

## Steps To Make Your Own Fonts

You will need:

- FontTweak by TassieJim (invaluable!).
- PowerPoint (or similar) - to produce .jpgs of large fonts to scale with crop registration marks.
- MS Picture Manager (or similar) - to crop the .jpgs to the crop marks.

The steps are:

1. Invoke FontTweak.exe and set it up to:
  - The font size you want e.g. 44 x 70 (w x h).
  - The ASCII range you want e.g. 48 (0) to 57 (9).
  - Within the 44 x 70 determine the actual size of characters to allow vertical and horizontal spacing to e.g. 4 blanks to left hand side; 5 blanks to RHS, 1 blank to top and 8 blanks to bottom. This determines the maximum size of letters and must be in the same proportions as w x h.  
Place “pixels” at these maximum points (top, bottom and sides).
  - Use <Alt><PrtScr> to capture an image of the screen.
2. Invoke PowerPoint and paste the screen capture.  
Keeping the aspect ratio crop and resize it so that it is 44x70 “units”  
(e.g. 14.5 x 23.33 cm in PowerPoint is in the same aspect ratio as 44x70).  
Draw a black rectangle 44 x 70 units around the outer edges of the screen image of the 44 x 70 grid.  
Within this draw a smaller black rectangle just kissing the outer edges of the left, right, top and bottom maximum pixels (this now positions a character within the whole font).
3. Delete the screen image, leaving the two black rectangles.
4. Draw thicker white lines over the edges of the larger rectangle, leaving registration marks at each corner (these will subsequently enable you to crop and position the image).
5. Using WordArt (or Textbox), with the font of your choice, draw the character “0” as large as you can - just kissing the four sides of the smaller rectangle - drag the “0”’s edges if necessary (“0” goes to each edge of the font). Make sure it is filled with black. Delete the smaller rectangle.
6. Copy this slide, say 9 times. For each successive slide double click on the “0” and change it to “1” to . . . “9”. Make sure that the character does not move and that you do not alter the aspect ratio between successive slides.  
You should now have 10 slides with a character accurately positioned within crop marks.
7. Use PowerPoint’s “Save As” to save every slide to a .jpg.
8. Use Picture Manager (or similar) to crop every .jpg to only just leave the crop marks.
9. In FontTweak, for each character, go to “Edit/Character from Image” to import the image, then go to “Edit/Inverse” (to turn black into white), erase the crop marks and tidy up the character.  
FontTweak does a remarkable job and little manual tidying is required. Save the file.
10. Copy the saved file to the end of your MMBasic program, test it and re-tweak with FontTweak if required. (Sometimes FontTweak omits characters or adds stray ones in the very last character in the definition. If this occurs, just change the last definition to be eight “0”s, ie “00000000”).
11. When you are happy with the font copy the definition into a blank MMBasic program and then to the Library with “Library Save”. It can then be deleted from your MMBasic program to save space.

