

Using the BayStack Instant Internet 100 Unit

Part No. 300866-D Rev.00
May 1999

NORTEL
NETWORKS™

Copyright © 1999 Bay Networks, Inc.

All rights reserved. Printed in the USA. May 1999.

The information in this document is subject to change without notice. The statements, configurations, technical data, and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. Users must take full responsibility for their applications of any products specified in this document. The information in this document is proprietary to Bay Networks, Inc.

The software described in this document is furnished under a license agreement and may only be used in accordance with the terms of that license. A summary of the Software License is included in this document.

Trademarks

Bay Networks is a registered trademark of Bay Networks, Inc. BayStack and Instant Internet are trademarks of Bay Networks, Inc.

All other trademarks and registered trademarks are the property of their respective owners.

Statement of Conditions

In the interest of improving internal design, operational function, and/or reliability, Bay Networks, Inc. reserves the right to make changes to the products described in this document without notice.

Bay Networks, Inc. does not assume any liability that may occur due to the use or application of the product(s) or circuit layout(s) described herein.

Bay Networks, Inc. Software License Agreement

NOTICE: Please carefully read this license agreement before copying or using the accompanying software or installing the hardware unit with pre-enabled software (each of which is referred to as “Software” in this Agreement). **BY COPYING OR USING THE SOFTWARE, YOU ACCEPT ALL OF THE TERMS AND CONDITIONS OF THIS LICENSE AGREEMENT. THE TERMS EXPRESSED IN THIS AGREEMENT ARE THE ONLY TERMS UNDER WHICH BAY NETWORKS WILL PERMIT YOU TO USE THE SOFTWARE.** If you do not accept these terms and conditions, return the product, unused and in the original shipping container, within 30 days of purchase to obtain a credit for the full purchase price.

1. License Grant. Bay Networks, Inc. (“Bay Networks”) grants the end user of the Software (“Licensee”) a personal, nonexclusive, nontransferable license: a) to use the Software either on a single computer or, if applicable, on a single authorized device identified by host ID, for which it was originally acquired; b) to copy the Software solely for backup purposes in support of authorized use of the Software; and c) to use and copy the associated user manual solely in support of authorized use of the Software by Licensee. This license applies to the Software only and does not extend to Bay Networks Agent software or other Bay Networks software products. Bay Networks Agent software or other Bay Networks software products are licensed for use under the terms of the applicable Bay Networks, Inc. Software License Agreement that accompanies such software and upon payment by the end user of the applicable license fees for such software.

2. Restrictions on use; reservation of rights. The Software and user manuals are protected under copyright laws. Bay Networks and/or its licensors retain all title and ownership in both the Software and user manuals, including any revisions made by Bay Networks or its licensors. The copyright notice must be reproduced and included with any copy of any portion of the Software or user manuals. Licensee may not modify, translate, decompile, disassemble, use for any competitive analysis, reverse engineer, distribute, or create derivative works from the Software or user manuals or any copy, in whole or in part. Except as expressly provided in this Agreement, Licensee may not copy or transfer the Software or user manuals, in whole or in part. The Software and user manuals embody Bay Networks’ and its licensors’ confidential and proprietary intellectual property. Licensee shall not sublicense, assign, or otherwise

disclose to any third party the Software, or any information about the operation, design, performance, or implementation of the Software and user manuals that is confidential to Bay Networks and its licensors; however, Licensee may grant permission to its consultants, subcontractors, and agents to use the Software at Licensee's facility, provided they have agreed to use the Software only in accordance with the terms of this license.

3. Limited warranty. Bay Networks warrants each item of Software, as delivered by Bay Networks and properly installed and operated on Bay Networks hardware or other equipment it is originally licensed for, to function substantially as described in its accompanying user manual during its warranty period, which begins on the date Software is first shipped to Licensee. If any item of Software fails to so function during its warranty period, as the sole remedy Bay Networks will at its discretion provide a suitable fix, patch, or workaround for the problem that may be included in a future Software release. Bay Networks further warrants to Licensee that the media on which the Software is provided will be free from defects in materials and workmanship under normal use for a period of 90 days from the date Software is first shipped to Licensee. Bay Networks will replace defective media at no charge if it is returned to Bay Networks during the warranty period along with proof of the date of shipment. This warranty does not apply if the media has been damaged as a result of accident, misuse, or abuse. The Licensee assumes all responsibility for selection of the Software to achieve Licensee's intended results and for the installation, use, and results obtained from the Software. Bay Networks does not warrant a) that the functions contained in the software will meet the Licensee's requirements, b) that the Software will operate in the hardware or software combinations that the Licensee may select, c) that the operation of the Software will be uninterrupted or error free, or d) that all defects in the operation of the Software will be corrected. Bay Networks is not obligated to remedy any Software defect that cannot be reproduced with the latest Software release. These warranties do not apply to the Software if it has been (i) altered, except by Bay Networks or in accordance with its instructions; (ii) used in conjunction with another vendor's product, resulting in the defect; or (iii) damaged by improper environment, abuse, misuse, accident, or negligence. **THE FOREGOING WARRANTIES AND LIMITATIONS ARE EXCLUSIVE REMEDIES AND ARE IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** Licensee is responsible for the security of its own data and information and for maintaining adequate procedures apart from the Software to reconstruct lost or altered files, data, or programs.

