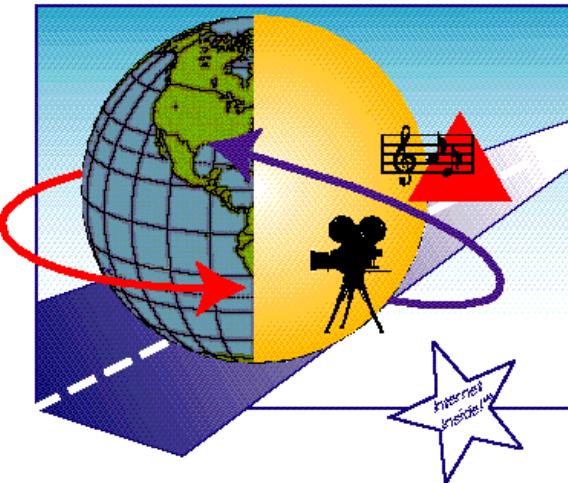




Personal Internet Access



Internet Access
for your PC, Macintosh®
or Workstation

USER'S GUIDE

Rev. 10/4/94



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Performance Systems International, Inc.
P. O. Box 592
Herndon, VA 22070
+1 703.709.0300 (Voice)
+1 703.904.1207 (FAX)
interramp-info@psi.com (Internet E-mail)
<http://www.psi.net> (World Wide Web)

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INTRODUCTION

InterRamp READ ME

This manual is written to help you initially configure your system to work on the Internet. It is written in a general fashion and should be used in conjunction with your TCP/IP software documentation. In many cases, a local consultant, corporate MIS or network specialist will help you configure InterRamp. In all cases - done once and backed up - you'll never have to look at this manual again.

About InterRamp

InterRamp provides a simple, inexpensive way to access the Internet via a V.32bis modem or ISDN for the individual. InterRamp allows you to access computers on the Internet from local access points located at PSI Points-of-Presence (POPs) located throughout the U.S. Your InterRamp account can be used on either the InterRamp ISDN ports or the InterRamp V.32bis ports. This allows you to travel and still use your InterRamp account with the V.32bis ports when you are away from your home ISDN connection.

InterRamp provides support of native TCP/IP applications and software. The connection to PSINet is conducted via the Internet Open Standard Point-to-Point Protocol (PPP). You will be assigned an Internet Address dynamically at connection time so your computer will be a full-fledged Internet "node" with the capability of supporting any TCP/IP application which you choose to run. This includes the latest information retrieval applications such as Mosaic, Gopher, and Wais or tried and true standards like telnet, ftp, and SMTP.

Included in the InterRamp service is an Internet electronic mail account so that you may take part in E-mail conversations and the many e-mail discussion lists. Depending on your software choice, multi-media mail through the Internet standard MIME is also available.

In addition to the e-mail discussion lists, there exists many discussion groups within the USENET News system. USENET is the largest distributed bulletin board service (BBS) in the world. The InterRamp service provides USENET News reading and posting via the Network News Transfer Protocol (NNTP).

PSINet and the Internet

PSINet® is a reliable, high performance public data internetwork (PDI). Its combination of hardware, software and communications facilities represents a substantial deployment of communication components integrated, fielded and managed to offer unparalleled networking services. What PSI builds, others copy years later.

PSINet's Internet service uses a common networking language (TCP/IP), supporting both batch style and interactive network services, including electronic mail, USENET news, remote terminal access, file transfer, bulletin board and directory services. PSINet is about 35% of the U.S. portion of the global Internet. This collection of networks called the Internet represents:

- About two-thirds Commercial and one-third Research and Education Networks worldwide
- Over 30,000 Organizations
- Over 3 Million Daily Users
- The U.S. and Over 80 Other Countries
- Over 30 Million E-mail Users

While over 90% of PSINet's traffic remains within its network, the outbound traffic is divided evenly between the commercial and research & education portions of the global Internet.

PSINet connects to all other Internet service providers through a combina-

tion of the Commercial Internet eXchange (CIX), MAE-East, SWAB, direct connects and the NSFNet.

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QUICK-STARTS

Internet Chameleon for use with InterRamp V.32bis

1. Install Internet Chameleon Software
2. Start the "Custom" application.
3. Click on "File", "Open" and select interamp.cfg.
4. Select InterRamp-PPP
5. Choose "Setup", "Dial" and enter local access phone number.
6. Choose "Setup", "Login" and enter your InterRamp User Name
(ppxxxxxx or usxxxxxx)
6a. Choose "File", "Save" to save your settings in the interamp.cfg file, then choose "File", "Exit" and run Custom again.
7. Choose "Connect" and now you should be able to connect to the InterRamp server.

Internet Chameleon for use with InterRamp ISDN

1. Install Internet Chameleon Software
2. Start the "Custom" application.
3. Click on "File", "Open" and select interamp.cfg.
4. Select InterRamp-ISDN.

5. Choose "Setup", "Call Type", and select "B 64K". Click on OK.
6. Choose "Setup", "Dial" and insert the ISDN number and click on OK.
7. Choose "Setup", "Hardware" and select ISDN*tek for the ISDN card type. Type in your SPID number and choose OK.
8. Choose "Setup", "Login" and enter User Name (ppxxxxx@interramp.com or usxxxxx@interramp.com) and password. Select ISDN as the Startup Command.
9. Choose "Connect" and now you should be able to connect to the InterRamp server.

Mail Setup

1. Click on Mail icon, login as Postmaster (no password).
2. Choose "Services", "Mailboxes", enter account name, then click on "Add".
3. A dialog box with the user name as the title comes up. Add user name again, the password and your full name, and click on OK. Chameleon will create the mail directory for you. Click on OK.
4. Exit the Mail application, and click on Mail again. Login as user name (that you just set up).
5. Click on "Settings", "Network", "Mail Gateway", and enter smtp.interramp.com for the Host.
6. Click on "Settings", "Network", "Mail Server", and enter the host as pop3.interramp.com, then enter username as your account name, and password. Mail directory is not required. Click on OK.
7. Choose "File", "Save" to save these settings.

