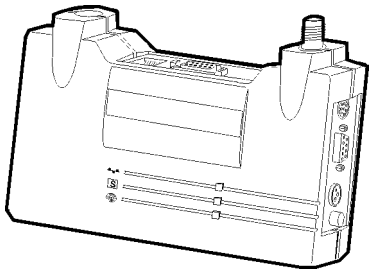
User's Guide

Wireless Bridges

Wireless LAN-to-LAN Bridges for Ethernet

Products supported:
BR2040-E, BR2000-E, and BR1000-E

DOC-710-003850 Rev. A0



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P.O. Box 5292 • Fairlawn, Ohio 44334-0292

Aironet Wireless Communications, Inc.

Printed in USA

DOC-710-003850 Rev. A0

Manufacturers Federal Communication Commission Declaration of Conformity Statement

Models : BR1000-E, BR2000-E, BR2040-E
Manufacturer :

Aironet Wireless Communications, Inc.
367 Ghent Rd , Suite 300
Fairlawn, OH 44333
1-800-3-WIRELESS

This device complies with Part 15 rules. Operation is subject to the following two conditions:

1) this device may cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and radiates radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference. However there is no guarantee that interference will not occur. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one of the following measures:

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

User Warning

The Part 15 radio device operates on a non-interference basis with other devices operating at this frequency. Any changes or modification to said product not expressly approved by Aironet could void the user's authority to operate this device.

Department of Communications—Canada
Canadian Compliance Statement

This Class B Digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numerique de la classe B respecte les exigences du Reglement sur le material broilleur du Canada.

This device complies with RSS-210 of Industry of Canada. Operation is subject to the following two conditions: 1) this device may cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired operation.

European Telecommunication Standards Institute
Statement of Compliance
Information to User

This equipment has been tested and found to comply with the European Telecommunications Standard ETS 300.328. This standard covers Wide-band Data Transmission Systems referred in CEPT recommendation T/R 10.01.

This type accepted equipment is designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Declaration of Conformity

Aironet Model Number:
BR2000-E

Application of Council Directive: 89/336/EEC
Application of Council Directive: 72/23/EEC

CE Type Examination Certificate: HDTP/RDR/167/328880/11

Standards to which Conformity is Declared:
EN 55022 (B)
EN 55011 (B)
EN 50082-1
EN 60950

Manufacturer:
Aironet Wireless Communications, Inc.
367 Ghent Road, Suite 300
Fairlawn Ohio, 44333

The undersigned hereby declares that the equipment specified above conforms to the directives and standards cited herein.

Director, Manufacturing Engineering
Aironet Wireless Communications, Inc.

Declaration of Conformity

Aironet Model Number:
BR2040-E

Application of Council Directive: 89/336/EEC
Application of Council Directive: 72/23/EEC

CE Type Examination Certificate: HDTP/RDR/167/377223

Standards to which Conformity is Declared:
EN 55022 (B)
EN 55011 (B)
EN 50082-1
EN 60950

Manufacturer:
Aironet Wireless Communications, Inc.
367 Ghent Road, Suite 300
Fairlawn Ohio, 44333

The undersigned hereby declares that the equipment specified above conforms to the directives and standards cited herein.

Director, Manufacturing Engineering
Aironet Wireless Communications, Inc.

Safety Information

The FCC with its action in General Docket 93-62, 1997, has adopted a safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC regulated equipment. Aironet subscribes to the same safety standard for the use of its products. Proper operation of this radio according to the instructions in this manual will result in user exposure substantially below the FCC recommended limits.

- Do not move the BR1000-E/BR2000-E/ BR2040-E antenna(s) while the unit is receiving or transmitting.
- Do not hold any component containing a radio such that the antenna(s) is(are) very close to, or touching, exposed parts of the body, especially the face or eyes, while transmitting. Hold such a component 15 centimeters (6 inches) or more from your face.
- Do not allow children to play with any radio equipment containing a transmitter.
- Do not operate a portable transmitter near unshielded electrical blasting caps or in an explosive atmosphere unless it is a type especially qualified for such use.
- Do not turn on the BR1000-E/BR2000-E/ BR2040-E or attempt to transmit data unless the antenna(s) is(are) attached; if the antenna(s) is(are) not attached, the radio module may be damaged.

The BR1000-E/BR2000-E/ BR2040-E are compliant with ANSI C95.1.91 (1991).

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Introduction

Designed for linking networks together—typically in different buildings—Aironet Wireless Bridges offer a low-cost alternative to installing cable or dedicated telephone lines, and are used when traditional wired LAN interconnections are impractical. Rivers, rough terrain, private property and highways can impede wired cable installation. Wireless Bridges easily elude these challenges.

Now you can connect two or more buildings quickly and easily with no expensive, time-consuming cable installation, no right-of-way negotiations, and no monthly service fees (unlike leased 56K, ISDN or T1 lines). By implementing an Aironet wireless bridge solution, hundreds of your users can experience speeds faster than 56K leased lines.

