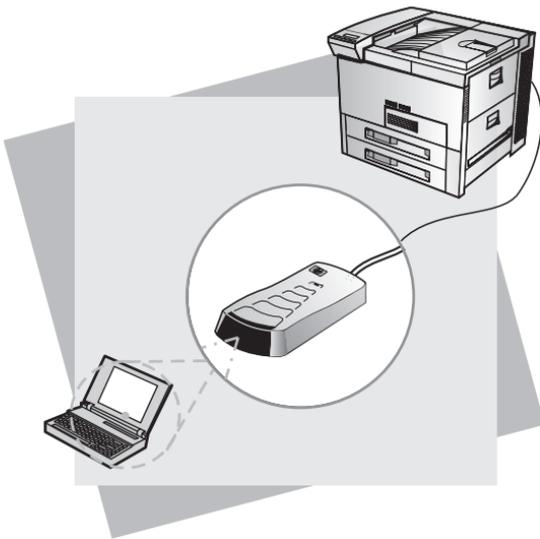


English



# HP Fast InfraRed Receiver for HP LaserJet Printers and HP Mopiers

## User Guide



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HP Fast InfraRed  
Receiver for  
HP LaserJet Printers  
and HP Mopiers

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User Guide

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First Edition,  
February 1999

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# HP Fast InfraRed Receiver

## Overview

Thank you for purchasing the HP Fast InfraRed Receiver. This device is an infrared (IR) adapter that complies with the communications protocol specifications established by the InfraRed Data Association (IRDA).

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### CAUTION

Only connect the HP Fast InfraRed Receiver to an HP LaserJet printer or mopier. Connecting the HP Fast InfraRed Receiver to a different device may damage the device.

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The HP Fast InfraRed Receiver enables wireless printing from any IRDA-compliant portable device (such as a portable computer) to HP LaserJet printers and mopiers equipped for fast serial infrared operation.

Because this printer has HP JetSend Communications Technology built in, the HP Fast InfraRed Receiver also allows wireless printing from any HP JetSend-enabled IR sending appliance.

The printing connection is maintained by positioning the sending IR port within operating range of the receiving IR port (see “Executing the Print Job” on page 10). Note that the connection can be blocked by objects such as a hand, paper, direct sunlight, or any bright light shining into either IR port.

## System Requirements

In order to print with the HP Fast InfraRed Receiver, you will need:

- HP LaserJet printer or mopier equipped with fast serial infrared capability
- IRDA-compliant portable or other IR-capable host supporting IRLPT or HP JetSend over IR
- Microsoft® Windows® 9x, Mac OS 8.5, or Apple LaserWriter 8.6 driver or higher

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### Note

Older non-IRDA-compliant portable computers may not be compatible with the HP Fast InfraRed Receiver. If you experience problems when attempting to print with the HP Fast InfraRed Receiver, contact the manufacturer or dealer of your portable computer to verify compatibility with the IRDA standard.

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# Features

- Complies with IRDA communications protocol specifications
- Compatible with a wide variety of IRDA-compliant portable computers
- Provides wireless data transfer
- Transmits data at speeds up to 4 Mbps

# Getting Started

This section contains procedures for installing the HP Fast InfraRed Receiver. The main steps include:

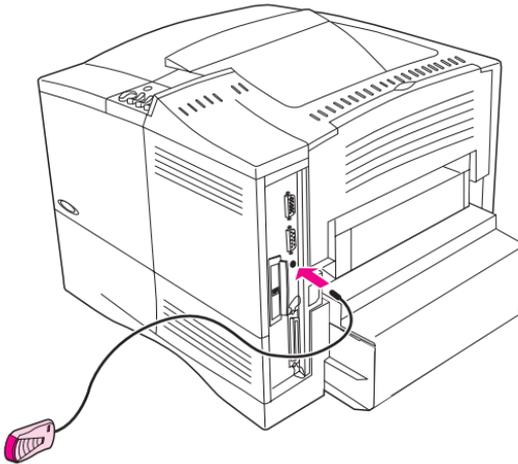
- Installing the HP Fast InfraRed Receiver
- Installing the IR driver in Windows 9x or Mac OS



