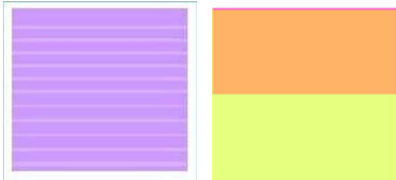


# How to interpret the image quality print

August, 2009



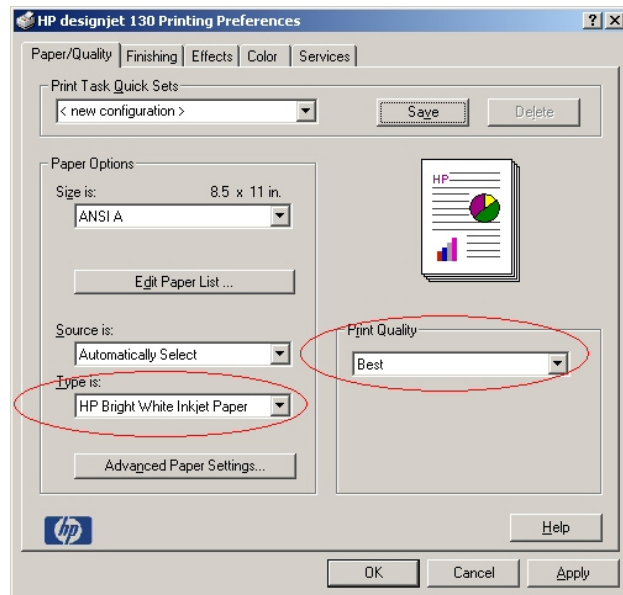
The image quality troubleshooting process is intended to resolve problems such as banding or shadows similar to the examples shown here:



If you are experiencing the type of image quality issue shown here, continue with the procedure

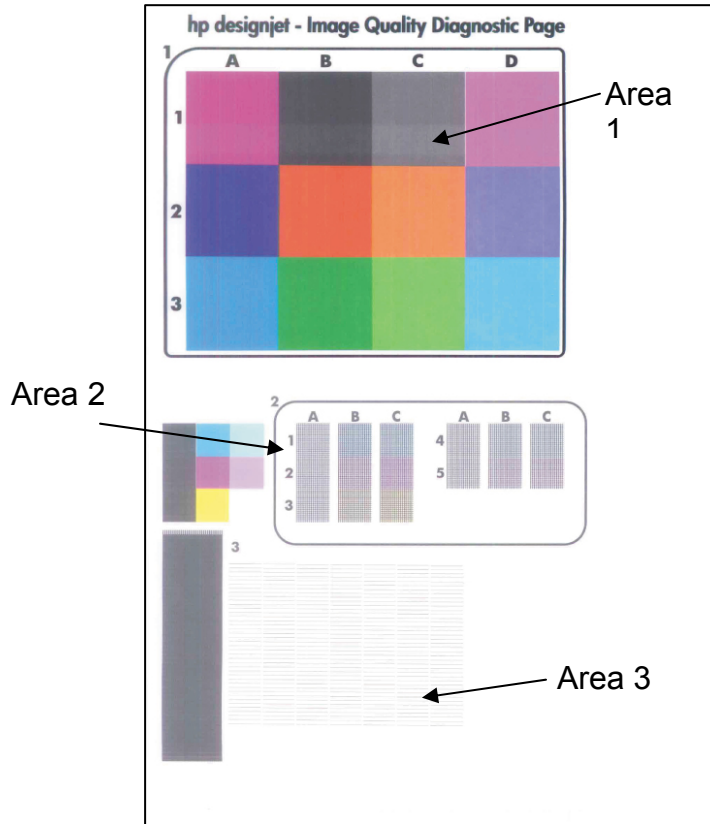
1. Check that the print quality settings are correctly chosen:

- Media "Type": Check that the paper type that you are using or the most similar to it is selected.
- Quality: Check that "Best" image quality is selected.