8. Then you should be able to receive mail ("Messages", "Receive Mail"), if a connection was established.

NEWT News Setup

1. Click on "NEWT News" icon.
2. Login using the same name and password that you did with mail.
3. Click on "Connect", and type in usenet.interramp.com as your news server.
4. After establishing a connection, the news application will fetch a list of all the news groups to which you can subscribe.
5. To subscribe to a news group, scroll down the list with the scroll bar or type in the " Group Name" to which you want to subscribe. The application will search the list for the group name and highlight it. Clicking the plus button (+) will select the news group. Selected newsgroups are indicated by the letter "S" to the left of the selection. Continue adding as many groups as you wish, and then exit from that window. To deselect a newsgroup click the minus button (-).
6. Lastly, choose "File", "Save" to save settings.

TCP/Connect II for InterRamp for InterRamp V.32bis

1. Insert disk and click on InterRamp Installer. Click the Install button when prompted. You should not have to do any customization during the installation. When you get the "Installation Successful" window choose "quit".
2. Now double click on the TCP/Connect II icon. You will be prompted for your Real Name: enter it. You will also be prompted for Organization, put in anything here. When prompted for registration key, enter the

key on the card labeled "Product Access Key" Once this is done, you should get the Configuration window. Here you will enter the Phone Number of the local dialup POP which you want to use. You must enter a 'T' in front of the number so the modem will use touch-tone, not rotary dial.

3. Select the port speed and the Port to which your modem is connected to. The Modem port is default. Enter your modem initialization string where prompted for "Pre-dial init:". If you don't know of a string that works for your modem, here is one that recommend AT&C1&D2
4. Then enter your Real Name where prompted for Your Name. Then enter your InterRamp Account # where prompted for Account Name: and enter your InterRamp Password from the card where prompted for Password:
5. Choose the Menu item Terminal, and "Connect" When prompted for Session Name, click the down arrow at the end of the line and select InterRamp. You may leave the Window Name entry blank, then click OK. This should start your InterRamp Session.
6. A black window will open and it should come up with an OK and then after a few seconds, up to 20 secs., your modem should begin to dial. You will hear the connect tones and then the InterRamp window should disappear. This means that your connected to InterRamp. To check to see if your connected, go to the File menu and choose Show Network Info, if you have an IP address you are connected to InterRamp.
7. To end your InterRamp session you must go to the Connect menu and choose Stop InterRamp. This should open the black window again and now if you click the box in the upper left corner to close the window it will ask if you want to disconnect

Mail Setup

1. You should now be in the Configure window if not then, To configure Mail, go to the Edit menu and choose Configure. This brings up the TCP /Connect II Configuration editor. You now want to scroll down to the Mail icon on the left side. Now choose the Mail icon. In this window you need to put for 'Return Address: ' your account number@interramp.com for example ppXXXXXX@interramp.com or usXXXXXX@interramp.com.
2. For 'Full Name' enter your real name. For Mail User ID: enter your account number, ppXXXXXX or usXXXXXX. For Mail Server: enter pop3.interramp.com.

News Setup

1. You should now be in the Configure window if not then, To configure News, go to the Edit menu and choose Configure... This brings up the TCP /Connect II Configuration editor. You now want to scroll down to the News icon on the left side.
2. Now choose the News icon. You will now see an InterRamp News item at the top of the window If you double click on this, it will put the correct information into the Server: item.
3. This is all you need to do to configure News. When using News you will go to the News menu item and choose Connect. This will prompt you for a News server: you will need to click the down arrow at the end of the line and select usenet.interramp.com. This will startup the News reader. You must be connect to InterRamp before using the News reader. Once all of the information is entered into the configuration. Then close the window. This will save the configuration information.

Morning Star PPP for use with InterRamp v.32bis

After installing MST PPP according to the included instructions and reading the README file for your system included on the disk, use the

following guidelines to setup for connection to PSI's InterRamp v.32bis service.

1. Equipment - It is best to use a modem supported by the MST PPP Dialers file. Among these modems are USR Sportsters and Couriers, various Telebit models, and several other brands.
2. Create the following files in your PPPHOME directory (/etc/ppp under SunOS 4.x, /usr/lib/ppp under Solaris 2.x):

Dialers

make a copy of the existing file Dialers.ex, making an entry for your modem if it is not already supported

Systems

38.1.1 Any ACU <baudrate> <InterRamp Access Number> ""

Devices

<modem type> <tty> <baudrate> <options>

(<modem type> is from the Dialers file, eg "USR-SPORTSTER". <tty> is the name of the tty device connected to the modem, eg "cua". a common option is "crtsccts" to turn on hardware flow control. See the README and printed documentation for more details)

Auth <YourLogin> <YourPassword> (Note: these are supplied by PSI

3. Look in the Dialers file and follow the setup directions given for your modem (dip switches, initialization strings).
4. To best interoperate with the equipment at the InterRamp POP, use a pppd commandline similar to the following:
pppd :38.1.1 auto vjcomp novjcid echolqm nopred1 name
<YourLogin>

5. To reach sites other than 38.1.1.1, you must set up routes to reach them. An easy way to do this is by setting a default route through the InterRamp POP:
route add default 38.1.1.1.

Morning Star PPP for use with InterRamp ISDN on Solaris and SunOS

After installing MST PPP according to the included instructions and reading the README file for your system included on the disk, use the following guidelines to setup for connection to PSI's InterRamp ISDN service.

