D-Link ®

DLB-1200

Network Load Balancer

User Manual

Table of Contents

FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this user's guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CE Mark Warning:

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Warnung!

Dies ist ein Produkt der Klasse A. Im Wohnbereich kann dieses Produkt Funkstoerungen verursachen. In diesem Fall kann vom Benutzer verlangt werden, angemessene Massnahmen zu ergreifen.

Precaución!

Este es un producto de Clase A. En un entorno doméstico, puede causar interferencias de radio, en cuyo case, puede requerirse al usuario para que adopte las medidas adecuadas.

Attention!

Ceci est un produit de classe A. Dans un environnement domestique, ce produit pourrait causer des interférences radio, auquel cas l`utilisateur devrait prendre les mesures adéquates.

Attenzione!

Il presente prodotto appartiene alla classe A. Se utilizzato in ambiente domestico il prodotto può causare interferenze radio, nel cui caso è possibile che l`utente debba assumere provvedimenti adeguati.

1、INTRODUCTION

1-1、Product Overview

Thank you for using DLB-1200. We have designed a simple installing process and WEB interface; let you enjoy easily the best network environment. By several ISP lines linking outside with DLB-1200, it either can construct a more reliable multi-line network environment or avoid losing due to ISP or component problem. Besides, DLB-1200 also can integrate all bandwidth of WAN linked outside to raise highly usage efficiency of enterprises' network. This manual provides the necessary information for DLB-1200 hardware device, software setting and configuration parameters.

1-2、Unpacking

Open the shipping carton of DLB-1200, and this carton should contain the following item:

- **DLB-1200**
- **DLB-1200 User Manual**
- **DLB-1200 Quick Installation Guide**
- **Power adapter（5V/3A）RJ-45 Cable×3**
- **Console Cable**

1-3、Identifying External Components

1-3-a、Front Panel

- **Power Indicator**

♦ **Ethernet Indicator**

♦ **WAN 1 Indicator**

♦ **WAN 2 Indicator**

The power indicator is keeping bright while DLB-1200 is power on. The indicators order from left to right be Ethernet, WAN 1 and WAN 2, every indicator has two LED lights. When you plug the cable end into the any connector port, the upper light will light up to notify you that a link is detected on the internal interface. The lower light will be sparkling while data transmission.

Power light	Green	System ready
	Sparkling	System staring
Ethernet light	Green	On line
	Yellow	Data transmission
WAN 1 light	Green	On line
	Yellow	Data transmission
WAN 2 light	Green	On line
	Yellow	Data transmission

1-3-b、Rear Panel

♦ **WAN 1 External Port**

♦ **WAN 2 External Port**

♦ **Ethernet Port**

♦ **DC Power Inlet**

♦ **Console Port**

WAN 1 External Port：

Connect the primary Broadband Modem here.

WAN 2 External Port：

Connect the second Broadband Modem here, if available.

Ethernet Port：

Connect the PC, Hub or switch to this port. Both 10Base T and 100Base T connections can be used simultaneously.

DC Power Inlet：

Connect the supplied power adapter here.

Console Port：

If you need to configure the admin password or user name, please connect one PC to this port and change above items with the terminal linking applications of the PC.

1-4、Specification

- ♦ **CPU：NS Geode GX1-300MHz**
- ♦ **System：32MB SD Memory**
- ♦ **WAN：2 Realtek RTL8139C 10/100 Ethernet controllers**
- ♦ **Ethernet：One Realtek RTL8139C 10/100 Ethernet controller**
- ♦ **Power：5V/3A**

1-5、Key Features
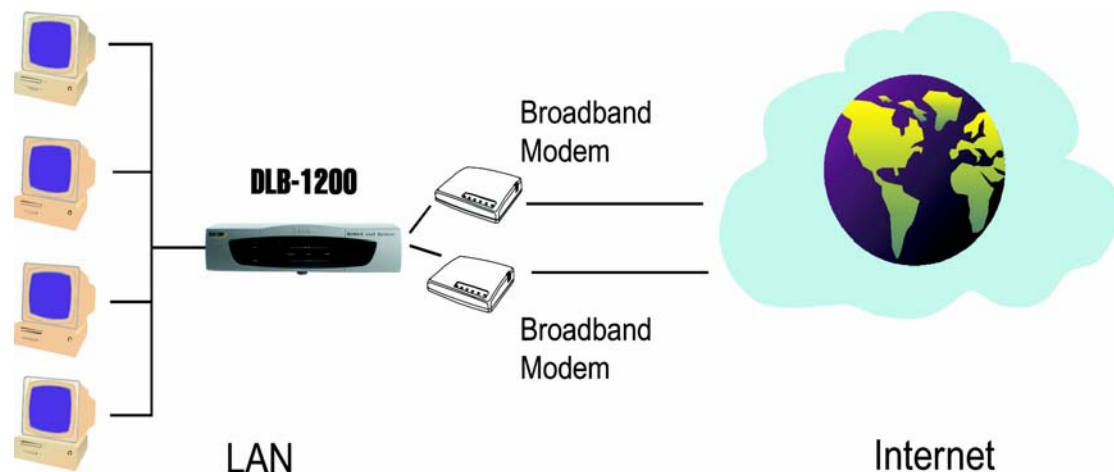
1-5-a、*Supports Two XDSL/Leased Line/cable modem (DHCP)*

DLB-1200 can integrate two of WAN linked outside and guides to the enterprise's intranet. It increases overall network efficiency to make two WAN to back up each other with weighted load balancing.

1-5-b、NAT、DHCP

NAT（Network Address Translation） provides the function, IP address translation, separates intranet and outside network safely. DHCP server can send out TCP/IP configuration for clients and display real-time information of PC client's IP address.

1-5-c、Console management support

You can configure the admin password or user name by connecting one PC to this port and change above user name and password with the terminal linking applications of the PC.

1-5-d、PPPoE support

DLB-1200 builds in PPPoE dialing up feature; your computer system does not extra dialing up program for Internet access.

1-5-e、Weighted Load Balance support

By Weighted Load Balancing of DLB-1200, you can set proper load on each line according bandwidth to increase much usage efficiency of enterprises' network, and then there's no more network delay because low-bandwidth line load higher network flow swiftly. High-bandwidth line will also bring into full play.

1-5-f、SNMP support

Supporting SNMP（Simple Network Management Protocol）, DLB-1200 can be a SNMP node on the network for administrator to collects information by other management platform.

1-5-g、Support Multi-session VPN (PPTP, IPSEC)

Multi-session VPN support lets users to link the enterprise's intranet safely through several remote VPN servers behind DLB-1200.

1-5-h、IP & Port Mapping (Multi-session DMZ support)

As the case may be, you can use IP or Port Mappings to achieve "DMZ" that allows users from Internet to access data on internal servers or PC.

1-5-i、WEB interface and remote management

With easy to use, simple configuration web interface, you can use DLB-1200 easily without any complicated steps or high-tone, professional knowledge of MIS（Management Information Service）. You can change the configuration at other PC from remote site as well.

