
Service Calibrations

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Service Calibrations

The following is a list of all internal service calibrations available in the Printers. Instructions for entering the service calibrations menu are given on Page 5-3.

1 Printhead Alignment ⇒ Page 5-5

The purpose of this Service Calibration is to correct the alignment between the Printheads. This calibration is necessary in order to prevent color misalignment and print quality defects like banding.

2 Color Calibration ⇒ Page 5-7

The purpose of this Calibration is to calibrate the ink system for the specific media loaded into the Printer. The Printer stores the calibration data for each type of media that has been calibrated since the Printer was switched ON. If the Printer is switched OFF, it will only store the last calibration done.

3 Advance Calibration ⇒ Page 5-9

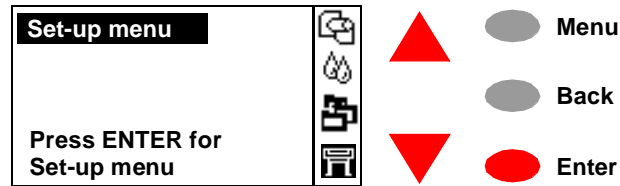
The purpose of this Service Calibration is to calibrate the nominal advance of the media. This calibration is necessary to control the exact movement on the media type that will be used (upto 2) in order to avoid print quality problems like banding.

4 Factory Advance Calibration ⇒ Page 5-11

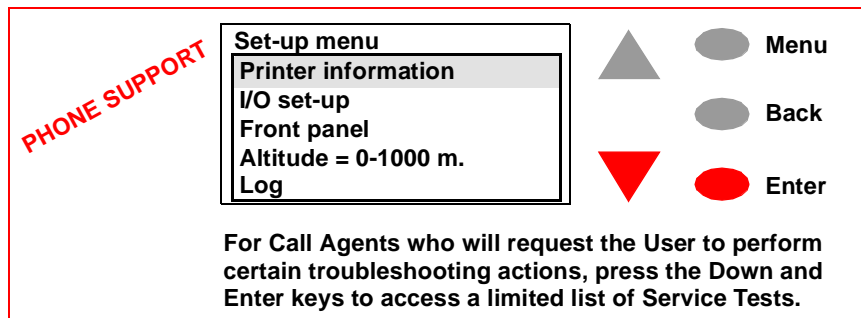
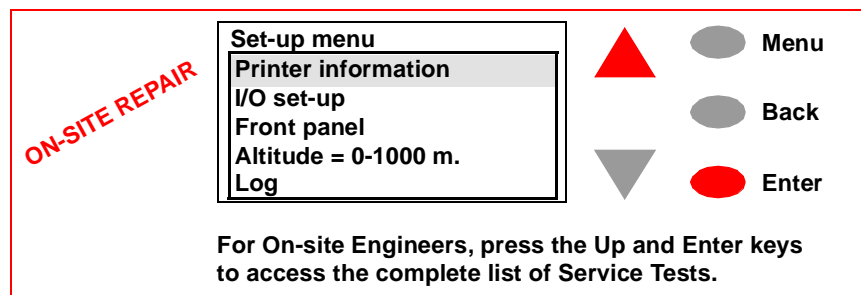
The purpose of this Service Calibration is to calibrate the nominal advance of the media. This calibration is necessary to control the exact movement of the media in order to avoid print quality problems like banding. The values from the Calibration will then be stored in the EEROM and the user can restore the Printer to these values by selecting "Restore factory" in the Advance Calibration menu.

Entering the Service Calibrations Menu

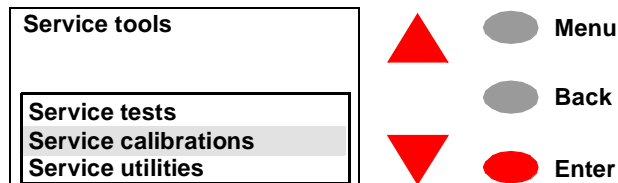
- 1 Press the ↑ or ↓ key until the front panel displays the Set-up Menu and then press **Enter**.



