HEWLETT PACKARD

Expanding Possibilities

HP LaserJet 3100/3150

Service Manual

HP LaserJet 3100/3150 Product

Service Manual

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1 Product Information

Chapter contents

Introduction

The HP LaserJet 3100/3150 product is a powerful business tool with the capabilities of a full range of office equipment. With the HP LaserJet 3100/3150 product, you can:

- Print—Easily print documents with the laser quality you have come to expect from an HP LaserJet printer.
- Fax—Use the HP LaserJet 3100/3150 product as a standalone fax machine to send and receive faxes, as well as perform advanced tasks such as forwarding faxes to other locations. Use the software to send faxes from and receive them to your computer.
- Copy—Make superior laser-quality copies. You can make up to 99 copies of a 30-page original. You can also enlarge, reduce, adjust contrast and collate.
- Scan—Scan important documents to create electronic files.
- Use Software—Use the software to print, fax, copy, or scan. Also use the software to store and organize scanned documents.

Product features

Table 1. Product features

Feature	Description
Print speed	6 pages per minute (ppm)
Copy speed	6 ppm
Fax transmission speed	6 seconds per page
Margins for scanned items	0.16 in (4.06 mm) at leading and trailing edges 0.12 in (3.05 mm) at sides
Margins for printed pages	0.20 in (5.08 mm) at sides 0.25 in (6.35 mm) at leading and trailing edges
Fax compatibility	International Telecommunications Union (ITU) Group 3
Fax coding schemes	MR, MMR, MH, and JBIG
Modem speed	14,400 bits per second (bps)
Speed dialing	Yes
Distinctive ring detect	Yes
Multiple copies	Up to 99 per job
Copy Reduction/ Enlargement	50% to 200%
Memory	2 megabytes (MB) (approximately 150 pages)
Printer Duty Cycle	6,000 single-sided pages per month
Document Scanner Duty Cycle	2,500 single-sided items per month

Product specifications

Table 2. Physical specifications

Category	Specification
Height	10.71 in (272 mm) without supports attached; 15.91 in (404 mm) with supports attached
Depth	15.36 in (390 mm) without supports attached; 23.55 in (598 mm) with supports attached
Width	15.12 in (384 mm)
Weight (cartridge installed)	23.37 pounds (10.6 kilograms)

Table 3. Performance specifications

Category	Specification
Print resolution	600 dots per inch (dpi)
Scan resolution	600 dpi enhanced; 300 dpi optical, with 256 levels of gray
Fax resolution	Standard: 203 by 98 dpi Fine: 203 by 196 dpi Superfine: 300 by 300 dpi (no halftone) Photo: 300 by 300 dpi (halftone enabled)
Print speed	6 ppm
Copy speed	6 ppm

Table 4. Power specifications

Category	Specification
Power requirements	100 to 127 Volts alternating current (Vac) +/-10%; 50 to 60 hertz 220 to 240 Vac +/-10%; 50 hertz
Power consumption (in continuous copy mode)	135 watts
Power consumption (idle)	9 watts
Minimum recommended circuit capacity	4.2 amps (110 volts) 2 amps (220 volts) (4.2 amps maximum pull)

Table 5. Operating acoustical emissions (per ISO 9296) specifications

Category	Specification
Sound Power Level, L_{WAd} (1 bel = 10 decibels)	5.7 bels (B)
Sound Pressure Level, L_{pAm} (Operator Position)	52 decibels (dB)
Sound Pressure Level, L_{pAm} (Bystander Position)	43 dB

Table 6. Skew specifications

Category	Specification
Print skew—left	0.6% (1.5 mm over 250 mm in length)
Print skew—right angle accuracy	0.64% (1.2 mm over 190 mm in width)
Scan skew	1.2%

Model and serial numbers

The model number and serial number are listed on an identification label located on the back of the printer.

- HP LaserJet 3100 product Model number C3948A
- HP LaserJet 3150 product Model number C4256A

The serial number contains information about the Country of Origin, the Revision Level, the Production Code, and production number of the HP LaserJet 3100/3150 product.

The label also contains power rating and regulatory information. The label shown in Figure 1 below is a label from an HP LaserJet 3100 product.