1. Equipment - You will need an ISDN Terminal Adaptor (TA) which has a phone number memory and capability to dial the stored number when DTR is raised - the AdTran ISU 128 is an example of one such TA (AdTran sales can be reached at 1-800-827-0807). If your TA has a S/T interface for connecting to the ISDN line, you will also need an external NT-1 adaptor (the ISU 128 has a U interface, which means that the NT-1 is builtin, so an external NT-1 is not required).
2. If you are using SunOS 4.x, install the HDLC driver according to the instructions in the README file, rebuild the kernel, and reboot with the new kernel.
3. Create the following files in your PPPHOME directory (/etc/ppp under SunOS 4.x, /usr/lib/ppp under Solaris 2.x):

For SunOS 4.x:

Systems

38.1.1.1 Any /dev/hdcl0 56000

Devices

Direct /dev/hdcl0 56000

For Solaris 2.x:

Systems

38.1.1.1 Any /dev/zsh0 56000

Devices

Direct /dev/zsh0 56000

For both systems:

Auth

<YourLogin> <YourPassword>

(Note: these are supplied by PSI)

4. Program your ISDN TA for a 56k DTE rate, enter the local InterRamp ISDN access number in its memory as phone number 0, and set the TA to dial number 0 when DTR is high (non-zero).
5. To best interoperate with the equipment at the InterRamp POP, use a pppd commandline similar to the following: pppd :38.1.1.1 auto vjcomp novjcid echolqm nopred1 name <YourLogin>
6. To reach sites other than 38.1.1.1, you must set up routes to reach them. An easy way to do this is by setting a default route through the InterRamp POP: route add default 38.1.1.1

REQUIRED READING!

Prerequisites - InterRamp Software and Hardware

Before you can begin to use the PSI InterRamp service, the following software and hardware is required:

- Personal Computer (PC), Macintosh, or Workstation
- TCP/IP Software for your computer
- ISDN card, ISDN TA or
- V.32bis modem (v.32 will work also).
- PPP Software (should be included in the TCP/IP software)
- If using V.32bis, you need a standard telephone line.
- If using ISDN, you need an NT1 (external or internal).
- If using ISDN, you need to order an ISDN BRI telephone line.

PSI will certify hardware and software configurations which are compatible with the InterRamp service. PSI Customer Support will only be available on the PSI certified hardware and software configurations.

PSI will not certify any public domain package. To obtain a list of certified InterRamp hardware and software configurations, please send electronic mail to interramp-certified@psi.com. An automatic response will be mailed back to you. If you do not have access to electronic mail, you can get the list of certified configurations from the PSI FAXBack server by calling 1.800.FAX.PSI.1 and selecting the option for InterRamp information.

TCP/IP Software Requirements

Your TCP/IP software should meet all of the open standards necessary for functioning as a good citizen on the Internet. All InterRamp certified TCP/IP software meets this requirement. If not using InterRamp Certified TCP/IP software, check with the developer of your particular package and specifically cite the issues of the PPP Requirements listed in Appendix C of this manual.

If you use InterRamp packaged software, almost all the necessary servers and applications will be configured already.

Accounts and Passwords

You will be given two sets of accounts and passwords. At first they will both be exactly the same. One account/password pair is for your PPP connection authentication. You can not change this password. It will always remain the same.

The second account/password pair is for the PSI application services that InterRamp gives you access to. For example, your POP mailbox username and password. You can change this password. When this password is changed, it will change for all PSI application services that InterRamp gives you access to. If you change this password, please be sure to remember it.

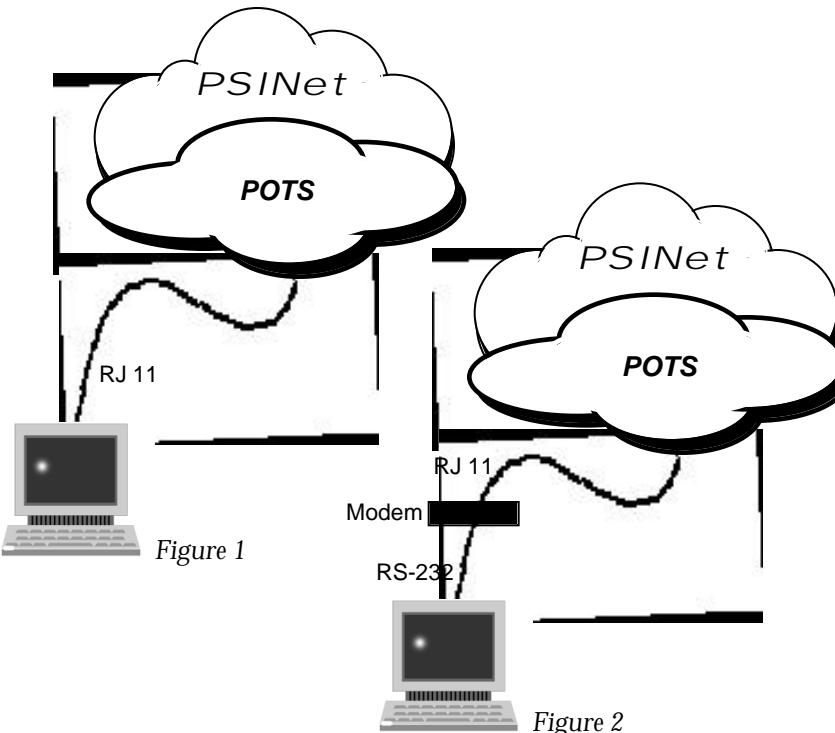
Your account names and passwords will be listed on your account card included in the InterRamp service box. Please do not lose this card.

INTERRAMP USING V.32bis

Using InterRamp with V.32bis and "Plain Old Telephone Service" (POTS)

It is possible to use the InterRamp service with a V.32bis modem. When using this, you will need TCP/IP software and PPP software which can run over a standard computer asynchronous serial (COM) port. You will also need a V.32bis modem. If you are using an external modem, you will need to have a cable to connect your modem to your computer's serial or COM port.

Figures 1 and 2 show the configuration of InterRamp when using a V.32bis internal and external modem.



After physically connecting up the computer and modem to a standard phone line, you can configure your TCP/IP and PPP software to call the PSI V.32bis InterRamp server nearest you. Phone numbers for the V.32bis dialups are included in an appendix in this manual. You can always send E-mail to numbers-info@psi.com to get the latest up to date list of InterRamp access numbers. They are designated by being labeled as "InterRamp" -- all PSI dialups DO NOT support InterRamp.

The POTS rotaries also support V.32 (9600 baud), as well as V.42 (error correction) and V.42bis (compression).

