ProCurve
Networking by HP

Installation and
Getting Started Guide

ProCurve Radio Port 230/210

www.procurve.com

hp ®
i n v e n t

Applicable Products

ProCurve Radio Port 230	J9006A
ProCurve Radio Port 210	J9004A

Trademark Credits

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Introduction

The ProCurve Radio Port 230 and ProCurve Radio Port 210, components of the ProCurve Wireless LAN System, link wireless IEEE 802.11a/b/g devices to the Ethernet network through a wireless services-enabled switch. Wireless services-enabled switches include:

- ProCurve Switch 5300xl Series with a ProCurve Wireless Edge Services xl Module
- ProCurve zl switches (such as 5400zl or 8200zl series) with a ProCurve Wireless Edge Services zl Module
- Other compatible wireless services-enabled switch products.

The radio ports are designed as simple plug-and-play devices that require no individual device configuration before network installation. All Radio port configurations, including: country-specific settings, radio channels, radio power, SSID settings, security settings, management information, and radio port software is provided through the wireless services-enabled switch.

NOTE   Before installing radio ports, a ProCurve wireless services-enabled switch should be deployed, configured and operational. For details, see the *Getting Started Guide* for your Wireless Edge Services Module.

ProCurve Radio Port 230 and 210 Package Contents

- ProCurve Radio Port 230 or Radio Port 210
- Two wall mount screws
- Two wall anchors
- *Installation and Getting Started Guide*
- *Software License, Warranty and Support* booklet

Description

The ProCurve Radio Port 230 is a dual-radio IEEE 802.11-compliant device supporting simultaneous IEEE 802.11a and b/g wireless Ethernet connections. It contains two embedded IEEE 802.11 b/g (2.4 GHz) omni directional diversity antennas, and two embedded IEEE 802.11a (5.4 GHz) omni directional diversity antennas.

The ProCurve Radio Port 210 is a single radio IEEE 802.11-compliant device supporting IEEE 802.11 b/g wireless Ethernet connections. It contains two embedded IEEE 802.11 b/g (2.4 GHz) omni directional diversity antennas.

Both radio ports are designed for installation in office environments, either using the wall mount or suspended-ceiling T-Bar mountings built into the underside of the plastic case. Each radio port has one RJ-45 connector supporting 10/100Base-TX Ethernet and requires power from any UL-listed, IEEE 802.3af-compatible Power over Ethernet (PoE) switch or power injector.

Technical Specifications

Operating Voltage	48VDC (from IEEE 802.3af-compliant power source)
Operating Current	148mA (typical)
Power	7W (typical)
Operating Temperature	0 to 40° C (32 to 104° F)
Non-Operating/Storage Temperature	-40 to 70°C (-40°F to 158°F)
Operating Humidity	5 to 95% (non-condensing)
Non-Operating/Storage Humidity	5 to 95% (non-condensing)
Operating Altitude (max)	3,048m (10,000ft.)
Non-Operating/Storage Altitude	4,572m (15,000ft.)

Dimensions & Weight

Length	249.2mm (9.81in.)
Width	174.9mm (6.88in.)
Height	42.4mm (1.67in.)
Radio Port 230 Weight	0.55kg (1.214lbs)
Radio Port 210 Weight	0.50kg (1.096lbs)

Features

- High-performance IEEE 802.11-compliant radios
- Embedded omni directional diversity antennas
- Integrated 10/100Base-TX RJ-45 port
- Two LEDs
- Safety wire tie point
- Lap-style lock port
- Slots for wall mounting
- Clips for mounting on a suspended ceiling T-Bar

LEDs

Wall Mount Slot

Cable Recess

T-Bar Retaining Clip

T-Bar Suspension Clips
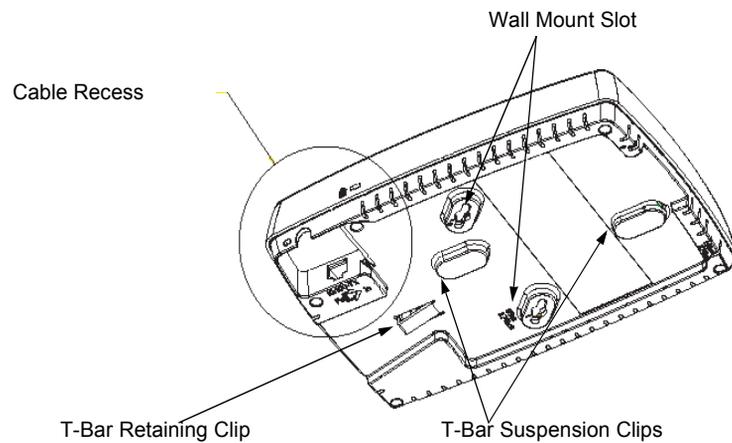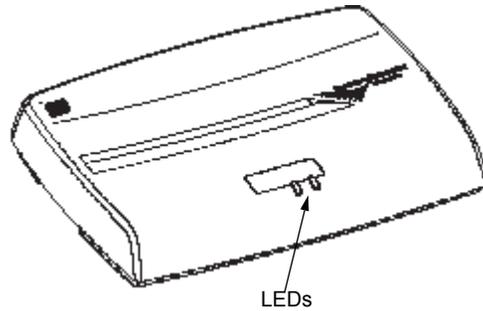
Radio Characteristics

The ProCurve Radio Port 230 comprises two IEEE 802.11 radios: (1) an IEEE 802.11 b/g radio operating in the 2.41 to 2.8 GHz band and (2) an IEEE 802.11a radio operating in the 5.15 to 5.88 GHz band. The ProCurve Radio Port 210 has a single IEEE 802.11b/g radio. Both units contain two embedded 2.41-2.8 GHz omni-directional diversity antennas and the Radio Port 230 also contains two embedded 5.1-5.88 GHz omni-directional diversity antennas.

The following table lists the IEEE 802.11-compliant operating modes. The three supported IEEE 802.11g modes are simultaneous CCK and OFDM, CCK only, or OFDM only.

Device	Mbps Data Rate Support	Utilizing Diversity	GHz
802.11a	6, 9, 12, 18, 24, 36, 48, 54 OFDM	Transmit and receive	5.1 to 5.88 range
802.11b/g	1, 2, 5.5, 11 CCK 6, 9, 12, 18, 24, 36, 48, 54 OFDM	Transmit and receive	2.41 to 2.8 range

For details on Transmit Power and Receiver Sensitivity values, reference the Product Data Sheets located on the ProCurve Web site, **www.procurve.com**.

Integrated RJ-45 Port

Each radio port has one RJ-45 connector supporting a full-duplex 10/100Base-TX Ethernet port, and requires IEEE 802.3af-compliant Power over Ethernet (PoE) from an external source, such as a PoE switch or power injector. This Ethernet port is configured as an MDI port and can be connected to any MDIX switch port using standard straight-through CAT-5 Ethernet cables. For details on cable pinouts, see the *Installation and Getting Started Guide* for your ProCurve switch.

