

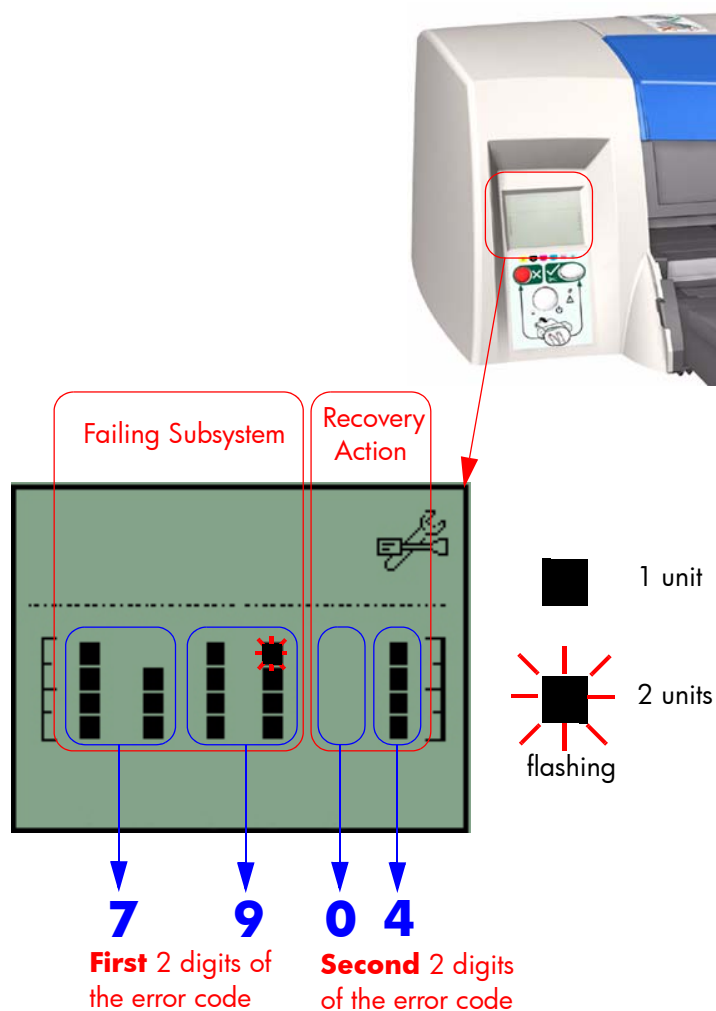
System Error Codes

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Introduction

The following pages contain a list of system error codes and their respective descriptions and recommended corrective actions. Only try one recommended action at a time and check if the error code has disappeared.

