

Ink Cartridge and Print Head Maintenance Manual



Hewlett Packard

D135/145/155/175

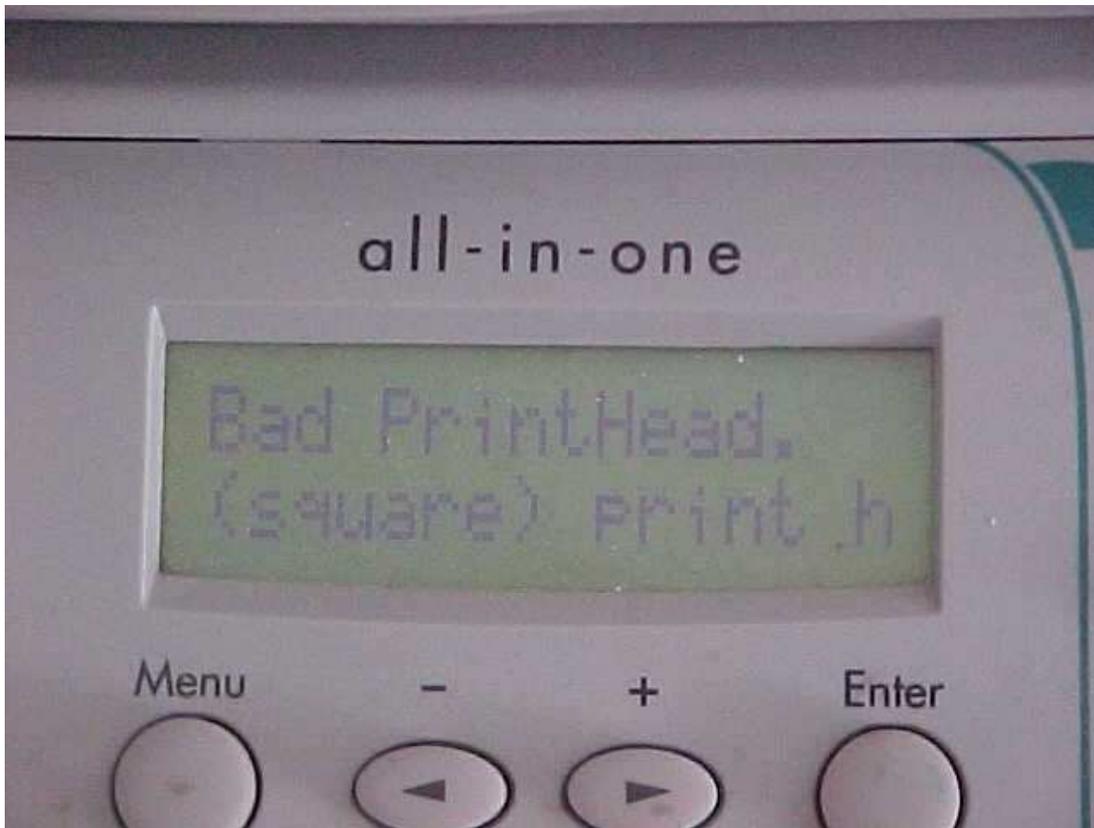
CP1160/Color Copier 610

And other printers with similar cartridge design.

Contents

Page	
3	Disclaimer
4	Before You Begin
5	Accessing Ink System
6	Removing Ink Cartridges
7	Refilling Ink Cartridges
8	Override Ink Level HP D Series
9	Override Ink Level HP CP1160
10	Removing Printheads
12	Printhead Cleaning
15	Clogged Printhead Repair
21	HP D Series Toolbox
25	3 Color Primer Page
26	4 Color Primer Page
27	Results

Disclaimer



This manual was formulated and written after years of personal experience owning HP D Series and HP 610 Color Copiers, with all known accessories. This manual is not supported by HP and methods herein may void HP warranty. Please refer any HP product under warranty to an authorized HP repair center. This manual is intended for informational purposes only. We claim no responsibility for any type of damage(s) as a result of using the instruction in this manual. If you chose to use the methods described herein, you are agreeing to do so at your own risk and hold the author harmless.

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Before You Begin

Before you begin you should prepare an area to work. Refilling ink cartridges and working on printheads will release ink. Caution should be taken to protect surrounding surfaces and to keep ink off your skin. Old towels, rags, paper towels, and latex gloves should be used. Ink will stain all surfaces and is very difficult to get off your skin. Use a bottle of Windex for final cleanup.



Accessing Ink System



To access the ink system you must open the front cover of the unit. There are no latches to release. Simply lift up on the door located above the paper tray.

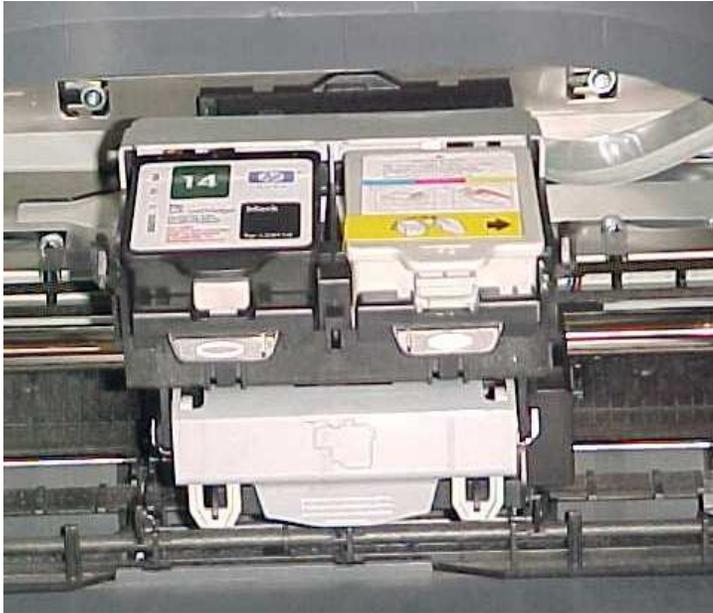
The door should open easily and lock into the open position.



Once opened the ink system will center itself. Once the ink system is accessible, unplug the power to the unit.