INTERRAMP USING ISDN

Using InterRamp with ISDN

It is most desirable to use the InterRamp service with ISDN. ISDN provides a 64Kbps connection to PSINet and the Internet using a superior digital technology compared to POTS. With this bandwidth, you will be able to take full advantage of the emergence of Multi-Media applications (like Mosaic) on the Internet. The higher bandwidth is useful to download images, sound files, and even movies in seconds or a few minutes -- something that classical on-line services cannot do.

If you are going to use ISDN, you will need to order an ISDN phone line into your location. Specifically, an ISDN Basic Rate Interface (BRI) line. This provides you with two ISDN B channels each capable of 64Kbps. For the InterRamp service, you currently will only use one B channel. For the future, PSI is following the technology which will support the bonding of B channels which could give you a total bandwidth of 128Kbps (though potentially at greater cost).

In order to use the BRI line, you will need to get an ISDN card for your computer. PSI has certified a number of ISDN interface cards, external TAs and the companion software which runs over them. This ISDN card provides a digital 4-wire interface to the ISDN BRI line.

Since the ISDN BRI coming into your location is provided to you by the telephone company on 2 wires and the ISDN card is expecting 4 wires, you need an ISDN "modem" to provide the translation from 2-wire to 4-wire. This is called an NT1. You will need an NT1 to use the InterRamp service over ISDN. Figure 3 shows the configuration of InterRamp service for ISDN with an ISDN Interface Card and NT1. In many cases the NT1 functionality is integrated in the Terminal Adapter.

It is also possible to use your computer's serial port with ISDN. In this case, you would need to use an external ISDN Terminal Adapter (TA) and connect it to your computer's serial port. The TA connects to your computer's serial port and provides a digital 4-wire ISDN connection. With an ISDN TA, you still need an NT1. Figure 4 shows the configuration of InterRamp service for ISDN with an external TA and NT1. AccessWorks Communication has a unique Terminal Adapter which connects to a standard asynchronous RS-232 port and makes a synchronous ISDN connection.

However, at this printing, only synchronous serial connections and synchronous TAs are supported. Synchronous serial connections are normally supported on workstations. Asynchronous ISDN TA connectivity requires

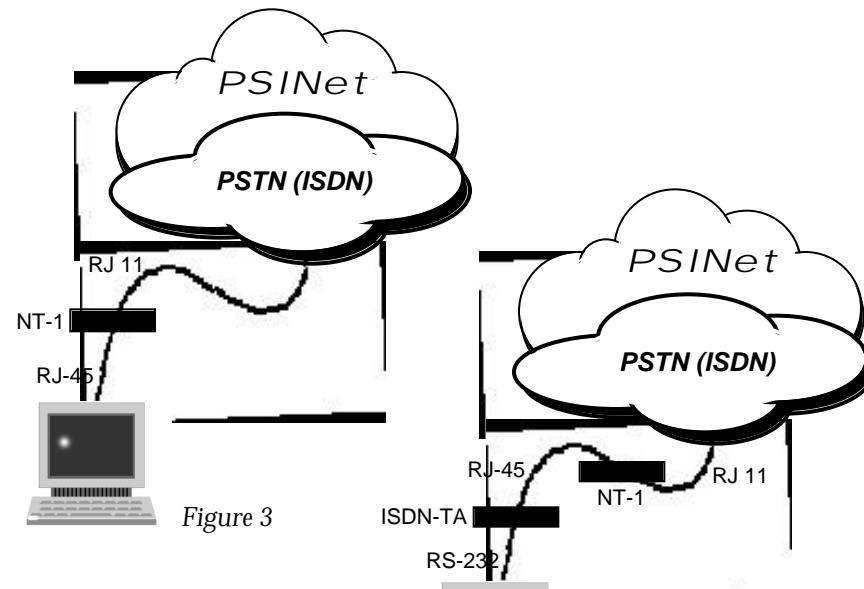


Figure 3

Figure 4

v.120 rate adaption support in PSI's hubs, and it is not yet available. After physically connecting up the computer and requisite equipment to your ISDN phone line, you can configure your TCP/IP and PPP software to call the PSI ISDN InterRamp server nearest you. Phone numbers for the ISDN dialups are included in Appendix A in this manual. You can always send e-mail to numbers-info@psi.com to get the latest up to date list of InterRamp access numbers.

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MAKING A CONNECTION

Establishing the InterRamp Connection

Any InterRamp certified PPP implementation will have a dial-on-demand feature so after configuring up your software, you need to send a packet destined to the Internet in order to start the dialing and connection process.

You can do this by sending a ping packet to a host address on the Internet. For example, you can try ping'ing 38.145.250.2. This is a host computer which is run by PSI and it is connected to PSINet and the Internet. However, an application like telnet, ftp, or Mosaic will also work.

When the PSI InterRamp server answers, the PPP protocol will be negotiated with your computer. At this time, your computer will be authenticated to find out if you are a valid InterRamp user. Then, your computer will be assigned an Internet IP address for this "session". This address will allow your computer to reach computers on the global Internet.

After the PPP connection has been set up, your computer will be an active node on the Internet. You will be able to use your TCP/IP applications which were included with your software package. You can also use the many Public Domain applications which have been developed. These include Mosaic, Gopher, and Wais.

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YOUR INTERNET ADDRESS

IP Addressing and Internet Naming

As an InterRamp customer, you will be assigned an IP address from the InterRamp server via PPP. The IP address will be part of PSI's Class A Network address. The PSI Class A network is 38.0.0.0. The IP address assigned to your computer has full Internet Connectivity.

The Internet name associated with the IP address assigned to your computer will be assigned by PSI and will be part of the interramp.com domain name space. You will not have your own unique or "corporate" domain name to be associated directly with your computer. This service is for an individual; other PSI services may be purchased to provide corporate solutions.

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MAIL AND NEWS

Electronic Mail with InterRamp

The InterRamp service comes bundled with a single Internet E-mail address. The address will be of the form `ppxxxxxx@interramp.com or usxxxxxx@interramp.com. E-mail sent to this Internet address will be stored on the InterRamp mail server and it can only be retrieved via POP3. All certified Interramp software packages will support POP3. The configuration of the mail module of your software package should be set to point to pop3.interramp.com. This is the InterRamp POP3 server which is holding your mail.

