ePipe 2344 ML-IP Gateway
Getting Started Guide

Check Package Contents

Check the packing list below to ensure you have all the correct parts. Cables are color coded for identification.

Your ePipe kit should contain:

- ❑ ePipe 2344 unit
- ❑ AC/DC power supply unit
- ❑ Two Ethernet UTP cables (green connector)
- ❑ Two modem cables - RJ45 to DB25 (orange connector)
- ❑ Console cable with DB9 connectors (black cable)
- ❑ RJ45 loopback adapter (black)
- ❑ ePipe ML-IP Family Software & Documentation CD
- ❑ Warranty Registration Card
- ❑ Quick Setup Guide (this card)

ePipe 2344 unit   *AC/DC power supply*   *2 x Ethernet UTP cables (green)*   *2 x modem cables (orange)*

Console cable (black)   *RJ45 loopback*   *ePipe ML-IP Family software & documentation CD*   *Warranty Registration Card*

Start Here

To get your ePipe up and running quickly, follow the steps in this Getting Started Guide. To understand how you can use ePipe refer to the ePipe 2344 ML-IP Gateway User Guide on the ePipe ML-IP Family Software & Documentation CD. This user guide is also available from the ePipe web site (www.ml-ip.com).

What Else Do I Need?

Before installing the ePipe 2344, you will need the following:

- A PC connected to your LAN for configuring the ePipe 2344, referred to as the Configuration PC, running the following:

  - Microsoft Windows (XP or 2000 recommended)

  - Microsoft Internet Explorer 5 or above

  - The Java™ Plug-in (i.e. Java™ 2 Runtime Environment). The Java™ Plug-in can be found on the ePipe ML-IP Family Software & Documentation CD-ROM and can also be obtained from the Sun Microsystems Java™ web site (http://java.sun.com/getjava/). See Step 5 over the page

- One or more xDSL, Cable, analog or ISDN modems or dedicated access routers

- Appropriate cables to connect your modem or router to the ePipe. Two RJ45 to DB25 RS-232 asynchronous serial cables (orange) and two Ethernet cables (green) are included. Additional cable kits are available from ePipe. For part numbers, other cabling requirements and all cabling pin-outs refer to the ePipe ML-IP Family Software & Documentation CD or go to the ePipe web site (www.ml-ip.com)

- One or more xDSL or Cable services, analog or digital (ISDN) phone lines or other dedicated connection

- One or more accounts from one or more ISPs for connecting to the Internet

- An available port on your Ethernet hub or switch to which you will connect the ePipe 2344

Once you have the above items, you are ready to follow the 6 step process contained in this getting started guide to setup the ePipe on your network.

Quick Setup

The ePipe 2344 can be connected to a variety of devices via its 10/100Mbps Ethernet (10/100Base-T) interfaces and its RS-232 asynchronous serial ports. Apart from Ethernet 1, all Ethernet and serial ports can be used to connect the ePipe 2344 to an Internet or WAN connection.

Ethernet 1 must be connected to the internal LAN or other local network as all configuration of the ePipe 2344 occurs via this interface. Figure 1 shows a typical network deployment using ePipe 2344 units to connect two sites.
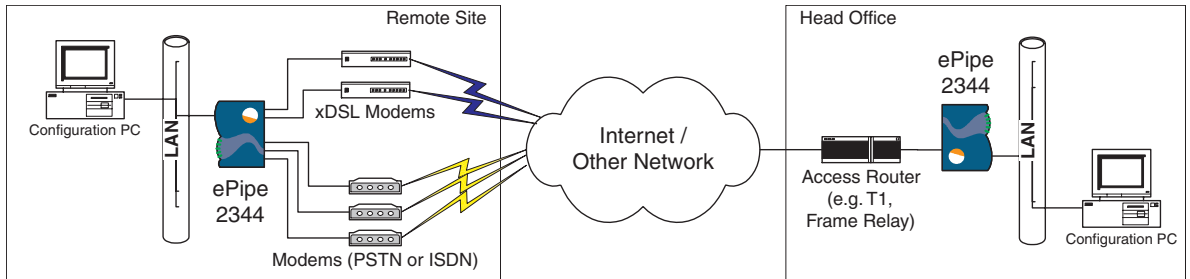
Figure 1 - Typical deployment of the ePipe 2344 units connecting two sites

The following six steps provide information on how to locate, install and start setting up the ePipe 2344.