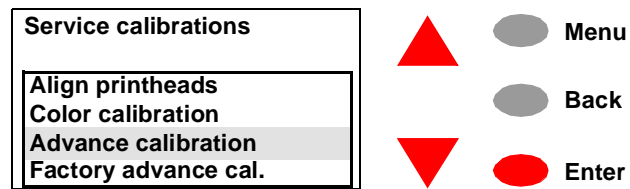
- 2 Once inside the Setup Menu, Press the following key combination to access the special Service Menu.



- 3 Once inside the Service Tools Menu, press the ↑ or ↓ key until the front panel displays **Service calibrations** and then press **Enter**.



- 4 Press the **Enter** key to begin a specific calibration when the required Service Calibration is highlighted.



Printhead Alignment (includes PPS Calibration)

The purpose of the Printhead Alignment is to correct the alignment between the Printheads in order to prevent color misalignment and print quality defects like banding. Normally the Printhead Alignment is performed automatically whenever the printheads are replaced.

The Printhead Alignment also contains the Pen to Paper Spacing (PPS) Calibration which is used to solve Vertical Line Straightness (VLS) problems. During normal operation, the PPS calibration **will not** be performed automatically whenever the Printheads are replaced, even though the Printhead Alignment will be performed automatically.

There are two options available when performing the Printhead Alignment:

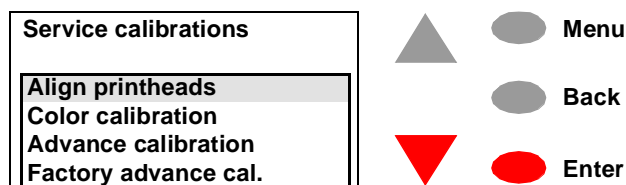
- **Standard** - Use this when **only** the Printheads need to be aligned. This Alignment normally takes about 4½ minutes to be completed and requires media of at least **A4/Letter**-size (loaded in landscape).
- **Special** - Use this when VLS problems have been detected when printing line drawings on wide media (36" to 42") in Fast Mode. Using this option the Printer will perform both the regular Printhead Alignment and the PPS Calibration. This Alignment normally takes about 11 minutes and requires media of at least **A3/B**-size (loaded in landscape).

Perform the Printhead Alignment as follows:

WARNING

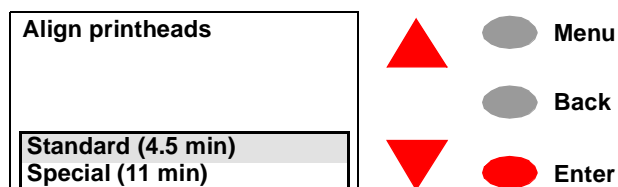
Make sure you use HP Bright White InkJet Paper (Bond), HP Coated Paper, HP Heavy Coated Paper, HP High-Gloss Paper, HP Satin Paper or Plain Paper. If you try to use any other type of Paper the Printer will not allow you to perform the Alignment.

- 1 In the Service Calibrations submenu, scroll to "Align printheads" and press **Enter**.

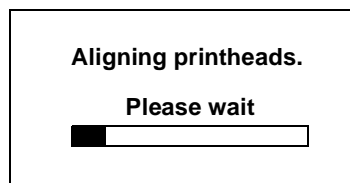


- 2 The following message will appear asking you if you want to perform the **Standard** alignment or the **Special** alignment. Select

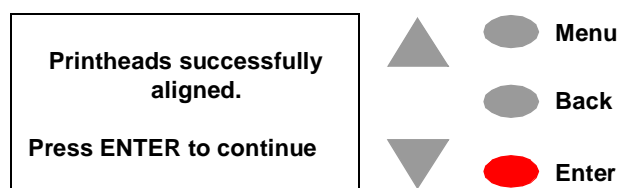
the alignment you want to perform and then press **Enter**.