Aironet's field-proven wireless solutions deliver high-speed network connectivity at a far lower cost than comparable wired solutions. With no service fees required, you can save hundreds—even thousands—of dollars per month.

Aironet Wireless Bridges establish radio links between two or more networks up to 25 miles apart and move data between buildings faster than T1 lines allowing all your PC users to gain Internet access, email and network resources housed in different buildings easily and efficiently.

Aironet Wireless Communications, Inc. has pioneered the design and manufacture of wireless LAN products using advanced spread spectrum radio technology for extremely reliable data transmissions.

Wireless Bridge Overview

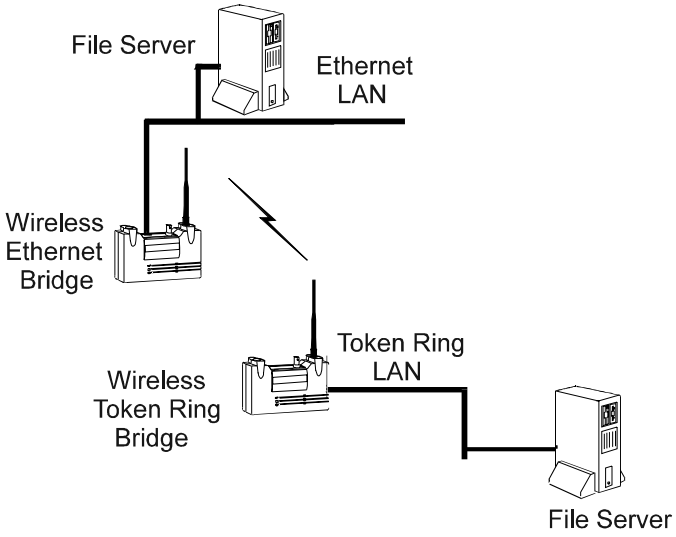
Aironet Wireless Bridges enable you to connect two or more Token Ring and/or Ethernet networks to create a single virtual LAN. The workstations on each LAN can communicate with each other over the Wireless Bridges as if they were on the same physical LAN.

When connecting two or more LANs, each LAN uses an Aironet Wireless Bridge and an antenna to transmit and receive information between the LANs. Each RF-based Bridge unit is connected to a LAN. Aironet offers a variety of antennas to satisfy varying communication requirements often dictated by premise considerations.

A wireless bridge appears as a single network node on the wired LAN. It performs routing functions by moving packets from the wireless LAN to remote workstations on the radio network. Aironet Wireless Bridges support Direct Sequence (DS) spread spectrum radios at frequencies of either 900 MHz or 2.4 GHz.

Supporting Mixed Network Topologies

To support mixed topologies, a Token Ring Bridge would be installed to support a local Token Ring network and an Ethernet Bridge would be installed to support a local Ethernet network. The Aironet Ethernet and Token Ring Bridges can then communicate with each other—linking both types of networks into a single LAN.



You can connect an Aironet Wireless Token Ring Bridge directly to Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP) network segments or a Wireless Ethernet Bridge to 10Base2, 10Base5, or 10BaseT segments.

If the existing network to which you are connecting the Bridge is not Token Ring- or Ethernet-based, you can install a Token Ring or Ethernet Network Interface Card (NIC) in the File Server or third-party Bridge and accommodate other network topologies.

Adding In-Building Wireless Connectivity

You can use an Aironet Wireless Bridge to support in-building wireless connections when local devices such as fixed, portable or mobile devices are equipped with Aironet wireless adapters. Aironet offers a wide array of wireless adapters—supporting ISA, Micro Channel, PC Card, Serial as well as Token Ring and Ethernet network infrastructures.

System Configurations

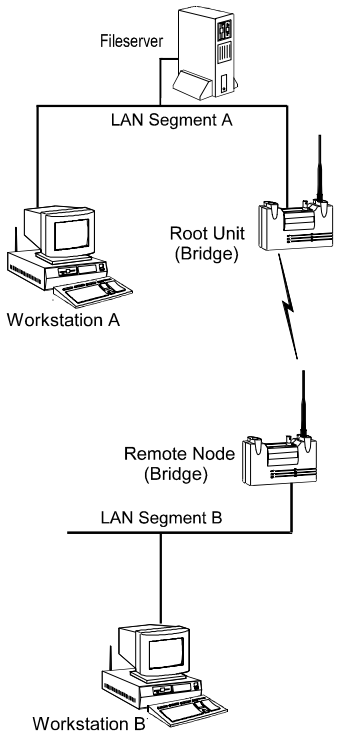
You can use wireless bridges in many different network configurations. The way in which you configure your network determines the size of a network microcell (the area for which a single Bridge provides radio coverage). You can create multiple microcells on a LAN to extend your RF coverage area.

The most common system configurations are:

- Point-to-Point Bridge
- Point-to-Multipoint Bridge
- Network extension with a Repeater
- Wireless Bridge with Wireless End Nodes

Point-to-Point Wireless Bridge

The Point-to-Point Wireless Bridge configuration (shown in the following figure) uses two units to bridge two individual LANs. Packets are sent between the File Server and Workstation B through the Bridge units (Root Unit and Remote Node) over the radio link. Data packets sent from the File Server to Workstation A go through the wired LAN segment and do not go across the wireless radio link.