Step 1: Locating the ePipe 2344

The ePipe 2344 is a desktop device with an external power supply. The unit can be located on any horizontal surface or wall mounted using the wall mounting points located on the base of the unit.

Avoid areas that are dusty or prone to extremes of heat or humidity.

Typically the ePipe 2344 should be located close to a power supply outlet and to any external access devices that need to be connected to the unit, such as DSL, Cable or analog modems and other access devices such as routers.

② Step 2: Connecting the ePipe 2344 to your LAN

The ePipe 2344 has four 10/100 Mbps Ethernet ports (10/100Base-T).

> **(!)** NOTE: Ethernet 1 must be connected to the internal or private network. The Configuration PC must also be connected to this network.

To connect the ePipe to your LAN, follow the steps below:

1. Attach Ethernet 1 on the ePipe 2344 to an internal or DMZ LAN. Using the provided Ethernet UTP cable (green connectors), connect one end of the cable to Ethernet 1 on the ePipe 2344 and the other end of the cable to an available port on your LAN's hub or switch. If using a 3rd party cable, use a standard straight-through Cat5 (or better) patch lead.
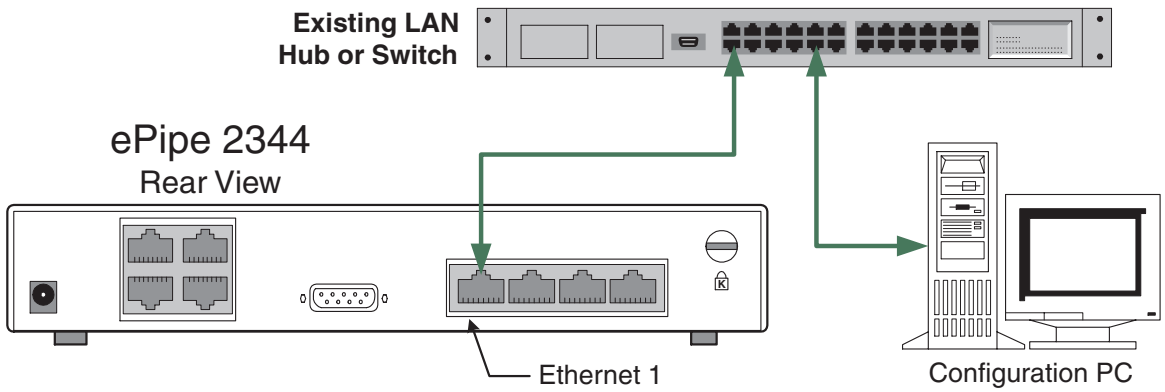

Figure 2 - Connecting the ePipe 2344 to the LAN

2. Attach the Configuration PC to this same LAN. The Configuration PC and the ePipe 2344 must be on the same IP subnet.

Step 3: Connecting the ePipe 2344 to WAN Access Devices

The ePipe 2344 has four (4) 10/100 Mbps Ethernet ports (10/100Base-T) and four (4) RS-232 asynchronous serial ports. The Ethernet ports (except Ethernet 1) can be connected to xDSL modems/routers, Cable modems, other access routers and other LANs. The serial ports can be connected to standard analog modems and ISDN modems (terminal adapters or TAs). These devices typically connect the ePipe 2344 to a public network (e.g. the Internet) or other WAN.

To connect the ePipe 2344 to a public network or WAN follow the steps below:

1. Connect your Cable modems or xDSL modems/routers or dedicated access routers to the 2nd, 3rd and/or 4th Ethernet ports on the ePipe 2344 using an Ethernet patch lead (2 Ethernet patch leads with green connectors are supplied in the box). Refer to Figure 3.