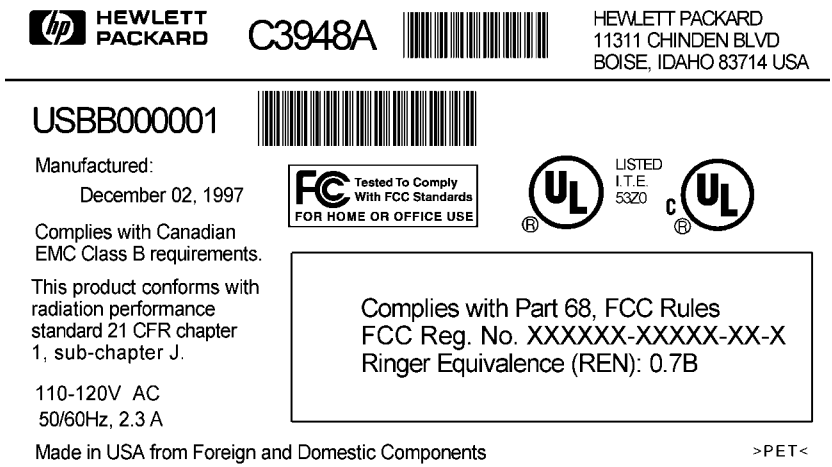

Figure 1. Model and serial number label

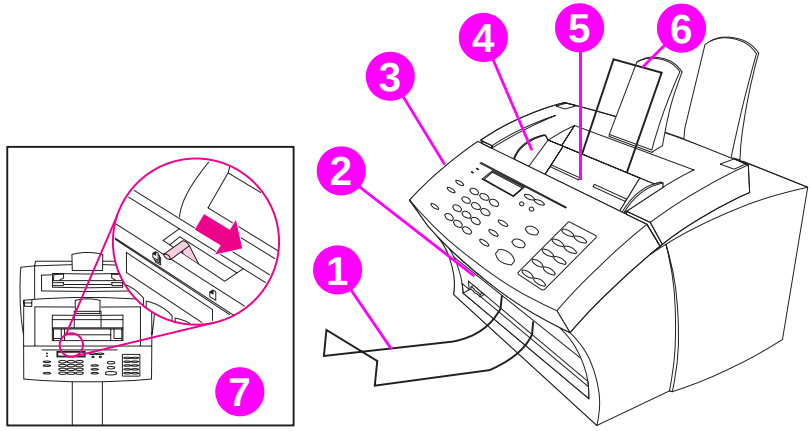

Figure 2. Document scanner path

1 Document output support

2 Document output slot

3 Document release door/control panel

4 Document feeder tray guides

5 Document feeder tray

6 Document feeder support

7 Special media lever

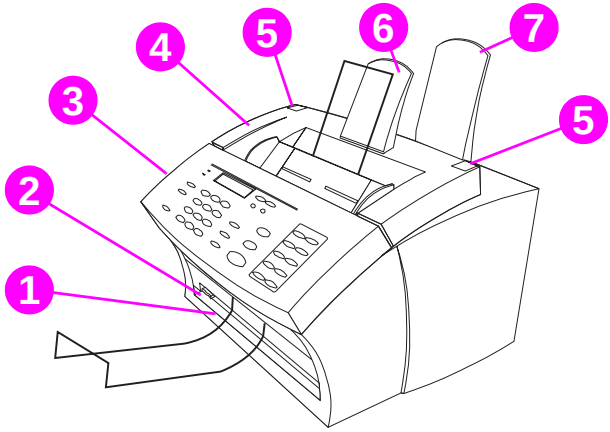

Figure 3. Printer path (1 of 2)

1 Front paper output

2 Paper path lever

3 Control panel

4 Printer door

5 Printer door release latches

6 Paper output support

7 Paper input support

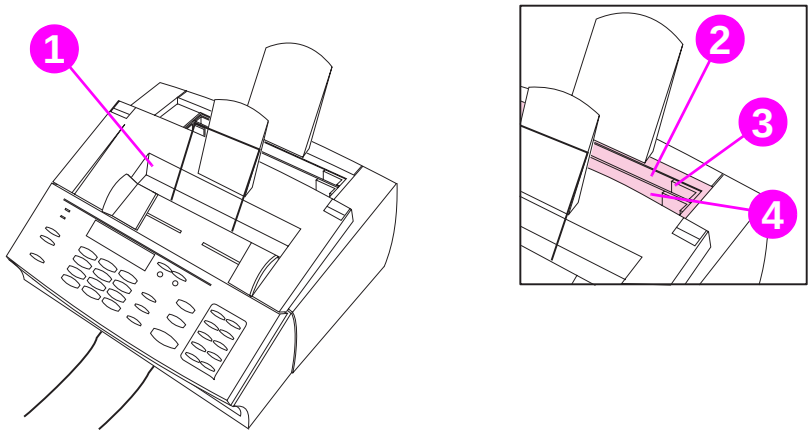

Figure 4. Printer path (2 of 2)

