

16. PRINTING

NoteCards includes facilities for printing in the PostScript language by Adobe, and the InterPress language by Xerox.

This chapter explains how to:

- Set up your printers
- Specify where your font directories are
- Deal with some common printer problems
- Customize your PostScript printer

Setting Up Printers

You can set up printers from either the background menu or the initialization file. For how to set up your printers with the initialization file, see Appendix C.

Adding Default Printers

To set up a new default printer from the background menu, press and hold the right mouse button in the background, place the mouse cursor on **Set Default Printer**, then slide off to the right and select **Add Default Printer**.

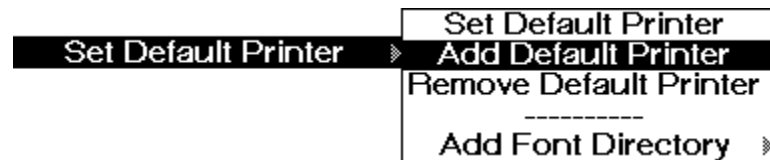


Figure 16-1. **Set Default Printer** Background Menu Option with its Submenu

A prompt window appears showing you the name of the current default printer and asking for the name of a new default printer.



Figure 16-2. PostScript Printer Name Entered as New Default Printer

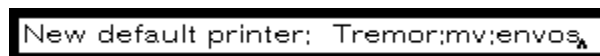


Figure 16-3. InterPress Printer Name Entered as New Default Printer

Enter the name of the new default printer. The moment you type the first character of the new printer name, the old name is deleted and replaced with what you type. If you don't want to make any changes, press RETURN. If you want to modify the name that is there, you can backspace over the name to erase part of it. If you press RETURN without entering a printer name, this operation is aborted.

When you press RETURN to end the name, a menu pops up requesting the printer type (Figure 16-4). Select one of the options with the left mouse button.



Figure 16-4. System Prompting for Printer Type

If you do not select any option (by clicking outside the menu) and the printer's type was previously defined, it remains the same. If the printer's type was not previously defined, and you do not select any option, the printer's type is left undefined, which will cause problems when you try to print. If you leave the printer type undefined the system will warn you (Figure 16-5).

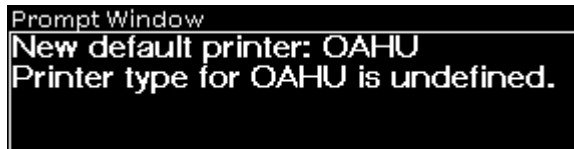


Figure 16-5. System Prompt Window with New Printer Status and warning Printer Type for Oahu is Undefined



Figure 16-6. System Prompt Window with New Printer Status

At this point, if you have already specified the font directories, you should be able to print to any default printer.

Setting the Default Printer

The system maintains a list of printers, one of which is the default printer—the printer that files are sent to when no printer is explicitly specified.

To set the default printer, select the **Set Default Printer** option from the background menu (Figure 16-7).

Figure 16-7. **Set Default Printer** Option on the Background Menu

This causes the system to open a menu listing all the known printers (Figure 16-8).

Figure 16-8. **Choose Default Printer** Menu

Selecting one of these options will make that printer the default printer. The current default printer is the topmost option.

Once you have selected a new default printer, the system confirms your choice by printing the printer name and type to the system prompt window (Figure 16-6).

If the printer type is undefined, the system beeps and issues a warning (Figure 16-5).

Removing a Default Printer

If you make a mistake specifying a printer or want to remove a printer for some reason, you can use the **Remove Default Printer** submenu option on the background menu.

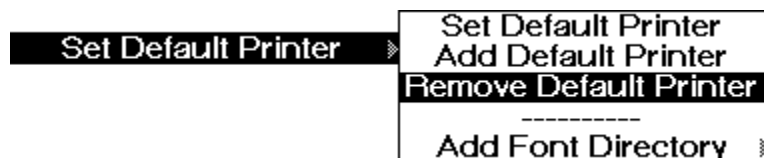


Figure 16-9. **Remove Default Printer** Submenu Option

Selecting this option brings up a menu of known printers. Selecting one of these deletes it from the known-printers list and makes the topmost remaining printer the default printer.



