Section 7

Users Manual

User Guide

Expedience® Express Card

Congratulations on your purchase of the Motorola Expedience Express Card.

The Expedience® plugin card provides your laptop with the highest performance broadband wireless service on the market today. To get started, please check that all the required items are in your package.

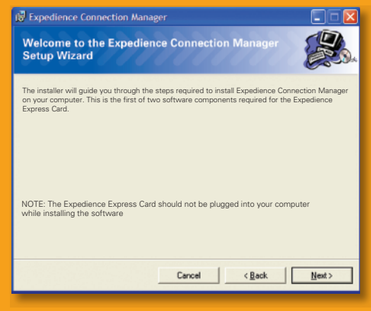
Expedience Express Card

Expedience User Guide

Expedience Software CD

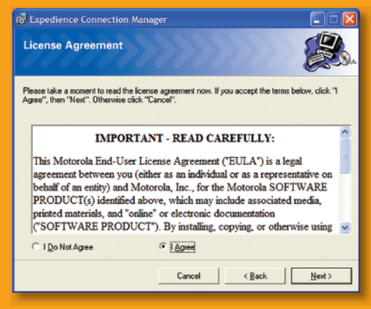
To operate your Express Card, you will first need to install the software driver from the Expedience Software CD. Please temporarily disable any anti-virus programs before starting the installation

To begin, insert the CD in your CD drive. ***Do not plug in your Express Card at this time.*** If the installer does not start up automatically, click **START** on your laptop screen, then **RUN**, and then type **X:/setup**, where X is the drive letter for your CD drive (Usually D). After the Motorola introductory screen is displayed, please follow the instructions below to complete the installation of your Expedience Express Card.



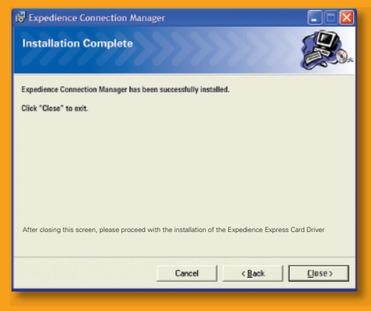
1.

Click **NEXT**



2.

Click **I AGREE,** then **NEXT**



3.

The connection manager software now loads automatically. At the end of the loading process, Click **CLOSE**

Now, plug in your Express Card

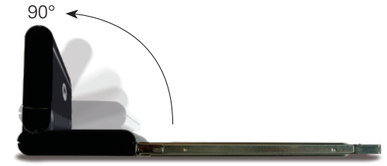
MOTOWi4

102-0552-0000

At this point, please plug in your Express Card

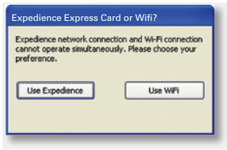
For the best signal quality, flip up the antenna on your Express Card to a vertical position.

NOTE: *Do not attempt to force the antenna past the vertical position, as this may damage your Express Card.*



To avoid interference between the Expedience connection and any WiFi service available on your computer, tell the computer which wireless service to use. This dialog box appears every time you plug in your Express Card.

Click the **Use Expedience** box to start using your Express Card.



Systray Icons

An icon appears in the Systray at the bottom right of the screen indicating the signal quality of the Expedience connection. Increasing signal quality is indicated by the number of green arcs, as shown:

If the Expedience Express Card is unplugged, the "Disconnected" icon appears:

Signal Quality Screen

Clicking on the signal quality Systray icon opens the Signal Quality screen.

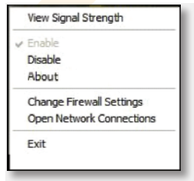
The quality of the Expedience signal is indicated by displaying from 1-5 bars. For best results, the user may orient the computer to display the maximum number of bars. Some fluctuation in the signal quality is normal, and will not have a significant effect on the data rate of your Internet connection.

If there is not enough signal for a reliable connection, the system continues to scan, and this screen is displayed. In this case, the use of the accessory directional antenna (available separately) may be required.

If the Expedience Express Card is unplugged or has been disabled using the Windows Control Panel function, this screen is displayed. Please check your PC documentation for information on enabling and disabling your Internet connections using the Control Panel.

Systray Menu Functions

Right-clicking on the Systray icon displays the Express Card Control screen. This screen provides access to the Signal Quality screen by clicking **View Signal Strength**, as well as directly providing the Control Panel **Enable** and **Disable** and **Network Connections** functions.