**Figure 1** HP Fast InfraRed Receiver Package Contents

- 1 HP Fast InfraRed Receiver
- 2 Velcro fasteners
- 3 User Guide

# Installing the HP Fast InfraRed Receiver



**Figure 2** IR Port on a HP LaserJet Printer

Follow the instructions below to print a configuration page.

- 1 Turn the printer's power switch off.
- 2 Attach the HP Fast InfraRed Receiver to the IR port on the rear of the HP LaserJet printer.
- 3 Turn the printer's power switch on.
- 4 On the control panel, make sure the printer is on and the READY message is displayed.
- 5 Press **Menu** until the display reads INFORMATION MENU.
- 6 Press **Item** until the display reads PRINT CONFIGURATION.

- 7 Press **Select** to print the configuration page.  
The configuration page shows the printer's current configuration.

An HP JetDirect network configuration page will also print for networked printers and mopiers.

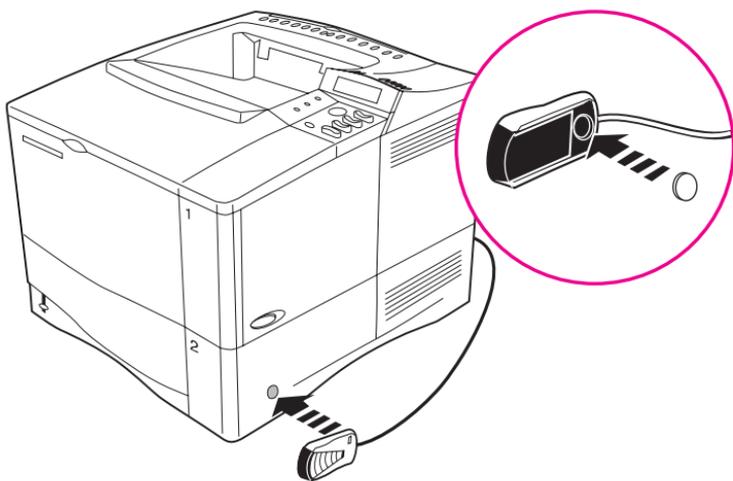
A configuration summary prints. On the first page of the printout, under *Installed Personalities and Options*, check for "IR POD (IRDA-Compliant)."

The HP Fast InfraRed Receiver can be placed on a table or attached to the side of the printer using the Velcro fasteners shown in Figure 3 on page 7.

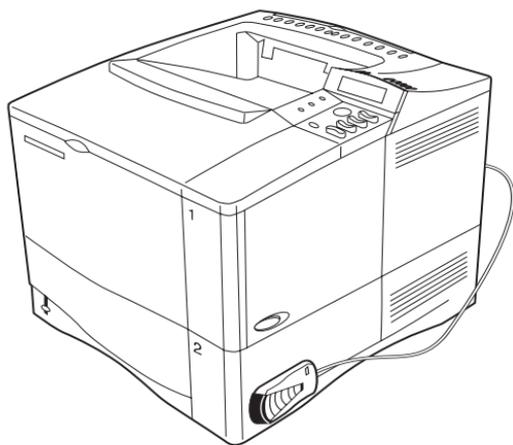
To attach the HP Fast InfraRed Receiver on the side of the printer, continue with steps 1 and 2.

- 1 Attach one Velcro faster to the round depression on the underside of the HP Fast InfraRed Receiver (see Figure 3).
- 2 Attach the remaining Velcro fastener to the side of the printer (see Figure 3).

When the HP Fast InfraRed Receiver is situated on the printer, it should be close to the printer's front edge as shown in Figure 4. This location allows for the largest possible area in which the portable computer's IR port can operate. The required alignment of devices is described in "Executing the Print Job" on page 10.



