

ZyWALL 1

Internet Security Gateway

Quick Start Guide

Version 3.50

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ZyXEL

TOTAL INTERNET ACCESS SOLUTION

Introduction

About Your ZyWALL 1 Internet Security Gateway

The ZyWALL 1 is a dual Ethernet Internet Security Gateway with an integrated firewall and network management features designed for telecommuters and home offices to access the Internet via cable or xDSL modem.

By integrating NAT (SUA), firewall and VPN capabilities, the ZyWALL 1 provides not only ease of installation and Internet access, but also a complete security solution that protects your Intranet and efficiently manages data traffic on your network. Other key features include content filtering and a four-port 10/100Mbps auto-negotiating Ethernet LAN switch.

The embedded web configurator provides easy network management and is totally independent of your operating system.

Packaging List

The following items come with your ZyWALL 1.

- This Quick Start Guide
- One 5 VDC power adapter
- One Supporting CD (includes a User's Guide and Support Notes)
- One straight-through Ethernet cable



Online Registration

Don't forget to register your ZyXEL product (fast, easy online registration at www.zyxel.com) for free future product updates and information.

Hardware Installation

The Front Panel

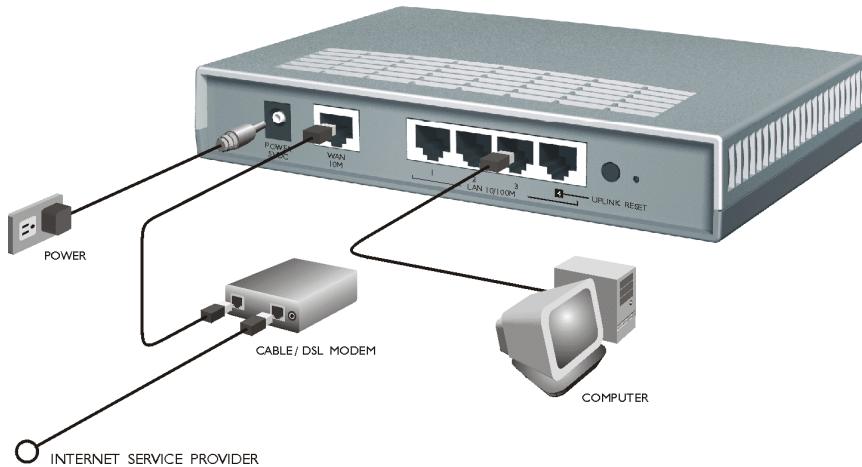
The LEDs on the front panel indicate the operational status of the ZyWALL.



Description of LEDs

LED	COLOR	STATUS	DESCRIPTION
SYS	Green	On	The ZyWALL is receiving power.
		Flashing	The ZyWALL is performing a self-test.
		Off	The ZyWALL is not receiving power.
WAN	Green	On	The WAN link is connected.
		Flashing	The 10M WAN link is sending/receiving packets.
		Off	The WAN link is not ready or has failed.
LAN 1,2,3,4	Green	On	The ZyWALL is connected to a 10M LAN.
		Flashing	The 10M LAN is sending/receiving packets.
		Off	The 10M LAN is not connected.
	Orange	On	The ZyWALL is connected to a 100Mbps LAN.
		Flashing	The 100M LAN is sending/receiving packets
		Off	The 100M LAN is not connected.

Rear Panel and Connections



WAN 10M Port

Connect the WAN port on the ZyWALL to the Ethernet port on the cable or xDSL modem using the Ethernet cable that came with your modem. The Ethernet port on a cable modem is sometimes labeled "PC" or "Workstation".

LAN 10/100M Ports

When the ZyWALL is on and properly connected to a computer or a hub, the corresponding LAN LED on the front panel turns on.

For more than four computers, use an external hub.

LAN 10/100M PORT NUMBER	ETHERNET CABLE TYPE	
	COMPUTER	HUB
1	straight-through	crossover
2	straight-through	crossover
3	straight-through	crossover
4 UPLINK button "on" (pushed in)	straight-through	crossover
4 UPLINK button "off" (out)	crossover	straight-through

POWER 5VDC Port

Use only the included 5 VDC power adapter or one with the same specifications.

Connect the female end of the power adapter to the port labeled **POWER 5VDC** on the rear panel of your ZyWALL.

