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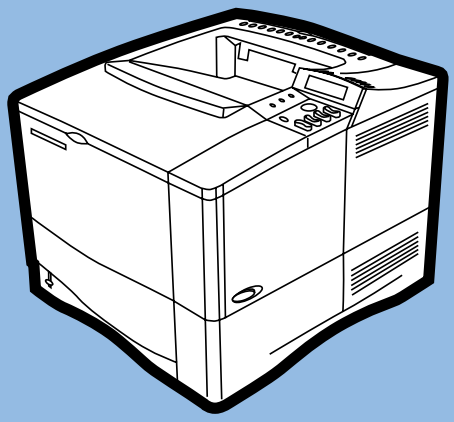

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HP LaserJet 4100 Series Printer

Service Manual

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Contents

1 Printer description

Printer features 14
Product compatibility matrix 18
Identification 20
    Model and serial numbers 20
Site requirements 21
    Installation requirements 22
    Environmental requirements 24
Print media specifications 25
    Supported types of print media 28
    Types of print media to avoid 29
    Weight equivalence table 30
    Adhesive labels 31
    Overhead transparencies 32
    Envelopes 33
    Card stock and heavy paper 35
Safety information 36
    Toner safety 36
    Laser safety 37
    Regulatory information 37

2 Service approach

Service approach 40
Parts and supplies 40
    Ordering information 40
    Printer documentation 41
    HP direct ordering for genuine HP parts 42
    Exchange program 42
    Consumables 42
    World Wide Web 42
    HP service parts information compact disc 42
    HP support assistant compact disc 43
    Toner cartridge information 44
Warranty statement 45
    Printer warranty 45
    Limited warranty for toner cartridge life 45

3 Printer operation

Using the control panel 49
    Control panel layout 49
    Control panel lights 49
    Control panel keys 50
    Settings and defaults 51
Control panel menus 52
    Quick copy jobs menu 53
    Private/stored jobs menu 54
    Information menu 55
    Paper-handling menu 57
    Printing menu 60
    Print quality menu 63

Configuration menu . . . 66
I/O menu . . . 69
EIO menu (networked printers) . . . 70
Resets menu . . . 73
Service mode . . . 74
Service menu . . . 75
Page count . . . 77
Maintenance count . . . 77
Maintenance interval . . . 77
Serial number . . . 77
Cold reset paper . . . 77
Diagnostics . . . 77
Clear event log . . . 78
Top margin . . . 78
Tray 1 left margin . . . 78
Trays 2 and 3 left margin . . . 78
Testing the printer . . . 78
Engine test . . . 78
Resetting the printer . . . 79
Cold reset . . . 79
Clearing NVRAM . . . 79
Initialization of NVRAM . . . 79
Initialization of the hard disk . . . 80
System configuration . . . 80
MS-DOS system configuration . . . 80
Parallel DOS commands . . . 80

4 Printer maintenance

Cleaning the printer and accessories . . . 82
Using the printer cleaning page . . . 84
Using the auto-cleaning page . . . 84
Cleaning spilled toner . . . 85
Performing printer maintenance . . . 86
Reset maintenance count . . . 86
Expected life of components . . . 87

5 Theory of operation

Power supply system . . . 91
AC/DC power distribution . . . 91
Overcurrent/overvoltage protection . . . 92
Fuser over-temperature protection . . . 92
High-voltage power distribution . . . 93
Toner-cartridge detection . . . 94
Cartridge memory . . . 94
Engine controller system . . . 95
Engine controller board inputs and outputs . . . 96
Laser/scanner drive . . . 101
Paper-motion monitoring and control . . . 101
Solenoids, sensors, clutches, and switches . . . 101
Engine test print . . . 101
Motors . . . 101
Formatter system . . . 104
PowerSave . . . 104
Resolution Enhancement technology . . . 104
EconoMode . . . 105
Input/output . . . 105
CPU . . . 105
Printer memory . . . 106

DIMM slots . . . 106
PJL overview . . . 107
PML . . . 107
Control panel . . . 107
Image formation system . . . 108
Toner cartridge . . . 109
Photosensitive drum . . . 110
Writing the image . . . 112
Developing the image . . . 113
Transferring the image . . . 114
Image fusing/variable fusing temperature . . . 115
Paper feed system . . . 117
Clutches and sensors . . . 120
Printing from tray 1 . . . 120
Printing from tray 2 . . . 122
Printing from the optional 500-sheet tray . . . 124
Envelope feeder . . . 127
Duplexer . . . 127
Jams . . . 128
Other controls . . . 129
Environmental detection . . . 129
Basic sequence of operation . . . 130

