**RMX**

# Font Remix Tools

## FOR GLYPHS

# Handbook

# Content

# 1. Getting started

## 1.1. Installation

- Download the latest version from
  https://remix-tools.com/glyphsapp/
- Warning: Do not rename RMX.glyphsFilter,
  otherwise you might install several versions in
  parallel.
- Double-click RMX.glyphsFilter, which will install
  the plug-ins in Glyphs.
- Restart Glyphs.
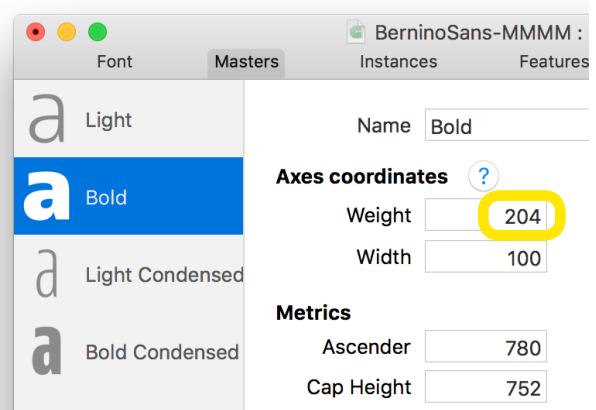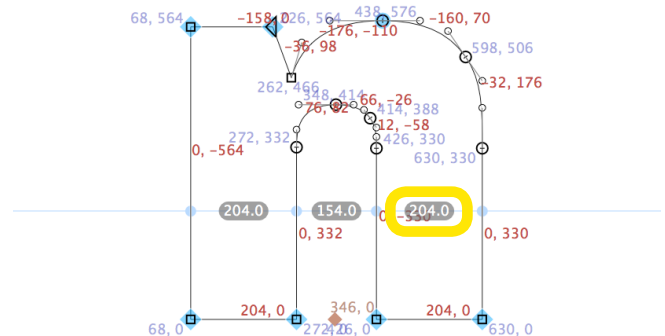- You will find the RMX tools in the Filter menu.

## 1.2. Keyboard shortcuts

You can customize the keyboard shortcuts in
your Mac's System Preferences under Keyboard →
Shortcuts → App Shortcuts → Glyphs.app.
Make sure to enter exactly the name as it is in the
menu, e.g. "RMX Harmonizer". In Glyphs, the most
recently used filter can also be run via Cmd+R.

## 1.3. Requirements

Some of the RMX Tools only work with fonts that
have several masters with a different weight.

For best results in the Tuner, Scaler and Monospacer,
make sure *Weight* property of each master corre-
sponds to the standard stem weight of the letters.
For example, you can use the vertical stem of the n.
Using real stem weights for the masters' *Weight*
ensures that the weight control of the RMX tools
work as expected.

## 2. RMX Harmonizer

The Harmonizer helps design nice, visually consistent curves while it retains the shape as far as possible.

### 2.1. Extracting handles

Many designers find it convenient to use a technique referred to as "zero handles" or "retracted handles", particularly for simple, shallow curves.

   Some environments such as foil cutting machines or the iOS rasterizer occasionally struggle to handle retracted handles correctly, which can lead to rendering errors. Extracting the handles as you export the font helps avoiding these problems. As a further benefit, the conversion to TrueType curves is greatly improved if handles are extracted first. The Harmonizer can extract handles while keeping the shape as close as possible to the original.

