

DI-701 iShare Internet Gateway

User Manual

FCC COMPLIANCE STATEMENTS

FCC Part 15 Registration

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the distance between the equipment and receiver

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult an experienced radio/TV technician for help.

Caution: Change or modification not expressly approved by party responsible for compliance could void the user's authority to operate the equipment.

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INTRODUCTION

The DI-701 iShare Internet Gateway is a high-bandwidth router that connects a LAN to the Internet over any external DSL or cable modem.

The DI-701 iShare Internet Gateway allows multiple users to share a single Internet Service Provider (ISP) account. The DI-701 iShare Internet Gateway acts as both a DHCP (Dynamic Host Configuration Protocol) server and a DHCP client simultaneously. The DI-701 iShare Internet Gateway provides true Plug & Play convenience. Workstations can be configured automatically for Internet access without entering any IP addresses, and the DHCP client on the Global port can receive the configuration information automatically from its ISP.

Features

- 10/100Mbps dual speed auto-detecting LAN interface for flexible network connectivity.
- Allows up to 32 users to access Internet concurrently.
- Supports popular Internet applications such as Web browsers, ICQ, FTP, Telnet, E-Mail, PING, and others
- DHCP server allocates up to 128 client IP addresses.
- DHCP client automatically gets its global IP address automatically from ISP
- Static route to Intranet servers
- Flash memory for firmware upgrade
- Supports operating systems such as Windows 95/98/NT, Unix, and Mac
- Uses Windows interface program to allow setup over the network
- Uses Terminal program to setup through Console port
- Natural firewall keeps hackers out
- FCC & VCCI Class B certification

Specifications

Protocols

IP, NAT, ARP, ICMP, DHCP

Local port

RJ-45 connector for 10/100 Base-TX Ethernet to an Ethernet 10/100TX Switch or HUB

Global port

RJ-45 connector for 10 Base-T Ethernet to an external Cable/xDSL Modem.

Console

DB-9 female connector for configuration and firmware upgrade

LED Indicators

Power, Local Link, Local Speed 10/100, Local Full/Half duplex, Global Link, Error

Electricity Power

Input Power 5V DC @2.4A

HOW DOES IT WORK

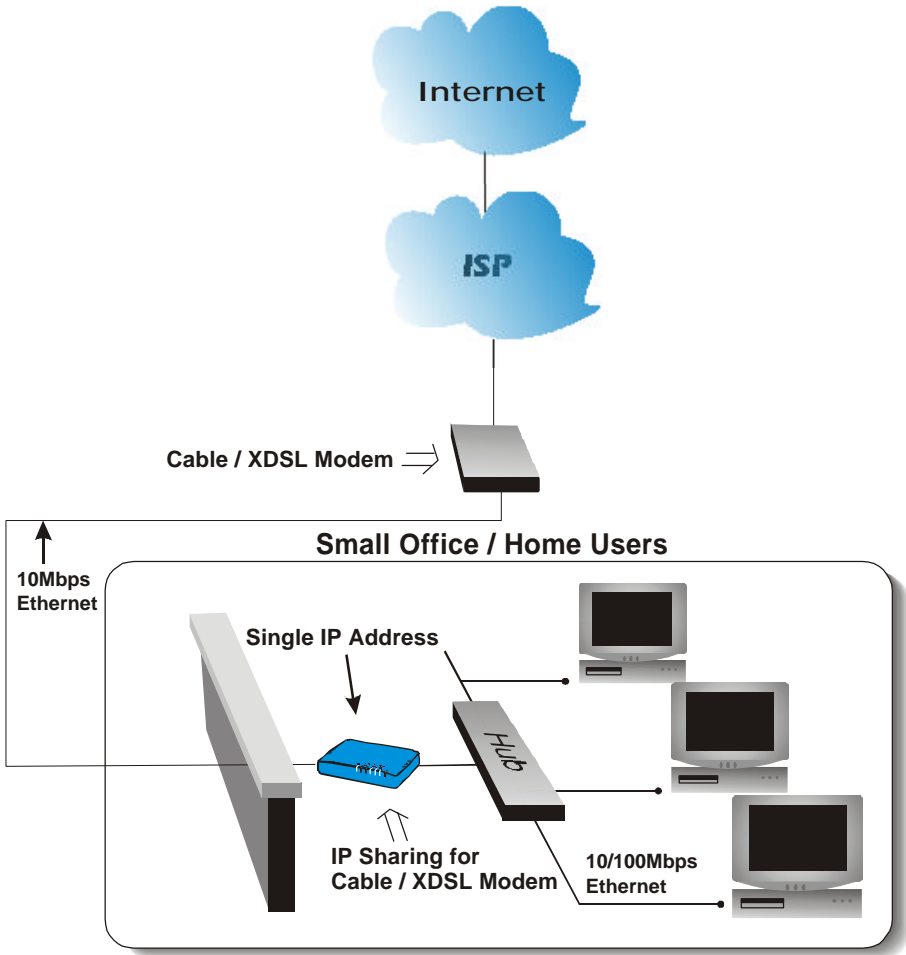
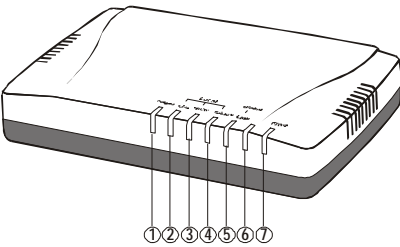