A single CAT-5 cable is used to supply both Ethernet connectivity and power to the radio port allowing these radio ports to be installed up to 100 m (300 ft.) from a PoE-compliant 10/100Base-TX Ethernet port. There is no additional power supply required.

LEDs

Each radio port has LEDs on the front of the case that display the device status. The LEDs display connection status and error conditions, as well as network activity for the individual radios in the radio port.
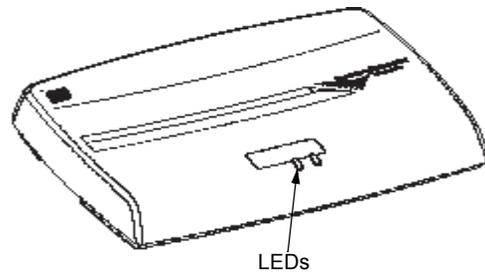
LEDs

Radio Port 230 LEDs

The Radio Port 230 has two LEDs displaying connection status, error conditions, and networking activity for each of the two radios. Operation is as follows:

Startup:

Radio Port Startup occurs immediately following the application of PoE power, or following a power or software reset.

1. Both GREEN and AMBER LEDs light steadily for several seconds, while the radio port performs an internal self-test.

2. The AMBER LED then flashes 3 times per second, while the GREEN LED is off. This indicates that the radio port is attempting to communicate to a compatible wireless services-enabled switch.

3. Both LEDs then go off for a moment, followed by both LEDs lighting steadily for a few seconds.

4. After this sequence, assuming no error conditions have occurred, the radio port enters Normal operation mode. This indicates the radio port has successfully communicated with and been adopted by a wireless services-enabled switch. If this startup sequence repeats itself, it is likely the radio port is unable to contact a compatible wireless services-enabled switch, and the installer should review the Troubleshooting section.

Normal Operation:

Once the radio port establishes a connection to a compatible wireless services-enabled switch, the radio port begins normal operation. During normal operation, the GREEN LED indicates the status of the IEEE 802.11 b/g radio, and the AMBER LED indicates status of the IEEE 802.11a radio.

- Without Wireless Traffic: Each LED briefly flashes once every 5 seconds, this indicates that power is on and the radio port is communicating normally to its wireless services-enabled switch. The flashing may not be synchronous between the two LEDs.
- With Wireless Traffic: Each LED briefly flashes more frequently than once every 5 seconds, and in an irregular fashion, to represent wireless traffic on that radio.

Radio Error Mode:

- The GREEN LED flashes on and off steadily once per second if an error prevents the IEEE 802.11b/g radio from operating normally.
- The AMBER LED flashes on and off steadily once per second if an error prevents the IEEE 802.11a radio from operating normally.

Radio Port 210 LEDs

The Radio Port 210 has two LEDs displaying connection status, error conditions, and networking activity for its IEEE 802.11 b/g radio. Operation is as follows:

Startup Radio:

- Operation of the indicators is identical to the Radio Port 230 during Startup.

Normal Operation:

- During Normal Operation, the GREEN LED flashes to indicate connection and traffic on the IEEE 802.11b/g radio, similar to the Radio Port 230. The AMBER LED remains off.

Radio Error Mode:

- The GREEN LED flashes on and off steadily once per second if an error prevents the IEEE 802.11b/g radio from operating normally.

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Installation Instructions

The ProCurve Radio Port 230 and 210 can be mounted either on a wall or on a suspended ceiling T-bar. The radio ports are not designed for mounting on a desk. The diagrams on the next page note the key installation features.

To prepare for installation, perform the following steps:

1. Match the model number on the purchase order with the model numbers in the packing list and on the case of the shipped device.

2. Verify that the contents of the box include the intended ProCurve Radio Port 230 or 210 and mounting hardware:

Radio Port	Item	Notes
230	J9006A	802.11a & 802.11b/g integrated antenna configuration.
210	J9004A	802.11b/g integrated antenna configuration.

3. Review site survey and network analysis reports to determine the location and mounting positions for the ProCurve Radio Port 230 and 210.

4. Connect a CAT-5 cable to a compatible IEEE 802.3af power source and run the cable to the installation site. Ensure that there is sufficient slack on the cable to perform the installation steps.

See Detail Below

Wall Mount Slot

T-Bar Retaining Clip

T-Bar Suspension Clips

Lock Port

Safety Wire Tie Point

RJ-45 Port

10/100-TX
PoE In
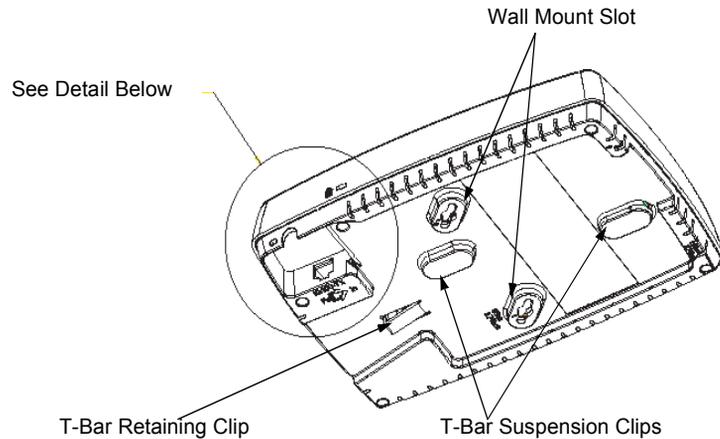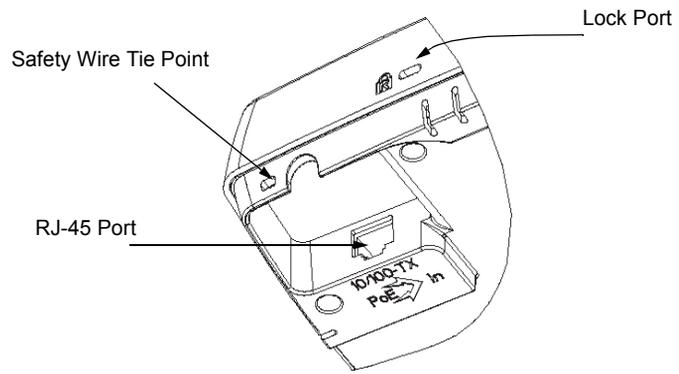
Wall Mount

Wall mounting consists of hanging the ProCurve Radio Port 230 or 210 along its width or length using the pair of wide-shoulder screws provided and mounting slots on the underside of the radio port.

