0051

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Chapter 1

0051

1.1 Personal Fonts Maker - 14. Problem Solving

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14.         Problem Solving
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   This chapter describes some of the most common problems which may be
encountered when using the computer's peripherals, explaining how to solve
these problems, and what to do in order to prevent them from the
beginning.

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14.1        Problems with Disks
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   The Amiga operating system may perform another disk write operation
some seconds after a file is stored. For this reason, a disk should never
be ejected from the drive (nor should the computer be switched off) for
some seconds after the disk drive activity indicator light has gone off.
Electrical noise can also cause problems. Lights, monitors and other
electrical devices connected to the same power line as the computer should
never be switched on or off while data is being written to the disk.

   Errors are first signalled by messages from the Amiga operating system,
and then by the program which is trying to save the data. The most
frequent sources of errors are: disk is write protected, disk is full,
disk is damaged or not formatted (sections 1.3.4 and 1.6). Unlike 5.25"
disks, 3.5" disks are write protected if it is possible to see through the
write-protect hole.

   If, while a file is being written to, the Amiga operating system
displays a message indicating that a read/write error has occurred, the
first thing to do is to eject the disk and set the write protect tab.
Precious data can be lost by trying to write to the disk after such an
error message. If the write protect tab is not set, the system may try to
write to the disk even if no write operation has been requested by the
user (especially if the disk is damaged). After the disk has been
reinserted, all the system messages should be cancelled with the mouse
(unless a "Software Error" message appears). The program which was saving
the data will display its own error message. The data which could not be
stored because of the error should be saved to another disk. Any other
material which is displayed or stored in RAM should be saved as well, so
that it can be recovered if its copy on the damaged disk has been

corrupted. Next, a copy of the damaged disk should be made (section 1.6).
If the standard system copy program does not work, because of the errors
present on the disk, other copiers should be used.

   A disk recovery program like "DiskDoctor" or "DiskSalv" will probably
be able to restore most files, with the likely exception of the one which
was being written to when the error occurred. It is possible that
different disk recovery programs will produce different results. The disk
on which the error occurred should not be used again, unless the cause of
the error is known not to be hardware dependent. An error may occur again
on the same disk, especially if a single sided or poor quality disk is
used, or if the disk is dirty, or the magnetic surface is scratched.
Scratches are usually visible when light is reflected from the disk
surface. The surface itself should never be touched.

   Some minor errors are automatically corrected by a process of the Amiga
operating system called validating. If, for example, a write operation is
interrupted for some reason (e.g. a power failure, or the removal of a
disk), and no other damages occur to the disk, the Amiga operating system
tries to validate the disk the next time that it is inserted in a drive
(or mounted, if it is a hard disk). The validation process can take a few
seconds or several minutes, depending on the size of the volume. If the
disk is write protected the validating process has to be repeated every
time the disk is inserted (or mounted). While the disk is being validated,
a "Disk not validated" system message is displayed if a program tries to
access that disk. The "Cancel" option of the message should not be
selected, as the message disappears automatically as soon as the
validating procedure terminates. It is possible to read from a disk which
has not been validated, but no data can be saved to it, since the data
structures which mark the parts of the disks which are free are not
updated.

   The most serious errors can be caused by physically damaged or
defective disks. The main cause of such errors is dirt. Coffee poured over
disks lying on the table, sticky drops of orange soda "raining" from a
nearby glass or a few grains of sand inside the disk case can become very
dangerous. Unless the magnetic coating of the disk has been scratched or
corroded, the data can still be recovered. Most liquids leave the cookie
(the foil coated with magnetic media inside the disk) intact, but must be
removed as soon as possible. The cookie must be taken out of the disk case
before it can be cleaned. To do so, a demagnetized blade can be used to
carefully open the case. The metal (or plastic) shutter of a 3.5" disk can
be removed by hand. The cookie can be washed under running water and dried
with a clean, soft cloth. The clean cookie can finally be inserted into a
new case (the shutter is not needed), from where it can be copied to a
new, intact disk. The procedure described here is not guaranteed to
succeed. Improper handling can damage the disk and/or the disk drive.

14.2   Problems with Printers

   Some suggestions to improve the quality of the printed output are
listed here. Possible solutions to many problems which may occur during a
print operation are also contained in this section.

   The parameters of the Amiga Preferences program must be perfectly set.
The most common cause of errors is the wrong choice of the printer driver.

The printer driver specified in Preferences must be the correct driver for the printer which is used. All printer settings of the Preferences program must be correctly set and stored on the Workbench disk. Not all printers use the same codes and control sequences.