Figure 16-10. **Choose Printer to Remove** Menu

Setting Font Directories

As with printers, it is possible to set your font directories from either the background menu or your initialization file. We recommend that you set your directories from the initialization file. There are two reasons for this. Setting the font directories involves a lot of typing, and these directories are set correctly for you by the standard initialization file unless you have moved the font files. See Appendix C for how to set the font directories from the initialization file.

Adding a New Font Directory

To add a font directory from the background menu, press and hold the right mouse button in the background to bring up the background menu. Position the mouse cursor on the **Set Default Printer** option and slide off to bring up the submenu containing **Add Font Directory**.



Figure 16-11. **Add Font Directory** Submenu Options

Selecting **Add Font Directory** brings up a menu asking you to specify the font group you want to add a search directory to.



Figure 16-12. **Add to which directory group?** Menu

The NoteCards system supports one display and three hard copy modes. For each of these there is a specialized set of fonts. The fonts for the screen display are stored in the display font directories, the fonts for PostScript printers are stored in the PostScript font directories, those for InterPress printers are stored in the InterPress font directories, etc. When you add a new directory to one of these groups, you are providing the system with another place to search for fonts. For example, the display font directories typically include the following directories:

```
{DSK}/usr/local/lde/fonts/display/presentation/
{DSK}/usr/local/lde/fonts/display/presentation/
{DSK}/usr/local/lde/fonts/display/publishing/
{DSK}/usr/local/lde/fonts/display/printwheel/
{DSK}/usr/local/lde/fonts/display/miscellaneous/
```

When the system is looking for a new display font, it searches through each of these directories in sequence for the font. The fonts are broken up into separate directories for convenience and efficiency reasons.

Once you have specified the font directory group you want to work with, the system prompts you for the name of a new directory to search for fonts of that type.

A screenshot of a prompt box with a black border. Inside the box, the text reads "Add font directory: {DSK}/usr/local/lde/fonts/interpress/jis1/▲".

Figure 16-13. System Prompting for New Font Directory to Search for InterPress Fonts

Enter the name of the new font directory. The moment you type the first character of the font directory name, the old name will be deleted and replaced with what you type. If you don't want to make any changes, strike the carriage return key. If you want to modify the name that is there, you can backspace over the name to erase part of it. If you type a carriage return without a printer name, this operation is aborted.

Note : For Sun machines, the directory name always starts with {DSK}; subdirectories in the path name are separated by slashes; and the directory path name must end in a slash (/).

Showing the Font Directories

To view a particular set of font directories, use the **Show Font Directories** submenu option (Figure 16-14).

Like **Add Font Directory**, this first brings up a menu asking you for the directory group you want to show.

Figure 16-14. **Show which directory group?** Menu

Once you have selected the directory group, the system pops up a window which displays the font directories in that group. You can close this window using the standard window-menu close option or the window will close of its own accord after about two minutes.



Figure 16-15. Window Showing List of Display Font Directories

Removing a Font Directory

If you make a mistake entering a font directory name or for some other reason want to remove a font directory, use the **Remove Font Directory** option shown in Figure 16-13.

Like the **Add Font Directory** option, this first brings up menu asking you for the directory group you want to modify (Figure 16-16).

Figure 16-16. **Remove from which directory group?** Menu

Once you have selected the directory group, the system pops up a menu of all the directories currently in that group (Figure 16-17).

Figure 16-17. **Remove which directory?** Menu

Select one of these options to delete that directory. Click outside the menu to abort this operation.

Troubleshooting Common Printer Problems

This section discusses some of the more common breaks which occur when your printers are not properly set up.