6 Removing and replacing parts

Removal and replacement strategy . . . 135
Required tools . . . 136
Tools . . . 136
Other helpful tools . . . 136
Removing covers . . . 138
Rear right side cover . . . 138
Control panel . . . 139
Top cover . . . 141
Left side cover . . . 143
Front right side cover . . . 144
Rear cover/rear output bin . . . 145
Tray 1 . . . 146
Removing internal assemblies . . . 149
Fuser . . . 149
Firmware DIMM . . . 150
Formatter assembly . . . 151
Output delivery assembly . . . 152
Laser/scanner . . . 154
Cartridge memory . . . 155
Fan . . . 156
Main motor . . . 158
Transfer roller . . . 159
Tray 1 pickup roller . . . 160
Tray 1 pickup assembly . . . 161
Right side toner cartridge guide . . . 164
Registration assembly . . . 165
Paper feed assembly . . . 167
Printer drive assembly (gear train) . . . 169
Delivery drive assembly . . . 170
Separating the engine module from the paper-feed module . . . 171
Engine controller board . . . 173
Paper-feed guide assembly . . . 176
Removing tray assemblies . . . 177
Paper-feed rollers for trays 2, 3, and 4 . . . 177

Separation rollers for trays 2, 3, and 4 . . . 178
Tray 2 paper-feed module disassembly . . . 179
Tray 3 and 4 paper-feed module disassembly . . . 180

7 Troubleshooting

Troubleshooting process . . . 184
Troubleshooting flowchart . . . 185
Troubleshooting flowchart (continued) . . . 186
Troubleshooting the printing system . . . 187
Preliminary operating checks . . . 187
Power on . . . 188
Engine test . . . 190
Display . . . 191
Event log . . . 191
Printer messages . . . 193
General paper-path troubleshooting . . . 220
Information pages . . . 222
Image quality . . . 227
Image system troubleshooting . . . 244
Reference diagrams . . . 246
Locations of components . . . 246
Paper path . . . 252
Engine controller board . . . 254
Paper-size detection switches . . . 255
Motors and fans . . . 257
Connectors . . . 258
PCAs . . . 261
Sensors, switches, and thermistors . . . 263
Solenoids and clutch . . . 266
Timing . . . 268

8 Parts and diagrams

How to use the parts lists and diagrams . . . 270
Accessories and supplies . . . 271
Common screws and replacement cables . . . 272
Illustrations and parts lists . . . 274
Alphabetical parts list . . . 306
Numerical parts list . . . 313

Index

Figures

Figure 1. Sample label 20
Figure 2. Top view, HP LaserJet 4100/4100N/4100TN/4100DTN printer 22
Figure 3. Side view, HP LaserJet 4100/4100N printer 22
Figure 4. Side view, HP LaserJet 4100TN/4100DTN printer 23
Figure 5. Control panel layout 49
Figure 6. Service menu 75
Figure 7. Location of the transfer roller – Do Not Touch! 82
Figure 8. Low-voltage power supply circuit 91
Figure 9. Engine controller board 93
Figure 10. Cartridge memory 94
Figure 11. Engine controller board 95
Figure 12. Engine controller board I/O (1 of 5) 96
Figure 13. Engine controller board I/O (2 of 5) 97
Figure 14. Engine controller board I/O (3 of 5) 98
Figure 15. Engine controller board I/O (4 of 5) 99
Figure 16. Engine controller board I/O (5 of 5) 100
Figure 17. Main motor control 102
Figure 18. Image formation system 108
Figure 19. Toner cartridge 109
Figure 20. Photosensitive drum 110
Figure 21. Cleaning the drum 110
Figure 22. Primary charging roller 111
Figure 23. Writing the image 112
Figure 24. Developing the image 113
Figure 25. Transferring the image 114
Figure 26. Image fusing 115
Figure 27. Fusing temperature control 116
Figure 28. Paper feed subsystem 118
Figure 29. Paper path 119
Figure 30. Tray 1 pickup timing 120
Figure 31. Tray 1 pickup 121
Figure 32. Tray 2 pickup timing 122
Figure 33. Skew correction at registration assembly 123
Figure 34. Multiple-feed prevention mechanism 124
Figure 35. Paper-feeder driver I/O 125
Figure 36. Paper feed pickup 126
Figure 37. Paper path for the duplexer 128
Figure 38. Timing diagram 131
Figure 39. Comparing Phillips and Posidriv screwdrivers 136
Figure 40. Removing the rear right side cover 138
Figure 41. Removing the control panel overlay 139
Figure 42. Removing the control panel board 140
Figure 43. Disconnecting the toner cartridge drive arm 141
Figure 44. Removing the top cover 142
Figure 45. Releasing tabs to lift the top cover 142
Figure 46. Removing the left side cover 143
Figure 47. Removing the front right side cover 144
Figure 48. Removing the rear cover/rear output bin 145
Figure 49. Removing tray 1 from the front cover 146
Figure 50. Removing the tray 1 sensor arm cover 146
Figure 51. Detail of the tray 1 sensor arm cover 147
Figure 52. Detail of hinge spring 147