The ProCurve Radio Port 230 or 210 can be mounted onto any wood, plaster, or cement wall surface using the provided wall anchors when necessary. The illustration shows the radio port mounted horizontally.
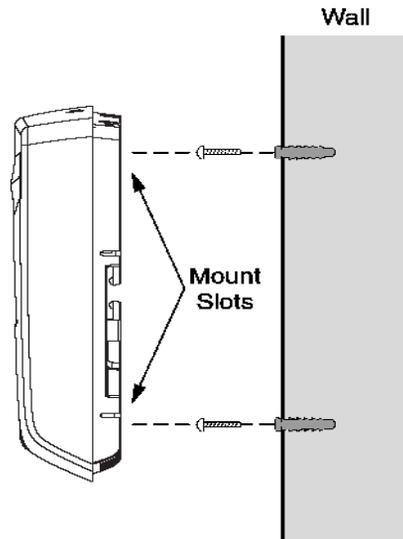
Wall Mount Hardware

- Two wide-shoulder Phillips pan head self-tapping screws, or
  - ANSI Standard) #6-18 X 0.875in, Type A or AB Self-Tapping Screw, or
  - ANSI Standard Metric M3.5 X 0.6 X 20mm Type D Self-Tapping Screw.
- Two wall anchors.
- Safety wire-recommend between 1.0 mm (.04in.) and 1.6 mm (.06in.)and security cable (optional)

Wall Mount Procedure

1. Lightly mark a vertical line on the wall at the location where the midline of the radio port is to be located.

2. Use the alignment arrows, move the edge of the radio port to the midline from step 1 and mark the two points on the midline for the location of the mounting screws. (See following diagram)

Use these alignment arrows to mark the wall in preparation for installing mounting screws
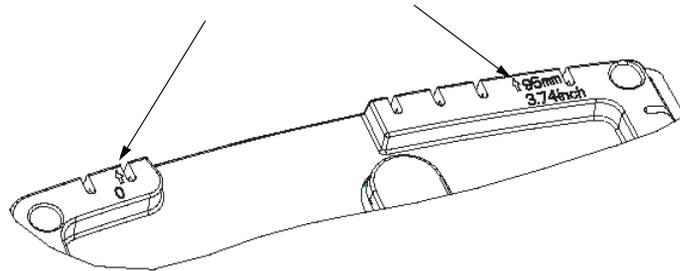
3. At each of the two points, drill a hole in the wall, insert an anchor (if required), screw the wall mounting screw into the anchor and stop when there is 2 mm remaining between the screw head and the wall.

NOTE   When pre-drilling holes, the recommended hole size is 3mm (0.125 or 1/8 in.) if the screws are going directly into the wall and 6mm (0.25 or 1/4 in.) if the provided wall anchors are being used.

4. Loop a safety wire through the tie point and secure the loop. Attach the opposite end of the safety wire to a secure point on the wall.

5. Install a security cable to the radio port's lock port and attach the opposite end of the security cable to a secure, stationary point.

Lock Port

Safety Wire Tie Point

RJ-45 Port

10/100-TX
PoE   In
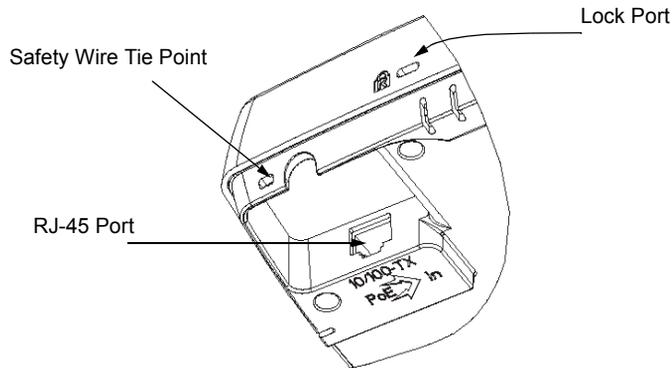
6. Plug the Ethernet cable to the RJ-45 port and connect the opposite end of the cable to a switch with an IEEE 802.3af compatible power source. The Ethernet cable can be tucked inside the cable recess on the underside of the radio port case for a completely clean installation. (See following diagram)

Cable
recess
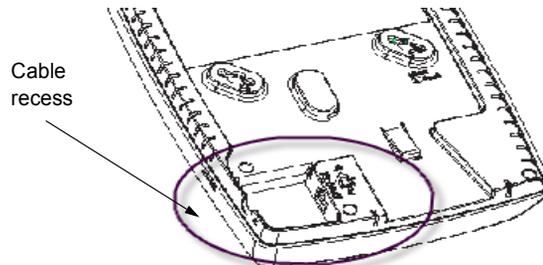
7. Place the middle of each of the case's mounting slots over the mounting screw heads.

8. Slide the case down along the mounting surface to hang the mounting slots on the mounting screws.

9. Verify the radio port has power by observing that the LEDs are lit or flashing.

Installation Instructions

RJ45 Wiring Options

The RJ-45 cable may be routed in multiple ways.

Cable exits
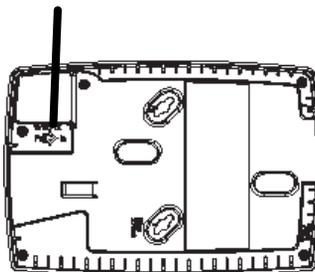
Cable exits
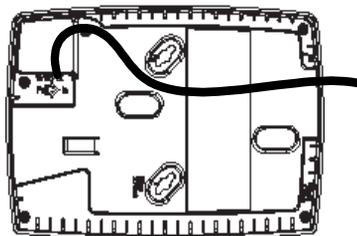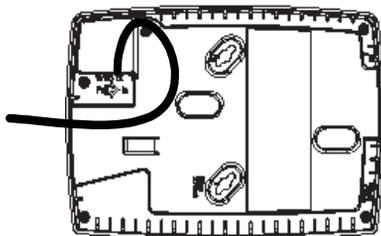
RJ-45 cable connection (tucked in recess and routed through wall or tile)

Cable recess
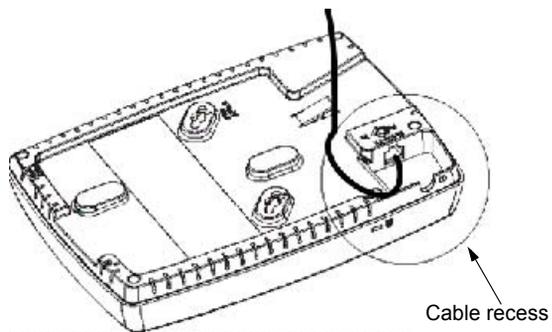
Suspended Ceiling Tile T-Bar Mount

Mounting the Radio Port 230 or 210 to a suspended ceiling T-Bar grid consists of attaching the radio port to the underside of a T-Bar in a suspended ceiling grid, and twisting the radio port to lock the case onto the T-Bar.

