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LaserWriters: Meaning of VMerror & Limitcheck Errors (11/96)

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TOPIC ---

Sometimes when I print to my LaserWriter printer, I get an error that there was a VMerror or limitcheck error. What do these errors mean?

DISCUSSION --

The PostScript language does not restrict or limit the sizes or quantities of things described in the language, such as numbers, arrays, stacks, paths, and so on. However, a PostScript interpreter running in a particular printer does have limits: the interpreter in the printer cannot process a printjob that exceed these limits. If the PostScript Interpreter attempts to perform some operation that would exceed one of these limits it may return the error "limitcheck," or "VMerror" if it exhausts virtual memory resources.

If you print a lot of complex documents to a PostScript printer, you may someday encounter a limitcheck or VMerror error.

limitcheck
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The occurrence of a limitcheck error usually indicates the print job itself contains an error or the job has some operation that exceeds one of the printers limits. There are different types of limitcheck errors; the specific limitcheck encountered error is typically listed when the error is reported. Appendix B of the PostScript Language Reference Manual provides an explanation and the typical values for such limits.

VMerror
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A VM error may occur if the memory becomes too low for the PostScript
interpreter to reallocate memory to finish processing a job, or perhaps even
provide a more accurate or specific error message, or to display any error
message at all. It is impossible to predict accurately how much VM available
to the PostScript interpreter a printjob will consume, and though by adding
more memory to the printer may resolve a VMerror, there may be other
workarounds to printing a complex document as well.

To workaround limitcheck and VM errors, try:

- Make sure your Macintosh is configured properly, such as you are using the
latest or fashionably current version of the LaserWriter driver (which are
v8.3.4 and 8.4.1 at the time this article was written).

- Make sure the proper PPD is selected. Instructions for selecting the proper
PPD are listed in the Selecting a PPD File section later in this article. Old
versions of the LaserWriter driver prior to LaserWriter 8.x did not use PPDs.

- If you are printing to an old printer with PostScript Level 1 ROMs, print
instead to a printer containing PostScript Level 2 ROMs.

- Install more memory in the printer, particularly if it is a printer that
contains an old implementation of PostScript (PostScript Level 1).

- Try creating a new document, then copy and past the contents of the old
document into the new, then print.

- If you are using fonts that are non-resident to the printer, fonts not
built-in to the ROM, select the Page Setup menu option, "Unlimited Downloadable
Fonts in Document."   One side effect is this option may be your print times may
increase. Alternatively, use fewer non-resident fonts in your document, perhaps
one or two typefaces, or merely use the built-in fonts. (A list of resident
fonts can be displayed with the Apple Printer Utility, or found in the printer's
specification sheet or manual.)

- Reduce the complexity of the document by removing unnecessary graphics.

- Cut down on the complexity of the graphics in a document. For example, some
programs will "auto-trace" graphics, and sometimes the auto-trace results in
excess bezier points. In this example, try hand-tracing the document with an
illustration program, or edit out some of the unnecessary points.

Reduce the number of graduated fills (fills that go from one color to another
in a rainbow-type fashion) in your document, or choose a solid screen or single
percentage gray tone.

- Print the document a few pages at a time.

- If you notice that the document always stops printing when processing a
certain page, try printing that page by itself, then print the pages that
follow.

- Look for corruption in your document. For instance, if only a some pages do not print, look for in those pages a repeating element such as a font or graphic. Try placing that font or graphic on a page by itself and print just that page. If that page will not print, the font or graphic itself may be corrupted, requiring you to reinstall the font or obtain/create a new graphic.

Selecting a PPD File
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Step 1

Open the Chooser

Step 2

Select the LaserWriter 8 driver

Step 3

Locate and select the printer from the printer list

Step 4

Choose Setup. . ."

Be patient after selecting Setup for a dialog to appear: it may take a little while, particularly if someone else is printing to that printer.

One dialog may appear stating "setting up PostScript printer." When a PPD has been selected, another dialog stating "Current printer Description File (PPD) Selected: name of PPD" is displayed.

Step 5

Verify the proper PPD has been selected. If the proper PPD was not select, for example Generic is listed as being the selected PPD, click on the Select PPD button, then select the PPD for your printer. If no PPD appears in the listing of PPDs (which are stored in the Printer Descriptions folder), then reinstall the printer software so that the correct PostScript Printer Description file becomes available, then repeat these steps to configure your Macintosh printer driver to use the proper PPD.

References
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PostScript Language Reference Manual, Adobe Systems Incorporated.
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