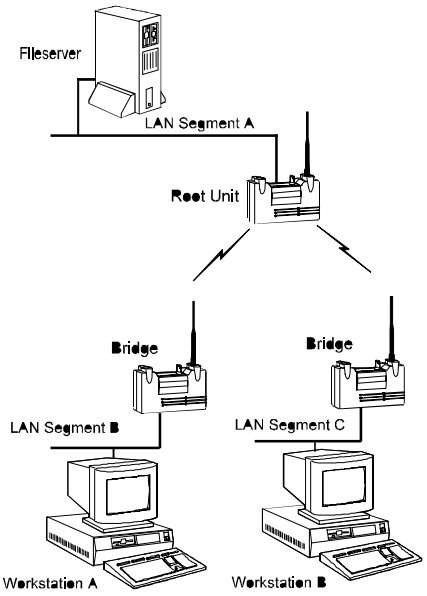


Point-to-Multipoint Wireless Bridge

When connecting three or more LANs (usually in different buildings), each building requires an Aironet Wireless Bridge and antenna. This is called a ‘multipoint’ bridge configuration. One bridge is designated as the central site and its antenna is configured to transmit and receive signals from the bridges at the other sites. Generally, the central site is equipped with an omni-directional antenna that provides radio signal coverage in all directions. The other bridges are typically served by directional antennas that direct radio signals toward the central site.

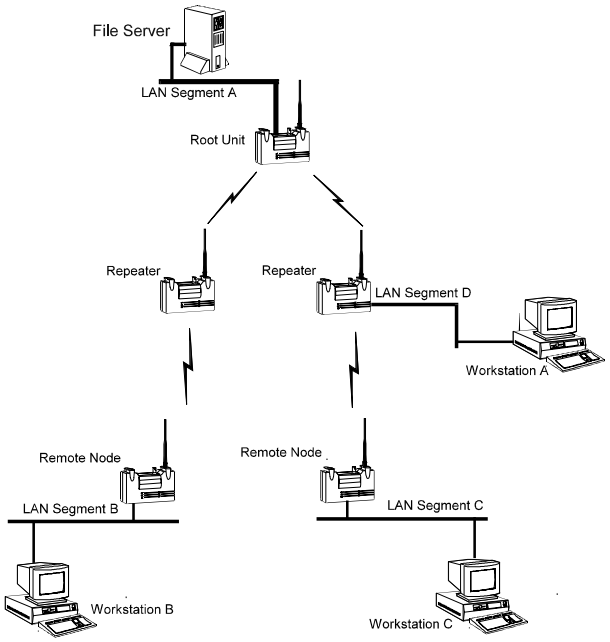
Under a multipoint wireless bridge configuration, workstations on any of the LANs can communicate with other workstations on their respective LAN or with any workstations on the remote LANs.

The following figure shows an example of a Point-to-Multipoint configuration. Packets sent between Workstation A and Workstation B are forwarded by their respective bridges to the Root Unit. Then the Root Unit forwards these packets back down to the appropriate bridge for routing to the workstations. Packets sent between the File Server and the remote workstations are routed through the Root Unit and the appropriate Bridge.



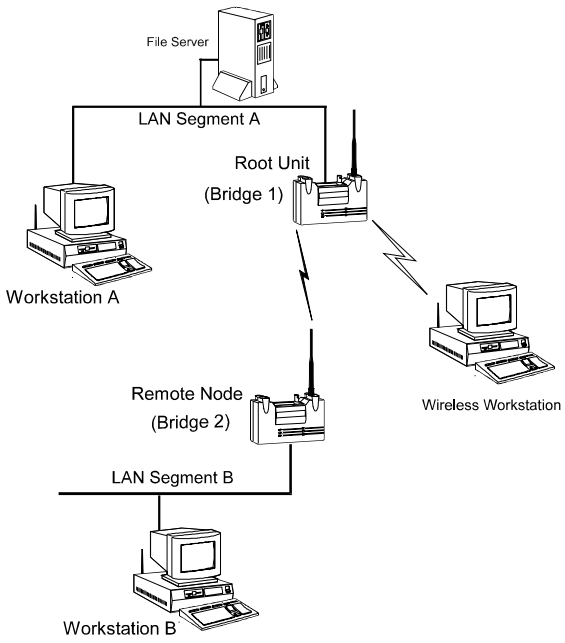
Network Extension with Repeaters

You can use bridges configured as repeaters to extend the range of a wireless network beyond that of a single radio hop. Repeaters can operate as either stand-alone units or they can have LAN connections. (See the following figure.)



Wireless Bridge with Wireless End Nodes

You can configure a Wireless Bridge to send and receive radio signals from in-building, radio-equipped devices at the same time that it functions as a wireless bridge. By equipping fixed, portable or mobile devices with Aironet Wireless Adapters, these devices can establish radio contact with the Bridge and have wireless access to all local and remote LANs, workstations and network resources. (See the following figure.)