Select the **Change Firewall Settings** item to manage the firewall function on your PC, if it is so equipped. Please contact your system administrator for information on firewalls.

Important Regulatory and Safety Information

Before installing your Express Card, please review the important regulatory and safety information in the Expedience Express Card User's Guide on your CD-ROM.

MOTOROLA

Motorola, Inc. 2900 W. County Road 42, Burnsville, MN 55337 USA Ph. 952.929.4008 - Fax: 952.929.4080 www.motorola.com/expedience

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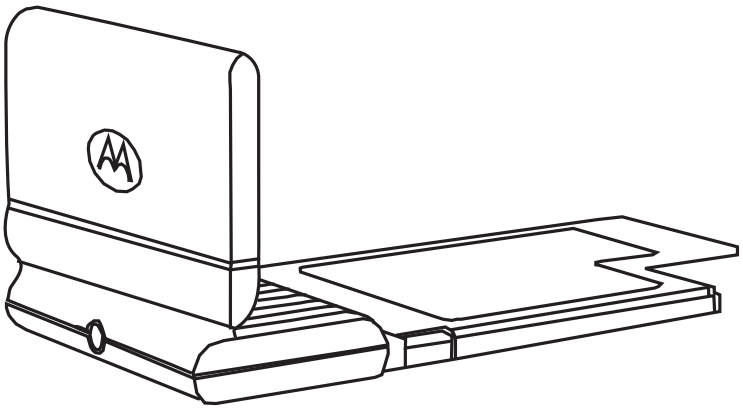
Technical Information

INSTALLING AND USING THE EXPEDIENCE® PC EXPRESS CARD

EXPEDIENCE®

ENGLISH
JANUARY 2008
150-0552-0001

Installing and using the Expedience® Express Card



Part number: 150-0552-0001-a

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Disclaimer

Statements included in this manual indicating support provided by Motorola are subject to changes at any time. Motorola reserves the right to make changes to this manual.

Declaration of Conformity

Per FCC CFR 47 Part 2 Section 2.1077(a)

Responsible Party Name: Motorola, Inc.

Address: 2900 W. Cty. Rd. 42, Burnsville, MN 55337

USA Phone Number: 1-952-929-4008

Hereby declares that the product:

Product Name: PCEx25100

Model Number: 900-0552-xxxx

Conforms to the following regulations:

FCC Part 15, subpart B, section 15.107(a), 15.107(d) and section 15.109(a)

Class B Digital Device

As a personal computer peripheral, 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.

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.

Regulatory Requirements

The Federal Communications Commission (FCC) requires application for certification of digital devices in accordance with CFR Title 47, Part 15 and Part 27. This includes Electromagnetic Energy Exposure (EME) testing. As the PCEx25100 is not a stand-alone modem but is a PC card, the PCEx25100 cannot be tested by itself for EME certification and was tested while inserted in a laptop computer.

Modification of this device may void the user's authority to operate this equipment.

When using the PCEx25100 product, other wireless networking devices contained within the laptop computer must be disabled. For example, most modern laptop computers contain wireless networking functions that are integrated into the computer which utilize a Wi-Fi or WLAN protocol product such as 802.11a@4.9GHz and 802.11b/g@2.4GHz.

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.

NOTE: The PCEx25100 was approved by the United States Federal Communications Commission (FCC) for use with the integral antenna and optional external accessory antenna which is available from your service provider.

NOTE: Safety and General Information

IMPORTANT INFORMATION ON SAFE AND EFFICIENT OPERATION. READ THIS INFORMATION BEFORE USING YOUR MOTOROLA PCEx25100.

RF Operational Characteristics

Your Motorola product contains a radio frequency transmitter to convey the information you wish to send as well as occasional automatic signals used to sustain connection to the wireless network, and a receiver which enables you to receive communication and connection information from the network.

Antenna Care

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could damage the radio product and may violate FCC regulations. When using any approved accessory antenna, position it at least eight inches (20 cm) from any part of any person.

DO NOT hold the antenna when the radio product is "IN USE". Holding the antenna affects communication quality and may cause the product to operate at a higher power level than needed.