Figure 1: Small Office/ Home Office Setup

HARDWARE INSTALLATION

Parts Names and Functions

LED Indicators on the Front Panel



Ports on the Rear Panel

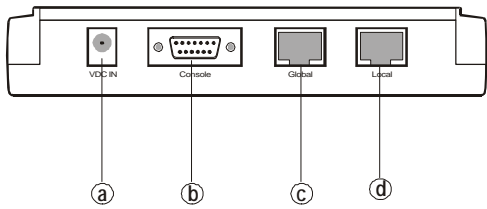


Figure 2: LED Indicators and Ports

Table 1: LED Indicators and Connections

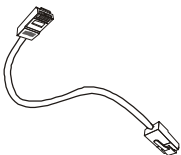
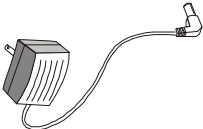
	LED Indicator	Color	Status		
			Glowing	Dimming	Flashing
①	Power	Green	Power On	Power Off	N/A.
②	Local Link	Green	Connected to a LAN device	Disconnected from any LAN device	Receiving/Sending data
③	Local 100/10	Green	100Mbps detected	10Mbps detected	N/A.
④	Local Full/Half	Green	Full duplex	Half duplex	N/A.
⑤	Global Link	Green	Connected to a Cable Modem, Ethernet Hub or any ADSL Modem	Disconnected from any Cable/ADSL modem	Receiving/Sending data
⑥	(Reserved)	Green	N/A.	N/A.	N/A.
⑦	Error	Red	Components malfunctioning	N/A.	N/A.

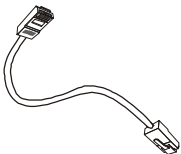
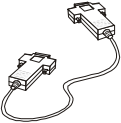
Port Name	Functions
-----------	-----------

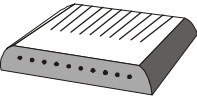

a	VDC IN	Connects the power adapter plug.
b	Console	Connects an RS-232 serial cable to your computer for <ul style="list-style-type: none"> • Configuring from terminal programs • Firmware upgrade.
c	Global	Connects to Ethernet port on Cable Modem, ADSL Modem or Ethernet Hub for Internet Access.
d	Local	Connects to the Ethernet Hub/Switch on LAN.

Hardware Requirements

Table 2: Essential Hardware

Item Included in Standard package	Description	Connections	
		From	To
	UTP Ethernet cross-over cable	Global Port	RJ-45 port of DI-701 iShare modem
	Power adapter	VDC IN Port	Wall outlet

Self-Prepared Items	Description	Connections	
		From	To
	CAT3 or CAT5 UTP Ethernet straight cable	Local Port	HUB or Switch
	RS-232 cable (For terminal program configuration only)	Console Port	COM port

	A well-installed WAN environment (Cable Modem or ADSL Modem)
	A well-installed LAN environment

Hardware Connections

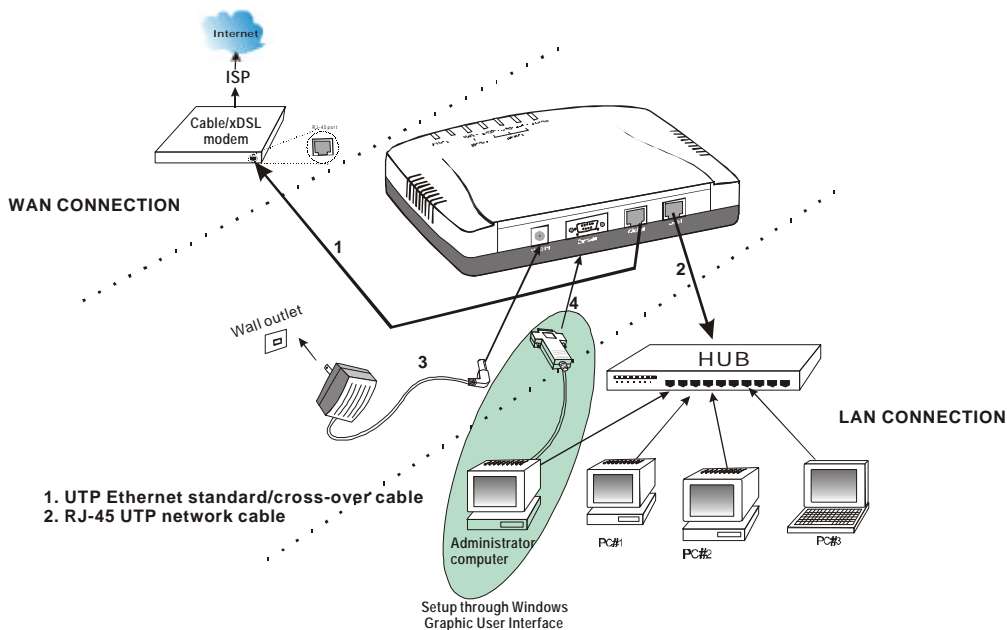


Figure 3: Hardware Connections

1. Make sure your DI-701 iShare is installed and connected properly. Use a UTP Ethernet cross-over cable¹ to connect the **Global** port. See Figure 3.
2. Use a CAT3 or CAT5² UTP Ethernet straight cable to connect the **Local** port to a free port on your hub or switch.

