



Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for ZYXEL G-570S. You'll find the answers to all your questions on the ZYXEL G-570S in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual ZYXEL G-570S
User guide ZYXEL G-570S
Operating instructions ZYXEL G-570S
Instructions for use ZYXEL G-570S
Instruction manual ZYXEL G-570S

G-570S

802.11g Wireless Access Point

User's Guide

Version 1.00
12/2006
Edition 2

ZyXEL
www.zyxel.com



[You're reading an excerpt. Click here to read official ZYXEL G-570S user guide](http://yourpdfguides.com/dref/3685506)
<http://yourpdfguides.com/dref/3685506>

Manual abstract:

· *Command Reference Guide* The Command Reference Guide explains how to use the Command-Line Interface (CLI) and CLI commands to configure the ZyXEL Device. It is recommended you use the web configurator to configure the ZyXEL Device. · *Supporting Disk* Refer to the included CD for support documents. · *ZyXEL Web Site* Please refer to www.zyxel.com for additional support documentation and product certifications. *User Guide Feedback* Help us help you. Send all User Guide-related comments, questions or suggestions for improvement to the following address, or use e-mail instead. Thank you! The Technical Writing Team, ZyXEL Communications Corp., 6 Innovation Road II, Science-Based Industrial Park, Hsinchu, 300, Taiwan.

E-mail: techwriters@zyxel.com.tw *ZyXEL G-570S User's Guide 3 Document Conventions* Document Conventions Warnings and Notes These are how warnings and notes are shown in this User's Guide. Warnings tell you about things that could harm you or your device. Notes tell you other important information (for example, other things you may need to configure or helpful tips) or recommendations.

Syntax Conventions · The G-570S may be referred to as the "ZyXEL Device", the "device", the "system" or the "product" in this User's Guide. · Product labels, screen names, field labels and field choices are all in bold font. · A key stroke is denoted by square brackets and uppercase text, for example, [ENTER] means the "enter" or "return" key on your keyboard. · "Enter" means for you to type one or more characters and then press the [ENTER] key. "Select" or "choose" means for you to use one of the predefined choices.

· A right angle bracket (>) within a screen name denotes a mouse click. For example, Maintenance > Log > Log Setting means you first click Maintenance in the navigation panel, then the Log sub menu and finally the Log Setting tab to get to that screen. · Units of measurement may denote the "metric" value or the "scientific" value. For example, "k" for kilo may denote "1000" or "1024", "M" for mega may denote "1000000" or "1048576" and so on. 4 ZyXEL G-570S User's Guide Document Conventions *Icons Used in Figures* Figures in this User's Guide may use the following generic icons. The ZyXEL Device icon is not an exact representation of your device. ZyXEL Device Computer Notebook computer Server DSLAM Firewall Telephone Switch Router ZyXEL G-570S User's Guide 5 Safety Warnings Safety Warnings For your safety, be sure to read and follow all warning notices and instructions. · Do NOT use this product near water, for example, in a wet basement or near a swimming pool. · Do NOT expose your device to dampness, dust or corrosive liquids. · Do NOT store things on the device.

· Do NOT install, use, or service this device during a thunderstorm. There is a remote risk of electric shock from lightning. · Connect ONLY suitable accessories to the device. · Do NOT open the device or unit. Opening or removing covers can expose you to dangerous high voltage points or other risks. ONLY qualified service personnel should service or disassemble this device. Please contact your vendor for further information. · Make sure to connect the cables to the correct ports. · Place connecting cables carefully so that no one will step on them or stumble over them. · Always disconnect all cables from this device before servicing or disassembling.

· Use ONLY an appropriate power adaptor or cord for your device. Connect it to the right supply voltage (for example, 110V AC in North America or 230V AC in Europe). · Do NOT allow anything to rest on the power adaptor or cord and do NOT place the product where anyone can walk on the power adaptor or cord. · Do NOT use the device if the power adaptor or cord is damaged as it might cause electrocution. · If the power adaptor or cord is damaged, remove it from the device and the power source.

· Do NOT attempt to repair the power adaptor or cord. Contact your local vendor to order a new one. · Do not use the device outside, and make sure all the connections are indoors. There is a remote risk of electric shock from lightning. · Do NOT obstruct the device ventilation slots, as insufficient airflow may harm your device.

· *Antenna Warning!* This device meets ETSI and FCC certification requirements when using the included antenna(s). Only use the included antenna(s). · If you wall mount your device, make sure that no electrical lines, gas or water pipes will be damaged. This product is recyclable. Dispose of it properly. 6 ZyXEL G-570S User's Guide Safety Warnings ZyXEL G-570S User's Guide 7 Safety Warnings 8 ZyXEL G-570S User's Guide Contents Overview Contents Overview

Introduction and Wizards

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... 21 Introducing the ZyXEL Device ...

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....
.....

.....
.....

.....
.....
. 23 ...
.....

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

.....
... 30 Introducing the Web Configurator ..
.....

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

.....
.. 31 Wizards ...
.....

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

. 35 Advanced

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... 43 Navigating the Advanced Screens .

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

. 45 Status Screens

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

... 47 System Screen ..

.....

.....

.....

.....

.....

.....

.....

.....
.....
.....

.....
.....
.....
.....

.....
.....

51 Wireless Screens

.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.... 55 Management and Troubleshooting .

.....
.....

.....
.....
.....

.....
.....
.....

87 Management Screens

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

. 89 Troubleshooting

.....
.....

.....
.....
.....
... 4 Safety Warnings.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

... 6 Contents Overview

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

... 9 Table of Contents..

.....
.....
.....
.....

.....
.....
.....

.....
.....
.....

.... 11 List of Figures .

.....
.....
.....
.....

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

15 List of Tables.....

.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

... 19 Part I: Introduction and Wizards..

.....

.....
.....
.....

.....
.....

.. 21 Chapter 1 Introducing the ZyXEL Device ...

.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.. 23 1.1 Overview

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
..... 23 1.

2 Applications for the ZyXEL Device

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

..... 23 1.2.1 Access Point for Internet Access ..

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....

.. 23 1.2.2 Corporate Network Access Application .

.....

.....
.....
.....
.....

.....
.....
.....

..... 24 1.

2.3 Wireless Client Application

.....
.....
.....

.....
.....
.....
.....

.....

.....
.....
.....

24 1.2.4 Bridge / Repeater

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

25 1.2.5 Access Point and Repeater ...

.....

.....
.....
.....

.....
.....
.....

.....
.....

26 1.3 Ways to Manage the ZyXEL Device

.....

.....
.....
.....

.....
.....
.....

26 1.4 Good Habits for Managing the ZyXEL Device

.....
.....

.....
.....
.....

.....
.....
.....

27 1.5 LEDs

.....
.....
.....

.....
.. 30 Chapter 2 Introducing the Web Configurator

.....
.....
.....

.....
.....
.....

.....
.....
.....

31 2.1 Web Configurator Overview

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 31 ZyXEL G-570S User's Guide 11 Table of Contents 2.2 Accessing the Web Configurator .

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 31 Chapter 3 Wizards ..

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
35 3.1 Using the Wizards

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.. 35 3.1.1 Wizard: Basic Settings

.....
.....
.....

.....
.....
.....

.....
.....
.....

*..... 35 3.1.
2 Wizard: Wireless Settings*

.....
.....

.....
.....
.....

.....
.....
.....

36 3.1.3 Wizard: Security Settings ...

.....
.....

.....
.....
.....

.....
.....
.....

.....

... 37 3.1.
4 Wizard: Confirm Your Settings

.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 40 Part II: Advanced...

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

. 43 Chapter 4 Navigating the Advanced Screens

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 45 4.