2. Print the Image Quality page and check the following areas:

- Area 1. Printhead health area
- Area 2. Printhead alignment area
- Area 3. Paper advance area



**For Area 1, check the following:**

1. If you see any white lines in Area 1, such as the example shown here, identify which printhead is failing.



For example, if the white lines can be seen in the colored boxes Magenta (A1), Magenta & Cyan (A2) and Yellow & Magenta (B2), this would indicate that the printhead causing the white lines is the Magenta printhead, as the white lines appear whenever the Magenta printhead is used to print a square.

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
<b>1</b>	<b>Magenta</b>	<b>Black</b>	<b>Black</b>	<b>Light Magenta</b>
<b>2</b>	<b>Magenta + Cyan</b>	<b>Yellow + Magenta</b>	<b>Yellow + Light Magenta</b>	<b>Light Magenta + Light Cyan</b>
<b>3</b>	<b>Cyan</b>	<b>Yellow + Cyan</b>	<b>Yellow + Light Cyan</b>	<b>Light Cyan</b>

HP Designjet  
30/130/120/90

	<b>A</b>	<b>B</b>	<b>C</b>
<b>1</b>	<b>Magenta</b>	<b>Black</b>	<b>Black</b>
<b>2</b>	<b>Magenta + Cyan</b>	<b>Magenta + Yellow</b>	<b>Yellow</b>
<b>3</b>	<b>Cyan</b>	<b>Cyan + Yellow</b>	<b>Yellow</b>

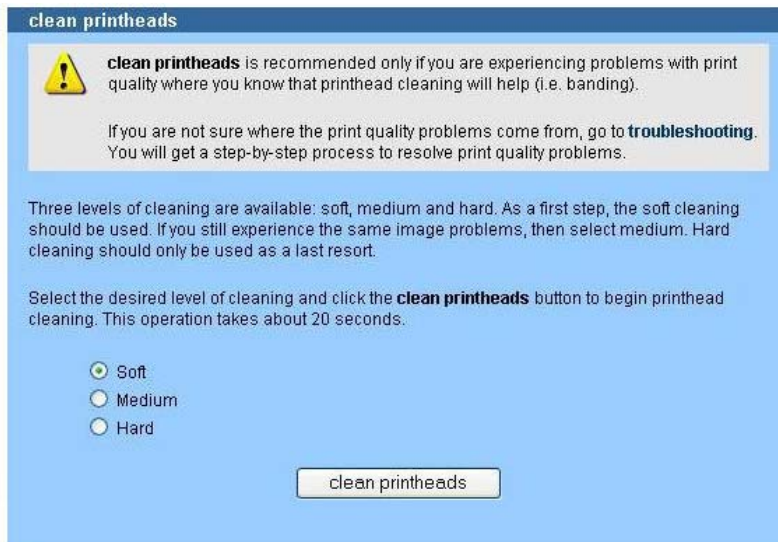
HP Designjet  
70/100/110/110  
plus

**Notes:** It should be noted that the colors shown here will differ from the printed colors on the diagnostic print.  
When printing the Image Quality print on Glossy paper, the black areas may look uneven due to the characteristics of the media. This is normal and no action is required.