¹ Check if your DI-107 is cross-over. If not, this Ethernet cross-over cable should be used instead of the standard Ethernet straight cable that came with your DI-701.

² CAT5 cable is required for 100Mbps data transfer rate transmission.

3. Connect the Power Adapter to the **VDC IN** port into a wall outlet.
4. Use an RS-232 cable to connect the **Console** port to the administrator computer's COM port. (Optional - for terminal program configuration only.)

The following sections explain how to configure the administrator computer.

SYSTEM ENVIRONMENT

Your system must meet the following requirements:

Software Requirements

1. Microsoft Windows 95/98/NT installed.
2. Windows Graphic User Interface (GUI) setup program (provided) to configure through Local Port; Or

Use a terminal emulation program such as Windows HyperTerminal to configure through the Console Port.

Gather and write down the following information before beginning:

Factory Default Setting

The LAN parameters of the DI-701 iShare are pre-set in the factory. The default values are shown in Table 3: Local and Global Port Addresses.

Table 3: Local and Global Port Addresses

Local Port		Global Port
IP address	192.168.0.1	DHCP client function is <i>enabled</i> to automatically get the Global port configuration from ISP.
Subnet Mask	255.255.255.0	
DHCP server function	Enabled	
IP addresses for distribution to PCs	32 IP addresses continuing from 192.168.0.2 through 192.168.0.33	

Information from ISP

If your IP address is provided *dynamically* by your ISP (Internet Service Provider), skip this step. Gather the information shown in Table 4: Assigned Addresses and keep it for reference.

Table 4: Assigned Addresses

	IP address
ISP-assigning IP address	Ex. 203.66.81.201
Subnet mask	Ex. 255.255.255.0
Gateway	Ex. 203.66.81.254
DNS server #1	Ex. 203.66.81.251
DNS server #2	Ex. 203.66.81.252

CONFIGURATION SETTINGS

Before Getting Started

The DI-701 iShare can be configured through the setup program provided or through a terminal emulation program (TP), such as Windows HyperTerminal. The installation choices are described in the following sections. See Table 5: Configuration in Windows GUI Mode for a guide to port configuration. See Table 6: Configuration in Terminal Program Mode for Terminal configuration settings.

Table 5: Configuration in Windows GUI Mode

Local port setting		Global port setting		Read through the following sections to set up the configuration
Dynamic	Modified	Dynamic	Static	
V		V		Configuring Your Computer
V			V	Getting Started (GUI) Static Global Port Setting (GUI)
	V	V		Modifying Local Port Setting (GUI)

Table 6: Configuration in Terminal Program Mode

Local port setting (IP address distribution)		Global port setting (IP address distribution)		Read through the following sections to set up the configuration
Dynamic	Modified	Dynamic	Static	
V		V		Configuring Your Computer
V			V	Getting Started (TP) Static Global Port Setting (TP)
	V	V		Getting Started (TP) Modifying Local Port Setting (TP)
	V		V	Getting Started (TP) Static Global Port Setting (TP) Modifying Local Port Setting (TP)

Configuring Your Computer

1. Start Windows 98.
2. Go to the **Start** menu. Point to **Settings**. Click **Control Panel**.
3. Double-click **Network**.
4. Select the binding of TCP/IP and your Ethernet adapter. Click the **Property** button.
5. Check the item of "**Obtain IP address automatically**". Click **OK**.



Figure 4: TCP/IP Properties

6. Disable any IP address in DNS Configuration and Gateway setting. Click **OK** to complete the setting.
7. Windows will then prompt you to restart your computer.

If your IP address is assigned dynamically, you are now ready for Internet access.

Configuring in GUI Mode

This section describes how to configure the DI-701 in the Windows Graphic User Interface.

Getting Started (GUI)

1. Insert the included setup diskette into your floppy drive.
2. Go to **My Computer**. Click the drive containing the diskette.
3. Double-click **setup.exe**.
4. When the following dialog box appears, click **Find**.