0.1 Navigation Panel

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

46 Chapter 5 Status.....

..... 73 7.

7.2 Wireless Security: WEP

.....
.....

.....
.....
.....
.....
.....
.....
.....
.....
.....

... 73 7.7.3 Wireless Security: WPA(2)-PSK

.....
.....
.....
.....
.....
.....

..... 75 7.7.4 Wireless Security: WPA(2) ...

.....
.....
.....
.....
.....
.....

..... 75 7.7.5 Wireless Security: IEEE 802.



[You're reading an excerpt. Click here to read official ZYXEL G-570S user guide](http://yourpdfguides.com/dref/3685506)
<http://yourpdfguides.com/dref/3685506>

Ix.

.....
.....
.....

.....
.....
.....

.....
.....

... 77 7.8 MAC Filter .

.....
.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

.. 78 7.9 OTIST

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.. 81 7.9.1 Enabling OTIST

.....
.....

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
81 7.9.2 Starting OTIST

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 83 7.
9.3 Notes on OTIST

.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

..... *84 Part III: Management and Troubleshooting*

.....
.....
.....
.....

..... *87 Chapter 8 Management Screens ...*

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....

.....
..... 89 8.1 Maintenance Overview ...

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
..... 89 8.2 Password ...

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

..... 89 8.3 Logs ...

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 90 8.

4 Configuration File

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

. 91 8.4.1 Backup Configuration

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

91 8.4.2 Restore Configuration

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 92 8.4.

3 Back to Factory Defaults

.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....

.. 93 8.5 F/W Upload Screen ..

.....
.....

.....

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

98 Part IV: Appendices and Index

.....
.....
.....
.....
.....

. 99 ZyXEL G-570S User's Guide 13 Table of Contents Appendix A Product Specifications....

.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 101 Appendix B Setting up Your Computer's IP Address..

.....
.....
.....
.....
.....
.....
.....

..... 107 Appendix C Pop-up Windows, JavaScripts and Java Permissions ..

.....
.....
.....
.....

. 123 Appendix D Wireless LANs

.....
.....
.....
.....
.....
.....
.....
.....

.....
.....
.....
.... 129 Appendix E Customer Support.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 143 Appendix F Legal Information ...

.....
.....
.....

.....
.....
.....

.....
.....
.....

. 147 Index.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

. 151 14 ZyXEL G-570S User's Guide List of Figures List of Figures Figure 1 Internet Access Application

.....
.....
.....

.....
.....
.....

.....
.....

..... 24 Figure 2 Corporate Network Application ..

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 24 Figure 3 Wireless Client Application

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

.. 25 Figure 4 Bridge Application ...

.....
.....
.....
.....

.....
.....
.....

.....
.....
.....

... 25 Figure 5 Bridge Repeater Application ..

.....
.....

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....
.....
.... 26 Figure 6 AP+Repeater Application

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 26 Figure 7 LEDs .

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

..... 27 Figure 8 Wired Connection

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....

.....
.....
... 28 Figure 9 Wireless Connection

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
28 Figure 10 Web Configurator Address

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 32 Figure 11 Login Screen

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 32 Figure 12 Language Screen

.....
.....
.....

.....
.....
.....

.....

.....

.....

.....

.....

.....

.....

.....

... 32 Figure 13 Select Wizard or Advanced Setup Screen

.....

.....

.....

.....

.....

.....

.....

.....

.....

33 Figure 14 Wizard: Basic Settings

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... 36 Figure 15 Wizard: Wireless Settings ...

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... 37 Figure 16 Setup Wizard 3: Disable .

.....

.....

.....

.....

.....

.....

.....

.....
.....
.....
.....

.... 38 Figure 17 Wizard 3: WEP

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

... 39 Figure 18 Wizard 3: WPA(2)-PSK

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 40 Figure 19 Wizard: Confirm Your Settings .

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.... 41 Figure 20 Status Screen .

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

45 Figure 21 Status

.....
.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

..... 47 Figure 22 Status: View Statistics ..

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

.. 49 Figure 23 Status: View Association List ...

.....
.....
.....
.....

.....
.....
.....

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

63 *Figure 29 Wireless Client Mode: the Site Survey Screen*

.....
.....
.....
.....
.....
.....

. 64 *Figure 30 Bridging Example*

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 66 *Figure 31 Bridge Loop: Two Bridges Connected to Hub*

.....
.....
.....
.....
.....
.....

... 66 *Figure 32 Bridge Loop: Bridge Connected to Wired LAN* ..

.....
.....
.....
.....
.....
.....
.....

..... 67 Figure 33 Wireless Settings: Bridge .

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

.. 67 Figure 34 Wireless Settings: AP+Repeater ...

.....
.....
.....
.....
.....
.....
.....
.....

.... 70 Figure 35 Wireless Security: Disable .

.....
.....
.....
.....
.....
.....
.....
.....

..... 73 Figure 36 Wireless Security: WEP

.....
.....
.....
.....
.....
.....
.....
.....

.....
74 Figure 37 Wireless Security: WPA(2)-PSK

.....
.....

.....
.....
.....

.....
.....
.....

.....
75 Figure 38 Wireless Security: WPA(2) .

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 76 ZyXEL G-570S User's Guide 15 List of Figures Figure 39 Wireless Security: 802.1x

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 77 Figure 40 MAC Filter .

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

.....
.....
.....

..... 84 Figure 49 Management: Password .

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.... 89 Figure 50 Management: Logs .

.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 90 Figure 51 Management: Configuration File ...

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 91 Figure 52 Configuration Upload Successful .

.....
.....
.....

.....
.....
.....

.....
.....
.....
.....

.... 93 Figure 57 Firmware Upgrading Screen .

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

.. 94 Figure 58 Network Temporarily Disconnected

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

94 Figure 59 Firmware Upload Error

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 94 Figure 60 Windows 95/98/Me: Network: Configuration ...

.....
.....
.....

.....
.....
.....
.....

.....
.....

.... 108 Figure 61 Windows 95/98/Me: TCP/IP Properties: IP Address .

.....
.....
.....
.....
.....

.... 109 Figure 62 Windows 95/98/Me: TCP/IP Properties: DNS Configuration .

.....
.....
.....
.....
.....

.....110 Figure 63 Windows XP: Start Menu ..

.....
.....
.....
.....
.....
.....

.111 Figure 64 Windows XP: Control Panel

.....
.....
.....
.....
.....
.....
.....

.....111 Figure 65 Windows XP: Control Panel: Network Connections: Properties .

.....
.....
.....
.....

...112 Figure 66 Windows XP: Local Area Connection Properties ..

.....
.....
.....
.....
.....

.....
...116 Figure 72 Macintosh OS X: Apple Menu ..

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

...117 Figure 73 Macintosh OS X: Network

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

....118 Figure 74 Red Hat 9.0: KDE: Network Configuration: Devices

.....

.....

.....

.....

.....

.....

.....

.....119 Figure 75 Red Hat 9.0: KDE: Ethernet Device: General

.....

.....

.....

.....

.....

.....

.....

.....

.....

119

.....

.....

.....

.....

.....

... 120 ..

.....

.....
.....
.....
.....

..... 121 Figure 76 Red Hat 9.0: KDE: Network Configuration: DNS ...

.....
.....

.....
.....
.....

.. 120 Figure 77 Red Hat 9.0: KDE: Network Configuration: Activate Figure 78 Red Hat 9.0: Dynamic IP Address Setting in ifconfig-eth0 .

.....
.....

.....
.....
.....

... 121 Figure 79 Red Hat 9.0: Static IP Address Setting in ifconfig-eth0 Figure 80 Red Hat 9.0: DNS Settings in resolv.conf Figure 81 Red Hat 9.0: Restart Ethernet Card ...

