



AirPort

AirPort Card and AirPort Base Station





Basics

AirPort





Overview

AirPort is a local area network (LAN) solution for wireless communication among multiple computers. Instead of using cables and wires, AirPort transfers data between computers via radio waves. Through AirPort networks, users can gain access to the Internet, send and receive e-mail, share files, play multi-player games, and perform other network activities.

The AirPort product line





includes the AirPort Base Station, AirPort Software Base Station, and AirPort Card. The AirPort Base Station and Card are currently available for the iBook and new Power Macintosh G4 products; the AirPort Software Base Station will be available soon. Other third-party wireless solutions are available through the Apple Store for older PowerBook G3 products.





AirPort Networks

Users can set up three different types of wireless AirPort networks.

Computer to Computer



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When two or more computers equipped with AirPort cards are in range of each other (within 150 feet), they can use the cards to communicate directly. This is known as a “computer-to-computer” AirPort connection and can be used to transfer files and play multiplayer network games. This type of network does not, however, provide built-in security.





AirPort Base Station



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With the AirPort Base Station, users can establish a more permanent and secure wireless network that can also access the Internet. In this type of network, all communication goes through the base station to up to ten AirPort-equipped computers within 150 feet of the station. Users can establish Internet access within the AirPort network by connecting the base station to an existing network that already has Internet access or to a telephone line, cable modem, or DSL modem. This allows multiple wireless users to access the Internet through a single Internet service account.

The AirPort Base Station provides security for the network through password access control and encryption. To log into the AirPort network, users must enter a password. Data is then transmitted using 40-bit encryption.





AirPort Software Base Station



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Users can also set up an AirPort network using an AirPort Software Base Station, which is a computer equipped with an AirPort card and special AirPort software. This type of network can provide Internet access for multiple AirPort-equipped computers and offers limited security through data encryption.





AirPort Card Specifications

Wireless Data Rate: 11 megabits per second (Mbps) maximum with fallback to 5.5, 2, and 1 Mbps

Range: 150 feet (45 meters) in typical indoor use (varies with building)

Frequency Band: 2.4 Gigahertz (Ghz)

Standards: Compliant with 802.11 Direct Sequence Spread Spectrum (DSSS) 1 and 2 Mbps standard and 802.11HR DSSS 11 Mbps draft standard





AirPort Setup

For more information on setting up a computer to use AirPort, see the attached user document “About Your AirPort Card.”



Card Installation

For more information on card installation, see the Upgrades chapter of the service manual for the computer in which the card will be installed.





Repair Strategy

The primary repair strategy for AirPort products is advance unit replacement; customers may replace defective cards and base stations directly through Apple. In addition, Apple-authorized service providers may replace cards and base stations as whole units. To order these service units, use the AppleOrder (U.S. only) or ARIS (Canada only) system and refer to the AirPort Service Price Pages.

Warranty

AirPort products are covered under the Apple One-Year Limited Warranty in the U.S. and Canada. The AppleCare Protection Plan is also available for these products.





Additional AirPort Information

For more information on AirPort technology and products, see TIL article 60430, “AirPort Wireless Communications FAQ.”





Troubleshooting

AirPort





Introduction

This chapter contains Symptom/Cure charts aimed at helping the user diagnose specific symptoms related to AirPort networks and base stations. The charts are included here for general background information.

For additional assistance in troubleshooting, direct users to the Tech Info Library (TIL) or contact Apple Technical Support.





Base Station LEDs

You can use the AirPort application to monitor the status of an AirPort Base Station. In addition, the three LEDs on the AirPort Base Station show its status. (The LEDs are numbered 1, 2, and 3 in the illustration below, but these numbers do not appear on the actual AirPort Base Station.)



Light Number	Indicator	Status
1	Flashing Green	AirPort communication in progress
2	Steady Green	The AirPort Base Station is receiving power
3	Flashing Green	Ethernet or modem port in use





Symptom Charts

AirPort Base Station

All AirPort Base Station LEDs are off

Verify that one end of power adapter is connected to operating AC outlet and other end is securely attached to power port on AirPort Base Station.