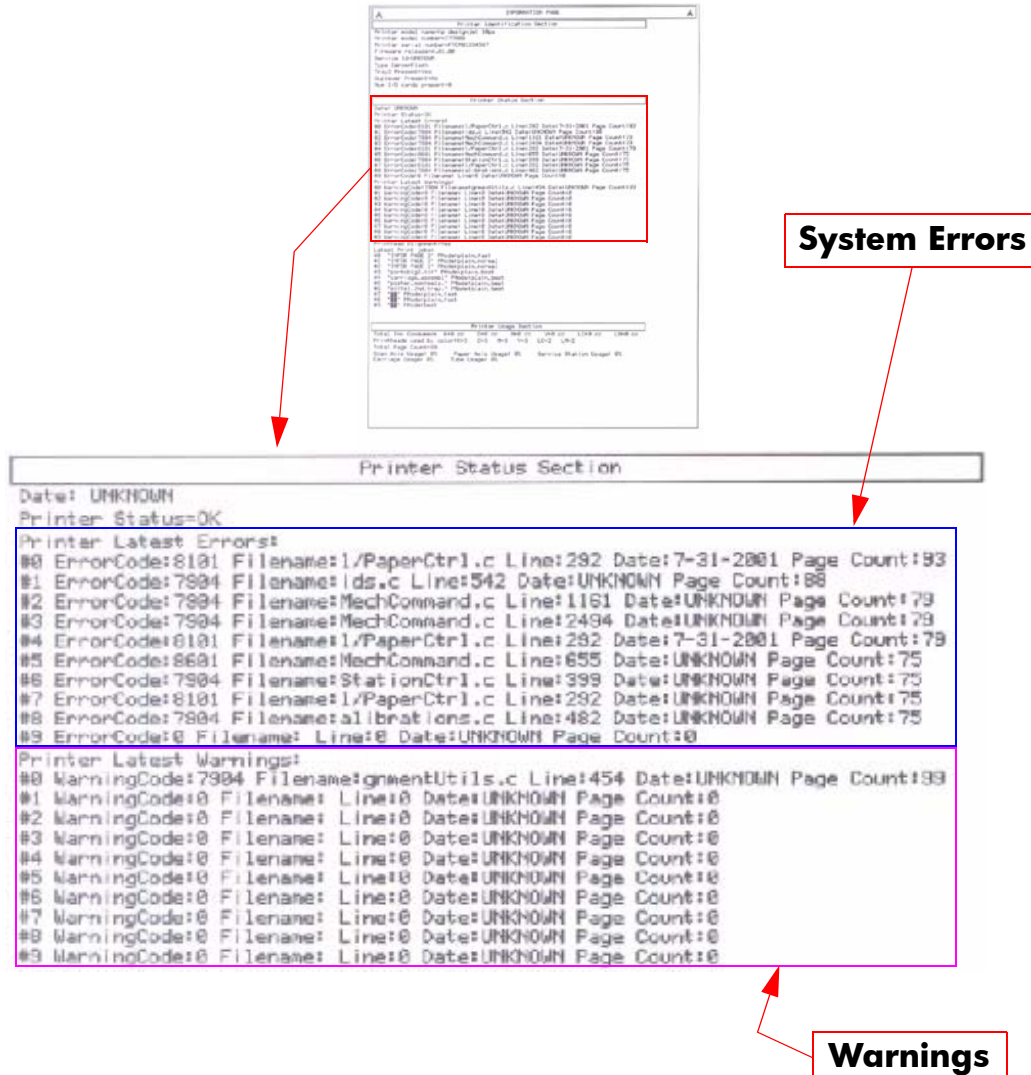
Since the front panel can only display graphics, the error code needs to be determined by counting the bars on the front panel (as shown below).



Refer to Page 2-17 for an explanation on the construction of the Error Codes and Warnings.

Errors and Warnings

Error Codes will normally be displayed directly on the front panel (but can also be seen on the Information Page) and will require some kind of intervention to resolve the problem. **Warnings** will **not** be displayed on the front panel, but will instead only appear on the Information Page, therefore allowing the user to continue operating the printer without the need of an intervention.



System Errors

Warnings

Printer Status Section

Date: UNKNOWN
Printer Status=OK

Printer Latest Errors:

Error Code	Filename	Line	Date	Page Count
#0 Error Code: 8101	Filename: l/PaperCtrl.c	Line: 292	Date: 7-31-2001	Page Count: 93
#1 Error Code: 7904	Filename: lds.c	Line: 542	Date: UNKNOWN	Page Count: 88
#2 Error Code: 7904	Filename: MechCommand.c	Line: 1161	Date: UNKNOWN	Page Count: 79
#3 Error Code: 7904	Filename: MechCommand.c	Line: 2494	Date: UNKNOWN	Page Count: 79
#4 Error Code: 8101	Filename: l/PaperCtrl.c	Line: 292	Date: 7-31-2001	Page Count: 79
#5 Error Code: 8601	Filename: MechCommand.c	Line: 655	Date: UNKNOWN	Page Count: 75
#6 Error Code: 7904	Filename: StationCtrl.c	Line: 399	Date: UNKNOWN	Page Count: 75
#7 Error Code: 8101	Filename: l/PaperCtrl.c	Line: 292	Date: UNKNOWN	Page Count: 75
#8 Error Code: 7904	Filename: calibration.c	Line: 482	Date: UNKNOWN	Page Count: 75
#9 Error Code: 0	Filename: Line: 0	Date: UNKNOWN	Page Count: 0	

Printer Latest Warnings:

Warning Code	Filename	Line	Date	Page Count
#0 Warning Code: 7904	Filename: gnmentUtils.c	Line: 454	Date: UNKNOWN	Page Count: 93
#1 Warning Code: 0	Filename: Line: 0	Date: UNKNOWN	Page Count: 0	
#2 Warning Code: 0	Filename: Line: 0	Date: UNKNOWN	Page Count: 0	
#3 Warning Code: 0	Filename: Line: 0	Date: UNKNOWN	Page Count: 0	
#4 Warning Code: 0	Filename: Line: 0	Date: UNKNOWN	Page Count: 0	
#5 Warning Code: 0	Filename: Line: 0	Date: UNKNOWN	Page Count: 0	
#6 Warning Code: 0	Filename: Line: 0	Date: UNKNOWN	Page Count: 0	
#7 Warning Code: 0	Filename: Line: 0	Date: UNKNOWN	Page Count: 0	
#8 Warning Code: 0	Filename: Line: 0	Date: UNKNOWN	Page Count: 0	
#9 Warning Code: 0	Filename: Line: 0	Date: UNKNOWN	Page Count: 0	

You can also obtain report of the System Error and Warnings through the DesignJet System Maintenance Tool.