.....
.....

.....
.....
.....

.....
.....

. 121

.....
.....
.....

.....
.....
.....

.... 121 16 ZyXEL G-570S User's Guide List of Figures Figure 82 Red Hat 9.0: Checking TCP/IP Properties

.....

.....
.....
.....

.....
.....

..... 122 Figure 83 Pop-up Blocker ..

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

..... 123 Figure 84 Internet Options: Privacy

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 124 Figure 85 Internet Options: Privacy ...

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....

.... 125 Figure 86 Pop-up Blocker Settings .

.....

.....
.....
.....
.....

.....
.....
.....
.....

.....

.....
.....
.....

.. 125 Figure 87 Internet Options: Security

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

... 126 Figure 88 Security Settings - Java Scripting ..

.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.. 127 Figure 89 Security Settings - Java ...

.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

..... 127 Figure 90 Java (Sun)

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

.....
.....
.....
.....

128 Figure 91 Peer-to-Peer Communication in an Ad-hoc Network

.....
.....

.....
.....

..... 129 Figure 92 Basic Service Set .

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

.. 130 Figure 93 Infrastructure WLAN

.....
.....
.....

.....
.....
.....

.....
.....
.....

. 131 Figure 94 RTS/CTS

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....
.....

. 132 Figure 95 WPA(2) with RADIUS Application Example

.....
.....
.....
.....

.....
.....
.....

..... 139 Figure 96 WPA(2)-PSK Authentication .

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 140 ZyXEL G-570S User's Guide 17 List of Figures 18 ZyXEL G-570S User's Guide List of Tables List of Tables Table 1 Front Panel LED Description

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....

. 27 Table 2 Factory Defaults

.....
.....
.....
.....

.....
.....
.....
.....

.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....

52 Table 11 Types of Encryption for Each Type of Authentication

.....

.....
.....
.....
.....

.....
.....

.. 57 Table 12 Additional Wireless Terms ...

.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

58 Table 13 WMM QoS Priorities

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

. 59 Table 14 Wireless Settings: Access Point

.....
.....

.....
.....

.....
.....
.....

.....
.....
.....

.... 60 Table 15 Wireless Settings: Wireless Client

.....
.....
.....

.....
.....
.....

.....
.....
.....

.... 63 Table 16 Wireless: the AP Survey Screen

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 65 Table 17 Wireless Settings: Bridge ...

.....
.....
.....

.....
.....
.....

.....
.....
.....

. 68 Table 18 Wireless Settings: AP + Repeater

.....
.....

.....
.....
.....

.....
.....
.....
.....

.. 70 Table 19 Wireless Security: Disable ...

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.... 73 Table 20 Wireless Security: WEP

.....
.....
.....
.....

.....
.....
.....

.....
.....
.....
.....

74 Table 21 Wireless Security: WPA-PSK

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

... 75 Table 22 Wireless Security: WPA(2) ..

.....
.....

.....
.....
.....

.....
.....

.....
.... 82 Table 26 Management: Password

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

.... 89 Table 27 Management: Logs .

.....
.....
.....
.....

.....
.....
.....

.....
.....
.....

.. 90 Table 28 Management: Configuration File: Restore Configuration ...

.....
.....
.....
.....
.....

..... 92 Table 29 Management: F/W Upload ..

.....
.....
.....
.....
.....

.....
.....
.....

.....
.....

94 Table 30 Hardware Specifications

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

... 101 Table 31 Feature Specifications

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

101 Table 32 Wireless Specifications

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 104 Table 33 Approvals

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....

.....
.....

.....
.. 104 Table 34 Power Adaptor Specifications

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

.. 105 Table 35 IEEE 802.11g ...

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

.. 133 Table 36 Wireless Security Levels ...

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

134 Table 37 Comparison of EAP Authentication Types

.....
.....

.....
.....

.....
.....

.....
.....
. 137 Table 38 Wireless Security Relational Matrix
.....

.....
.....
.....
.....
.....
.....
.....

.....
.. 140 ZyXEL G-570S User's Guide 19 List of Tables 20 ZyXEL G-570S User's Guide PART I Introduction and Wizards Introducing the ZyXEL Device (23)
Introducing the Web Configurator (31) Wizards (35) 21 22 CHAPTER 1 Introducing the ZyXEL Device This chapter introduces the main applications and
features of the ZyXEL Device.



[You're reading an excerpt. Click here to read official ZYXEL G-570S user guide](http://yourpdfguides.com/dref/3685506)
<http://yourpdfguides.com/dref/3685506>

It also introduces the ways you can manage the ZyXEL Device. 1.

1 Overview The ZyXEL Device is a 4-in-1 Access Point with Super G and Turbo G wireless technology. Access Point (AP), repeater, bridge and wireless client functions allow you to use the ZyXEL Device in various network deployments. Super G and Turbo G technology boost the wireless data throughput. The ZyXEL Device Access Point (AP) allows wireless stations to communicate and/or access a wired network. It can work as a bridge and repeater to extend your wireless network.

You can also use it as a wireless client to access a wired network through another AP. The ZyXEL Device uses IEEE 802.1x, WEP data encryption, WPA (Wi-Fi Protected Access), WPA2 and MAC address filtering to give mobile users highly secured wireless connectivity. Both IEEE 802.11b and IEEE 802.11g compliant wireless devices can associate with the ZyXEL Device. In addition to being highly flexible, the ZyXEL Device is easy to install and configure. 1.2 Applications for the ZyXEL Device Here are some application examples of how you can use your ZyXEL Device. 1.

2.1 Access Point for Internet Access The ZyXEL Device is an ideal access solution for wireless Internet connection. A typical Internet access application for your ZyXEL Device is shown as follows. ZyXEL G-570S User's Guide 23 Chapter 1 Introducing the ZyXEL Device Figure 1 Internet Access Application 1.2.2 Corporate Network Access Application In situations where users need to access corporate network resources and the Internet, the ZyXEL Device is an ideal solution for wireless stations to connect to the corporate network without expensive network cabling. Stations A, B and C can access the wired network through the ZyXEL Devices. The following figure depicts a typical application of the ZyXEL Device in an enterprise environment. The three computers with wireless adapters are allowed to access the network resource through the ZyXEL Device after account validation by the network authentication server. Figure 2 Corporate Network Application 1.

2.3 Wireless Client Application The ZyXEL Device can function as a wireless client to connect to a network via an Access Point (AP). The AP provides access to the wired network and the Internet. 24 ZyXEL G-570S User's Guide Chapter 1 Introducing the ZyXEL Device Figure 3 Wireless Client Application 1.2.

4 Bridge / Repeater The ZyXEL Device can act as a wireless network bridge and establish wireless links with other APs. The ZyXEL Devices in the following example are using bridge mode with a star configuration. A, B, C and D are connected to independent wired networks and have bridge connections at the same time (B, C and D can communicate with A). Figure 4 Bridge Application A ZyXEL Device in bridge mode without an Ethernet connection can function as a repeater. It transmits traffic from one AP to another AP without using a wired connection.

C in the following graphic repeats wireless traffic between A and B. ZyXEL G-570S User's Guide 25 Chapter 1 Introducing the ZyXEL Device Figure 5 Bridge Repeater Application 1.2.5 Access Point and Repeater Set the ZyXEL Device to AP+Repeater mode to have it simultaneously provide access for wireless clients and use the repeater function. This allows you to extend the coverage of your wireless network without installing Ethernet cable to connect the ZyXEL Device. In the following figure, B is in AP+Repeater mode. B functions as an AP for wireless clients C and D. B also repeats traffic between the wireless clients and AP A which is connected to the wired network. You could also set AP A to AP+Repeater mode so that wireless clients could connect to A as well. Figure 6 AP+Repeater Application 1.