Ceiling Mount Hardware

■ Safety wire-recommend between 1.01mm (.04in.) and 1.58mm (.06in) and security cable (optional)

Ceiling Mount Procedure

To Install the Radio Port on the T-Bar:

1. Lift the ceiling tiles around the T-Bar where the radio port is to be installed.

2. Loop a safety wire around the tie point, secure the loop and attach the opposite end to a secure point on the ceiling or T-bar grid.

3. Install a security cable to the radio port's lock port and secure the opposite end to a secure, stationary point on the ceiling.

4. Plug the Ethernet cable into the RJ-45 jack and connect the opposite end to a switch with an IEEE 802.3af-compatible power source. Thread the cable through the ceiling T-Bar grid on the proposed radio port installation side.

5. Position the radio port so the back of the radio port faces the bottom of the T-Bar. Position the radio port case so that the T-Bar fits into the channel formed into the underside of the radio port case.

6. Slide the radio port until the T-Bar Suspension Clip on the opposite side of the radio port case slips over the T-Bar. Rotate the radio port *counter-clockwise* slightly (approximately 15 degrees) to lock the remaining T-Bar Suspension Clip into place. The T-Bar Retaining Clip clicks into place as the Suspension Clips fasten onto the T-Bar. (See following diagram)

Ceiling View: Install into T-Bar Suspension Clip (slide the radio port into the suspension clip, then rotate radio port clockwise and the T-Bar Suspension click locks))

T-Bar Suspension Clip (first secure)

To install, turn radio port counter-clockwise

T-Bar Suspension Clip

T-Bar Retaining Clip
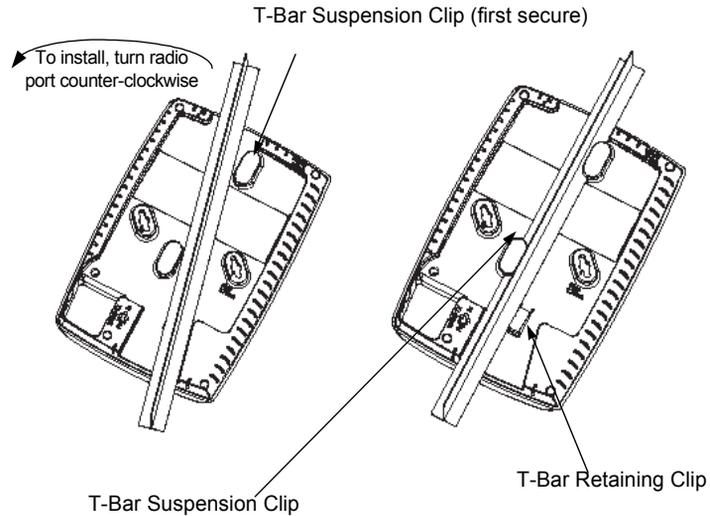
7.   Verify the radio port has power by observing the LEDs.

8.   Tuck the Ethernet cable into the cable recess on the underside of the radio port.

9.   Replace the ceiling tiles around the T-Bar to complete the installation.

To Remove the Radio Port from the T-Bar:

1.   Lift the ceiling tiles away from the T-Bar to which the radio port is attached.

2.   Using your finger, depress the T-Bar Retaining Clip that locks the radio port to the T-Bar.

3.   Rotate the radio port *clockwise* to release the T-Bar from the radio port's T-Bar Suspension Clips.

3

Troubleshooting Radio Port Installation

This section describes how to troubleshoot the installation of your ProCurve radio port primarily from a hardware perspective. You can perform more in-depth troubleshooting of your wireless LAN system from the console or Web UI on your wireless services-enabled ProCurve switch.

For more information on software configuration or troubleshooting, see the *Getting Started Guide* for your ProCurve Wireless Edge Services Module for details.

Basic troubleshooting relies on the LEDs to diagnose the condition of the radio port. The table below shows LED patterns on the radio port that indicate problem conditions.

LED Error Indicators

GREEN LED	AMBER LED	Diagnostic Tips
Off steadily while Ethernet cable is linked to a PoE source. Remains off even when the radio port is disconnected from Ethernet cable and reconnected.	Off steadily while Ethernet cable is linked to a PoE source. Remains off even when radio port is disconnected from Ethernet cable and reconnected.	Radio port is not receiving PoE power. Verify that the Ethernet cable is connected directly to an IEEE 802.3af-compatible PoE source, and that all cable connections are tight and secure. Verify that the PoE source device is powered on, and that the PoE function has been administratively enabled on the source port connected to the radio port. Verify that the network cable is functioning properly, or try a different cable. Try plugging the radio port into another PoE power source, or connect another PoE device to the port to confirm if the PoE source is functioning appropriately.
Both GREEN and AMBER LEDs light steadily for several seconds, followed by the AMBER LED flashing steadily on and off three times a second for several seconds, then this cycle repeats itself continuously.		The radio port is encountering a Startup Error, and is unable to successfully communicate with or be adopted by a compatible wireless services-enabled switch. See the Startup Error checklist below for further diagnostic tips.
Flashes on and off steadily once per second	*	The radio port has encountered an error that prevents the IEEE 802.11b/g radio from operating normally.
*	Flashes on and off steadily once per second	(Radio Port 230 only) The radio port has encountered an error that prevents the IEEE 802.11a radio from operating normally.

* This LED is not important for this diagnosis

Startup Error Checklist

Startup errors occur when the radio port is unable to communicate with a compatible wireless services-enabled switch, or when the radio port successfully communicates to a compatible switch but the switch is not able to adopt and manage the radio port. The following steps can be used to determine the different circumstances that may be preventing the radio port from being adopted by the switch and operating normally.

1. The network connection between the radio port and the wireless services-enabled switch has been disrupted. Verify that network connectivity between the Ethernet cable and the wireless services-enabled switch by connecting another device, such as a laptop, to the Ethernet cable and confirming network connectivity to the switch. Verify the Ethernet port to which the radio port is connected has not been disabled, and if IEEE 802.1X port security is turned on, that the IEEE 802.1X Port security is compatible with the radio port's IEEE 802.1X settings. The network between the radio port and the wireless services-enabled switch has a Layer 3 compatibility issue (e.g. the two devices are on different subnets.)

2. The downlink VLAN has not been properly configured on all switch ports between the Radio Port and the wireless enabled switch. (add a pointer to the proper manual for more information on configuring the downlink VLAN).

3. The wireless services-enabled switch may not be configured properly. Verify the Wireless Edge Services Module is properly installed, configured, and operational. In particular, verify that the wireless services' country-code setting has been properly configured, as this setting must be configured to enable the wireless service to function. Refer to the *Getting Started Guide* for your ProCurve Wireless Edge Services Module for details.

4. The wireless services-enabled switch may not be functioning normally. Refer to the *Getting Started Guide* for your ProCurve Wireless Edge Services Module for details on verifying operation.

5. The Wireless Edge Services Module may have adopted radio ports up to it's Authorization Level and may not be authorized to adopt additional radio ports. Review the number of radio ports the wireless services-enabled switch has currently adopted and compare this number to the number of radio ports authorized based on the licenses installed.