**Figure 3** Attaching the Velcro Fasteners



**Figure 4** HP Fast InfraRed Receiver After Installation

## Installing the IR Driver in Windows 9x

If your version of Windows does not have the HP Fast InfraRed driver pre-installed, you can download it from the Internet at no charge. The address is <http://www.microsoft.com/windows>. Use the search feature on the web page to locate the correct driver.

After downloading the InfraRed driver, complete these steps:

- 1 Start the SETUP.EXE program to invoke the Windows 95 *Add InfraRed Device* wizard.
- 2 When the wizard announces *New Hardware Found* events for the IR serial and parallel ports, you can enable the IR device immediately after the wizard is finished.
- 3 Restart the computer.

## Installing the IR Driver in Macintosh OS

The HP Fast InfraRed driver is pre-installed with Mac OS 8.5 or newer. If your Mac OS is older than 8.5, you can download the Apple LaserWriter 8.6 driver, which supports IR printing, from the World Wide Web at no charge from [www.apple.com](http://www.apple.com).

# Printing with the HP Fast InfraRed Receiver

## Setting Up to Print with Windows 9x

Before launching the HP Fast InfraRed driver, complete the following steps:

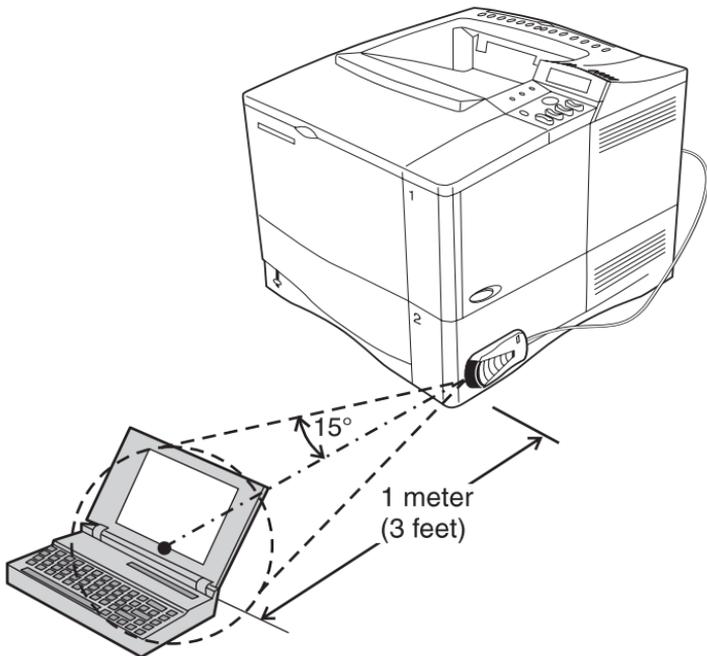
- 1 From the **Printers** panel, select your HP LaserJet printer as the default printer.
- 2 While in the same **Printers** panel, go to **Properties/Details**, and make sure that **Virtual Infrared LPT Port** is selected.
- 3 Select the file to print.

## Setting Up to Print with Macintosh

- 1 Launch the **Desktop Printer Utility**.
- 2 Click the **Printer (InfraRed)** from the **New Printer** window. Click **OK**, then click **Change**.
- 3 From the **PostScript Printer Description** window, click the desired printer to print to.
- 4 From the **File** menu, select **Save**.
- 5 From the **File Browser** window, name your desktop printer, then click **Save**.
- 6 Quit out of the **Desktop Printer Utility**.

## Executing the Print Job

- 1 Align your portable computer (or other portable device equipped with an IRDA-compliant IR window) within 1 meter (2 to 3 feet maximum) of the HP Fast InfraRed Receiver. The IR window must be at an angle of +/- 15 degrees to ensure an effective connection for printing. Figure 5 illustrates the required alignment of devices necessary for printing.