Figure 53. Unlocking the fuser assembly . . . 149
Figure 54. Installing a firmware DIMM . . . 150
Figure 55. Removing the formatter assembly . . . 151
Figure 56. Removing the output delivery assembly . . . 152
Figure 57. Left end of output delivery assembly (brass arm) . . . 152
Figure 58. Right end of output delivery assembly (white tab) . . . 153
Figure 59. Removing the laser/scanner . . . 154
Figure 60. Removing the fan . . . 156
Figure 61. Detail of the plastic fan clip . . . 157
Figure 62. Removing the main motor . . . 158
Figure 63. Removing the transfer roller . . . 159
Figure 64. Removing the pickup roller (shown with envelope entrance cover removed) . . . 160
Figure 65. Installation of tray 1 pickup roller . . . 160
Figure 66. Removing the gear cover . . . 161
Figure 67. Removing the tray 1 pickup assembly—right side . . . 162
Figure 68. Removing the tray 1 pickup assembly—left side . . . 162
Figure 69. Removing the tray 1 pickup assembly—front side . . . 163
Figure 70. Removing the right side toner cartridge guide . . . 164
Figure 71. Removing the registration assembly . . . 165
Figure 72. Detail of screws for the registration assembly . . . 166
Figure 73. Unplugging the connector to the paper feed assembly . . . 167
Figure 74. Removing the upper screws from the paper feed assembly . . . 168
Figure 75. Detail of clutch orientation . . . 168
Figure 76. Removing the printer drive assembly . . . 169
Figure 77. Removing the delivery drive assembly . . . 170
Figure 78. Unplugging the connector to the paper-feed module . . . 171
Figure 79. Separating the engine from the paper-feed module . . . 172
Figure 80. Removing the engine controller board . . . 173
Figure 81. Removing the engine controller board . . . 174
Figure 82. Location of VR501 . . . 175
Figure 83. Adjusting the top margin . . . 175
Figure 84. Removing the paper feed roller . . . 177
Figure 85. Removing the separation roller . . . 178
Figure 86. Removing the tray 2 paper-feeder plate . . . 179
Figure 87. Removing the paper-feeder plate . . . 180
Figure 88. Detail of clutch release . . . 181
Figure 89. Detail of spring and lever . . . 181
Figure 90. Location of spring and lever (the paper feeder is inverted) . . . 182
Figure 91. Troubleshooting flowchart (1 of 2) . . . 185
Figure 92. Troubleshooting flowchart, continued . . . 186
Figure 93. Location of the engine test button . . . 190
Figure 94. Sample event log . . . 191
Figure 95. Sample menu map (1 of 2) . . . 223
Figure 96. Sample menu map (2 of 2) . . . 223
Figure 97. Sample configuration page (HP LaserJet 4100 series printer) . . . 227
Figure 98. Repetitive print defect ruler . . . 243
Figure 99. Components of the paper pickup and feed system . . . 246
Figure 100. Components of the optional paper feeder . . . 248
Figure 101. Components of the optional duplexer . . . 249
Figure 102. Components of the fusing and delivery unit . . . 250
Figure 103. Components of the optional envelope feeder . . . 251
Figure 104. Paper sensors and the paper path . . . 252
Figure 105. Engine controller board layout . . . 254
Figure 106. Paper-size detection switches (1 of 2) . . . 255
Figure 107. Paper-size detection switches (2 of 2) . . . 255
Figure 108. Location of motors . . . 257
Figure 109. Connectors (1 of 3) . . . 258
Figure 110. Connectors (2 of 3) . . . 259
Figure 111. Connectors (3 of 3) . . . 260

Figure 112. Location of PCAs. 261
Figure 113. Location of sensors, switches, and thermistors (1 of 2) 263
Figure 114. Location of sensors, switches, and thermistor (2 of 2) 264
Figure 115. Location of solenoids and clutch) 266
Figure 116. Pickup timing for tray 2 (and lower trays) 268
Figure 117. Pickup timing for tray 1 268
Figure 118. Assembly location diagram (1 of 2) 274
Figure 119. Assembly location diagram (2 of 2) 275
Figure 120. External covers and panels 277
Figure 121. Top cover assembly 278
Figure 122. Internal components (1 of 4) 280
Figure 123. Internal components (2 of 4) 282
Figure 124. Internal components (3 of 4) 284
Figure 125. Internal components (4 of 4) 286
Figure 126. Engine controller board assembly 288
Figure 127. Delivery drive assembly 289
Figure 128. Printer drive assembly 290
Figure 129. Tray 2 paper pickup guide assembly. 291
Figure 130. Tray 1 pickup assembly 292
Figure 131. Paper feed guide assembly 294
Figure 132. Delivery assembly 295
Figure 133. Fuser assembly (1 of 2). 296
Figure 134. Fuser assembly (2 of 2). 297
Figure 135. Internal components of optional 500-sheet feeder 298
Figure 136. Paper pickup guide assembly of optional 500-sheet feeder 300
Figure 137. 500-sheet tray 302
Figure 138. Envelope feeder 303
Figure 139. Internal components of duplexer 304

