

→ SpeedMark Tutorial 3

Serialized machine type tag

SpeedMark Tutorial 3 for SpeedMarker Series | V001_SM-Tutorial (08/2015)
ENGLISH



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1 Objectives of this tutorial

This tutorial will show how to:

- Import a black and white bitmap
- Combine a graphic file with text
- Add serialization

Requires:

SpeedMarker FL 20
F160 lens
SpeedMark 3.1b1 or higher
Anodized aluminium tag

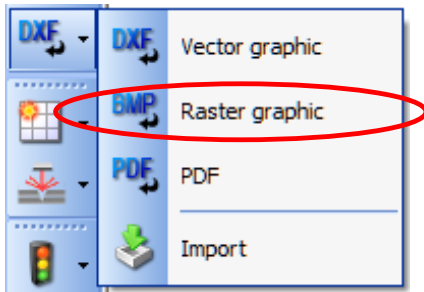


Figure 1: SpeedMarker series

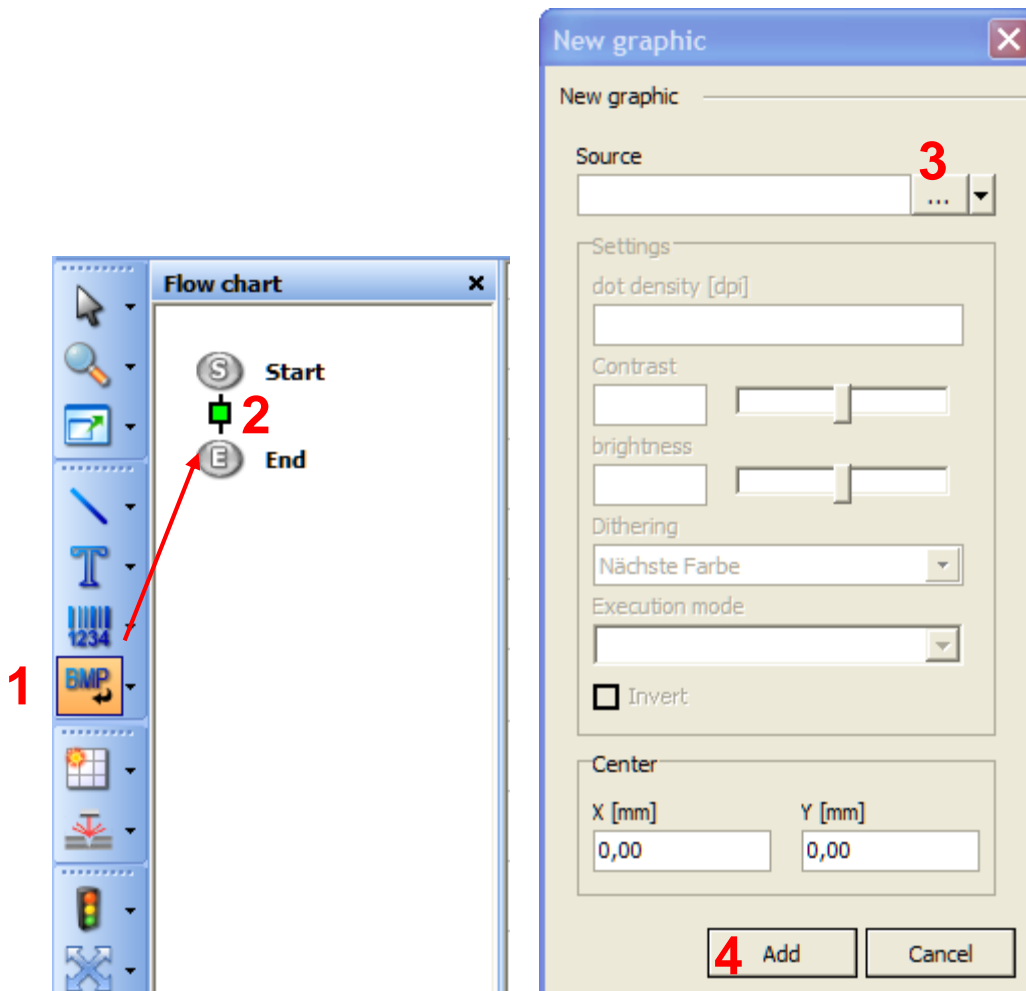


2 Import a raster graphic (bitmap)

1. Click the “BMP” element in the graphic tool box. It will become visible by clicking the small arrow next to the “DXF” default icon.