3 Ways to Manage the ZyXEL Device Use any of the following methods to manage the ZyXEL Device. · Web Configurator. This is recommended for everyday management of the ZyXEL Device using a (supported) web browser. · Command Line Interface. Line commands are mostly used for troubleshooting by service engineers. · FTP. Use File Transfer Protocol for firmware upgrades and configuration backup/restore. 26 ZyXEL G-570S User's Guide Chapter 1 Introducing the ZyXEL Device 1.4 Good Habits for Managing the ZyXEL Device Do the following things regularly to make the ZyXEL Device more secure and to manage the ZyXEL Device more effectively. · Change the password.

Use a password that's not easy to guess and that consists of different types of characters, such as numbers and letters. · Write down the password and put it in a safe place. · Back up the configuration (and make sure you know how to restore it). Restoring an earlier working configuration may be useful if the device becomes unstable or even crashes. If you forget your password, you will have to reset the ZyXEL Device to its factory default settings.

If you backed up an earlier configuration file, you would not have to totally re-configure the ZyXEL Device. You could simply restore your last configuration.

1.5 LEDs Figure 7 LEDs The following table describes the LEDs on the ZyXEL Device. Table 1 Front Panel LED Description LED PWR COLOR Green STATUS Blinking On Off ETHN Green Blinking On Amber Blinking On Off OTIST Green Blinking On Off DESCRIPTION The ZyXEL Device is not ready or rebooting.

The ZyXEL Device has rebooted successfully and is receiving power. The ZyXEL Device is not receiving power. The ZyXEL Device is sending/receiving data. The ZyXEL Device has a successful 10Mbps Ethernet connection. The ZyXEL Device is sending/receiving data. The ZyXEL Device has a successful 100Mbps Ethernet connection. The ZyXEL Device does not have an Ethernet connection. The OTIST automatic wireless configuration is in progress. The OTIST feature is activated on the ZyXEL Device. The OTIST feature is not activated or activated but the wireless settings have been changed.

ZyXEL G-570S User's Guide 27 Chapter 1 Introducing the ZyXEL Device Table 1 Front Panel LED Description LED WLAN COLOR Green STATUS Blinking On DESCRIPTION The ZyXEL Device is sending or receiving data through the wireless LAN. The ZyXEL Device is ready, but is not sending/receiving data. 1.6 Management Computer Setup You can connect a computer to the ZyXEL Device for management purposes either using an Ethernet connection (recommended for a first time management session) or wirelessly. 1.6.1 Wired Connection You must prepare your computer/computer network to connect to the ZyXEL Device if you are using a wired connection. Your computer's IP address and subnet mask must be on the same subnet as the ZyXEL Device. This can be done by setting up your computer's IP address. See the appendix for details on how to set up your IP address.

The following figure shows an example of accessing your ZyXEL Device via a wired connection with an Ethernet cable. Figure 8 Wired Connection Default IP Address: 192.168.1.2 192.

168.1.3 1.6.2 Wireless Connection Ensure that the wireless stations have a compatible wireless card/adaptor with the same wireless settings as the ZyXEL Device.



[You're reading an excerpt. Click here to read official ZYXEL G-570S user guide](http://yourpdfguides.com/dref/3685506)
<http://yourpdfguides.com/dref/3685506>

The following figure shows how you can access your ZyXEL Device wirelessly. Figure 9 Wireless Connection SSID: ZyXEL G570S Channel: 6 28 ZyXEL G-570S User's Guide Chapter 1 Introducing the ZyXEL Device The wireless stations and the ZyXEL Device must use the same SSID, channel and wireless security settings for wireless communication. If you do not enable any wireless security on your ZyXEL Device, your network traffic is visible to any wireless networking device that is within range. 1.7 Restarting the ZyXEL Device Press and immediately release the RESET button to restart the ZyXEL Device.

Holding the RESET button in for five seconds or longer resets the device to the factory-default settings. 1.8 Resetting the ZyXEL Device If you forget the ZyXEL Device's IP address or your password, to access the ZyXEL Device, you will need to reload the factory-default using the RESET button. Resetting the ZyXEL Device replaces the current configuration file with the factory-default configuration file. This means that you will lose all configurations that you had previously.

The following parameters will be reset to the default values. Table 2 Factory Defaults PARAMETER IP Address Password Wireless Security SSID DEFAULT VALUE 192.168.1.2 1234 Disabled ZyXEL G-570S 1.8.1 Methods of Restoring Factory-Defaults You can erase the current configuration and restore factory defaults in two ways: 1 Use the RESET button on the ZyXEL Device to upload the default configuration file (hold this button in for at least five seconds). 2 Use the web configurator. Click System > Management > Configuration File. From here you can restore the ZyXEL Device to its factory default settings. ZyXEL G-570S User's Guide 29 Chapter 1 30 ZyXEL G-570S User's Guide CHAPTER This chapter describes how to configure the ZyXEL Device using the Wizard. 2 Introducing the Web Configurator 2.1 Web Configurator Overview The web configurator is an HTML-based management interface that allows easy ZyXEL Device setup and management via Internet browser. Use Internet Explorer 6.0 and later or Netscape Navigator 7.

0 and later versions. The recommended screen resolution is 1024 by 768 pixels. In order to use the web configurator you need to allow: · Web browser pop-up windows from your device. Web pop-up blocking is enabled by default in Windows XP SP (Service Pack) 2. · JavaScripts (enabled by default). · Java permissions (enabled by default). See the Troubleshooting chapter for details on how to make sure these functions are allowed in Internet Explorer or Netscape Navigator. 2.2 Accessing the Web Configurator Follow the steps below to access the web configurator, select a language, change your login password and choose a configuration method from the status screen. 1 Make sure your ZyXEL Device hardware is properly connected (refer to the Quick Start Guide). 2 Prepare your computer/computer network to connect to the ZyXEL Device (refer to the appendix on setting up your IP address). 3 Launch your web browser. 4 Type the IP address of the ZyXEL Device (192.168.1.

2 is the default) in the URL bar. Press Enter. ZyXEL G-570S User's Guide 31 Chapter 2 Introducing the Web Configurator Figure 10 Web Configurator Address 5 Type "1234" (default) as the password and click Login. Figure 11 Login Screen Default password is 1234. 6 Select your language and click Apply. Figure 12 Language Screen 7 The following screen displays. Select Go Wizard Setup and click Apply to use the wizard setup screens for initial configuration (see Chapter 3 on page 35). Select Go Advanced Setup and click Apply to go directly to the advanced screens (see Chapter 4 on page 45). 32 ZyXEL G-570S User's Guide Chapter 2 Introducing the Web Configurator Figure 13 Select Wizard or Advanced Setup Screen ZyXEL G-570S User's Guide 33 Chapter 2 Introducing the Web Configurator 34 ZyXEL G-570S User's Guide CHAPTER 3 Wizards This chapter shows you how to configure the ZyXEL Device's basic features using the wizards. 3.

1 Using the Wizards The wizards consist of a series of screens to help you configure your ZyXEL Device for wireless stations to access your wired LAN. Use the following buttons to navigate the Wizard: Back Next Click Back to return to the previous screen. Click Next to continue to the next screen. No configuration changes will be saved to the ZyXEL Device until you click Finish. 3.

1.1 Wizard: Basic Settings First, log into the ZyXEL Device as shown in Section 2.2 on page 31. Click SETUP WIZARD to display the first wizard screen shown next. Refer to the System Screens chapter for more background information.