Tables

Table 1. Printer features for the HP LaserJet 4100 series printers 14
Table 2. Product compatibility matrix 18
Table 3. Electrical specifications for the HP LaserJet 4100 series printers 21
Table 4. Printer and toner cartridge environmental conditions 24
Table 5. Operating sound power or pressure (Per ISO 9296) 24
Table 6. Print media specifications, tray 1 25
Table 7. Print media specifications, trays 2, 3, and 4 26
Table 8. Print media specifications, optional envelope feeder 26
Table 9. Print media specifications, optional duplexer 27
Table 10. Weight equivalence table 30
Table 11. Adhesive labels specifications 31
Table 12. Overhead transparencies specifications 32
Table 13. Envelope specifications 34
Table 14. Paper specifications 35
Table 15. Printer documentation 41
Table 16. Control panel lights 49
Table 17. Control panel keys 50
Table 18. Settings and defaults 51
Table 19. Quick copy jobs menu 53
Table 20. Private/stored jobs menu 54
Table 21. Information menu 55
Table 22. Paper handling menu 57
Table 23. Printing menu 60
Table 24. Print quality menu 63
Table 25. Configuration menu 66
Table 26. I/O menu 69
Table 27. EIO menu 70
Table 28. Resets menu 73
Table 29. Changing the page count (example) 76
Table 30. Cleaning the printer 83
Table 31. Maintenance kit part numbers 86
Table 32. Life of components 87
Table 33. Printer timing 130
Table 34. Screws used in the printer 137
Table 35. Major steps for troubleshooting 184
Table 36. Power on defect or blank display 188
Table 37. Printer messages 194
Table 38. Mopy disk error messages 218
Table 39. General paper-path troubleshooting questions 220
Table 40. Image quality checks 228
Table 41. Weights of toner cartridges 228
Table 42. Image defects 231
Table 43. High voltage system checks 245
Table 44. Components of the paper pickup and feed system 247
Table 45. Paper sensors 252
Table 46. Engine controller board layout 254
Table 47. Paper-size detection switches 256
Table 48. Motors 257
Table 49. Location of PCAs 262
Table 50. Sensors, switches, and thermistors 264
Table 51. Solenoids and clutch 267
Table 52. Accessories and supplies 271

Table 53. Screws used in the printer . . . 272
Table 54. Replaceable cables . . . 273
Table 55. Assemblies (listed alphabetically) and their part numbers . . . 276
Table 56. External covers and panels . . . 277
Table 57. Top cover assembly . . . 279
Table 58. Internal components (1 of 4) . . . 281
Table 59. Internal components (2 of 4) . . . 283
Table 60. Internal components (3 of 4) . . . 285
Table 61. Internal components (4 of 4) . . . 287
Table 62. Engine controller board assembly . . . 288
Table 63. Delivery drive assembly . . . 289
Table 64. Printer drive assembly . . . 290
Table 65. Paper pickup guide assembly . . . 291
Table 66. Tray 1 pickup assembly . . . 293
Table 67. Paper feed assembly . . . 294
Table 68. Delivery assembly . . . 295
Table 69. Fuser assembly . . . 296
Table 70. Internal components of optional 500-sheet feeder . . . 299
Table 71. Paper pickup guide assembly, optional 500-sheet feeder . . . 301
Table 72. 500-sheet tray . . . 302
Table 73. Envelope feeder . . . 303
Table 74. Internal components of duplexer . . . 305
Table 75. Alphabetical parts list . . . 306
Table 76. Numerical parts list . . . 313

1 Printer description

Chapter contents

Printer features 14
Product compatibility matrix 18
Identification 20
Site requirements 21
- Installation requirements 22
- Environmental requirements 24

Print media specifications 25
- Supported types of print media 28
- Types of print media to avoid 29
- Weight equivalence table 30
- Adhesive labels 31
- Overhead transparencies 32
- Envelopes 33
- Card stock and heavy paper 35

Safety information 36
- Toner safety 36
- Laser safety 37
- Regulatory information 37

Printer features

Table 1. Printer features for the HP LaserJet 4100 series printers

Models	**HP LaserJet 4100 (C8049A):** • 25 pages per minute (ppm) for letter-size paper, and 24 ppm for A4-size paper • 16 megabytes (MB) random-access memory (RAM) • 600-sheets input capacity **HP LaserJet 4100N (C8050A):** Base unit plus the following: • 16 MB RAM (32 MB total) • 10/100BaseT card **HP LaserJet 4100TN (C8051A):** Base unit plus the following: • 16 MB RAM (32 MB total) • 10/100BaseT card • One 500-sheet feeder (1100-sheet input capacity) **HP LaserJet 4100DTN (C8052A):** Base unit plus the following: • 16 MB RAM (32 MB total) • 10/100BaseT card • One 500-sheet feeder (1100-sheet input capacity) • Duplex printing accessory
Accessories	• Stackable 500-sheet feeder with XY size capability • Duplex printing accessory • 75-sheet envelope feeder • 4, 8, 16, 32, 64, and 128 MB dual inline memory modules (DIMMs) • 2 and 4 MB flash DIMMs • LocalTalk/Universal Serial Bus (USB)/Serial and Token Ring EIO cards • Infrared adapter • Enhanced input/output (EIO) hard disk drive • HP Print to Mail (not available in all regions)
Speed	• 25 ppm for letter-size paper, and 24 ppm for A4-size paper • RIP ONCE (rasterized image processing) capability with 16 MB or hard-disk options for faster production • First page out = 12 seconds • 250 MHz RISC processor