4. Limitation of liability. IN NO EVENT WILL BAY NETWORKS OR ITS LICENSORS BE LIABLE FOR ANY COST OF SUBSTITUTE PROCUREMENT; SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES; OR ANY DAMAGES RESULTING FROM INACCURATE OR LOST DATA OR LOSS OF USE OR PROFITS ARISING OUT OF OR IN CONNECTION WITH THE PERFORMANCE OF THE SOFTWARE, EVEN IF BAY NETWORKS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL THE LIABILITY OF BAY NETWORKS RELATING TO THE SOFTWARE OR THIS AGREEMENT EXCEED THE PRICE PAID TO BAY NETWORKS FOR THE SOFTWARE LICENSE.

5. Government Licensees. This provision applies to all Software and documentation acquired directly or indirectly by or on behalf of the United States Government. The Software and documentation are commercial products, licensed on the open market at market prices, and were developed entirely at private expense and without the use of any U.S. Government funds. The license to the U.S. Government is granted only with restricted rights, and use, duplication, or disclosure by the U.S. Government is subject to the restrictions set forth in subparagraph (c)(1) of the Commercial Computer Software—Restricted Rights clause of FAR 52.227-19 and the limitations set out in this license for civilian agencies, and subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause of DFARS 252.227-7013, for agencies of the Department of Defense or their successors, whichever is applicable.

6. Use of Software in the European Community. This provision applies to all Software acquired for use within the European Community. If Licensee uses the Software within a country in the European Community, the Software Directive enacted by the Council of European Communities Directive dated 14 May, 1991, will apply to the examination of the Software to facilitate interoperability. Licensee agrees to notify Bay Networks of any such intended examination of the Software and may procure support and assistance from Bay Networks.

7. Term and termination. This license is effective until terminated; however, all of the restrictions with respect to Bay Networks' copyright in the Software and user manuals will cease being effective at the date of expiration of the Bay Networks copyright; those restrictions relating to use and disclosure of Bay Networks' confidential information shall continue in effect. Licensee may terminate this license at any time. The license will automatically terminate if Licensee fails to comply with any of the terms and conditions of the license. Upon termination for any reason, Licensee will immediately destroy or return to Bay Networks the Software, user manuals, and all copies. Bay Networks is not liable to Licensee for damages in any form solely by reason of the termination of this license.

8. Export and Re-export. Licensee agrees not to export, directly or indirectly, the Software or related technical data or information without first obtaining any required export licenses and other governmental approvals. Without limiting the foregoing, Licensee, on behalf of itself and its subsidiaries and affiliates, agrees that it will not, without first obtaining all export licenses and approvals required by the U.S. Government: (i) export, re-export, transfer, or divert any such Software or technical data, or any direct product thereof, to any country to which such exports or re-exports are restricted or embargoed under United States export control laws and regulations, or to any national or resident of such restricted or embargoed countries; or (ii) provide the Software or related technical data or information to any military end user or for any military end use, including the design, development, or production of any chemical, nuclear, or biological weapons.

9. General. If any provision of this Agreement is held to be invalid or unenforceable by a court of competent jurisdiction, the remainder of the provisions of this Agreement shall remain in full force and effect. This Agreement will be governed by the laws of the state of California.

Should you have any questions concerning this Agreement, contact Bay Networks, Inc., 4401 Great America Parkway, P.O. Box 58185, Santa Clara, California 95054-8185.