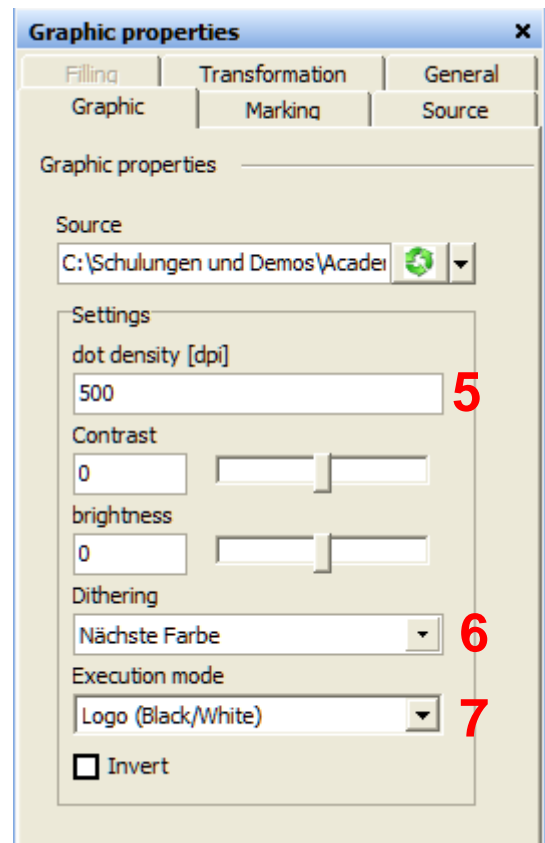
2. Place the cursor in the flow chart and left click to add the bitmap to the flow chart. This will automatically open an import dialogue window as shown on the right below.



3. Click on the three dots (...) to open the file dialogue and load the file called Anodized_aluminum_type_plate_file_SN.bmp that was supplied with the tutorial.
4. Add the bitmap

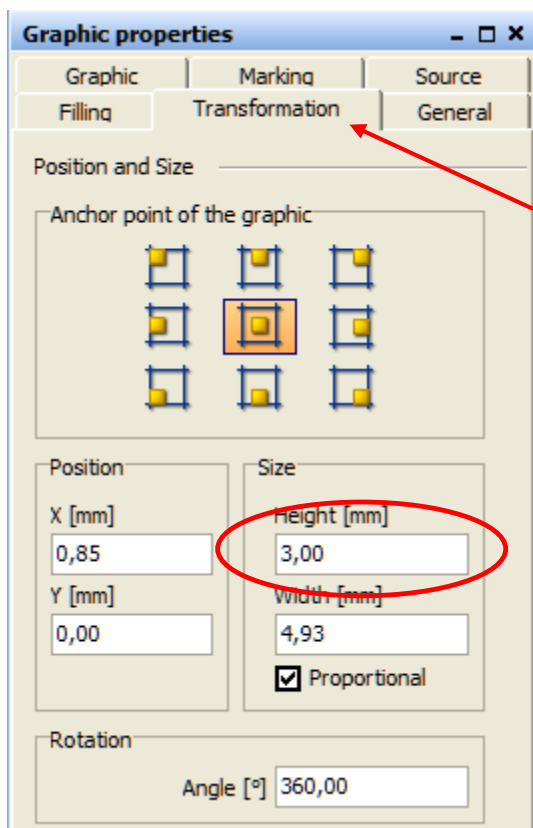
5. With the bitmap still highlighted, go to the *Graphic* tab and select a DPI setting of 500
6. Choose the *Dithering* mode as shown here (no dithering needed)
7. As *Execution mode* select *Logo*. This will automatically vectorize the bitmap to reduce the marking time

To learn more about importing vector files, refer to chapter 5.2.11 on page 53 ff. of the SpeedMark user manual.