   Normally, you would rather keep the zero handles in your working file and extract them only when you export the font files.
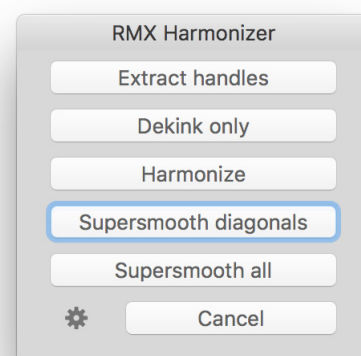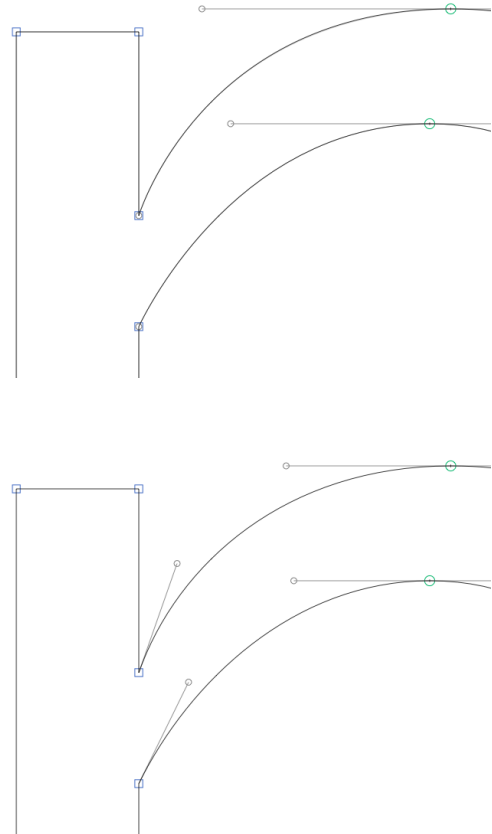
### 2.2. Improving curve quality

The RMX Harmonizer offers three degrees of smooth-ness, each of which corresponds to a geometrical concept of continuity:

   In Glyphs, sometimes even nodes that are set to "smooth" can have kinks, for example, after inter-polation or scaling. Use Dekink to make sure these connections are really straight. This has a very similar effect as double-clicking a smooth node twice but the handles will be even better aligned since RMX handles the integer coordinates intelligently.

   Another condition of visually balanced curve connections is the continuity of curvature. Choose Harmonize to have the outline automatically adjusted so that at each node, the radius of the two joining curve segments is equal. Note that this process includes dekinking.
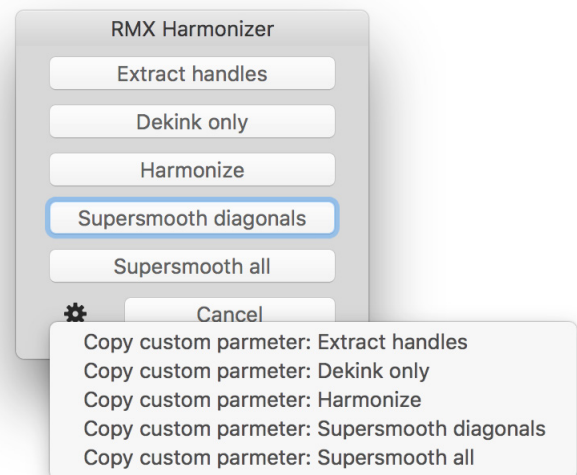
   The next degree of geometric continuity, which the RMX Harmonizer refers to as Supersmooth, means that even the change of curvature is continuous at the node. In practice, this means that "flattenings" and "bumps" cause by additional nodes are evened out.

# RMX

## 2.  RMX Harmonizer

### 2.3.  Harmonizing on export

Glyphs lets you specify *Custom Parameters* for exported instances. This feature allows you to automatically apply the RMX Harmonizer to the whole font as the instance is generated and the font is exported. The gear menu helps you copy the custom parameter for different settings, which you can then simply paste into the Font Info dialogue. Note that "extract handles" can be added to any level of harmonisation so you can harmonize and extract at the same time by specifying "RMXHarmonizer;harmonize;extract handles".

### 2.4.  Further notes

Note that the Harmonizer does not modify the shape as a matter of principle. How much a glyph gets modified glyph depends entirely on the deviation from the required conditions. Consequently, a shape that is already harmonious will not be changed at all if the Harmonizer is applied to it a second time.

If there is a very abrupt change in curvature then the Harmonizer assumes it is an intentional design feature and does not adjust that node.

To treat just a portion of the contour, select the nodes before running the Harmonizer.

The Harmonizer remembers the previously used button. Just press the space bar to harmonize using the previous mode.

# RMX

# 3. RMX Tuner

Use the Tuner in the Glyph Window to quickly adjust the current glyph.

## 3.1. How it works

Adjust the shape of the glyph by entering positive or negative values in the fields. The most convenient way of setting the values is to use the up and down cursor keys as you know it from other dialogues in Glyphs. Shift-up and shift-down changes the value by 10.

The controls for Width, Height and Weight are only available for fonts that have at least two masters with a different weight.