System Error Codes

System Error:	01:10
Problem Description:	Electronics Module failure.
Corrective Action:	Replace the Electronics Module.
System Error:	01:12
Problem Description:	Electronics Module failed during the firmware upgrade OR the Electronics Module failed during initialization.
Corrective Action:	<p>Try the following:</p> <ul style="list-style-type: none">■ If the Electronics Module failed during initialization, you must perform the Electronics Test to determine the cause of the failure.■ If the Electronics Module failed during the firmware upgrade, first perform an emergency firmware upgrade (⇒ Page 16).■ If an emergency firmware upgrade is NOT possible or it didn't work, replace the Electronics Module.
System Error:	02:10
Problem Description:	Carriage failure.
Corrective Action:	Replace the Carriage Assembly.
System Error:	04:13
Problem Description:	Generic Firmware Error (Network Card).
Corrective Action:	Unplug the power cable from the printer and wait a few seconds. Plug in the power cable again and check if the Error Code has disappeared. If the error code continues, refer to the Jetdirect Card Service Manual and Service Notes.
System Error:	08:11
Problem Description:	Front Panel cannot be detected.
Corrective Action:	Reconnect the Front Panel.

System Error: 11:10

Problem Description: Trailing Cable Failure.

Corrective Action: Try the following:

- Replace the Carriage Assembly.
- If the Error Code continues, replace the Electronics Module.

Only replace one component at a time and check if the error has gone before replacing another component. Using this procedure you will be able to determine exactly which component failed.

System Error: 11:11

Problem Description: Trailing Cable is badly connected.

Corrective Action: Try the following:

- Reconnect the Trailing Cable correctly to the Electronics Module.
- If the Error Code continues, replace the Carriage Assembly.

System Error: 21:10

Problem Description: Service Station failure.

Corrective Action: Replace the Service Station Assembly.

System Error: 22:10

Problem Description: Ink Supply Station failure.

Corrective Action: Replace the Ink Supply Station.

System Error: 35:01

Problem Description: No Cleanout Assembly detected while loading media.

Corrective Action: Try the following:

- Remove the Cleanout Assembly and install it again correctly.
- Replace the Cleanout Interconnect PCA.
- If the Error Code continues, replace the Cleanout Assembly.

Only replace one component at a time and check if the error has gone before replacing another component. Using this procedure you will be able to determine exactly which component failed.

System Error: 37:01

Problem Description: Automatic roll motor shutdown.

Corrective Action: Try the following:

- If this error code was caused by a paper jam, unplug the power cable from the printer and clear the blockage. Plug in the power cable again and check if the Error Code has disappeared.
- If there is no paper jam or if recovering the paper jam does not resolve the problem, then replace the Automatic Roll System (the error could be caused by anything that stalls the motor).

System Error: 37:10

Problem Description: Automatic roll home position error.

Corrective Action: Replace the Automatic Roll System (the error could be caused by anything that causes the home position not to be detected or not to be the correct one - electrical sensors, internal mechanical problems, etc.).

System Error: 42:10

Problem Description: Carriage Motor failure (short-circuit).

Corrective Action: Replace the Carriage Motor Assembly.

System Error: 56:10

Problem Description: Error during the calibration of the Line-feed Motor/Encoder system or a problem finding the zero position on the Encoder Disc.

Corrective Action: Try the following:

- Replace the LF Motor Assembly.
- Replace the Encoder Disc.

Make sure you recalibrate the Paper-Axis after replacing the Paper-Axis Motor Drive Assembly or the Encoder Disc.

Only replace one component at a time and check if the error has gone before replacing another component. Using this procedure you will be able to determine exactly which component failed.

System Error: 56:13

Problem Description: Error during the calibration of the Line-feed Motor/Encoder system.

Corrective Action: Unplug the power cable from the printer and wait a few seconds. Plug in the power cable again and check if the Error Code has disappeared.