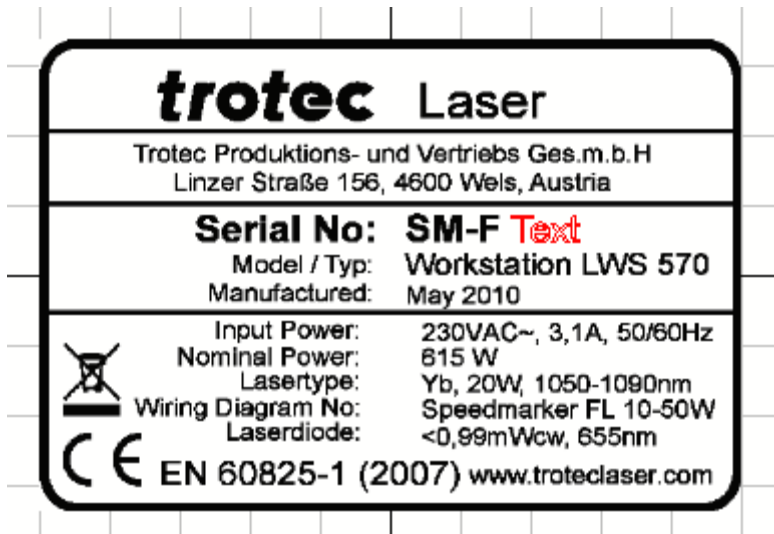


3 Add a serial number

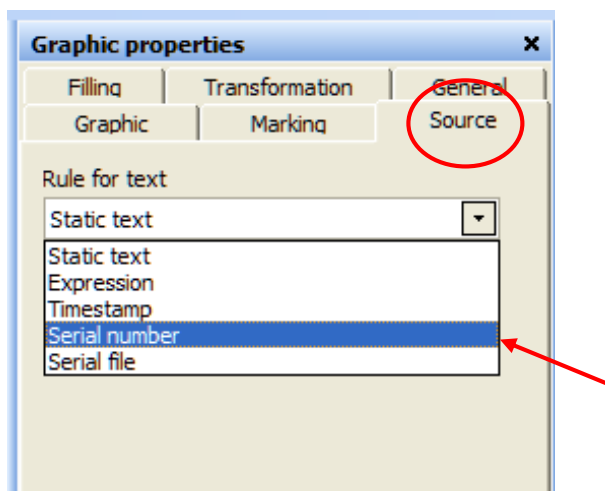
1. Add a text element. (The text element serves as a placeholder for the serial number and can be added without entering actual text)
2. Move the text so that will appear before the bitmap in the flowchart (otherwise the text will be hidden behind the bitmap in the pre-view window)
3. Change the text height to 3mm:
 - a. click on the text element to highlight it
 - b. go to the tab called *Transformation* in the *Graphic properties* window
 - c. enter 3 under Height [mm] and press enter



- Position the text over the bitmap as shown below.



- Highlight the text element in the flow chart
- In the graphic properties window on the right side of the screen, go to the *Source* tab and select *Serial number* form the drop-down list.



The window will change as shown below. Leave the settings for start value, increment and end value unchanged.