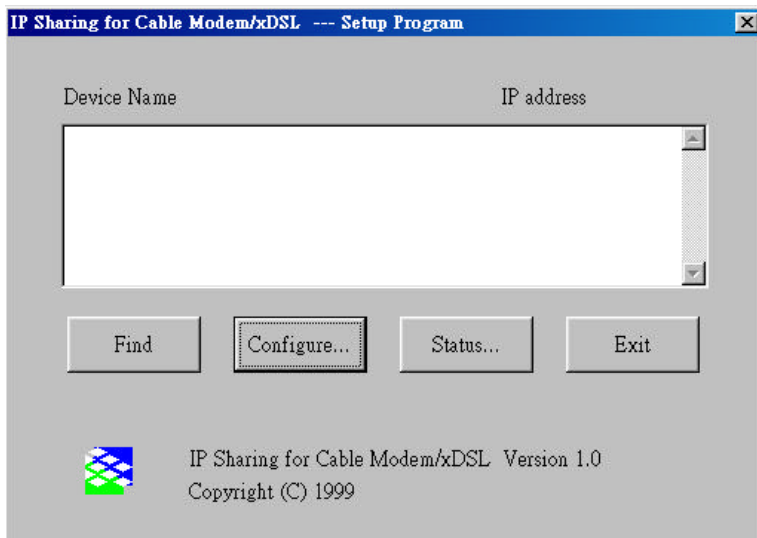


Figure 5: DI-701 iShare Setup Program

5. The setup program finds the active DI-701 iShare. The password dialog box prompts you to enter a password. The **Configure** tab is highlighted if the password is correct. Click **Configure** to continue.
6. See the following sections for WAN or LAN settings.

Static Global Port Setting (GUI)

1. Select the **Global Port** tab.
2. Select **Obtain global port configuration from ISP automatically** if your IP address is assigned dynamically. Dynamic assignment means that your DI-701 iShare receives configuration information automatically from the ISP. Select the **Use ISP provided IP address info** tab if you have been assigned a static IP Address.

3. **IP addresses, Subnet mask IP address, Gateway, and DNS server** should be noted and entered accordingly if you are assigned a static IP address by your ISP. See Table 7: IP Addresses and Figure 6.

Table 7: IP Addresses

	<i>For example:</i>
IP address:	202.178.230.113
Subnet Mask	255.255.255.0
Gateway	202.178.231.1
DNS server:	202.178.225.1
Secondary DNS server:	202.178.244.207

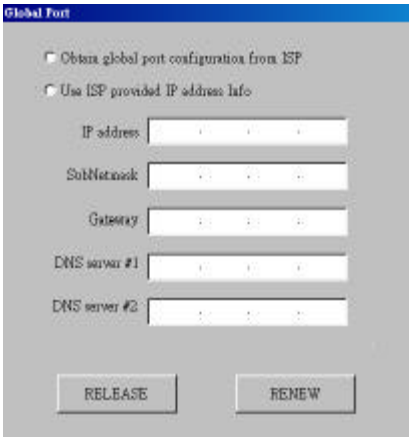


Figure 6: Global Port

4. When finished, click the OK button to complete the setting.

Modifying Local Port Setting (GUI)

5. Select the **Local Port** tab.
6. Enter the desired IP addresses and Subnet mask.
7. Select **Do not distribute IP address to local computers** or **Distribute IP addresses to local computers**.
8. If **Distribute IP addresses to local computers** is selected, you must enter the starting IP address and the DNS server number.

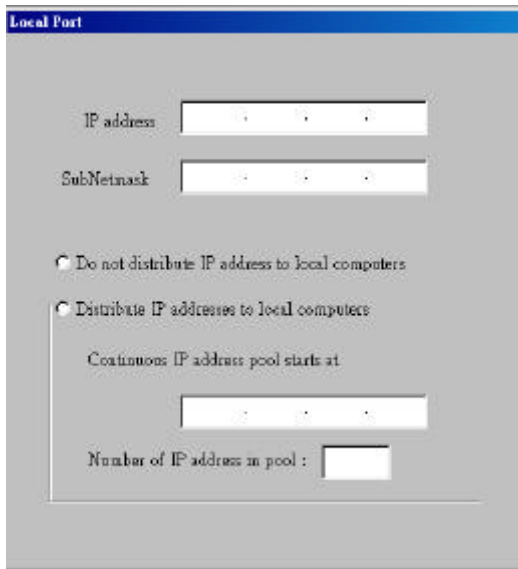
A screenshot of a 'Local Port' configuration window. The window has a blue title bar with the text 'Local Port'. Below the title bar, there are two input fields: 'IP address' and 'SubNetmask', each with a small icon to its right. Below these fields are two radio buttons. The first radio button is selected and is labeled 'Do not distribute IP address to local computers'. The second radio button is labeled 'Distribute IP addresses to local computers'. Below the radio buttons is a label 'Continuous IP address pool starts at:' followed by an input field. Below that is a label 'Number of IP address in pool :' followed by an input field.

Figure 7: Local Port

9. When finished, click the OK button to complete the setting.

Management

Select the **Management** tab to change the administrator password as shown in Figure 8.