## 3.2. Blending in layers

If you have created a backup layer using the "Copy" button on the layers panel then an additional field allows you to "blend in" this layer. This additional field is only available if the outline on this layer is compatible but not identical to the master layer.
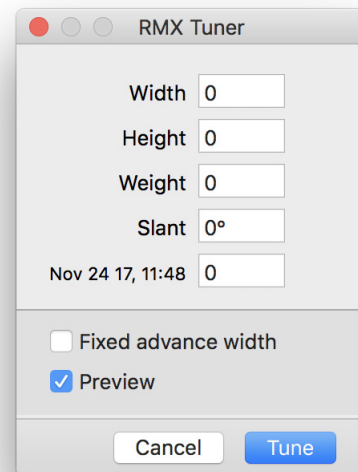
## 3.3. Advance width

By default, the RMX Tuner preserves the sidebearings so the advance width of the glyph changes according to your Width value. Check Fixed advance width to adjust only the shape but not the advance width. This is helpful when working on tabular glyphs or monospaced fonts.

## 3.4. Vertical alignment

You can control the vertical alignment by selecting one node before you run the RMX Tuner: This node will remain at its height. This can be helpful while adjusting the height (i.e. descender length) of the g.

When run in Text Tool mode or in the Font View, the Tuner can be applied to several glyphs at the same time.

# 4. RMX Scaler

Run this tool in the Font Window to scale the selected glyphs. Used in the Glyph Window, the Scaler allows to precisely adjust all

## 4.1. Requirements

For the RMX Scaler to work, the font needs to have several masters with different weights.

## 4.2. In-place scaling

If Generate from source is not checked then the RMX Scaler will scale the selected glyphs in place. This is a convenient way of adjusting groups of glyphs or the whole font as part of the design process. You can also create a new master such as a condensed version by first duplicating an existing master and then applying the RMX Scaler to all glyphs.

*Kerning*
For pairs within the set of scaled glyphs, kerning is automatically scaled according to the width change. Kerning with other glyphs, kerning groups and metrics keys are not modified.



## 4.3. Derived glyphs

Another powerful use of the RMX Scaler is to generate scaled glyph variants such as small caps, without affecting the source glyph.

*Setting up the glyphs*
The RMX Scaler automatically guesses which operation you are about to perform. If the selected glyph contains a suffix such as .sc then the corresponding source will be used. If only one glyph is selected then the name of the source glyph is shown and it is possible to manually change it.
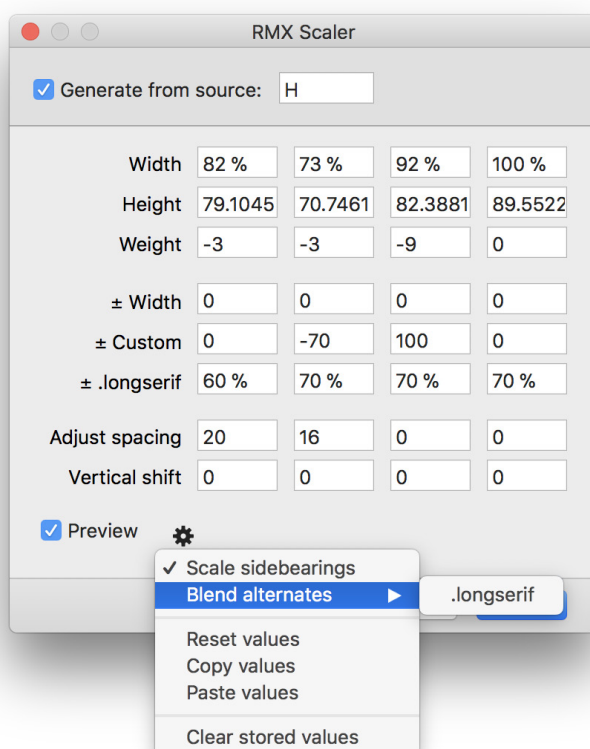
Note that, if the Scaler finds a glyph with identical outlines then this will be used as a default source. With this in mind, the quickest way to set up your derived glyphs is to duplicate the source glyphs and then apply the Scaler.