The configuration of your Reply-to: option in your mail module should be set to your InterRamp e-mail account:

ppxxxxxx@interramp.com or usxxxxxx@interramp.com

While your computer retrieves its e-mail through POP3, it sends its e-mail through SMTP. You will need to configure your software to use smtp.interramp.com as its "mail forwarder".

USENET News with InterRamp

The InterRamp service comes bundled with a single USENET News account which can be used to read USENET News articles and post to USENET News groups. Your USENET News reading client should be directed at usenet.interramp.com. You should make sure that your Reply-to: address in your USENET News postings is set to your InterRamp electronic mail address.

The InterRamp USENET News service is strictly a News reading and posting service. The classic corporate USENET News feed where articles are

^xxxxxx will be a numeric number assigned to you when you purchase InterRamp.

batched up and transmitted to the corporate customer in bulk is not supported with InterRamp. USENET News via the InterRamp service utilizes the NNTP protocol to perform the remote reading and posting of news articles.

NETWORK STATUS

On-Line Network Status

From time to time, you may need to find out the status of the network in general, but would rather not go through the trouble of a phone call to PSI Network Operations. PSI provides that capability through electronic mail and through the use of the finger protocol. The following items are available in the brief status reports:

- (1) NSFNET and CIX outages
- (2) PSINet POP and link outages
- (3) Major DNS server outages
- (4) Major NNTP server outages
- (5) Major Mail server outages
- (6) Any upcoming scheduled outage
- (7) Any upcoming scheduled upgrade
- (8) Any outage or upgrade to various dialup capabilities

These events are normally retained for up to 24 hours so that a small amount of history is available. To gain access to this information, send e-mail to:

status@psi.com

or use the finger protocol at the following host:

@status.psi.net

In either case, the status report will be returned (immediately by finger, or via return e-mail).

You can also retrieve the same network status information via PSI's World Wide Web (WWW) server. Using Mosaic, select the "Network Status" Hyperlink from PSI's Home Page to get the latest network status information

on PSINet. For more information on PSI's WWW server, please see the "On Line Information" section later in this manual.

IMPORTANT SERVERS

Important Configuration Servers

- DNS: dns.interramp.com (primary) 38.8.17.2
dns2.interramp.com (secondary) 38.146.21.2
- SMTP: smtp.interramp.com
- POP3: pop3.interramp.com (supports MIME)
- NNTP: usenet.interramp.com
- MOSAIC: www.interramp.com
- Gopher: gopher.interramp.com
- IRC: irc.interramp.com

SMTP.INTERRAMP.COM

This is the mail gateway used to relay outgoing mail from InterRamp customers to the Internet. The InterRamp service uses the Simple Mail Transfer Protocol to send outgoing mail.

POP3.INTERRAMP.COM

This is the mail server accessed by the InterRamp mail client. The InterRamp services use the Post Office Protocol to process and retrieve their messages.

USENET.INTERRAMP.COM

This is the news server accessed by the InterRamp news client. This server retrieves all USENET news for InterRamp customers and holds the articles until the user connects and reads the news groups.

DNS.INTERRAMP.COM 38.8.17.2

DNS2.INTERRAMP.COM 38.146.21.2

This is the domain name server accessed by the InterRamp service. It allows the customer to find other hosts on the Internet by translating host names into IP addresses.

WWW.INTERRAMP.COM

This is a World-Wide-Web server which may be accessed by MOSAIC. This web server contains the InterRamp Home Page. MOSAIC is a graphical interface to allow for exploration throughout the Internet with ease.

GOPHER.INTERRAMP.COM

This is the Gopher server which may be accessed by the InterRamp Gopher client. Gopher is a menu based interface for exploring other gopher servers throughout the Internet.

IRC.INTERRAMP.COM

This is an Internet Relay Chat server which may be accessed to do "real-time" chatting with other users currently logged on. Using Internet Relay Chat users can play trivia, discuss current topics or help out other users with technical issues.

ON-LINE INFORMATION

On-Line Information

PSI has a number of on line information services including:

- (1) Marketing and other information available via e-mail;
- (2) Source archives available via anonymous ftp;
- (3) SNMP statistics for PSINet available via anonymous ftp; and
- (4) Newsletters, press releases, etc., available via anonymous ftp.
- (5) A World Wide Web Server (WWW) with information about
PSI and the Internet.

PSI has created mailboxes which automatically generate information on specific areas of our services, these mailboxes are in the form:

{mailbox}-info@psi.com

The directory of these mailboxes is available by sending e-mail to:

all-info@psi.com

Responses to mail received by these mailboxes are mechanically generated (no human intervention), so the body of messages sent to these mailboxes is unimportant (and can be empty, in fact).

PSI has a WWW server which holds multimedia information pertaining to PSI and the Internet. An example of information available includes company background, information about PSI services, PSI technical documents, PSI images and maps.

You can access PSI's Home Page using MOSAIC by using the following Universal Resource Locator (URL):

<http://www.psi.net/>

Once you get to PSI's Home Page, you can follow the hyperlinks to the information you desire.

INTERRAMP PRICING

InterRamp Pricing - "Pioneer Preference"

As with any new service or product, bugs, outages and other factors can happen and are ironed out through time. The original subscribers through December 31, 1994 will have a lifetime lower cost through PSI's Pioneer Preference billing.

InterRamp registrations through December 31, 1994 will qualify for the following special Pioneer Preference pricing:

(NOTE: Pioneer Preference orders include unlimited use during the first three months of service.)

InterRamp Service ONLY\$116[†]
(Includes one-time registration fee of \$29, and 3 months of service,
unlimited use at \$29/Mo.)

InterRamp Service PLUS InterRamp PC or Macintosh®
Software Package\$200*

InterRamp Service PLUS InterRamp UNIX workstation
Software Package\$235*
(Includes one-time registration fee of \$29, three months of service,
unlimited use at \$29/Mo., plus InterRamp software).