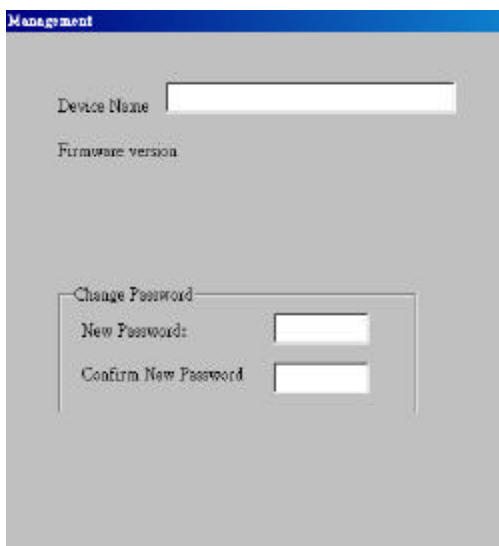


Figure 8: Management

Configuration in Terminal Program Mode

Use terminal emulation on your PC/workstation for the initial configuration of your DI-701. Windows HyperTerminal or other terminal emulation applications can be used. The following example was done with HyperTerminal.

Getting Started (TP)

1. Connect an RS-232 cable from one COM port on your PC to your DI-701's Console port.
2. Go to **Start → Program → Accessories → Communications → HyperTerminal**.
3. When the Hyper Terminal window appears, double-click **Hypertrm**.
4. Name the new connection appropriately.
5. In the **Connect To** dialog box, select the COM port that connects to your DI-701.



Figure 9: Connect To:

6. When the dialog box shown in Figure 9 appears, set the **Bits per second** rate at **38400**, and **Flow control** at **None**. Click **OK** to complete the setting. See Figure 10.



Figure 10: COM 1 Properties

7. Power on your DI-701.
8. The following information will appear.

IP Sharing for Cable Mdem/ADSL Mdem/Ethernet

BIOS Version: 1.00 (1999/10/06)

©Copyrights 1999, all rights reserved.

SRAM Test 0

WAN NIC Test 0 MAC Address: 00 E8 80 C8 20 93

LAN NIC Test 0 MAC Address: 00 E8 80 C8 00 12

Internet SOAR is ready

System starts up

Welcome to SOAR 1.01

Administrator password:

9. No password is required the first time you log in. Press **<ENTER>** to enter Configure mode. The screen prompts you for the following command.

command>

10. Type the **SET** command to configure your DI-701. Press **<ENTER>** if you agree with the default value, or **<ESC>** to escape.
11. Refer to “Terminal Commands” for a detailed description of terminal commands.

Static Global Port Setting (TP)

Example:

Obtain configuration automatically ?(Yes/No) [Yes] :N³

IP address for 10Mwan : [0.0.0.0]: 202.178.230.113

IP mask for 10Mwan: [255.255.255.0]

Device name (0 to 12 characters) <DEFAULT Untitled>: CA2000

Default gateway Router [0.0.0.0]: 202.178.231.1

Primary DNS server [0.0.0.0]: 202.178.225.1

³ When you are entering “NO”, i.e. you select “Static Global Port Setting”, meaning you have an explicit IP address from your ISP instead of dynamic assigning.

Secondary DNS server [0.0.0.0]: 202.178.244.207

New configuration will be:

.
.
.

Save this configuration, and reboot device?

(Yes/No): <DEFAULT: No> Y

Save configuration and reboot ...

Modifying Local Port Setting (TP)

Example:

IP address for local [192.168.0.1]:

IP netmask for local [255.255.255.0]:

Distribute configuration for PCs on LAN? (Yes/No) [Yes]:

Distribute IP address pool start at [192.168.0.2]:

DHCP IP address pool numbers [32]:

New configuration will be:

IP address for 10/100MLAN: [192.168.0.1]

IP mask for 10/100MLAN: [255.255.255.0]

Distribute configuration for PCs on LAN: [Yes]

Distribute IP address pool start at: [192.168.0.2]

DHCP IP address pool numbers: [32]

Obtain configuration automatically: [No]

IP address for 10Mwan: [202.178.230.113]

IP mask for 10Mwan: [255.255.255.0]

Device name: [CA2000]

Default gateways: [202.178.231.1]

Primary DNS server: [202.178.225.1]

Secondary DNS server: [202.178.244.207]

Save this configuration, and reboot device?

(Yes/No): <DEFAULT: No> Y

Save configuration and reboot...

SETUP DIAGNOSIS

TCP/IP Network Diagnosis

Execute *WINIPCFG.EXE* or *PING.EXE* for TCP/IP network diagnosis.

WINIPCFG

The WINIPCFG program is used to gather information about the TCP/IP connections that are active on your system. It cannot be used to dynamically adjust TCP/IP connections. You can also renew leases (if allowed by the network), and get the current IP address assignments through this program.

Go to **Start**. Click **Run**. Enter **WINIPCFG**. See Figure 11.

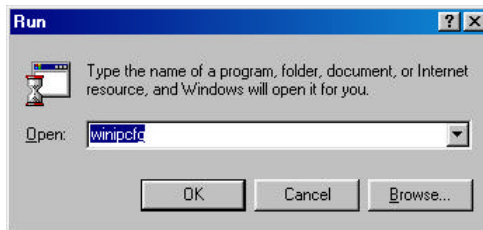


Figure 11: Run

Figure 12 displays the adapter address and current TCP/IP address.