**Figure 5** Alignment of Devices Used for Printing

- 2 Execute the print job. The status indicator on the HP Fast InfraRed Receiver lights up, and, after a short delay, the printer status panel displays a `PROCESSING JOB` message.

If the status indicator does not light up, realign the HP Fast InfraRed Receiver with the IR port on the sending device, re-send the print job, and maintain the alignment of all devices as shown in Figure 5. If you have to move the equipment (for example, to add paper), make sure that all devices remain within the range of operation shown in Figure 5. Only then is the required connection maintained. If the connection is interrupted before your print job is complete, the HP Fast InfraRed Receiver status indicator turns off. You have up to 40 seconds to resume the connection and continue the job. If the connection is resumed within this time, the status indicator lights up again.

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#### Note

The connection is permanently broken if the sending port is moved out of operating range (see Figure 5), or if anything passing between the ports blocks transmission for more than 40 seconds. (This block could be a hand, paper, or even direct sunlight). Depending on the size of the job, printing with the HP Fast InfraRed Receiver may be slightly slower than printing with a cable connected directly to the parallel port.

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## Handling and Care

The HP Fast InfraRed Receiver is a delicate electronic device that should be treated with the same care as your printer. In addition, follow these precautions at all times:

- Avoid discharging static electricity to the HP Fast InfraRed Receiver.
- Do not place objects on the HP Fast InfraRed Receiver.

### Cleaning the HP Fast InfraRed Receiver

Always keep the device's IR window free from dust and grease.

To remove dust from the HP Fast InfraRed Receiver's surface, use a soft, non-abrasive cloth. Hardened dirt may be removed with a cloth slightly dampened in soapy water. Do not allow water to get into openings on the device.

Do not use abrasive cleaners, acrylic or lacquer paint thinners, and cleansers with an acetone or solvent base, such as MDC or EDC. These will damage the HP Fast InfraRed Receiver's plastic case.

# Troubleshooting

If you have a problem while operating the HP Fast InfraRed Receiver, follow these steps:

- 1 Verify in your computer user's guide that your equipment is compatible with the HP Fast InfraRed Receiver, fulfills system requirements, and you have performed the correct hardware and software installation procedures.
- 2 See the Troubleshooting Chart on page 14 to check if a solution to your problem is provided.
- 3 If you still have a problem, or think you may have a defective HP Fast InfraRed Receiver, consult the support section of your user's guide.

Please have the following information available before you call:

- Description of the problem
- Version of Windows or Mac OS you are using
- Type of portable IRDA-compliant device you are using
- HP Fast InfraRed Receiver serial number and product number

## Troubleshooting Chart

Condition	Solution
<p>IR port status indicator does not light up.</p>	<p>Make sure the printer is in <b>READY</b> mode and that the IR port you are printing from is IRDA-compliant and within the range of operation described in “Executing the Print Job” on page 10.</p> <p>Make sure the HP Fast InfraRed Receiver is properly connected to the printer.</p> <p>Print the printer configuration page. Check that “IR POD (IRDA Compliant)” is printed under <i>Installed Personalities and Options</i>.</p>
<p>Connection cannot be established or transmission seems to take longer than usual.</p>	<p>Use a device that is IRDA-compliant; look for an IRDA symbol on the device, or refer to the computer user’s guide for IRDA specifications.</p> <p>Make sure that the operating system on your computer includes an IR driver and your application uses the appropriate HP LaserJet printer driver. (Note that complex pages take longer to print.)</p> <p>Position the HP Fast InfraRed Receiver within the range of operation (see “Executing the Print Job” on page 10), and make sure that no object is blocking the connection. (This object could be a hand, paper, books, or even bright light.)</p> <p>Make sure that the two IR ports are clean (free from dirt and grease).</p> <p>Bright light of any kind (sunlight, incandescent light, fluorescent light, or light from an infrared remote control, such as those used for TVs and VCRs) shining directly into one of the IR ports may cause interference. Make sure no bright light is shining directly into either IR port.</p> <p>Position the portable device closer to the IR port on the printer.</p>