1 Enter a descriptive name to identify the device in the Ethernet network. 2 Select Obtain IP Address Automatically if you want to put the device behind a router that assigns an IP address. If you select this by mistake, use the RESET button to restore the factory default IP address. 3 Select Use fixed IP Address to give the device a static IP address. The IP address you configure here is used for management of the device (accessing the web configurator). 4 Enter a Subnet Mask appropriate to your network and the Gateway IP Address of the neighboring device, if you know it. If you do not, leave the Gateway IP Address field as 0.0.0.0.

ZyXEL G-570S User's Guide 35 Chapter 3 Wizards Figure 14 Wizard: Basic Settings Do not select this unless you have a router that can assign the ZyXEL Device an IP address. 3.1.2 Wizard: Wireless Settings Use this wizard screen to set up the wireless LAN. See the chapter on the wireless screens for background information. 1 The SSID is a unique name to identify the device in a wireless network. Enter up to 32 printable characters. Spaces are allowed. If you change this field on the device, make sure all wireless stations use the same SSID in order to access the network. 2 A wireless device uses a channel to communicate in a wireless network.

Select a channel that is not already in use by a neighboring wireless device. The wireless stations and this device must use the same SSID, channel and wireless security settings for wireless communication. 36 ZyXEL G-570S User's Guide Chapter 3 Wizards Figure 15 Wizard: Wireless Settings 3.1.3 Wizard: Security Settings Use this screen to configure security for your wireless LAN.

The screen varies depending on what you select in the Encryption Method field. Select Disable to have no wireless security configured, select WEP, or select WPA-PSK if your wireless clients support WPA-PSK. Select WPA2-PSK if your wireless clients support WPA2-PSK Go to Wireless > Security if you want WPA2, WPA or 802.1x. See Chapter 7 on page 55 for background information.

3.1.3.1 Disable Select Disable to have no wireless LAN security configured. If you do not enable any wireless security on your device, your network is accessible to any wireless networking device that is within range.



You're reading an excerpt. Click here to read official ZYXEL G-570S user guide
<http://yourpdfguides.com/dref/3685506>

With no wireless security a neighbor can access and see traffic in your network. ZyXEL G-570S User's Guide 37 Chapter 3 Wizards Figure 16 Setup Wizard 3: Disable 3.1.3.2 WEP 1 WEP (Wired Equivalent Privacy) encrypts data frames before transmitting over the wireless network.

Select 64-bit, 128-bit or 152-bit from the WEP Encryption dropdown list box and then follow the on-screen instructions to set up the WEP keys. 2 Choose an encryption level from the drop-down list. The higher the WEP encryption, the higher the security but the slower the throughput. 3 You can generate or manually enter a WEP key. If you selected 64-bit or 128-bit WEP, you can enter a Passphrase (up to 32 printable characters) and click Generate. The device automatically generates WEP keys. One key displays in the Key 1 field. Go to Wireless > Security if you want to see the other WEP keys. or Enter a manual key in the Key 1 field. 38 ZyXEL G-570S User's Guide Chapter 3 Wizards Figure 17 Wizard 3: WEP Use Passphrase to automatically generate keys or manually enter a key in the Key 1 field.

3.1.3.3 WPA(2)-PSK Only select WPA-PSK or WPA2-PSK if your wireless clients support it. Type a pre-shared key from 8 to 63 ASCII characters (including spaces and symbols).

This field is case-sensitive. ZyXEL G-570S User's Guide 39 Chapter 3 Wizards Figure 18 Wizard 3: WPA(2)-PSK 3.1.4 Wizard: Confirm Your Settings This read-only screen shows the status of the current settings. Use the summary table to check whether what you have configured is correct.

Click Finish to complete the wizard configuration and save your settings. 40 ZyXEL G-570S User's Guide Chapter 3 Wizards Figure 19 Wizard: Confirm Your Settings For more detailed background information, see the rest of this User's Guide. ZyXEL G-570S User's Guide 41 Chapter 3 Wizards 42 ZyXEL G-570S User's Guide PART II Advanced Navigating the Advanced Screens (45) Status Screens (47) System Screen (51) Wireless Screens (55) 43 44 CHAPTER 4 Navigating the Advanced Screens The Status screen is the first advanced screen that displays. This section explains how to navigate the advanced configuration screens. See Chapter 5 on page 47 for details about the individual screen. Figure 20 Status Screen The following table describes the global web configurator icons (in the upper right corner of most screens). Table 3 Global Icon Key ICON DESCRIPTION Click the Wizard icon to open the setup wizard. Click the About icon to view copyright information. Click the Logout icon at any time to exit the web configurator. Make sure you save any changes before you log out.

ZyXEL G-570S User's Guide 45 Chapter 4 Navigating the Advanced Screens 4.0.1 Navigation Panel After you enter the password, use the links on the navigation panel to go to the various advanced screens. The following table describes the sub-menus. Table 4 Screens Summary LINK Status TAB FUNCTION This screen shows the ZyXEL Device's general device, system and interface status information. Use this screen to access the wizard, and summary statistics tables. Use this screen to configure the device name and IP address assignment settings. Wireless Settings Security MAC Filter OTIST Use this screen to configure the wireless LAN. Use this screen to configure the wireless LAN's security settings. Use the MAC filter screen to configure the ZyXEL Device to block or allow only certain devices to associate with the ZyXEL Device.

When the ZyXEL Device is in access point mode, this screen allows you to assign wireless clients the ZyXEL Device's wireless security settings. When the ZyXEL Device is in wireless client mode, this screen allows the ZyXEL Device to get security settings from an OTIST-enabled access point. Use this screen to configure the administrator password. Use this screen to view logs and alert messages. Use this screen to backup and restore the configuration or reset the factory defaults to your ZyXEL Device.

Use this screen to upload firmware to your ZyXEL Device. System Wireless Management Password Logs Configuration F/W Upload See the rest of this User's Guide for configuration details and background information on all features using the web configurator. 46 ZyXEL G-570S User's Guide CHAPTER This chapter describes the Status screens. 5 Status Screens 5.1 System Status Click Status to open the following screen.

The Status screen display a snapshot of your device's settings. You can also view network statistics and a list of wireless stations currently associated with your device. Note that these labels are READ-ONLY and are meant to be used for diagnostic purposes. Figure 21 Status The following table describes the labels in this screen. Table 5 Status LABEL Refresh Interval Refresh Now Device Information Device Name Operation Mode This is the same as the device name you entered in the first wizard screen if you entered one there. It is for identification purposes. This field shows whether the device is functioning as an access point, a wireless client, a bridge or an access point and repeater. DESCRIPTION Use the drop-down list box to select how often you want the device to renew the information on this screen. Click this button to have the device renew the information on this screen. ZyXEL G-570S User's Guide 47 Chapter 5 Status Screens Table 5 Status LABEL MAC Address DESCRIPTION This field displays the MAC address of the device.

The MAC (Media Access Control) or Ethernet address on a LAN (Local Area Network) is unique to your computer. A network interface card such as an Ethernet adapter has a hardwired address that is assigned at the factory. This address follows an industry standard that ensures no other adapter has a similar address. This is the firmware version and the date the firmware was created. Firmware Version IP Settings IP Address Subnet Mask Gateway IP Address Wireless Settings SSID Channel Encryption Method This is the Ethernet port IP address. This is the Ethernet port subnet mask. This is the IP address of a gateway. Leave this field as 0.0.0.

0 if you do not know it. This is the descriptive name used to identify the device in a wireless network. This field displays the radio channel the device is currently using. This field shows the type of data encryption that is enabled on the wireless network: WEP (WEP or 802.1x) TKIP (WPA or WPA-PSK) AES (WPA2 or WPA2-PSK) TKIP + AES (WPA & WPA2 or WPA-PSK & WPA2-PSK) or Disable (no security) This field shows whether MAC filter is enabled or not.