Radio Characteristics

Aironet Wireless Bridges use a radio modulation technique known as Spread Spectrum Transmission. Spread Spectrum radios broadcast signals over a range of available frequencies. The sending station uses a spreading code to encode the signal. Only the receiving station that uses this same spreading code can decode or "despread" the signal. This lets the spread spectrum radio operate on a range of frequencies with high data bandwidth and excellent immunity from interference and multipath effects. Two Direct Sequence (DS) spread spectrum radio models are offered with the Wireless Bridges that differ in their frequency band of operation and maximum data rate:

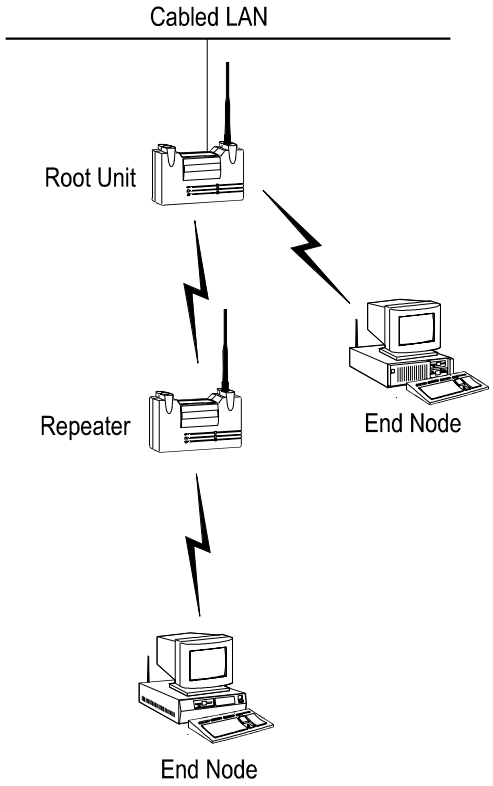
- Aironet 1000 Series of Wireless Bridges supporting the 902 - 928 MHz band.
- Aironet 2000 and 2040 Series of Wireless Bridges supporting the 2400 - 2483.5 MHz (2.4 GHz) band.

Data is transmitted over a half-duplex radio channel operating at data rates up to 860 Kbps (BR1000) and 2 Mbps (BR2000) or 4 Mbps (BR2040).

Radio Network Terminology

When you are reading this User's Guide and configuring your system, you may encounter some of the following terms. You should become familiar with them.

Wireless Network—Aironet's Advanced Radio Local Area Network (ARLAN) is designed as shown in the following figure. This network structure shows that the Root Unit is at the top of the wireless network, and Repeaters and radio nodes branch down and away from the root to provide areas of wireless network coverage.



Root Unit—An RF-based device that is at the top of a wireless network structure. The Root Unit is the network's starting point and its Registration Table contains information about other wireless network nodes associated with it.

Bridge—A device that connects two or more networks to create a virtual network.

Remote Node—A non-Root Unit that communicates by radio with the Root Unit.

Repeater—A device used to extend your network's radio range. A single Bridge is limited to a specific RF range. If your system configuration includes nodes outside this range, you need to add a Repeater for these nodes to communicate.

Radio Node—A PC, File Server, notebook computer, etc. that contains a Radio Card, LAN Adapter, or PCMCIA card.

End Node—A Radio Node located at the end of the wireless radio network structure.

Parent/Child Node—The relationship between nodes on the network. For example, The Root Unit in the preceding figure is the parent of the other nodes in the network structure. Likewise, the End Nodes are the Children of the Root Unit.

Registration—Each Wireless Bridge on the Radio Network has a Registration table that controls packet routing from the wired LAN to the Radio network. This table maintains entries for all radio nodes below the selected Wireless Bridge in the network. This table determines data packet routing.

Understanding the Radio Network

The preceding figure shows a simplified graphic illustration of a Radio Network. In this example shown, the Root Unit does not register but accepts registration from those nodes within Radio Range (The Repeater and top End Node).

The Repeater registers to the Root Unit and accepts registrations from nodes in its radio range (the bottom End Node).

The End Node now registers to the Repeater as if it is the closest Wireless Bridge in Radio Range. Then, the Repeater passes the End Node's registrations to its parent, the Root Unit. Now the Root Unit has registration for all the nodes.

Before You Begin

Unpack your Wireless Bridge. Make sure the following items are present and in good condition:

- Wireless Bridge (Ethernet model)
- 120VAC/60Hz to 12-18VDC Power Pack or 90-264 VAC/47-63Hz to 12-18VDC Universal Power Pack
- Standard 2dB Dipole Antenna

If any item is damaged or missing, contact your retailer. Save all shipping and packing material to repack the unit in the future if servicing is required.

Determining the Location for the Bridge

Before you begin installation and configuration, determine where you want to put the Wireless Bridge. Because the Bridge is a radio device, you need to make decisions regarding the location of the Bridge and its antenna to provide optimum radio range and performance. You can use the Bridge in both indoor and outdoor Radio network environments.