Table 1. Printer features for the HP LaserJet 4100 series printers (continued)

Resolution	The printer prints true 1200 dpi and supports the following: • HP ProRes 1200 at full engine speed (PCL6 and PS)—produces 1200-dpi printing for the best quality of graphic images • HP FastRes 1200 (PCL6 only)—produces emulated 1200-dpi print quality for fast, high-quality printing of business text and graphics • 600 dpi with PCL5e and PS • 300 dpi with PCL5e and HP PostScript™ Level 3 emulation (PS)
Typefaces/fonts	110 Scalable TrueType™ (80 built-in, 30 with HP FontSmart, all PCL and PS accessible)
Memory	Standard Memory: • HP LaserJet 4100: 16 MB synchronous dynamic random access memory (SDRAM) standard (installed on a DIMM) • HP LaserJet 4100N/4100TN/4100DTN: 32 MB SDRAM standard (installed on a DIMM) Optional Memory: • 4, 8, 16, 32, 64, and 128 MB SDRAM DIMM • Expandable memory (up to 256 MB) using three DIMM slots
Mass storage options	• 2 and 4 MB flash DIMMs • 2 gigabyte (GB) or larger EIO hard disk
Interface	• Bidirectional (IEEE-1284-compliant) parallel interface • Paper-handling connector (PHC) • 10/100Base-TX Fast Ethernet (4100N/4100TN/4100DTN)
Optional networking	• Enhanced input/output (EIO)—HP JetDirect EIO internal print server network cards • Token Ring (EIO) network cards • Fast Ethernet (10/100Base-TX single RJ-45 port) • HP JetDirect Connectivity card (EIO) for USB, Serial, LocalTalk
Expansion slots	• Three 100-pin DIMM slots • Two EIO slots

Table 1. Printer features for the HP LaserJet 4100 series printers (continued)

Paper trays	**100-sheet tray 1** • Standard and custom sizes: from 76 by 127 mm (3 by 5 inches) to 216 by 356 mm (8.5 by 14 inches) **500-sheet tray 2** • Letter: 216 by 279 mm (8.5 by 11 inches) • A4: 210 by 297 mm (8.3 by 11.7 inches) • Executive: 191 by 267 mm (7.3 by 10.5 inches) • Legal: 216 by 356 mm (8.5 by 14 inches) • B5 (JIS): 182 by 257 mm (7.2 by 10 inches) • A5: 148 by 210 mm (5.8 by 8.2 inches) • Custom sizes: from 148 by 210 mm (5.8 by 8.2 in) to 216 by 356 mm (8.5 by 14 in) **500-sheet tray 3 (HP LaserJet 4100TN/4100DTN)** • Letter: 216 by 279 mm (8.5 by 11 inches) • A4: 210 by 297 mm (8.3 by 11.7 inches) • Executive: 191 by 267 mm (7.3 by 10.5 inches) • Legal: 216 by 356 mm (8.5 by 14 inches) • B5 (JIS): 182 by 257 mm (7.2 by 10 inches) • A5: 148 by 210 mm (5.8 by 8.2 inches) • Custom sizes: from 148 by 210 mm (5.8 by 8.2 in) to 216 by 356 mm (8.5 by 14 in) **Optional 500-sheet tray** • Letter: 216 by 279 mm (8.5 by 11 inches) • A4: 210 by 297 mm (8.3 by 11.7 inches) • Executive: 191 by 267 mm (7.3 by 10.5 inches) • Legal: 216 by 356 mm (8.5 by 14 inches) • B5 (JIS): 182 by 257 mm (7.2 by 10 inches) • A5: 148 by 210 mm (5.8 by 8.2 inches) • Custom sizes: from 148 by 210 mm (5.8 by 8.2 in) to 216 by 356 mm (8.5 by 14 in)
Paper path	Straight-through paper path available.
Output capacity	• 250-sheet top output bin (with bin-full sensor) • 50-sheet rear output bin
Input capacity	• HP LaserJet 4100 and 4100N: hold 600 sheets of paper. • HP LaserJet 4100TN and 4100DTN: hold 1,100 sheets of paper. • Expandable to hold up to 1,600 sheets of paper with optional 500-sheet tray(s); also holds envelopes.
Media handling options	• Duplexer • Envelope feeder (up to 75 envelopes) • 500-sheet tray • HP Print to Mail (not available in all regions)
Media weights	See page 25 through page 27.