Additional Installation Requirements

1. A computer(s) with an installed Ethernet NIC (Network Interface Card).
2. A cable/xDSL modem and an ISP account.

Turning on Your ZyWALL

Plug the male end of the power adapter into a power outlet. The **SYS LED** turns on. The WAN and the LAN LED(s) turn on after the system tests are complete, if the WAN and LAN ports are properly connected.

RESET Button

If you forget your password or cannot access the ZyWALL, use the **RESET** button on the rear panel of the ZyWALL to reinstall the factory default configuration (rom) file. Uploading the factory default configuration file replaces the current configuration file with the default configuration file and deletes all customer-made ZyWALL configurations. The Password resets to “1234” and the IP address resets to 192.168.1.1.

Using the RESET Button

1. Use a pointed object to press the **RESET** button for five seconds, then release it.
2. If the LAN LEDs flash within 30 seconds, the factory defaults have been restored and the ZyWALL restarts. Otherwise, go to step 3.
3. Turn the ZyWALL off.
4. While pressing the **RESET** button, turn the ZyWALL on.
5. Continue to hold the **RESET** button for about 30 seconds. The ZyWALL restarts.
6. Release the **RESET** button and wait about ten seconds for the ZyWALL to finish restarting.

Preparing Your Network

Since most Internet/network-related protocols are dependent on TCP/IP, you need to install and configure TCP/IP on your computer before you can access the Internet.

Windows 95/98/Me/NT/2000, Macintosh OS 7 and later operating systems and all versions of UNIX (including Linux) include the software components you need to install and use TCP/IP on your computer.

After the appropriate TCP/IP components are installed, configure the TCP/IP settings in order to "communicate" with your network. The ZyWALL assigns these factory default values if you configure TCP/IP using DHCP:

- IP address: between 192.168.1.33 and 192.168.1.64
- Subnet Mask: 255.255.255.0
- Default Gateway: 192.168.1.1 (the ZyWALL)

Do not assign an arbitrary IP address or subnet mask to your computer, if you do, you will not be able to access the Internet.

Windows 95/98/Me

Installing TCP/IP Components

1. Click **Start** in the task bar (usually in the screen's lower left-hand corner).
2. Click **Settings** and then **Control Panel**.
3. In the **Control Panel** window, double-click the **Network** icon.

The **Network** window displays a list of installed components. You need a network adapter, the TCP/IP protocol and Client for Microsoft Networks.

If you need the adapter:

- a. In the **Network** window, click **Add**.
- b. Select **Adapter** and then click **Add**.
- c. Select the manufacturer and model of your network adapter and then click **OK**.

If you need TCP/IP:

- a. In the **Network** window, click **Add**.
- b. Select **Protocol** and then click **Add**.
- c. Select **Microsoft** from the list of manufacturers.
- d. Select **TCP/IP** from the list of network protocols and then click **OK**.

If you need Client for Microsoft Networks:

- a. Click **Add**.
- b. Select **Client** and then click **Add**.
- c. Select **Microsoft** from the list of manufacturers.
- d. Select **Client for Microsoft Networks** from the list of network clients and then click **OK**.
- e. Restart your computer so the changes you made take effect.

Configuring TCP/IP

Configuring Dynamic TCP/IP Properties

1. In the **Network** window, click the **TCP/IP** entry to select it and click the **Properties** button.
2. In the **TCP/IP Properties** window, select **Obtain an IP address automatically**.
3. Click the **WINS Configuration** tab and select **Disable WINS Resolution**.
4. Click the **Gateway** tab. Highlight any installed gateways and click the **Remove** button until there are none listed.
5. Click the **DNS Configuration** tab and select **Disable DNS**.
6. Click **OK** to save and close the **TCP/IP Properties** window.
7. Click **OK** to close the **Network** window. Insert the Windows CD if prompted.
8. When the drivers are updated, you will be asked if you want to restart your computer. Make sure your ZyWALL is on before clicking **Yes** at the prompt.