InterRamp Rates After the Initial 3 Months of Service:
First 29 Hours of Usage\$29/Mo.[®]
ISDN Usage Over Initial 29 Hours\$2/Hr.
V.32bis Usage Over Initial 29 Hours\$2/Hr.

*InterRamp Software not sold separately.

[®]Minimum billing is \$29/Mo.

*For all accounts sold prior to December 31, 1994, billing will begin January 1, 1995 regardless of
first usage after January 1, 1995.

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INTERRAMP SUPPORT

The InterRamp Support Group

Provided you have a certified InterRamp TCP/IP implementation, at any time during the installation, initial setup, and continued use of your InterRamp service, you may contact the InterRamp Support Group. There is no charge for using InterRamp Support.

To contact InterRamp, you may send e-mail to support@interramp.com. Sending mail to this mailbox will generate a trouble-ticket number. All questions and problems reported to this list are tracked to insure that a timely response is provided to the customer.

Current support hours are:

7:00 am - 10:00 pm Monday - Saturday (EST)

You can reach PSI InterRamp Support directly by dialing:

1.518.286.1100

It is always desirable to send e-mail to:

support@interramp.com

However, PSI understands that there are some cases when phone consultation is the only remedy to the situation at hand.

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MISCELLANEOUS

Security/Privacy/Ethics

You are responsible for maintaining the security and integrity of your data. Our system is only as secure as the phone system it uses to transfer data. In general, most data is not encrypted by the network. If you have sensitive materials, it is your responsibility to ensure privacy.

In addition, it is considered unfriendly to attempt to gain access to hosts on which you have no permission. It is not difficult for host administrators to determine the source of repeat offenders. The PSI NISC monitors InterRamp server activities on a regular basis. If there are indications that a user is misusing the service, then his/her access will immediately be terminated pending further review.

Suggested Reading

The Whole Internet User's Guide & Catalog, written by Ed Krol. A complete and comprehensive introduction to the Internet Published by O'Reilly & Associates, Inc., Sebastopol, CA. 400 pages, ISBN 1-56592-025-2.

The Internet Guide for New Users, written by Daniel P. Dern. Published by McGraw-Hill, Inc. ISBN 0-07-016511-4 (paperback); ISBN 0-07-016510-6 (hard cover).

These books are available for purchase through PSI. Contact PSI Sales for ordering information.

For further sales information on InterRamp or other PSI
products, please contact:

Performance Systems International, Inc.
510 Huntmar Park Drive
Herndon, VA 22070
Phone: 1.800.PSI.3031 (+1 703.709.0300)
Fax: +1 703.904.1207
FAXBACK Info: 1 800.FAX.PSI.1
E-mail: interramp-info@psi.com
Automatic Response E-Mail: all-info@psi.com
World Wide Web: <http://www.psi.net>

APPENDIX A

InterRamp V.32bis Access Numbers

For the most up-to-date list of InterRamp V.32bis access numbers, send e-mail to numbers-info@psi.com.

<u>CITY & STATE</u>	<u>ACCESS NUMBER</u>
Akron, OH	Available Soon
Atlanta, GA	404.865.0110
Austin, TX	512.432.0001
Baltimore, MD	410.244.0719
Boston, MA	617.450.6800
Chicago, IL	312.616.6700
Cincinnati, OH	Available Soon
Cleveland, OH	Available Soon
Columbus, OH	614.442.9500
Dallas, TX	214.658.9500
Detroit, MI	Available Soon
Dublin, OH	Available Soon
Fort Wayne, IN	Available Soon
Harrisburg, PA	Available Soon
Herndon, VA	703.904.0600
Houston, TX	713.567.0300
Indianapolis, IN	Available Soon
Islip, NY	516.468.2200
Jacksonville, FL	904.355.1523
Los Angeles, CA	213.623.6411
Miami, FL	305.470.6277
Newark, NJ	Available Soon
New York, NY	212.631.2860
Orlando, FL	407.481.1000
Philadelphia, PA	215.587.9450

InterRamp V.32bis Access Numbers (Continued)

<u>CITY & STATE</u>	<u>ACCESS NUMBER</u>
Pittsburgh, PA	412.562.1103
Portland, ME	Available Soon
Portland, OR	Available Soon
Rochester, NY	716.428.3700
Sacramento, CA	916.537.2901
Salt Lake City, UT	Available Soon
San Antonio, TX	Available Soon
San Diego, CA	Available Soon
San Francisco, CA	415.284.4800
Santa Clara, CA	408.653.2300
Seattle, WA	206.728.3468
South Bend, IN	219.271.0326
Sunnyvale, CA	408.774.4700
Tampa, FL	813.276.9824
Urbana, IL	Available Soon
Washington, DC	Available Soon
Wilmington, DE	302.576.0500

APPENDIX B

InterRamp ISDN Access Numbers

For the most up-to-date list of InterRamp ISDN access numbers, send e-mail to numbers-info@psi.com.

<u>CITY & STATE</u>	<u>ACCESS NUMBER</u>
Akron, OH	Available Soon
Atlanta, GA	404.865.0110
Austin, TX	512.432.0001
Baltimore, MD	410.244.0719
Boston, MA	617.450.6800
Chicago, IL	312.565.9446
Cincinnati, OH	Available Soon
Cleveland, OH	216.696.8236
Columbus, OH	614.222.0825
Dallas, TX	Available Soon
Detroit, MI	Available Soon
Dublin, OH	614.228.7452
Fort Wayne, IN	219.452.1004
Harrisburg, PA	Available Soon
Herndon, VA	703.904.9050
Houston, TX	713.567.0300
Indianapolis, IN	317.576.0308
Islip, NY	Available Soon
Jacksonville, FL	904.355.1523
Los Angeles, CA	213.623.6411
Miami, FL	305.470.6277
Newark, NJ	Available Soon
New York, NY	212.631.2860
Orlando, FL	407.648.9426
Philadelphia, PA	215.587.9450

InterRamp ISDN Access Numbers (Continued)