When the name of the printer driver has been selected with the Preferences program, the programs which need to use the printer will be able to use the correct printer codes, and Amiga will activate the appropriate printer driver. The Personal Fonts Maker itself works with any printer driver, as the formats in which fonts are to be downloaded are stored in special parameter files, rather than in the Amiga printer drivers. Other programs, however, and especially word processors interacting with the Personal Fonts Maker, require the correct printer driver to be selected.

Printer drivers are stored in the "printers" drawers, which are contained in the "devs" drawers of the Workbench and Extras disks. At least the "generic" driver is stored on the Workbench disk which comes with the Personal Fonts Maker. This is sufficient to download fonts to any printer. The Extras disk shipped with the computer and officially distributed by Commodore contains all other drivers. A driver stored only on the Extras disk must be copied to the Workbench disk before it can be used. The "InstallPrinter" program, also on the Workbench disk, allows the user to copy the drivers from the Extras disk to the Workbench disk in a very easy way. If there is no driver for a particular printer model, a similar or compatible driver can be used. The documentation enclosed with the Amiga and with the printer should be read to determine which is the most suitable driver for a particular printer. Appendix F of this guide also lists several suggested drivers for the most used printers. The printer retailer or manifacturer should be contacted if no information can be found in the handbooks, and the existing drivers do not work. Drivers which were included with versions of the operating system before 1.3, as well as versions labelled Alpha, Beta, Gamma and Omega might not work properly with most software.

Since the Personal Fonts Maker uses the printer device only for "direct" communication with the printer, a simple driver like the one named "generic" is sufficient to work with the program. If it is important to save disk space, and no programs need a different driver, the "generic" driver can be selected from the Preferences program, and all other printer drivers can be removed from the Workbench disk.

The Preferences program can be started with the mouse from Workbench. If the Personal Fonts Maker has closed the Workbench screen, the "Workbench" parameter described in section 7.7 can be set to open it again. If the Workbench is still closed, the program should be terminated (section 4.18) to free the memory necessary to open the Workbench screen.

Again, it should be noted that the Personal Fonts Maker does not need a particular printer driver to be selected. The Personal Fonts Maker does not need printer drivers to translate its data into the printer's format. If the Personal Fonts Maker is used to download printer fonts, it is important to use the correct printer driver when another program is used to print the text.

If characters without accents or other signs are printed instead of

characters with these signs, or characters are printed instead of an image, or undesired characters appear in the text printed by a word processor, the wrong driver was probably selected. As an example, with some inappropriate driver/printer combinations a 'P' or 'K' character (not part of the document) is printed at the beginning of each print operation. Also the left and right margins must be set with great precision in Preferences (not only in the word processor's parameters). If – for example – an 80-column (characters per line) printer is used, the two margins should be respectively set to 1 and 80, and not 5 and 75.

Sometimes it may be necessary to change the default factory settings of the printer. Some printers have small DIP-switches grouped into banks, located at the rear of the printer or under the cover. Other printers allow the user to change their parameters by accessing the printer memory setting through the control panel. A parameter which is often not set appropriately is the automatic line feed function, which should be disabled to work with most printer drivers. This has to be done if the graphic print is interrupted by wide horizontal lines, or if the line spacing of the text is twice the spacing which was set through the parameters of the word processor. If accents or other particular national characters of a specific language are not printed, and the correct driver was used, it is possible that the character set default setting (e.g. "Italic"/"Epson" versus "Standard"/"IBM") or the language character set should be modified. As described in section 13.4 ("Downloading a Font to the Printer"), it may be necessary to modify some printer settings in order to be able to use the printer's memory to store downloaded fonts.

If it is possible to choose between tractor (perforated paper) or friction paper feed, it should be noted that friction feed is usually much more accurate over short distances (e.g. single sheets), especially on low-cost printers. On some printers friction feed may not grab a sheet stiffly enough if the paper is too light or too thick (forcing the feed mechanism). A discontinuous, asymmetric and imprecise paper feed may be caused by the wrong paper type. This may be especially annoying if it is necessary to print within restricted spaces on the paper, like pre-printed lines. To locate the cause of the problem, it may be useful to compare the spacing of the same text printed using the tractor feed and the friction feed. At least twenty lines beginning with a dash ('-' sign) should be printed to measure the line spacing with precision.

The presence of thin, light, horizontal lines on the printed output (graphic or text) can be reduced by selecting the friction feed and/or narrowing the printer head to the paper. If the inked ribbon streaks the paper, or dirties the margins of the paper, the printer head is probably too close to the surface of the sheet. On some printers the presence of thin horizontal lines can be reduced by selecting a "Custom" paper size, and/or "Single" paper type rather than "Fanfold" in the Preferences program. The internal power supply of some printers is not sufficient to guarantee a homogeneous pressure of all needles on the ribbon. Some drivers may let the printer use only part of their pins (generally the upper 16 of 24) if some parameters in Preferences are set as described above. These drivers make an improper (but surely appreciated) use of some Preferences parameters, which would otherwise remain unused, like "Paper Type".