System Error:	62:04, 63:04, 64:04 and 65:04
Problem Description:	I/O module error (62 = parallel; 63 = Network; 64 = USB).
Corrective Action:	<p>Try the following:</p> <ul style="list-style-type: none">■ Unplug the power cable from the printer and wait a few seconds. Plug in the power cable again and check if the Error Code has disappeared.■ If the Error Code reappears, upgrade the firmware.
System Error:	71:03
Problem Description:	Memory Management Error (Out of memory).
Corrective Action:	<p>Try the following:</p> <ul style="list-style-type: none">■ Unplug the power cable from the printer and wait a few seconds. Plug in the power cable again and check if the Error Code has disappeared.■ If the Error Code reappears, check for a new Firmware release.
System Error:	71:14
Problem Description:	Memory Management Error (Out of memory during firmware upgrade).
Corrective Action:	<p>Try the following:</p> <ul style="list-style-type: none">■ Unplug the power cable from the printer and wait a few seconds. Plug in the power cable again and check if the Error Code has disappeared.■ If the Error Code reappears, perform an emergency firmware upgrade ⇒ Page 16.
System Error:	72:04
Problem Description:	Generic Firmware Error (expected).
Corrective Action:	<p>Try the following:</p> <ul style="list-style-type: none">■ Unplug the power cable from the printer and wait a few seconds. Plug in the power cable again and check if the Error Code has disappeared.■ If the Error Code reappears, upgrade the Firmware.
System Error:	74:12
Problem Description:	Firmware Upgrade Error (Memory size check failed during firmware upgrade).
Corrective Action:	<p>Try the following:</p> <ul style="list-style-type: none">■ Perform the automatic troubleshooting procedure (requires a special firmware upgrade file that must be provided by the manufacturing division).

System Error: 79:04

Problem Description: Generic Firmware Error (**unexpected**).

Corrective Action: Try the following:

- Unplug the power cable from the printer and wait a few seconds. Plug in the power cable again and check if the Error Code has disappeared.
- If the Error Code reappears, upgrade the Firmware.

System Error: 81:01 

Problem Description: Paper-Axis shutdown - usually a paper-jam caused by a blockage of the Paper-axis System.

Corrective Action: Try the following:

- If this error code was caused by a paper-jam, unplug the power cable from the printer and clear the blockage. Plug in the power cable again and check if the Error Code has disappeared.
- If this error code appeared but was NOT caused by a paper jam, replace the LF Motor Assembly.

System Error: 81:12

Problem Description: Media Advance error.

Corrective Action: This error usually appears during the paper-advance calibration - Retry the paper-advance calibration.

System Error: 83:10

Problem Description: Sheet feeding failure.

Corrective Action: Try the following:

- Replace the Out-Of-paper Sensor.
- Replace the Electronics Module.

Only replace one component at a time and check if the error has gone before replacing another component. Using this procedure you will be able to determine exactly which component failed.

System Error: 85:10

Problem Description: Paper-Axis Encoder error.

Corrective Action: Try the following:

- Make sure that the Encoder Sensor cable is connected correctly.
- Replace the Paper-Axis Motor Drive Assembly.
- Replace the Electronics Module.

Only replace one component at a time and check if the error has gone before replacing another component. Using this procedure you will be able to determine exactly which component failed.

System Error: 86:01 

Problem Description: Scan-axis shutdown - usually a paper-jam caused by a blockage of the Scan-axis System.

Corrective Action: Try the following:

- Check that there are no obstacles in the Scan-Axis which stops the Carriage from moving freely.
- Too much friction in the Slider Rod, try lubricating the Slider Rod.
- The Carriage is bumping into the Service Station. If the Carriage is stuck at the right hand side of the Printer and cannot be moved out to the center of the Print Platen it is because the Service Station cannot uncup the printheads. In this case replace the Service Station Assembly.
- Check that the belt is correctly installed and not damaged.
- Check that the Turnaround Pulley is correctly installed.
- Replace the Carriage Motor Assembly.

System Error: 86:11

Problem Description: Scan-axis shutdown during initialization. Typically, this error occurs when the printer detects an incorrect length.


Corrective Action: Try the following:

- If the Carriage stopped on the right hand side of the Printer:
 - Check that the User removed the foam packing that secures the Carriage.
 - Make sure that the User has closed the carriage latch properly.
 - Check that the Carriage moves freely and DOES NOT bump into the Service Station.
- If the Carriage stopped in the middle of the print zone:
 - Check that the Trailing Cable is properly attached. Check that the Trailing Cable clip is properly installed.