<u>CITY & STATE</u>	<u>ACCESS NUMBER</u>
Pittsburgh, PA	412.562.1103
Portland, ME	Available Soon
Portland, OR	Available Soon
Rochester, NY	716.324.1000
Sacramento, CA	916.537.2901
Salt Lake City, UT	Available Soon
San Antonio, TX	Available Soon
San Diego, CA	Available Soon
San Francisco, CA	415.357.9900
Santa Clara, CA	408.289.1510
Seattle, WA	206.441.2203
South Bend, IN	219.271.0326
Sunnyvale, CA	408.736.0194
Tampa, FL	813.276.9824
Urbana, IL	Available Soon
Washington, DC	Available Soon
Wilmington, DE	302.576.0500

APPENDIX C

PPP REQUIREMENTS

If you choose to run your own software which is not on the certified list, a full PPP implementation is recommended for use with the InterRamp service. However, there are a few key elements which must be present in order for a PPP implementation to be used with the InterRamp service. They are:

- PAP authentication - The InterRamp service will use this to authenticate InterRamp users. PPP PAP is specified in RFC1334.
- -IP address negotiation - The PPP implementation will need to be able to receive an IP address via PPP and assign it to the PPP interface on your computer. This is how you get your IP address.
- -PPP Option Negotiation - PPP option negotiation should be able to handle all PPP option requests even if the response is reject. The goal of the PPP implementation is to not die when encountering an unsupported PPP option during the negotiation stage.
Please remember that when using software that has not been certified for use with InterRamp by PSI, it will not be supported by PSI customer support.
There are no guarantees that non-certified software will interoperate with the PSI InterRamp service.

*These details are important to TCP/IP stack vendors. Make sure they are supported. All software distributed in InterRamp boxes are guaranteed to work and support this.

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APPENDIX D

ORDERING A BRI PHONE LINE

Introduction

In an effort to make the process as simple as possible, PSI has prepared this document as a guide to use when you, the customer, order the necessary Basic Rate Interface (BRI) circuit for InterRamp service.

Included are:

- (a) the details that you will need to know when calling the phone company to order the circuit;
- (b) a description of available databases on ISDN service;
- (c) a list of who to contact to order the circuit and;
- (d) a list of known equipment providers.

Background Information on ISDN

ISDN is classified as either "Custom" or "National." Custom ISDN circuits use protocols that were developed independently by each switching system manufacturer (AT&T, Northern Telecom, etc.) The National standards have since been established to replace the Custom classification, and switching manufacturers are now implementing and deploying the new standard National #1 protocol. InterRamp service supports either the National ISDN-1 (NI-1) standard, or AT&T's custom standard. Ultimately, the National #2 standard should eliminate the differences between switching manufacturers.

A BRI circuit from the telephone company will have a "U" interface when the circuit enters a building. This "U" interface is composed of two wires (one pair), and carries data, but does not provide any power to the terminal equipment. The "U" interface must be converted to a "S/T" interface, which

requires the use of an "NT-1" with its power supply. The "NT-1" converts the two wire circuit to a four wire circuit, provides diagnostic capabilities for the telephone company to speed testing, and supplies limited power for the "terminals," if needed. BRI circuits terminate in a device referred to as a terminal adapter, or "TA." In the case of InterRamp service, the TA is the PSI-authorized ISDN card or equipment. See Figure 5 below.

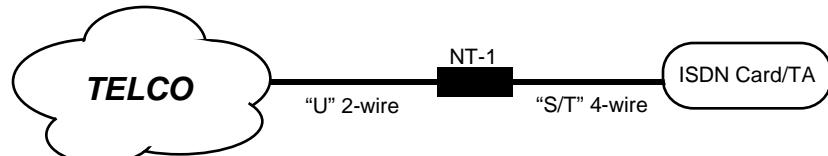


Figure 5

A BRI circuit from a PBX will already be in the "S/T" format and will not need an NT-1 adapter.

Ordering a BRI

However, ISDN service is not available in all areas. When a customer orders a BRI circuit, the BRI circuits are available from a local telephone company, or most major long-distance carriers. telephone company will first verify that ISDN is available in the location before taking an order. It is imperative that you stress the fact that you require either National ISDN-1 or AT&T's Custom provision of BRI. InterRamp service only supports these two standards. PSI assumes that the majority of installations will use BRI circuits provided by local telephone companies.

In addition to basic information such as name, address, installation date, etc., the telephone company will need the following information:

Service Desired:

ISDN Basic Rate Interface (BRI).

How do you want to terminate the circuits?

The NT-1 requires an RJ-11 jack.

Circuit Termination:

An NT-1. Can be obtained from various vendors (see "Contacts" section for easy ordering information). Specify model and make when ordering the circuit. The maximum distance between the NT-1 and its termination point (ISDN card or TA) is 3,280 feet. The ISDN card or TA can be installed anywhere along this cable segment.

For what type of application will you be using this circuit?

Data transfer only.

How many circuits will you need?

One.

Which channels should be provisioned?

Order your BRI with two "B" channels.

What type of signalling will be needed on the circuit?

This depends on the telco's switch.

AT&T 5ESS switches must be configured to support these line translations: Basic Services only, terminal type "A," B1 data, or, B2 data.

Only one "B" Channel needs to be configured, the other can be left "blank."

Northern Telecom switches must support these line translations: Basic Services only, Dynamic TEI, B1 data, B2 data, or, EKTS (electronic key telephone system) off.

What "SPID" number should/will be used?

The phone company will assign "SPID" (Service Profile Identifier) numbers to the circuit, if it is needed. Make sure that you request the assigned "SPID" numbers from the telco in order to properly set up the router.

Is this a Multi-point or Point-to-Point termination?

InterRamp is a Point-to-Point connection.

Will you need to dial "9" first to call out with a BRI?

Some companies sell their BRI circuits as Centrex, which means they act like a telephone behind a PBX. If this is the case, you must dial a "9" first when dialing anywhere. Please be sure to ask if the circuit is Centrex.