Product Operation and EME Exposure

Your Motorola product is designed to comply with the following national and international standards and guidelines regarding exposure of human beings to radio frequency electromagnetic energy (EME):

- United States Federal Communications Commission,Code of Federal Regulations; 47 CFR part 2 sub-part J.
- American National Standards Institute (ANSI) / Institute of Electrical and Electronics Engineers (IEEE). C95. 1-1992.
- Institute of Electrical and Electronics Engineers (IEEE). C95. 1-1999 Edition.
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998.
- Ministry of Health (Canada). Safety Code 6. Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz, 1999.
- Australian Communications Authority Radiocommunications (Electromagnetic Radiation - Human Exposure) Standard 2003.
- ANATEL, Brasil Regulatory Authority, Resolution 303 (July 2, 2002) “Regulation of the limitation of exposure to electrical, magnetic, and electromagnetic fields in the radio frequency range between 9 kHz and 300 GHz.” “Attachment to Resolution 303 from July 2, 2002.”

The PCEx25100 has been tested for compliance with FCC RF exposure limits in laptop computer configurations with side PCMCIA slots, and can be used in laptop computers with substantially similar physical dimensions, construction, and electrical and RF characteristics.

FCC ID: PHX-PCE25100 MEETS THE GOVERNMENT'S REQUIREMENTS FOR EXPOSURE TO RADIO WAVES.

Your PCEx25100 is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for the PCEx25100 employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg.(1) Tests for SAR are conducted using standard operating positions reviewed by the FCC with the PCEx 25100 transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the PCEx 25100 while operating can be well below the maximum value. This is because the PCEx25100 is designed to operate at multiple power levels so as to use only the power required to reach the network.

Before a PCEx25100 model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations as required by the FCC for each model.

The FCC has granted an Equipment Authorization for this PCEx25100 with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this PCEx25100 is on file with the FCC and can be found under the Display Grant section of

http://www.fcc.gov/oet/fccid after searching on FCC ID:

PHX-PCE25100.

(1) In the United States and Canada, the SAR limit for modems used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

Electro Magnetic Interference/Compatibility

Facilities

To avoid electromagnetic interference and/or compatibility conflicts, turn off your PCEx 25100 immediately in any facility where posted notices instruct you to do so. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy.

Aircraft

When instructed to do so, turn off your PCEx25100 when on board an aircraft. Any use of a PCEx25100 must be in accordance with applicable regulations per airline crew instructions.

Medical Devices

Pacemakers

The Advanced Medical Technology Association (AdvaMed) recommends that a minimum separation of 6 inches (15 cm) be maintained between a PCEx25100 and a pacemaker. These recommendations are consistent with those of the U.S. Food and Drug Administration. Persons with pacemakers should:

- ALWAYS keep the PCEx25100 more than 6 inches (15 cm) from their pacemaker when the PCEx25100 is turned ON.
- Turn the PCEx25100 OFF immediately if you have any reason to suspect that interference is taking place.

Hearing Aids

Some digital wireless modem products may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.

Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from RF energy. Your physician may be able to assist you in obtaining this information.

Operational Cautions

Cleaning and Drying Considerations

This product is not water proof, and exposing the unit to liquids may result in permanent damage to the unit. If your PCEx25100 interior gets wet, do not try to accelerate drying with the use of an oven or a dryer as this will damage the PCEx25100 and void the warranty. Instead, do the following:

1. Immediately power off the PCEx25100.

2. Shake excess liquid from PCEx25100.

3. Place the PCEx25100 in an area that is at room temperature and has good air flow.

4. Let the PCEx25100 dry for 72 hours before powering on again.

If the PCEx25100 does not work after following the steps listed above, contact your dealer for servicing information.

Clean the external surfaces of the PCEx25100 with a damp cloth, using a mild solution of dishwashing detergent and water. Some household cleaners may contain chemicals that could seriously damage the PCEx25100. Avoid the use of any petroleum-based solvent cleaners. Also, avoid applying liquids directly on the PCEx25100.

Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed or otherwise configured for electromagnetic compatibility.

Operational Warnings

For Vehicle With Air Bags

Do not place a PCEx25100 in the area over an air bag or in the air bag deployment area. Air bags inflate with great force. If a PCEx25100 is placed in the air bag deployment area and the air bag inflates, the PCEx25100 may be propelled with great force and cause serious injury to occupants of the vehicle.

Potentially Explosive Atmospheres

Turn off your PCEx25100 prior to entering any area with a potentially explosive atmosphere.

Sparks in a potentially explosive atmosphere can cause an explosion or fire resulting in bodily injury or even death. The areas with potentially explosive atmospheres referred to above include fueling areas such as below decks on boats, fuel or chemical transfer or storage facilities, and areas where the air contains chemicals or particles such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine. Areas with potentially explosive atmospheres are often but not always posted.