> **NOTE**: The ePipe 2344 is supplied with two (2) straight through Ethernet (green) cables. If your xDSL/Cable modem or router requires a cross-over Ethernet cable, please use the cable that is supplied with your modem or router, or alternatively, purchase an Ethernet cross-over cable from your supplier.

2. Connect your analog modems and/or TAs to the RS-232 serial ports of the ePipe using the supplied serial cables (orange connectors). Two serial modem cables are provided with your ePipe. Refer to Figure 3.
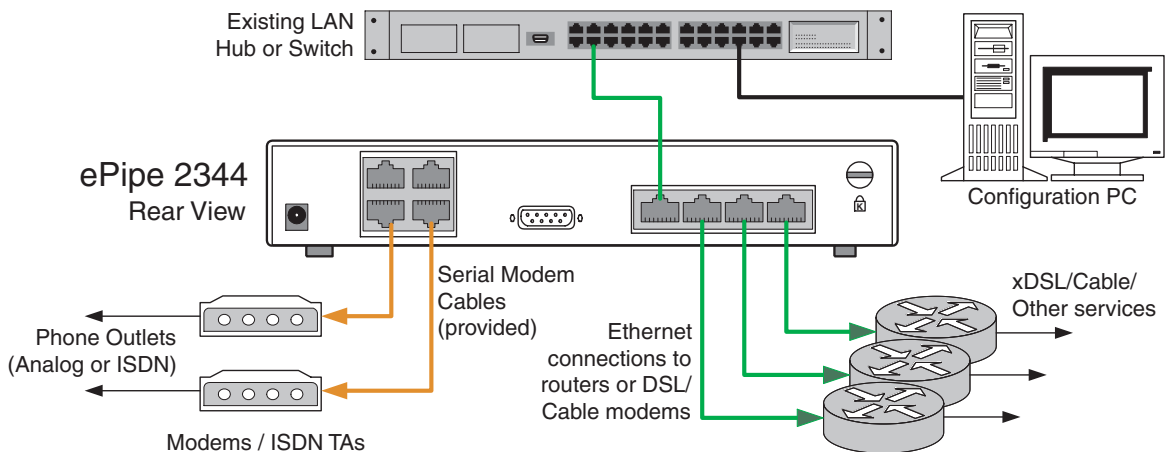

Figure 3 - Connecting WAN devices to the ePipe 2344

④ Step 4:   Ethernet 1 Setup

Once the ePipe 2344 is connected to your LAN and any external WAN devices, you are ready to proceed with configuring Ethernet 1.

To configure the ePipe 2344, the Configuration PC is required to use a web browser to access the ePipe 2344, which requires the Configuration PC to be able to talk to the IP address of the ePipe 2344.

NOTE: The ePipe 2344 has a default or pre-configured IP address. The default IP address and subnet mask are:

IP Address	Subnet Mask
192.168.111.111	255.255.255.0

If this address is acceptable, you may proceed to step 5. If this address does not match your current IP network design, follow the steps below to change the IP address of the ePipe 2344.

You will need to know the new IP address and subnet mask of the ePipe 2344. The IP address should be allocated from the range of IP addresses on your network and must be unique on this network.

1. Connect a COM port (in-built serial port) on the Configuration PC to the ePipe console port using the supplied black DB9-DB9 console cable.


Figure 4 - Starting HyperTerminal
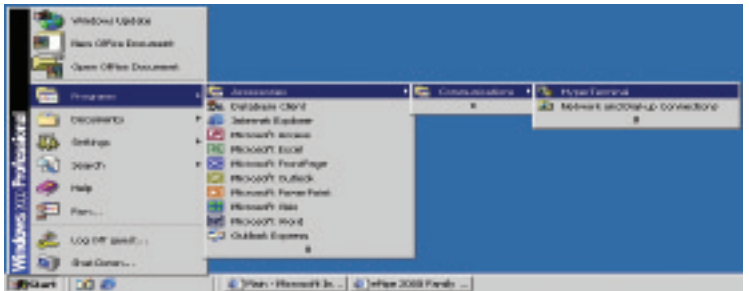
2. On the Configuration PC, start HyperTerminal (via the Start > Programs > Accessories > Communications menu). Refer to Figure 4.