Can't determine IMAGETYPE for {LPT}

This break occurs when you do not have any printers specified on the default printer list, or if you have not specified the printer type.



Figure 16-18. Break Window indicating System Cannot Find a Valid Printer

Type an up-arrow to exit the break and make sure that the printer and its type are properly set.

You can get into this situation by choosing the hardcopy **To a printer** suboption off the standard window menu and then selecting the **Other...** option from the **Which Printer?** menu.

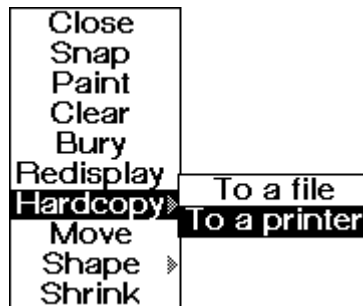


Figure 16-19. Standard Right Button Window Menu with Hardcopy **To a printer** Submenu Option Selected

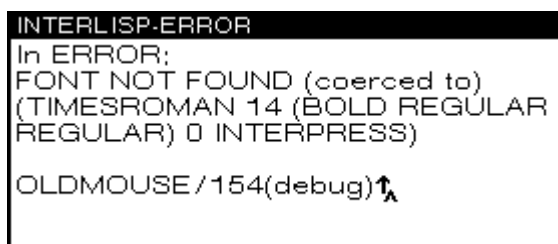


Figure 16-20. **Which printer?** Menu showing **Other...** Option Selected

The **Other...** option does not automatically prompt you for a printer type. Therefore, we recommend that you always add new printers using the background menu **Add Default Printer** submenu option.

Font not Found

This break occurs when you do not have one of your font directories set properly.



```

INTERLISP-ERROR
In ERROR:
FONT NOT FOUND (coerced to)
(TIMESROMAN 14 (BOLD REGULAR
REGULAR) 0 INTERPRESS)

OLDMOUSE/154(debug)↑

```

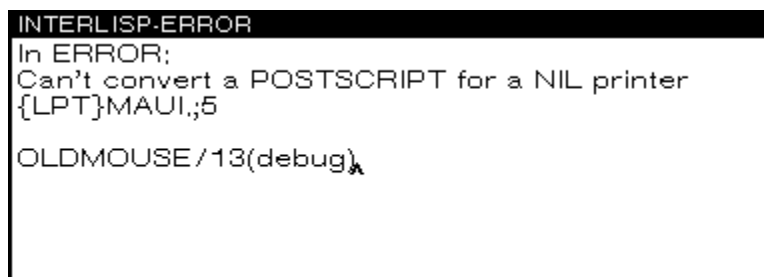
Figure 16-21. A break window indicating that the system cannot find the appropriate font.

In the example shown in Figure 16-21, the system was unable to find an InterPress font. Note that the font description contains the word InterPress. This implies that either there are no InterPress font directories set or that the given InterPress font directories do not contain that font.

Type an up-arrow to exit the break and make sure that the appropriate font directory is properly set. You can do this by selecting the **Show Font Directories** suboption off the **Set Default Printer** option on the background menu. If directories are not correctly set use the **Add Font Directory** and **Remove Font Directory** options to correct the errors.

Can't Convert a POSTSCRIPT for a NIL Printer

This break can occur if you have incorrectly typed the case of the printer name.



```

INTERLISP-ERROR
In ERROR:
Can't convert a POSTSCRIPT for a NIL printer
{LPT}MAUI,5

OLDMOUSE/13(debug)↵

```

Figure 16-22. Break Window Showing System Cannot Find Appropriate Printer

Type an up-arrow to exit the break and, if you have entered a printer name in lowercase, try entering the same name in uppercase by selecting the **Add Default Printer** option off the **Set Default Printer** submenu on the background menu.

Customizing Your PostScript Printer

The PostScript driver allows you to set a number of parameters to modify the output to suit your needs.

Portrait vs. Landscape

There are two terms used to describe how an image is printed on a piece of paper which you need to know.