Warnings

System Error:	01:12
Problem Description:	Electronics Module Error.
Corrective Action:	The Electronics Module EEPROM is flagged as empty and must be upgraded with the contents of the Carriage EEPROM, but the Carriage is also flagged as empty. The backup is not performed. This is the result of an error during the manufacturing or the repair process. Therefore the Electronics Module must be reconfigured.
System Error:	270:00
Problem Description:	Black Printhead Error.
Corrective Action:	Try the following: <ul style="list-style-type: none">■ Clean the electrical contacts on the black printhead.■ If the error code continues, replace the black printhead.
System Error:	271:00
Problem Description:	Cyan Printhead Error.
Corrective Action:	Try the following: <ul style="list-style-type: none">■ Clean the electrical contacts on the cyan printhead.■ If the error code continues, replace the cyan printhead.
System Error:	272:00
Problem Description:	Magenta Printhead Error.
Corrective Action:	Try the following: <ul style="list-style-type: none">■ Clean the electrical contacts on the magenta printhead.■ If the error code continues, replace the magenta printhead.
System Error:	273:00
Problem Description:	Yellow Printhead Error.
Corrective Action:	Try the following: <ul style="list-style-type: none">■ Clean the electrical contacts on the yellow printhead.■ If the error code continues, replace the yellow printhead.

System Error:	274:00
Problem Description:	Light Cyan Printhead Error.
Corrective Action:	Try the following: <ul style="list-style-type: none"> ■ Clean the electrical contacts on the light cyan printhead. ■ If the error code continues, replace the light cyan printhead.
System Error:	275:00
Problem Description:	Light Magenta Printhead Error.
Corrective Action:	Try the following: <ul style="list-style-type: none"> ■ Clean the electrical contacts on the light magenta printhead. ■ If the error code continues, replace the light magenta printhead.
System Error:	58:10
Problem Description:	Problem detected in the Color Sensor system.
Corrective Action:	Replace the Carriage Assembly.
System Error:	61:05
Problem Description:	Language interpreting error. This is usually an error produced while parsing a file. There is probably an incompatibility between the driver and the firmware.
Corrective Action:	Upgrade the RIP software.
System Error:	65:01
Problem Description:	Communication Failure.
Corrective Action:	Try the following: <ul style="list-style-type: none"> ■ Unplug the power cable from the printer and check the cable connections (Parallel, USB and Network cables). Plug in the power cable again and check if the Error Code has disappeared.
System Error:	66:02:1 (Only applicable to HP DesignJet 90/90r/130/130nr)
Problem Description:	Horizontal clipping. May happen when the roll ends in the middle of printing an image. Could also happen when multi-pick occurs and two sheets are loaded together and they do not completely overlap.
Corrective Action:	Make sure the image size is within the selected WIDTH of the sheet.

System Error:	66:02:2 (Only applicable to HP DesignJet 90/90r/130/130nr)
Problem Description:	Vertical clipping. May happen when the roll ends in the middle of printing an image. Could also happen when multi-pick occurs and two sheets are loaded together and they do not completely overlap.
Corrective Action:	Make sure the image size is within the selected LENGTH of the sheet.
System Error:	81:01 
Problem Description:	Paper-Axis shutdown - usually a paper-jam caused by a blockage of the Paper-axis System.
Corrective Action:	Try the following: <ul style="list-style-type: none">■ If this error code was caused by a paper-jam, unplug the power cable from the printer and clear the blockage. Plug in the power cable again and check if the Error Code has disappeared■ If this error code appeared but was NOT caused by a paper jam, replace the Paper-Axis Motor Drive Assembly.
System Error:	83:01:1 (Only applicable to HP DesignJet 90/90r/130/130nr)
Problem Description:	The paper is rejected from the Bypass due to skew.
Corrective Action:	When manually loading paper from the front of the printer, make sure that it is loaded straight.
System Error:	83:01:3 (Only applicable to HP DesignJet 90/90r/130/130nr)
Problem Description:	The paper is rejected from the roll due to skew.
Corrective Action:	When loading paper from the roll, make sure that it is loaded straight.
System Error:	94:02:1
Problem Description:	User selected Coated Paper and Best mode, but the Color Calibration profile was obsolete or missing for Coated Paper and the selected print quality setting.
Corrective Action:	Using the System Maintenance Tool, perform Color Calibration for Coated Paper and the selected print quality setting.
System Error:	94:02:2 (Only applicable to HP DesignJet 120/120nr)
Problem Description:	User selected Glossy Paper and Best mode, but the Color Calibration profile was obsolete or missing for Glossy Paper and the selected print quality setting.
Corrective Action:	Using the System Maintenance Tool, perform Color Calibration for Glossy Paper and the selected print quality setting.

