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Macintosh Application Environment: Print Troubleshooting (5/94)

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TOPIC -----------------------------------------------------------


This article provides some ideas and helpful hints when troubleshooting printing
problems with Macintosh Application Environment (MAE).


DISCUSSION ------------------------------------------------------


Before you can print from MAE, UNIX printing must be correctly configured on the
workstation.  In addition, MAE only supports printing to Postscript printers,
since Postscript is the only page description language commonly available on
UNIX workstations.  If there is no Postscript printer available, then you will
not be able to print from MAE.


If you have never printed on your workstation, or are not sure of the types of
printers available, see your system administrator, who should be able to help
you solve problems with the UNIX print spooler configuration, based on the error
messages displayed in the X window where you started MAE.


For flexibility with MAE, you can specify any UNIX command you choose for
printing a generated PostScript file.  The printing sub-system takes the
user-specified command, and passes it to a UNIX shell, generating a command line
similar to:


  cat MAE.ps | USER_COMMAND


MAE.ps is the PostScript file generated by MAE, and USER_COMMAND is what you
typed into the Setup dialog in the Chooser.  Thus, the command that is used for
printing reads its "standard input" to gather the PostScript file for printing.
The command specified MUST be able to read the file to be printed from its
standard input.  Both lp and lpr (standard printing systems on UNIX
workstations) have this functionality.  We suggest testing a print command from
the UNIX command line before entering it in a print command description in the
Chooser.  You should test the command by having it read its standard input, as
above.  If you are having problems getting a print command to work, you should
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try to print from the UNIX command line.

Nothing comes out of the printer

• Have never printed from the UNIX workstation

  The underlying UNIX spooling system must be set up before printing from
  MAE. See your system administrator, or read the documentation that came
  with your workstation. The most common UNIX spoolers are lp and lpr.

• Have printed from the UNIX workstation

  1) Check the X window in which MAE was started. MAE displays any
     error or status messages in this window. The error messages can
     provide useful information about why printing isn't working. (For
     example, "lp: unknown printer <printer name>", or "lp: host NAME is
     refusing permission", or "lp: no space left on device"). Here are
     some common problems:

     • Remote machine is unavailable.
     • Permission has not been granted for the your machine (for remote
       printing via lpd).
     • There is no space left in the spooling directories (your home
       directory, /usr/spool).
     • The printer is not accepting requests (Type "lpstat -a" to see if
       this is the case. "Not accepting requests" or "disabled" means that
       the spooler won't use that printer.)

     A message similar to: "request id is Silence-0 (standard input)" is
     normal. This means that the UNIX spooler has accepted the print
     request. It also indicates which printer got the request.

  2) Have you ever printed from MAE? (You have to go into the Chooser and
     create a print command before printing in MAE.) If you've never been
     able to print, print a text file from UNIX, and after verifying that
     it worked, type the exact same command into the Chooser window without
     the file name. If this doesn't work, click the "File" radio button on
     the right, inside a dashed box labeled "destination". This causes
     LprWriter (just like LaserWriter 8) to save the output to a file
     instead of sending it to a printer. A standard file dialog pops
     up, asking where to put the file. After the file is saved, go to a
     UNIX window and try to print the file. This provides you with a
     print command that works, which you can enter in the chooser.

  3) If you have printed from MAE

     • If you don't explicitly specify a printer in the print command (the
       -d option to lp), you may be sending to the wrong printer. UNIX
       spoolers use an environment variable (LPDEST or PRINTER) to specify
       your default printer. If the environment variable isn't set,
       and a printer isn't specified on the command line, then the system
       default printer is used. The window where you started MAE should
       have messages saying which printer was used. You can find out the

system default printer with the command "lpstat -d". You can find
the value of the environment variables by typing "printenv" in
C shell, or "set" in the Bourne or Korn shells.

Note: We recommend having one print command per printer the user
prints to, and explicitly specifying the printer, rather than
modifying the print command each time.

- Check the UNIX spool print queue:

    "lpstat -oPRINTERNAME"

- Have you changed the print command recently?

- If you have more than one print command entered in the Chooser, do
  any of them work?

