picture loading and library creation please read the tutorials of *Make a photo mosaic picture* and *Make a picture library*.

As for the choice of picture library, we need to make sure that the intended cell size picture size (96 x 96px) does not exceed the smallest library picture. To check this, the following action is needed:

- select the tab *Libraizer*
- press the *File explorer* button and then navigate to the picture library folder
- press the *Library creator* button and then press the button *Analyze Directory*

The chosen folder is now scanned and analyzed for size. After this process has finished you can see the size summary in the same tab. Our result now reads: minimum size 90 x 48px and maximum size 90 x 90px. So, the intended size of 96 x 96px is a bit too high. We take a risk by selecting a cell size of 72 x 72px, but we'll see.

File explorer Library creator

File List Summary

Available bitmaps: 1297

Smallest size	90 x 48
Largest size	90 x 90

Step 2: set the basic settings

We will first set a few basic settings to quickly see the effect.

This tutorial would be very short if we directly show all the settings, but we would like to explain why we do this and what the effect is of a change. An similar (but alternative) approach is explained in the tutorial *Coins on a banknote*.

The rendering result after selecting the 32Bit overlay mask (*o32_BeerCork*) is shown below (just the mask has been selected – all other settings remain default, e.g. cell size 32 x 32px).



This is of course not the result we have in mind. So we change the following settings:

- background color set to black (and also activated by ticking its checkbox)
- check the boxes for *Random build* and *Random pattern* (tab *Special*)

Then press the *Create* button.



The result is now more random, and the details of the mosaic can be seen. We need to increase the amount of randomly placed beer corks. So, we increase the *Amount* of random cells.

Now the effect is good enough and the amount of beer corks seems alright as well (69H x 65V).



Step 3: tune the 3D effect into a realistic photo

Near photo-realistic pictures are usually achieved by adding a light source that creates a shadow. Therefore we apply a shadow to each cell. Use the 3D-effect *Shadow* and set the shade parameters to *depth* = 30%, *Intensity* = 40% en *Size* is 5 south and east. Next, also increase the cell size to 48 x 48px.



Information: if the cell size is changed (from 32 x 32px) to 96 x 96 the amount of cells dramatically drops and the logo is not very well recognized and the Amount (of random cells) need to be increased as well. So, the amount of rendering time will sharply increase. It is recommended to use the Preview button to evaluate a change of setting.

The 3D shadow effect looks fine, but we'll need a tad more realism so we modify the shade to a sharper effect: *depth* = 20%, *Intensity* = 50% en *Size* is 3px south and east.



Left: original shade (a bit blurry)

Right: new shade results (sharper)

Step 4: rotate the mask and cells

We now have a good shadow and a good amount of cells. Before we make the final rendering, we first want to add a next step to realism: randomly rotated beer-corks. This setting is found in the tab *Quick settings | Other settings*.

With version 7.0.33 of Mosaizer Pro the cells can be rotated with a rotating mask. To do this, simply tick the checkboxes *Cell rotate* and *Mask rotate* and choose the minimum and maximum rotation angles.

Information: the minimum rotation angle is measured anti-clockwise in degrees. The maximum angle is measured clockwise. It's no use to go beyond +/- 180 degrees, since this will lead to a full circle rotation. When Mask rotation is used with Cell rotation, the Mask resize does not work for the cells, but just for the mask.

Other settings			
<input type="checkbox"/>	Mask resize (%)		25
<input checked="" type="checkbox"/>	Mask rotate	min	-180
<input checked="" type="checkbox"/>	Cell rotate	max	180

We selected angles between -180 and 180 degrees to have a full 360 degrees cell rotation. The result is shown below. Now it seems that the beer-corks are 'thrown' on a surface in a pattern shape of the car logo.



Step 5: final tuning of size and amount

To finalize this 3D picture, we need to tune the cell-size and logo recognition again. In step 3 we have increased the size of the cell, without a corresponding increase of the amount of (randomly placed) cells. This is the reason for a less recognizable car logo.

To find the proper values, remember that a good readability was achieved with 69 x 65 cells in the horizontal and vertical direction (result of step 2).

We will increase the cell size to our intended 72 x 72px, the paper size to A1 and the density to 175 dpi. Now the amount of cells in horizontal and vertical direction is about the same (73H and 69H).

The settings will vary per source picture of course. When following this tutorial with a different source picture you'll probably need to tune to different sizes.

The result is now amazingly realistic: well recognizable individual cells (72px is quite good), the logo is recognized very well and the 3D effect is nearly as realistic as our brain believes.



Top: the logo is now well readable

Bottom: a 100% close-up of the letter 'L'

Mosaizer Pro

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www.mosaizer.com