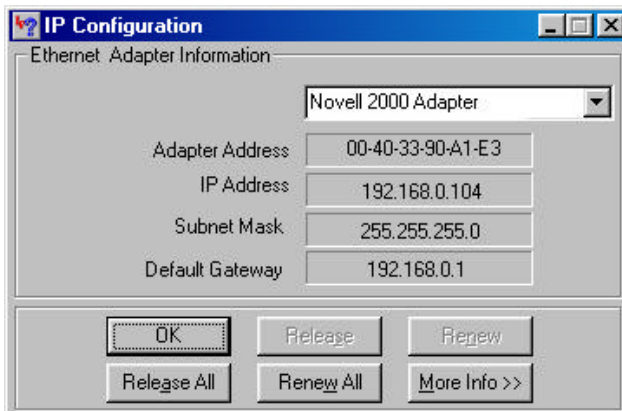


Figure 12: IP Configuration

Click the **More Info** button, displayed in Figure 13, to get detailed configuration information.

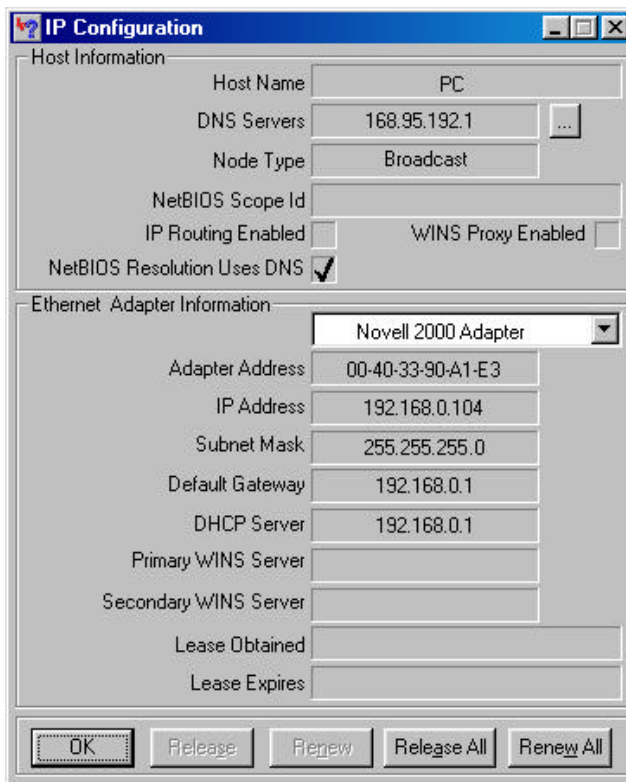


Figure 13: IP Configuration

Figure 13 displays the advanced settings of your TCP/IP connection.

The computer name and DNS server the computer is configured to call when it is looking for a named resource are on top. The gateway for Internet access via the network specifies which server processes the request. The DHCP Server identifies the network server that assigns IP addresses to computers logging onto the network.

Users should not use the Release and Renew buttons unless they are asked to do so by the network administrator.

PING.EXE

Ping is used to verify that a computer is active and available. Users can specify the destination domain name or just the IP address.

Example:

For example, to find the server 168.95.192.1, type the following command at the MS-DOS prompt:

C:\>ping 168.95.192.1.

PING can be executed in Windows as shown below:

1. Go to the **Start** menu.
2. Click **Run**.
3. Type **168.95.192.1**. Click **OK**.
4. The server is online if the following message appears.

Reply from 192.168.0.1: bytes=32 time=3ms TTL=100

5. The destination device is not reachable if the following message appears.

Reply from 192.168.0.1: Destination host unreachable. Or

Request timed out.

Cable Connectivity Checkup

Verify that the Power, Local Link, and Global LEDs are lit. Go to the “Hardware Connections” section and verify that all cables are attached correctly.

Device Alive Checkup

Issue a PING command to the IP address of the device’s local port. The device is working properly if it is successful.

ISP Connectivity Checkup

Issue a PING command to IP address of Gateway or DNS server.

For Example:

C:\> PING 203.66.81.254

If successful, you can reach your ISP server.

If unsuccessful your ISP may have trouble connecting to the Internet.

Internet Connectivity Checkup

PING to an IP address or domain name on Internet.

For Example:

C:\> PING 168.95.192.1 -w 5000

C:\> PING www.yahoo.com -w 5000

If successful, you are connected to the Internet.

If unsuccessful, your ISP may have trouble connecting to the Internet.