Configuring Static TCP/IP Properties

1. In the **Network** window, click the **TCP/IP** entry to select it and click the **Properties** button.

2. In the **TCP/IP Properties** window, select **Specify an IP address**.
3. Type your information into the **IP Address** and **Subnet Mask** fields.
4. Click the **Gateway** tab. Highlight any installed gateways and click the **Remove** button until there are none listed. Type your gateway address in the **New gateway** field and click **Add**.
5. Click the **DNS Configuration** tab and select **Enable DNS**. Make sure all the fields in this tab are correct.
6. In the **TCP/IP Properties** window, click **OK**.
7. In the **Network** window, click **OK**.
8. Restart your computer if prompted, making sure that your ZyWALL is turned on first.

Verifying TCP/IP Properties

1. In the taskbar, click **Start** and then **Run**.
2. In the **Run** window, type "winipcfg" and then click **OK**. The **IP Configuration** window opens and lists information such as your computer's IP address, subnet mask and default gateway.
3. Select your network adapter.
4. When using DHCP, the default TCP/IP values assigned by the ZyWALL (shown earlier) are now displayed.

Windows NT/2000

Installing TCP/IP Components

TCP/IP should already be installed on Windows NT and 2000 systems.

Configuring TCP/IP

Configuring Dynamic TCP/IP Properties

1. Click **Start** in the task bar (usually at the lower left-hand corner of the screen).
2. Click **Settings** and then **Control Panel**.
3. In the **Control Panel** window, double-click the **Network and Dial-up Connections** icon.
4. Right-click the **Local Area Connections** icon and click **Properties**.

5. Select the **Internet Protocol (TCP/IP)** entry and click the **Properties** button.
6. Select **Obtain an IP address automatically** and click the **Advanced** button.
7. Select any installed gateways and click **Remove** until there are none listed.
8. Click the **WINS** tab and select any WINS addresses. Click **Remove** until there are none listed.
9. Click the **DNS** tab and select any DNS addresses. Click **Remove** until there are none listed.
10. Click **OK** to save and close the **Advanced TCP/IP Settings** window.
11. Click **OK** to close the **Internet Protocol (TCP/IP) Properties** window. Restart your computer if prompted, making sure that your ZyWALL is turned on first.

Configuring Static TCP/IP Properties

1. In the **Network and Dial-up Connections** window, click the **TCP/IP** entry to select it and click the **Properties** button.
2. In the **TCP/IP Properties** window, select **Use the following IP Address**.
3. Type your information into the following fields: **IP address**, **Subnet mask**, **Default gateway**, **Preferred DNS server**, **Alternate DNS server** (optional).
4. Click **OK** to save and close the **Internet Protocol (TCP/IP) Properties** window.
5. Click **OK** to close the **Local Area Connection Properties** window.
6. Restart your computer if prompted, making sure that your ZyWALL is turned on first.

Verifying TCP/IP Properties

1. In the taskbar, click **Start, Programs, Accessories** and then **Command Prompt**.
2. In the **Command Prompt** window, type "ipconfig" and then press [ENTER]. The window will display information about your connection-specific DNS suffix, IP Address, Subnet Mask and Default Gateway.

Macintosh

Installing TCP/IP Components

TCP/IP should already be installed on Macintosh OS 7 and later systems.

Configuring TCP/IP Properties

1. Click the **Apple** icon (located in the upper left corner of your screen), select **Control Panels** and then **TCP/IP**.
2. From the "**Connect Via**" box, select **Ethernet**.
3. For dynamically assigned settings select **Using DHCP Server** from the "**Configure**" box; for statically (manually) assigned settings see the following:
 - a. From the "**Configure**" box, select **Manually**.
 - b. Enter your IP Address in the **IP Address** box.
 - c. Enter your subnet mask in the **Subnet mask** box.
 - d. Enter the IP address of your ZyWALL in the **Router address** box.
 - e. To use a name server, enter its address in the **Name server address** box.
4. Close the **TCP/IP Control Panel**.
5. Click **Save** if prompted, to save changes to your configuration.
6. Restart your computer, making sure that your ZyWALL is turned on first.

Verifying TCP/IP Properties for the Macintosh

After your Macintosh is configured and has restarted, go back to the **TCP/IP Control Panel**. When using DHCP, the default TCP/IP values assigned by the ZyWALL (shown earlier) are now displayed.

Internet Account Checklist

Your ISP (Internet Service Provider) should have given you most of the following information. You do not need to fill in every blank.