LICENSEE ACKNOWLEDGES THAT LICENSEE HAS READ THIS AGREEMENT, UNDERSTANDS IT, AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS. LICENSEE FURTHER AGREES THAT THIS AGREEMENT IS THE ENTIRE AND EXCLUSIVE AGREEMENT BETWEEN BAY NETWORKS AND LICENSEE, WHICH SUPERSEDES ALL PRIOR ORAL AND WRITTEN AGREEMENTS AND COMMUNICATIONS BETWEEN THE PARTIES PERTAINING TO THE SUBJECT MATTER OF THIS AGREEMENT. NO DIFFERENT OR ADDITIONAL TERMS WILL BE ENFORCEABLE AGAINST BAY NETWORKS UNLESS BAY NETWORKS GIVES ITS EXPRESS WRITTEN CONSENT, INCLUDING AN EXPRESS WAIVER OF THE TERMS OF THIS AGREEMENT.

Contents

Preface

Before You Begin	xi
Acronyms	xii
Related Publications	xiii
How to Get Help	xiv

Chapter 1

Introduction

Instant Internet Package	1-1
Available Options	1-2
Requirements and Compatibility	1-2

Chapter 2

Installation Preparation

Preparing for Internet Access	2-1
Making Decisions	2-1
Selecting an Internet Service Provider	2-2
Installation Checklist	2-3
Installation Worksheet	2-5

Chapter 3

Instant Internet 100 Hardware Installation

Getting to Know Your Instant Internet 100 Unit	3-1
Instant Internet Quick Installation	3-2

Chapter 4

Switch Settings

DIP Switches	4-1
Switch Settings for Normal Operation	4-2
Switch Settings for Special Configurations	4-2
Resetting Your Instant Internet Unit	4-3

Chapter 5

LEDs: Support and Diagnostic Functions

Interpreting LED Indicators	5-1
LEDs at Power-Up Sequence	5-1

Appendix A

Technical Specifications

Physical Specifications	A-1
Environmental Specifications	A-1

Index

Figures

Figure 3-1.	Front Panel of the Instant Internet 100 Unit	3-1
Figure 3-2.	Back Panel of the Instant Internet 100 Unit	3-2
Figure 4-1.	DIP Switches on the Back of the Unit	4-1

Tables

Table 2-1.	Installation Checklist	2-3
Table 4-1.	Switch Settings for Normal Operation	4-2
Table 4-2.	Switch Settings for Resetting the Password	4-2
Table 4-3.	Switch Settings for Resetting the Password and User-Defined Configurations	4-3
Table 4-4.	Switch Settings for Restoring Factory Default Conditions	4-3
Table 5-1.	LED Status and Appearance During Operation	5-2

This guide describes the BayStack™ Instant Internet 100 unit and what you do to install the Instant Internet™ hardware and to access the Internet.

Before You Begin

Before using this guide, you need to do two things. First, write down the model number and serial number of your Instant Internet unit. You will need this information if you have to call Nortel Networks Technical Support. You can find the model and serial numbers on the back of your Instant Internet unit.

Model # _____

Example: CQ1001101

Serial # _____

Example: I0300004F

Second, you must complete the steps outlined in [Chapter 2, “Installation Preparation.”](#) The steps include:

1. Preparing for Internet access
2. Making decisions
3. Selecting an Internet service provider

Acronyms

The following acronyms are used in this guide:

AC	alternating current
AUI	attachment unit interface
CHAP	Challenge Handshake Authentication Protocol
dBA	decibels audible
DSL	digital subscriber lines
IP	Internet Protocol
ISDN	Integrated Services Digital Network
ISP	Internet service provider
Kb/s	kilobits per second
LAN	local area network
LED	light emitting diode
Mb/s	megabits per second
MP	Multilink Protocol
NAT	Network Address Translation
NT1	Network termination type 1
PAP	Password Authentication Protocol
POP	point of presence
PPP	Point-to-Point Protocol
ROM	read-only memory
WAN	wide area network

Related Publications

For more information about using Instant Internet, refer to the following publications:

- *Using the BayStack Instant Internet Management Software* (Nortel Networks part number 300868-D)
Provides an introduction to Instant Internet, instructions for administering the product, and procedures for using Instant Internet features.
- *Reference for the BayStack Instant Internet Remote Access Commands* (Nortel Networks part number 302005-C)
Provides instructions and commands for remotely accessing Instant Internet.
- *Installing Documentation and Third-Party Applications* (Nortel Networks part number 307603-A)
Provides instructions on installing third-party applications (Adobe Acrobat Reader, Netscape Communicator, and AniTa Terminal Emulator).

You can now print Nortel Networks technical manuals and release notes free, directly from the Internet. Go to support.baynetworks.com/library/tpubs/. Find the Nortel Networks product for which you need documentation. Then locate the specific category (for example, “Remote Access” for Instant Internet products) and model or version for your hardware or software product. Using Adobe Acrobat Reader, you can open the manuals and release notes, search for the sections you need, and print them on most standard printers. You can download Acrobat Reader free from the Adobe Systems Web site, www.adobe.com.

