

Vector Font Editing

You can edit existing vector fonts or create new ones with the font editing feature.

Use the FontEditor's Open Font File (**VO**) command when you want to modify any Visual CADD™ vector font file (it will have a .vcf extension). When finished with editing, save the changes with the Save Font File (**VS**) command.

Each character in a vector font is defined by Visual CADD™ drawing entities, which 'draw' the character on the screen, printer or plotter. The objects defining a character can be any combination of:

- Single Lines
- Continuous Lines
- Circle
- Ellipses
- Arcs
- Elliptical Arcs
- Single Bezier Curves
- Spline Curves
- Continuous Bezier Curves (see note below)

Before you begin, we suggest you make a backup copy of the font file(s) you are planning to edit.

In *Open Font File (VO)*, browse to the folder where your fonts reside, and pick 'Visual CADD™ Vector Font (*.VCF)' from the 'Files of type' dropdown. Select a file and click Open. A new drawing will open displaying a bounding box around each character of the font, including gridlines and other aids to assist you in editing.

An ASCII font file has 256 characters (0-255), but 0 through 31 are reserved, so VCF supports 224 editable characters. Note that many fonts do not include all 224; a bounding box will be empty where a character has not been defined.

The Visual CADD™ title bar will indicate a new drawing (Drawing-1 or Drawing-2 etc), but a text string at the bottom of the layout grid will always show the full path and name of the .vcf font file you are editing.

The drawing has two layers:

Layer 0 (named *Vector Font*) contains the entities defining the font.

Layer 1 (named *Guides*) contains a layout template to help you edit the font characters.

The template (Layer 1) has several leader labels in the upper left portion of the grid that point out the purpose of each of the guides. You should review these leaders to become familiar with how the guides can help your font editing.

Edit the font entities on Layer 0 using Visual CADD™ *Draw* and *Modify* commands. Each line, arc or other entity defining a character must be completely inside the bounding box; if even a tiny portion of the entity is outside the box, that object will not be visible in the edited font once you have saved it.

Because there isn't any need to edit anything on the *Guides* layer, the drawing is always opened by default with the *Vector Font* layer current and the Visual CADD™ command 'AllLayerEdit' toggled to Off, so that you can *only* edit the font characters and not the *Guides* template.

After editing, save the changes with the *Save Font File* command.

Saving a font file will take several seconds to over a minute, depending on the complexity of the font and the speed of your machine. Progress of the save is indicated by each character being highlighted in the current Visual CADD™ selection color as it is being processed.

Note

Continuous Bezier curves are not supported in Visual CADD™ vector font definitions. However, you can use continuous Bezier curves when drawing your font definitions and FontEdit will translate them to equivalent spline curves.

Note

You can also choose to save the open drawing in the Visual CADD™ drawing file format (.vcd) using the File>Save command, and print it out for reference. As an alternate to opening a .vcf, you can open this .vcd file at a later time, edit the font characters, and if you then save it as an existing font file (.vcf) with *Save Font File*, the changes will be applied to the font.

Tips

- Several of the Visual CADD™ vector fonts can be placed as "filled" or "unfilled" via the "Fill Text" checkbox from the Utilities>Settings>Text dialog. Some fonts don't have this option (*Helvet.vcf* is a good example of one that does). With the font editor we've included a feature that allows you to edit or create fonts with both filled and non-filled characters (one use might be to have normally filled alphanumeric characters vs. non-filled special symbols). When you open the .vcf, each character has a checkbox. Uncheck those that you want unfilled. You can always recheck a box later --use the Point (**PO**) command to fill the box. When you save the file as a .vcf, you're prompted to choose one of three options: fill all characters, fill no characters, and fill only marked characters.
- Visual CADD™ expects the 'degree' sign (superscript little circle) to be at alt-0248, the 'diameter' sign (little circle with a slash) to be at alt-0157, and the 'plus-minus' sign (+ over top of -) to be at alt-0241. These symbols are used in certain types of dimensions. If you have a custom vector font --particularly the .shx fonts converted from AutoCAD-- these symbols

may be in the wrong place in your font file; if so you will see an empty bounding box or another character at the 0248, 0157 or 0241 locations. Use the Visual CADD™ Move (**MV**) or Copy (**CO**) command to add the symbol to the proper location.

- All fonts have other special characters. To add any of these to text, leaders or dimensions in Visual CADD™, you hold down the alt key and type the ASCII number while in the relevant Visual CADD™ edit box. There are two rules: the number has to be typed from the numeric keypad, and it must begin with '0' (for example, 157 is an ASCII number; you must type 0157). To see which numbers correspond with special symbols in your font, open a .vcf file and print the drawing with both the font and template layers visible.