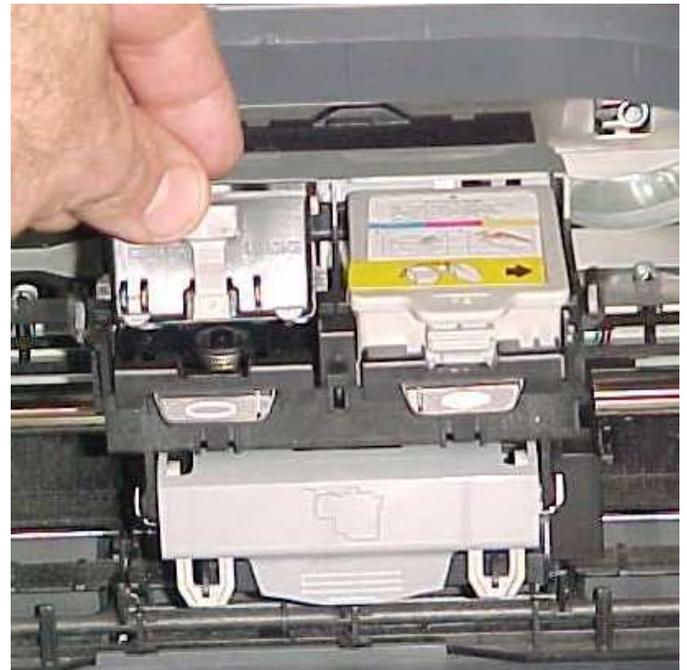


Removing Ink Cartridges

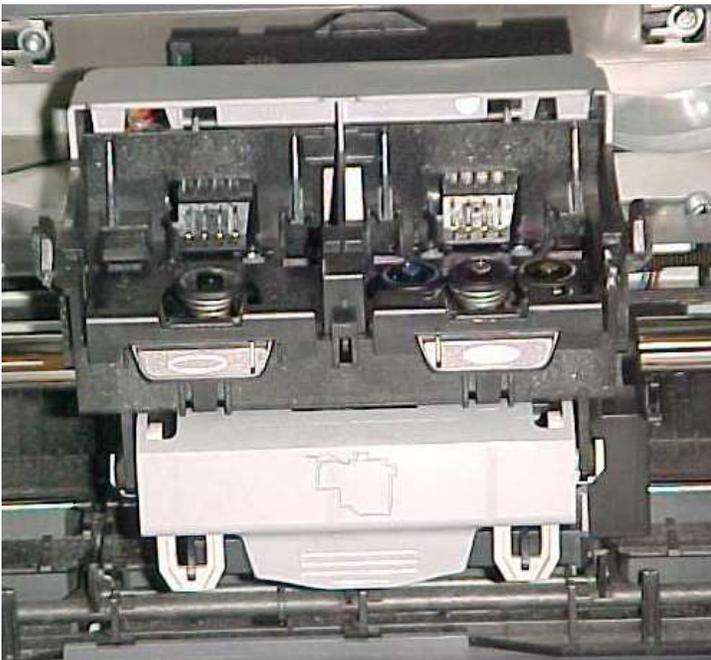


Black and color cartridges are located as shown in separate compartments.

Push the release tab and lift gently to remove the cartridges.

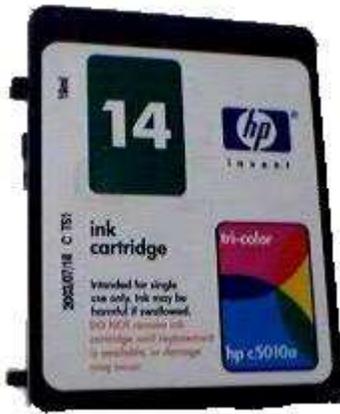


The inkwell system and contacts will be visible with the cartridges removed.



HP Cartridge #14

Refill Instructions for Black and Color cartridges.



Instructions

1. Put the cartridge on some paper towels in an area where you can tolerate a spill.
2. Seal the outlet hole(s) with the aluminum tape provided.
3. Fill the syringe with 10 ml. of black ink or 5 ml. of color ink. Push needle through the label into the sponge of the correct filling hole. On the color cartridge the inks from left to right are, CYAN - MAGENTA - YELLOW (You can double check the ink colors by looking at the outlet ports before putting on the tape)



4. Very S-L-O-W-L-Y inject ink into the sponge until the cartridge is full. A little ink might come out of the top when full, so cover up the other two holes while filling one.

5. When finished, seal the Filling Hole(s) made in the top label with tape. If the holes are not sealed properly the cartridge will leak.

6. **Important** - Next, remove the Tape from all exit port(s).

7. Replace the cartridge and run 1 - 3 cleaning cycles as per printer instructions.

Or print the primer pages.

If necessary leave cartridge in printer for up to 24 hours.

8) Check your printer's user manual about resetting the ink levels back to full. If your printer does not have this option of resetting the cartridge then you will need to deactivate the ink level monitor.

If you don't do this, once the cartridge reads empty (even though you refilled it) the printer will refuse to print. An alternate method of refilling if you are careful would be to leave the cartridge in the printer and to top off the colors (or black) very S-L-O-W-L-Y. Be sure to seal the filling hole(s) with tape after refilling.



Theory

The ink in this cartridge is retained because the cartridge has an internal sponge.

For best results, never leave your HP printer without an installed cartridge -- even an empty one -- for more than an hour or so, because the ink -- the original or our refill ink -- will begin to gel to the consistency of honey, which will require multiple cleaning routines to clear.

If the cartridge does not print the most likely problem is that you have an air bubble in the exit tube of your cartridge. Remember that the absence of ink is the same as an air bubble.

What is happening is that a small air bubble expands under the vacuum of printing to form a large air bubble, which blocks the flow of ink to the printhead. This problem usually occurs after printing 1 or 2 good pages.

To clear the problem, you may wish to let the printer sit without printing for several minutes, while tapping on the top of the cartridge. This may get the air bubble to move to the top of the cartridge. It may not.

Another idea is to remove the cartridge and try again. Also, try putting a single drop of ink directly into the cartridge outlet port. But be very careful not to spill the ink!

A Refill Kit should include Ink plus the following:

One 10cc Syringe for Black

Three 10cc Syringes for Color.

Aluminum Tape

Overriding the ink level gauge in the HP D135 / D155 using the HP14 cartridge

Overriding the ink level gauge disables the printer's ink level tracking feature.

Caution! If you use the override sequence described below, you will disable the ink level gauge for your ink cartridge. If you choose to continue printing with an ink cartridge that has had its ink level gauge disabled, you may not know when the cartridge is running low or empty.

The ink level gauge automatically resets when a different ink cartridge is installed in the printer.

Overriding the ink level gauge does not affect ink cartridge expiration dates. The printer cannot use an expired ink cartridge.

Follow these steps to override the ink level gauge:

If you installed a black ink cartridge

1. Press  and  at the same time, then release.
2. On the keyboard, press in a fast sequence, 7, 8, 9.
3. When the prompt appears asking if you want to override the ink level gauge, press 1 for Yes, or 2 for No.

If you installed a tri-color ink cartridge

1. Press  and  at the same time, then release.
- 2.
3. On the keyboard, press in a fast sequence, 4, 5, 6.
- 4.
5. When the prompt appears asking if you want to override the ink level gauge, press 1 for Yes, or 2 for No.

Always install an ink cartridge before performing an ink lever gauge override.

To restore Factory Defaults:

You can restore the original factory settings to what they were when you purchased your HP OfficeJet. Choosing to restore you factory defaults restores all settings, except copy settings, speed-dial entries, date, and fax header information.

You can perform this process from the front panel only.

1. - Press Menu.
2. - Press 7, then 5.
This selects the Status and Maintenance menu, then selects the Restore Factory Defaults option. The factory default settings are restored.

Overriding the ink level gauge in the HP CP1160 using the HP14 cartridge

Overriding the ink level gauge disables the printer's ink level tracking feature.

Caution! If you use the override sequence described below, you will disable the ink level gauge for your ink cartridge. If you choose to continue printing with an ink cartridge that has had its ink level gauge disabled, you may not know when the cartridge is running low or empty.

The ink level gauge automatically resets when a different ink cartridge is installed in the printer.

Overriding the ink level gauge does not affect ink cartridge expiration dates. The printer cannot use an expired ink cartridge.