You can purchase Nortel Networks documentation sets, CDs, and selected technical publications through the Nortel Networks Collateral Catalog. The catalog is located on the World Wide Web at support.baynetworks.com/catalog.html and is divided into sections arranged alphabetically:

- The “CD ROMs” section lists available CDs.
- The “Guides/Books” section lists books on technical topics.
- The “Technical Manuals” section lists available printed documentation sets.

Make a note of the part numbers and prices of the items that you want to order. Use the “Marketing Collateral Catalog description” link to place an order and to print the order form.

How to Get Help

If you purchased a service contract for your Nortel Networks product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller for assistance.

If you purchased a Nortel Networks service program, contact one of the following Nortel Networks Technical Solutions Centers:

Technical Solutions Center	Telephone Number
Billerica, MA	800-2LANWAN (800-252-6926)
Santa Clara, CA	800-2LANWAN (800-252-6926)
Valbonne, France	33-4-92-96-69-68
Sydney, Australia	61-2-9927-8800
Tokyo, Japan	81-3-5402-7041

Chapter 1

Introduction

This chapter introduces your Instant Internet 100 unit. The chapter describes package contents, available options for your Instant Internet unit, and requirements and compatibility.

Instant Internet Package

The Instant Internet package contains:

- Instant Internet 100 unit
- Software installation diskettes
- *BayStack Instant Internet Documentation and Third-Party Applications Version 6.10 CD*
 - *Using the BayStack Instant Internet 100 Unit*
 - *Using the BayStack Instant Internet Management Software*
 - *Reference for the BayStack Instant Internet Remote Access Commands*
- Depending on the type of connection you ordered, your Instant Internet package contains one or more of the following connector cables:
 - RJ-11 cable (phone cord) for a dial-up connection
 - ISDN cable for an ISDN connection
 - RJ-45 cable for a 10BASE-T or 100BASE-T Ethernet connection
- *Installing the BayStack Instant Internet 100 Unit*
- *Third-Party Applications Quick Setup Card*
- Regulatory information booklet

Available Options

Instant Internet comes with several options. The standard unit includes a 10BASE-T Ethernet connection.

You can order an Instant Internet 100 unit configured with one of the following:

- Internal analog modem (K56 Flex or 56K x2/V.90)
- Internal ISDN 128K card (with or without NT1)
- A second Ethernet connection (for an external router, cable modem, or DSL modem)

Requirements and Compatibility

With Instant Internet, the Internet connection supports:

- Dial-up PPP connection up to K56 Flex, 56K x2, or V.90
- ISDN connection using synchronous PPP and optional Multilink Protocol (MP) at up to 128 kilobits per second (Kb/s)



Note: The speed of dial-up connections can vary internationally. Consult your local distributor for specifications.

Chapter 2

Installation Preparation

This chapter describes steps you should follow in preparing for Internet access, explains some decisions you need to make before you install your Instant Internet 100 unit, and provides an installation checklist and worksheet.

Preparing for Internet Access

To prepare for access to the Internet:

1. **Obtain installation and service from your local telephone company.**
2. **Obtain an Internet connection from an Internet service provider (ISP).**
3. **Connect the Instant Internet unit to your local area network (LAN).**
4. **Connect the power supply and cord.**

See [“Instant Internet Quick Installation” on page 3-2](#) of this guide for more information.

Making Decisions

Before you can access the Internet with your Instant Internet unit, you must make the following decisions:

- Who will be your Internet service provider (ISP)?
- What type of connection will you use — the dial-up connection or ISDN connection?

Selecting an Internet Service Provider

There are thousands of Internet service providers (ISPs) from which to choose. Nortel Networks maintains an updated list of the major, national ISPs and as many local ISPs as possible. You can choose an ISP from this list, or you can locate a different one. Either way, try to choose an ISP that has a local access number so that you do not have to pay long distance charges. You can look in the yellow page directory for local or regional ISPs, or you can call a national ISP and ask if it offers local dial-up access in your area.

If your ISP is not on the selection list during Instant Internet installation, select the ! Default provider from the list. If you cannot connect to the Internet with the ! Default provider selected, do *one* of the following:

- Call the Internet Service Provider Hotline at 800-2LANWAN, Express Routing Code #167, Monday through Friday, 9 a.m. to 5 p.m. CST.
- Send an e-mail message to support@nortelnetworks.com.

