# Introduction

Some designers need to be able to display text in an inverse way on some boards. You are effectively adding the blanks around the text so that it can be displayed hollow. This technical note describes the only procedure for creating this type of text in PCB Editor.

## How to reverse Text in PCB Editor.

For ease of working, you may want to create a new subclass to hold the text to be reversed, this makes it easier to export the plot in step 3, Setup > Subclasses (Allegro) or Setup > More > Subclasses (OrCAD), left-click on the button next to "REF DES" type the name of the new subclass, "textfill" for example, and press enter to add the subclass, then use the "X" to close the "Define Non-Etch Subclass" dialog and OK to close the "Define Subclasses" dialog. If required, set the colour for the new subclass, this will be under the Components colour folder in RefDes.
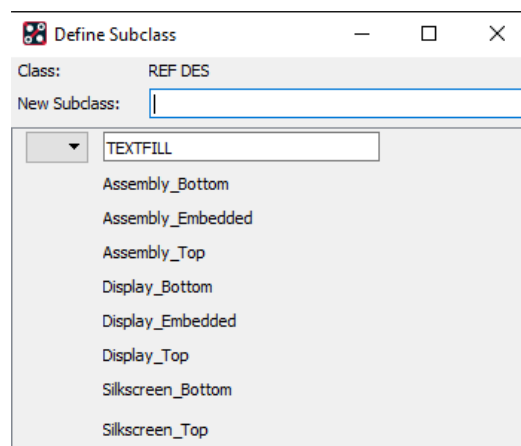


Add the required text on the new subclass layer. Make sure the subclass is visible in PCB Editor. (This is why the new subclass may be useful).



Go to File > PRINT Setup, on the General tab in the IPF setup group, check that Vectorized text is checked and the Width is set to "0". Create an IPF plot using File > Export > IPF (Allegro) or Export > More > IPF (OrCAD), set the name of the "plt" file.

Load the IPF plot file generated using File > Import > IPF (Allegro) or Import > More > IPF (OrCAD). Before placing / selecting the load point of the Plot file, change the active class and subclass to Etch and Top. (You could create another etch layer for this purpose and remove it later).

Temporarily change the void control setting by typing "set no_avtrim" in the command window, press enter to execute the command. (Don't leave this set permanently since this disables the cleaning routines of voiding of copper shapes, the instruction to unset this is at the end).

Add a static shape to Etch Top, Shape > Rectangular, set the Options for Etch and Top (Or the layer designated for this if you added a layer), Static Solid and Dummy net, draw the rectangle around the text. Right-Click > Done, or F6 to add the shape. You will initially get DRC's which will disappear after the next step.



Now create the voids in the shape, from the menu, Shape > Manual Void/Cavity > Element (Allegro) or Shape > Manual Isolation/Cavity > Element (OrCAD), left-click on the rectangle to select it and right-click > Void All, move away from the shape to the background and use right-click > Done or F6 to finish the command. (Repeat this for the other text to be reversed) If you get a prompt to break up the shape, pick the "Continue" option and OK.

Then Z-Copy the created shape from the Etch Layer to a Silkscreen subclass, Edit > Z-Copy (Allegro) or Shape > Z-Copy (OrCAD), set the options for the target class and subclass and left-click on the shape to copy it to the new layer. Ensure you include Voids when copying.

Delete any text and shapes that are no longer required on the Etch layer. The resulting reversed text looks like below.



IMPORTANT: Remove the "no_avtrim" setting by typing "unset no_avtrim" and enter in the command window