

**D-Link<sup>®</sup>**

***DI-304***

***ISDN Router  
Quick Installation Guide***

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Printed In Taiwan



RECYCLABLE

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## Introduction

This Quick Installation Guide gives step-by-step instructions for setting up the D-Link DI-304 ISDN routers. The model you have purchased may appear slightly different from those shown in the illustrations. Examples in this manual are based on ISDN routers. For more detailed information about the ISDN router, its components, making network connections and technical specifications, please refer to the User's Guide included with your router.

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## Unpacking

Open the shipping cartons of your Internet server and carefully unpacks the contents. The carton should contain the following items:

- ◆ One ISDN Router device
- ◆ One AC power adapter, suitable for your areas electrical power connections
- ◆ One unshielded twisted-pair (UTP) cable.
- ◆ One unshielded twisted-pair (ISDN) cable.
- ◆ Rubber Feet
- ◆ *User's Guide*
- ◆ *CD-ROM*

Inspect the device and all accompanying items. If any item is damaged or missing, report the problem immediately to your dealer.

## Ordering Your ISDN Line

If you do not have an ISDN line installed already, we suggest that you order it from your telephone company as soon as possible to avoid the long waiting period common when ordering a new line. Use the information in this section to place the order. If you have already installed your ISDN line, you can check the following section to make sure that you can use all the features of your ISDN router.

1. Contact your local telephone company's ISDN Ordering Center.
2. Make sure DSS1 switches are available since these are the only switch types currently supported by the ISDN router.
3. When the telephone company installs your ISDN line, be sure to obtain the following information:
  - ◆ ISDN switch type.
  - ◆ ISDN telephone number(s).

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## The ISDN router Front Panel

Names and descriptions of your router's front panel LEDs are given below:



**POWER**— Comes on as soon as you connect the router to the power adapter and plug the power adapter into a suitable AC outlet.

**STATUS**— Should be blinking if the router is functioning properly.

**ISDN – LINK**— Indicates that the router has an ISDN line connected to the ISDN interface and it has been successfully initialized.

*Note:* On some NT1 boxes, the LINK indicator will go off when the ISDN line has been idle for a while. When the router is dialing or answering a call, it should be on again.

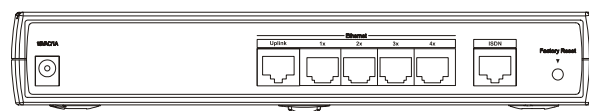
**ISDN – B1 and B2**— On if there is an active ISDN session on that channel or if that channel is making or receiving a call.

**LINK/ACT**— 1 through 4. These indicators light up when a port is connected to a powered-on Ethernet/Fast Ethernet station. The LEDs blink when information is transmitted or received on a port.

**100/10M – 1 through 4** These indicators light up when a port is operating at 100Mbps. Otherwise, if this indicator is dark *and* the corresponding **LINK** indicator is lit, then the port is operating at 10Mbps.

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## The ISDN router Rear Panel



**POWER** — This socket is an 18 volt, 750mA power input jack. If the power adapter included with the router has been lost or misplaced, please ensure that the replacement adapter meets both the voltage and amperage requirements.

**ETHERNET** – The Ethernet ports function as a normal, dual speed NWay Ethernet switch.

**Uplink** – This port is used to connect the router to another switch or hub using a straight-through twisted-pair cable. When the Uplink port is used, Port 1x is unavailable.

*Ports 1x to 4x* – These eight ports can be used to connect end-stations to the router using straight-through cables.

**ISDN** – This socket is used to connect the ISDN line to either an NT-1 or directly to the ISDN wall jack, depending on the type of service delivered by your phone company.

## Installation and Initial Configuration

### Step 1 - Connecting an ISDN Line to the Router

Your phone company will provide an S/T interface into your home or office. Plug the ISDN line from the router directly into the ISDN wall socket provided by your phone company.

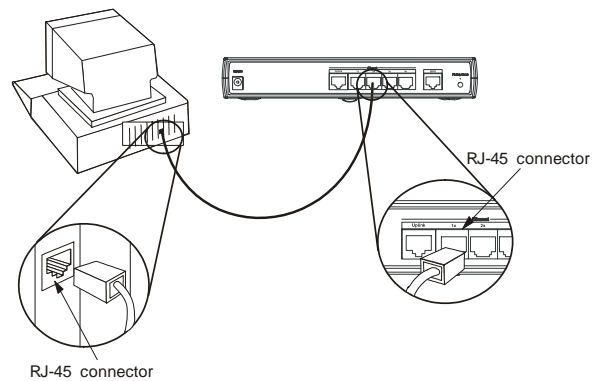
### Step 2 - Connecting Ethernet Cables to the Router

Your DI-304 has four ports for connecting 100BASE-TX Fast Ethernet devices to form a LAN. The jacks for ports 1 through 4 are wired to let you connect network end nodes (computers, servers, bridges, other routers, etc.) using standard “straight-through” EIA (Electronic Industries Association) Category 5 or higher twisted-pair cables. The jack for the sixth port is labeled **Uplink** and is wired to let you connect to another 10Mbps or 10/100Mbps Ethernet or hub or Switch using a straight-through cable, or an end node using a cross-wired cable.

