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## **Defaults Button**

Choose the Defaults button to return all selections in the Options dialog box to their default values.

## **Graphics Mode**

Use the Graphics Mode setting to tell Windows how to send graphic information to the printer. HP LaserJet printers will print graphics as either bitmapped images or as HP-GL/2 graphic images. All graphics can be printed as bitmapped images, however some geometric shapes or patterns print faster if they are printed as HP-GL/2 graphics.

**To Change your Graphics Mode, select one of the following options in the Graphics Mode box:**

### **Raster**

When you select the Raster setting, Windows will send all graphics to the printer as bitmapped images.

### **HP-GL/2**

If you select the HP-GL/2 setting, Windows will send graphics to the printer as a mixture of HP-GL/2 and bitmapped images.

**NOTE: Not all graphic images can print using the HP-GL/2 and Bitmap setting. If you are using the HP-GL/2 and Bitmap setting, and your graphic images do not print like they appear on your computer screen or if your printer displays a print overrun error (error 21), select the Bitmap setting and reprint your graphic.**

# Graphics Quality

Use the Graphics Quality box to change the resolution of graphic images.

**NOTE: The Graphics Quality setting affects the resolution of graphic images only, not text. To change the resolution of text as well as graphic images, use the Printer Resolution box in the Setup dialog box.**

You can select one of three Graphics quality options. High quality is equal to the highest resolution that your printer prints at the current Printer Resolution. Medium quality is half that resolution and Low quality is one fourth that resolution.

High resolution will produce finer, higher quality graphics. The graphics resolution decreases as the Graphics Quality setting decreases. For example, if you have set your Printer Resolution setting to 600 dpi for the HP LaserJet 4 printer, the High setting will print text and graphics at 600 dpi, Medium will print text and graphics at 300 dpi, and Low will print them at 150 dpi.

## Graphics Quality Problems

### Printed Graphic Looks Different than Computer Graphic

Not all graphic images can print using the HP-GL/2 setting in the Graphics Mode box. If your printed image looks different than the image on the computer screen, change your Graphics Mode setting from HP-GL/2 to Raster.

### Related Topic:

[Graphics Mode](#)

### Out of Memory printer error (Error 20)

Additional printer memory may be required to print full-page graphic images at higher Graphics Quality settings. If the printer does not print the entire graphic image on one page and the printer displays an out of memory error (Error 20) the printer has run out of memory.

### To avoid this error:

- \* choose a lower setting in the Graphics Quality box.
- \* choose the HP-GL/2 setting in the Graphics Mode box.
- \* install more memory in your printer. (For more information about additional printer memory, contact your authorized Hewlett-Packard dealer).

### Print Overrun printer error (Error 21)

The Print Overrun message indicates that the data (rules, dense text, raster graphics, or

vector graphics) sent to your printer was too complex.

**To avoid this error:**

- \* make your page less complex by reducing the amount of dense text or the number of rules or graphic images.
- \* choose the Raster setting in the Graphics Mode box.

## Halftoning

Halftone refers to a type of pattern that is applied to printed images. By using combinations of black dots, these patterns produce a gray appearance on the printed page.

The best way to choose a Halftoning setting for your graphic image is to experiment. Print a graphic image at each setting and choose the one you like best.

**NOTE: In order to be able to use Halftoning options, you must select High in the Graphics Quality box.**

To help you decide which selection to choose, the three settings are described here:

### Photographic Images

Choose this setting for printed images that you want to have smooth, realistic and photographic appearance. The Photographic Images setting provides soft contrasts between various shades of gray. This setting also works well for images originally designed with color. The PCL 5 printer driver uses an 8 bit-by-8 bit "clustered dot" method to emulate 60 different levels of gray at this setting.

### Line Art Images

**NOTE: This option is not available if you have selected 600 dots per inch resolution in the Printer Resolution box in the Setup dialog box. If you have selected Line Art Images and you change your Printer Resolution to 300 dots per inch resolution, this options will automatically change to the Photographic Images setting.**

Choose this setting for graphic images with intricate lines and fine detail, like clip art graphics. The Line Art Images setting provides solid lines and sharp contrasts between shaded areas. The PCL 5 Printer Driver uses 32 different 8 bit-by-8 bit dispersed dot patterns to produce gray tones.

### HP ScanJet Images

Choose this setting if your graphic images were originally scanned in through an HP ScanJet. The HP ScanJet Images setting is specially tuned to provide exceptional quality and clarity to printed images originally scanned with an HP ScanJet. The PCL 5 Printer Driver uses a variation of the 8 bit-by-8 bit clustered dot method used in the Photographic Images setting. This method also produces 60 different levels of gray.

## **Print TrueType as Graphics**

Select this option to send your TrueType images to the printer as graphics. This option is useful if you want to print graphic images over text such that only the exposed portion of a character is printed.

**NOTE: This option is only available if you have selected the Raster setting in the Graphics Mode box and if you have selected the High setting in the Graphics Quality box.**

## **RET (Resolution Enhancement Technology)**

RET (Resolution Enhancement Technology) refines the print quality of characters and graphics by smoothing out jagged edges which can occur around angles and curves in the print image.

The RET option has five settings: Printer Default, Off, Light, Medium, and Dark. The default setting for the HP LaserJet 4 printer is Printer Default. This selection will use the RET selection that is made on your front panel. If you choose Off, Light, Medium, or Dark, this driver will override your printer default setting.

The effects of different RET settings can be seen by printing out a printer self test. Look for the block on the self test print out that is label RET. In general, set RET so that the RET block on the self test page is uniform with no vertical lines or with vertical lines that are dark.



## **HP LaserJet printers can print in portrait or landscape orientation.**

Select portrait orientation if you are printing a page that is taller than it is wide when you view the text upright.

Select landscape orientation if you are printing a page that is wider than it is tall when you view the text upright.

Refer to your printer user's manual or operator's guide for instructions about how to print a printer self test.