Table 1. Printer features for the HP LaserJet 4100 series printers (continued)

HP genuine toner cartridge	• No-shake cartridge design. • HP UltraPrecise toner for crisp, sharp output. • Supplies status page—provides information about the toner gauge, page count, and paper sizes used in the printer.
Printer languages	• HP PCL6 • HP PCL5e • PostScript 3 emulation • Automatic language switching
Duty cycle	Up to 150,000 pages per month.
Expanded support capabilities	Embedded Web server provides remote access and status information.

Product compatibility matrix

Table 2. Product compatibility matrix

		HP LaserJet printer series:		
Product	**Part number**	**4000**	**4050**	**4100**
Envelope feeder	C4122A	●	●	
	C8053A	●	●	●
Duplex printing accessory (duplexer)	C4123A	●	●	
	C8054A	●	●	●
Toner cartridges				
6,000 pages	C4127A	●	●	
10,000 pages	C4127X	●	●	
6,000 pages	C8061A	●	●	●
10,000 pages	C8061X	●	●	●
Paper trays				
500-sheet paper feeder and tray	C4124A	●[1]	●[1]	●[2]
500-sheet paper feeder and tray	C8055A	●[1]	●[1]	●
500-sheet replacement tray	C4125A	●[1]	●[1]	●[2]
500-sheet replacement tray	C8056A	●[1]	●[1]	●
500-sheet standard replacement tray	C3122A	●[3]	●[3]	●[3]
250-sheet standard replacement tray	C4126A	●[1]	●[1]	

1. A5 size is detected as custom size.
2. A5 size is detected as custom size; larger custom sizes might be detected as A5 size.
3. Supports only letter, A4, and legal sizes.

Table 2. Product compatibility matrix

		HP LaserJet printer series:		
Product	**Part number**	**4000**	**4050**	**4100**
Memory				
4 MB extended data out (EDO) DIMM	C4135A	●		
8 MB EDO DIMM	C4136A	●		
16 MB EDO DIMM	C4137A	●		
4 MB SDRAM DIMM	C4140A	●	●	●
8 MB SDRAM DIMM	C4141A	●	●	●
8 MB SDRAM DIMM	C7842A	●	●	●
16 MB SDRAM DIMM	C4142A	●	●	●
16 MB SDRAM DIMM	C7843A	●	●	●
24 MB SDRAM DIMM	C7844A	●	●	●
32 MB SDRAM DIMM	C4143A	●	●	●
32 MB SDRAM DIMM	C7845A	●	●	●
64 MB SDRAM DIMM	C3913A	●	●	●
64 MB SDRAM DIMM	C7846A	●	●	●
128 MB SDRAM DIMM	C9121A			●
2 MB flash DIMM	C4286A	●	●	●
4 MB flash DIMM	C4287A	●	●	●
Font DIMMs				
Traditional Chinese font DIMM (8 MB Asian read-only memory [ROM])	C4292A	●	●	●
Simplified Chinese font DIMM (8 MB Asian ROM)	C4293A	●	●	●
Korean font DIMM (8 MB Asian ROM)	D4838A	●	●	●
Jet Direct EIO cards				
Ethernet RJ-45 only	J3110A	●	●	●
Ethernet RJ-45 and BNC, LocalTalk	J3111A	●	●	●
Token Ring	J4167A	●	●	●
10/100Base-TX	J4169A	●	●	●
USB, LocalTalk, and Serial	J4135A	●	●	●
Fast infrared receiver (FIR) pod	C4103A		●	●
EIO hard disk	C2985B	●	●	●
Preventive maintenance kits, user installable (consumable)				
110 V kit	C7851A	●	●	
220 V kit	C7852A	●	●	
110 V kit	C8057A			●
220 V kit	C8058A			●

Model and serial numbers

The model number and printer serial number are listed on an identification label located under the top cover on the right side of the printer. The model number is alphanumeric, such as C8049A for the HP LaserJet 4100 printer.

The serial number contains information about the country of origin, the revision level, the production code, and production number of the printer. An example of a serial number is USBB123456.

The label also contains power rating and regulatory information as shown in figure 1.

