

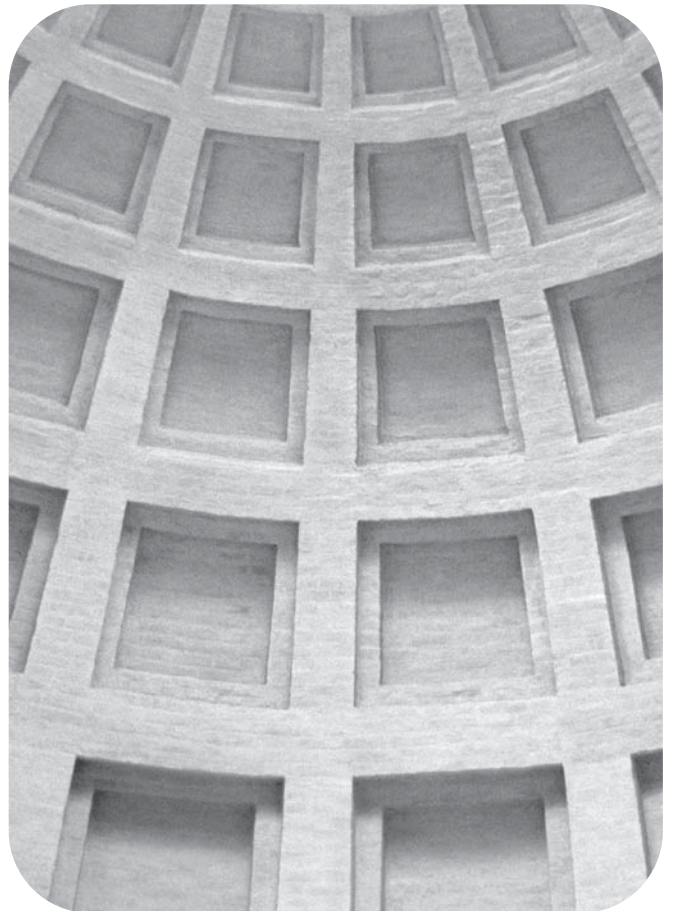
For the complete PDF manual
please visit www.LaserPros.com.



HP color LaserJet
5500/5550 Printers



Service



HP Color LaserJet 5500/5550 Printers

Service Manual _____

© 2005 Copyright Hewlett-Packard
Development Company, L.P.

Reproduction, adaptation or translation
without prior written permission is
prohibited, except as allowed under the
copyright laws.

The information contained herein is subject
to change without notice.

The only warranties for HP products and
services are set forth in the express
warranty statements accompanying such
products and services. Nothing herein
should be construed as constituting an
additional warranty. HP shall not be liable
for technical or editorial errors or omissions
contained herein.

Part number: Q3713-90965

Edition 1, 1/2005

Trademark Credits

Adobe and Adobe Photoshop are
trademarks of Adobe Systems Incorporated.

CorelDRAW™ is a trademark of Corel
Corporation or Corel Corporation Limited.

Microsoft® is a U.S. registered trademark
of Microsoft Corporation.

Netscape is a U.S trademark of Netscape
Communications Corporation.

PANTONE® Pantone, Inc.'s check-
standard trademark for color.

PostScript is a trademark of Adobe
Systems, Incorporated, which may be
registered in certain jurisdictions.

TrueType is a U.S. trademark of Apple
Computer, Inc.

UNIX is a registered trademark of the Open
Group.

Windows, MS Windows, and Windows NT
are U.S. registered trademarks of Microsoft
Corporation.