1-5-j、DoS(Denial of Service) protesction

DLB-1200 build in firewall features with packet filtering and supported DoS（Denial of Service） protection. It protects all inside servers and PCs from outside malicious attack effectively.

2、INSTALLATION

2-1、Requirements

- ♦ **One or two DSL or Cable modems, each with an Internet Access account from ISP.**
- ♦ **Network cable. Use standard 10/100Base T network (UTP) cable with RJ45 connectors.**
- ♦ **TCP/IP network protocol must be installed on all PCs.**

2-2、Procedure

1、Ensure the DLB-1200 and DSL/Cable Modem are power OFF.

2、WAN port connection

Please use a standard UTP cable or the cable supplied with your DSL/Cable Modem to connect DLB-1200 and DSL/Cable Modem. If you have only one Broadband modem, connect it to the "WAN 1 External Port".

If your WAN (DSL/Cable Modem) has been already connected to internal Firewall or Router, please connect the DLB-1200 to the Firewall or Router.

3、Ethernet port connection

Use 10Base T and 100Base T connections to connect your admin PC with the internal Switch or Hub that connected to the Ethernet Port on DLB-1200. If you want directly connect the DLB-1200 to this PC, you have to use a Cross Over Line as connection.

4、Power up

Power the DSL/Cable modem or modems.
Connect the supplied power adapter to the DLB-1200 and power up.

5、Check the LED

The Power Indicator and WAN 1/2 Indicator should be ON, if the corresponding WAN External Port was connected to a DSL/Cable Modem、Firewall or a Router.

The corresponding Ethernet Indicator should be ON while a PC connected to the Ethernet Port. If any error condition shows up, the Error Indicator stays ON.

6、Configure the DLB-1200's IP Address on your Ethernet

After all connections have been set, please set up the IP of the PC connected DLB-1200 as 192.168.0.X/ 255.255.255.0, then reboot the PC.

1、 On administrator's PC, please select Star Menu - Control Panel - Network.
2、 Please click "properties" and choose the TCP/IP component of this PC's NIC(Network Interface Card).
3、 Please set up the PC's IP as 192.168.0.X/ 255.255.255.0, the "X" range could be 2~254. If you want directly connect the DLB-1200 to this PC, you have to use a Cross Over Line as connection.

Note：Administrator

Administrator means the manager who disposes the DLB-1200 in the Local Area Network (Ethernet), and can proceed following configuration by DLB-1200.

♦ **Administrator can set up the configuration of Ethernet, WAN, Server, DMZ and DHCP on the WEB management interface of DLB-1200 for maintaining normal network function and internal network security.**

♦ **Administrator can modify the Load Balancing mode according every unit or every segment's need. And also apply the bandwidth policy of company.**

2-3、Configure PCs on your LAN

After DLB-1200 installation, for each PC, the following may need to be configured:

♦ **TCP/IP network setting**
♦ **Internet Access configuration**

2-3-a、*TCP/IP network setting*

♦ **If your PC uses the default Windows 95/98/ME/2000/XP setting, no changes need to be made. Just star/restart your PC.**

♦ **DLB-1200 will act as a DHCP Server, automatically provide a suitable IP Address (and related information) to each PC after the PC boots up.**

♦ **For all non-Server version of Window, the default TCP/IP setting is to act as a DHCP client. In Windows, this called Obtain an IP address automatically.**
♦ **If using fixed IP Address on your LAN, or you want to check your TCP/IP setting, refer to Appendix 1 - Windows TCP/IP Setup.**

2-3-b、*Internet Access Configuration*

To configure your PCs to use the DLB-1200 for Internet access, follow this procedure.

For Windows 9x/2000

1、 Please select Star Menu - Control Panel - Internet Option.
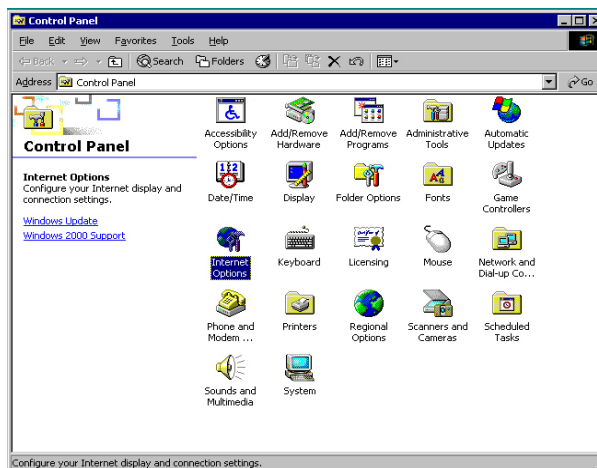
2、 Select the Connection tab, and click the Setup button.

3、 Select "I want to set up my Internet connection manually, or I want to connect through a Local Area Network (LAN)" and click Next.
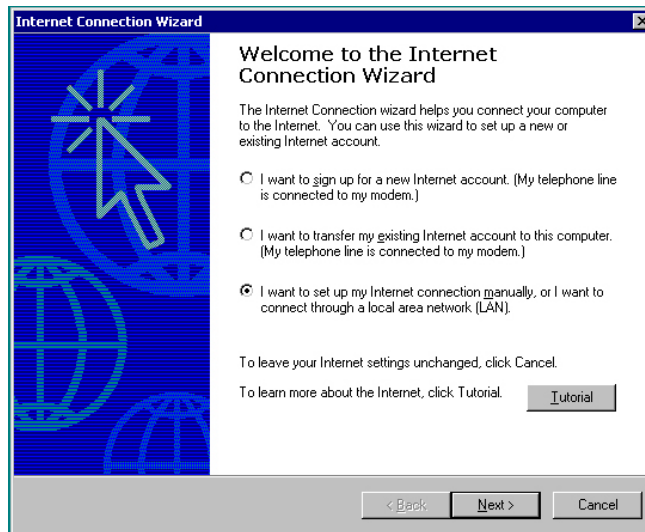
4、 Select "I connect through a Local Area Network (LAN)" and click Next.
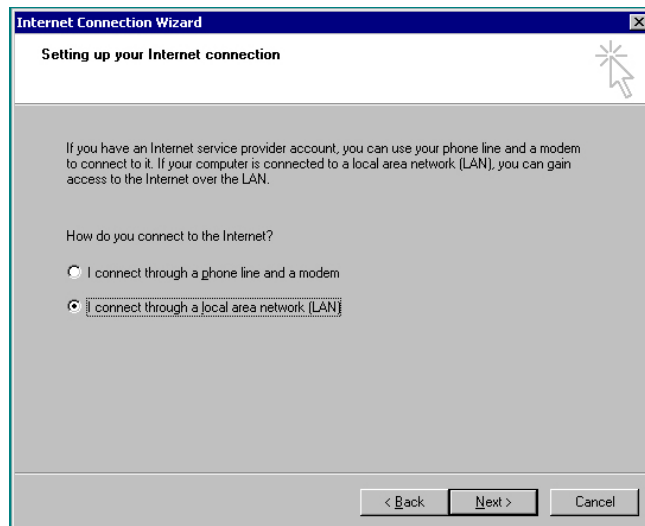
5、 Ensure all of the boxes on the following Local Area Network Internet Configuration screen are **unchecked**.