## Troubleshooting Chart (Continued)

Condition	Solution
The printer prints only part of a page or document.	<p>The connection has been broken during transmission.</p> <p>If you move the portable device during transmission, the connection can be broken. IRDA-compliant devices are designed to recover from temporary connection interruptions. You have up to 40 seconds to re-establish the connection (depending on the portable device being used).</p>
The print job has been properly sent, but the printer will not print.	<p>If the connection is broken before the entire print job has been transmitted to the printer (printing has not yet started), the printer may not print any of the job.</p> <p>Press the <b>Job Cancel</b> button to clear the printer's memory. Then, re-position the portable device within the range of operation (see "Executing the Print Job" on page 10), and print the job again.</p>
The IR status indicator turns off during transmission.	<p>The connection may have been broken, resume connection within 40 seconds.</p> <p>Press the <b>Job Cancel</b> button to clear the printer's memory. Then, re-position the portable device within the range of operation (see "Executing the Print Job" on page 10), and print the job again.</p>
PostScript™ print job will not print.	<p>Check configuration in the PostScript tab of Windows: check that <b>Protocol</b> is set to <b>AppleTalk</b>, and <b>Binary Data</b> is not selected.</p>

# Specifications

## Product Specifications

### Physical Dimensions

<b>Height</b>	0.64 in (16.3 mm)
<b>Width</b>	1.70 in (43.0 mm)
<b>Depth</b>	3.07 in (78.0 mm)
<b>Weight</b>	8 oz.

### Electrical Specifications

<b>Power Consumption</b>	During standby - 0.4 W
	During transmission - 2.0 W/400 mA
<b>Voltage</b>	5 V DC

### Environmental Specifications

<b>Operating Temperature</b>	50 to 91 °F (10 to 32.5 °C)
<b>Non-operating Temperature</b>	32 to 95 °F (0 to 35 °C)
<b>Operating Humidity</b>	20% to 80%
<b>Non-operating Humidity</b>	10% to 95%

### Safety and Regulatory Conformance

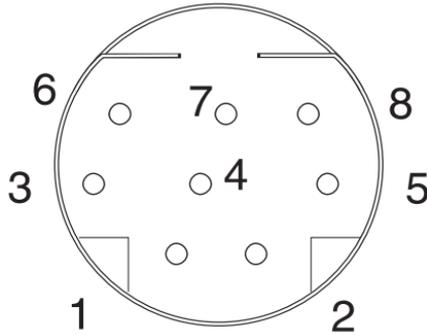
<b>Safety</b>	Complies with IEC950 requirements
<b>Regulatory</b>	FCC B, VCCI 2, CE Marking

### Cable Dimensions

<b>Cable</b>	6 ft. (1.8 m)
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# DIN Pin-Outs

The HP Fast InfraRed Receiver uses the eight position mini-DIN connector. A functional description of the pins follows.



**Figure 6** Eight-Position Mini-DIN Connector

## DIN Connector Pin-Outs

PIN Number	Signal Name
1 (Indicator LED)	-SIGNAL_DETECT
2 (single-ended signal)	-RX_SIR
3 (Differential data)	-TX (Transmit Data)
4 (Ground)	PWR_GND
5 (FIR differential data)*	-RX_FIR
6 (Differential data)	+TX (Transmit Data)
7 (5 volt power)	+5V_POWER
8 (FIR differential data)	+RX_FIR

\*no connect for FIR

# Declaration of Conformity

according to ISO/IEC Guide 22 and EN45014

**Manufacturer's Name:** Hewlett-Packard Company  
**Manufacturer's Address:** 11311 Chinden Boulevard  
Boise, Idaho 83714-1021, USA