Caution

All ProCurve devices are labeled in compliance with the location rules and regulations of each purchased unit. Any changes or modifications to ProCurve Equipment, not expressly approved by HP, could void the user's authority to operate this device.

This device is used only with supported switches that have a ProCurve Wireless Edge Services Module installed, or other compatible wireless services-enabled switch. For additional compliance details, see the *Module Installation Guide* for your switch.

HP Customer Service

If you are still having trouble with your radio port or ProCurve wireless services-enabled switch, Hewlett-Packard offers support 24 hours a day, seven days a week through the use of a number of automated electronic services. See the *Software License, Warranty and Support* booklet that came with your radio port for information on how to use these services to get technical support.

The ProCurve Web site, **www.procurve.com**, also provides up-to-date support information under product support. In addition, your HP-authorized network reseller can provide you with assistance and services, as well as those services offered by HP.

Troubleshooting Radio Port Installation

Before Calling Support

To make the support process most efficient, before calling your networking dealer or HP Support, you first should retrieve the following information

Information Item	Information Location
• radio port identification	• the front of the radio port
• wireless services-enabled switch identification and module identification	• the front of the switch • the front of the module
• details about the radio port's status and the status of the wireless services-enabled switch including the software (OS) version of the switch and any installed modules, a copy of the wireless services configuration, • a copy of the switch event log, • a copy of the switch status • counters information	• Switch console (Wireless Services Configuration Level): show command • switch event Log • Syslog server entry file, if configured
• copy of your network topology map, including network addresses assigned to the relevant devices	• your network records

For more information, see the *Software License, Warranty and Support booklet*, if included with your product.

For service information and the latest version of this booklet, visit:

http://www.procurve.com

Safety and Regulatory Statements

Safety Information

Documentation reference symbol. If the product is marked with this symbol, refer to the product documentation to get more information about the product.

WARNING   A WARNING in the manual denotes a hazard that can cause injury or death.

CAUTION   A CAUTION in the manual denotes a hazard that can damage the equipment or create a non-compliant condition.

Do not proceed beyond a WARNING or CAUTION notice until you have understood the hazardous conditions and have taken appropriate steps.

Grounding

- If your LAN covers an area served by more than one power distribution system, be sure their safety grounds are securely interconnected.
- LAN cables may occasionally be subject to hazardous transient voltages (such as lightning or disturbances in the electrical utilities power grid). Handle exposed metal components of the network with caution.

Servicing

There are no user-serviceable parts inside this product. Any servicing, adjustment, maintenance or repair must be performed only by service trained personnel.

This product does not have a power switch; it is powered on when the LAN cable is plugged in.

Regulatory Model Identification Number

For regulatory identification purposes, this product has been assigned a Regulatory Model Number (RMN). The RMN for your product is RSVLC-0502. The RMN should not be confused with the marketing name (ProCurve Radio Port 210, ProCurve Radio Port 230) or the Product Number (J9004A, J9006A).

Regulatory Statements

Notice for U.S.A.

Manufacturer's FCC Declaration of Conformity Statement
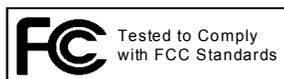
Product No:	J9004A, J9006A
FCC ID No:	B94RSVLC-0502, B94RSVLC-0505
Regulatory Model No:	RSVLC-0502
Manufacturer::	Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94394-1185 USA
Phone:	650-857-1501

For questions regarding this declaration, contact the Product Regulations Manager at the above address or phone number.

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.

This device 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 the 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/television technician for help.

The FCC requires the user to be notified that any changes or modifications made to the device that are not expressly approved by the Hewlett-Packard Company may void the user's authority to operate the equipment.

WARNING	Exposure to Radio Frequency Radiation
	The radiated output power of this device is below the FCC radio exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact during normal operation is minimized. To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antennas (located internal to the enclosure) should not be less than 20 cm (8 inches) during normal operation.

Notice for European Community

$C \in \textcircled{!}$

This device complies with the EMC Directive 89/336/EEC, Low Voltage Directive 73/23/EEC and R&TTE Directive 1999/5/EC. Compliance with these directives implies conformity to harmonized European standards (European Norms) that are listed on the EU Declaration of Conformity that has been issued by HP for this device.

Countries of Operation & Conditions of Use

This device may be used in the following EU and EFTA countries: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland and the United Kingdom. Requirements for indoor vs. outdoor operation, licensing and allowed channels of operation apply in some countries as described below.

N o t e : The person responsible for installing this device must use the configuration utilities provided with the wireless services-enabled switch to ensure the channels of operation are in conformance with the spectrum usage rules for EU and EFTA countries as described below.

2.4 GHz Operation:

■ "This device may be operated indoors or outdoors in all EU and EFTA countries using the 2.4GHz band (Channels 1 - 13), except where noted below.

■ "In Italy, a license is required for outdoor use. Verify with your dealer or directly with the General Direction for Frequency Planning and Management (Direzione Generale Pianificazione e Gestione Frequenze).

- E'necessaria una concessione ministeriale anche per l'uso del prodotto. Verifici per favore con il proprio distributore o direttamente presso la Direzione Generale Pianificazione e Gestione Frequenze.

- "In France, this device may use the entire 2400 - 2483.5 MHz band (Channels 1 through 13) for indoor applications. For outdoor use, only the 2400 - 2454 MHz frequency band (Channels 1 through 9) may be used. For the latest requirements, see http://www.art-telecom.fr.

- L'utilisation de cet equipement (2.4GHz wireless LAN) est soumise à certaines restrictions: cet equipement peut être utilisé à l'interieur d'un batiment en utilisant toutes les frequences de 2400 a 2483.5MHz (Chaine 1-13). Pour une utilisation en environnement exterieur, vous devez utiliser les frequences comprises entre 2400 a 2454MHz (Chaine 1-9). Pour les dernières restrictions, voir http://www.art-telecom.fr.

5 GHz Operation:

- "This device requires the user to properly enter the current country of operation during the initial setup of the radio port. Once the country of operation has been entered, the radio port will automatically limit the available channels, ensuring compliant operation in the selected country. Incorrectly entering the country of operation may result in illegal operation and may cause harmful interference to other systems. The user is obligated to ensure the device is operating according to the channel limitations, indoor/outdoor restrictions and license requirements for each European Community country as described in this document. Information on configuring this device can be found in the *Module Installation Guide* for your switch.

- "This device employs a radar detection feature required for European Community and EFTA country operation in the 5GHz band. This feature is automatically enabled when the country of operation is correctly configured for any European Community or EFTA country. The presence of nearby radar operation may result in temporary interruption of operation of this device. The radar detection feature will automatically restart operation on a channel free of radar.

- "This device is restricted to indoor use when operated in EU and EFTA countries using the 5.15-5.35GHz band (Channels 36, 40, 44, 48, 52, 56, 60 and 64). See the table below for the allowed 5GHz channels in each band.