6、 Check the "No" option when promoted "Do you want to set up an Internet mail account now?"

7、 Click Finish to close the Internet Connection Wizard. Setup is now completed.

For Windows XP

1. Please select Star Menu - Control Panel - Network and Internet Connection.

2. Select Set up or change your Internet Connection.

3. When Internet Properties Dialogue Box pops up, click "Setup" button and click "Next" on the "New Connection Wizard" screen.

4. Select "Connect to the Internet" and click Next.

5. Select "Set up my connection manually" and click Next.

6. Check "Connect using a broadband connection this always on " and click Next.

7. Click Finish to close the New Connection Wizard to complete the setup.

3、NETWORK CONFIGURATION

For using further applications of DLB-1200, you have to set up related configurations by following steps after reboot the PC.

1、**Open admin PC's browser. (Ex: Microsoft Internet Explore)**

2、**Enter "192.168.0.1" in the Address or Location box.**

3、**Please enter "123456" in the "Password" column.**

NOTE：Screen resolution recommend - 800X600.

When entering the WEB management interface of DLB-1200, you'll find the following main items on the screen.
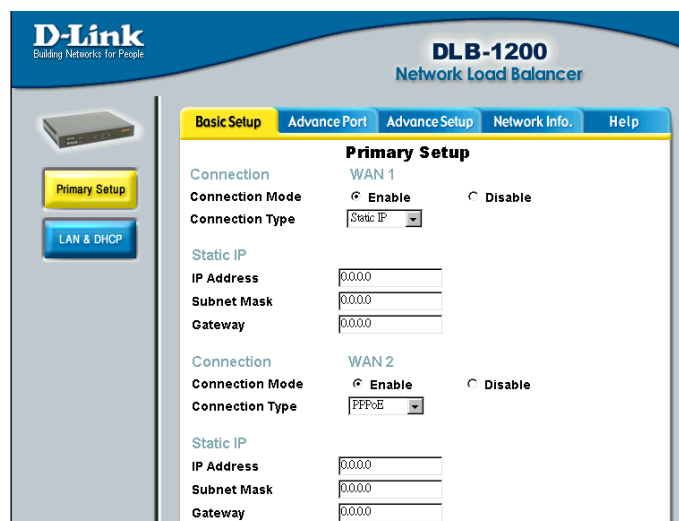
♦ **Basic Setup**

Includes "Primary Setup" and "LAN & DHCP" configuration.

♦ **Advance Port**

This item is used for set up the load balancing mode, you can allocate the ratio of load balancing for two WAN. Besides, you can open the "RIP" to allow DLB-1200 exchanging "In Packets" data with other routers.

♦ **Advance Setup**

This item includes "Custom Virtual Server", "SNMP", "Advance Feature", "QoS" and "Firewall". Custom Virtual Server allows you making Virtual Server to separate internal and external network. Activated SNMP to let DLB1200 to be a node of you network for other network management platform to monitor its status. Advanced Feature provides you System setting to export or import and Software upgrade. QoS and Firewall applications can protect the network

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security and provide basic bandwidth management for your network.

♦ **Network Info**

The item can monitor the LAN and WAN link status of DLB1200. You can also change the admin Password from this item.

♦ **Help**

If you have any problem while operating or configuring, please click this button to read more online instructions.

3-1、Basic Setup

3-1-a、*Primary Setup*

When you click the "Basic Setup" tab, you'll see the "Primary Setup" menu. Before you set up the configuration, please pay attention the following notices.

♦ **Complete the configuration of WAN 1 and/or WAN 2 is recommended.**

1、Connection Mode

Enable

Select this if you have connected a broadband modem to WAN 1 or WAN 2 External Port.

Disable

Select this if there is no broadband connection to WAN 1 or WAN 2 External Port.

2、Connection Type

"Connection Type" is the way that your WAN connection to the Internet. Please check the following data such as Connection Type, Static IP Address, Subnet Mask, etc, and select the appropriate option.

Static IP

1、 Select this if your ISP has provided a Fixed or Static IP address. Then enter the data into the Address Info fields.

2、 There're several columns such as IP Address, Subnet Mask, Gateway, etc. Please check these above data that ISP provided, and enter the data in each column under the "Static IP" item. Here is an example under the following legend.

- ♦ **IP Address：192.168.9.6**
- ♦ **Subnet Mask：255.255.255.0**
- ♦ **Gateway：192.168.9.1**

PPPoE

If your Connection Type is PPPoE mode, the ISP might provide you related software. DLB-1200 has build in PPPoE dialing up software, so you can just enter the User Name and Password in following fields.

- ♦ **User Name：Please enter the user name here.**
- ♦ **Password：Please enter the password here.**

NOTE：After you entered above essential data in this page/item, you have to click the "Save" button on right below of the screen.

Dynamic IP

1、 Please select this if your ISP provide you IP address via DHCP server. Click "Get IP" to obtain an IP Address automatically.

2、 If you click the "DHCP Status" button, it'll show the DHCP function and situation of IP allotment.

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NOTE：After you entered above essential data in this page/item, you have to click the "Save" button on right below of the screen.

3-1-b、LAN & DHCP

1、LAN IP Configuration

This item can let you set up the different IP Address and Subnet Mask of DLB-1200 in your internal network/LAN, and makes DLB-1200 a Gateway for other PCs connecting to the Internet even if other PCs are separately in different LAN segments. Please modify the data by following steps and click the "Add" button to add a new LAN IP Address in the "LAN IP List".

IP Address

You can enter an unused IP Address within the range used by one segment of your LAN, and then all PCs of this segment will link to external network through DLB-1200. After setting up new IP and Subnet Mask, please click "Add" button to add a new IP Address in the "LAN IP List". After all network configuration including settings in following chapters, you have to reboot DLB-1200 to activate new LAN IP Address.

Subnet Mask

For example, the value "255.255.255.0" is standard for small (class "C") network. For other network, use the Subnet Mask for the LAN segment to which the DLB-1200 is attached (the same value as the PCs on that LAN segment).

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2、LAN IP List

This table shows the current LAN IP Addresses you configured. You can click the "Delete" button to delete an LAN IP Address configuration.

3、DHCP Server Configuration

DLB-1200 can provide the DHCP service and allocate IP Addresses to internal PCs. Please open the DHCP server as required, and inter the IP Address range or other related configuration.

Enable

If Enable, the DLB-1200 will allocate IP Addresses to PCs (DHCP clients) on your LAN when these PCs start up. The default and recommended value is "Enable".