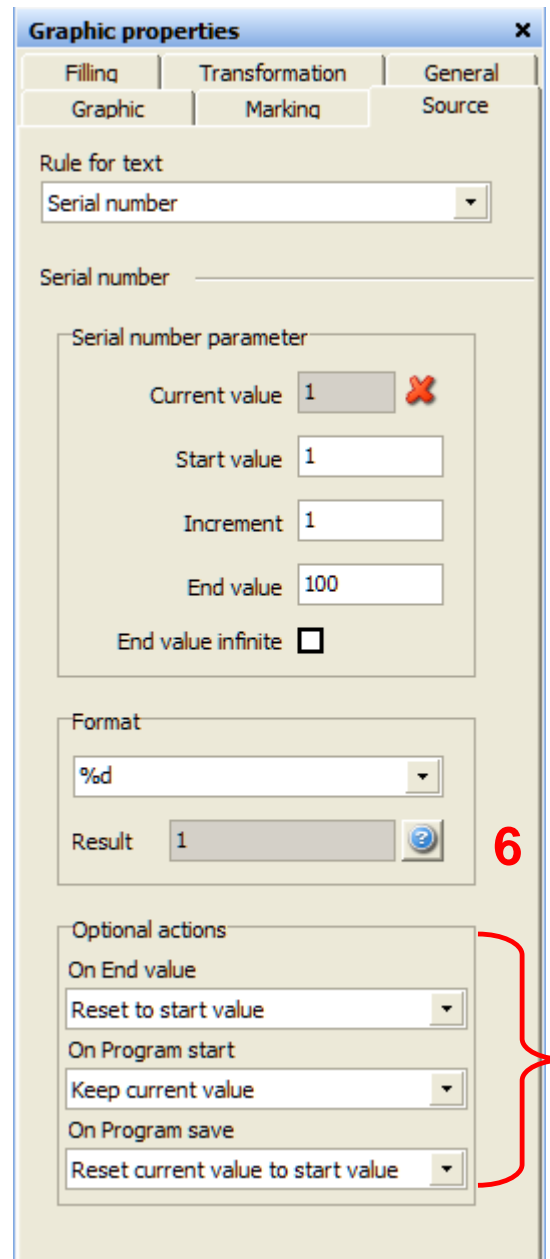
7. Change the format by selecting %4d from the drop down list. This will change the serial number format to display a 4 digit number with leading zeros (starting at 0001)
8. Ensure that the three settings at the bottom of the window match the setting shown here.
9. Fill the text using 0,03mm hatch spacing

Tip:

Serialization can be applied to barcodes in exactly the same manner.

By choosing time stamp from the upper most drop down list, a date or time can be realized as well.

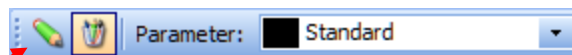
To learn more about these built in SpeedMark functions, refer to chapter 12 on pages 101 ff. in the SpeedMark User Guide.



4 Assign material parameters

The easiest way to assign material parameters to the graphic would be to select a pre-defined set of parameters from the material database. For example there is a set of parameters called *Anodized/Engraving* defined in the database.

To fine tune the parameters and save them as part of the project file rather than in a separate data base, select the project parameter from the menu bar:



Project parameters

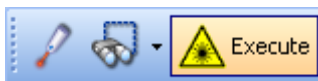
Enter the following parameters to a color of your choice:

Power [%]	Marking Speed [mm/sec]	Frequency [kHz]
100%	2.000	50

Highlight first the text and select the project parameter you just defined
 Highlight the bitmap and change to the project parameter.

5 Start marking

- Have the pilot laser outline the graphic by pressing F7
- Check the correct position
- Start the marking process using the F12 key or the Execute button in the menu bar.

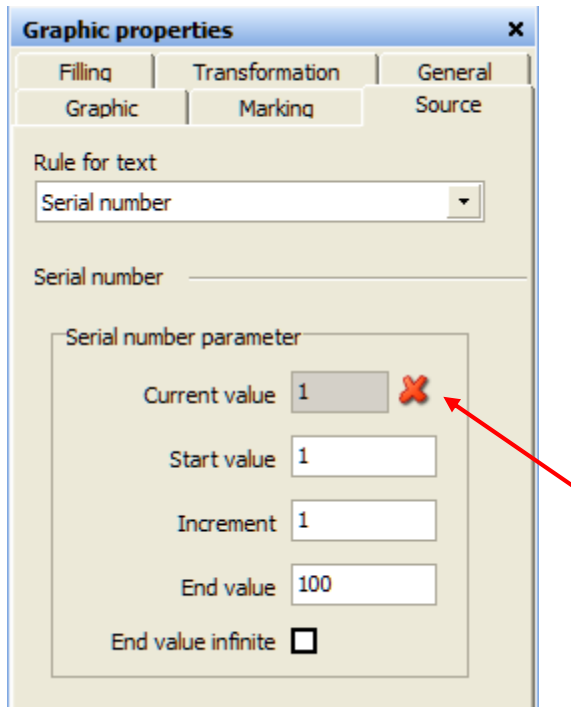


Each time the script is started (F12) the serial number will counted up by one. Alternatively a loop may be added to the flow chart (refer to the LWS-SpeedMark-Tutorial_1) so that the script only needs to be started once.



Tip:

To reset the serial number to the start value, go to the *Source* tab of the text element and press the red X as shown below.



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Subject to technical changes.