With MAC filtering, you can allow or deny access to the device based on the MAC addresses of the wireless stations. Click View Statistics to see performance statistics such as number of packets sent and number of packets received. Click View Association List to show the wireless stations that are currently associated to the device. MAC Filter View Statistics View Association List 5.



[You're reading an excerpt. Click here to read official ZYXEL G-570S user guide](http://yourpdfguides.com/dref/3685506)
<http://yourpdfguides.com/dref/3685506>

1.

1 Statistics Click View Statistics in the Status screen. This screen displays read-only information including port status and packet specific statistics. Also provided are "system up time" and "poll interval(s)". The Poll Interval(s) field is configurable. 48 ZyXEL G-570S User's Guide Chapter 5 Status Screens Figure 22 Status: View Statistics The following table describes the labels in this screen. Table 6 Status: View Statistics LABEL Ethernet Packets Bytes Wireless Unicast Packets Broadcast Packets Multicast Packets Total Packets Total Bytes System Up Time Poll Interval(s) Set Interval Stop This row displays the numbers of unicast packets received and transmitted by the wireless adapter. This row displays the numbers of broadcast packets received and transmitted by the wireless adapter. This row displays the numbers of multicast packets received and transmitted by the wireless adapter. This row displays the numbers of all types of packets received and transmitted by the wireless adapter. This row displays the numbers of bytes received and transmitted by the wireless adapter.

This is the total time the device has been on. Enter the time interval for refreshing statistics. Click this button to apply the new poll interval you entered above. Click this button to stop refreshing statistics. This row displays the numbers of packets received and transmitted by the Ethernet port. This row displays the numbers of bytes received and transmitted by the Ethernet port. DESCRIPTION 5.1.2 Association List Click Status and then the View Association List button to display the Association List screen. When the device is not in wireless client mode, this screen displays which wireless stations are currently associated to the device in the Association List screen.

ZyXEL G-570S User's Guide 49 Chapter 5 Status Screens Figure 23 Status: View Association List The following table describes the labels in this screen. Table 7 Status: View Association List LABEL # MAC Address IP Address Signal Strength Status Rescan DESCRIPTION This is the index number of an associated wireless station. This field displays the MAC address of an associated wireless station. This field displays the IP address of an associated wireless station. This field displays the signal strength of each associated wireless station.

This field displays Associated for associated wireless stations. Click Rescan to check for associated wireless stations. When the device is in wireless client mode, this screen displays details of the access point to which the ZyXEL Device is associated. Figure 24 Status: View Association List: Wireless Client Mode The following table describes the labels in this screen. Table 8 Status: View Association List: Wireless Client Mode LABEL # MAC Address IP Address Signal Strength Status Rescan DESCRIPTION This is the index number of an associated access point.

This field displays the MAC address of the associated access point. This field displays the IP address of the associated access point. This field displays the signal strength of the associated access point. This field displays Associated for an associated access point. Click Rescan to check for associated wireless stations. 50 ZyXEL G-570S User's Guide CHAPTER This chapter provides information on the System screen. 6 System Screen 6.1 TCP/IP Parameters 6.1.1 IP Address Assignment Every computer on the Internet must have a unique IP address.

If your networks are isolated from the Internet, for instance, only between your two branch offices, you can assign any IP addresses to the hosts without problems. However, the Internet Assigned Numbers Authority (IANA) has reserved the following three blocks of IP addresses specifically for private networks. Table 9 Private IP Address Ranges 10.0.0.0 172.16.0.0 192.168.0.0 10.255.255.255 172.31.255.255 192.168.255.255

255 You can obtain your IP address from the IANA, from an ISP or have it assigned by a private network. If you belong to a small organization and your Internet access is through an ISP, the ISP can provide you with the Internet addresses for your local networks. On the other hand, if you are part of a much larger organization, you should consult your network administrator for the appropriate IP addresses. Regardless of your particular situation, do not create an arbitrary IP address; always follow the guidelines above. For more information on address assignment, please refer to RFC 1597, Address Allocation for Private Internets and RFC 1466, Guidelines for Management of IP Address Space. 6.1.2 IP Address and Subnet Mask Similar to the way houses on a street share a common street name, computers on a LAN share one common network number. ZyXEL G-570S User's Guide 51 Chapter 6 System Screen Where you obtain your network number depends on your particular situation. If the ISP or your network administrator assigns you a block of registered IP addresses, follow their instructions in selecting the IP addresses and the subnet mask.

If the ISP did not explicitly give you an IP network number, then most likely you have a single user account and the ISP will assign you a dynamic IP address when the connection is established. The Internet Assigned Number Authority (IANA) reserved this block of addresses specifically for private use; please do not use any other number unless you are told otherwise. Let's say you select 192.168.1.0 as the network number; which covers 254 individual addresses, from 192.168.1.1 to 192.168.1.254

(zero and 255 are reserved). In other words, the first three numbers specify the network number while the last number identifies an individual computer on that network. Once you have decided on the network number, pick an IP address that is easy to remember, for instance, 192.168.1.254

1.2, for your device, but make sure that no other device on your network is using that IP address. The subnet mask specifies the network number portion of an IP address. Your device will compute the subnet mask automatically based on the IP address that you entered. You don't need to change the subnet mask computed by the device unless you are instructed to do otherwise.

6.2 System Settings Click System to open the System Settings screen. Figure 25 System Settings The following table describes the labels in this screen. Table 10 System Settings LABEL Device Name IP Address Assignment Obtain IP Address Automatically Select this option to have your device use a dynamically assigned IP address from a router each time. DESCRIPTION This name can be up to 30 printable characters long. Spaces are allowed. 52 ZyXEL G-570S User's Guide Chapter 6 System Screen Table 10 System Settings LABEL Use fixed IP address IP Address Subnet Mask Gateway IP Address Apply Reset DESCRIPTION Select this option to have your device use a static IP address. When you select this option, fill in the fields below. Enter the IP address of your device in dotted decimal notation. Enter the subnet mask.



[You're reading an excerpt. Click here to read official ZYXEL G-570S user guide](http://yourpdfguides.com/dref/3685506)

<http://yourpdfguides.com/dref/3685506>

Type the IP address of the gateway. The gateway is a router or switch on the same network segment as the device. The gateway helps forward packets to their destinations. Leave this field as 0.0.0.0 if you do not know it. Click Apply to save your changes back to the device. Click Reset to reload the previous configuration for this screen. ZyXEL G-570S User's Guide 53 Chapter 6 System Screen 54 ZyXEL G-570S User's Guide CHAPTER 7 Wireless Screens This chapter discusses how to configure the wireless network settings in your ZyXEL Device.

See the appendices for more detailed information about wireless networks. 7.1 Wireless Network Overview The following figure provides an example of a wireless network. Figure 26 Example of a Wireless Network The wireless network is the part in the blue circle. In this wireless network, devices A and B use the access point (AP) to interact with the other devices (such as the printer) or with the Internet.

Your ZyXEL Device is the AP. Every wireless network must follow these basic guidelines. · Every device in the same wireless network must use the same SSID. The SSID is the name of the wireless network. It stands for Service Set IDentity.

· If two wireless networks overlap, they should use a different channel. ZyXEL G-570S User's Guide 55 Chapter 7 Wireless Screens Like radio stations or television channels, each wireless network uses a specific channel, or frequency, to send and receive information. · Every device in the same wireless network must use security compatible with the AP. Security stops unauthorized devices from using the wireless network. It can also protect the information that is sent in the wireless network. 7.2 Wireless Security Overview The following sections introduce different types of wireless security you can set up in the wireless network. 7.2.1 SSID Normally, the ZyXEL Device acts like a beacon and regularly broadcasts the SSID in the area.