Table of contents

1 Printer description

Model Configurations	3
The HP Color LaserJet 5500 series printer	3
Performance, memory, and other printer features	6
Identification	9
Model and serial numbers	9
HP Color LaserJet 5500 models	11
HP Color LaserJet 5550 models	12
Printer specifications	13
Supply storage requirements (HP Color LaserJet 5500 series)	15
Product information	16
Product information	16
Electrical specifications (HP Color LaserJet 5500 models)	16
Electrical specifications (HP Color LaserJet 5550 models)	17
Media requirements	19
Selecting print media	19
Media specifications	19
Supported media weights and sizes (HP Color LaserJet 5500 models)	19
Supported paper weights and sizes (HP Color LaserJet 5550 models)	22
Media specifications for 2-sided (duplex) printing	25
Media to avoid	25
Media that may cause damage to the printer	26
Printing on special media	26
Transparencies	26
Printing on transparencies	26
Glossy paper	27
Colored paper	27
Heavy paper	27
Printing images (HP Color LaserJet 5550 models)	28
Envelopes	28
Labels	29
HP LaserJet Tough paper	29
Preprinted forms and letterhead	29
Recycled paper	30
Weight equivalence table	30
Hewlett-Packard warranty statement	32
Limited warranty for print cartridge life	33
HP's Premium Protection Warranty. Color LaserJet Image Fuser Kit and Image Transfer Kit Limited Warranty Statement	34
Declaration of Conformity	35
Safety information	37
Laser safety statement	37
Canadian DOC regulations	37
EMI statement (Korea)	38
VCCI statement (Japan)	38
Laser Statement for Finland	39

Toner safety	40
--------------------	----

2 Service approach

Chapter contents	41
Service approach	42
Parts and supplies	43
Ordering parts	43
By phone:	43
By mail:	43
Ordering supplies	43
Ordering parts, supplies, and accessories over the Internet	43
Ordering directly through the embedded Web server (for printers with network connections)	43
Ordering directly through the HP Toolbox software (HP Color LaserJet 5550 model only)	44
Exchange program	44
Supplies	44
World Wide Web	44
HP service parts information compact disc	45
HP support assistant compact disc	45
Customer care reseller sales and service support center	45
HP service agreements	45
Other areas	45
HP customer care	45
Ordering related documentation and software	46
HP maintenance agreements	48
On-site service agreements	48
Priority on-site service	48
Next-day on-site service	48
Weekly (volume) on-site service	48

3 Installation and configuration

Site requirements	51
Space requirements	52
500-sheet paper feeder dimensions	52
Printer stand dimensions	52
Unpack the printer	53
Package contents	53
Unpacking the HP Color LaserJet 5500 series printer (for base models 5500n and 5500dn)	54
Unpacking the HP Color LaserJet 5500/5550dtn and 5500/5550hdn models	58
Installing print cartridges for HP Color LaserJet 5500 series printers	62
Installing print cartridges (HP Color LaserJet 5500 series models)	62
Installing paper trays (HP Color LaserJet 5500 series printers)	64
Installing accessories (HP Color LaserJet 5500 series printers)	66
Installing optional printer stand (HP Color LaserJet 5500 series printers)	69
Installing a new overlay (HP Color LaserJet 5500 models)	70
Installing a new control panel label (HP Color LaserJet 5550 models)	71
Testing the printer operation	73
Using PowerSave	73
Connecting to a computer	75
Parallel connections	75
USB configuration (HP Color LaserJet 5550 models)	76
Auxiliary connection configuration (HP Color LaserJet 5550 models)	76
Network connections	77

Enhanced I/O (EIO) configuration	79
HP Jetdirect print servers	79
Available enhanced I/O interfaces	79
NetWare networks	79
Windows and Windows NT networks	80
AppleTalk networks	80
LocalTalk configuration	80
LocalTalk network configuration	80
UNIX/Linux networks	80
Wireless printing	81
IEEE 802.11b standard	81
Bluetooth	81
Printer drivers	82
Available drivers	82
Additional drivers	83
Select the right printer driver for your needs	83
Printer driver Help	84
Software for Macintosh computers	85
PPDs	85
HP LaserJet Utility	85
Installing the printing system software	86
Installing Windows printing system software for direct connections	86
Installing Windows printing system software for networks	87
To set up Windows-sharing to use the printer on a network	87
Installing Macintosh printing system software for networks	88
Installing Macintosh printing system software for direct connections (USB, HP Color LaserJet 5550 models)	89
Installing the software after the parallel or USB cable has been connected	90
Network configuration	92
Configuring Novell NetWare frame type parameters	92
HP Web Jetadmin	93
UNIX	93
Utilities	93
Embedded Web server	94
Configuring TCP/IP parameters	96
Setting network security on the printer	102
Locking the control panel	102
Using an ASCII PJI escape sequence to set network security	103