1 Output bin

2 Input bin

3 Paper guides

4 Single-sheet input slot

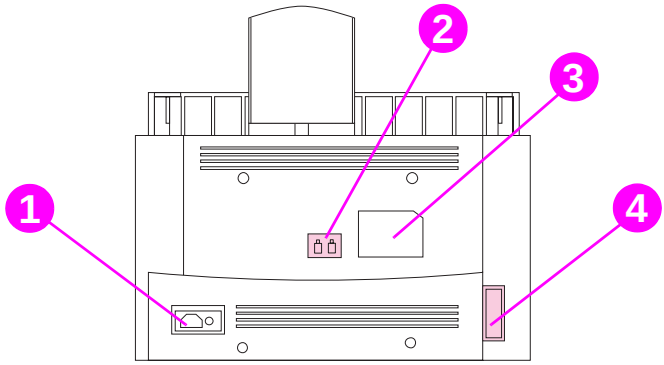

Figure 5. Rear view

1 Power cable connector

2 Phone line connector (or connectors, depending on country)

3 Model and serial number label

4 Parallel cable connector

Regulatory information

Safety

Transportation

Non-operating Magnetic Field Emissions, IATA Packaging Instructions 902

Laser safety statement

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration has implemented regulations for laser products manufactured since August 1, 1976. Compliance is mandatory for products marketed in the United States. This printer is certified as a “Class 1” laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. Since radiation emitted inside this printer is completely confined within protective housings and external covers, the laser beam cannot escape during any phase of normal user operation.

WARNING! Using controls, making adjustments, or performing procedures other than those specified in this manual may result in exposure to hazardous radiation.

Laser statement for Finland

Luokan 1 laserlaite

Klass 1 Laser Apparat

HP LaserJet 3100/3150 laserkirjoitin on käyttäjän kannalta turvallinen luokan 1 laserlaite. Normaalissa käytössä kirjoittimen suojakotelointi estää lasersäteen pääsyn laitteen ulkopuolelle.Laitteen turvallisuusluokka on määritetty standardin EN 60825-1 (1994) mukaisesti.

Varoitus!

Laitteen käyttäminen muulla kuin käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

Varning!

Om apparaten används på annat sätt än i bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

HUOLTO
HP LaserJet 3100/3150 -kirjoittimen sisällä ei ole käyttäjän huollettavissa olevia kohteita. Laitteen saa avata ja huoltaa ainoastaan sen huoltamiseen koulutettu henkilö. Tällaiseksi huoltotoimenpiteeksi ei katsota väriainekasetin vaihtamista, paperiradan puhdistusta tai muita käyttäjän käsikirjassa lueteltuja, käyttäjän tehtäväksi tarkoitettuja ylläpitotoimia, jotka voidaan suorittaa ilman erikoistyökaluja.

Varo!

Mikäli kirjoittimen suojakotelo avataan, olet alttiina näkymättömälle lasersäteilylle laitteen ollessa toiminnassa. Älä katso säteeseen.

Varning!

Om laserprinterns skyddshölje öppnas då apparaten är i funktion, utsättas användaren för osynlig laserstrålning. Betrakta ej strålen.

Tiedot laitteessa käytettävän laserdiodin säteilyominaisuuksista:

Aallonpituus 775-795 nm
Teho 5 mW
Luokan 3B laser

FCC regulations

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If is not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase separation between equipment and receiver.
- Connect equipment to an outlet on a circuit different from that to which the receiver is located.
- Consult your dealer or an experienced radio/TV technician.

Note Any changes or modifications to the printer that are not expressly approved by HP could void the user's authority to operate this equipment.

Note Use of a shielded interface cable is required to comply with the Class B limits of Part 15 of FCC rules.

FCC part 68 requirements

This equipment complies with FCC rules, Part 68. On the back of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all, areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

This equipment uses the following USOC jacks:

RJ11C

An FCC-compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant.

This equipment cannot be used on telephone company-provided coin service. Connection to Party Line Service is subject to state tariffs.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

If trouble is experienced with this equipment, please see the numbers in the front of this manual for repair and (or) warranty information.

If the trouble is causing harm to the telephone network, the telephone company may request you remove the equipment from the network until the problem is resolved.

The following repairs can be done by the customer:

Replace any original equipment that came with the HP LaserJet 3100/3150 product. This includes the toner cartridge, the supports for trays and bins, the power cord and the telephone cord.

It is recommended that the customer install an AC surge arrestor in the AC outlet to which this device is connected. This is to avoid damage to the equipment caused by local lightning strikes and other electrical surges.

Telephone consumer protection act (U.S.)

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided may not be a 900 number or any other number for which charges exceed local or long-distance transmission charges.)

In order to program this information into your facsimile, please see “Setting the fax header” and “Setting the time and date” in the user guide.

IC CS-03 requirements

NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirement document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

The Ringer Equivalence Number (REN) of this device is 0.7.

NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Number of all the devices does not exceed 5.

The standard connecting arrangement code (telephone jack type) for equipment with direct connections to the telephone network is CA11A.