For all of the above options, make sure you supply your provider's name, location, and person-contact phone number so that we can add your ISP to our list. This information will aid in future installations.

Installation Checklist

Use the checklist in [Table 2-1](#) to ensure a smooth installation. As you check off each item, record the information in [“Installation Worksheet” on page 2-5](#).

Table 2-1. Installation Checklist

✓	Item	Description
	Type of Account	<p>Instant Internet can bring access to your entire network through a single Internet Protocol (IP) address for unlimited access to the Internet.</p> <ul style="list-style-type: none"> • If you want to use public IP addresses, request a network account. • If you want to use Network Address Translation (NAT) or you are using the Instant Internet unit as an IPX-to-IP gateway, request a single-user account. <p>Your ISP will provide you with a user name, password, primary access phone number, optional alternate access phone number, and name server IP address. Record this information on page 2-5.</p>
	Dial-Up and ISDN Protocols	<p>If you are using a dial-up or ISDN connection, ensure that your ISP supplies true IP service using PPP protocols for analog and ISDN connections. ISDN requires synchronous PPP protocol with authentication via PAP or CHAP. For a 128K connection, Multilink PPP must be supported. Some ISPs use their own proprietary protocols or, for ISDN, V.120 rate adaption. Instant Internet does not support these proprietary protocols.</p>
	ISDN Service	<p>When you obtain ISDN service, your telephone company may assign one or two Service Profile Identifier (SPID) numbers to your line.</p> <p>Record the SPID number(s) on page 2-5.</p>
	Connect-Time Charges	<p>Some ISPs and local telephone companies charge a flat fee for unlimited connect time, and some charge fees according to the actual amount of time your Instant Internet unit is dialed in and connected. Be sure that you understand your ISP's and local telephone company's policies.</p>

Table 2-1. Installation Checklist *(continued)*

✓	Item	Description
	Installation Information	<p>If you choose an ISP from the Nortel Networks list, you need to give only the ISP's telephone number and your user name and password for access.</p> <p>If you are using an analog or ISDN connection, you can choose ! Default as your provider and then enter your name servers.</p> <p>If your ISP is not on the Nortel Networks list, call the Internet Service Provider Hotline at 800-2LANWAN, Express Routing Code 167#, and give us some additional information so that we can create a dial-up script specific to your ISP's access requirements.</p>
	Application Information	<p>Your ISP usually offers some additional services which you might consider:</p> <ul style="list-style-type: none">• Access to a NEWS server• Access to a POP mail server (and an SMTP relay)• Individual POP mail user accounts for each user <p>NOTE: Be aware that a single-user account from an ISP generally comes with only one POP e-mail account. You can arrange for additional e-mail accounts with your ISP.</p>

After completing this checklist, you are ready to begin installing the Instant Internet hardware.

Installation Worksheet

ISP User Name: _____

This is the user name you enter to log on to your ISP account.

ISP Password: _____

This is the password you enter to log on to your ISP account.

ISP Connection Phone Number: _____

This number is the primary phone number you dial to access your ISP account.

ISP Connection Alternate Phone Number: _____

This number is an alternate or backup phone number you dial to access your ISP account if the primary phone number is not working. This phone number is optional. Not every ISP supplies an alternate phone number.

ISP Name Server: _____

ISP Name Server: _____

The Name Server (or Domain Name Server or DNS) is the numeric IP address of your ISP's name server(s). It follows the format nnn.nnn.nnn.nnn where n is a number between 0 and 255.

Telephone Company Information

ISDN SPID Number: _____

ISDN SPID Number: _____

SPID (Service Profile Identifier) numbers are provided by your telephone company when you install an ISDN line. Usually, two SPID numbers are provided, but sometimes one and even none is provided. If you are not using an ISDN connection, you do not need to provide this information.

Chapter 3

Instant Internet 100 Hardware Installation

This chapter helps you get to know your Instant Internet unit and provides instructions for connecting your unit to your LAN or WAN according to the type of connection you are using.

Before you install the Instant Internet hardware, make sure that you are familiar with the physical and environmental specifications of the Instant Internet 100 unit. For more information, refer to [Appendix A, “Technical Specifications.”](#)

Getting to Know Your Instant Internet 100 Unit

The front panel of your Instant Internet 100 unit has nine lights, or LEDs, that signal information about your unit. The Power LED is always lit when your unit is turned on. The other eight LEDs as well as the Power LED indicate various active or error conditions.

[Figure 3-1](#) illustrates the front panel of the unit.