3. HyperTerminal will start and ask for the name of a 'New Connection'. Type a name and click OK.

4. In the 'Connect using' drop down menu, select the COM port that you connected to the ePipe 2344 in step 1, then click OK. Refer to Figure 5.

Figure 5 - Selecting the COM port

5. Set the port settings to 9600 bits per second, 8 data bits, parity none, 1 stop bit and software (XON/XOFF) flow control. Click OK when done. Refer to Figure 6.

Figure 6 - COM port settings
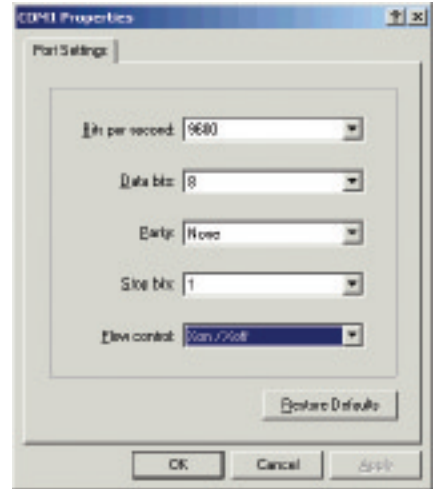
6. You should now be connected to the ePipe 2344's console port.

7. Now, power up the ePipe 2344 by inserting the power supply plug into the power socket at the rear bottom left of the unit. If the unit has already been powered up, simply remove and re-insert the power supply plug into the ePipe 2344. Refer to Figure 7.

8. In HyperTerminal you will see some power-on messages. To change the IP address of the ePipe 2344, press the ENTER key (several times if necessary) until you see a login prompt.
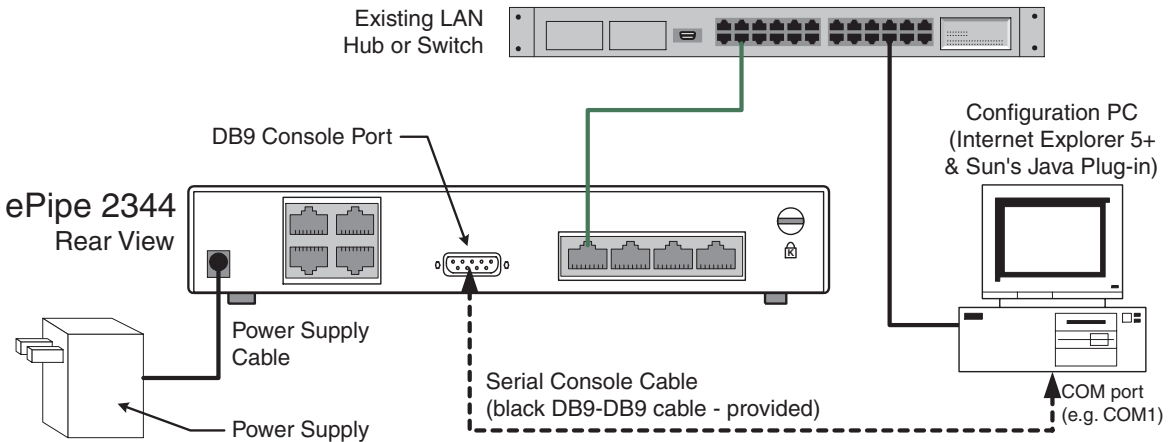

Figure 7 - Connecting the console cable and power supply

9. Login with the user name 'root' with password 'system'. This is the administrative user and its default password.

10. You will now be prompted to change the IP address and subnet mask of the ePipe 2344. Simply type in the details when prompted and press the ENTER key. Once the change has been made, the ePipe 2344 will reboot.

