

Character Designer V1.0

Simple character and font designer Windows based application

Use for creating characters and fonts for graphical LCDs

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Technical Queries/Rants etc. tech@picmodules.com

Introduction

This document describes how to use the various features of the character designer application.

The program can be used to design any 5x8 pixel format character and subsequently a full 256 character font. Several fonts can be designed and saved to disk for future use/archiving/sharing etc.

The application generates a CSS style ROM table output in either hex or decimal format and is intended to be cut/copy and pasted into your C code. In this way small individual sections can be copied if required. For other compilers just change the table declaration.

Installation

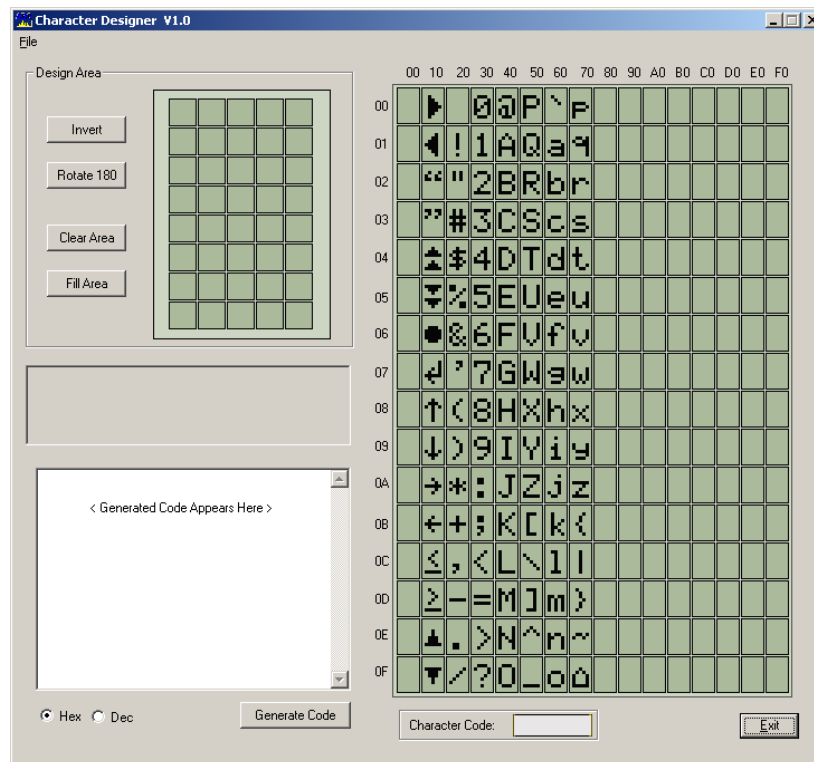
The application is provided as zip file. Download and save the zip file to a suitable location on your local PC.

Double click the zip file to start the extraction process and extract to a new folder of your choice. Once extracted, double click the setup.exe file to begin the software installation. Follow all onscreen instructions for successful installation.

When installation is completed a desktop icon will have been created and an entry in your Start-Programs file list will have been inserted.

The Application Explained

Double click the desktop icon or navigate to Start-Programs-PicModules-Character Designer V1.0 and select it. This will launch the application.



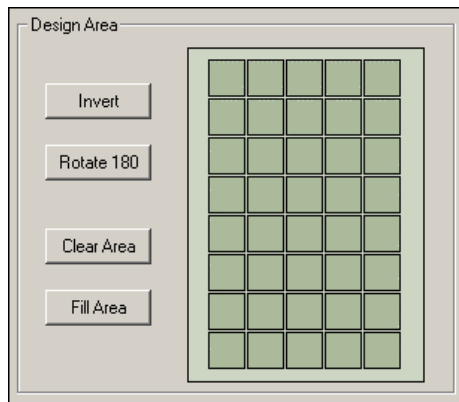
The program is all contained within one big dialog as shown above. The dialog is split into a few basic areas each of which are described later below.

A basic and pretty standard looking character font has already been inserted for you in the standard ASCII positions from the default character font loaded at startup. From here you would normally either change any existing characters or add more characters before saving and then generating a C style table for inserting into your C code.

The remaining features of the program attempt to help you do this, one way or another.

