

6/18/90 DESKWRITER AID CDEV

Deskwriter Aid shortstops bugs in the Hewlett-Packard Deskwriter driver that cause corruption of application heap zones when running under MultiFinder. It is provided in the form of a Control Panel device so protection can be turned on and off at will. You must restart your Mac for changes to become effective. To add Deskwriter Aid to your Control Panel, simply drag the file to your System Folder. To access Deskwriter Aid, open your Control Panel and select the printer icon with the bandaid across it. Your two options are to turn protection on or off. When protection has been turned on, a small printer icon with a bandaid across it will be displayed during system starts and restarts.

Deskwriter Aid has been tested with a Macintosh Plus and both the original and current version of the Deskwriter print driver. (Both versions contain the same bugs).

TECHNICAL INFO

If you are interested in the technical details, they are fairly simple. When running under MultiFinder, the Deskwriter printer driver throws a number of nil Handles at the Resource Manager and Memory Manager at various points during a print job. If you are familiar with Macintosh programming you will recognize this sort of behavior as fatal. The result is that block headers for Multifinder, the Finder, the current application and sometimes other applications are immediately destroyed, guaranteeing at a minimum some sort of System bomb in your very near future.

To see this effect immediately when Deskwriter Aid is not active, you must have a debugger (such as Macsbug) installed. First, print a document under MultiFinder with the Deskwriter, then break to your debugger and do a heap check. You will be advised that your application heap has been corrupted, signalling a crash in the making. (If you do this check, exit the application immediately and do a complete shutdown and restart to prevent possible damage to the application or other files.)

Since the effects of the Deskwriter -induced application heap corruption can be extremely unpredictable, feel lucky if a System crash is all that has happened in the past. Negative effects up to and including trashing of your hard disk are among the possibilities.

Fortunately, the cure is simple. When a print job is initiated, Deskwriter Aid monitors all requests for disposal of Handles, examining each Handle to make sure that it is valid. If it is a good Handle, the request is passed on to the Macintosh Toolbox for action. If it is an invalid Handle, control is returned to the requesting routine without any further action. The requesting routine is advised that the bad Handle was successfully dealt with just as if it had passed in a good Handle. This prevents both unwanted application termination as well as fatal corruption of the application. In this case, what the print driver doesn't know saves it from bombing your Mac.

HEWLETT-PACKARD'S CORRECTIVE ACTION

After discovering the above problems shortly after purchasing a Deskwriter, I notified both Hewlett-Packard's Customer Service and Technical Sections of the problem with a simple, free way to cure it. The reaction was that since all their products were perfect, there could be no problem and, therefore, no corrective action would be taken, thank you very much.

If you feel that paying between \$900 and \$1000 for a printer entitles you to a more professional product, I would encourage you to write Hewlett-Packard at:

Office of the President
Hewlett-Packard Corp.
18110 S.E. 34th Street
Camus, WA 98607
(Tel: 208-323-2551)

and respectfully request that you be provided a non-buggy print driver for their product.

Sam Thornton
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