Follow these steps to override the ink level gauge:

If you installed a black ink cartridge

1. Press and hold down the **Power** button.
2. While holding down the **Power** button:
Press the **Cancel** button twelve times
Press the **Resume** button once.
3. Release the **Power** button.

If you installed a tri-color ink cartridge

1. Press and hold down the **Power** button.
- 2.
3. While holding down the **Power** button: Press the **Cancel** button twelve times Press the **Resume** button three times.
- 4.
5. Release the **Power** button

Always install an ink cartridge before performing an ink lever gauge override.

To restore Factory Settings

using the printer properties dialog box

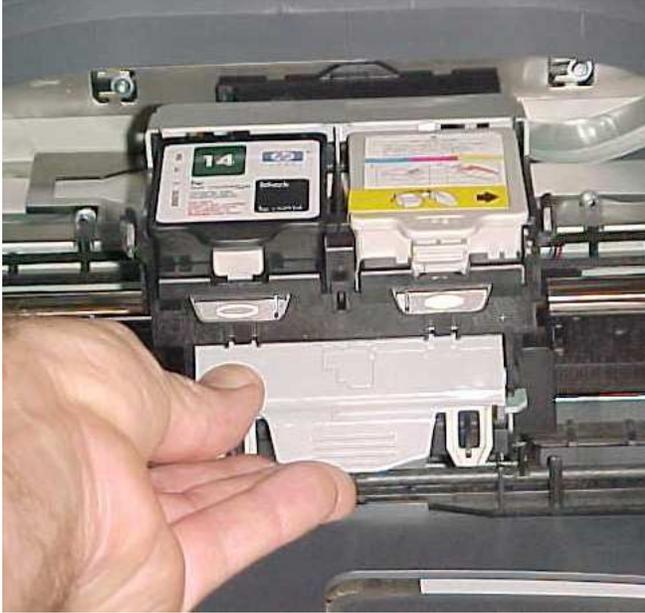
The Printer Properties dialog box has several tools to make it easy to use.



1. **Tabs:** Click a tab to see its contents. To see a description of a specific tab, see [setup](#), [features](#), [color](#), or [services](#).
2. **Preview:** Shows how changes to the print settings affect the document.
3. **Buttons:**
 - **OK:** Saves and applies settings.
 - **Cancel:** Closes dialog box without saving new settings.
 - **Help:** Opens online help.
 - **Factory Settings:** Restores default print settings.

The Printer Properties dialog box may display an **Apply** button. The **Apply** button saves changes to settings without closing the dialog box.

Removing Printheads

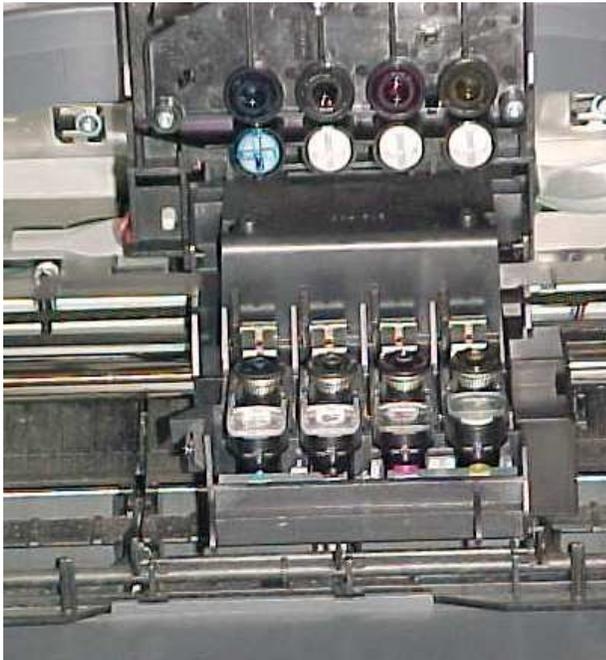


Release the locking tabs and pull towards you to release the mechanism.

Release the tension bar between the ink cartridges and the printheads located underneath.



Once opened, the printheads will be accessible for removal.



Removing Printheads



Lift the tab on the front of the printhead to remove.

Pull straight up on the tab to release the printhead. You will feel it unlock from the carriage.



Gently remove the printhead from the carriage for service.



Printhead Cleaning

Printhead cleaning is recommended before replacing your printheads. If you are experiencing streaking or no color when printing, this may help elevate the problem. This is for simple cleaning only. If this method does not work, then see Clogged Printhead Repair. These methods work on all 4 printheads.



Place a paper towel in the bottom of a bowl and cover the bottom with warm water. Place the bottom of the printhead in the water for several minutes. Dry completely and test the printhead .

If more extensive cleaning is needed, place printhead in a bowl of warm water.



Soak entire printhead in water for several minutes. Small amounts of ink will seep out of the printhead.



Printhead Cleaning



Remove the printhead from the water after several minutes.

Dry the printhead completely with paper towels.



Clean and wipe all areas of the printhead. Do not worry about touching the contacts.



Printhead Cleaning



Lightly tap the top of the printhead on a small pad of paper towels. HP !4's have a spring release at the top for ink flow.

Wipe the contacts on the side of the cartridge until they are clean and dry.



Smear the bottom the printhead across paper towels to clean access from the ink dispenser. Some dripping may occur. Repeat until dripping stops and contacts are clean and dry. Let stand a few minutes then replace printhead in printer and test.



Clogged Printhead Repair

Clogged printhead repair should be performed if lesser methods are unsuccessful. **WARNING:** You will need an **ink refill kit** to perform this repair. Considerable ink will seep out of the printhead during this repair. Use latex gloves to protect your skin from ink stains.



These methods work on all 4 printheads.

First, remove the round piece from the printhead. Pry gently in several places with a small flat screwdriver.

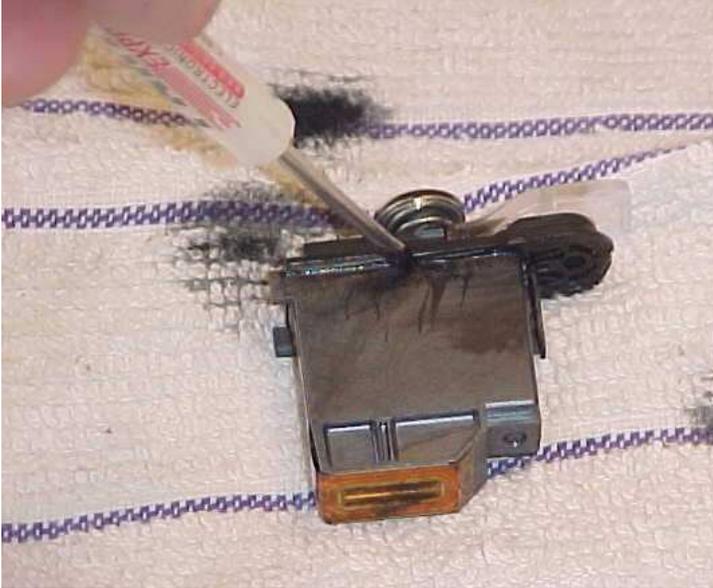
Unseat the piece from the top of the printhead as shown to the right.



Once loose, the piece should slide easily off the printhead.