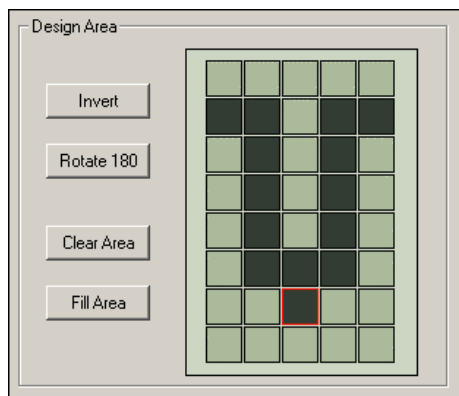
Designing A New Character

The Design Area is used as a scratchpad area for you to set/unset any pixel within a single 5x8 character pixel area.



To set a pixel hover your mouse over a pixel square until a red border surrounds the pixel, then click the **LEFT** mouse button.

To unset/clear a pixel hover your mouse over a pixel square until a red border surrounds the pixel, then click the **RIGHT** mouse button.



Note: You can hold down the mouse button and in-effect draw in the design area

The **Invert**, **Rotate 180**, **Clear Area** and **Fill Area** buttons perform various actions on the pixels currently within the design area.

Copying A Design Character To The Font Table

When you are happy with the design of your character you can copy the character into any position within the font table.

To do this simply move your mouse pointer over any font position within the font table area until the desired font character position has a red border around it.

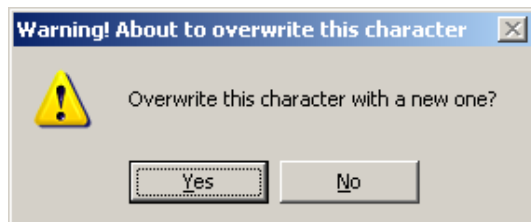
LEFT click the mouse button to copy the design area character to the selected character font table position.

To help you select the desired character position, the character code corresponding to the current cursor position is displayed underneath the table. This character code is the offset within the C generated character font table.



Note: You can copy multiple times by releasing the **LEFT** mouse button, selecting another position and **LEFT** clicking again... and again... etc.

If you have selected an occupied character position then you will be asked to confirm that you want to overwrite the current character.



Click **Yes** to overwrite or click **No** to keep the original character and abort the overwrite process.

Copying A Font Table Character To The Design Area

In some circumstances you might want to 'tweak' a character from the font table. This can only be done from within the character design area.

To copy a character from the font table to the design area for 'tweaking', hover your mouse pointer over the desired character in the table until the character border turns red. Then click the **RIGHT** mouse button. This will copy the character to the design area.

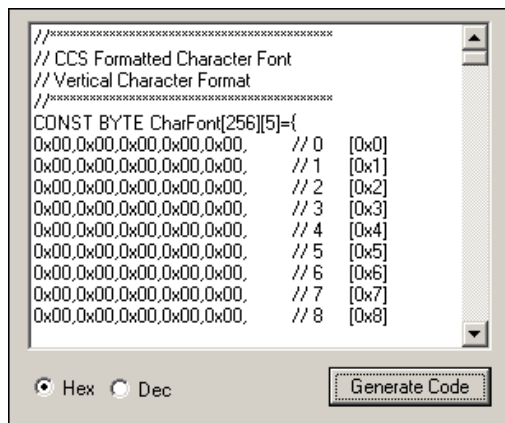
From here you can edit the character before copying back to the font table.

Generating C Code

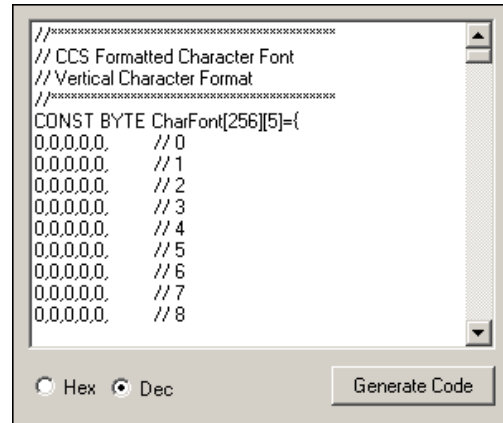
Once you are happy with your character font you should save the font to disk (see later section). Eventually you will want to generate some C code representing all of your efforts, so that you can use the font in your project.