**declares that the product**

**Product Name:** HP Fast InfraRed Receiver  
**Model Number:** C4103A  
**Product Options:** ALL

**conforms to the following Product Specifications:**

**Safety:** IEC 950:1991+A1+A2+A3 / EN 60950:1992+A1+A2+A3+A4  
IEC 825-1:1993 / EN 60825-1:1994 Class 1 (Laser/LED)

**EMC:** CISPR 22:1993+A1 / EN 55022:1994 Class B<sup>1</sup>  
EN50081-1:1992  
EN 50082-1:1992

IEC 801-2:1991 / prEN 55024-2:1992 -	4 kV CD, 8 kV AD
IEC 801-3:1984 / prEN 55024-3:1991 -	3 V/m
IEC 801-4:1988 / prEN 55024-4:1992 -	0.5 kV Signal Lines 1.0 kV Power Lines

FCC Title 47 CFR, Part 15 Class B<sup>2</sup> / ICES-003, Issue 2 / VCCI-2<sup>1</sup>  
AS / NZS 3548:1992 / CISPR 22:1993 Class B<sup>1</sup>

**Supplementary Information:**

The product herewith complies with the requirements of the following Directive and carries the CE-marking accordingly:  
the EMC Directive 89/336/EEC

- 1) The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
- 2) This Device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**For Compliance Information ONLY, contact:**

**Australia Contact:** Product Regulations Manager, Hewlett-Packard Australia Ltd., 31-41 Joseph Street, Blackburn, Victoria 3130, Australia

**European Contact:** Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Straße 130, D-71034 Böblingen (FAX: +49-7031-14-3143)

**USA Contact:** Product Regulations Manager, Hewlett-Packard Company, PO Box 15 Mail Stop 160, Boise, ID 83707-0015 (Phone: 208-396-6000)

# U.S.A. Federal Communications Commission (FCC) Statement

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, and if not installed and used in accordance with the instructions, 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 the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Compliance to these regulations requires the use of shielded cables. Changes or modifications to the equipment not expressly approved by Hewlett-Packard could void the user's authority to operate it.

## Canadian Department of Communications (DOC) Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the Radio Interference Requirements of the Canadian Department of Communications.

Compliance to these regulations requires the use of shielded cables.

## VCCI Statement (Japan)

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。  
取り扱い説明書に従って正しい取り扱いをして下さい。

### **WARNING!**

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

# Warranty

HP warrants that the HP Fast InfraRed Receiver will be free from defects, and will meet the InfraRed Receiver specifications as presented by HP at the time of original purchase, for one year. Under this warranty HP will, at its sole option, repair or replace any InfraRed Receiver which is defective or does not meet the InfraRed Receiver specifications. Options, cables, accessories, and included items are covered by the same warranty as the HP Fast InfraRed Receiver for which they are purchased. Purchaser pays freight charges to return replaced equipment under this warranty.

If you think you have a defective InfraRed Receiver, call HP's Technical Support or your local sales office for assistance.

Warranty does not cover (1) InfraRed Receivers with serial numbers that cannot be read; (2) InfraRed Receivers which have been operated with incompatible accessories. Warranty will not cover damage resulting from: (1) abnormal conditions including but not limited to accidents, fire, water, etc.; (2) neglect or misuse of InfraRed Receiver; (3) causes external to the InfraRed Receiver, including but not limited to failure or fluctuation of electrical power, air conditioning, humidity control, etc. (4) maintenance, repairs, alterations, or modifications performed by any person or entity other than HP.

This warranty is exclusive of all other warranties, whether expressed, implied, or statutory. HP does not warrant InfraRed Receiver for fitness for a particular purpose or merchantability. HP will not be liable for any special, consequential, indirect or incidental damages, even if advised of their possibility. Some states do not allow for the exclusion or limitation of certain liabilities, so the above limitations may not apply. This warranty gives you specific legal rights, and you may also have other legal rights which vary from state to state.







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