Clogged Printhead Repair



Use the screwdriver to release the top of the printhead. There is a small channel at the top of the printhead where these pieces fit together. Be very careful not to break the printhead.

Pry gently in several places all around the top of the printhead.



Place the screwdriver in front where the round piece was and pry to make the final separation



Clogged Printhead Repair



Once the top of the printhead is loose, gently pry the top piece apart from the tank.

Be careful not to break the square rubber seal between the two pieces



Now the top is free, the two pieces should pull apart easily.

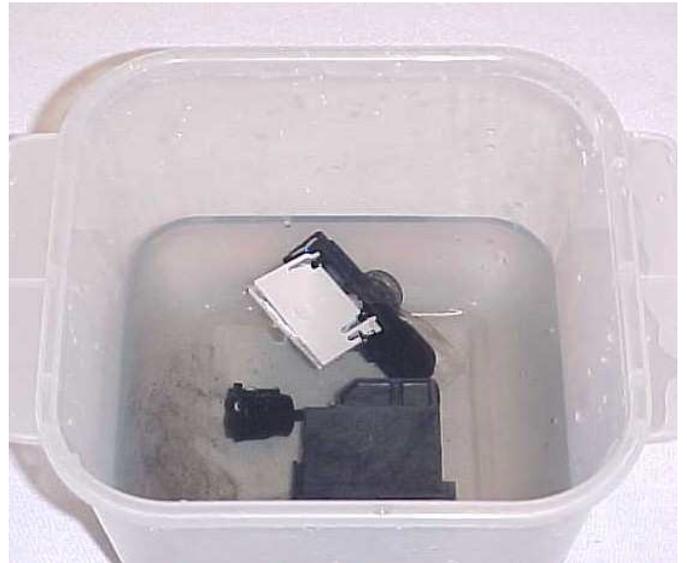


Clogged Printhead Repair



Separate the pieces completely, and place in a bowl of warm water.

Soak all pieces of the printhead in warm water for several minutes.



You will see a considerable amount of ink in the water as it is softened, and flows from the printhead pieces.



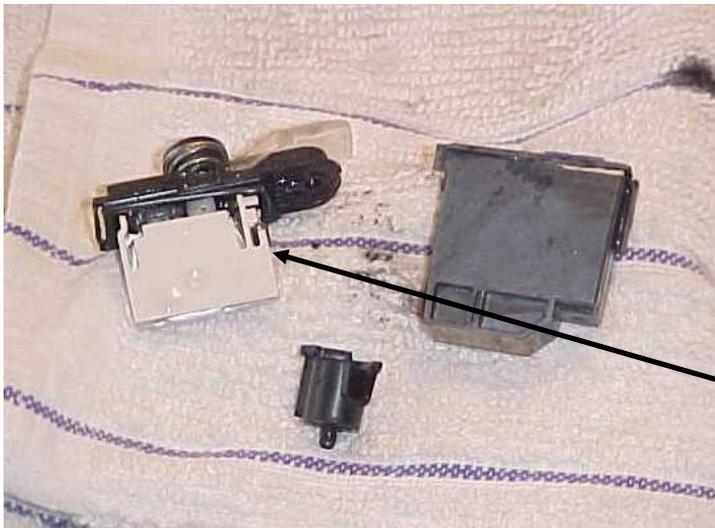
Clogged Printhead Repair

CAUTION: This step will leak a great deal of ink!! It is recommended to be performed in and old sink or tub. Ink is water soluble but will stain surrounding surfaces if allowed to dry.



There is a small sponge in the bottom of the printhead. In order to completely clean it, the tank should be rinsed thoroughly after soaking. Run warm water in the open top of the tank. **MUCH INK** will run out during rinsing. It may take several minutes to clear.

Completely clean and rinse all 4 pieces: round piece, top, tank, and seal.



Pat dry all pieces and lay out for reassembly.

Be careful not to lose the spring in the top piece.

Clogged Printhead Repair



Using your thumb and fore-fingers carefully pry the pieces back together until they seal. Ink may seep from the bottom for several minutes.

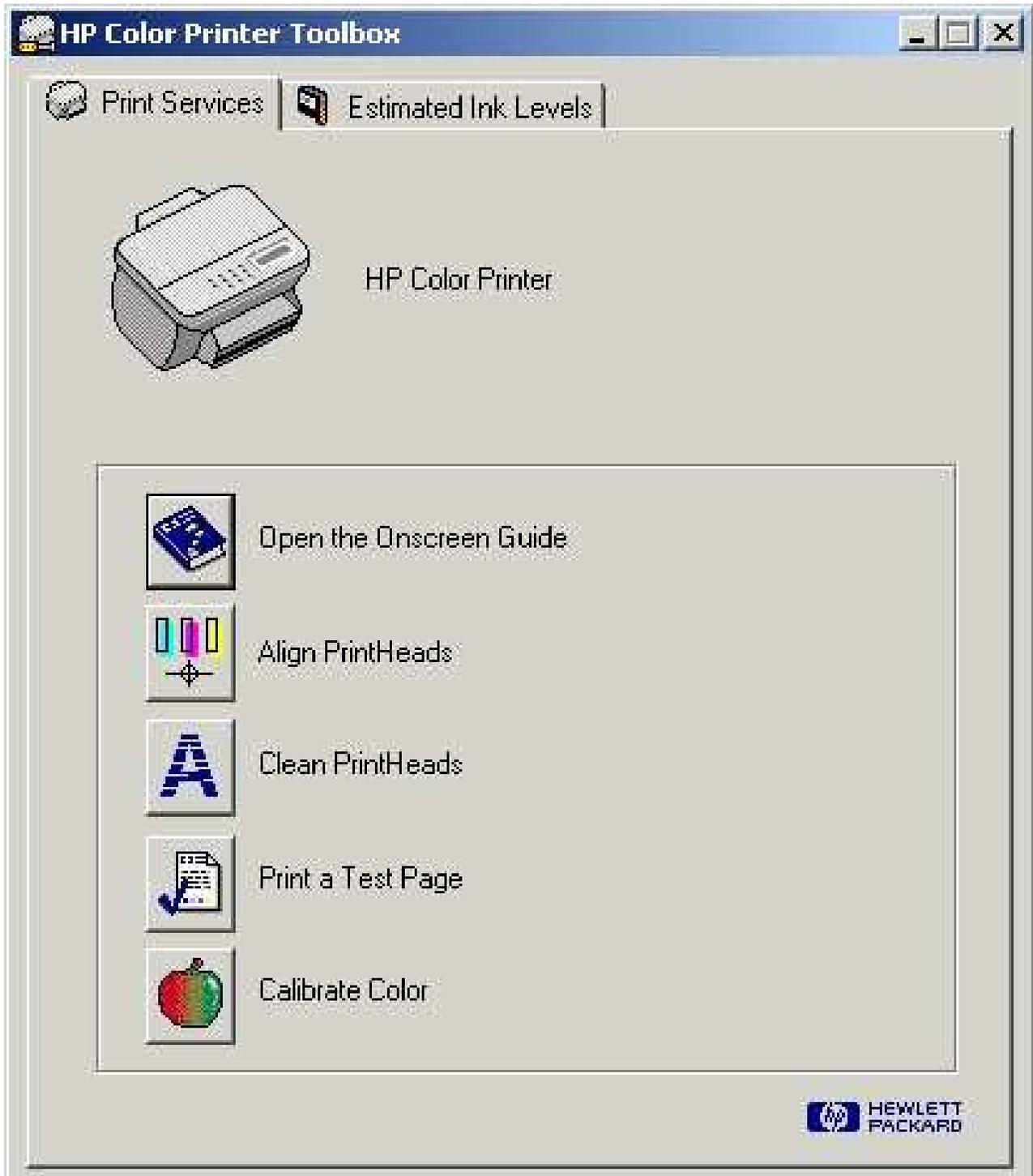
Using your ink refill kit, place approximately 6ML of ink back into the tank. Be careful not to spill it when placing the top piece in the tank. Make sure the seal is in its track between the two pieces.