Operation Using 5 GHz Channels in the European Community

The user must ensure operation of this device is in conformance with European National spectrum usage laws as shown below and elsewhere in this document.

Frequency Band (MHz)	Allowed Channels	Usage	Maximum EIRP (mW)	Maximum EIRP (dBm)
5150-5250	36,40,44,48	Indoor Use only	200	23
5250-5350	52,56,60,64	Indoor Use only	200	23
5470-5725	100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140	Indoor or outdoor use	1000	30

Notice for Canada

This device complies with the limits for a Class B digital device and conforms to Industry Canada standard ICES-003. Products that contain a radio transmitter comply with Industry Canada standard RSS210 and are labeled with an IC approval number.

Cet appareil numérique de la classe B est conforme à la norme ICES-003 de Industry Canada. La radio sans fil de ce dispsitif est conforme à la certification RSS 210 de Industry Canada et est étiquetée avec un numéro d'approbation IC.

This device complies with the Class B limits of Industry Canada. Operation is subject to the following two conditions: 1) this device may not cause harmful interference, and 2) this device must accept interference received, including interference that may cause undesired operation.

EU Declaration of Conformity

	DECLARATION OF CONFORMITY according to ISO/IEC Guide 22 and EN 45014
Manufacturer's Name:	Hewlett-Packard Company
Manufacturer's Address:	8000 Foothills Blvd. Roseville, CA 95747-5502 U.S.A.
declares, that the product	
Product Name:	HP Procurve Radio Port 210, 220, 230
Product Number(s):	J9004A, J9005A, J9006A
Regulatory Model:	RSVLC-0502 (J9004A, J9006A), RSVLC-0505 (J9005A)
Product Options:	J8441A, J8444A, J8448A, J8997A, J8998A, J8999A, J9000A

conforms to the following Product Specifications:

Safety:	EN 60950-1:2001 / IEC 60950-1:2001
Health:	EU 1999/519/EC
EMC:	EN 55022:1998 +A1+A2 / CISPR 22:1997 +A1+A2 Class B[1] EN 301 489-1 V1.4.1 (2002-08) EN 301 489-17 V1.2.1 (2002-08) EN 60601-1-2:2001 / IEC 60601-1-2:2001
Radio:	EN 300 328 V1.6.1 (2004-11) EN 301 893 V1.2.3 (2003-08)

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC, the EMC Directive 89/336/EEC and the R&TTE Directive 1999/5/EC and carries the CE marking accordingly.

1) The Product was tested in a typical configuration with a laptop computer.

Roseville, February 8, 2006

Mike Avery, Regulatory Engineering Mgr.

European Contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE, Herrenberger Straße 140, D-71034 Böblingen (FAX: + 49-7031-14-3143)

Notice For Japan

この機器の使用周波数帯では、電子レンジ等の産業・科学・医療用機器のほか工場の製造ライン等で使用されている移動体識別用の構内無線局（免許を要する無線局）及び特定小電力無線局（免許を要しない無線局）が運用されています。

1　この機器を使用する前に、近くで移動体識別用の構内無線局及び特定小電力無線局が運用されていないことを確認して下さい。

2　万一、この機器から移動体識別用の構内無線局に対して電波干渉の事例が発生した場合には、速やかに使用周波数を変更するか又は電波の発射を停止した上、下記連絡先にご連絡頂き、混信回避のための処置等（例えば、パーティションの設置など）についてご相談して下さい。

3　その他、この機器から移動体識別用の特定小電力無線局に対して電波干渉の事例が発生した場合など何かお困りのことが起きたときは、次の連絡先へお問い合わせ下さい。

連絡先：日本ヒューレット・パッカード株式会社　ＴＥＬ：０１２０－０１４１２１

Notice For Taiwan

DGT LPD (Low Power devices) Statement

低功率電波輻射性電機管理辦法

第十四條 經型式認證合格之低功率射頻電機，非經許可，公司、
商號或使用者均不得擅自變更頻率、加大功率或變更原
設計之特性及功能。

第十七條 低功率射頻電機之使用不得影響飛航安全及干擾合法通
信；經發現有干擾現象時，應立即停用，並改善至無干
擾時方得繼續使用。
前項合法通信，指依電信規定作業之無線電信。低功率
射頻電機須忍受合法通信或工業、科學及醫療用電波輻
射性電機設備之干擾。

Recycle Statements

Waste Electrical and Electronic Equipment (WEEE) Statements

Disposal of Waste Equipment by Users in Private Household in the European Union

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Likvidace zařízení soukromými domácími uživateli v Evropské unii

Tento symbol na produktu nebo balení označuje výrobek, který nesmí být vyhozen spolu s ostatním domácím odpadem. Povinností uživatele je předat takto označený odpad na předem určené sběrné místo pro recyklaci elektrických a elektronických zařízení. Okamžité třídění a recyklace odpadu pomůže uchovat přírodní prostředí a zajistí takový způsob recyklace, který ochrání zdraví a životní prostředí člověka. Další informace o možnostech odevzdání odpadu k recyklaci získáte na příslušném obecním nebo městském úřadě, od firmy zabývající se sběrem a svozem odpadu nebo v obchodě, kde jste produkt zakoupili.

Bortskaffelse af affald fra husstande i den Europæiske Union

Hvis produktet eller dets emballage er forsynet med dette symbol, angiver det, at produktet ikke må bortskaffes med andet almindeligt husholdningsaffald. I stedet er det dit ansvar at bortskaffe kasseret udstyr ved at aflevere det på den kommunale genbrugsstation, der forestår genvinding af kasseret elektrisk og elektronisk udstyr. Den centrale modtagelse og genvinding af kasseret udstyr i forbindelse med bortskaffelsen bidrager til bevarelse af naturlige ressourcer og sikrer, at udstyret genvindes på en måde, der beskytter både mennesker og miljø. Yderligere oplysninger om, hvor du kan aflevere kasseret udstyr til genvinding, kan du få hos kommunen, den lokale genbrugsstation eller i den butik, hvor du købte produktet.

Seadmete jäätmete kõrvaldamine eramajapidamistes Euroopa Liidus

See tootel või selle pakendil olev sümbol näitab, et kõnealust toodet ei tohi koos teiste majapidamisjäät-metega kõrvaldada. Teie kohus on oma seadmete jäätmed kõrvaldada, viies need elektri- ja elektrooni-kaseadmete jäätmete ringlussevõtmiseks selleks ettenähtud kogumispunkti. Seadmete jäätmete eraldi kogumine ja ringlussevõtmine kõrvaldamise ajal aitab kaitsta loodusvarasid ning tagada, et ringlussev-õtmine toimub viisil, mis kaitseb inimeste tervist ning keskkonda. Lisateabe saamiseks selle kohta, kuhu oma seadmete jäätmed ringlussevõtmiseks viia, võtke palun ühendust oma kohaliku linnakantselei, majapidamisjäätmete kõrvaldamise teenistuse või kauplusega, kust Te toote ostsite.