Disable

If you are already using another DHCP Server, the DHCP Server of DLB1200 setting must be Disable, and existing DHCP server must be set to provide the IP Address of the DLB-1200 (ex. 192.168.0.1) as the Default Gateway.

After DLB-1200 has been set as the Default Gateway, please also verify your setting in DNS Server for successful domain name resolution. Maybe change IP of DNS Server in the same subnet as the DLB-1200 (ex. 192.168.0.x).

4、DHCP IP Address Range

If you're using the DLB-1200 to be the DHCP Server, please enter the related data in following columns after clicking "Enable".

Offered IP Range

You can set the values used by the DHCP server when allocating IP Address to DHCP client. The range also determines the number of DHCP client supported.

DNS

Please enter the Default IP Address of the DNS Server here.

Default Lease Time

Please set up the IP Default lease time. (Unit: second)

Max Lease Time

Please set up the IP Max lease time. (Unit: second)

Subnet mask

Please enter the Default Subnet mask here.

Gateway IP

Please enter the Default Gateway IP Address here.

5、DHCP Information List

All DHCP configurations you set up will show on this list.

6、Mac - IP Mapped

The DHCP Server will keep allotting IP Address to internal PCs if you wish to reserve a particular (LAN) IP address for a particular PC on your LAN. This item allows the PC to use DHCP while gaining the benefits of a fixed IP Address. The PC's IP Address will never change, so it might provide service to other people or computers.
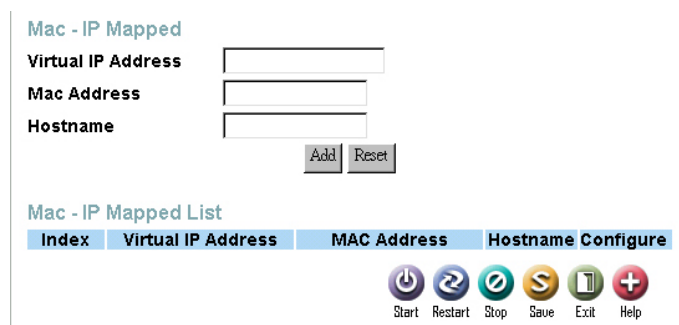
Virtual IP Address

Enter the Virtual IP address you wish to reserve, if the setting above is "Enable". Otherwise,

ignore this field.

Mac Address

Also called Physical Address or Network Adapter Address. Enter the MAC address of this host.

Host Name

Please give a new name to the MAC-IP Mapping entry.

7、Mac - IP Mapped List

This table shows the current Mac-IP Mapping. You can either click the "Delete" button to delete old mapping or click the "Add" button to add a new mapping in the "Mac - IP Mapping List".

NOTE：After you entered above essential data in this page/item, you have to click the "Save" button on right below of the screen.

3-2、Advance Port

3-2-a、Load Balance

You can integrate two lines (WAN1, WAN2) to provide more reliable service for all staff on your network. You can also set up these lines with different load ratio according to different mission and requirement; especially you have different speed WAN links.

1、Weight

You can assign the load ratio of two lines (WAN1, WAN2) to provide better service for all staff. For example, T1 Leased Line's (WAN1) bandwidth is three times faster than 512K ADSL line (WAN2). Then you can assign WAN1 load weight for 3 and WAN2 load weight for 1.

3-2-b、RIP I & RIP II

You can enable the "RIP I" or "RIP II" to allow DLB-1200 to receive RIP update from other routing devices like router or multilayer switch. If you want DLB-1200 to receive the routing update packets, please click "Enable". Otherwise, please click "Disable".
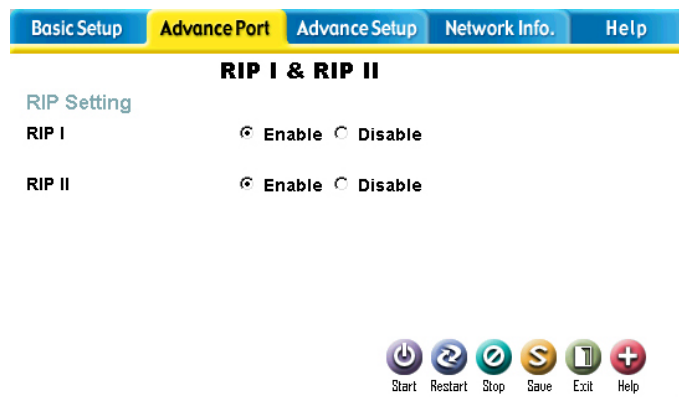
NOTE：After you entered above essential data in this page/item, you have to click the "Save" button on right below of the screen.

3-2-c、Bridge

1、Bridge Setting

If you hope that LAN can connect to WAN and pass through DLB-1200 without any NAT, DMZ, IP Mapping, please choose "Enable" then DLB1200 will act as a bridge. If you want to use

DLB-1200 as a router or firewall, etc, please choose "Disable" to shut this function.

3-3、Advance Setup

3-3-a、*Custom Virtual Servers*

If there're some PCs providing particular Internet service, the "Custom Virtual Servers" allow you make virtual server by virtual IP corresponding the external real IP. We called that "NAT" (Network Address Translation), for effectively separate internal and external network and ensure the securities of LAN.

1、IP Mapped

Virtual Server includes mapped IP and Port. IP Mapping can make one internal virtual IP corresponding one external real IP, then all service request to the external IP will be transmitted to the virtual IP you set.

External IP Address

Please enter an external real IP Address in this column.

Internal IP Address

Please enter an Internal virtual IP Address corresponding above IP Address in this column.

Button

There're 3 buttons in IP Mapped item and Port Mapped item. The function of these buttons will be described in following item.

♦ **Add**

You can click the "Add" button to add a new mapping in the following "IP Mapping List".

♦ **Delete**

You can click the "Delete" button to delete old mapping in above "Select Custom Server Name" column.

♦ **Reset**

You can use reset button to clear the IP you entered in above columns.

2、IP Mapped List

All mapping you set will show in the "IP Mapped List". You can either click the "Delete" button to delete existing mapping or click the "Add" button to add a new mapping in the "IP Mapped List".

3、Port Mapped

Port Mapping allows you to configure a corresponding IP and port mapping between outside IP address and internal IP address. Then Internet users might connect to the internal PC or server through the external IP address.

Internal IP Address

Please enter an Internal virtual IP Address in this column.

Internal Port

Please enter the Port Number range corresponding to the service you want to provide. (Ex: FTP Server, Mail Server, etc). If only one Port Number is needed, please enter same Port Number in both two columns. When outside user's request to the external IP and port number,

DLB1200 will translate the request to internal IP Address and Port Number. Please confirm the service ports your server provided are exactly the same as your configure on the DLB1200.

Type

Please choose the protocol type of the port mapped, like TCP or UDP.

External IP Address

Please enter an External IP Address corresponding above IP Address in this column.

External Port

Please enter the default Port Number range of Internet service that requested by outside user. If only a Port Number be needed, please enter same Port Number in following two columns. Some services might need more than single port number, please verify the service port before you configure the external port.