*Values are stored*
After a glyph is generated from a source for the first time, it automatically "remembers" how they were generated. The source glyph name as well as the values are stored in the glyph's custom data, which is also stored in the .glyphs file. This means you can easily re-generate and update derived glyphs at any time later, which is helpful if you have modified the design of the source glyphs. You can Clear stored values using the gear menu , for example to reduce the size of the .glyphs file.

*Kerning*
For pairs within the set of derived glyphs (i.e. the selected glyphs), kerning is automatically generated on the basis of the kerning between the source glyphs. Kerning groups are renamed as necessary, taking into account the suffix.

# RMX

# 4. RMX Scaler

## 4.4.  Controlling the result

The values for Width and Height control the dimensions of the scaled glyphs. Leave the height setting at 100% to generate true condensed or extended versions.

The Weight setting allows to adjust the weight of the scaled glyphs. Enter the stroke weight adjustment in units.

If the font has a width axis, i.e. masters of different width, the RMX Scaler allows to tweak the result using this axis. The dialogue will show an additional row of fields named ± Width. This gives you the option to scale height and width by the same percentage, and control the width using the ± Width control. The result is usually somewhat different and often better.

When generating from source, if there are compatible alternates for the source glyphs, you can choose Blend alternates from the gear menu. A use case for this would be to set up alternate capitals with longer serifs to control the serif length of the small caps.

If the font has a third, "custom" axis such as optical size, the RMX Scaler allows to tweak the result using this axis as well, showing an additional row of fields named ± Custom. As an example, small caps often benefit from adjusting the optical size.

Reduced versions such as small caps or superiors generally need a somewhat looser tracking. Use Adjust spacing to increase or decrease the sidebearings by a fixed amount.

Enter a Vertical shift when creating superiors, inferiors or numerators. Negative values shift the glyph downwards.

Use the Preview checkbox to see what the result will look like.

In most cases, it is advisable to Scale sidebearings along with the glyph shapes. In certain cases such as adjusting the with of individual letters you may want to uncheck this setting to retain the existing sidebearings the same way the RMX Tuner does.

## 4.5.  Handling the values

You can Reset the dialogue to its default values, and Copy and Paste the values from the clipboard. The values are copied as plain text (in json format) so you can store them in a text file, send them as an email etc.

## 4.6.  Example: generating small caps

In Glyphs, automatically generating OpenType features works best if the small caps have lowercase names such as a.sc. To quickly set up the small caps glyphs:
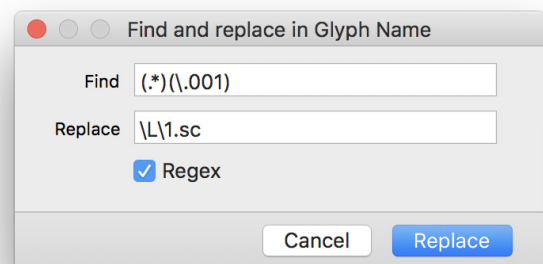
- Select your capitals (the source glyphs)
- Use Cmd+D to duplicate the glyphs. The new glyphs will have .001 added to their names.
- Use Cmd+Shift+F to rename the new glyphs:

  Find: (.*)(\.001)
  Replace: \L\1.sc
  Regex

- Simply run the RMX Scaler, which will know which sources to use since they still identical at this time. After applying the Scaler for the first time, the glyphs will remember their source.

# 5. RMX Monospacer

After selecting a number of glyphs in the Font Window, use this tool to create a monospaced version. It is recommended particularly for automatic generation of tabular figures and symbols.

## 5.1. Notes

Most of the Monospacer's features work like in the RMX Scaler.

You create a monospaced font by monospacing all glyphs in place, or generate tabular figures and symbols that are derived from their proportional counterparts.

## 5.2. Controlling the result

The advance width that all input glyphs are scaled to, the Mono width, is automatically filled in with a proposed value. This is chosen so that one third of the glyphs will be condensed and the others extended. Masters that only differ in weight are given the same mono width.

The Keep stroke setting controls in how far the weight of the strokes is retained. Recommended values are 100% for extralight, 90% for regular weights and 60%–70% for bold and black weights.

In order to monospace the glyphs, the macro extends and condenses their shape, but it can also Use spacing to adjust the advance width. This reduces the changes to the horizontal proportions within the set of glyphs but it results in more irregular spacing.

Use the preview checkbox to see what the result will look like.

*Kerning*
For all monospaced glyphs, all kerning is removed.