Indoor locations

The radio ranges for indoor locations depend on the following:

Antenna type and placement: To maximize a radio's range indoors, you should try to place the Bridge's antenna as high as is possible (but below the ceiling to reduce interference). For additional antenna solutions, please contact your Aironet representative.

Environment openness: The less cluttered and open your work environment, the greater the Bridge's radio range.

Building materials: The floor-to-floor penetration of the Bridge's radio depends on the materials in your building's construction. For example, the radios will achieve a greater range when used in buildings that have drywall rather than concrete block walls.

Outdoor Locations

Radio ranges for outdoor locations are basically determined by antenna elevation, path clearances, and line-of-sight considerations.

Outdoor applications will achieve greater radio ranges when the antenna is elevated as high as possible.

Line of Sight—When considering line of sight criteria be sure that there are no obstructions between antennas. You can attain ranges up to 300 meters (1,000 feet) with 1.8 meters (6 feet) elevation of both antennas and up to 40 kilometers (25 miles) with directional antennas at both ends and appropriate elevation and maximum path clearance.

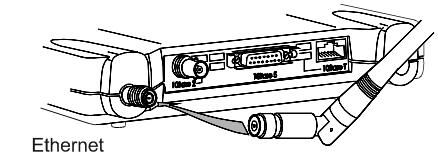
Installing the Hardware

Use the following procedures to install the Wireless Bridge hardware.

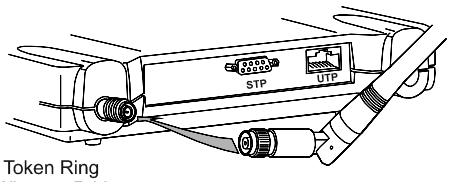
Connecting the Antenna

1. With the Bridge powered off, attach the antenna to the antenna connector as shown below.

   Connect the antenna until it is finger-tight. Do not over-tighten.



Ethernet
Wireless Bridge



Token Ring
Wireless Bridge

2. After it is connected, position the antenna vertically to achieve an omni-directional pattern.

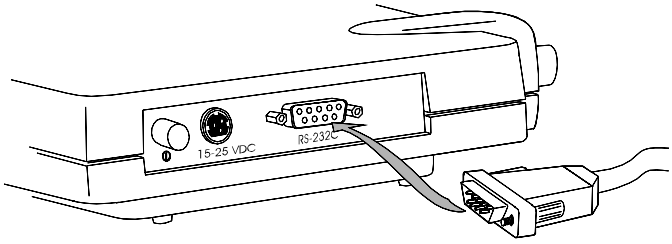
   Note: *If you are using a remote antenna with your Bridge, connect the coaxial cable to the Antenna connector. Only use antennas and cables supplied by Aironet.*

   Note: *Because of changes in FCC and DOC regulations, the antenna connector on the Bridge is the reverse polarity of the standard TNC connector.*

Connecting the Console Port Cable

Connecting the Bridge's console port to a terminal or to a PC running a terminal emulation program lets you configure the Bridge's software.

1. With the Bridge powered off, connect the console port cable to the EIA-232-E port as shown below.



2. Connect the other end of the cable to the serial port of a terminal or a PC running a terminal emulation program.

   Make sure the terminal or PC is powered off.

Connecting the Ethernet Cable

The Ethernet model of the Wireless Bridge supports 10Base2 (Thinnet), 10Base5 (Thicknet), and 10BaseT (twisted pair) cabling. If your system uses:

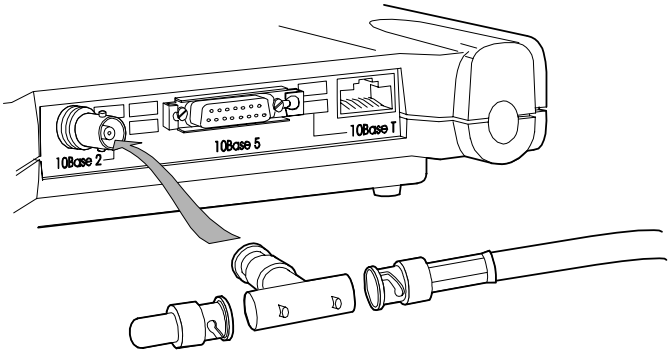
- 10Base2 cabling, go to the next section, "Connecting the 10Base2 Cable."
- 10Base5 cabling, go to the "Connecting the 10Base5 Cable" section.
- 10BaseT cabling, go to the "Connecting the 10BaseT (Twisted Pair) Cable" section.

Connecting the 10Base2 Cable

1. Make sure the Bridge is turned off.

2. Connect one end of the Ethernet cable to one end of a BNC T-connector (if applicable).

3. Slide the T-connector onto the Bridge's 10Base2 BNC connector and turn it until it locks into place, as shown in the following figure.



4. Decide what to do next:

   - If the Bridge is at the end of the Ethernet cable, connect a 50-ohm terminator to the open end of the T-connector (shown in the preceding figure).