4 Printer maintenance

Cleaning the printer and accessories	106
Cleaning spilled toner	106
Vacuum specifications	106
Periodic cleaning	108
Cleaning the static discharge comb	108
Cleaning the OHT sensor	109
Approximate replacement intervals for supply items	111
ETB life under different circumstances	113
Locating supplies	114
Replacing supply items	115
Changing print cartridges	115
Replacing the transfer unit (ETB)	117
Replacing the transfer unit when it is not at end of life	118
Replacing the fuser	119
Replacing the fuser when it is not at end of life	120

Printer memory (HP Color LaserJet 5500 models)	122
To print a configuration page	122
Installing memory and font DIMMs (for HP Color LaserJet 5500 models)	122
Installing DDR memory DIMMs (for HP Color LaserJet 5550 models)	125
Enabling memory (HP Color LaserJet 5500 models)	128
Enabling the language font DIMM (HP Color LaserJet 5550 models)	128
Enabling the language font DIMM (HP Color LaserJet 5500 models)	129
Checking DIMM installation (HP Color LaserJet 5500 models)	129
Installing an HP Jetdirect print server card	129

5 Theory of operation

Basic operation	135
Operation sequence	135
Engine control system	137
DC controller circuit	137
Motors and fans	139
Fuser power supply circuit	141
Heater temperature control	142
Heater temperature control (HP Color LaserJet 5550 models)	143
Failure detection (HP Color LaserJet 5550 models)	144
High-voltage power supply	144
Low-voltage power supply	145
Formatter system	146
PowerSave	146
Input/Output	147
Printer memory	148
Read-only memory	148
Random-access memory	148
Firmware DIMM (HP Color LaserJet 5500 models)	148
Firmware compact flash (HP Color LaserJet 5550 models)	148
Nonvolatile memory	148
PJM overview	149
PML	149
Control panel	149
Laser/scanner system	150
Scanner motor control	151
Image formation system	152
Image formation process	153
Print cartridges	155
Toner level detection	156
Electrostatic transfer/transport belt (ETB) unit	160
Electrostatic latent image formation block	161
Development block	163
Transfer block	164
Fusing block	165
Fuser motor speed control	166
Cleaning block	166
Calibration and cleaning	167
Color plane registration calibration	171
Drum phase calibration	172
Image stabilization control	172
Pickup/feed system	175
Pickup/feed unit	178
Fuser/delivery unit	185
Duplex feed unit	186

500-sheet paper feeder	187
Pickup and feed operations	187

6 Removal and replacement

Introduction	191
Removal and replacement strategy	191
Repair notices	191
Caution regarding electrostatic discharge (ESD)	191
Required tools	191
Types of screws	192
Supplies	194
Print cartridges and ETB	194
Covers and external components	196
Rear cover	196
Top cover	196
Rear top cover	197
Left cover	198
Right cover	199
Reinstallation tip	200
Multi-purpose tray (Tray 1)	200
Front cover	201
Control panel	202
Cassette cover	204
Internal components (front)	205
Paper pickup unit	205
Cassette sensor PCB	206
Multi-purpose tray sensor PCB	206
Paper pickup drive unit	207
Lifter drive unit	208
Cassette (Tray 2) paper pickup and feed rollers	210
Solenoid and clutch	211
Cassette separation roller	212
Multi-purpose tray pickup roller	213
Multi-purpose tray separation pad	214
Color registration detection unit	214
Internal components (left side)	216
DC controller shield	216
Environment sensor (HP Color LaserJet 5550 models)	216
Memory tag antenna PCBs	217
E-label memory controller PCB	223
DC controller PCB	224
Cassette paper size detection switches	225
Power supply fan	226
Internal components (rear)	228
Formatter	228
Low-voltage power supply	229
Formatter case	231
Laser/scanner units	233
Internal components (right side)	239
High-voltage power supply PCB	239
Toner level detection PCB	240
High-voltage contact blocks	241
Door switch	242
Internal components (top)	244
Discharging PCB	244

Fuser power supply PCB	245
Fuser drive unit	246
Fuser inlet paper sensor	249
Fuser delivery sensor and output bin full sensor	250
Static discharge comb	252
Formatter fan	253
Cartridge fan	253
Optional 500-sheet paper feeder	255
Paper feeder left cover	255
Paper feeder right cover	256
Paper feeder pickup and feed rollers	257
Paper feeder separation roller	257
Paper feeder pickup unit	257
Paper feeder lifter drive unit	259
Paper feeder length and width detection switches	260
Paper feeder pickup clutch	261
Paper feeder PCB	262