Graphics are usually printed faster in mono-directional mode than in bi-directional mode. The mode can be selected manually or through software

control on most printers. Black and white graphic print is the fastest,
while gray level and colour printing take longer.

   Some graphics print parameters, like "Smoothing", may be activated in
Preferences to reduce diagonal "steps" in the graphic prints. This usually
slows down the printing.

   On some colour printers a black ribbon can (or must) be used to print
black text or black and white or gray graphics. In this case, only black
ink ribbons, usually more affordable than colour ribbons, need be bought.

   Printing a text with a downloaded font may yield unexpected results,
especially the first times this task is performed. If "garbage" characters
are printed during the download, the FFDL sequences are probably not
correct. Sections 2.7 ("Programming the Output Format: the Cloanto
FFDL"), 4.13 ("Write Font Data"), 7.3 ("Font Description"), 13.4
("Downloading a Font to the Printer") contain more on this subject.

   If the font is downloaded without problems, either by the Personal
Fonts Maker or by the word processor, but the text is then printed with a
font other than the font just downloaded, it is very likely that the
"Epilogue" FFDL sequence (section 7.3.8) did not contain the control
sequence which should have selected the downloaded font as the font to be
used. It is also possible that the word processor sent a command to the
printer requesting a particular font, other than the downloaded font, to
be used. In this case, the "Automatic Font Selection" option (or similar)
of the word processor should be disabled, so that no font selection
commands are sent to the printer. It is also possible that the word
processor is printing the text in graphics mode. If this is the case, the
character images are defined by the program, rather than by the font
stored in the printer's memory. The text must be printed in character
mode, or the font must be saved in the Amiga font format (or another
format which can be processed by the word processor) and loaded by the
program printing the text in graphics mode.

   Some printers do not have enough memory to download a full high
resolution font, or cannot download characters whose code is greater than
127. The "Write Font Data" function (section 4.13) displays the number of
bytes sent to the printer. This can be useful to determine whether the
printer's limit has been exceeded. Section 12.1 explains how to use the
TextChars program, designed to optimize the use of the available memory.
The printer's documentation should be read to determine how much of the
printer's RAM can be used to store a downloaded font. Chapters 9 to 11
explain how to use the Printer Driver Modifier to deal with printers
which do not support the redefinition of characters having codes higher
than 127. Section 13.4 ("Downloading a Font to the Printer") also
contains some information on this subject.

   It may happen that the text is printed correctly with the downloaded
font, but as soon as an accented letter, or another special or national
character not defined by the US ASCII set is printed, the printer uses its
internal font rather than the downloaded font. Some printer drivers do not
use the full set of 8-bit codes of the printer. Instead, they switch to
national 7-bit codes whenever they receive an ASCII character whose code
is greater than 127. This switch to a different character set may override
the selection of the downloaded font. The user-defined font data may be
not used to print the special character, or – in the worst case – the

downloaded font data is not used any more after the special character is
printed. This problem can be solved by using the Printer Driver Modifier,
as described in chapters 9 to 11.

If all the characters in a text are printed with the downloaded font,
but some of the printed characters are not the same characters contained
in the original text, it is possible that the character set used to encode
the characters of the downloaded font is different from the character set
used by the printer. In this case, the Printer Driver Modifier (chapters
9 to 11) can be used to modify the codes sent by the printer driver to
the printer, or the character set used to design the font can be changed,
as described in section 2.8 ("Character Sets"), 4.10 ("Define Character
Set"), 4.11 ("Edit Character Set").

The widths of the characters in a downloaded font may be different from
those of the default characters used by the printer. A word processor may
not be able to format properly a text printed with a downloaded font,
especially if the text is not printed left-aligned, but, for example,
centred or justified. If the word processor has a size table containing
the widths of the characters used to print the text, the values can be
updated as described in section 13.6 ("Creating a Word Processor Font
Size Table"). If however the text is justified by the automatic formattimg
functions of the printer, it may be necessary to modify the "Proportional
Adjust" (or similar) parameter of the word processor. This parameter
determines the position of the right margin when the text is formatted by
the printer using proportional characters. The parameter is used to
determine the ratio between the width of a text printed with
proportionally spaced characters and the same number of characters having
a fixed, standard, width. Depending on the printer, this standard
character width unit may be the width of the space character in the
proportional font, or the width of the characters in text printed at 10 or
12 characters per inch.

Finally, a warning addressed to the owners of Amiga 1000 models. This
computer requires a non-standard parallel printer cable. Connecting the
printer cable of another Amiga model, or a standard Centronics cable may
damage the equipment.