System Error:	94:02:3
Problem Description:	User selected Photo Paper and Best mode, but the Color Calibration profile was obsolete or missing for Photo Paper and the selected print quality setting.
Corrective Action:	Using the System Maintenance Tool, perform Color Calibration for Photo Paper and the selected print quality setting.
System Error:	94:02:4
Problem Description:	User selected Heavy-Weight Coated Paper and Best mode, but the Color Calibration profile was obsolete or missing for Heavy-Weight Coated Paper and the selected print quality setting.
Corrective Action:	Using the System Maintenance Tool, perform Color Calibration for Heavy-Weight Coated Paper and the selected print quality setting.
System Error:	94:02:5
Problem Description:	User selected Proofing Semi-Gloss Paper and Best mode, but the Color Calibration profile was obsolete or missing for Proofing Semi-Gloss Paper and the selected print quality setting.
Corrective Action:	Using the System Maintenance Tool, perform Color Calibration for Proofing Semi-Gloss Paper and the selected print quality setting.
System Error:	94:02:6 (Only applicable to HP DesignJet 90/90r/130/130nr)
Problem Description:	User selected Photo Matte Paper and Best mode, but the Color Calibration profile was obsolete or missing for Photo Matte Paper and the selected print quality setting.
Corrective Action:	Using the System Maintenance Tool, perform Color Calibration for Photo Matte Paper and the selected print quality setting.
System Error:	94:02:7 (Only applicable to HP DesignJet 90/90r/130/130nr)
Problem Description:	User selected Photo Satin Paper and Best mode, but the Color Calibration profile was obsolete or missing for Photo Satin Paper and the selected print quality setting.
Corrective Action:	Using the System Maintenance Tool, perform Color Calibration for Photo Satin Paper and the selected print quality setting.
System Error:	94:02:8
Problem Description:	User selected Coated Paper and Max dpi/High Resolution mode, but the Color Calibration profile was obsolete or missing for Coated Paper and the selected print quality setting.
Corrective Action:	Using the System Maintenance Tool, perform Color Calibration for Coated Paper and the selected print quality setting.

System Error:	94:02:9 (Only applicable to HP DesignJet 120/120nr)
Problem Description:	User selected Glossy Paper and High Resolution mode, but the Color Calibration profile was obsolete or missing for Glossy Paper and the selected print quality setting.
Corrective Action:	Using the System Maintenance Tool, perform Color Calibration for Glossy Paper and the selected print quality setting.
System Error:	941:02:1
Problem Description:	User selected Photo Paper and Max dpi/High Resolution mode, but the Color Calibration profile was obsolete or missing for Photo Paper and the selected print quality setting.
Corrective Action:	Using the System Maintenance Tool, perform Color Calibration for Photo Paper and the selected print quality setting.
System Error:	941:02:2
Problem Description:	User selected Heavy-Weight Coated Paper and Max dpi/High Resolution mode, but the Color Calibration profile was obsolete or missing for Heavy-Weight Coated Paper and the selected print quality setting.
Corrective Action:	Using the System Maintenance Tool, perform Color Calibration for Heavy-Weight Coated Paper and the selected print quality setting.
System Error:	941:02:3
Problem Description:	User selected Proofing Semi-Gloss Paper and Max dpi/High Resolution mode, but the Color Calibration profile was obsolete or missing for Proofing Semi-Gloss Paper and the selected print quality setting.
Corrective Action:	Using the System Maintenance Tool, perform Color Calibration for Proofing Semi-Gloss Paper and the selected print quality setting.
System Error:	941:02:4 (Only applicable to HP DesignJet 90/90r/130/130nr)
Problem Description:	User selected Photo Matte Paper and Max dpi mode, but the Color Calibration profile was obsolete or missing for Photo Matte Paper and the selected print quality setting.
Corrective Action:	Using the System Maintenance Tool, perform Color Calibration for Photo Matte Paper and the selected print quality setting.
System Error:	941:02:5 (Only applicable to HP DesignJet 90/90r/130/130nr)
Problem Description:	User selected Photo Satin Paper and Max dpi mode, but the Color Calibration profile was obsolete or missing for Photo Satin Paper and the selected print quality setting.
Corrective Action:	Using the System Maintenance Tool, perform Color Calibration for Photo Satin Paper and the selected print quality setting.