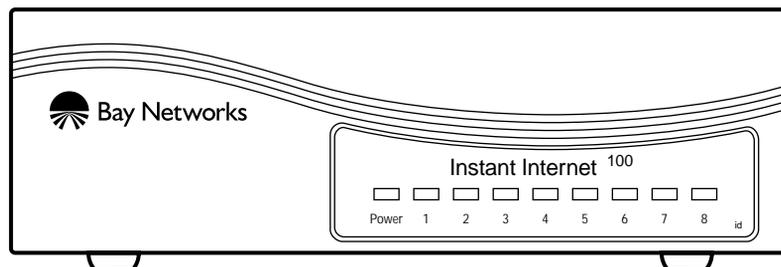


Figure 3-1. Front Panel of the Instant Internet 100 Unit

For a description of the LEDs, refer to [Chapter 5, “LEDs: Support and Diagnostic Functions.”](#)

On the back panel of the unit (from left to right) are switches and connectors as follows:

- At the top is the phone or ISDN jack or second Ethernet connection.
- At the bottom are the configuration switches, the attachment unit interface (AUI) connection, the network cable connection (such as Ethernet LAN hub), and the power supply connector.

[Figure 3-2](#) illustrates the back panel of the unit.

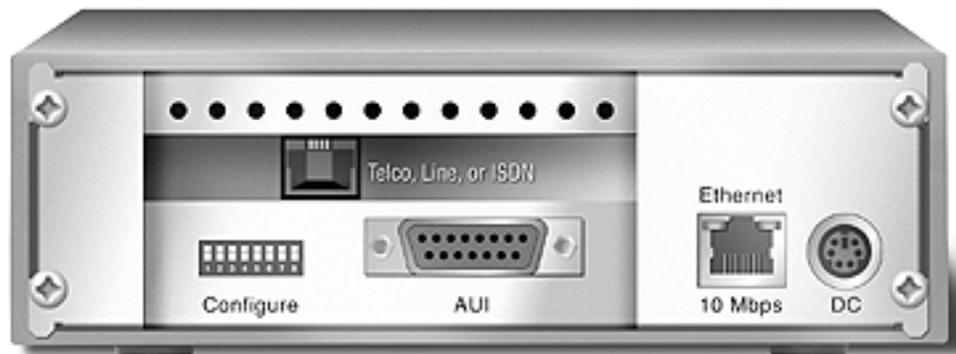


Figure 3-2. Back Panel of the Instant Internet 100 Unit



Note: If you have a dual-Ethernet unit, the second Ethernet connection replaces the phone or ISDN jack at the top of the unit.

Instant Internet Quick Installation

These steps will guide you through the general process of installing your Instant Internet hardware.



Note: Before you begin installation, be sure that the switch settings are set to normal operation. For information about configuring switch settings, refer to [“Switch Settings for Normal Operation” on page 4-2.](#)

The communications connection is necessary to provide the link between your Instant Internet unit and your Internet service provider (ISP). To ensure a proper communications connection, make sure that you have ordered the appropriate:

- Installation from your telephone service company (Telco)
- Service from your Telco
- Internet access service from your ISP

Be sure to review the information in [“Installation Checklist” on page 2-3](#).

If you experience problems during installation, unplug all connections, except the LAN connection, and then restart the Instant Internet unit.



Note: *Do not* apply power to the Instant Internet unit until you have completed the installation steps.

To install your Instant Internet hardware:

1. **Place your Instant Internet unit on a flat surface.**
2. **Attach one end of the communications cable (modem, ISDN, or second Ethernet) to the appropriate connector on the Instant Internet unit.**
3. **Attach the other end of the communications cable to the appropriate source (phone jack, ISDN jack, router, cable modem, or xDSL modem).**
4. **Attach the Instant Internet unit to a hub on your LAN using an Ethernet cable.**
5. **Plug the power cord into the back of the Instant Internet unit.**



Caution: It is very important that you plug the power supply into the Instant Internet unit *before* you plug it into the AC outlet. If your Instant Internet unit was manufactured before July 1998, you can damage your unit if you plug a live power supply into it.

6. **Plug the power cord into an AC wall outlet.**

Chapter 4

Switch Settings

This chapter describes the switch settings for your Instant Internet 100 unit, including those for normal operation and for resetting your unit's password and configuration settings.

DIP Switches

DIP switches enable you to configure your Instant Internet unit for a particular type of operation. There are eight DIP switches on the back of your unit ([Figure 4-1](#)). The switches are labeled left to right from 1 through 8.