TERMINAL COMMANDS

You may type **?** or **help** to list the main menu commands as below.

command>help

Internet SOAR version 1.67

=====	
Command	Description

help	Show this message
passwd	Change administrator's password
show	Display active configuration
set	Configure device in batch
vserv	Set internal virtual server mapping
release	Give up the obtained global port configuration
renew	Update global port configuration
user	List active local IP address leases
session	List active internet sessions
quit	Exit to login prompt
reboot	Restart device

=====

passwd

No password is required when logging in for the first time. Press <Enter> to enter the start screen. Passwords can be up to four characters long. Passwords can contain letters, numbers, and spaces. Passwords are case sensitive. To set or change your password type four characters. You will be prompted to reenter your password to verify it before the new password is set. Return to the Start screen by typing quit. Test your new password to verify it has taken effect.

Example:

COMMANDS>passwd

Old password:

New password (4 characters or numbers at most): ****

Re-type new password: ****

show

Displays the current configuration. For first-time login, the current configuration is the factory default settings. Refer to section titled “Factory Default Setting” for detail.

Example:

IP address of local port: [192.168.0.1]

SubNetmask of local port: [255.255.255.0]

Distribute IP addresses to local computers: [Yes]

Continuous IP address pool starts at: [192.168.0.2]

Number of IP address in pool: [32]

Obtain global port configuration from ISP: [Yes].. already claimed⁴

IP address of global port: [203.66.99.1]

SubNetmask of global port: [255.255.255.0]

Device name: [Untitled]

Gateway: [203.66.99.254]

Primary DNS server: [205.178.225.1]

Secondary DNS server: [205.178.244.207]

set

The current settings appear by sequence. Press enter to accept the default or current value in the bracket. Enter the appropriate value in the brackets to change it and then press Enter. Press <Esc> at any time to abort this command.

Example:

command>set

Press <ENTER> if you agree with the default value,

⁴ Compared with **Configuration claiming**, meaning the configuration is still under claiming, namely the global port configuration is invalid, **Configuration claimed** means this device has obtained the global port configuration from the ISP. While in **Configuration claiming**, the local computer is not able to access the Internet.

Or <ESC> to escape.

IP address of local port [192.168.0.1]:

SubNetmask of local port [255.255.255.0]:

Distribute IP address to local computers? (Yes/No) [Yes]:

Continuous IP address pool start at [192.168.0.2]:

Number of IP address in pool [32]:

Obtain global port configuration from ISP? (Yes/No) [Yes]: n

IP address of global port [202.178.230.149]: 203.66.99.252

SubNetmask of global port [255.255.255.0]:

Device name (0 to 20 characters) [Untitled]: CABLE_ISP

Gateway [0.0.0.0] : 203.66.81.254

Primary DNS server [0.0.0.0] : 203.66.81.251

Secondary DNS server [0.0.0.0] : 203.66.81.252

New configuration will be:

IP address of local port : [192.168.0.1]

SubNetmask of local port : [255.255.255.0]

Distribute IP addresses to local computers : [Yes]

Continuous IP address pool starts at : [192.168.0.2]

Number of IP address in pool : [32]

Obtain global port configuration from ISP : [No]

IP address of global port : [203.66.81.201]

SubNetmask of global port : [255.255.255.0]

Device name : [CABLE_ISP]

Gateway : [203.66.81.254]

Primary DNS server : [203.66.81.251]

Secondary DNS server : [203.66.81.252]

Save and reboot ?(Yes/No) : [No]

vserv

Displays the internal virtual server mapping. You can set (including add, delete) the applications' names and the corresponding IP addresses of the local servers. **"Natural firewall"** allows requests for Internet access from the Local network, but no requests from the Internet to the Intranet are allowed. Computers from outside the Intranet are allowed to access specific ports by using the vserv command. There are four operation choices for vserv command: Add, Del, Show, Quit.

Example:

command>vserv

Set local virtual server mapping (maximum 6),

or <ESC> to escape

Example Add':

Input command : 1)Show 2)Add 3)Del 0)Quit: 2

Input port number or application name : www

Input IP address of local server :192.168.0.12

Example Add'':

Input command : 1)Show 2)Add 3)Del 0)Quit: 2

Input port number or application name : 23

Input IP address of local server :192.168.0.3

Example Show:

Input command : 1)Show 2)Add 3)Del 0)Quit: 1

Item	Port(Application)	Local server
------	-------------------	--------------

====	=====	=====
------	-------	-------

1.	80 (www)	192.168.0.12
----	----------	--------------

2.	23 (telnet)	192.168.0.3
----	-------------	-------------

Example Del:

Input command : 1)Show 2)Add 3)Del 0)Quit 3

Item	Port(Application)	Local server
====	=====	=====
1.	80 (www)	192.168.0.12
2.	23 (telnet)	192.168.0.3

Which item will be deleted : 2

Example Quit:

Input command : 1)Show 2)Add 3)Del 0)Quit: 0

release

Gives up the obtained global port configuration. Executing this command disables the device, unless the user types the “renew” command as described below to retrieve configurations.

Example:

command>release

Give up the obtained global port configuration

Note that if you choose NOT to obtain the global port configuration from your ISP, this command won't be executed and the following message will appear.

Example:

command>release

Works only if 'Obtain global port configuration from ISP' is enabled

renew

You must renew the global port configuration, after you have released it, to enable the device. The 'Show' command enables you to see the configuration. The device will not work until you have renewed the global port configuration.