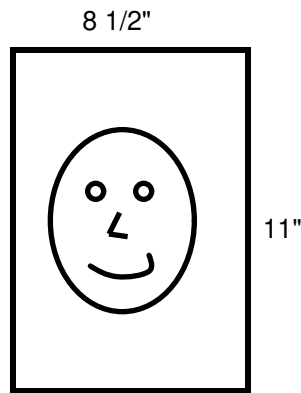


Figure 16-23. Portrait describes the way we normally hold a piece of paper

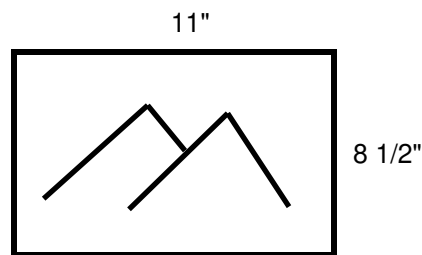


Figure 16-24. Landscape describes a piece of paper held on its side

Maximum Wild Font Size

Indicates the maximum point size that the system will indicate as available when looking for fonts.

The default value is 72.

Font Association Menu

Maps display font names onto PostScript font names. To change the mapping, click the left mouse button on a display font name in the left-hand column, then select a PostScript font from the a menu of PostScript fonts names which will appear.

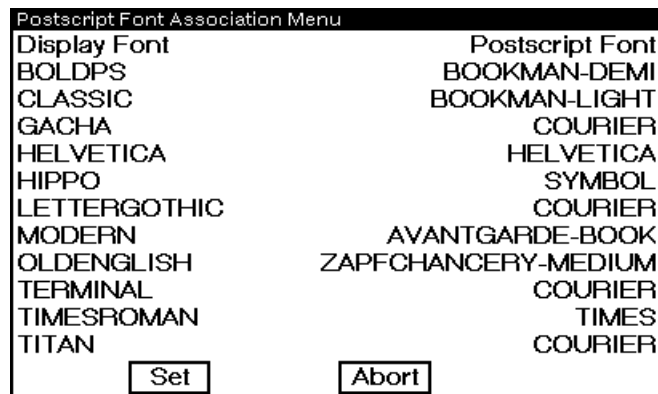


Figure 16-25. **PostScript Font Association** Menu showing the display fonts on the left and the PostScript printer fonts on the right.

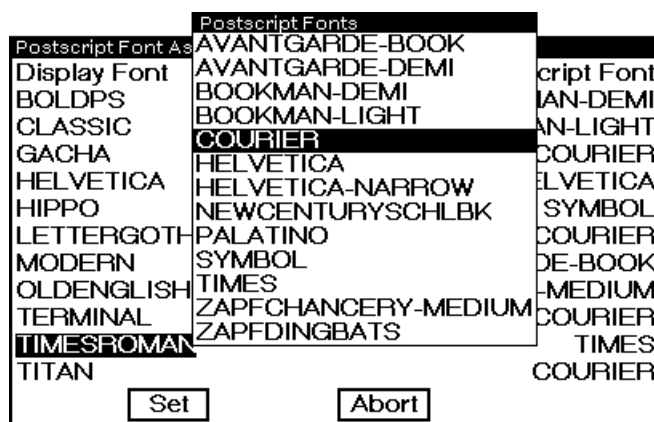


Figure 16-26. **PostScript Font Association** Menu with the **TIMESROMAN** display font selected and about to be set to correspond to the **COURIER** PostScript printer font.

PostScript Short Edge Shift

Is the distance (in points) to shift the image perpendicular to the short edge of the paper. A positive value gives a shift upward in portrait mode, and to the right in landscape mode. A negative value shifts the image down in portrait and to the left in landscaped mode.

The default value is 0.