You can hide the SSID instead, in which case the ZyXEL Device does not broadcast the SSID. In addition, you should change the default SSID to something that is difficult to guess. This type of security is fairly weak, however, because there are ways for unauthorized wireless devices to get the SSID. In addition, unauthorized wireless devices can still see the information that is sent in the wireless network. 7.2.2 MAC Address Filter Every device that can use a wireless network has a unique identification number, called a MAC address.1 A MAC address is usually written using twelve hexadecimal characters2; for example, 00A0C5000002 or 00:A0:C5:00:00:02. To get the MAC address for each device in the wireless network, see the device's User's Guide or other documentation. You can use the MAC address filter to tell the ZyXEL Device which devices are allowed or not allowed to use the wireless network.

If a device is allowed to use the wireless network, it still has to have the correct information (SSID, channel, and security). If a device is not allowed to use the wireless network, it does not matter if it has the correct information. This type of security does not protect the information that is sent in the wireless network. Furthermore, there are ways for unauthorized wireless devices to get the MAC address of an authorized device. Then, they can use that MAC address to use the wireless network.

7.2.3 User Authentication Authentication is the process of verifying whether a wireless device is allowed to use the wireless network. You can make every user log in to the wireless network before they can use it. However, every device in the wireless network has to support IEEE 802.

1x to do this. For wireless networks, you can store the user names and passwords for each user in a RADIUS server. This is a server used in businesses more than in homes. If you do not have a RADIUS server, you cannot set up user names and passwords for your users. 1. 2. Some wireless devices, such as scanners, can detect wireless networks but cannot use wireless networks. These kinds of wireless devices might not have MAC addresses. Hexadecimal characters are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, and F. 56 ZyXEL G-570S User's Guide Chapter 7 Wireless Screens Unauthorized wireless devices can still see the information that is sent in the wireless network, even if they cannot use the wireless network.

Furthermore, there are ways for unauthorized wireless users to get a valid user name and password. Then, they can use that user name and password to use the wireless network. 7.2.4 Encryption Wireless networks can use encryption to protect the information that is sent in the wireless network. Encryption is like a secret code. If you do not know the secret code, you cannot understand the message. The types of encryption you can choose depend on the type of authentication. (See Section 7.2.

3 on page 56 for information about this.) Table 11 Types of Encryption for Each Type of Authentication NO AUTHENTICATION Weakest No Security Static WEP WPA-PSK Strongest WPA2-PSK WPA2 RADIUS SERVER WPA For example, if the wireless network has a RADIUS server, you can choose WPA or WPA2. If users do not log in to the wireless network, you can choose no encryption, Static WEP, WPAPSK, or WPA2-PSK. Usually, you should set up the strongest encryption that every device in the wireless network supports. For example, suppose you have a wireless network with the ZyXEL Device and you do not have a RADIUS server.

Therefore, there is no authentication. Suppose the wireless network has two devices. Device A only supports WEP, and device B supports WEP and WPA.

Therefore, you should set up Static WEP in the wireless network. It is recommended that wireless networks use WPA-PSK, WPA, or stronger encryption.

The other types of encryption are better than none at all, but it is still possible for unauthorized wireless devices to figure out the original information pretty quickly. When you select WPA2 or WPA2-PSK in your ZyXEL Device, you can also select an option (WPA compatible) to support WPA as well. In this case, if some of the devices support WPA and some support WPA2, you should set up WPA2-PSK or WPA2 (depending on the type of wireless network login) and select the WPA compatible option in the ZyXEL Device. Many types of encryption use a key to protect the information in the wireless network. The longer the key, the stronger the encryption. Every device in the wireless network must have the same key. ZyXEL G-570S User's Guide 57 Chapter 7 Wireless Screens 7.2.5 One-Touch Intelligent Security Technology (OTIST) With ZyXEL's OTIST, you set up the SSID and the encryption (WEP or WPA-PSK) on the ZyXEL Device. Then, the ZyXEL Device transfers them to the devices in the wireless networks.

As a result, you do not have to set up the SSID and encryption on every device in the wireless network. The devices in the wireless network have to support OTIST, and they have to be in range of the ZyXEL Device when you activate it.



[You're reading an excerpt. Click here to read official ZYXEL G-570S user guide](http://yourpdfguides.com/dref/3685506)

<http://yourpdfguides.com/dref/3685506>

See Section 7.9 on page 81 for more details. 7.3 Wireless Performance Overview The following sections introduce different ways to improve the performance of the wireless network. 7.3.1 Quality of Service (QoS) You can turn on Wi-Fi MultiMedia (WMM) QoS to improve the performance of voice and video applications in the wireless network. QoS gives high priority to voice and video, which makes them run more smoothly.

Similarly, it gives low priority to many large file downloads so that they do not reduce the quality of other applications. 7.4 Additional Wireless Terms The following table describes wireless network terms and acronyms used in the ZyXEL Device's Web Configurator. Table 12 Additional Wireless Terms TERM Intra-BSS Traffic DESCRIPTION This describes direct communication (not through the ZyXEL Device) between two wireless devices within a wireless network. You might disable this kind of communication to enhance security within your wireless network.

In a wireless network which covers a large area, wireless devices are sometimes not aware of each other's presence. This may cause them to send information to the AP at the same time and result in information colliding and not getting through. By setting this value lower than the default value, the wireless devices must sometimes get permission to send information to the ZyXEL Device. The lower the value, the more often the devices must get permission. If this value is greater than the fragmentation threshold value (see below), then wireless devices never have to get permission to send information to the ZyXEL Device.

A preamble affects the timing in your wireless network. There are two preamble modes: long and short. If a device uses a different preamble mode than the ZyXEL Device does, it cannot communicate with the ZyXEL Device. The process of verifying whether a wireless device is allowed to use the wireless network. Enable this to improve the performance of both pure IEEE 802.11g and mixed IEEE 802.11b/g networks. Maximum Frame Burst sets the maximum time that the ZyXEL Device transmits IEEE 802.11g wireless traffic only. RTS/CTS Threshold Preamble Authentication Max.

Frame Burst 58 ZyXEL G-570S User's Guide Chapter 7 Wireless Screens Table 12 Additional Wireless Terms TERM Fragmentation Threshold Roaming DESCRIPTION A small fragmentation threshold is recommended for busy networks, while a larger threshold provides faster performance if the network is not very busy. If you have two or more ZyXEL Devices (or other wireless access points) on your wireless network, you can enable this option so that wireless devices can change locations without having to log in again. This is useful for devices, such as notebooks, that move around a lot. 7.5 Quality of Service This section discusses the Quality of Service (QoS) features available on the ZyXEL Device. 7.5.1 WMM QoS WMM (Wi-Fi MultiMedia) QoS (Quality of Service) ensures quality of service in wireless networks. It controls WLAN transmission priority on packets to be transmitted over the wireless network. WMM QoS prioritizes wireless traffic according to delivery requirements.

WMM QoS is a part of the IEEE 802.11e QoS enhancement to certified Wi-Fi wireless networks. On APs without WMM QoS, all traffic streams are given the same access priority to the wireless network. If the introduction of another traffic stream creates a data transmission demand that exceeds the current network capacity, then the new traffic stream reduces the throughput of the other traffic streams. The ZyXEL Device uses WMM QoS to prioritize traffic streams according to the IEEE 802.

Iq tag or DSCP information in each packet's header. The ZyXEL Device automatically determines the priority to use for an individual traffic stream. This prevents reductions in data transmission for applications that are sensitive to latency (delay) and jitter (variations in delay). 7.5.