Blasting Caps and Blasting Areas

To avoid possible interference with blasting operations, turn off your PCEx25100 when you are near electrical blasting caps, in a blasting area, or in areas posted: "Turn off two-way radio." Obey all signs and instructions.

Patent and Software Provisions

Motorola will defend, at its own expense, any suit brought against the end user purchaser to the extent that it is based on a claim that the Product or its parts infringe a United States patent, and Motorola will pay those costs and damages finally awarded against the end user purchaser in any such suit which are attributable to any such claim, but such defense and payments are conditioned on the following:

1. that Motorola will be notified promptly in writing by such purchaser of any notice of such claim;
2. that Motorola will have sole control of the defense of such suit and all negotiations for its settlement or compromise;

   and
3. should the Product or its parts become, or in Motorola's opinion be likely to become, the subject of a claim of infringement of a United States patent, that such purchaser will permit Motorola, at its option and expense, either to procure for such purchaser the right to continue using the Product or its parts or to replace or modify the same so that it becomes non-infringing or to grant such purchaser a credit for the Product or its parts as depreciated and accept its return. The depreciation will be an equal amount per year over the lifetime of the Product or its parts as established by Motorola.

Motorola will have no liability with respect to any claim of patent infringement which is based upon the combination of the Product or its parts furnished hereunder with software, apparatus or devices not furnished by Motorola, nor will Motorola have any liability for the use of ancillary equipment or software not furnished by Motorola which is attached to or used in connection with the Product. The foregoing states the entire liability of Motorola with respect to infringement of patents by the Product or any its parts thereof.

Laws in the United States and other countries preserve for Motorola certain exclusive rights for copyrighted Motorola software such as the exclusive rights to reproduce in copies and distribute copies of such Motorola software. Motorola software may be used in only the Product in which the software was originally embodied and such software in such Product may not be replaced, copied, distributed, modified in any way, or used to produce any derivative thereof. No other use including, without limitation, alteration, modification, reproduction, distribution, or reverse engineering of such Motorola software or exercise of rights in such Motorola software is permitted. No license is granted by implication, estoppel or otherwise under Motorola patent rights or copyrights.

Welcome

This document describes how to install and use your Expedience PC Express Card to obtain wireless high-speed Internet access. You can plug the Expedience PC Express Card into any laptop computer with a side access cardbus slot.

The Expedience PC Express Card contains an internal antenna that can connect with base stations. Once a connection is established between the Expedience PC Express Card and a base station you can access your service provider's network.

Before you begin

Figure 1 illustrates the Expedience PC Express Card package contents.

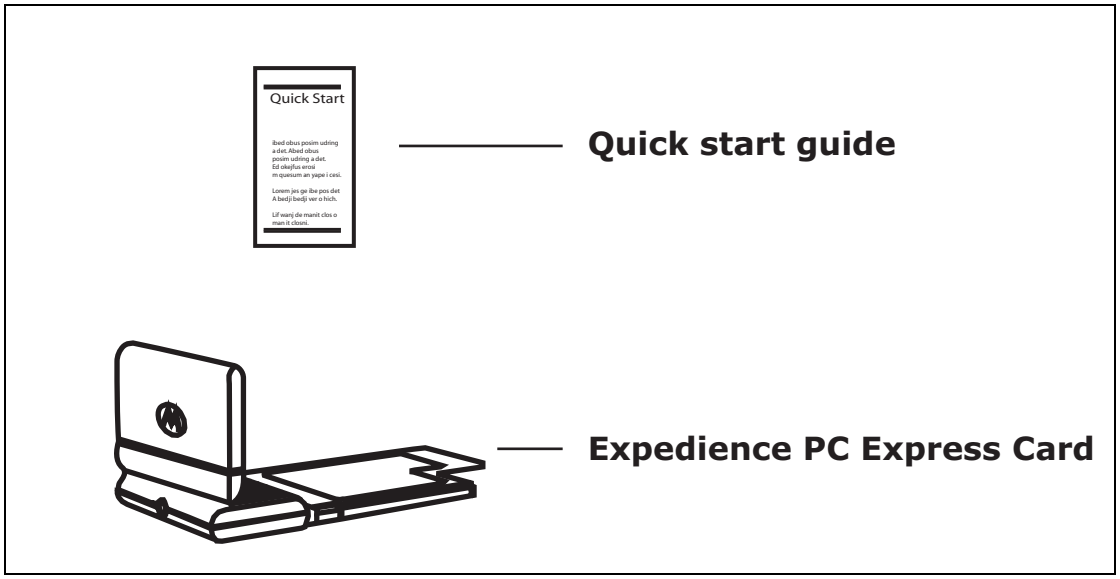

Figure 1 Expedience PC Express Card package contents

Table 1 lists the standard contents in your Expedience PC Express Card package.