- Did you test printing under UNIX, using the exact same command as in
  the Chooser?

    Example: echo "test" | THEIR_CHOOSER_COMMAND

- Is the PPD file correct? If it's not, incorrect Postscript may be
  generated, such as not downloading a font that MAE thinks is
  resident in the printer, but really isn't. Try using the "generic"
  PPD (in the "Page Setup" dialog, click on the "Select PPD…" button,
  then the "use generic" button).

4) For some reason, the LprWriter driver may be generating incorrect
   Postscript. Check that Postscript is actually getting to the printer
   by doing the following:

   - In the "options" dialog of the print dialog (that is, click on the
     "options" button in the "Print" dialog) specify a cover page to be
     printed before the document (click on the "Before" radio button).

   - Choose "Postscript Errors - Print detailed report". If the
     generated Postscript actually makes it to the printer, and it
     contains a Postscript error, the Postscript error is printed. If
     nothing is printed, then something else is wrong because Postscript
     commands aren't getting to the printer.

5) If the desktop database (DDB) is bad, peculiar things can happen with
   printing. The most obvious being the driver not finding the PPD file;
   the driver stores an alias in the prefs file, and if the DDB is
   damaged, there's a chance the alias won't resolve. You can check if
   this is the cause by opening the Chooser, then opening the currently
   selected print command, and click on "Setup" or just press the
   <Return> key. If a damaged DDB is the problem, a message similar to
   what's below appears:

    "can't find prefs file"
    "can't use PPD file 'XXX', using Generic instead"

You need to re-select the PPD file for the printer.

Strange text comes out of the printer, starting with "%!PS-Adobe-3.0"

• It's not a Postscript printer.

• It's a Postscript printer, but the spooling system is interpreting the
  Postscript as text, instead of a Postscript program to be sent to the
  printer, and is printing the text of the program. This may be due to an
  option given to the print command (like the "-p" option with lpr), or it
  may be due to the spooling system being confused. See your system
  administrator for help in straightening out this spooling problem.

Can't cancel printing

Before the print status dialog disappears from the MAE window, you can cancel
printing by holding down the <Command> and <period> keys at the same time until
the "canceling printing" dialog appears. After the printing status dialog
disappears from the MAE window, the print request has been given to the
user-specified UNIX command for printing. At this point, you must use UNIX
commands to cancel printing, for example lprm(1) or cancel(1). For information
about using these commands to cancel print requests, see the appropriate man
pages in the documentation that came with your workstation, or consult your
administrator.

Only the first few pages of the document print

Check to see that the UNIX file systems that contain your MAE system folder
(usually your home directory), and the spooling files (usually /usr/spool)
aren't full using the df(1) command. If a file system is full, only a portion
of your document prints because only a portion of your file was written to disk.
 You should see an error message in the window where you started MAE, such as:
"no space on device", or "file system full", or "write error". Some files will
have to be removed from the file system. See your administrator for help in
resolving this problem. Note that some UNIX systems reserve a portion of a file
system for the "super user" (up to 10%). The output of df(1) may not indicate
that you can no longer add data to the file system.

Can't print from Aldus PageMaker

Aldus PageMaker uses its own, internal Postscript rastering driver instead of
using the MAE printer driver. The Aldus driver expects the ability to talk
directly to the printer to obtain information about the Postscript version and
other parameters. Since MAE uses a user-specified UNIX command for printing,
rather than talking to the printer directly, PageMaker cannot print using an
Aldus driver. This problem is evidenced by an error message similar to:

  "An error occurred while printing. Could not open the printer. Check
   that the printer connection is correctly set up in the Chooser."

You can print from Aldus PageMaker, but you must use the LprWriter print driver
delivered as part of MAE. To do so, hold down the <OPTION> key when selecting

"Print" in PageMaker's "File" menu. This tells PageMaker that you want to use
the currently selected, standard driver, rather than an Aldus driver.

Miscellaneous useful commands

To get a list of printers:

    lpstat -a

To get the status for a particular printer:

    lpstat -oPRINTER
    lpq -PPRINTER

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