4、Port Mapped List

You can view the complete mapped settings on the "Port Mapped List". You can either click the "Delete" button to delete old mapping or click the "Add" button to add a new mapping in the "Port Mapping List".

NOTE：**After you entered above essential data in this page/item, you have to click the "Save" button on right below of the screen.**

3-3-b、SNMP

This section is only useful if you have SNMP (Simple Network Management Protocol) software on your PC. If you have SNMP software, you can use a standard MIB II format with the DLB-1200.
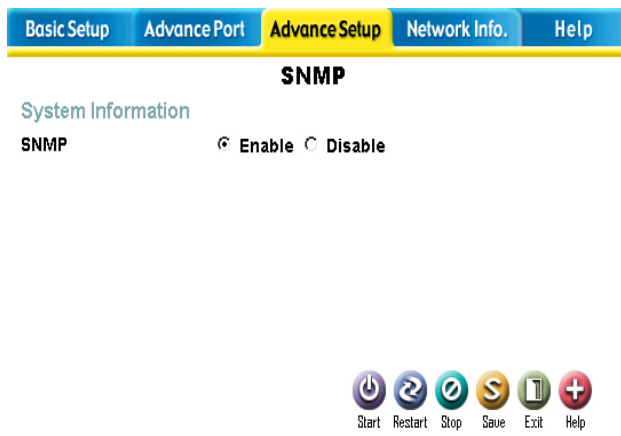
1、System Information

SNMP Enable

Clicking here to activate the SNMP function.

SNMP Disable

Clicking here to disable the SNMP function.

NOTE：After you entered above essential data in this page/item, you have to click the "Save" button on right below of the screen.

3-3-c、Advanced Feature

This item can let you make a backup of DLB-1200 configuration. When any unexpected hardware problem happened, you don't need to set up the configuration again. Besides, you can download the latest updating files in this item.
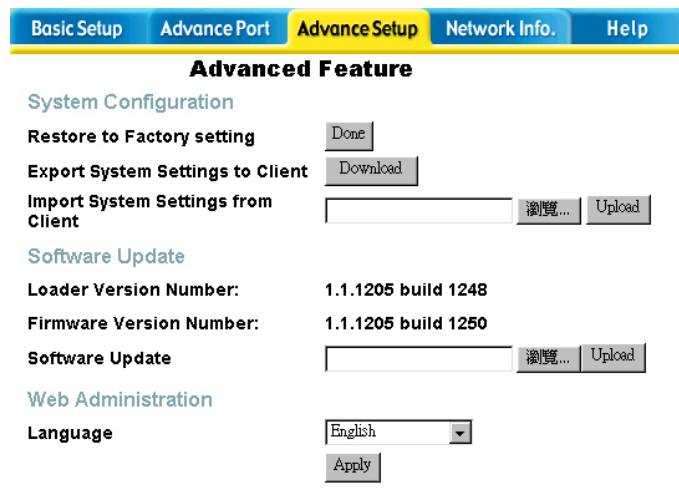
1、System Configuration

Restore to Factory setting

Please click the "Done" button to restore system to factory setting if you need it.

Click the "Done" button, it will show warning message first. After confirm this action, all current configurations will be cleared then restore to factory default setting.

Export System Setting to Client

Please click the "Download" button to download or to save your original DLB-1200 configuration as a backup.

Import System Setting to Client

Please click "Browse" button to find your configuration backup file, then click "Upload" button to import the configuration of DLB-1200 automatically.

2、Software Update

Loader Version Number

This column will show the Loader Version Number of DLB-1200.

Firmware Version Number

This column will show the Firmware Version Number of DLB-1200.

Software Update

Please click "Browse" button to find the latest updating files you downloaded, then click "Upload" button to upload new software version of DLB-1200 automatically.

3、Web Administration

Language

Please choose your language interface and click the button "Apply".

NOTE：After you entered above essential data in this page/item, you have to click the "Save" button on right below of the screen.

3-3-d、QoS

QoS (Quality of Service) function of DLB-1200, it can differentiate "Traffic Flow" in TCP/IP protocol to separate different Internet services. By QoS function, you can set up the configuration for giving higher priority and bandwidth to more important or urgent Internet services. Administrator has flexibility to control bandwidth usage among all network traffic.
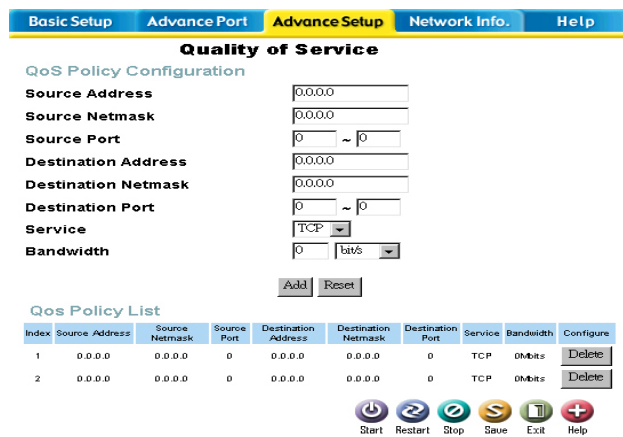
1. QoS Policy Configuration

Please enter Source/Destination IP Address of data-packets, Subnet mask, Port Number, etc in the following columns to plan your QoS Policy.

Source Address

Please enter the data-packets Source IP Address.

Source Netmask

Please enter the data-packets Source Subnet Mask.

Source Port

Please enter the data-packets Source Port Number.

Destination Address

Please enter the data-packets Destination IP Address.

Destination Netmask

Please enter the data-packets Destination Subnet Mask.

Destination Port

Please enter the data-packets Destination Port Number.

Service

Please choose the data-packet type, either TCP or UDP.

Bandwidth

Please enter the range of bandwidth that will be used by this policy. You can choose Bite, KB

or MB as Bandwidth Unit. However, you should adjust the configuration to match real link bandwidth to have exactly control.

2. QoS Policy List

All QoS Policy you set will show in the ""QoS Policy List". If you want delete one policy, just choose the policy first then click "Delete".

NOTE：After you entered above essential data in this page/item, you have to click the "Save" button on right below of the screen.

3-3-e、Firewall

Firewall function of DLB-1200, it provides some basic TCP/IP access control over your network. It allows administrator to manage the traffic flow in the network, block unwanted visit from Internet or deny the request to specific destination. On the other hand, we can accept some access from Internet or allow specific outgoing access as well.

1. Firewall Policy Configuration

Source Address

Please enter the data-packets Source IP Address.

Source Netmask

Please enter the data-packets Source Subnet Mask.

Source Port

Please enter the data-packets Source Port Number.

Destination Address

Please enter the data-packets Destination IP Address.

Destination Netmask

Please enter the data-packets Destination Subnet Mask.

Destination Port

Please enter the data-packets Destination Port Number.

