



## Engraving MacIntosh files on the Xenetech engraver

General thoughts and very important details of which a bit of understanding would save a lot of frustration.

### ===== General Definitions

**Vector files** (files made up of lines, arcs, curves). These files are normally created with drawing programs ((e.g., Adobe Illustrator, Quark, CorelDRAW ) or CAD programs (e.g., AutoCAD).

**Raster files** (files made up of bitmaps; that is, a matrix of black or white dots) These files are normally made with a scanner or "paint" programs (Adobe Photoshop, for instance).

*Note:* While all versions of Xenetech can import vector files, 4.00 or later is required to directly engrave raster files. The 4.00 (what Brewer Sales calls "Enhancement Software") software is extra price; check with your distributor for current pricing.

### ===== Specifics

**Vector files** To engrave a vector file on the PC based Xenetech from the MacIntosh, a common file format must be established. The problem is different MacIntosh programs use slightly different "dialects" when they export files. So it is not possible to say in every case what export format should be used on the MacIntosh.

The "preferred" file format for importing into the Xenetech (and likewise most PC based programs) is HPGL (Hewlett Packard Graphics Language). However few MacIntosh programs export in HPGL. Possibly because HPGL is a vector language and there are relatively few vector devices available for the MacIntosh.

The preferred output file format for the MacIntosh is .EPS (Encapsulated PostScript). While Xenetech can import the .EPS files from some Mac programs, I've had several failures lately and that causes me to recommend:

**Adobe Illustrator 1.1 (it should have extension of ".ai" )** file format as the preferred MAC to PC vector file format. Let me emphasize that the exported filename should have eight characters or less (no spaces) and an extension of **.ai** to be imported into the Xenetech system. If the Mac operator does not perform this, the filename can be changed during the MAC-->PC conversion (assuming this is done on the PC).

*Note:* vector files in drawing programs often have a "filled" attribute that will print but is not transferred to a vector device (plotter, engraver, vinyl lettering machine, etc.). The drawing program must be used to put vector lines into the shapes if they are to be engraved. Easily done in CorelDRAW and other PC programs and I assume it can be done in MAC programs but it is up to the MAC operators to determine how.

*Note:* many MAC programs will require that the text be "exploded," "converted to curves," "change text to graphics" (or some similar term) before they will be accepted by many import programs. If you have some graphics and some text and only the graphics are imported into Xenetech, determine how your MAC program performs this translation.

**Raster files:** Raster files, Bitmap files, Scan files are general terms meaning a matrix of black or white dots (could also be color...but that doesn't apply to this discussion).

.PCX, .BMP, .TIF, .TIFF, .GIF, .JPEG are all "competing" file formats of raster files.

Most PC scanning programs allow the user to select any of the above formats.

Most MAC scanning programs prefer to save raster files in the .TIF file format and many give the user no choice.

The Xenetech enhanced software (often called "laser" software) 4.00 or later will import .BMP or .PCX but not .TIF. Therefore, if the MAC program only provides .TIF then a conversion program can be used to convert from .TIF to .BMP (recommended). I will illustrate conversion with CorelPAINT, although many graphics programs could be used similarly.

CorelPAINT can be used to convert from .TIF to .BMP.

1. Run CorelPAINT
2. Open the .TIF file
3. Save As...
4. From the FileType listbox select .BMP (or Windows .BMP if there are more than one .BMP)
5. Note which file folder (DIRectory) to which you save it. Recommended file folder is **1**

Additional thoughts on Raster files. If large images are scanned or even smaller ones are scanned at very high resolutions, the file size will be large and it will take longer to do the transfers and it will take Xenetech longer to process and engrave. Please understand that by default Xenetech assumes you want to engrave each pixel. So if you scan a 5" logo at 300 dots per inch then Xenetech will put 1500 horizontal lines by default. Likewise the wider the graphic the more processing and engraving time will be required. It will probably take most engravers a while to get a "feel" for the desired scanning resolution to yield the output they desire.

General parameters. Save the raster file with the appropriate "number of lines." For instance, if you are going to engrave a graphic at 1" and you would like it to have about 100 lines to give you the detail/productivity "mix" you want then save it at 300DPI and at 1/3" tall. To further illustrate, similar results could be attained by scanning/saving at 75DPI and 1.25" tall.

===== **Specifics** Step by Step: From MacIntosh to Xenetech.

**Note:** The following instructions assume the MAC does not have the ability to write to PC disks. All newer MACs have that ability and older MACs with "SuperDrive" or appropriate software can also write to PC. However, it is my experience that many MAC operators deny their systems can write to PC disks when they know good and well it can; no sense starting a fight, just do it on the PC! If the MAC can write to a PC disk and the MAC operator is too busy to try to drag you into the MAC vs PC controversy then you can ignore the steps that refer to Conversions+ (\$99 street price) &/or MACnDOS (\$49 street price).

## **Vector files** (Step by Step)

1. Export the vector file in Adobe Illustrator 1.1 format. Preferably with the .AI extension (not case sensitive)
2. Run Conversions+ or Mac-n-DOS on the PC to convert and place in **1** file folder(recommendation only).  
[See **Conversions+** example later in this document]
3. In Xenetech, **File|To File Import...** and be sure the file type is **.AI**
4. Select the file from file folder **1** (or where ever you put it) and import it.

## **Raster files**(Step by Step)

1. Scan and save files on MAC disk.
2. Run Conversions+ or Mac-n-DOS on the PC to convert and place in **1** file folder (recommendation only).  
[See **Conversions+** example later in this document]
3. If file format is .TIF, use CorelPAINT(or any other raster program) to open, then save as .BMP (see earlier steps) .
4. In Xenetech **File|To File Import...** from the **.BMP** file format.
5. Positioning and sizing will be much faster if "wire frame" is left off. With wire frame on, each modification and reDraw will cause Xenetech to recalculate the required vectors.
6. By selecting the .BMP in the layout screen and increasing the Cutter Size (in ToolKit) you can put fewer lines than the default. Normally, increase the cutter size by a multiple of the original cutter suggestion.

===== **Conversions+** as example of MAC->PC conversion on PC end =====

1. Run ConversionsPlus
2. If setup properly, the files on the MAC disk will show up on the left (from) side of the screen.
3. Select the file(s) to be converted.
4. If setup properly, it will by default go into file folder **1** for easy integration with the rest of this document.
5. Click OK to consummate the conversions.
6. Vector files are now ready to be imported into Xenetech. Raster files may need to be converted to .BMP format.

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