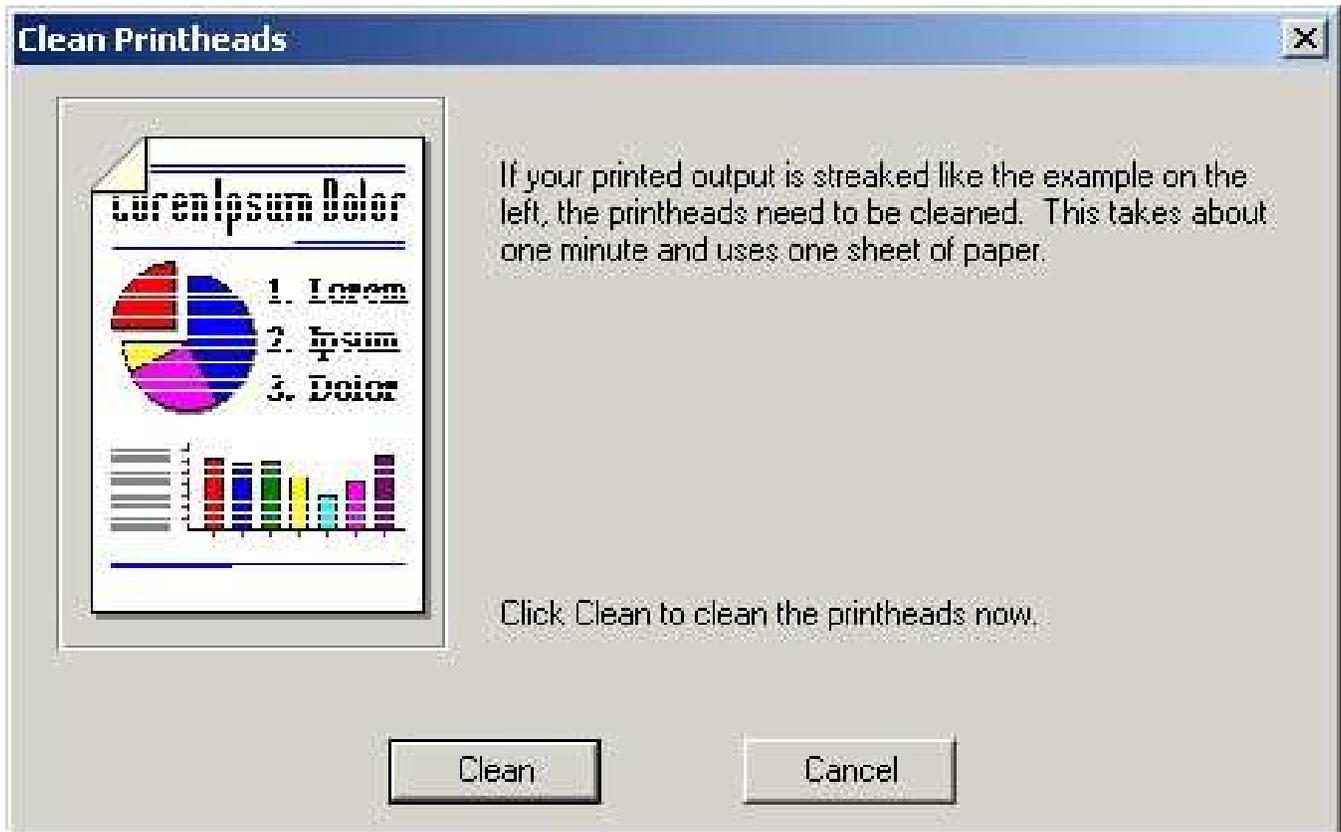
Thoroughly clean off the printhead including the contacts, and the bottom where the ink comes out. Replace the round piece, it should snap into place. Let the printhead set for several minutes. The ink should stop flowing out of the bottom. Clean and replace the printhead in the printer and test. It may take several pages to clear and function properly.

HP Toolbox

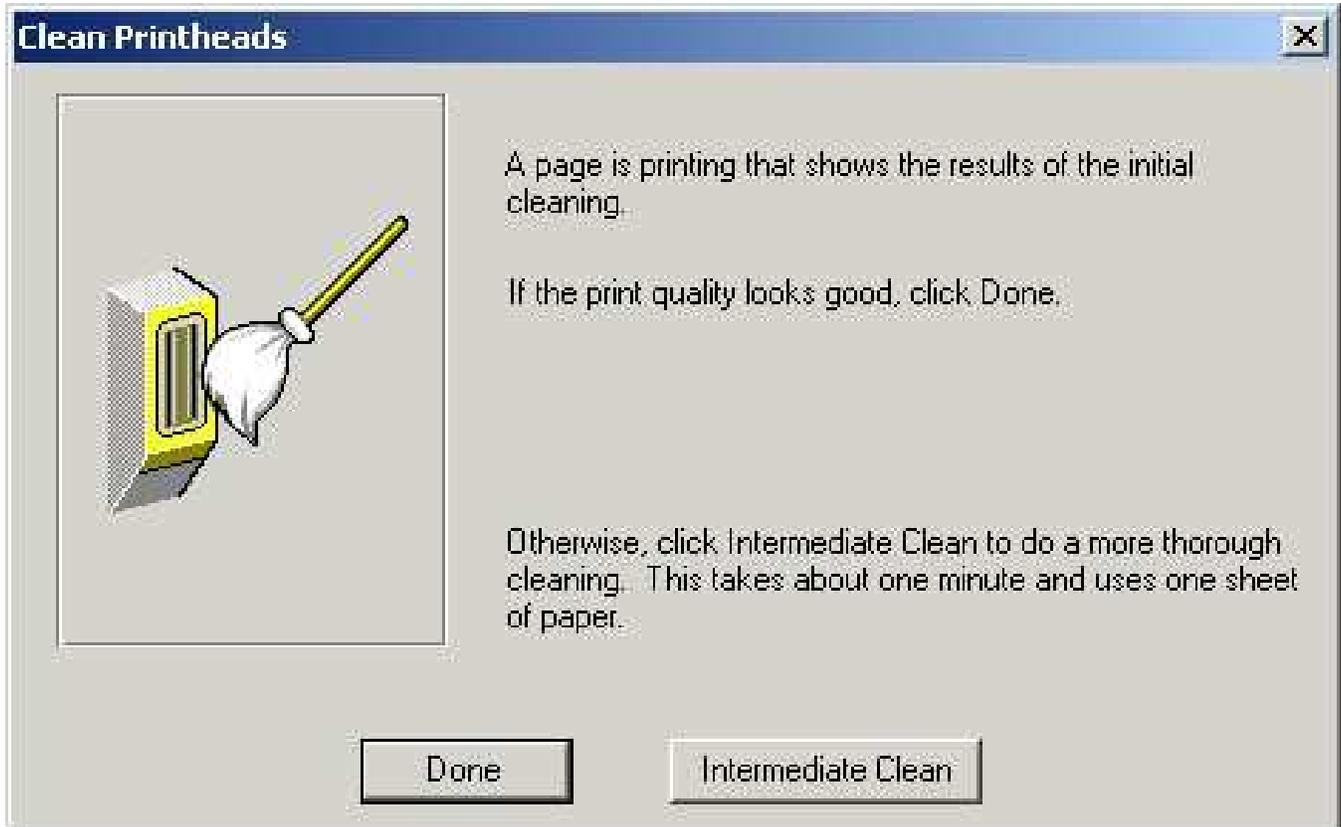
Performing the following functions from your HP toolbox is recommended after changing printheads or cartridges. Simply go to "Start" and "Hewlett Packard" and into your toolbox. Follow the on screen instructions for regular maintenance. Primer pages are included in the back of this manual.