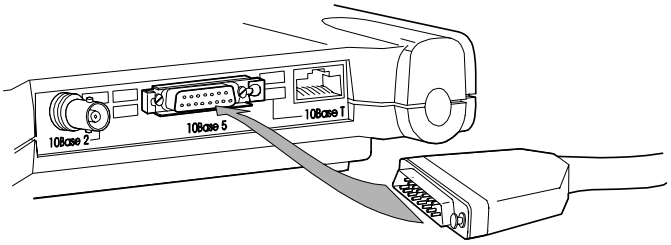
   - If it is not at the end, connect another end of the Ethernet cable to the other end of the T-connector on the Bridge.

5. Go to the "Connecting the Power Pack" section.

Connecting the 10Base5 Cable

1. Make sure the Bridge is turned off.

2. Connect the Transceiver Connector to the Bridge's 10Base5 AUI port, and slide the locking mechanism into place (shown in the following figure).



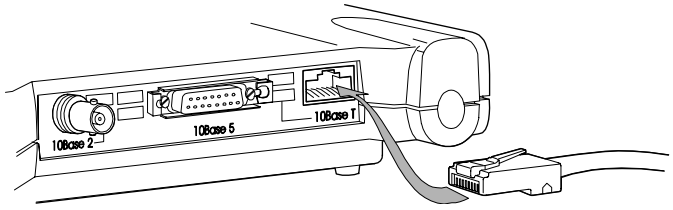
3. Connect the other Transceiver Connector at the end of the Transceiver drop cable to the External Transceiver.

4. Go to the "Connecting the Power Pack" section.

Connecting the 10BaseT (Twisted Pair) Cable

1. Make sure the Bridge is turned off.

2. Plug one end of an RJ-45 connector into the Bridge's 10BaseT socket (as shown in the following figure).



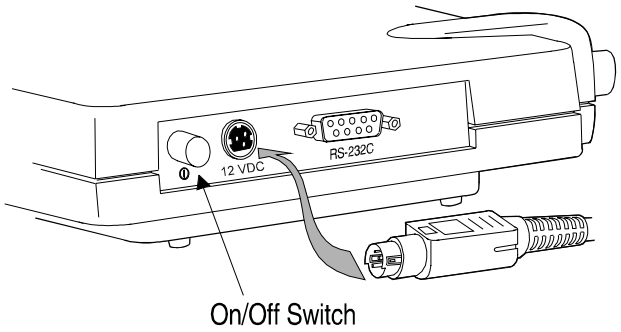
3. Plug the cable's other RJ-45 connector into the socket on a Twisted Pair hub or concentrator.

4. Go to the "Connecting the Power Pack" section.

Connecting the Power Pack

After you have made the network connection, connect the Power Pack to the Bridge.

1. Connect the small plug on the end of the Power Pack cord into the 12-18VDC Port on the back of the Bridge as shown below.



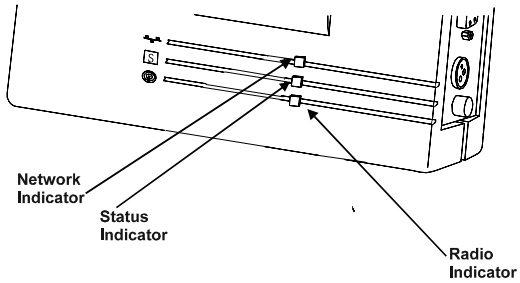
2. Plug the other end of the Power Pack into an electrical outlet (120VACor 90-240VAC, as appropriate).

3. Press the On/Off Switch to turn on the Bridge.

4. With the Bridge on, follow the instructions in the next section ("Viewing the Bridge's Top Panel Indicators") to check the Bridge's indicators for proper startup.

Viewing the Bridge's Top Panel Indicators

The Bridge has three Indicators on its top panel as shown below.



- Radio Indicator—This indicates radio traffic activity; it flashes green whenever the radio transmits or receives a data packet.

- Status Indicator—This indicates operational status; flashing green indicates the Bridge is operating normally. When the Bridge has accepted a Radio registration the indicator becomes solid green.

- Network Indicator—This indicates Ethernet network activity; it flashes green whenever a data packet is transmitted or received over the network link.

When power is initially applied to the Bridge, all three Indicators will flash yellow, red and then green, in sequence, to test the functionality of the Indicators. The Power-On Self Test follows. If any power-on test fails, the Status Indicator will go solid red and the unit will stop functioning. Refer to the *BR1000-E/BR2000-E/BR2040-E Technical Reference Manual* for error codes.

Configuring the Wireless Bridge

Use the Bridge's Console Port and the Console System to configure the unit to communicate with the rest of your network. The Console System consists of a series of menus from which you can change and set Bridge parameters to conform with your network.