Table 1 Expedience PC Express Card package components

Component	Part number
Expedience PC Express Card	900-0552-0000
Quick start guide	102-0552-0000

Installing the Expedience PC Express Card driver

Before using the Expedience PC Express Card for the first time, install the driver for the card.

1. Insert the PC Express Card into the laptop's ExpressCard socket. The installation program automatically runs.

   If the installation program does not automatically run:

   - From the **Start** menu, select **Run**. The Run dialog box opens.
   - In the **Open** field, type x:**setup** where **x** is the letter assigned to the laptop computer's CD drive.
   - Click **OK**.

2. To install the Expedience PC Express Card driver software, follow the instructions that appear on your laptop's screen.
3. The Expedience PC Express Card detects the network. You can discover the connection status of your Expedience PC Express Card in the following ways:

   - The icons displayed in your laptop's system tray vary depending on the operating state of the Expedience PC Express Card and the signal strength the Expedience PC Express Card detects.

Figure 2 System tray icons: connected/signal strength icons

   - You can also show the status of the Expedience PC Express Card by rolling your mouse over the system tray icon. The status tip box appears (Figure 3).

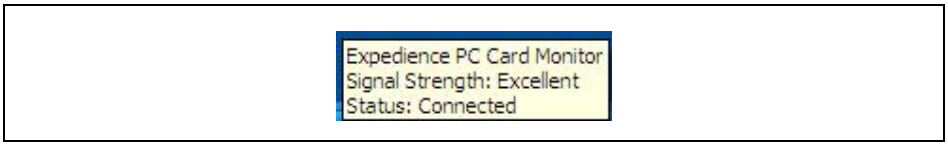

Figure 3 Status tip box

4. To obtain the best signal, follow the process described in the section "Optimizing the signal'.

Choosing an Expedience PC Express Card network connection or a Wi-Fi connection

You cannot establish an Expedience PC Express Card connection to a network if your computer is already connected to a Wi-Fi network.

To determine the connection to be used:

1. If a Wi-Fi connection exists when the Expedience PC Express Card is plugged in, the Expedience PC Express Card or Wifi? dialog box opens.

The Expedience PC Express Card or Wifi? dialog box also appears if a Wi-Fi card is inserted into the laptop after the Expedience PC Express Card is operating.

Figure 4 Expedience PC Express Card or Wifi window

2 Perform one of the following:

- If you want to connect to the network using the PC Express Card, click **Use Expedience**.
- If you want to connect to the Wi-Fi network, click **Use WiFi**.

3 One of the following dialog boxes appears, asking you to confirm your choice of networks.

- If a Wi-Fi card is present when you disable the Expedience PC Express Card, you are asked if you want to re-enable Wi-Fi:

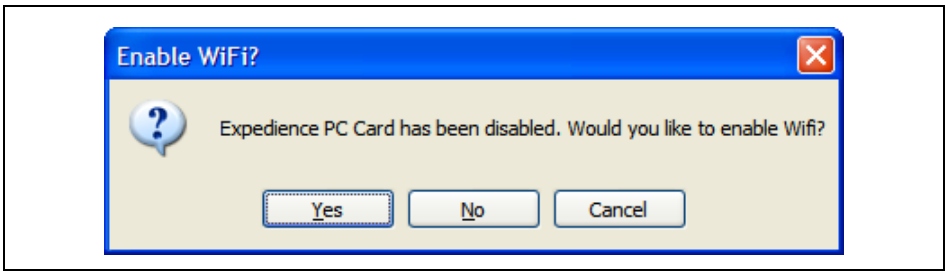

Figure 5 PC Express Card disabled: Enable WiFi window

- If Wi-Fi networking is operating when you choose to enable the Expedience PC Express Card, you must confirm if you want to establish the Expedience PC Express Card connection.

Figure 6 Connect using Expedience window

- If you eject the PC Express Card from the computer, a dialog box appears, asking if you want to enable a WiFi connection.