- 3 The Printer will start to print the alignment pattern and the following message will be displayed on the front panel:



- 4 Once the Printhead Alignment is completed, the following message will be displayed on the front panel:



- 5 If the calibration fails due to poor Print Quality it will try and recover the Printheads and retry the Printhead Alignment. *If the Calibration continues to fail due to Printhead problems, the Printer will mark the failing Printheads (but they will still be usable).*

Color Calibration

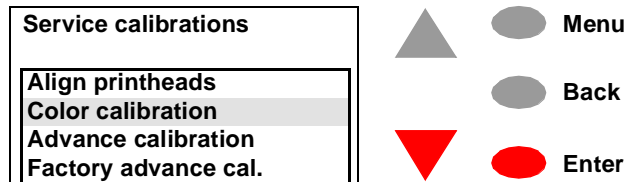
The purpose of this Calibration is to calibrate the ink system for the specific media loaded into the Printer. The Printer stores the calibration data for each type of media that has been calibrated since the Printer was switched ON. If the Printer is switched OFF, it will only store the last calibration done.

Perform the Color Calibration as follows:

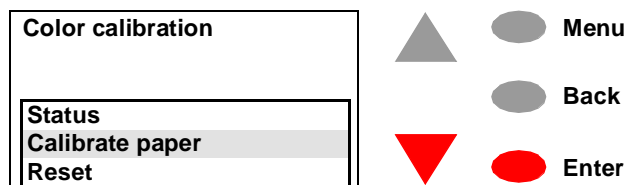
NOTE

Make sure you load media before performing this calibration.

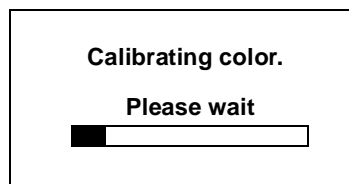
- 1 In the Service Calibrations submenu, scroll to "Color calibration" and press **Enter**.



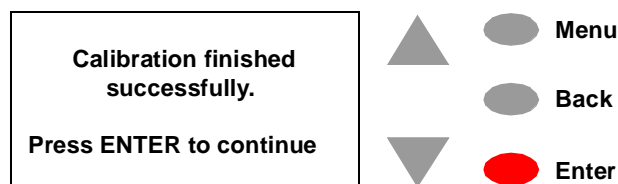
- 1 In the Color Calibration submenu, scroll to "Calibrate paper" and press **Enter**.



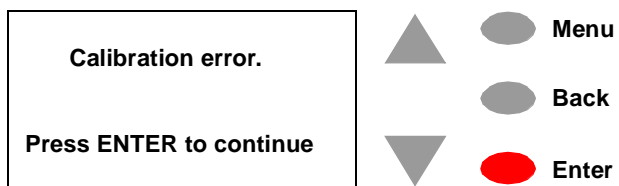
- 2 The Printer will start to print the calibration pattern and the following message will be displayed on the front panel:



- 3 Once the Color Calibration is completed, the following message will be displayed on the front panel:



If the calibration fails, then the following message will appear on the front panel:



In this case, to resolve the problem, try the following:

- Make sure that you DO NOT use transparent media when performing the Color Calibration.
- Clean the Line Sensor and try the Calibration again.
- Make sure that the Window is closed when you perform the Color Calibration.

Advance Calibration

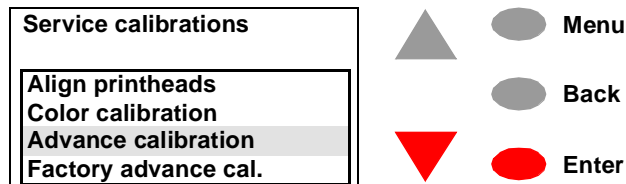
The purpose of this Service Calibration is to calibrate the nominal advance of the media. This calibration is necessary to control the exact movement on the media type that will be used (upto 2) in order to avoid print quality problems like banding.

Perform the Advance Calibration whenever:

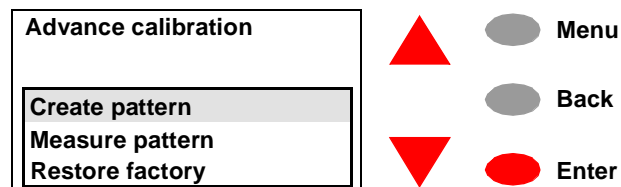
- Banding is detected in prints.
- Printheads Diagnostic is OK.