Service

Please choose the data-packet type, either TCP or UDP.

Action

Please choose "DENY" to restrict illegal network access. The rest traffic is allowed by default.

2. Firewall Policy List

All Firewall Policy you set will show in the ""Firewall Policy List". If you want delete one policy, just click the policy, and then click "Delete".

NOTE：**After you entered above essential data in this page/item, you have to click the "Save" button on right below of the screen.**

3-4、Network Info

The Network Info can clearly and immediately let you see the current network situation and information, including WAN/LAN configuration and usage status, administrator user name and password, etc. You can change the user name and password in this item.

3-4-a、System Status

1. WAN Information

Connection Status

The column shows current status, either "Connected" or "Not connected".

Connection Type

The type of connection used - DHCP, Fixed IP, or PPPoE.

IP Address

It shows the IP address of the DLB-1200, as seen from Internet, which is allocated by the ISP (Internet Service Provider).

Subnet Mask

It's the Network Mask (Subnet Mask) for the IP Address above in this column.

Gateway

The column shows the Gateway IP Address of DLB-1200.

2. LAN Information

Primary IP Address/ Subnet Mask

It shows the LAN IP Address and Network Mask (Subnet Mask) of the DLB-1200.

DHCP Server

It shows the status of the DHCP Server function - either "Enabled" or "Disabled".

3. Device Information

Loader Version

This column shows the version of the Firmware Loader currently installed.

Firmware Version

This column shows the version of the Firmware currently installed.

3-4-b、WAN Status
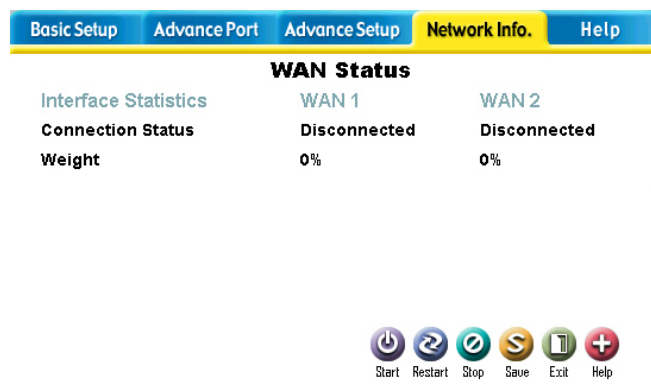
1. Interface Statistics

Connection Status

The column shows each WAN current status - either "Connected" or "Disconnected".

Weight

The column shows the loading rate of each WAN.

3-4-c、LAN Status
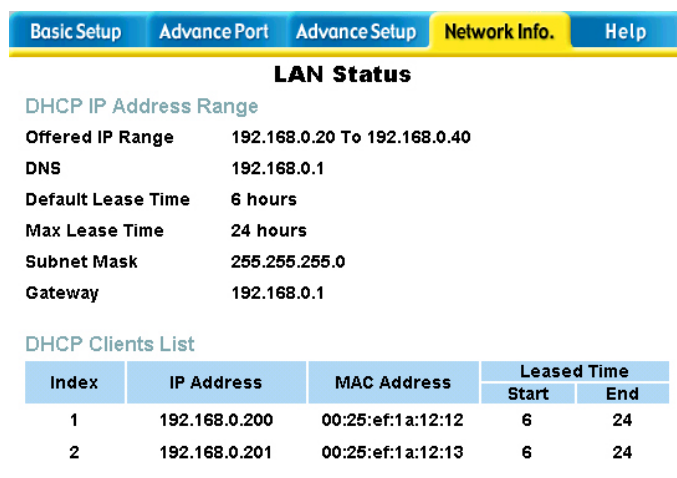
1. DHCP IP Address Range

Offered IP Range

The column shows values used by the DHCP server when allocating IP Address to DHCP client. The range also determines the number of DHCP client supported.

DNS

The column shows the IP Address of Default DNS Server.

Default Lease Time

The column shows the IP Default lease time. (Unit: second)

Max Lease Time

The column shows the IP Max lease time. (Unit: second)

Subnet mask

The column shows the Default Subnet mask here.

Gateway IP

The column shows the Default Gateway IP Address here.

2. DHCP Clients List

This column will show all related data of DHCP clients that were allocated IP Address by DLB-1200.
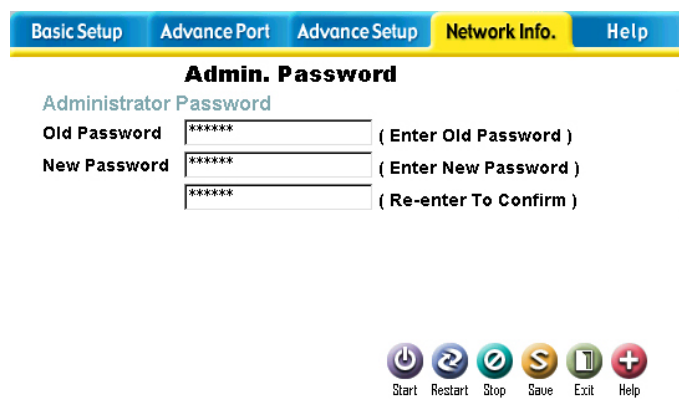
3. Mac - IP Mapped List

This table shows the current Mac-IP Mapping.

4. Routing Table

This item will show the Routing Table of DLB-1200.

3-4-d、Admin. Password

1. Administrator Password

Old Password
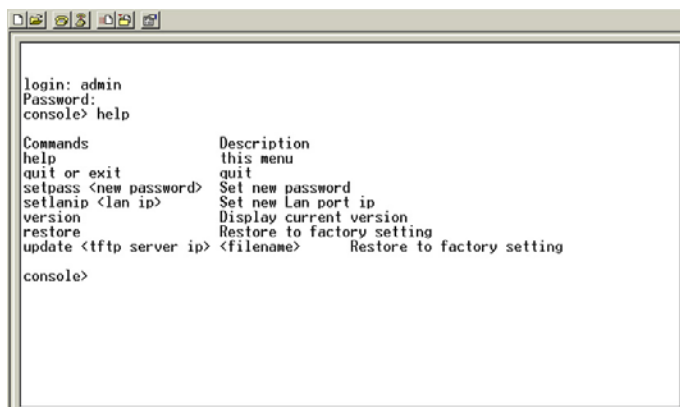
If you want to change the admin password, please enter the password you already set . If you did not ever change the default password, the Default Password is "123456".

New Password

After enter the old password in above column, please enter the new password in this column. Then re-enter it again to confirm the password is correct.

Note：Console Configuration

You can also connect DLB-1200 and PC by a Console cable and then use the terminal application to set up the password and LAN IP for WEB management. Besides, you can check DLB-1200's firmware version or update the latest firmware here.（**The console baud rate must be 9600, enter "admin" to login and the password is "123456"**）

```
login: admin
Password:
console> help

Commands          Description
help              this menu
quit or exit      quit
setpass <new password>  Set new password
setlanip <lan ip>       Set new Lan port ip
version           Display current version
restore           Restore to factory setting
update <tftp server ip> <filename>     Restore to factory setting

console>
```

♦ **Quit or exit**

If you want to log out from Console Configuration, please enter this command.