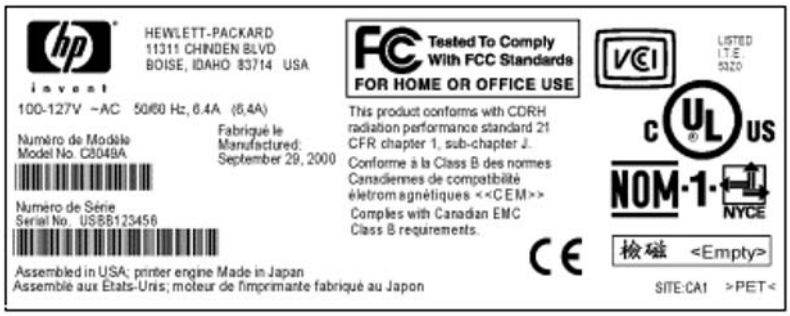

Figure 1. **Sample label**

Site requirements

The following environmental specifications must be maintained to ensure the correct operation of the printer. Consider the following points before installing the printer:

- Install in a well-ventilated, dust-free area.
- Install on a hard, flat, continuous surface, with all four printer feet level. Do not install on carpet or other soft surfaces.
- Ensure adequate power is supplied. Printer power requirements are listed in table 3. Uninterruptable power supplies (UPSs) are not recommended.
- Install where temperature and humidity are stable, away from water sources, humidifiers, air conditioners, refrigerators, or other major appliances. See table 4 for temperature and humidity ranges.
- Install away from direct sunlight, open flames, or ammonia fumes. If the printer is placed near a window, make sure the window has a curtain or blind to block direct sunlight.
- Install with enough space around the printer for access and ventilation.
- Install away from the direct flow of exhaust from air ventilation systems.

Table 3. Electrical specifications for the HP LaserJet 4100 series printers

Volts	Frequency	Circuit Capacity	Watts (W) (typical)
100-127 VAC±10%	50/60 Hz ± 3 Hz	Minimum recommended = 10 amps	printing = 450 W standby = 19 W PowerSave on = 18 W (EPA ENERGY STAR®)
220-240 VAC±10%	50/60 Hz ± 3 Hz	Minimum recommended = 5 amps	printing = 450 W standby = 19 W PowerSave on = 18 W (EPA ENERGY STAR®)

Installation requirements

Install the printer with enough space around it to open trays and bins, install toner, and perform maintenance. If the duplexer is installed, the printer needs 101 mm (4 inches) of ventilation space on the left side (fan side) and rear of the printer.

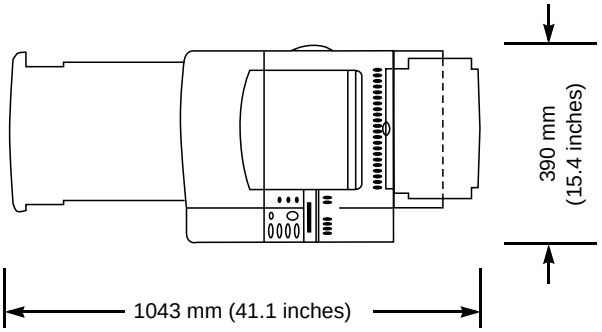

Figure 2. **Top view, HP LaserJet 4100/4100N/4100TN/4100DTN printer with trays and rear output bin open**

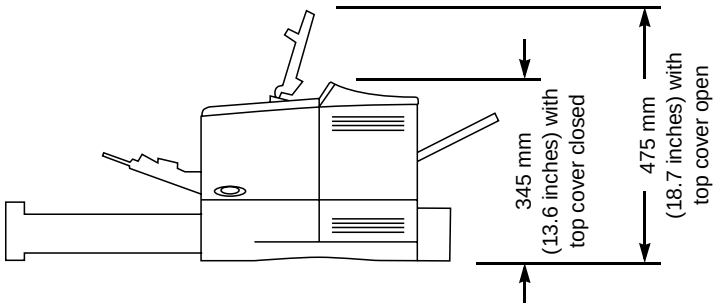

Figure 3. **Side view, HP LaserJet 4100/4100N printer**

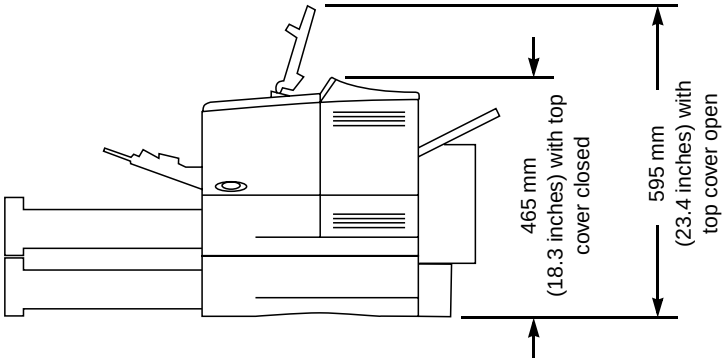

Figure 4. **Side view, HP LaserJet 4100TN/4100DTN printer**

Printer weight (without toner cartridge)

- HP LaserJet 4100/4100N printers: 18 kg (39 lb)
- HP LaserJet 4100TN printer: 25 kg (55 lb)
- HP LaserJet 4100DTN printer: 28 kg (62 lb)

Environmental requirements

Table 4. Printer and toner cartridge environmental conditions

Item	Operating	Storage
Temperature	10° to 32° C (50 to 91° F)	Toner cartridge: 0° to 35°C (32 to 95° F) Printer: -20 to 60°C (-4° to 140° F)
Relative humidity	20 to 80 percent relative humidity (RH) (with no condensation)	10 to 95 percent RH

Table 5. Operating sound power or pressure (Per ISO 9296)

Sound power level	L_{WAd}= 6.6 Bels (A) printing, L_{WAd}= 4.1 Bels (A) idle
Operating position	L_{pAm}= 58 dB (A) printing, L_{pAm}= 32 dB (A) idle
Bystander position	L_{pAm}= 52 dB (A) printing, L_{pAm}= 26 dB (A) idle

Note Testing per International Standards Organization (ISO) 9296/7779

Print media specifications

The following tables show print media specifications for the HP LaserJet 4100 series printer.