Please refer to the following chart when deciding on the type of cable necessary for a given connection:

DEVICE	PORT USED	DEVICE BEING CONNECTED	PORT TYPE	CABLE TO USE
Router	Normal	Hub or	Normal	Crossover (X)
		Switch	Uplink	Straight-Through (II)
		Server (or PC)		Straight-Through (II)
	Uplink	Hub or	Normal	Straight-Through (II)
		Switch	Uplink	Crossover (X)
		Server (or PC)		Crossover (X)

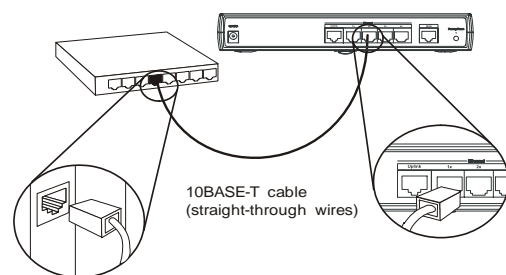
The figure below shows how to make an Ethernet connection between the router and a network end node.



### Important Notes on Ethernet Connections

Observe the following rules when connecting devices with twisted-pair Ethernet cables:

- ◆ For both end-node and uplink connections, use only EIA Category 5 or higher-grade twisted-pair data cables with RJ-45 plugs. In almost all cases, only standard straight-through cables are needed.
- ◆ Make sure no cable is more than 100 meters (328 feet) long.
- ◆ When uplinking two hubs together with a straight-through cable, use an uplink-type jack at one end, and an end-node-type jack at the other.
- ◆ If uplinking more than two hubs together, observe the 5-4-3 rule: no signal, in order to go from one end node to another, must ever pass through more than five twisted-pair cables, four repeaters (that is, hubs), and three uplink cables. This is the maximum signal path in twisted-pair Ethernet. Also be sure never to allow a signal loop to form.



Note that you can connect an end node through the Uplink jack, but to do so you must use a cross-wired cable or cable converter.

### Step 3 - Powering Up Devices for Initial Configuration

Plug in the included 18V AC, 1000 mA power adapter into the power jack on the router's rear panel.

You should have now connected the ISDN phone line, one or more Ethernet cables, and the power adapter.

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At this point in the installation process you can now power up the console computer, and then power up the router.

### ***Step 4 - Initial Configuration of the Router***

You can configure your router using the supplied Configuration program and Java-capable World Wide Web browser . The Configuration program requires a Windows machine running a Java-capable World Wide Web browser.

### ***Step 5 - Plugging in All Devices***

You can now plug in and power on all other devices connected to the router.

The router is now able to use the LAN ports.

The router must be further configured to get the built-in ISDN modem to function properly, to perform other routing functions, and to manage your IP network. This can now be done by using the Java-capable World Wide Web browser.

For more information about configuring or managing the router, please refer to the *User's Guide*.

### ***Additional Information***

Additional help is available online at <http://www.dlink.com>, or through our offices listed at the back of the User's Guide.

## Technical Support

You can find software updates and user documentation on the D-Link website.

D-Link provides free technical support for customers within the United States and within Canada for the duration of the warranty period on this product.

U.S. and Canadian customers can contact D-Link technical support through our website, or by phone.

### **Tech Support for customers within the United States:**

#### ***D-Link Technical Support over the Telephone:***

(877) 453-5465

24 hours a day, seven days a week

#### ***D-Link Technical Support over the Internet:***

<http://support.dlink.com>

[email:support@dlink.com](mailto:support@dlink.com)

### **Tech Support for customers within Canada:**

#### ***D-Link Technical Support over the Telephone:***

(800) 361-5265

Monday to Friday 7:30am to 12:00am EST

#### ***D-Link Technical Support over the Internet:***

<http://support.dlink.ca>

[email:support@dlink.ca](mailto:support@dlink.ca)

### **Tech Support for customers within the United Kingdom & Ireland:**

#### ***D-Link UK & Ireland Technical Support over the Telephone:***

44 (0)845 612 0003 (United Kingdom)

+353 (0)12 421 061 (Ireland)

Monday to Friday 8:00 am to 10:00 pm

#### ***D-Link Technical Support over the Internet:***

<http://www.dlink.co.uk>