Example:

command>renew

Update global port configuration

Note that if you choose NOT to obtain the global port configuration from your ISP, this command won't be executed and the following message will appear.

Example:

`command>renew`

Works only if 'Obtain global port configuration from ISP' is enabled

user

Displays the current active user(s), up to 128.

Example:

`command>user`

IP address	Node address	Remainder time	Host name
-----+-----+-----+-----			
192. 168. 0. 2	0040-3390-A1E3	0: 36: 54	Lotus
192. 168. 0. 3	00E0-980A-4BF6	expired	Pingc
192. 168. 0. 4	0040-3324-332F	0: 52: 33	VICKY3
192. 168. 0. 5	0040-3392-6155	0: 31: 46	Tree
192. 168. 0. 6	00E0-9600-0001	0: 36: 38	DESKTOP
192. 168. 0. 7	00E0-9817-01C5	0: 45: 26	Gary
192. 168. 0. 8	0020-1834-6D3E	expired	Jeffrey98C
192. 168. 0. 9	00E0-9810-9999	expired	Luke
192. 168. 0. 10	0080-C849-0882	expired	MA
192. 168. 0. 11	00E0-9812-3456	0: 35: 54	ACER370
192. 168. 0. 12	0040-0517-79BE	0: 38: 45	CT2
192. 168. 0. 13	00E0-9811-2233	0: 41: 45	Roxy_gino
192. 168. 0. 14	0040-3390-A1D9	expired	mailen2

Total 13 users, 8 active leases.

Elapsed 2 days & 1:28:30

The displayed items are explained as the following:

- IP address** the assigned IP address
- Node address** physical address for the network adapter
- Reminder time** the balance of leasing time for each lease. For “expired”, it means the computer is out of time and in logoff.
- Host name** identities for computers in Windows

Note that if you choose NO for the setting of “Distribute IP address to local computers” in the previous setting, this command won’t be executed and the following message will appear.

Example:

command>user

Works only if 'Distribute IP addresses to local computers' is enabled
session

List active Internet sessions through this device.

Example:

command> session

		IP	Port	Port	IP	Port	
Seq	Flag	client	client	fake	remote	remote	idle
-----+-----+-----+-----+-----+-----+-----+-----							
1	07	192.168.0.12	1542	10583	212.234.161.21	20	0
2	05	192.168.0.13	1269	10506	203.77.21.102	4364	890
3	07	192.168.0.12	1541	10581	212.234.161.21	20	0
4	01	192.168.0.13	1264	10253	205.188.153.98	4000	90
5	0D	192.168.0.12	1476	10229	212.234.161.21	21	120
6	05	192.168.0.20	1086	10531	140.112.1.6	23	35
7	0D	192.168.0.12	1468	10218	212.234.161.21	21	35
8	0D	192.168.0.12	1209	9090	212.234.161.21	21	0

Active: 8(Maximum 128)

The value meaning of Flag field is:

01 idle UDP session

03 active UDP session

05 idle TCP session

07 active TCP session

0D idle FTP control session

0F active FTP control session

15 idle TCP session has been aborted by client

25 idle TCP session has been aborted by server

The displayed items are explained as the following:

IP client the IP addresses for local computers.

Port client the port number for local computers.

Port fake the translated port code from client port.

IP remote the IP address for computers on Internet.

Port remote the port number for remote computers.

Idle idle interval (in seconds) since last network frames transaction.

FIRMWARE UPGRADE

System Requirements

- One free COM port on PC.
- A pin-to-pin RS-232 cable. One end is 9 pin male connector, the other end is 9 or 25 pin female connector depends on the COM port.
- **FWUPLOAD.EXE** : This is a DOS program for firmware upload. You can execute this file in Windows 95/98/NT or at DOS prompt.
- **FIRMWARE.BIN** :This is a firmware image file. This file **MUST** reside in the same subdirectory with FWUPLOAD.EXE.

For better disk access speed, it is recommended that you copy these two files to your hard disk before uploading them to the DI-701.

Getting Uploaded

1. Connect the RS-232 cable from the Console port of your DI-701 iShare to the PC COM port.
2. At the DOS prompt, run **FWUPLOAD.EXE** with COM port specified. You can type "FWUPLOAD -?" first for reference.

For example: To use port COM 1 to upload firmware, type command as:

C:\> FWUPLOAD 1

3. Turn on the DI-701 iShare. FWUPLOAD.EXE automatically detects the DI-701 iShare and completes the uploading. A sequence of messages similar to the following appears.

CA2000 - Firmware upgrade program ver 1.0.

Copyright 1999.

FWUPLOAD -? for usage help.

press <ESC> to abort this program

Waiting for CA2000 turned on . . .

CA2000 has been detected.

Ready for upload.

Uploading . . .

66000 bytes transmitted

OK: Firmware upload succeeded.

If any error message appears, check the cable connectivity and make sure that you have selected the correct COM port, then go through the steps again.

Restart the DI-701 iShare to activate the new firmware.

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