7 Troubleshooting

Introduction	266
Troubleshooting process	267
Pre-troubleshooting checklist	267
Troubleshooting flowchart	268
Troubleshooting flowchart (continued)	270
Troubleshooting power-on	270
Printer error troubleshooting	272
Status messages	272
Warning messages	272
Error messages	272
Critical error messages	272
Alphabetical printer messages	273
Numerical printer messages	302
Replacement parts configuration (HP Color LaserJet 5550 models)	341
Both the formatter and DC controller	341
Formatter (new or previously installed in another printer)	341
DC controller (new or previously installed in another printer)	342
Paper path troubleshooting	343
Jams	343
Jam locations	343
Jam locations by error message	343
Jam recovery	345
Avoiding paper jams	346
Persistent jams	347
Basic troubleshooting for paper jams	347
Data collection	347
General paper path troubleshooting	348
Paper path checklist	348
Paper transport troubleshooting	354
Paper is wrinkled or folded	354
Image formation troubleshooting	356
Print quality problems associated with media	356
Overhead transparency defects	356
Print quality problems associated with the environment	357
Print quality problems associated with jams	357
Print quality troubleshooting pages	357

Understanding color variations	358
Print quality defect chart	363
Image defects	369
Light image	370
Light color	370
Dark image	371
Dark color	372
Completely blank image	372
All black or solid color	372
Dots in vertical lines	373
Dirt on back of paper	373
Dirt on front of paper	374
Vertical lines	374
White vertical lines	375
Horizontal lines	375
White horizontal lines	376
Missing color	376
Blank spots	377
Poor fusing	377
Distortion or blurring	378
Smearing	378
Misplaced image	379
Repetitive defects troubleshooting	380
Interface troubleshooting	383
Communications checks	383
EIO troubleshooting	383
AUTOEXEC.BAT standard configurations	383
Printer Job Language (PJL) commands	384
Control panel troubleshooting	387
Printing a menu map	387
Information menu	388
Paper handling menu	389
Configure device menu	389
Printing menu	390
Print quality menu	393
System setup menu	395
I/O menu	401
Resets menu	402
Diagnostics menu	402
Service menu	404
Tools for troubleshooting	406
Embedded Web server	406
To access the embedded Web server	406
Information tab	407
Settings tab	407
Networking tab	408
Other links	408
Using the HP Toolbox (HP Color LaserJet 5550 models)	408
Printer Status and Alerts software	411
To choose which status messages appear	412
To view status messages and information	412
Printer configuration page	412
Supplies status page	414
Usage page	415
Event log	417
Print the file directory page	418

Print the PCL font list page	419
Print the PS font list page	420
Print the RGB samples page (HP Color LaserJet 5550 models)	421
Print the CMYK samples page (HP Color LaserJet 5550 models)	422
Diagnostics	423
LED diagnostics	423
Engine diagnostics	425
Diagnostics from the control panel	426
Test pages	439
Engine test page	439
Formatter test page	439
Engine resets	440
Cold reset	440
NVRAM initialization	440
Hard disk initialization	441
Calibration bypass	441
Calibrate now (HP Color LaserJet 5500 models only)	442
Full calibrate now (HP Color LaserJet 5550 models)	443
Quick calibrate now (HP Color LaserJet 5550 models)	444
Service menu	445
Accessing the Service menu	445
Clear event log	445
Total page count	445
Transfer kit count	445
Fuser kit count	445
Serial number	445
Service ID	446
Cold reset paper	447
Diagrams	448
Main parts	448
Switches	450
Solenoid and clutch	451
Motors and fans	452
PCBs	453
DC controller PCB	454
Connectors	455
500-sheet paper feeder connectors	458
General circuit diagram	459
500-sheet paper feeder circuit diagram	460

8 Parts and diagrams

Introduction	462
Ordering parts	463
Supplies and accessories	463
Common fasteners	468
Illustrations and parts lists (printer)	470
Illustrations and parts lists (500-sheet paper feeder)	520
Alphabetical parts list.....	534
Numerical parts list.....	543

Index

For the complete PDF manual
please visit www.LaserPros.com.