Configure

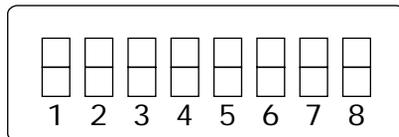


Figure 4-1. DIP Switches on the Back of the Unit

The switches have two possible positions: on or off. For the Instant Internet 100 unit, the on position is down and the off position is up. Use a small instrument with a fine point, such as a pen nib or small screwdriver, to move the switches to the proper position. Labels on the unit indicate whether a switch is on or off, and the specific switch pattern indicates a specific configuration item.

Switch Settings for Normal Operation

Leave all switches *off* for normal operations, as shown in [Table 4-1](#).

Table 4-1. Switch Settings for Normal Operation

	1	2	3	4	5	6	7	8
OFF	•	•	•	•	•	•	•	•
ON								

Switch Settings for Special Configurations

During the power-up sequence, your Instant Internet 100 unit checks the settings of the switches. You can use the switches on your unit to:

- Erase the password ([Table 4-2](#)), which is useful if you forget the password.
- Erase the password and other user-defined system configuration ([Table 4-3](#)).
- Restore the original default factory settings ([Table 4-4](#)).

[Table 4-2](#) shows the switch settings for resetting your unit's password.

Table 4-2. Switch Settings for Resetting the Password

	1	2	3	4	5	6	7	8
OFF				•		•		•
ON	•	•	•		•		•	

[Table 4-3](#) shows the switch settings for resetting your unit's password as well as all user-defined configurations.

Table 4-3. Switch Settings for Resetting the Password and User-Defined Configurations

	1	2	3	4	5	6	7	8
OFF				•			•	•
ON	•	•	•		•	•		



Caution: If you use these switch settings to reset your unit, the following user-defined settings are removed or reset: password, hosts, port mappings, and unit configuration.

[Table 4-4](#) shows the switch settings for restoring your unit to factory default conditions.

Table 4-4. Switch Settings for Restoring Factory Default Conditions

	1	2	3	4	5	6	7	8
OFF				•				•
ON	•	•	•		•	•	•	



Caution: If you use these switch settings to restore your unit to factory default conditions, the following user-defined settings are removed or reset: password, unit registration, hosts, port mappings, unit configuration, and access restrictions.

Resetting Your Instant Internet Unit

Before you reset your Instant Internet unit, be sure to back up the configuration. If you back up the configuration, you can easily restore it. For details, refer to the guide entitled *Using the Instant Internet Management Software*.

To reset your Instant Internet unit:

1. **Turn off your unit by unplugging it from the wall outlet.**
2. **Set the switches to the configuration you want.**

Refer to [“Switch Settings for Normal Operation” on page 4-2](#).

3. **Turn on your unit by plugging it into the wall outlet.**

The LEDs on the front of your unit flash and then glow steadily when they completely match the sequence for the selected switch settings.

4. **Turn off your unit.**
5. **Reset the switches for normal operation.**

Normal operation is when all the switches are in the “off” position ([Table 4-1](#)).

6. **Turn on your unit.**

Chapter 5

LEDs: Support and Diagnostic Functions

This chapter describes how the LEDs work on your Instant Internet 100 unit and how you can use them to interpret activity on your unit.

Interpreting LED Indicators

On the front of the Instant Internet unit, the nine LEDs indicate failures and operational status. When the unit is turned on, it displays any failures as red lights.

LEDs at Power-Up Sequence

If any failure is found during the power-up sequence, the Power LED glows amber, and one or more of LEDs 1 through 8 glows red. This failure indicates a hardware problem. Call Nortel Networks Technical Support for assistance at 800-2LANWAN, Express Routing Code 167#.



Note: During normal operation, the Power LED glows green, except when updating the internal flash ROM. While updating the flash memory, the Power LED glows amber. This amber LED indicates that it is not safe to turn off the unit without potentially damaging the contents of flash memory.

After initialization is complete, the LEDs indicate status and activity during operation as shown in [Table 5-1](#).

Table 5-1. LED Status and Appearance During Operation

LED #	Color	Appearance	Meaning
Power	Green	Solid	Unit has electrical power and is turned on.
Power	Green and Amber	Solid Green and Flashing Amber	Unit is updating flash ROM. DO NOT TURN OFF until light returns to green.
1	Green	Blinking	Unit is operating normally.
2	Green	Solid	Unit is ready to service clients.
2	Green and Amber	Solid Green and Flashing Amber	Unit is communicating with clients.
2	Amber	Solid	Unit is ready to run setup but cannot service clients (normally occurs before unit has been configured).
3-8	Green	Solid	Indicated interface (see Note below) is online.
3-8	Green	Flashing	Indicated interface (see Note below) is dialing or attempting connection.
3-8	Green and Amber	Solid Green and Flashing Amber	Traffic is on the indicated interface.
3-8	Red	Solid	Indicated interface (see Note below) has failed.