Using the Console Port

You can access the Console Port directly by connecting a straight through serial cable between the Bridge's console (serial) port and a terminal or PC running a terminal emulation program. When you installed the Bridge hardware, you connected a serial cable to this port and to a terminal or PC. To begin using the Console System:

1. Set the communication parameters of the terminal or PC running the terminal emulation software to the following:
   - 9600 baud
   - No parity
   - 8 data bits
   - 1 stop bit
   - Xon/Xoff flow control
2. Start the communication session between your terminal or PC and the Bridge.
3. After the Bridge is powered up, the following message appears on the terminal's screen:

   `Are you using an ANSI compatible terminal [y/n]:`

- If you are using an ANSI compatible terminal, type "y" at the prompt and press Enter.

  Note: *An ANSI terminal shows you formatted text and clears the screen before each new screen displays.*

- If you are using a Teletype (TTY) terminal, type "n" at the prompt and press Enter.

  Note: The TTY terminal scrolls information as it arrives at the terminal's screen.

The Console System's Main Menu appears on the terminal screen:

```
ARLAN 64x Vx.x          Main Menu                    64x_123456
  Option                Value          Description
1 - Configuration       [ menu  ]      - General configuration
2 - Statistics          [ menu  ]      - Display statistics
3 - Registration        [ menu  ]      - Registration table maintenance
4 - Filter              [ menu  ]      - Control packet filtering
5 - Logs                [ menu  ]      - Alarm and log control
6 - Diagnostics         [ menu  ]      - Maintenance and testing commands
7 - Privilege           [ write ]      - Set privilege level
8 - Help                               - Introduction

Enter an option number or name

>
```

You can select an option from any of the Console System menus by typing its name or number at the prompt (>). Pressing Esc returns you to the preceding menu. Pressing "=" returns you to the Main Menu from any other menu in the system.

Note: *The Main Menu that appears on your screen may not look exactly like the example above. Menu options depend upon the Bridge model that you have (BR1000-E, BR2000-E or BR2040-E).*

5. Go to the next section, "Setting Configuration Parameters."

Setting Configuration Parameters

To configure the Wireless Bridge to communicate with the other elements in your radio and/or wired network, you need to access the Configuration Menu and set:

- Radio Network parameters: System Identifier (SID), root/repeater mode, bit rate, and frequency
- Ethernet activity, frame size, and port

Begin by selecting the Configuration option from the Main Menu.

1. Type "1" at the prompt (>) to select "Configuration" from the Main Menu.

   The Configuration Menu appears on the terminal screen.

2. Go on to the next section, "Configuring the Radio Network."

Configuring the Radio Network

The first parameter to configure is the SID for the bridge's radio. The SID is a unique, 6-digit, hexadecimal number that is attached to each packet sent out over the radio. The Bridge's SID must be the same as the SIDs of other nodes on its network. You can select your own SID, or you can ask the unit to do it for you. If you ask it to select an SID for you, the Bridge selects a random SID and assigns it to the unit.

Note: *Letting the unit select a random SID may be the best way to select the SID. There is less chance of this SID conflicting with other networks that might be in its radio range.*

Whether you select a specific SID or let the unit select one, **you must use the same SID with all other nodes on the network**.

The Bridge's bit rate and frequency also must match the bit rate and frequency of the radios in other nodes on the network.

To set radio network parameters:

1. Type "1" at the prompt to select "Radio" from the Configuration Menu.

   The Configuration Radio Menu appears.

2. Type "1" to select "Sid" from the Configuration Radio Menu.

   The prompt: "Enter one of [random, an even number in hex of ffffffh or less]" appears.

3. Decide what to do next:

   - If you want to assign a specific hexadecimal SID to the Bridge, type the hexadecimal number (less than ffffff) at the prompt and press Enter.
   - If you want to let the unit select a random SID, type "r" at the prompt and press Enter.

     The selected SID appears at on the Configuration Radio Menu.

4. Examine the default bit rate and frequency on the Configuration Radio Menu, and decide what to do next:

   The bit rate and frequency must match that of other nodes on the RF network. The default bit rate is the highest available, and the default frequency is the center frequency. You can accept these defaults or change them as follows. Type *Bitrate* and then type the applicable bit rate from the choices shown. Type *Frequency* and then type the applicable frequency from the choices shown.

5. Type "2" to select "Bitrate" from the Configuration Radio Menu.

   The prompt: "Enter rate in kb/s, one of [354, 500, 1000, 2000]:" appears.

6. Type the appropriate bit rate from the list provided and then press Enter.

   The new bit rate appears on the menu.

7. Type "3" to select "Frequency" from the Configuration Radio Menu.

The prompt: "Enter frequency in MHz, one of [2412, 2427, 2442, 2457, 2465]:" appears.

8. Type the appropriate frequency from the list provided and then press Enter.

   The new frequency appears on the menu.

9. Type "4" to select "Distance" from the Configuration Radio menu.

10. Type the maximum distance (in kilometers) between this bridge and its farthest partner and then press Enter.

11. Decide what to do next:

    - If you are using the Bridge as a Root Unit, go on to Step 12.
    - If you are not using the Bridge as a Root Unit or you are using it as a Repeater Bridge, type "5" to select "Root" from the Radio Configuration Menu.