System Error: 95:00

Problem Description: Printhead Alignment Failure - Printhead Alignment cancelled.

Corrective Action: Try the following:

- Clean the printhead indicated by the printer.
- If the error code continues, replace the faulty printhead.

System Error: 95:02

Problem Description: Printhead Alignment Failure - Printhead Alignment cancelled.

Corrective Action: Try the following:

- Unplug the power cable from the printer and wait a few seconds. Plug in the power cable again and try the Printhead Alignment again.
- If this error code appears again, check the Printhead Alignment print:
 - If the Printhead Alignment was printed correctly without any print defects, then check that the media is moving freely (backwards and forwards) while the printer is scanning it.
 - If the Printhead Alignment was printed incorrectly, with some print defects, replace the faulty Printhead of the color where the defects were noticeable.

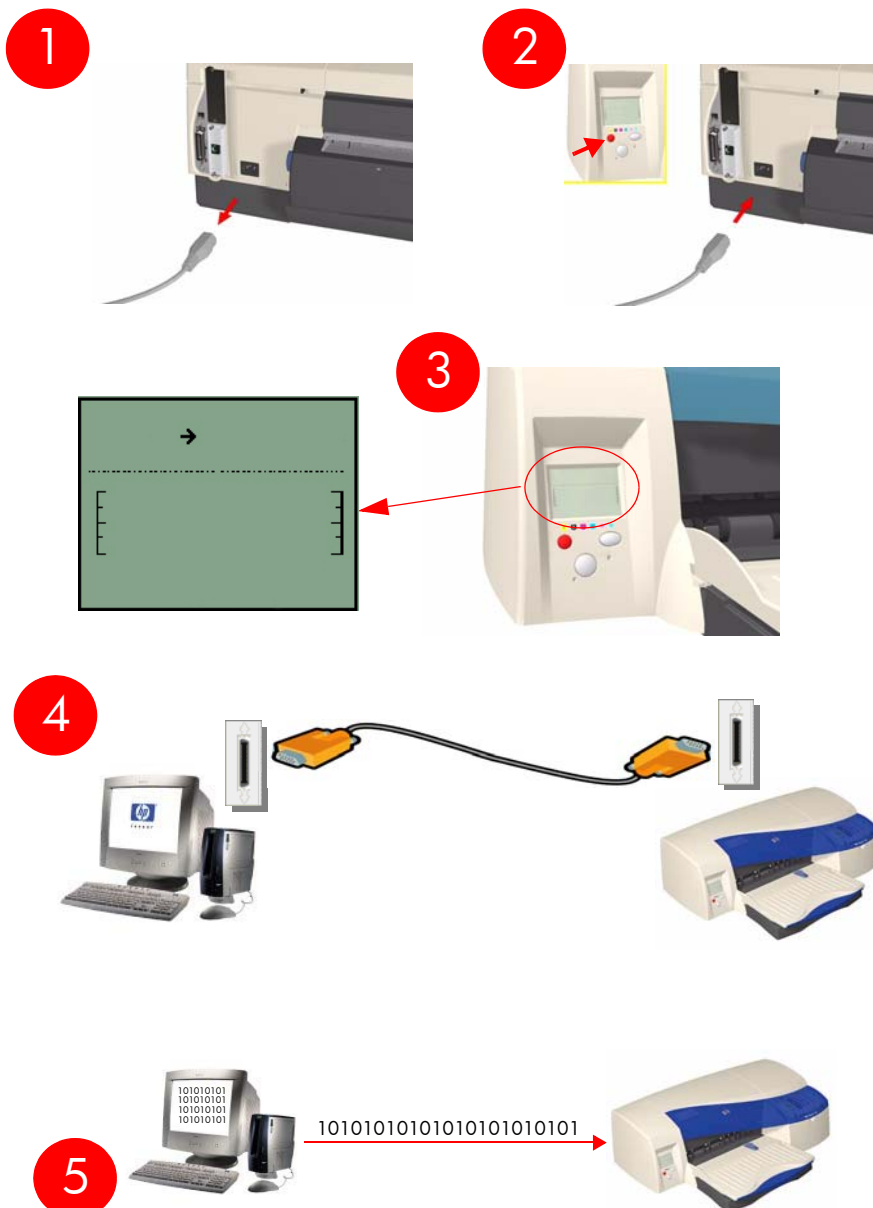
System Error: 95:04

Problem Description: Firmware Error (during Printhead Alignment).