This completes changing the IP address of Ethernet 1.

5 Step 5: Preparing the Configuration PC

Configuration of the ePipe 2344 is achieved by using a web browser to access the Multilink IP Manager. The Multilink IP Manager is the user interface of the ePipe 2344.

The ML-IP Manager <u>requires</u> the Java™ Plug-in (or Java™ Runtime Environment) to be installed for use with Microsoft Internet Explorer. At the time of writing, the latest version of the Java™ Plug-in was version 1.4.0. This version is included on the ePipe ML-IP Software and Documentation CD.

To install the Java™ Plug-in, follow the steps below:

1. Insert the ePipe ML-IP Family Software and Documentation CD into the CD drive of the Configuration PC.

2. Select 'Run' from the 'Start' menu and click Browse.

3. Navigate to the CD drive and then to the JRE directory. Select one of the following files and click Open.

Description	File Name
Java™ 2 Runtime Environment - Windows version - US English only	j2re-1_4_0-win.exe *
Java™ 2 Runtime Environment - Windows version - All languages (including English)	j2re-1_4_0-win-i.exe *

*   File names are for version 1.4.0. If the CD contains a later version the file names will change accordingly.

4. Click OK to execute the Java™ Plug-in installer. Follow the prompts to install the Java™ Plug-in.

! **NOTE**: The latest version of the Java™ Plug-in can also be downloaded from the Sun Microsystems Java™ web site (http://java.sun.com/getjava/).

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6 Step 6: Configuring the ePipe 2344

You are now ready to configure the ePipe 2344 to connect to public networks (e.g. the Internet) and to configure ML-IP tunnels between ePipes across these networks.

To start configuring the ePipe 2344, follow the steps below:

1. On the Configuration PC, start Microsoft Internet Explorer (version 5 or later) and browse to the IP address of the ePipe. [Refer to the IP address used in section 3 above.] The default IP address is 192.168.111.111. Refer to Figure 8.

Figure 8 - Enter the ePipe 2344's IP address

2. The browser will show Java™ classes loading followed by a login prompt. Login with user name 'root' and password 'system'. Click Yes when done. Refer to Figure 9.

Figure 9 - ML-IP Manager login prompt

3. You will now see the Multilink IP Manager. You will be prompted to change the default password of the 'root' user to prevent unwanted access. Please ensure this password is recorded in a safe place.

> **!** **NOTE**: If the 'root' password is lost, no further access to the ePipe 2344 will be possible and the unit will need to be reset to factory defaults.

4. You are now ready to proceed with configuring the ePipe 2344. Start with configuring Network Connections, followed by any ML-IP tunnels.

Refer to the ePipe 2344 ML-IP Gateway User Guide for more information on how to configure the ePipe 2344.

Troubleshooting

Should you experience any difficulty with your ePipe, you may want to recheck previous steps in this Getting Started Guide to ensure correct installation. Consult the ePipe documentation for more information on troubleshooting configuration, network or hardware problems.

Documentation

All documentation and software for the ePipe 2344 are included on the ePipe ML-IP Family Software & Documentation CD and are also available from the ePipe web site at http://www.ml-ip.com/

Warranty / Registration

ePipe is offering free telephone support for the term of the ePipe 2344's three year limited warranty by completing the on-line registration available from the ePipe web site at http://www.ml-ip.com/, or by mailing the completed ePipe Warranty Registration Details form to the nearest ePipe office (see back of this Getting Started guide) within 30 days of purchase. Unregistered users may access our Technical Support Team by email only. Registered customers will also receive the latest information on ePipe's leading-edge product developments.

The Americas (USA)
Tel: +1 1800 347-7722

Asia Pacific (Australia)
Tel: 1800 037 473 (from within Australia)
Tel: +61 7 3270 4275 (outside Australia)

World Wide Web
http://www.ml-ip.com/epipe/

Email
General: info@ml-ip.com
Support: support@ml-ip.com