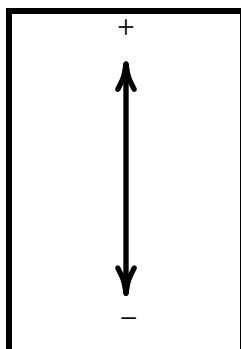


Figure 16-27. Short Edge Shift in Portrait Mode

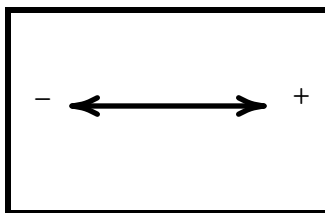


Figure 16-28. Short Edge Shift in Landscape Mode

PostScript Short Edge Points

Indicates the printable region of the page, in points, along the short edge of the paper. It should be adjusted to allow for any short edge shifts of the image.

The default value is 576 points or 8 inches.

PostScript Long Edge Shift

Is the corresponding variable for shifts perpendicular to the long edge of the paper. A positive value here gives a shift to the right in portrait mode and downward in landscape mode.

The default value is 0.

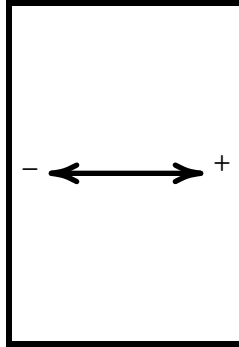


Figure 16-29. Long Edge Shift in Portrait Mode

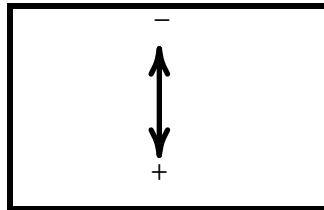


Figure 16-30. Long Edge Shift in Landscape Mode

PostScript Long Edge Points

Indicates the printable region of the page, in points, along the long edge of the paper. It should be adjusted to allow for any long edge shifts of the image.

The default value is 786.24 or 10.92 inches.

Note: The AST TurboLaser PS has an imageable area on the page which is a different size than that of the Apple LaserWriter. The values of **PostScript Short Edge Points** and **PostScript Long Edge Points** for the AST are 575.76 and 767.76, respectively.

Landscape Mode

Indicates whether the default orientation of output files is landscape.

The default value is No.

Landscape Text Mode

Indicates if the printing of text files should force the orientation of output files to landscape.

The default value is No.

Bitmap Scale

Specifies an independent scale factor for display of bitmap images, window hardcopies, for example. Values less than 1 reduce the image size, i.e., a value of 0.5 gives a half size bitmap image. The position of the scaled bitmap still has the same lower-left corner, i.e., the scaled bitmap is not centered in the region of the full size bitmap image.

The default value is 1.

Note: Setting bitmap scale to 0.96, instead of 1, will give cleaner bitmap images on a 300 dpi printer. This corrects for the 72 ppi imagestream vs. the 75 dpi printer, using 4x4 device dots per bitmap pixel. Also, values of 0.24, 0.48 and 0.72, instead of 0.25, 0.5 and 0.75, will also give cleaner images for reduced size output. In general, use integer multiples of 0.24 for a 300 dpi printer.

Texture Scale

Specifies an independent scale for the display of bit map textures. The value represents the number of printer bits per screen pixel. The default value is 4, which represents each pixel of the texture as a 4x4 block, so that textures are approximately the same resolution as on the screen for 300 dpi output devices, such as the Apple Laserwriter.

The PostScript package extends the allowed representations of a texture, beyond 16-bit integers and 16x16 bit maps, to any square bit map. (If the bit map is not square, its longer edge is truncated from the top or right to make it square.) Use this feature with caution, as large bit map textures, or sizes other than multiples of 16 bits square, require large amounts of storage in the PostScript interpreter, and can cause errors when printing.

Image Size Factor

Specifies an independent factor to change the overall size of the printed image. This resizing affects the entire printed output. Values greater than 1 enlarge the printed image, and values less than 1 reduce it. The **Bitmap Scale** parameter does not consider the **Image Size Factor** when determining the scale factor for a bit map.

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