ISDN Databases

The Combinet "BBS" contains information supplied by Bell Communications Research and various operating companies regarding ISDN availability. The BBS is available via telnet or direct dial with a 2400 baud modem.

To access the service, telnet to [bbs.combinet.com](telnet://bbs.combinet.com), or dial directly to 408.733.4312, and login as "isdn." After entering the area code and three digit prefix, the service displays the availability of ISDN. Also displayed is pricing information on installation and monthly recurring charges.

Bellcore offers information about National ISDN by anonymous ftp over the Internet at host "[info.bellcore.com](ftp://info.bellcore.com)." The files are available in a PostScript format in the /pub/ISDN sub-directory. Please note that many of these files are large. Therefore, it is important to first review the README file for detailed information on retrieving files associated with documents.

The README file is in ASCII format and can be read on any word processor. The other files in the directory are in PostScript format and may be downloaded by ftp. This information is also available via the world-wide-web: <http://www.bellcore.com/>

If you have problems, or would like to comment on the information stored at this site, you can e-mail Bellcore at isdn@cc.bellcore.com. Or, you can call Bellcore's National ISDN Hotline - 1.800.992.ISDN.

Telephone Company Contacts

Ameritech - IL, OH, MI, IN, WI - 800.832.6328 - Team Data - ISDN specialty department. Ameritech's Team Data group is familiar with PSI's service and has a "PSI outline" that will make the process quite simple. Ameritech can set up your ISDN long-distance with either AT&T or MCI. If you would like to use another carrier, they will not be able to help you. Centrex is not required.

Bell Atlantic- VA, WV, DC, PA, NJ, MD - 800.570.4736 - Bev Bosley. Bev is quite familiar with PSI's service and helps to lessen the customer's confusion. It takes approximately 5 days to complete your order after Bell Atlantic engineers have confirmed that ISDN is available at your location. Centrex is not required.

Rochester Telephone - Rochester, NY- 716.777.5118 - Dan O'Neil. Centrex is not required, but it is available. Rochester Telephone resells AT&T's NT-1.

PacBell - CA - 408.493.8034 - Jim Parnell, or 408.493.7737 - Greg Marshall. Both are familiar with PSI and PSI services. PacBell engineers will confirm that ISDN is available at your location. Centrex is not required.

Southwestern Bell - Houston, TX - 713.567.4167 - Jackie Spradlee. Centrex is not required. Ask for "Digiline" service. That is their name for BRI. Jackie is familiar with PSI and our service, so she should be quite helpful. You must specify that you are to be served from the Clay Central Office in order to reach the PSI POP - THIS IS VERY IMPORTANT.

Southwestern Bell - Dallas, TX - 214.268.1402 - Justine Black. Centrex is not required. Ask for "Digiline" service. Currently ISDN calls cannot be made from one central office (CO) to another in Dallas. Customers must request the Riverside CO in order to access PSI - THIS IS VERY IMPORTANT.

GTE - Fort Wayne, IN - 219.435.3888 - Eric White. Centrex is not required. Eric is familiar with PSI and the services we sell.

NYNEX - New York, NY - 212.229.3752 - Joan Dash; Kimberly Roberts - 212.626.7247. Centrex is not required.

NYNEX - Boston, MA - 617.743.5149 - Louise Downs.

BellSouth - Orlando, FL - 305.351.3132 - LeRoy Williams. LeRoy is familiar with PSI services and will be quite helpful to business customers. Individuals should call BellSouth's ISDN Hotline - 800.428.4736.

USWest - Seattle, WA - 800.769.6543 - David Prouix. David is familiar with PSI services and will be quite helpful.

Equipment

NT-1 - Available from any of the following: (This page intentionally left blank.)

Performance Systems International, Inc. - 800.774.3031 PSI is now selling the Northern Telecom NT1 in conjunction with various other InterRamp certified ISDN equipment.

Bell Atlantic - 800.221.0845. The Northern Telecom NT1 is sold by Bell Atlantic for \$108.00. The 2 watt power and cable required is \$39.00. In order to receive this pricing, PSI must be mentioned. Bell Atlantic ships throughout the US via UPS.

Com-Net - 510.264.2100 - Rick Berman. The Tone Commander NT1 is sold for \$235.00, which includes the power supply. The Tone Commander is rack mountable. Com-Net requires at least a one week lead prior to shipment.

Rochester Telephone - 716.777.5118 - Dan O'Neil. The AT&T NT1 is sold by Rochester Telephone for \$384.00, plus \$64.00 for installation. This includes the necessary power and cables.

APPENDIX E

Public Domain Applications Available on the Internet

Introduction

Available on the Internet are a number of easy-to-use, free, public domain navigational tools. Listed here are a few of these tools and where you can find them.

Gopher

Created at the University of Minnesota, Gopher uses a simple client/server protocol that can be used to search for information located on the Internet. The information is presented in a series of menus, much like the directories on your disk. There are many gopher servers in existence, however one place to download the client software is the University of Minnesota.

address:	ftp boombbox.micro.umn.edu
login:	anonymous
password:	your e-mail address
directory:	gopher

MOSAIC

Mosaic is a global hypermedia browser tool which combines text, graphics, audio, and video. This combination offers a unique front-end which allows users to discover, retrieve, and display documents and data from all over the Internet. Mosaic is available via anonymous ftp at the University of Illinois Urbana-Champaign's National Center for Supercomputing Applications.

address: ftp.ncsa.uiuc.edu
login: anonymous
password: your e-mail address
directory: /pc/mosaic/
file: win32s.zip and wmos20a5.zip

IRC (Internet Relay Chat)

IRC is a real-time chat system which allows users to talk to many people from all over the Internet.

address: ftp cs.bu.edu
login: anonymous
password: your e-mail address
directory: irc/clients

CU-SeeMe

CU-SeeMe is a Macintosh® videoconferencing tool program. It is intended to offer useful conferencing at a minimal cost. Currently this program is only available for the Macintosh, however a PC version is under development. This software is available free from Cornell University.

address: gated.cornell.edu
login: anonymous
password: your e-mail address
directory: /pub/video