Laitteiden hävittäminen kotitalouksissa Euroopan unionin alueella

Jos tuotteessa tai sen pakkauksessa on tämä merkki, tuotetta ei saa hävittää kotitalousjätteiden mukana. Tällöin hävitettävä laite on toimitettava sähkölaitteiden ja elektronisten laitteiden kierrätyspisteeseen. Hävitettävien laitteiden erillinen käsittely ja kierrätys auttavat säästämään luonnonvaroja ja varmistamaan, että laite kierrätetään tavalla, joka estää terveyshaitat ja suojelee luontoa. Lisätietoja paikoista, joihin hävitettävät laitteet voi toimittaa kierrätettäväksi, saa ottamalla yhteyttä jätehuoltoon tai liikkeeseen, josta tuote on ostettu.

Élimination des appareils mis au rebut par les ménages dans l'Union européenne

Le symbole apposé sur ce produit ou sur son emballage indique que ce produit ne doit pas être jeté avec les déchets ménagers ordinaires. Il est de votre responsabilité de mettre au rebut vos appareils en les déposant dans les centres de collecte publique désignés pour le recyclage des équipements électriques et électroniques. La collecte et le recyclage de vos appareils mis au rebut indépendamment du reste des déchets contribue à la préservation des ressources naturelles et garantit que ces appareils seront recyclés dans le respect de la santé humaine et de l'environnement. Pour obtenir plus d'informations sur les centres de collecte et de recyclage des appareils mis au rebut, veuillez contacter les autorités locales de votre région, les services de collecte des ordures ménagères ou le magasin dans lequel vous avez acheté ce produit.

Entsorgung von Altgeräten aus privaten Haushalten in der EU

Das Symbol auf dem Produkt oder seiner Verpackung weist darauf hin, dass das Produkt nicht über den normalen Hausmüll entsorgt werden darf. Benutzer sind verpflichtet, die Altgeräte an einer Rücknahmestelle für Elektro- und Elektronik-Altgeräte abzugeben. Die getrennte Sammlung und ordnungsgemäße Entsorgung Ihrer Altgeräte trägt zur Erhaltung der natürlichen Ressourcen bei und garantiert eine Wiederverwertung, die die Gesundheit des Menschen und die Umwelt schützt. Informationen dazu, wo Sie Rücknahmestellen für Ihre Altgeräte finden, erhalten Sie bei Ihrer Stadtverwaltung, den örtlichen Müllentsorgungsbetrieben oder im Geschäft, in dem Sie das Gerät erworben haben

Απόρριψη άχρηστου εξοπλισμού από χρήστες σε ιδιωτικά νοικοκυριά στην Ευρωπαϊκή Ένωση

Το σύμβολο αυτό στο προϊόν ή τη συσκευασία του υποδεικνύει ότι το συγκεκριμένο προϊόν δεν πρέπει να διατίθεται μαζί με τα άλλα οικιακά σας απορρίμματα. Αντίθετα, είναι δική σας ευθύνη να απορρίψετε τον άχρηστο εξοπλισμό σας παραδίδοντάς τον σε καθορισμένο σημείο συλλογής για την ανακύκλωση άχρηστου ηλεκτρικού και ηλεκτρονικού εξοπλισμού. Η ξεχωριστή συλλογή και ανακύκλωση του άχρηστου εξοπλισμού σας κατά την απόρριψη θα συμβάλει στη διατήρηση των φυσικών πόρων και θα διασφαλίσει ότι η ανακύκλωση γίνεται με τρόπο που προστατεύει την ανθρώπινη υγεία και το περιβάλλον. Για περισσότερες πληροφορίες σχετικά με το πού μπορείτε να παραδώσετε τον άχρηστο εξοπλισμό σας για ανακύκλωση, επικοινωνήστε με το αρμόδιο τοπικό γραφείο, την τοπική υπηρεσία διάθεσης οικιακών απορριμμάτων ή το κατάστημα όπου αγοράσατε το προϊόν.

Készülékek magánháztartásban történő selejtezése az Európai Unió területén

A készüléken, illetve a készülék csomagolásán látható azonos szimbólum annak jelzésére szolgál, hogy a készülék a selejtezés során az egyéb háztartási hulladéktól eltérő módon kezelendő. A vásárló a hulladékká vált készüléket köteles a kijelölt gyűjtőhelyre szállítani az elektromos és elektronikai készülékek újrahasznosítása céljából. A hulladékká vált készülékek selejtezéskori begyűjtése és újrahasznosítása hozzájárul a természeti erőforrások megőrzéséhez, valamint biztosítja a selejtezett termékek környezetre és emberi egészségre nézve biztonságos feldolgozását. A begyűjtés pontos helyéről bővebb tájékoztatást a lakhelye szerint illetékes önkormányzattól, az illetékes szemételtakarító vállalattól, illetve a terméket elárusító helyen kaphat.

Smaltimento delle apparecchiature da parte di privati nel territorio dell'Unione Europea

Questo simbolo presente sul prodotto o sulla sua confezione indica che il prodotto non può essere smaltito insieme ai rifiuti domestici. È responsabilità dell'utente smaltire le apparecchiature consegnandole presso un punto di raccolta designato al riciclo e allo smaltimento di apparecchiature elettriche ed elettroniche. La raccolta differenziata e il corretto riciclo delle apparecchiature da smaltire permette di proteggere la salute degli individui e l'ecosistema. Per ulteriori informazioni relative ai punti di raccolta delle apparecchiature, contattare l'ente locale per lo smaltimento dei rifiuti, oppure il negozio presso il quale è stato acquistato il prodotto.

Nolietotu iekārtu iznīcināšanas noteikumi lietotājiem Eiropas Savienības privātajās mājsaimniecībās

Šāds simbols uz izstrādājuma vai uz tā iesaiņojuma norāda, ka šo izstrādājumu nedrīkst izmest kopā ar citiem sadzīves atkritumiem. Jūs atbildat par to, lai nolietotās iekārtas tiktu nodotas speciāli iekārtotos punktos, kas paredzēti izmantoto elektrisko un elektronisko iekārtu savākšanai otrreizējai pārstrādei. Atsevišķa nolietoto iekārtu savākšana un otrreizējā pārstrāde palīdzēs saglabāt dabas resursus un garantēs, ka šīs iekārtas tiks otrreizēji pārstrādātas tādā veidā, lai pasargātu vidi un cilvēku veselību. Lai uzzinātu, kur nolietotās iekārtas var izmest otrreizējai pārstrādei, jāvēršas savas dzīves vietas pašvaldībā, sadzīves atkritumu savākšanas dienestā vai veikalā, kurā izstrādājums tika nopirkts.