Note: The “indicated interface” is the interface associated with the LED’s number. This information is available in the main dialog box of the iiSetup program. For more information, refer to the guide entitled *Using the BayStack Instant Internet Management Software*.

Appendix A

Technical Specifications

This appendix describes the physical and environmental specifications for your Instant Internet 100 unit.

Physical Specifications

The Instant Internet 100 unit is 6.875 inches wide by 10.50 inches deep and 2.25 inches high.

Environmental Specifications

The operating and nonoperating environment for the Instant Internet 100 unit is as follows:

- Operating Temperature: 10° C to 40° C maximum
- Nonoperating Temperature: -44° C to 66° C maximum
- Operating Humidity:
 - 20% minimum to 80% maximum
 - Relative Humidity: noncondensing
- Nonoperating Humidity
 - 10% minimum to 95% maximum
 - Relative Humidity: noncondensing
- Operating Altitude: 8,000 feet (2,438 meters) maximum
- Nonoperating Altitude: 30,000 feet (9,144 meters) maximum
- Acoustic Noise: 55dBA at 1 meter

Symbols

! Default provider, 2-2

Numbers

100BASE-T Ethernet connection, 1-1

10BASE-T Ethernet connection, 1-1

56K x2/V.90 modem, 1-2

A

acronyms, xii

altitude

nonoperating, A-1

operating, A-1

C

cable

dial-up connection, 1-1

Ethernet connection, 1-1

ISDN connection, 1-1

RJ-11 connection, 1-1

RJ-45 connector, 1-1

cable modem, 1-2

cables, installing, 3-2

CHAP, 2-3

connection

dial-up, 1-2

ISDN, 1-2

customer support, xiv

D

dial-up connection

56K x2, 1-2

K56 Flex, 1-2

V.90, 1-2

DIP switch

off position, 4-1

on position, 4-1

setting, 4-1

using, 4-1

DSL modem, 1-2

dual-Ethernet card, 1-2

E

environmental specifications, A-1

Ethernet

100BASE-T, 1-1

10BASE-T, 1-1

Ethernet connection, cable, 1-1

external router, 1-2

F

factory default conditions, resetting, 4-3

H

humidity

nonoperating, A-1

operating, A-1

I

install

overview, 3-2

unit specifications, A-1

installation checklist, 2-3

interface, AUI, 3-2

Internet service provider

! Default provider, 2-2

access phone number, 2-3

additional services, 2-4

- name server, 2-3
- password, 2-3
- selecting, 2-2
- user name, 2-3

Internet Service Provider Hotline, 2-2

ISDN, 1-2

- NT1, 1-2

ISDN card, 1-2

ISDN connection, 2-3, 2-4

- cable, 1-1

- Multilink Protocol, 1-2

- SPID number, 2-3

- synchronous PPP, 1-2

K

K56 Flex modem, 1-2

L

LED indicators

- about, 3-1

- at power-up sequence, 5-1

- interpreting, 5-1

lights, 3-1

M

modem

- 56K x2/V.90, 1-2

- analog, 1-2

- cable, 1-2

- DSL, 1-2

- K56 Flex, 1-2

- V.90, 1-2

MP, 1-2

Multilink Protocol, 1-2

P

package contents, 1-1

PAP, 2-3

password

- resetting, 4-2

phone cord, 1-1

PPP, 1-2, 2-3

product support, xiv

protocol

- dial-up, 2-3

- ISDN, 2-3

- PPP, 2-3

- proprietary, 2-3

publications

- Nortel Networks, xiii

- related, xiii

R

router, external, 1-2

S

specifications, A-1

SPID number, 2-3

support, Nortel Networks, xiv

switch settings

- resetting the password, 4-2

- resetting to factory default conditions, 4-3

- resetting user-defined configurations, 4-3

- special configurations, 4-2

T

technical publications, xiii

technical support, xiv

temperature

- nonoperating, A-1

- operating, A-1

U

unit

- acoustic noise, A-1

- altitude, A-1

- dimensions, A-1

- humidity, A-1

- nonoperating environment, A-1

- operating environment, A-1

- physical specifications, A-1

- resetting, 4-4

- size, A-1

- temperature, A-1

user-defined configuration, resetting, 4-3