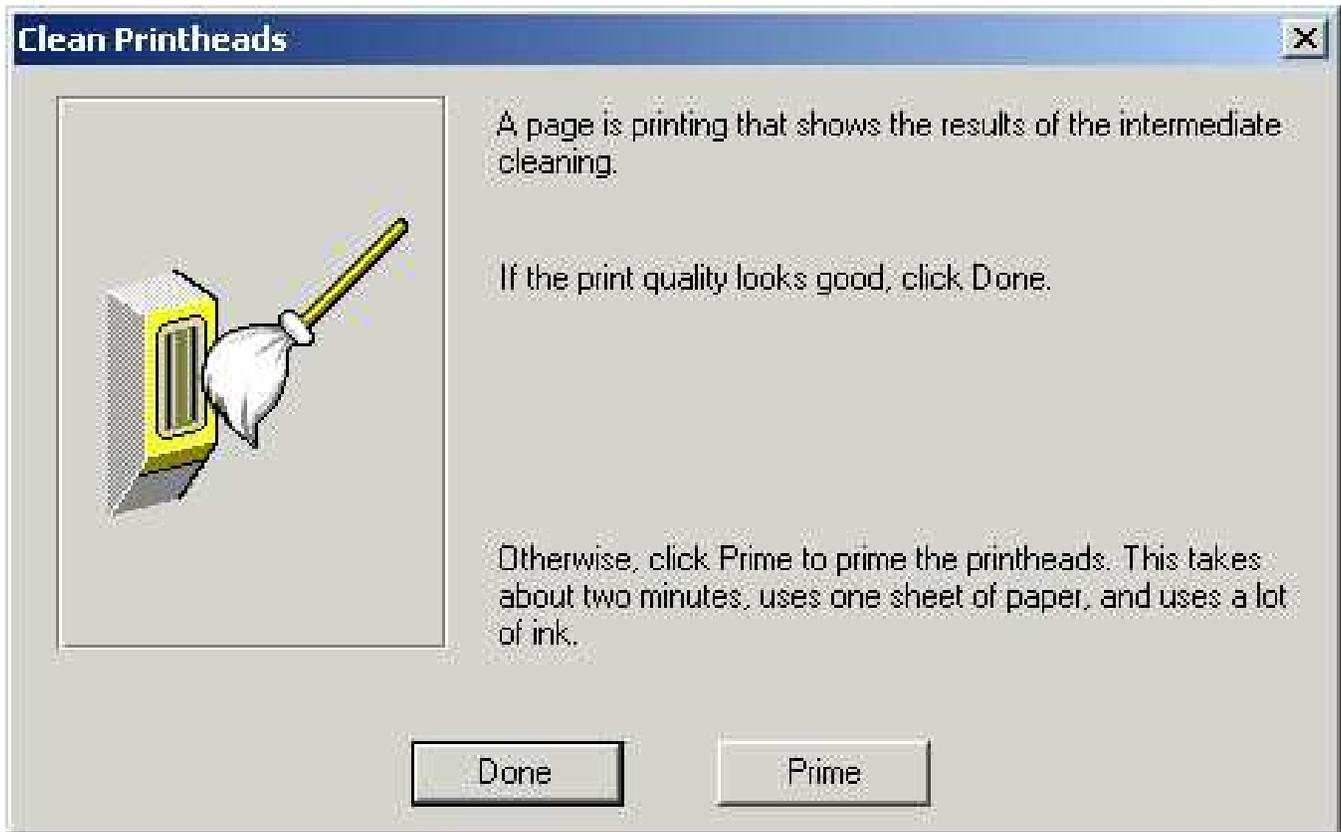
Basic Printhead Cleaning



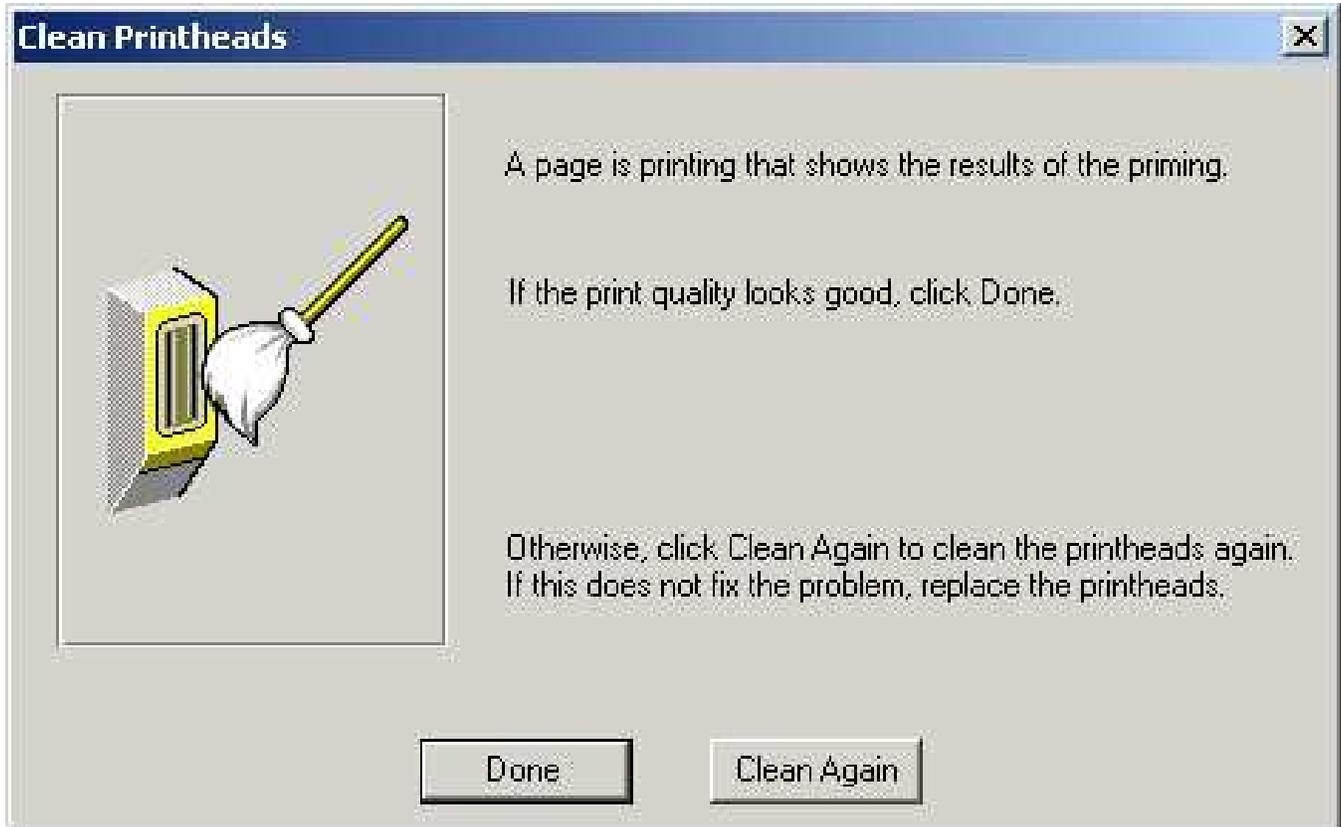
Intermediate Printhead Cleaning



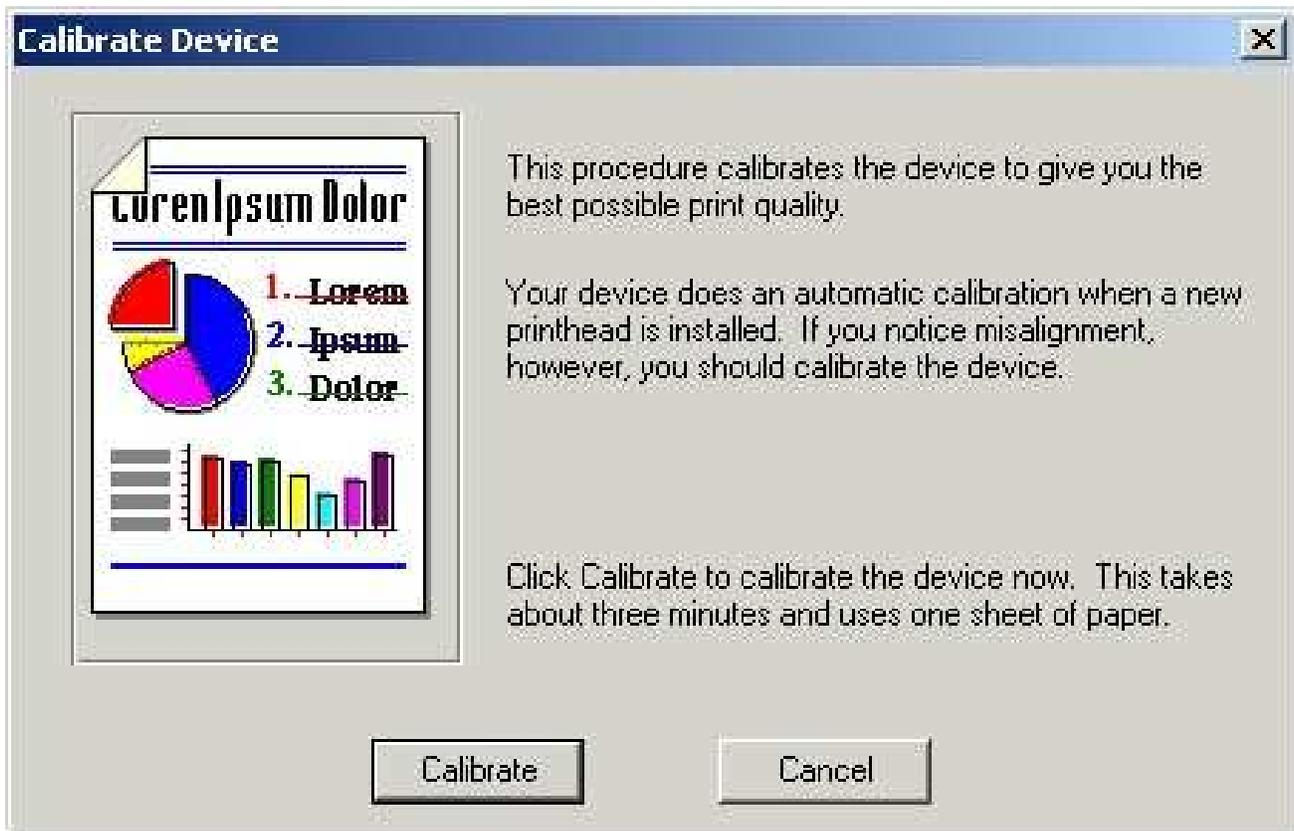
Printhead Ink Priming



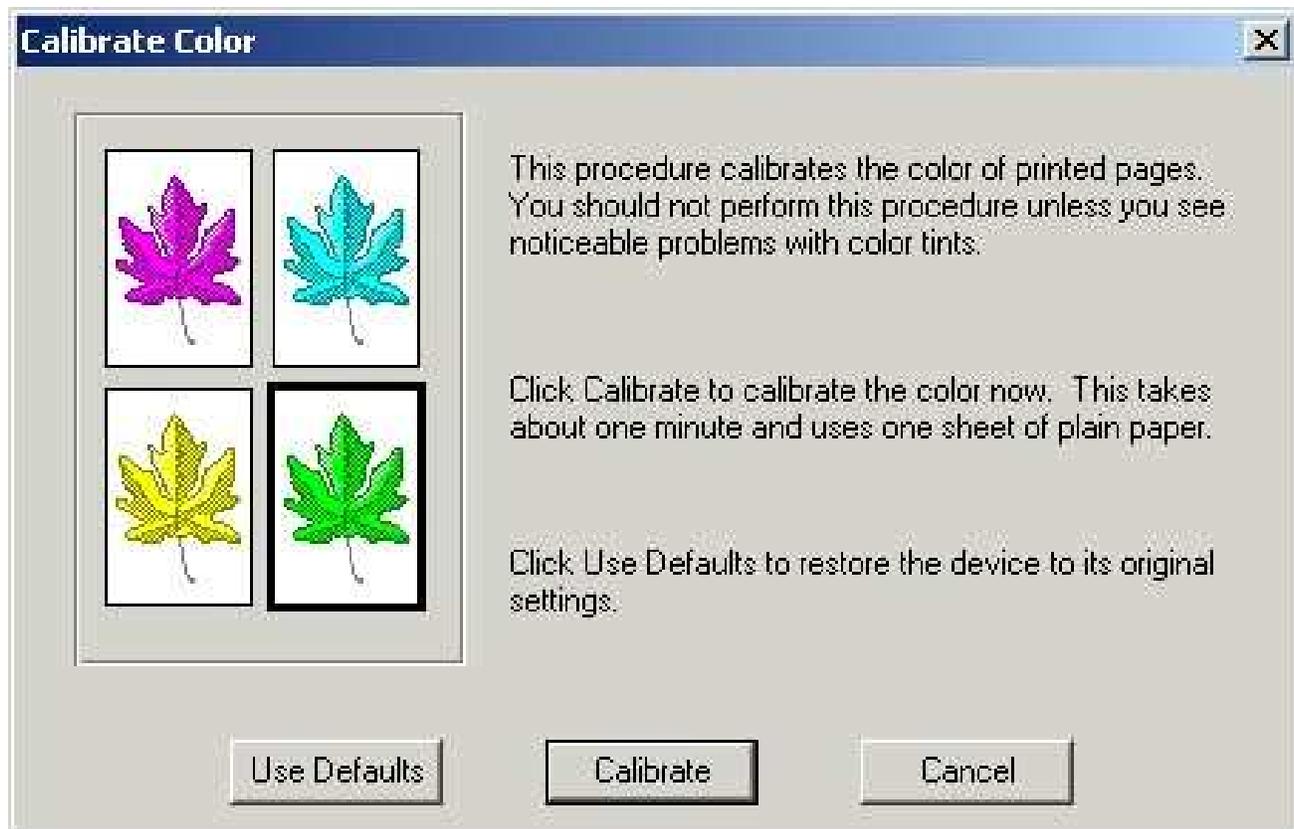
Repeat Process



Device Calibration