Perform the Advance Calibration as follows:

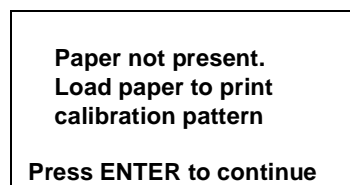
- 1 In the Service Calibrations submenu, scroll to "Advance calibration" and press **Enter**.



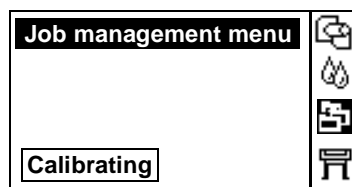
- 2 When the following message appears on the front panel, select "Create pattern" and press **Enter**.



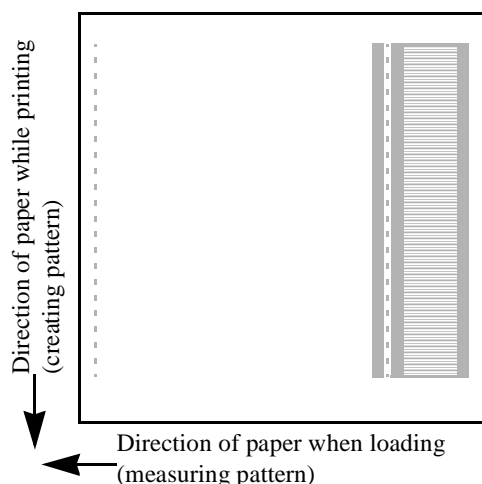
- 3 If media is not loaded, the following message appears on the front panel and you must load media into the Printer.



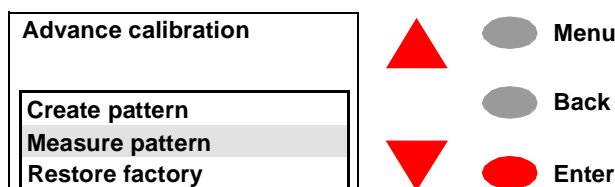
- 4 The Printer will start to print the Accuracy Calibration Pattern and the following message will be displayed on the front panel:



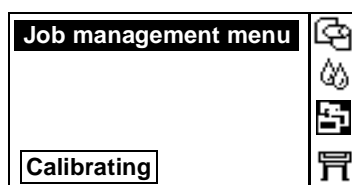
- 5 The following drawing shows you the pattern that will be printed:



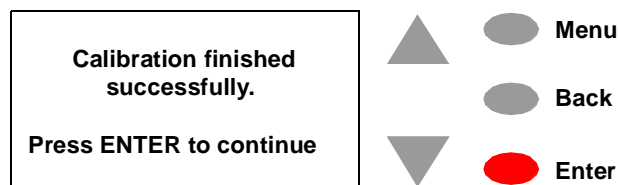
- 6 In order to measure the pattern that has been printed, load the pattern into the Printer with the printed side up and with the dotted line at the top (that is, rotated 90°).
- 7 Re-enter the Advance Calibration and select "Measure pattern" and press **Enter**.



- 8 The Printer will measure the alignment marks using the line sensor on the Carriage Assembly. The following message will be displayed while the Printer measures the pattern:



- 9 Once the calibration is completed, the following message will be displayed:



Factory Advance Calibration

The purpose of this Service Calibration is to calibrate the nominal advance of the media. This calibration is necessary to control the exact movement of the media in order to avoid print quality problems like banding. The values from the Calibration will then be stored in the EEROM and the user can restore the Printer to these values by selecting "Restore factory" in the Advance Calibration menu.

Perform the Factory Advance Calibration whenever:

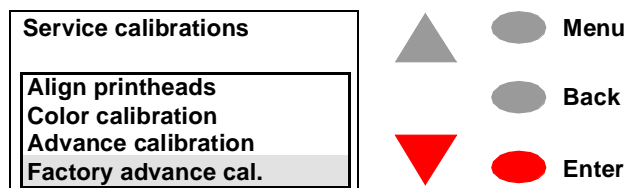
- Banding is detected in prints for **all** HP Media standard paper types and Printheads Diagnostic is OK.
- Drive Roller is disassembled or replaced.
- Paper-Axis Motor Assembly is disassembled or replaced.
- Electronics Module AND the Ink Supply Station are replaced.