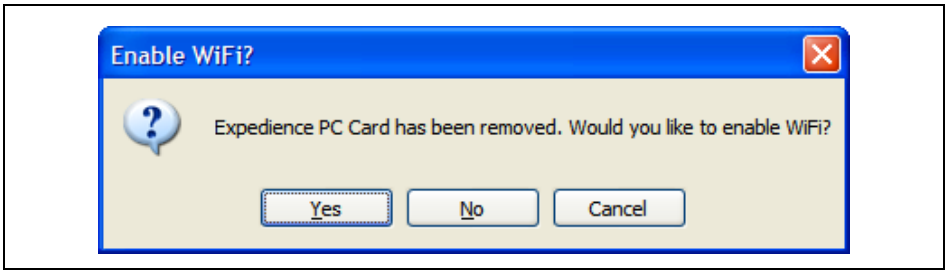

Figure 7 PC Express Card removed: Enable WiFi? window

Optimizing the signal

The Signal Optimizer is a graphic software tool that makes it easier to optimize the PC Express Card's connection to the network.

To open the Signal Optimizer:

1 In the Windows system tray, click on the connection icon.

The Expedience Signal Strength window opens. The appearance of this window depends on the strength of the connection to the network.

The number of arcs displayed is a measure of signal quality.

Figure 8 Signal quality dialog box

2 To obtain a stronger connection, move the laptop around and point the Expedience PC Express Card in different directions.

Other signal quality messages in the Signal Optimizer

Other messages are displayed by the Signal Optimizer when the following events occur:

- Card ejected from PC
- Card disabled

If you eject the Expedience PC Express Card from the laptop, the message "Expedience card removed" appears in the Expedience Signal Strength window.

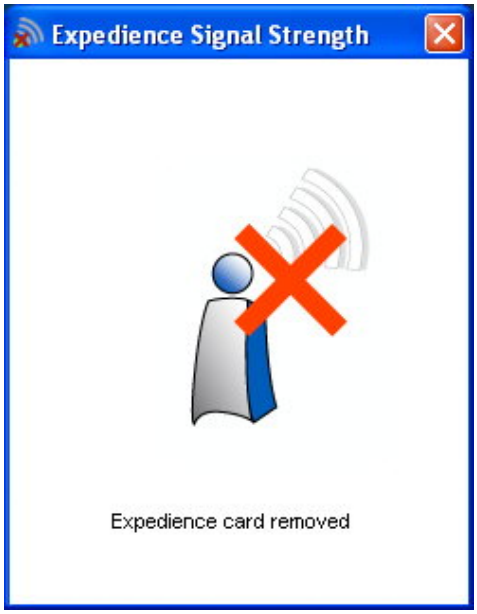

Figure 9 Signal Optimizer: Expedience card removed

When you disable the PC Express Card, perhaps to switch to a Wi-Fi network, the message "Expedience card disabled" appears in the Expedience Signal Strength window.

Figure 10 Signal Optimizer: Expedience card disabled

Enabling or disabling the Expedience PC Express Card connection

You might want to disable the Expedience PC Express Card connection when you are not using the network, in order to conserve the power of your laptop computer's battery.

You also might want to disable the Expedience PC Express Card connection in order to connect to a Wi-Fi network by using a Wi-Fi Card/Connection available on your computer.

To enable or disable the Expedience PC Express Card connection:

1. In the Windows system tray, right click on the connection icon.
2. From the menu that appears, select one of the following:
   - To use the Expedience PC Express Card to connect to an network, select **Enable**.
   - To disable the Expedience PC Express Card connection, select **Disable**.

     If you select **Disable**, the Expedience PC Express Card connection is disabled.The connection icon is removed from the system tray.
3. To enable your Wi-Fi connection, use the Windows control panel.
4. To re-enable the Expedience PC Express Card connection, select **Enable**

Figure 11 System tray icon: Expedience PC Express Card disconnected

Unplugging the Expedience PC Express Card

Always use the Safely Remove Hardware system tray icon before unplugging the PC Express Card from your computer.

1. Double click the Safely Remove Hardware system tray icon. The Safely Remove Hardware window appears.
2. In the hardware devices list, select the Expedience modem, then click **Stop**.
3. In the dialog box that appears, confirm your choice to stop the modem.
4. Click **Close**.
5. Safely remove the PC Express Card from your computer.

Uninstalling the Expedience PC Express Card

To uninstall the Expedience PC Express Card, from the **Start** menu, select **Programs**, **Motorola**, **Connection Manager**, **Uninstall**.

This removes both the Connection Manager and the driver software from the computer.

Note: There may be variations in these designations. These variations depend on the service provider supplying your PC Express Card.

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