Corrective Action: Upgrade the printer to the latest firmware release.

Emergency Firmware Upgrade

- 1 Unplug the power cord from the printer and wait a few seconds.
- 2 Press and hold the Cancel (red) button while plugging in the power cord.
- 3 The printer will initialize in emergency mode (the front panel will display just the arrow icon).
- 4 Connect the printer to the computer with a parallel cable.
- 5 Send the firmware file through the parallel port from the DOS command prompt. Type: **copy /b firmware_file lpt1:** and then press ENTER.



System Error Codes and Warnings - Explanation

System Error Codes explain which component/system is failing and what action should be taken to resolve the problem.

System Error Codes are displayed directly on the front panel (but can also be seen on the Information Page) and have been defined in the format **XX.YZ**.

Warnings will **not** be displayed on the front panel, but will instead only appear on the Information Page and have been defined in the format **XXn.YZ.m**.

- **XX**: Service Part (2 digits).
- **n**: Service Part Index (if more than one used in the product) - Optional.
– e.g. Identify the Ink Supply (color and number).
- **Y**: Who should perform the action (1 digit) - (User or Service Engineer).
- **Z**: Action to perform (1 digit).
- **m**: additional actions/information to consider (1 digit) - Optional.
– e.g. Non-authorized ink was detected, PM was triggered or Printhead in/out of Warranty.

The following table explains the **XX** part of the System Error Code or Warning:

Items in **red** are not applicable to this printer.

Code	Component/System
01	Main PCA/Electronics Module
02	Carriage/Carriage PCA
03	Power Supply Unit
04	Network Card
05	Formatter
06	Hard Disk Drive
07	Interconnect PCA
08	Front Panel
11	Trailing Cable
12	Carriage Flex Circuit
17	Interconnect Cable
21	Service Station
22	Ink Supply Station
23	Pressure System (APS)
24	Ink Delivery Tubes
25	Spittoon
26n	Ink Cartridge (color n)
26n	Printhead (color n)
31	Cutter
32	Take-up Reel
33	Sheet Feeder

Code	Component/System
34	Dryer/Blower
35	Cleanout Assembly
36	Duplexer
37	ARSS/Rollfeed
38	Output Tray
41	Paper-Axis Motor
42	Scan-Axis Motor
43	Vacuum Fan
44	Aerosol fan
51	Window Sensor
52	Drop Detector
53	Media Sensor
54	Pinch-Arm Sensor
55	Line Sensor
56	Drive Roller Encoder Sensor
57	Ink Leak Detector
58	Color Sensor
59	Media Type Sensor
61	Language Interpreting
62	Input/Output through Parallel Port
63	Input/Output through Network Card
64	Input/Output through USB Port
65	Input/Output (not know what port)
66	Print Job Configuration
71	Memory Management
72	Generic Firmware
73	Motor Control Functions
74	Firmware Upgrade
79	Firmware Crash
81	Media Advance
82	Media Cut
83	Single-Sheet Feeding
84	Roll Feeding
85	Media-Axis Encoder Reading
86	Carriage Movement
87	Scan-Axis Encoder Reading
91	Printhead Firing
92	Servicing
93	Ink Pumping
94	Color Calibration
95	Printhead Alignment
96	Image Quality Troubleshooting

The following table explains the **YZ** part of the System Error Code or Warning:

Code	Recovery Action	Response
00	Replace	Possible for customer to perform action
01	Reseat/Reconnect/Clean/Adjust (manually)	
02	Calibrate/Adjust (using Automatic Process)	
03	Power OFF	
04	Upgrade System Firmware	
05	Upgrade Driver	
06	Add Accessory	
07	Escalate	
08	Send Plot Again	
09	Wrong Part Installed	
10	Replace	hp qualified personnel assistance required
11	Reseat/Reconnect/Clean/Adjust (manually)	
12	Calibrate/Adjust (using Automatic Process)	
13	Power OFF	
14	Upgrade System Firmware	
15	Upgrade Driver	
16	Add Accessory	
17	Escalate	
18	Send Plot Again	
19	Wrong Part Installed	