Table 6. Print media specifications, tray 1

Supported media	Dimensions[1]	Weight	Capacity[2]
Minimum size (custom[3])	76 by 127 mm (3 by 5 inches)	60 to 199 g/m^2 (16 to 53 lb)	100 sheets of 75 g/m^2 (20 lb) paper
Maximum size (custom[3])	216 by 356 mm (8.5 by 14 inches)		
Transparencies	Same as minimum and maximum paper sizes listed above	Thickness: 0.10 to 0.11 mm (0.0039 to 0.0043 inch)	50 transparencies
Labels		Thickness: 0.13 to 0.18 mm (0.005 to 0.007 inch)	50 labels
Envelopes		75 to 105 g/m^2 (20 to 28 lb)	10 envelopes

1. The printer supports a wide range of print media sizes. Check the printer software for supported sizes. To print custom-size media, see the user guide.

2. Capacity can vary depending on media weight and thickness, and environmental conditions.

3. Custom media must be fed short-edge first (portrait).

Table 7. Print media specifications, trays 2, 3, and 4

Supported media	Dimensions[1]	Weight	Capacity[2]
Letter	216 by 279 mm (8.5 by 11 inches)	60 to 105 g/m^2 (16 to 28 lb)	500 sheets of 75 g/m^2 (20 lb) paper or 50 transparencies
A4	210 by 297 mm (8.3 by 11.7 inches)		
Executive	191 by 267 mm (7.3 by 10.5 inches)		
Executive (JIS) (custom[3])	216 by 330 mm (8.5 by 13 inches)		
16K (custom[3])	197 by 273 mm (7.75 by 10.75 inches)		
Legal	216 by 356 mm (8.5 by 14 inches)		
B5 (ISO) (custom[3])	176 by 250 mm (6.9 by 9.9 inches)		
B5 (JIS)	182 by 257 mm (7.2 by 10 inches)		
A5	148 by 210 mm (5.8 by 8.2 inches)		
Custom[3]	148 by 210 mm to 216 by 356 mm (5.8 by 8.2 inches to 8.5 by 14 inches)		

1. The printer supports a wide range of print media sizes. Check the printer software for supported sizes. To print custom-size media, see the user guide.

2. Capacity can vary depending on media weight and thickness, and environmental conditions.

3. Custom media must be fed short-edge first (portrait).

Table 8. Print media specifications, optional envelope feeder

Supported envelope	Dimensions	Weight	Capacity[1]
Monarch (#7 3/4)	98.4 by 190.5 mm (3.88 by 7.50 inches)	75 to 105 g/m2 (20 to 28 lb)	75 envelopes
Commercial 10 (#10)	104.9 by 241.3 mm (4.13 by 9.5 inches)		
DL ISO	110 by 220 mm (4.33 by 8.66 inches)		
C5 ISO	162 by 229 mm (6.38 by 9.02 inches)		
B5 ISO	176 by 250 mm (6.93 by 9.84 inches)		

1. Capacity can vary depending on media weight and thickness, and environmental conditions.

Table 9. Print media specifications, optional duplexer

Supported media	Dimensions	Weight
Letter	216 by 279 mm (8.5 by 11 inches)	60 to 105 g/m2 (16 to 28 lb)
A4	210 by 297 mm (8.3 by 11.7 inches)	
Executive	184 by 267 mm (7.3 by 10.5 inches)	
Legal	216 by 356 mm (8.5 by 14 inches)	
B5 (JIS)	182 by 257 mm (7.2 by 10 inches)	

Product: 2001 HP Color LaserJet 4100 Series Printer Service Repair Workshop Manual
Full Download: https://www.arepairmanual.com/downloads/2001-hp-color-laserjet-4100-series-printer-service-repair-workshop-manual/

Supported types of print media

The printer supports the following types of print media:

- plain
- letterhead
- prepunched
- bond
- color
- rough
- preprinted
- transparency (see page 32)
- labels (see page 31)
- recycled
- card stock

Note Transparencies and labels must be specified for use in laser printers.

Sample of manual. Download All 336 pages at:
https://www.arepairmanual.com/downloads/2001-hp-color-laserjet-4100-series-printer-service-repair-workshop-manual/