Vartotojų iš privačių namų ūkių įrangos atliekų šalinimas Europos Sąjungoje

Šis simbolis ant gaminio arba jo pakuotės rodo, kad šio gaminio šalinti kartu su kitomis namų ūkio atliekomis negalima. Šalintinas įrangos atliekas privalote pristatyti į specialią surinkimo vietą elektros ir elektroninės įrangos atliekoms perdirbti. Atskirai surenkamos ir perdirbamos šalintinos įrangos atliekos padės saugoti gamtinius išteklius ir užtikrinti, kad jos bus perdirbtos tokiu būdu, kuris nekenkia žmonių sveikatai ir aplinkai. Jeigu norite sužinoti daugiau apie tai, kur galima pristatyti perdirbtinas įrangos atliekas, kreipkitės į savo seniūniją, namų ūkio atliekų šalinimo tarnybą arba parduotuvę, kurioje įsigijote gaminį.

Verwijdering van afgedankte apparatuur door privé-gebruikers in de Europese Unie

Dit symbool op het product of de verpakking geeft aan dat dit product niet mag worden gedeponeerd bij het normale huishoudelijke afval. U bent zelf verantwoordelijk voor het inleveren van uw afgedankte apparatuur bij een inzamelingspunt voor het recyclen van oude elektrische en elektronische apparatuur. Door uw oude apparatuur apart aan te bieden en te recyclen, kunnen natuurlijke bronnen worden behouden en kan het materiaal worden hergebruikt op een manier waarmee de volksgezondheid en het milieu worden beschermd. Neem contact op met uw gemeente, het afvalinzamelingsbedrijf of de winkel waar u het product hebt gekocht voor meer informatie over inzamelingspunten waar u oude apparatuur kunt aanbieden voor recycling.

Pozbywanie się zużytego sprzętu przez użytkowników w prywatnych gospodarstwach domowych w Unii Europejskiej

Ten symbol na produkcie lub jego opakowaniu oznacza, że produktu nie wolno wyrzucać do zwykłych pojemników na śmieci. Obowiązkiem użytkownika jest przekazanie zużytego sprzętu do wyznaczonego punktu zbiórki w celu recyklingu odpadów powstałych ze sprzętu elektrycznego i elektronicznego. Osobna zbiórka oraz recykling zużytego sprzętu pomogą w ochronie zasobów naturalnych i zapewnią ponowne wprowadzenie go do obiegu w sposób chroniący zdrowie człowieka i środowisko. Aby uzyskać więcej informacji o tym, gdzie można przekazać zużyty sprzęt do recyklingu, należy się skontaktować z urzędem miasta, zakładem gospodarki odpadami lub sklepem, w którym zakupiono produkt.

Descarte de Lixo Elétrico na Comunidade Européia
Este símbolo encontrado no produto ou na embalagem indica que o produto não deve ser descartado no lixo doméstico comum. É responsabilidade do cliente descartar o material usado (lixo elétrico), encaminhando-o para um ponto de coleta para reciclagem. A coleta e a reciclagem seletivas desse tipo de lixo ajudarão a conservar as reservas naturais; sendo assim, a reciclagem será feita de uma forma segura, protegendo o ambiente e a saúde das pessoas. Para obter mais informações sobre locais que reciclam esse tipo de material, entre em contato com o escritório da HP em sua cidade, com o serviço de coleta de lixo ou com a loja em que o produto foi adquirido.

Likvidácia vyradených zariadení v domácnostiach v Európskej únii
Symbol na výrobku alebo jeho balení označuje, že daný výrobok sa nesmie likvidovať s domovým odpadom. Povinnosťou spotrebiteľa je odovzdať vyradené zariadenie v zbernom mieste, ktoré je určené na recykláciu vyradených elektrických a elektronických zariadení. Separovaný zber a recyklácia vyradených zariadení prispieva k ochrane prírodných zdrojov a zabezpečuje, že recyklácia sa vykonáva spôsobom chrániacim ľudské zdravie a životné prostredie. Informácie o zberných miestach na recykláciu vyradených zariadení vám poskytne miestne zastupiteľstvo, spoločnosť zabezpečujúca odvoz domového odpadu alebo obchod, v ktorom ste si výrobok zakúpili.

Odstranjevanje odslužene opreme uporabnikov v zasebnih gospodinjstvih v Evropski uniji
Ta znak na izdelku ali njegovi embalaži pomeni, da izdelka ne smete odvreči med gospodinjske odpadke. Nasprotno, odsluženo opremo morate predati na zbirališče, pooblaščeno za recikliranje odslužene električne in elektronske opreme. Ločeno zbiranje in recikliranje odslužene opreme prispeva k ohranjanju naravnih virov in zagotavlja recikliranje te opreme na zdravju in okolju neškodljiv način. Za podrobnejše informacije o tem, kam lahko odpeljete odsluženo opremo na recikliranje, se obrnite na pristojni organ, komunalno službo ali trgovino, kjer ste izdelek kupili.

Eliminación de residuos de equipos eléctricos y electrónicos por parte de usuarios particulares en la Unión Europea
Este símbolo en el producto o en su envase indica que no debe eliminarse junto con los desperdicios generales de la casa. Es responsabilidad del usuario eliminar los residuos de este tipo depositándolos en un "punto limpio" para el reciclado de residuos eléctricos y electrónicos. La recogida y el reciclado selectivos de los residuos de aparatos eléctricos en el momento de su eliminación contribuirá a conservar los recursos naturales y a garantizar el reciclado de estos residuos de forma que se proteja el medio ambiente y la salud. Para obtener más información sobre los puntos de recogida de residuos eléctricos y electrónicos para reciclado, póngase en contacto con su ayuntamiento, con el servicio de eliminación de residuos domésticos o con el establecimiento en el que adquirió el producto.

Bortskaffande av avfallsprodukter från användare i privathushåll inom Europeiska Unionen
Om den här symbolen visas på produkten eller förpackningen betyder det att produkten inte får slängas på samma ställe som hushållssopor. I stället är det ditt ansvar att bortskaffa avfallet genom att överlämna det till ett uppsamlingsställe avsett för återvinning av avfall från elektriska och elektroniska produkter. Separat insamling och återvinning av avfallet hjälper till att spara på våra naturresurser och gör att avfallet återvinns på ett sätt som skyddar människors hälsa och miljön. Kontakta ditt lokala kommunkontor, din närmsta återvinningsstation för hushållsavfall eller affären där du köpte produkten för att få mer information om var du kan lämna ditt avfall för återvinning.
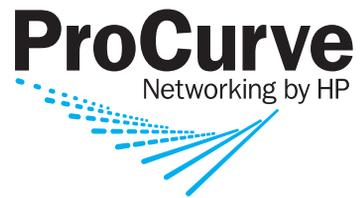
ProCurve
Networking by HP

September 2007

Manual Part Number
5991-8629