FIELD	DESCRIPTION	YOUR INFO
System Name (optional)	Name for your ZyWALL.	
Domain Name (optional)	Your domain name.	
Encapsulation	Ethernet, PPPoE, or PPTP.	
Service Type (Ethernet encapsulation)	Standard, RR-Toshiba, RR-Manager, or RR-Telstra. (RR = RoadRunner)	
Service Name (PPPoE Encapsulation)	The PPPoE service name if the ISP supplies one.	
User Name (N/A with Ethernet Standard)	The user name assigned by your ISP.	
Password (N/A with Ethernet Standard)	Enter the password associated with the user name above.	
Login Server IP Address (Only Ethernet with Road Runner encapsulation)	Enter the RoadRunner authentication server IP address if given one.	
Idle Timeout (PPPoE/PPTP only)	The time lapse in seconds before you automatically disconnect from the PPPoE/PPTP server.	
My IP Address (PPTP)	WAN Ethernet port IP address.	
Server IP Address (PPTP)	IP address of the PPTP server.	
Connection ID/Name (PPTP)	Enter the connection ID or name if your DSL modem requires it.	
WAN IP Address (if given)	IP Address	
	IP Subnet Mask	
	Gateway IP Address	
DNS Server Address Server Assignment (if given)	Primary DNS server	
	Secondary DNS server	


Using the Web Configurator

Web Configurator Login

The web configurator provides user-friendly setup for your ZyWALL.

- Step 1.** Launch your web browser and enter 192.168.1.1 as the URL.
- Step 2.** Enter "1234" (default) as the password and click **Login**. In some versions, the default password appears automatically - if this is the case, just click **Login**. You should see a screen asking you to change your password (highly recommended).
- Step 3.** Either enter a new password (and retype it to confirm) and click **Login** or click **Ignore**.
- Step 4.** You should now see the **MAIN MENU** screen.

You are now in the web configurator.

Follow the instructions in the **MAIN MENU** to navigate screens or use the  icon (located in the upper right portion of most screens) for online HTML help.

Click **WIZARD SETUP** for initial configuration.

Click **ADVANCED** for further configuration and setting up advanced features.

Click **MAINTENANCE** to view information about your ZyWALL or upgrade configuration or firmware files.

Click **LOGOUT** at any time to exit the web configurator.

If you forget your password, refer to the previous *RESET Button* section to see how to reset the default configuration file.

Troubleshooting

PROBLEM	CORRECTIVE ACTION
None of the LEDs turn on when you turn on the ZyWALL.	<p>Make sure that you have the correct 5 VDC power adapter connected to the ZyWALL and plugged in to an appropriate power source.</p> <p>If the error persists, you may have a hardware problem. In this case, you should contact your vendor.</p>
Cannot access the ZyWALL from the LAN.	<p>Check your Ethernet cable type and connections. Refer to the <i>Rear Panel and Connections</i> section for details.</p> <p>Make sure your NIC (Network Interface Card) is installed and functioning properly.</p>
Cannot ping any computer on the LAN.	<p>If all of the 10/100M LAN LEDs are off, check the cables between the ZyWALL and your computer or hub.</p> <p>Verify that the IP address and the subnet mask of the ZyWALL and the computers are on the same subnet.</p>
Cannot get a WAN IP address from the ISP.	<p>The WAN IP is provided after the ISP verifies the MAC address, host name or user ID.</p> <p>Find out the verification method used by your ISP and configure the corresponding fields.</p>
	<p>If the ISP checks the WAN MAC Address, click MAINTENANCE and then DHCP Table to display the ZyWALL's WAN MAC address. Send it to the ISP.</p> <p>If the ISP does not allow you to use a new MAC, click ADVANCED, WAN and then the MAC tab. Clone the MAC from the LAN as the WAN. ZyXEL recommends that you configure this menu even if your ISP presently does not require MAC address authentication.</p>
	<p>If the ISP checks the host name, enter your computer's name (refer to the <i>Wizard Setup</i> section in the User's Guide) in the System Name field in the first screen of the WIZARD SETUP.</p>
	<p>If the ISP checks the user ID, click ADVANCED, WAN and the ISP tab. Check your service type, user name, and password.</p>
Cannot access the Internet.	<p>Check the ZyWALL's connection to the cable/xDSL device.</p> <p>Check whether your cable/xDSL device requires a crossover or straight-through cable.</p>
	<p>Click ADVANCED and then WAN and verify your settings.</p>