

For the complete PDF manual  
please visit [www.LaserPros.com](http://www.LaserPros.com).



**hp** LaserJet 3200/3200m  
printer • fax • copier • scanner

**service  
manual**

**LaserJet  
all-in-one**





HP LaserJet 3200 product  
HP LaserJet 3200M product

**Service manual**

### Copyright Information

© 2002 Hewlett-Packard Company

All Rights Reserved.  
Reproduction, adaptations, or translation without prior written permission is prohibited except as allowed under copyright laws.

Part number C7052-90930  
Second edition, February 2002  
Printed in USA

### Warranty

The information contained in this document is subject to change without notice.

Hewlett-Packard makes no warranty of any kind with respect to this information. HEWLETT-PACKARD SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Hewlett-Packard shall not be liable for any direct, indirect, incidental, consequential, or other damage alleged in connection with the furnishing or use of this information.

NOTICE TO U.S. GOVERNMENT USERS: RESTRICTED RIGHTS COMMERCIAL COMPUTER SOFTWARE: "Use, duplication, or disclosure by the Government is subject to restrictions as set forth in subparagraph (c) (1)(ii) of the Rights in Technical Data Clause at DFARS 52.227-7013."

Hewlett-Packard Company  
11311 Chinden Boulevard  
Boise, Idaho 83714 U.S.A.

### Trademark Credits

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

ENERGY STAR is a U.S. registered service mark of the U.S. EPA.

All other products mentioned herein may be trademarks of their respective companies.

### This product is approved for use only in the country in which it was purchased.

Local country laws may prohibit the use of this product outside of the countries specified. It is strictly forbidden by law in most countries to connect nonapproved telecommunications equipment (fax machines) to public telephone networks.



### Safety Information

#### WARNING!

#### Potential Shock Hazard

Always follow basic safety precautions when using this product to reduce risk of injury from fire or electric shock.

- 1 Read and understand all instructions in the user guide.
- 2 Observe all warnings and instructions marked on the product.

- 3 Use only a grounded electrical outlet when connecting the product to a power source. If you don't know whether the outlet is grounded, check with a qualified electrician.
- 4 Do not touch the contacts on the end of the telephone cord or any of the sockets on the product. Replace damaged cords immediately.
- 5 Never install telephone wiring during a lightning storm.
- 6 Unplug this product from wall outlets and telephone jacks before cleaning.
- 7 Do not install or use this product near water or when you are wet.
- 8 Install the product securely on a stable surface.
- 9 Install the product in a protected location where no one can step on or trip over the line cord and the line cord will not be damaged.
- 10 If the product does not operate normally, see the online user guide.
- 11 Refer all servicing questions to qualified personnel.

Information regarding FCC Class B, Parts 15 and 68 requirements can be found in the *user guide*.

# Contents

## 1 Product information

Introduction . . . . .	14
Hardware description . . . . .	14
Firmware description . . . . .	15
Product specifications . . . . .	16
Model and serial numbers . . . . .	19
Product overview . . . . .	20
Warranty statement . . . . .	23
Hewlett-Packard limited warranty statement . . . . .	23
Declaration of Conformity . . . . .	25
Toner cartridge information . . . . .	26
Additional product stewardship . . . . .	27
Environmental conformity . . . . .	27

## 2 Installation and operation

Operating environment . . . . .	30
Identifying product components . . . . .	31
Control panel lights and keys . . . . .	31
Using the control panel menu structure . . . . .	33
Control panel error messages . . . . .	35
Selecting media . . . . .	43
Selecting media to print . . . . .	43
Selecting media to fax, copy, or scan . . . . .	44
Loading media . . . . .	45
Loading media to fax, copy, or scan . . . . .	45
Loading media to be printed . . . . .	48
Selecting the output path . . . . .	50

## 3 Maintenance

Life expectancies of consumables . . . . .	52
Cleaning and maintaining the equipment . . . . .	53
Cleaning the product . . . . .	54
Cleaning the scanner path . . . . .	57
Recalibrating the scanner . . . . .	59
User-replaceable parts . . . . .	60

## 4 Operational overview

Basic functions	62
Optical system	63
Formatter system	65
Control panel	66
Draft mode	66
MEt	66
Enhanced I/O	66
Page Protect	67
PJM Overview	67
Printer functions	68
Engine control unit/power system	69
Image formation system	74
Printer paper feed system	77
Basic sequence of operation (formatter-to-printer)	82

## 5 Removal and replacement

Removal and replacement strategy	87
Required tools	87
Parts removal order	88
Covers	89
DIMMs	89
Back cover	90
Right side cover	91
Left side cover	93
Internal paper guide	94
Top cover	95
Document scanner assemblies	96
Printer door	96
Document scanner assembly	100
Contact image sensor	103
Document scanner pickup roller	105
Document scanner separation pad	106
Document scanner motor	107
Upper guide assembly	108
Control panel/scanner board	112
Internal assemblies	113
Laser/scanner assembly	113
Output roller	114
Delivery assembly	116
Paper exit-sensor flag	118
Fusing element	119

Gear train motor . . . . .	124
Solenoid . . . . .	127
Pressure roller . . . . .	128
Transfer roller . . . . .	130
Pickup roller . . . . .	131
Paper-pickup assembly . . . . .	132
Kick plate . . . . .	134
Separation pad . . . . .	135
Bottom assemblies . . . . .	137
Formatter pan . . . . .	137
Formatter and LIU . . . . .	138
ECU pan . . . . .	139
Paper-feed assembly . . . . .	141

## 6 Troubleshooting

Basic troubleshooting . . . . .	146
Errors . . . . .	149
Image formation troubleshooting . . . . .	155
Checking the toner cartridge . . . . .	155
Solving image-quality problems . . . . .	156
Solving paper feed problems . . . . .	162
Functional checks . . . . .	165
Engine test . . . . .	165
Half-self-test functional check . . . . .	166
Drum rotation functional check . . . . .	167
Heating element check . . . . .	168
High-voltage power supply check . . . . .	169
Paper path check . . . . .	171
Service mode functions . . . . .	172
Secondary service menu . . . . .	172
Developer's menu . . . . .	173
Diagnostic mode . . . . .	181
NVRAM init . . . . .	183
PJL software commands . . . . .	183
Troubleshooting tools . . . . .	186
Internal reports . . . . .	186
Printing all fax reports at once . . . . .	187
T.30 protocol trace . . . . .	188
Repetitive image defect ruler . . . . .	207
Document scanner recalibration . . . . .	208
Main wiring . . . . .	210
Locations of connectors . . . . .	212

## 7 Parts and diagrams

Ordering parts and supplies . . . . .	216
Parts . . . . .	216
Parts exchange program . . . . .	217
Related documentation and software . . . . .	217
Consumables . . . . .	217
Accessories . . . . .	218
How to use the parts lists and diagrams . . . . .	219
Common hardware . . . . .	220
Assembly locations . . . . .	221
Covers . . . . .	222
Trays and bins . . . . .	223
External covers and panels . . . . .	225
Document scanner assemblies . . . . .	226
Document scanner assemblies . . . . .	227
Document feeder . . . . .	229
Upper guide assembly . . . . .	231
Internal assemblies . . . . .	232
Internal components (1 of 4) . . . . .	233
Internal components (2 of 4) . . . . .	235
Internal components (3 of 4) . . . . .	237
Internal components (4 of 4) . . . . .	239
Feed assembly . . . . .	241
Electrical components . . . . .	243
Alphabetical parts list . . . . .	244
Numerical parts list . . . . .	249

For the complete PDF manual  
please visit [www.LaserPros.com](http://www.LaserPros.com).