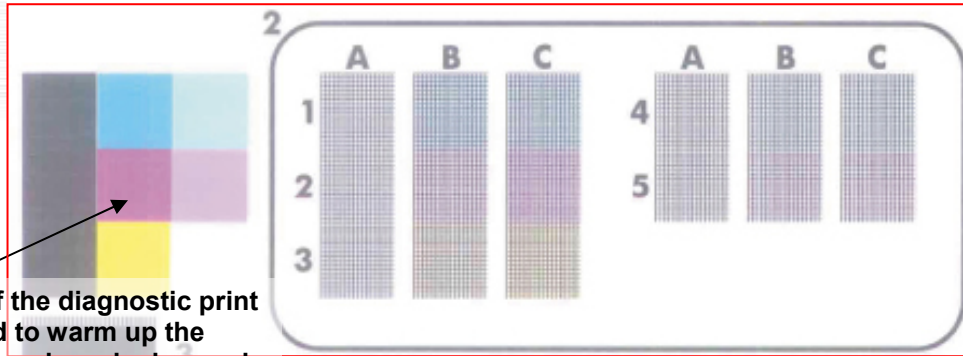
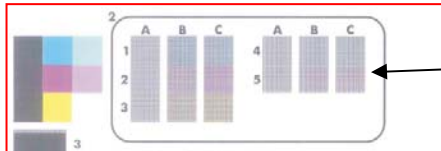
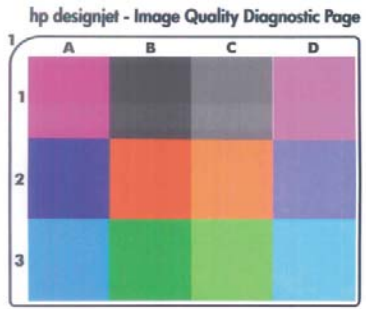
## Solution

Perform the following actions for the failing printhead. After each Printhead cleaning, print again the Image Quality print to check if the cleaning has fixed the error of the white lines:

1. Clean Printheads Soft.
2. Clean Printheads Medium.
3. Clean Printheads Hard.
4. If the lines can still be seen replace the Printhead.



For Area 2, check the following:



This area of the diagnostic print is only used to warm up the printheads, and can be ignored.

**No alignment is required**

If the middle graphic is correctly aligned, no Printhead Alignment is required

**Printhead alignment required**

If the middle graphic is not correctly aligned, a Printhead Alignment is required

If there is a error in area 2, this will show up as unexpected shadows, as shown here:




# Unexpected shadows

## Solution

Perform the Printhead Alignment procedure

**align printheads**

 **align printheads** is recommended only if you are experiencing problems with print quality where you know that proper printhead alignment will help (i.e. graininess).

If you are not sure where the print quality problems come from, go to **troubleshooting**. You will get a step-by-step process to resolve print quality problems.

Before you continue, make sure that you have at least 5 sheets of A4 or letter paper in the input tray. If the printhead alignment fails on the first attempt, the printer will retry the alignment twice.

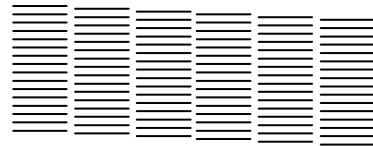
Click the **align printheads** button to begin printhead alignment. This operation takes about 5 minutes.

## For Area 3, check the following:

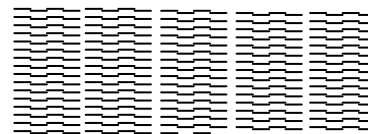
3. If you are experiencing a banding defect, check the results in Area 3:



Good paper advance



Bad paper advance



If you see a defect in Area 3, you might also see banding in all the color squares of area 1.

## Solution

If you are using non-HP media, perform a paper advance calibration. Select the option shown below 'Calibrate paper feed'.

The image shows two parts of the HP printer's web interface. On the left is the 'main menu' with the following options:

- » main menu
- web services
  - » HP instant support
  - » troubleshooting
- maintenance
  - » maintain printheads
  - » align printheads
  - » clean printheads
  - » **check image quality**
  - » **calibrate paper feed**
  - » advanced functions
- other links
  - » HP Designjet online
  - » help

An 'Exit' button is located at the bottom of the menu. On the right is the 'image quality diagnostic' screen, which displays the following information:

**image quality diagnostic**

The **image quality diagnostic** page has now been sent to the printer, which is printing it. The printer display shows an hourglass to indicate that it is busy until the operation has finished.

 Do not turn off the printer during this operation.

Do not perform other **System Maintenance** tasks or print jobs with the printer until this operation has finished.

If the banding persists, contact your HP support representative.

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