Perform the Factory Advance Calibration as follows:

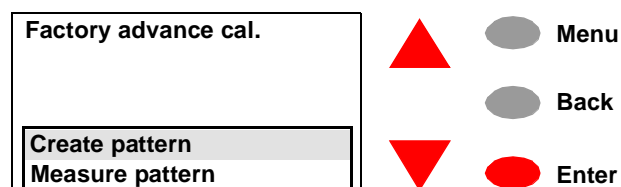
NOTE

Make sure you load HP High Gloss Photo Paper or HP Bright White Inkjet Paper in to the Printer before performing this calibration. Do NOT use any other type of media apart from HP High Gloss Photo Paper or HP Bright White Inkjet Paper otherwise the Printer will display "Calibration Error" on the Front Panel and the calibration will be cancelled.

- 1 In the Service Calibrations submenu, scroll to "Factory advance cal." and press **Enter**.



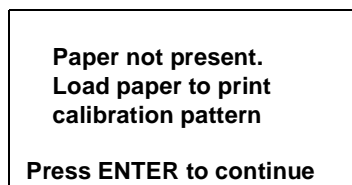
- 2 When the following message appears on the front panel, select "Create pattern" and press **Enter**.



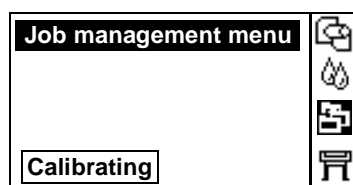
- 3 If media is not loaded, the following message appears on the front panel and you must load media into the Printer.

NOTE

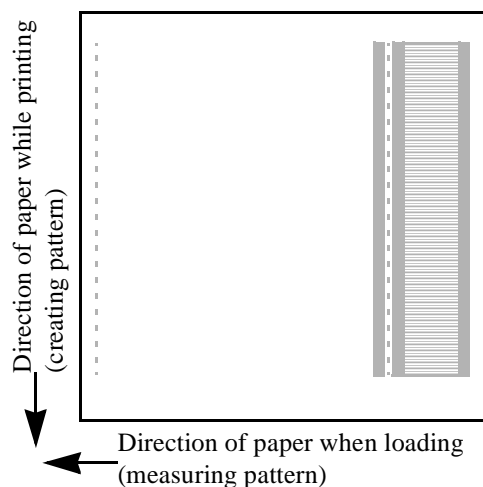
Do NOT use any other type of media apart from HP High Gloss Photo Paper or HP Bright White Inkjet Paper.



- 4 The Printer will start to print the Accuracy Calibration Pattern and the following message will be displayed on the front panel:

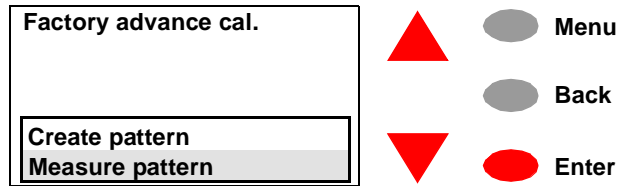


- 5 The following drawing shows you the pattern that will be printed:

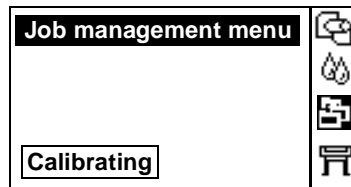


- 6 In order to measure the pattern that has been printed, load the pattern into the Printer with the printed side up and with the dotted line at the top (that is, rotated 90°).

- 7 Re-enter the Advance Calibration and select "Measure pattern" and press **Enter**.



- 8 The Printer will measure the alignment marks using the line sensor on the Carriage Assembly. The following message will be displayed while the Printer measures the pattern:



- 9 Once the calibration is completed, the following message will be displayed:

