

ZyWALL 100

Internet Security Gateway

Quick Start Guide

Version 3.52

March 2003



Introducing the ZyWALL

The ZyWALL 100 is the ideal secure gateway for all data passing between the Internet and the LAN. By integrating NAT, firewall, VPN capability and wireless LAN, ZyXEL's ZyWALL 100 is a complete security solution that protects your Intranet and efficiently manages data traffic on your network. The embedded web configurator is easy to operate and totally independent of the operating system platform you use.

You should have an Internet account already set up and have been given most of the following information.

Internet Account Information

Your device's WAN IP Address (if given): _____	
DNS Server IP Address (if given): Primary _____, Secondary _____	
Encapsulation:	
<input type="radio"/> Ethernet	Service Type: _____ Login Server IP Address: _____ User Name: _____ Password: _____
<input type="radio"/> PPTP	User Name: _____ Password: _____ Your WAN IP Address: _____ PPTP Server IP Address: _____ Connection ID (if required): _____
<input type="radio"/> PPPoE	(PPPoE) Service Name: _____ User Name: _____ Password: _____

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1 Hardware Installation

Rear Panel



LABEL	DESCRIPTION
1. LAN 10/100M	Connect a computer to this port with an Ethernet cable. This port is auto-negotiating (can connect at 10 or 100Mbps). Push the UPLINK button in with a straight-through Ethernet cable or have the UPLINK button out with a crossover Ethernet cable.
2. WAN 10/100M	Connect your cable/DSL modem to this port with the cable that came with your modem.
3. POWER 100-240VAC	Connect the included power cord (use only this cord) to this power socket.
After you've made the connections, connect the power cord to a power supply and push the power switch to the on position. Look at the front panel LEDs.	
CONSOLE	<p>Only connect this port if you want to configure the ZyWALL using the SMT via console port; see your <i>User's Guide</i> for details.</p> <p>Connect the 9-pin male end of the console cable to the console port of the ZyWALL and the other end to a serial port (COM1, COM2 or other COM port) on your computer. Your computer should have a terminal emulation communications program (such as HyperTerminal) set to VT100 terminal emulation, no parity, 8 data bits, 1 stop bit, no flow control and 9600 bps port speed.</p>
DIAL BACKUP	<p>Only connect this port if you want to set up a backup WAN connection; see your <i>User's Guide</i> for details.</p> <p>Connect the 9-pin female end of your modem or TA cable to this port and the other end to your modem or TA.</p>
DMZ 10/100M	<p>Connect publicly accessible servers (Web, FTP, etc.) to this port to make them visible to the outside world. Use a crossover Ethernet cable to connect this port to a single computer.</p> <p>For multiple computers, use a straight-through Ethernet cable to connect this port to a hub.</p>
RESET	You only need to use this button if you've forgotten the ZyWALL's password. It returns the ZyWALL to the factory defaults (password is 1234, LAN IP address 192.168.1.1, terminal emulation settings as described above etc.; see your <i>User's Guide</i> for details).

LABEL	DESCRIPTION
WIRELESS LAN	<p style="text-align: center;">Do not insert or remove a card with the ZyWALL turned on.</p> <p>Turn off the ZyWALL before inserting or removing an 11 Mbps 802.11b-compliant wireless LAN PCMCIA card (to avoid damage).</p> <p>Slide the 64-pin connector end of the PCMCIA wireless LAN card into the slot as shown next.</p> <p style="text-align: center;">Do not force, bend or twist the wireless LAN card.</p>



The Front Panel LEDs

The **PWR** LED turns on when you connect the power. The **SYS** LED blinks while performing system testing and then stays on if the testing is successful. The **CON/AUX**, **LAN**, **WAN** and **WLAN** LEDs turn on if they are properly connected. Refer to the following table for more detailed LED descriptions.



ZyWALL 100

LED	COLOR	STATUS	MEANING
PWR	Green	On	The ZyWALL is turned on.
		Off	The ZyWALL is turned off.
SYS	Green	Off	The ZyWALL is not ready or failed.
		On	The ZyWALL is ready and running.
	Flashing	The ZyWALL is rebooting.	
	Red	On	The power to the ZyWALL is too low.
WLAN	Green	Off	The wireless LAN is not ready, or has failed.
		On	The wireless LAN is OK.
		Flashing	The wireless LAN is sending or receiving packets.
LAN 10M	Green	Off	The 10M LAN is not connected.
		On	The ZyWALL is connected to a 10M LAN.
		Flashing	The 10M LAN is sending or receiving packets.
LAN 100M	Orange	Off	The 100M LAN is not connected.
		On	The ZyWALL is connected to a 100Mbps LAN.
		Flashing	The 100M LAN is sending or receiving packets.
DMZ 10M	Green	Off	The 10M DMZ is not connected.
		On	The ZyWALL is connected to a 10M DMZ.
		Flashing	The 10M DMZ is sending/receiving packets.
DMZ 100M	Orange	Off	The 100M DMZ is not connected.
		On	The ZyWALL is connected to a 100Mbps DMZ.
		Flashing	The 100M DMZ is sending or receiving packets.
WAN 10M	Green	Off	The 10M WAN link is not ready, or has failed.
		On	The 10M WAN link is OK.
		Flashing	The 10M WAN link is sending or receiving packets.
WAN 100M	Orange	Off	The 100M WAN link is not ready, or has failed.
		On	The 100M WAN link is OK.
		Flashing	The 100M WAN link is sending or receiving packets.
AUX LNK	Green	Off	The backup port is not connected.
		On	The backup port is connected.

LED	COLOR	STATUS	MEANING
AUX ACT	Green	Off	The auxiliary port is not sending or receiving packets.
		Flashing	The auxiliary port is sending or receiving packets.

2 Setting Up Your Computer's IP Address

Skip this section if your computer is already set up to accept a dynamic IP address. This is the default for most new computers.

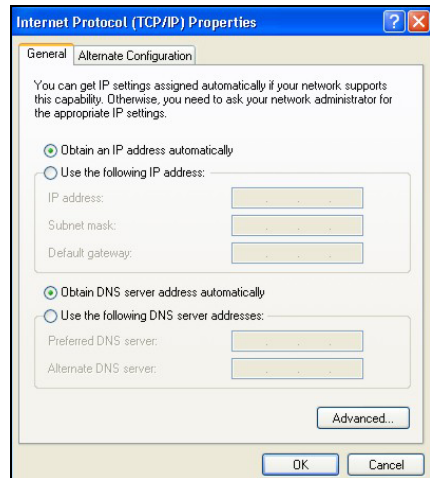
The ZyWALL is already set up to assign your computer an IP address. Use this section to set up your computer to receive an IP address or assign it a static IP address in the 192.168.1.2 to 192.168.1.254 range with a subnet mask of 255.255.255.0. This is necessary to ensure that your computer can communicate with your ZyWALL.

Your computer must have an Ethernet card and TCP/IP installed. TCP/IP should already be installed on computers using Windows NT/2000/XP, Macintosh OS 7 and later operating systems.

Windows 2000/NT/XP

1. In Windows XP, click **start, Control Panel**. In Windows 2000/NT, click **Start, Settings, Control Panel**.
2. In Windows XP, click **Network Connections**.
In Windows 2000/NT, click **Network and Dial-up Connections**.
3. Right-click **Local Area Connection** and then click **Properties**.
4. Select **Internet Protocol (TCP/IP)** (under the **General** tab in Win XP) and click **Properties**.

- The **Internet Protocol TCP/IP Properties** screen opens (the **General** tab in Windows XP).
 - To have your computer assigned a dynamic IP address, click **Obtain an IP address automatically**.
 - To configure a static IP address, click **Use the following IP Address** and fill in the **IP address** (choose one from 192.168.1.2 to 192.168.1.254), **Subnet mask** (255.255.255.0), and **Default gateway** (192.168.1.1) fields.

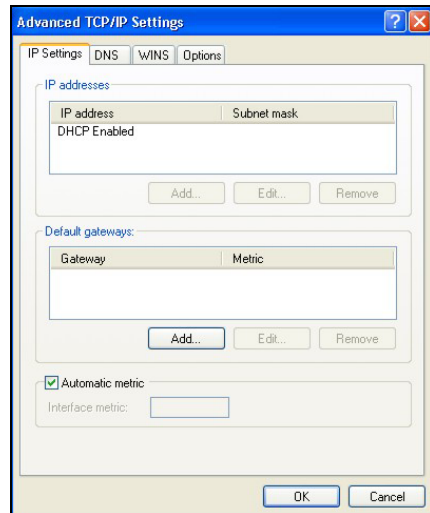


- Click **Advanced**. Remove any previously installed gateways in the **IP Settings** tab and click **OK** to go back to the **Internet Protocol TCP/IP Properties** screen.
- Click **Obtain DNS server address automatically** if you do not know your DNS server IP address(es).

If you know your DNS server IP address(es), click **Use the following DNS server addresses**, and type them in the **Preferred DNS server** and **Alternate DNS server** fields.

If you have more than two DNS servers, click **Advanced**, the **DNS** tab and then configure them using **Add**.

- Click **OK** to close the **Internet Protocol (TCP/IP) Properties** window.
- Click **OK** to close the **Local Area Connection Properties** window.



Checking Your Computer's IP Address

- In the computer, click **Start, (All) Programs, Accessories** and then **Command Prompt**.
- In the **Command Prompt** window, type "ipconfig" and then press **ENTER**. Your computer's IP address must be in the correct range (192.168.1.2 to 192.168.1.254) with subnet mask 255.255.255.0 in order to communicate with the ZyWALL.

Refer to your *User's Guide* for detailed IP address configuration for other Windows and Macintosh computer operating systems.

3 Configuring Your ZyWALL

Choose one of these methods to access and configure the ZyWALL. This *Quick Start Guide* shows you how to use the web configurator wizard only. See your *User's Guide* for background information on all ZyWALL features and SMT configuration. Click the web configurator online help for screen-specific web help.

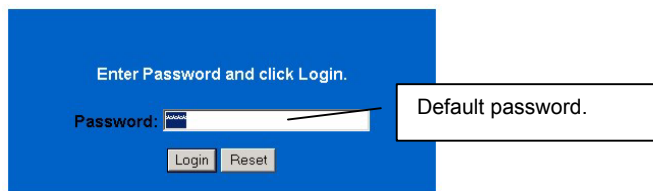
- Web Configurator
- SMT (System Management Terminal). Access the SMT via:
 - Console port using terminal emulation software
 - LAN, WLAN or WAN using Telnet

Accessing Your ZyWALL Via Web Configurator

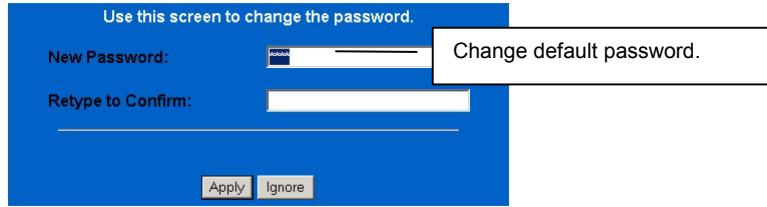
Step 1. Launch your web browser. Enter “192.168.1.1” as the web site address.



Step 2. The default password (“1234”) is already in the password field (in non-readable format). Click **Login** to proceed to a screen asking you to change your password. Click **Reset** to revert to the default password in the password field.

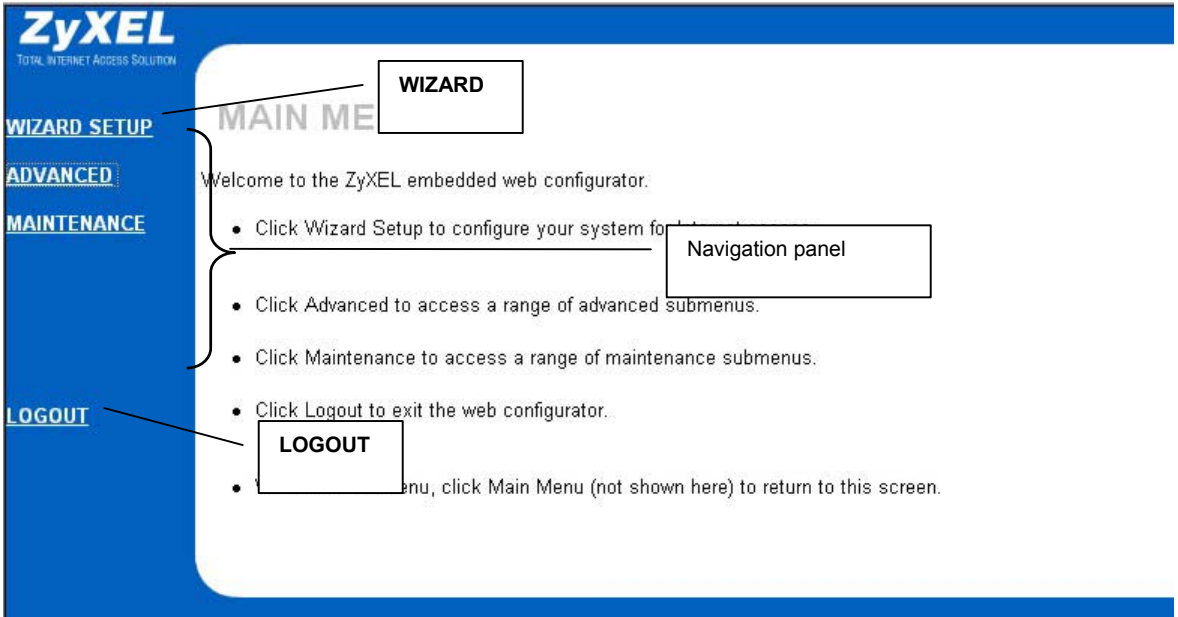


Step 3. It is highly recommended you change the default password! Enter a new password, retype it to confirm and click **Apply**; alternatively click **Ignore** to proceed to the main menu if you do not want to change the password now.



Step 4. You should now see the web configurator **MAIN MENU** screen.

- Click **WIZARD** to begin a series of screens to help you configure your ZyWALL for the first time.
- Click a link under **ADVANCED** in the navigation panel to configure that ZyWALL feature.
- Click **MAINTENANCE** in the navigation panel to see ZyWALL performance statistics, upload firmware and back up, restore or upload a configuration file.
- Click **LOGOUT** when you have finished a ZyWALL management session. The ZyWALL automatically logs you out if it is left idle for five minutes; press **ENTER** to display the **Login** screen again and then log back in. This idle timeout timer is one of the many ZyWALL features that you may edit using the web configurator.



Using the Wizard to Configure for Internet Access

Step 1. Click **Wizard Setup** in the main menu to display the first wizard screen.

WIZARD SETUP

General Setup:
This information is optional, but may be helpful in accessing services of your Internet Service Provider, such as mail and news servers and customer support web pages.

Enter a descriptive name for identification purposes. We recommend using your computer's name.

System Name:

The ISP's domain name is often sent automatically by the ISP to the router. If you are having difficulty accessing ISP services, you may need to enter the Domain Name manually in the field below.

For example, if the full address of your ISP's mail server is **mail.www.my.domain.com**, then the Domain Name is **www.my.domain.com**

Domain Name:

System Name is for identification purposes. Enter your computer's "Computer Name".

The **Domain Name** entry is what is propagated to the DHCP clients on the LAN. If you leave this blank, the domain name obtained by DHCP from the ISP is used. Click **Next** to continue.

Step 2. The second wizard screen has three variations depending on what encapsulation type you use. Use the information in *Internet Account Information* to fill in fields.

WIZARD SETUP

ISP Parameters for Internet Access

Encapsulation	<input type="text" value="Ethernet"/>
Service Type	<input type="text" value="Standard"/>
User Name	N/A
Password	N/A
Login Server IP Address	N/A

Choose **Ethernet** when the WAN port is used as a regular Ethernet. Choose from **Standard** or a RoadRunner version. You'll need **User Name**, **Password** and **Login Server IP Address** for some Roadrunner versions.

Point-to-Point Protocol over Ethernet (**PPPoE**) also functions as a dial-up connection. Therefore you'll also need a username and password and possibly the PPPoE service name. Your ISP will give you all needed information.

Choose **PPTP** if your service provider uses a DSL terminator with PPTP login. The ZyWALL must have a static IP address in this case. You'll also need a login name, associated password, the DSL terminator IP address and possibly a connection ID. Click **Next** to continue.

Step 3. Fill in the fields and click **Finish** to save and complete the wizard setup.

The screenshot shows the 'WIZARD SETUP' interface with three main sections:

- WAN IP Address Assignment:**
 - Radio buttons: Get automatically from ISP (Default), Use fixed IP address
 - Fields: IP Address (0.0.0.0), IP Subnet Mask (0.0.0.0), Gateway IP Address (0.0.0.0)
- DNS Server Address Assignment:**
 - Radio buttons: Get automatically from ISP (Default), Use fixed IP Address - DNS Server IP Address
 - Fields: Primary DNS Server (0.0.0.0), Secondary DNS Server (0.0.0.0)
- WAN MAC Address:**
 - Radio buttons: Factory default, Spoof this computer's MAC Address - IP Address
 - Field: IP Address (192.168.1.33)

Buttons: Back, Finish

WAN IP Address Assignment
 Select **Get automatically from ISP** if your ISP did not assign you a fixed IP address. Select **Use fixed IP address** if the ISP assigned a fixed IP address and then enter your IP address and subnet mask in the next two fields. Enter the gateway IP address in this field (if provided) when you select **Use Fixed IP Address**.

DNS Server Assignment
 Select **Get automatically from ISP** if your ISP does not give you DNS server addresses. If you selected the **Use fixed IP address – Primary/Secondary DNS Server** option, enter the provided DNS addresses in these fields.

WAN MAC Address

Select **Factory Default** to use the factory assigned default MAC address. Alternatively, select **Spoof this Computer's MAC address - IP Address** and enter the IP address of the computer on the LAN whose MAC address you are cloning.

Test Your Internet Connection

Launch your web browser and navigate to www.zyxel.com. You don't need a dial-up program such as Dial Up Networking. Internet access is just the beginning. Refer to the *User's Guide* for more detailed information on the complete range of ZyWALL features.

Troubleshooting

PROBLEM	CORRECTIVE ACTION
None of the LEDs turn on when you turn on the ZyWALL.	Make sure that you have the correct power adapter connected to the ZyWALL and plugged in to an appropriate power source. Check all cable connections. If the LEDs still do not turn on, you may have a hardware problem. In this case, you should contact your local vendor.
Cannot access the ZyWALL from the LAN.	Check the cable connection between the ZyWALL and your computer or hub. Refer to the <i>Rear Panel</i> section for details. Ping the ZyWALL from a LAN computer. Make sure your computer Ethernet card is installed and functioning properly.
Cannot ping any computer on the LAN.	If the 10/100M LAN LEDs are off, check the cable connections between the ZyWALL and your LAN computers. Verify that the IP address and subnet mask of the ZyWALL and the LAN computers are in the same IP address range.

PROBLEM	CORRECTIVE ACTION
<p>Cannot get a WAN IP address from the ISP.</p>	<p>The WAN IP is provided after the ISP verifies the MAC address, host name or user ID. Find out the verification method used by your ISP and configure the corresponding fields.</p>
	<p>If the ISP checks the WAN MAC address, you should clone the MAC address from a LAN computer. Click WAN and then the MAC tab, select Spoof this Computer's MAC address - IP Address and enter the IP address of the computer on the LAN whose MAC address you are cloning.</p>
	<p>If the ISP checks the host name, enter your computer's name (refer to the <i>Wizard Setup</i> section in the <i>User's Guide</i>) in the System Name field in the first screen of the WIZARD.</p>
	<p>If the ISP checks the user ID, click WAN and then the ISP tab. Check your service type, user name, and password.</p>
<p>Cannot access the Internet.</p>	<p>Check the ZyWALL's connection to the cable/DSL device.</p>
	<p>Check whether your cable/DSL device requires a crossover or straight-through cable.</p>
	<p>Click WAN to verify your settings.</p>