    The Root option is set to "off".

12. Press the Esc key to return to the Configuration Menu.

Setting Ethernet Parameters

The Ethernet port has three parameters (Active, Size, and Port) whose default settings are already correct for most basic installations. You should probably need to make no changes to any of the Ethernet parameters. Go on to the "Disconnecting the Terminal" section. If you require additional information refer to the *BR1000-E/BR2000-E/BR2040-E Technical Reference Manual*.

Disconnecting the Terminal

With the initial configuration of the unit finished, you need to end the terminal session and disconnect the terminal (or PC) from the Bridge's serial port.

1. Power-off the Bridge.

2. Remove the serial cable connector from the Bridge's EIA-232-E port.

3. Power-on the Bridge.

Where to Go from Here

Please ask your Aironet representative for the *BR1000-E/BR2000-E/BR2040-E Technical Reference Manual.*

Read the *Technical Reference Manual* to learn more details about your Aironet unit and ARLAN software. Use the instructions in this reference to view statistics and perform system diagnostics.

Technical Support

Shipping Address

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Communications

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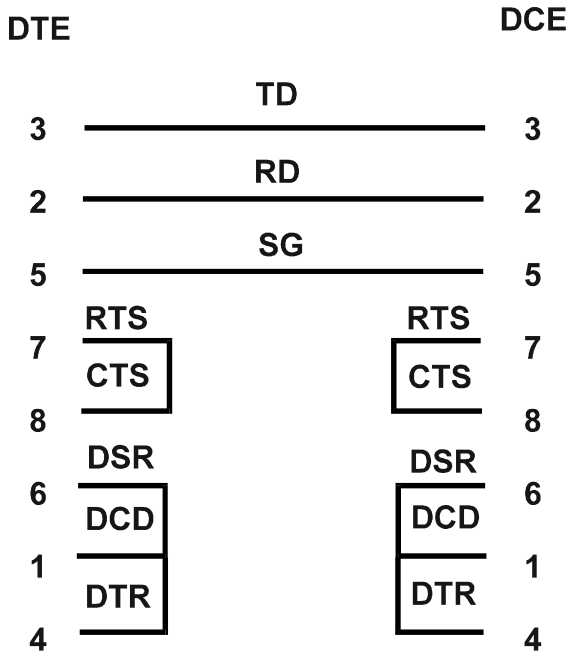
Web Site

http://www.aironet.com

Appendix A: Serial Cable Pinout

A typical Wireless Bridge serial cable is a 9-pin cable. The following diagram shows its pinout.



Serial Port Pinout

9-Pin AT	Name	Abbr.	DTE
3	Transmit Data	TD	Output>
2	Receive Data	RD	Input<
7	Request to Send	RTS	Output>
8	Clear to Send	CTS	Input<
6	Data Set Ready	DSR	Input<
5	Signal Ground	SG	
1	Data Carrier Detect	DCD	Input<
4	Data Terminal Ready	DTR	Output>
9 N/C	Ring Indicator	RI	Input<

- The “DTE” column indicates the data direction in terms of the DTE.
- The “9-Pin AT” column indicates the pin numbers used on the Console Port connector.

Appendix B: Ethernet RJ-45 Cable

The Ethernet cable is configured as a Hub device. See the following figure.

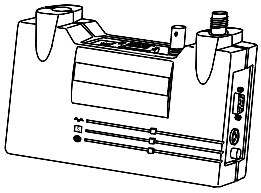
10Base5

Pin	1	GND
	2	CN+
	3	TX+
	4	GND
	5	RX+
	6	GND
	7	NC
	8	GND
	9	CN-
	10	TX-
	11	GND
	12	RX-
	13	12V
	14	NC
	15	NC

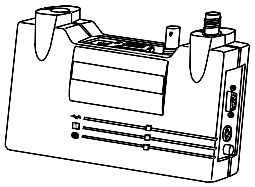
10BaseT

Pin	1	TD+
	2	TD-
	3	RD+
	6	RD-

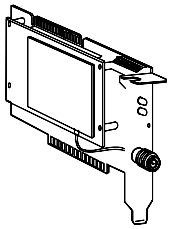
Other AIRONET Products



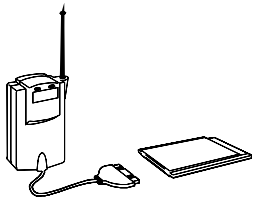
Ethernet Access Point



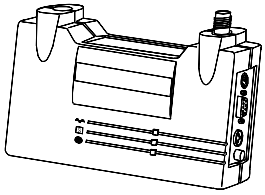
Ethernet Bridge



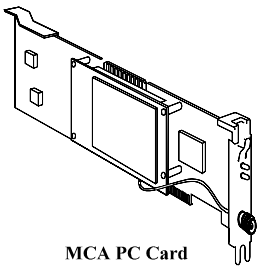
ISA PC Card



PCMCIA Adapter



Token Ring Access Point



MCA PC Card

Aironet