♦ **Setpass <xxxxxxxx>**

**If you want to change administrator's password, please enter this command.
Then enter the new password as you want.**

♦ **Setlanip <xxx.xxx.xxx.xxx>**

**If you want to change DLB-1200's IP Address, please enter this command and
set a new IP Address.**

♦ **Version**

Entering this command will show the Firmware Version.

♦ **Restore**

Entering this command will restore system to the original Configuration.

♦ **Update <tftp server ip> <filename>**

**If you want to update firmware, please enter this command, firmware resource
IP Address and firmware file name.**

3-5、Save Data & Activate

There're 6 tabs on the right below of the main page, and these tabs are used to star, restart or
logout DLB-1200, etc. Please notice that, you have to click the "Save" button after changing

configuration in each item page. After clicking "Save" button to save all configuration of DLB-1200, "Stop" button can be used to stop DLB-1200 function temperately. When you click the "Start" button to activate DLB-1200; it'll start to provide the services you previously set up.

Start Restart Stop Save Exit Help

3-5-a、Button Introduction

1、Start

When you changed and saved configuration in each item, DLB-1200 actually won't execute these modified configuration. You have to "Stop" DLB-1200 function by clicking "Stop" button first. "Start" button is used to activate all new configurations of DLB-1200 .

2、Restart

After all configurations were saved, you can also use "Restart" button to activate all new configurations of DLB-1200.

3、Stop

"Stop" button can stop all function of DLB-1200, and then you can use "Start" button to activate all new DLB-1200's configurations again. When you clicking this button, network will be disconnected immediately.

4、Save

When you changed configurations in each item, you have to use "Save" button to save new configurations of DLB-1200.

5、Exit

After saving and activating DLB-1200, you can click the "Logout" button or close the window to leave the DLB-1200 management interface.

6、Help

If you have any problem with configuration, please click this button to request more online help or instructions.

3-5-b、How to save data and activate DLB-1200

If you have changed DLB-1200's configurations and want DLB-1200 be activated, we recommend below procedures to activate new configurations and restart system function.

- ♦ **1、Click "Save" → Click "Restart"**
- ♦ **2、Click "Save" → Click "Stop" → Click "Start"**
- ♦ **3、Finally, click "Logout" to leave the DLB-1200 management interface.**

APPENDIX A

Windows TCP/IP Setup

If using the default DLB-1200 settings, and the default Windows 95/98/ME/2000 TCP/IP settings, no changes need to be made. By default, the DLB-1200 will act as a DHCP Server, automatically providing a suitable IP Address (and related information) to each PC after the PC boots up.

For all non-Server versions of Windows, the default TCP/IP setting is to act as a DHCP client. If you wish to check your TCP/IP settings, the procedure is described in the following sections.

Checking TCP/IP Settings - Windows 9x/ME

1、 Select Control Panel - Network and Dial-up Connections. You should see a screen like the following.
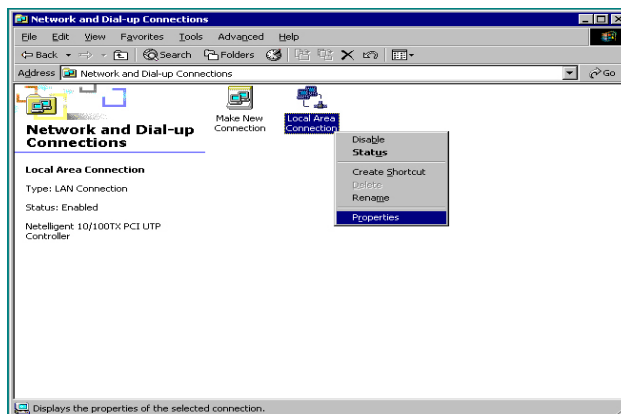
2、Select the TCP/IP protocol for your network card.
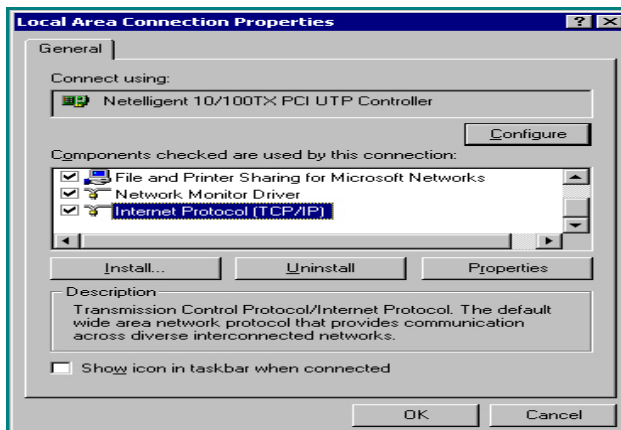
3、Click on the Properties button. You should then see a screen like the following

4、Ensure your TCP/IP settings are correct, as follows.

♦ **Using DHCP**

To use DHCP, select the radio button to obtain an IP Address automatically. This is the default Windows settings.

Restart your PC to ensure it obtains an IP Address from the DLB-1200.
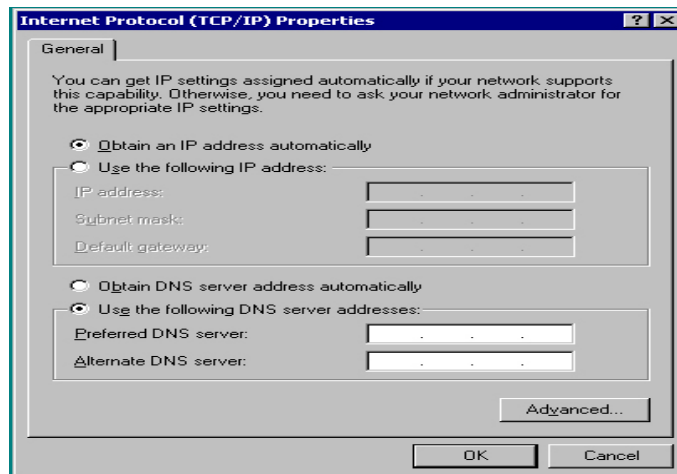
♦ **Using "Specify an IP Address"**

If your PC is already configured, check with your network administrator before making the following changes.

1、If the DNS Server fields are empty, select Use the following DNS server addresses, and enter the DNS address or addresses provided by your ISP, then click OK.

2、On the Gateway tab, enter the DLB-1200's IP address in the New Gateway field and click Add. (Your LAN administrator can advise you of the IP Address they assigned to the DLB-1200.)

Check TCP/IP Setting - Windows 2000

1、Select Control Panel - Network and Dial-up Connection, then click Properties.

2、Right click the Local Area Connection icon and select Properties.

3、Select the TCP/IP protocol for your network card.