The **Generate Code** button creates a C header style output in the CCS compiler format. This output is displayed in a text box for you to cut/copy and paste into your C code.

Of course any C compiler can be used or even assembly. Just change the table declaration to meet your software tool requirements. The values in the table will still be valid.



Select **Hex** for hex output



Select **Dec** for decimal output

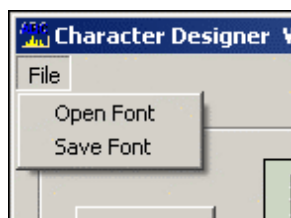
To select the output in the text box, either click in the text box and manually select the code or code section that you want to copy, or click in the output text box, **RIGHT** click and select **Select All** from the drop down list.

Finally paste the code into your C code project file.

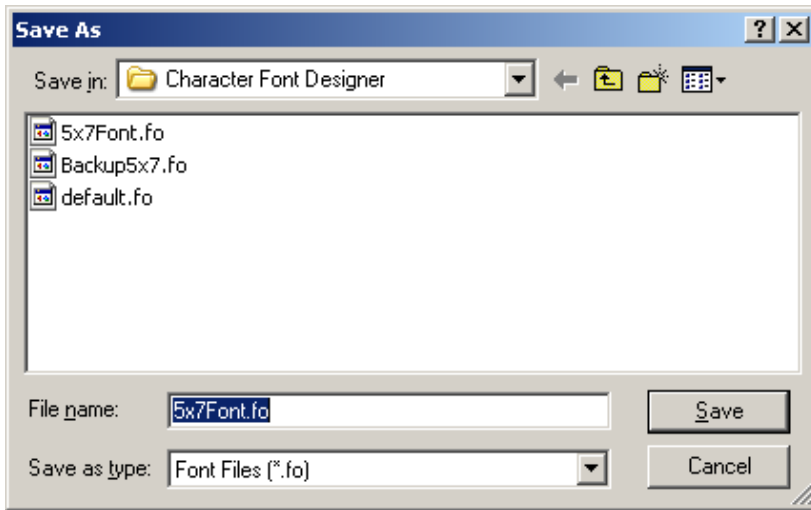
Saving The Font Table To Disk

At startup the file called Default.fo is loaded into the character table. Any changes you make to the character font table can either be saved back to the default.fo file or can be saved to a new file.

Use the **File Save** option available at the top of the main application dialog.



A File Save dialog box will open as shown below. From here you can either select an existing file to save to or create a new filename. Always use the .fo extension so that the file will be visible on a File Open operation.

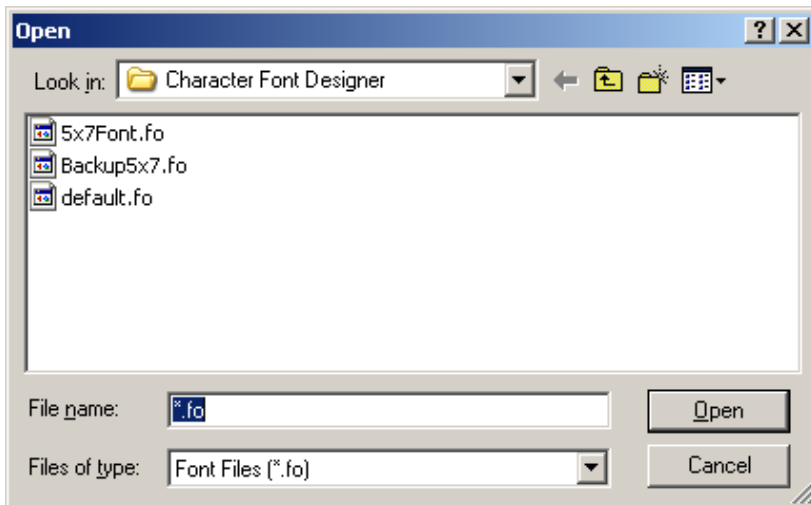


Click Save to save the font and return to the application.

Loading A Font Table From Disk

To load any previously saved font file use the File Open option available at the top of the main application dialog.

A File Open Dialog will open as shown below. From here you can select on eof any number of saved font files. Click open to load the font into the character font table.



I hope this application helps you in some way. Any queries/suggestions for improvement etc. email tech@picmodules.com