AirPort connection is slow

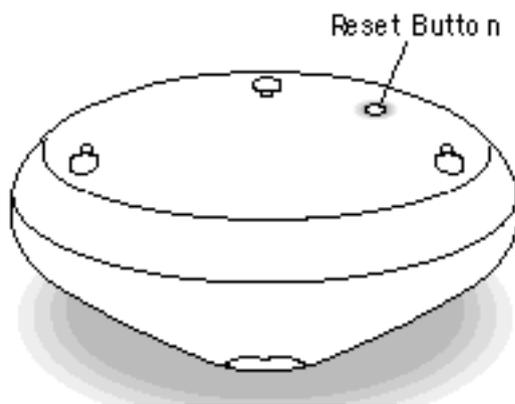
- 1 Move computer closer to base station.
- 2 Too many users are accessing network at the same time causing heavy network traffic. To improve network connection speed, add additional base stations.
- 3 Use the AirPort Utility (AirPort Admin Utility), Optimize Placement option, to check signal strength and noise level of clients connected to the base station.

Network connection becomes unavailable

- 1 Move computer back in range of base station. Use AirPort Control Strip module to monitor signal strength of currently selected network.
- 2 Verify that base station is turned on.
- 3 Ensure that the computer has a network selected and is not in “computer to computer” mode.
- 4 Verify that either the TCP/IP or the AppleTalk control panels are set to use AirPort as their connection method.

User forgot password to AirPort Base Station

- 1 User must reset AirPort Base Station and then reconfigure it. (Reset button is on underside of AirPort Base Station.)
- 2 Refer to TIL article #58502, “AirPort Base Station: How to Perform a Forced Reload”.





Computer-to-Computer Connection

Cannot access other computers

- 1 Make sure that other computers are in range.
- 2 Try repositioning computer to reduce possible interference.
- 3 Check that other computers are set up for computer-to-computer connection.
- 4 Make sure that a network accessible service is active on the computers. For example, file sharing and personal web sharing.





Network Connections

Cannot connect to network

- 1 Verify that network password is correct.
- 2 Make sure Caps Lock key is not engaged.
- 3 Check with network administrator. User may not be authorized to access network until AirPort ID is entered into Access Control Table for base station.

No networks visible in Control Strip

- 1 Check that TCP/IP or AppleTalk control panel is currently set for AirPort.
- 2 Check that AirPort is turned on in AirPort application.
- 3 Restart the computer.
- 4 Verify that there is a properly configured base station in the vicinity.
- 5 Some networks can be configured as a closed network. If the name of the network is known, use the “Allow selection of closed networks” option to enter the network name. If name of the network is unknown, contact network administrator.





Internet Access

Cannot access Internet

- 1 Make sure base station is physically connected to phone line, cable modem, DSL modem, or LAN with internet access.
- 2 Check that base station is turned on and in range of computer. This is covered in “Network connection becomes unavailable” section.
- 3 Verify that ISP uses standard PPP protocols (only for dialup ISP).
- 4 Check that computer's TCP/IP control panel is set correctly.
- 5 If client is supposed to get IP address via DHCP, check address in TCP/IP. If address begins with 169.254, then address is not coming from the base station.
- 6 Check DNS address by putting TCP/IP control panel into Basic user mode.





AirPort Software Base Station

Cannot access
software base station

- 1 If other clients do not detect network, check that base station computer sleep settings are set so that computer never goes to sleep.
- 2 Make sure that software base station is turned on.
- 3 Verify that computer is in range of software base station and that AirPort is turned on.
- 4 Verify that antenna is finally connected to AirPort card.
- 5 Something might be blocking or interfering with the base station wireless signal. Or, move the computer that is running the software base station to a different location.