4、Click on the Properties button.

5、Ensure your TCP/IP settings are correct, as follows.

♦ **Using DHCP**

To use DHCP, select the radio button to obtain an IP Address automatically. This is the default

Windows settings.

Restart your PC to ensure it obtains an IP Address from the DLB-1200.

◆ **Using a fixed IP Address**

If your PC is already configured, check with your network administrator before making the following changes.

1、 Enter the DLB-1200's IP address in the Default gateway field and click OK. (Your LAN administrator can advise you of the IP Address they assigned to the DLB-1200.)

2、 If the DNS Server fields are empty, select Use the following DNS server addresses, and enters the DNS address or addresses provided by your ISP, then click OK.

Checking TCP/IP Setting - Windows XP

1、 Select Control Panel - Network Connection.

2、 Right click the Local Area Connection icon and select Properties.

3、 Select the TCP/IP protocol for your network card.

4、 Click on the Properties button.

5、 Ensure your TCP/IP settings are correct, as follows.

◆ **Using DHCP**

To use DHCP, select the radio button to obtain an IP Address automatically. This is the default Windows settings.

Restart your PC to ensure it obtains an IP Address from the DLB-1200.

◆ **Using a fixed IP Address**

If your PC is already configured, check with your network administrator before making the following changes.

1、 Enter the DLB-1200's IP address in the Default gateway field and click OK. (Your LAN administrator can advise you of the IP Address they assigned to the DLB-1200.)

2、 If the DNS Server fields are empty, select Use the following DNS server addresses, and enters the DNS address or addresses provided by your ISP, then click OK.

APPENDIX B

Trouble Shooting

This chapter covers some common problems that may be encountered while using the DLB-1200 and some possible solutions to them. If you have followed the suggested steps and the DLB-1200 still didn't function properly, please contact your dealer for further advice.

General Problems

♦ **Problem 1: Can't connect to the DLB-1200 to configure it.**

♦ **Solution 1: Check the following:**

1、 The DLB-1200 is properly installed, LAN connections are OK, and it is powered ON.

2、 Ensure that your PC and the DLB-1200 are on the same network segment. (If you don't have a router, this must be the case.)

3、 If your PC is set to "Obtain an IP Address automatically" (DHCP client), restart it.

4、 If your PC uses a Fixed (Static) IP address, ensure that it is using an IP Address within the range 192.168.0.2 to 192.168.0.254 and thus compatible with the DLB-1200's default IP Address of 192.168.0.1. Also, the Network Mask should be set to 255.255.255.0 to match with DLB-1200. In Windows, you can check these settings by using Control Panel-Network to check the Properties for the TCP/IP protocol.

Internet Access

♦ **Problem 1: When I enter a URL or IP address I get a time out error.**

♦ **Solution 1: A number of things could cause this. Try the following troubleshooting steps.**

1、 Check if other PCs work fine. If they do, ensure that your PCs IP settings are correct. If using a Fixed (Static) IP Address, check the Network Mask, Default gateway, DNS and IP Address.

2、 If the PCs are configured correctly, but still not working, check the DLB-1200. Ensure that it is connected and interfaces status are ON. Connect to it and check its settings. (If you can't connect to it, check the LAN and power connections.)

3、 If the DLB-1200 is configured correctly, check your Internet connection (DSL/Cable modem etc) to see that it is working correctly.

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	E-MAIL: attie@d-link.co.za URL: www.d-link.co.za
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	E-MAIL: tech@dlink.com, support@dlink.com URL: www.dlink.com

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Limited Hardware Warranty: D-Link warrants that the hardware portion of the D-Link products described below ("Hardware") will be free from material defects in workmanship and materials from the date of original retail purchase of the Hardware, for the period set forth below applicable to the product type ("Warranty Period") if the Hardware is used and serviced in accordance with applicable documentation; provided that a completed Registration Card is returned to an Authorized D-Link Service Office within ninety (90) days after the date of original retail purchase of the Hardware.   If a completed Registration Card is not received by an authorized D-Link Service Office within such ninety (90) period, then the Warranty Period shall be ninety (90) days from the date of purchase.

Product Type	*Warranty Period*
Product (excluding power supplies and fans)	One (1) Year
Power Supplies and Fans	One (1) Year
Spare parts and spare kits	Ninety (90) days

D-Link's sole obligation shall be to repair or replace the defective Hardware at no charge to the original owner.   Such repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office.   The replacement Hardware need not be new or of an identical make, model or part; D-Link may in its discretion may replace the defective Hardware (or any part thereof) with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware.   The Warranty Period shall extend for an additional ninety (90) days after any repaired or replaced Hardware is delivered. If a material defect is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to repair or replace the defective Hardware, the price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware.   All Hardware (or part thereof) that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

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Registration Card

Print, type or use block letters.

Your name: Mr./Ms_____

Organization: _____ Dept. _____

Your title at organization: _____

Telephone: _____ Fax:_____

Organization's full address: _____

_____

Country: _____

Date of purchase (Month/Day/Year): _____

Product Model	Product Serial No.	* Product installed in type of computer (e.g., Compaq 486)	* Product installed in computer serial No.

(* Applies to adapters only)

Product was purchased from:

Reseller's name: _____

Telephone:_____ Fax:_____

Reseller's full address: _____

_____

_____

Answers to the following questions help us to support your product:

1. Where and how will the product primarily be used?
    □Home □Office □Travel □Company Business □Home Business □Personal Use

2. How many employees work at installation site?
    □ 1 employee □2-9 □10-49 □50-99 □100-499 □500-999 □1000 or more

3. What network protocol(s) does your organization use ?
    □XNS/IPX □TCP/IP □DECnet □Others_____

4. What network operating system(s) does your organization use ?
    □D-Link LANsmart □Novell NetWare □NetWare Lite □SCO Unix/Xenix □PC NFS □3Com 3+Open
    □Banyan Vines □DECnet Pathwork □Windows NT □Windows NTAS □Windows '95
    □Others_____

5. What network management program does your organization use ?
    □D-View □HP OpenView/Windows □HP OpenView/Unix □SunNet Manager □Novell NMS
    □NetView 6000 □Others_____

6. What network medium/media does your organization use ?
    □Fiber-optics □Thick coax Ethernet □Thin coax Ethernet □10BASE-T UTP/STP
    □100BASE-TX □100BASE-T4 □100VGAnyLAN □Others_____

7. What applications are used on your network?
    □Desktop publishing □Spreadsheet □Word processing □CAD/CAM
    □Database management □Accounting □Others_____

8. What category best describes your company?
    □Aerospace □Engineering □Education □Finance □Hospital □Legal □Insurance/Real Estate □Manufacturing
    □Retail/Chainstore/Wholesale □Government □Transportation/Utilities/Communication □VAR
    □System house/company □Other_____

9. Would you recommend your D-Link product to a friend?
    □Yes □No □Don't know yet

10.Your comments on this product?
    _____
    _____

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