Color Calibration

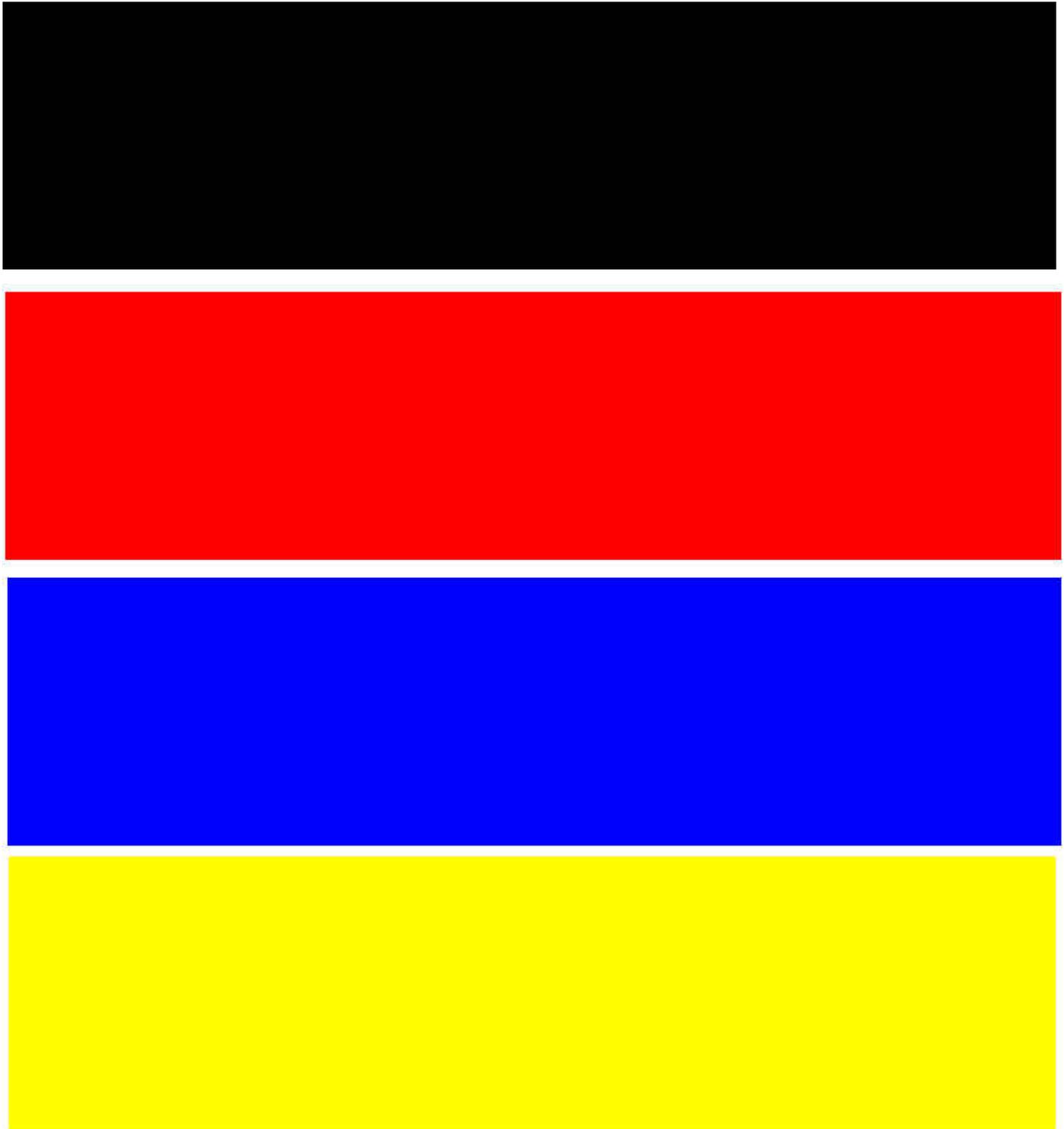


3 Color Primer Page



This should get the Color flowing out of your cartridge

CYMK 4 Color Primer

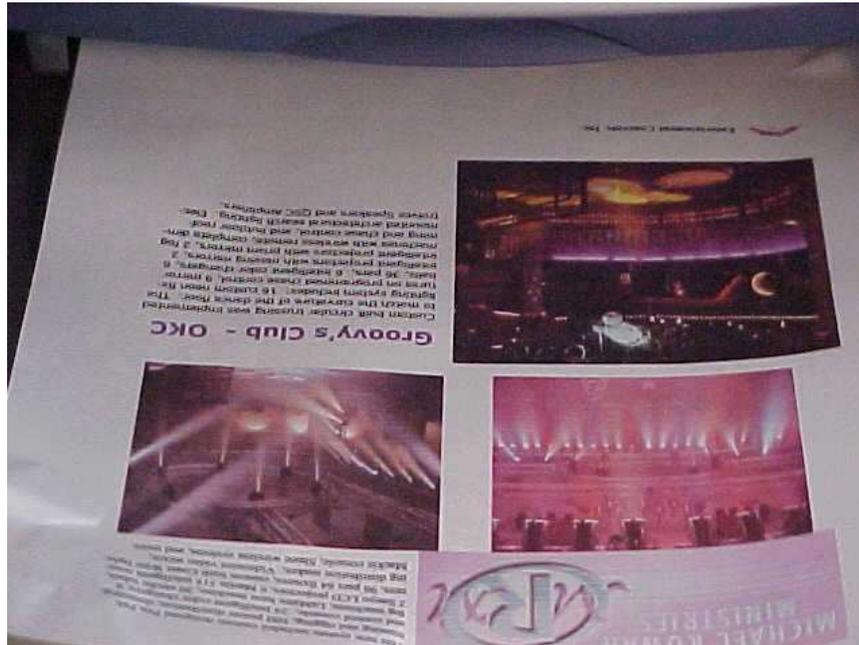


This should get the Color flowing out of your cartridge well

Results

Example of our results using the instructions in this manual. We use after market tanks that have been refilled.

Before - No blue (Cyan) is present after several cleanings and calibrations. Tank was refilled but printhead is clogged.



After - Blue (Cyan) was restored with Clogged Printhead Repair