1.1 WMM QoS Priorities The following table describes the WMM QoS priority levels that the ZyXEL Device uses. Table 13 WMM QoS Priorities PRIORITY LEVEL voice (WMM_VOICE) video (WMM_VIDEO) best effort (WMM_BEST_EFFORT) background (WMM_BACKGROUND) DESCRIPTION Typically used for traffic that is especially sensitive to jitter. Use this priority to reduce latency for improved voice quality. Typically used for traffic which has some tolerance for jitter but needs to be prioritized over other data traffic. Typically used for traffic from applications or devices that lack QoS capabilities. Use best effort priority for traffic that is less sensitive to latency, but is affected by long delays, such as Internet surfing. This is typically used for non-critical traffic such as bulk transfers and print jobs that are allowed but that should not affect other applications and users. Use background priority for applications that do not have strict latency and throughput requirements. ZyXEL G-570S User's Guide 59 Chapter 7 Wireless Screens 7.

6 Configuring Wireless Click Wireless to display the Wireless Settings screen. The screen varies depending upon the operation mode you select. 7.6.1 Access Point Mode Select Access Point in the Operation Mode field to display the screen as shown next. This mode has the device act as an access point (AP) through which wireless stations can communicate and/or access a wired network. Figure 27 Wireless Settings: Access Point The following table describes the labels in this screen. Table 14 Wireless Settings: Access Point LABEL Basic Settings Operation Mode Select the operating mode from the drop-down list. The options are Access Point, Wireless Client, Bridge and AP+Repeater. DESCRIPTION 60 ZyXEL G-570S User's Guide Chapter 7 Wireless Screens Table 14 Wireless Settings: Access Point (continued) LABEL SSID DESCRIPTION Wireless stations associating to the access point (AP) must have the same SSID.

Enter a descriptive name (up to 32 printable characters) for the wireless LAN. Spaces are allowed. Note: If you are configuring the device from a computer connected to the wireless LAN and you change the device's SSID, channel or security settings, you will lose your wireless connection when you press Apply to confirm. You must then change the wireless settings of your computer to match the device's new settings. Hide SSID Channel Select this check box to hide the SSID in the outgoing beacon frame so a station cannot obtain the SSID through passive scanning using a site survey tool.

Set the operating frequency/channel depending on your particular region. Select a channel from the drop-down list box. Refer to the chapter on wizard setup for more information about channels. Select 802.11b only to allow only IEEE 802.

11b compliant WLAN devices to associate with the device. Select 802.11g only to allow only IEEE 802.11g compliant WLAN devices to associate with the device. Select Auto (11g/11b) to allow either IEEE 802.11b or IEEE 802.11g compliant WLAN devices to associate with the device. The transmission rate of your device might be reduced.



[You're reading an excerpt. Click here to read official ZYXEL G-570S user guide](http://yourpdfguides.com/dref/3685506)
<http://yourpdfguides.com/dref/3685506>

Wireless Mode Advanced Settings Beacon Interval Intra-BSS Traffic Set the number of milliseconds that should pass between the sending out of beacons. Intra-BSS traffic is traffic between wireless stations in the same BSS.

Enable Intra-BSS traffic to allow wireless stations connected to the device to communicate with each other. Disable Intra-BSS traffic to only allow wireless stations to communicate with the wired network, not with each other. Set the interval for wireless clients in sleep mode to wake up and check for multicast or broadcast traffic. The AP includes a Delivery Traffic Indication Message (DTIM) in the beacon to notify wireless clients in sleep mode that there is a multicast or broadcast packet awaiting delivery. The interval is a multiple of the beacon interval. For example, if the beacon interval is 100 milliseconds and the DTIM interval is 2, the AP includes a DTIM with every second beacon (or every 200 milliseconds). Select this to turn on WMM QoS (Wireless MultiMedia Quality of Service). The ZyXEL Device assigns priority to packets based on the 802.1q or DSCP information in their headers. If a packet has no WMM information in its header, it is assigned the default priority.

Use this field to set a maximum number of wireless stations that may connect to the device. Enter the number (from 1 to 32) of wireless stations allowed. Turn on the wireless adapter to allow wireless communications between the device and other IEEE 802.11b and IEEE 802.11g compliant wireless devices.

Turn off the wireless adapter to stop wireless communications between the device and other IEEE 802.11b and IEEE 802.11g compliant wireless devices. DTIM Interval WMM Number of Wireless Stations Allowed to Associate: Radio Enable ZyXEL G-570S User's Guide 61 Chapter 7 Wireless Screens Table 14 Wireless Settings: Access Point (continued) LABEL Output Power Management DESCRIPTION Set the output power of the device in this field. @@The options are Full, 50%, 25%, 12% and Min.

@@@Preamble is used to signal that data is coming to the receiver. @@@@Turbo-G Mode Turbo-G mode provides higher speed transmissions than regular IEEE 802.11g or super-G mode. The other device must also support turbo-G mode in order for the device to use it for the wireless connection. @Turbo-G uses two channels bonded together in order to achieve its higher transmission rates. This may cause interference with other APs in the area. The Channel field is automatically fixed at 6 when you use turbo-G mode. RTS/CTS Threshold Enter a value between 0 and 2346. @@The default is 2346. It is the maximum data fragment size that can be sent.

Apply Reset Click Apply to save your changes back to the device. Click Reset to begin configuring this screen afresh. 7.6.2 Wireless Client Mode Select Wireless Client in the Operation Mode field to display the screen as shown next. This mode has the device act as wireless client to connect to a wireless network. WPA, WPA2 and IEEE 802.1x wireless security are not available when you use Wireless Client, Bridge or AP+Repeater mode. 62 ZyXEL G-570S User's Guide Chapter 7 Wireless Screens Figure 28 Wireless Settings: Wireless Client The following table describes the labels in this screen. Table 15 Wireless Settings: Wireless Client LABEL Basic Settings Operation Mode SSID Select the operating mode from the drop-down list.

The options are Access Point, Wireless Client, Bridge and AP+Repeater. Wireless stations associating to the access point (AP) must have the same SSID. Enter a descriptive name (up to 32 printable characters) for the wireless LAN. Spaces are allowed. DESCRIPTION Note: If you are configuring the device from a computer connected to the wireless LAN and you change the device's SSID, channel or security settings, you will lose your wireless connection when you click Apply to save your settings.

You must then change the wireless settings of your computer to match the device's new settings. Site Survey Advanced Settings Manual MAC Cloning Every Ethernet-capable device is issued with a unique Media Access Control (MAC) address at the factory. This address is used to identify the device across a network. Your ZyXEL Device is capable of "cloning", or emulating, the MAC addresses of one or more other devices. Select the check box and enter the MAC address you want to clone.

Turn on the wireless adapter to allow wireless communications between the device and other IEEE 802.11b and IEEE 802.11g compliant wireless devices. Turn off the wireless adapter to stop wireless communications between the device and other IEEE 802.11b and IEEE 802.11g compliant wireless devices.

@@@The options are Full, 50%, 25%, 12% and Min. @@@@Preamble is used to signal that data is coming to the receiver.

@@@@RTS/CTS Threshold Enter a value between 0 and 2346. @@The default is 2346.

It is the maximum data fragment size that can be sent. Apply Reset Click Apply to save your changes back to the device. @The ZyXEL Device searches for available access points (APs). @@This field displays the MAC address of each access point. This field displays the channel number used by each access point. @@@@This field displays the signal strength of each access point. @@@@The following examples show two network topologies that can lead to this problem: If two or more ZyXEL Devices (in bridge mode) are connected to the same hub as shown next. Figure 31 Bridge Loop: Two Bridges Connected to Hub If your ZyXEL Device (in bridge mode) is connected to a wired LAN while communicating with another wireless bridge that is also connected to the same wired LAN as shown next. 66 ZyXEL G-570S User's Guide Chapter 7 Wireless Screens Figure 32 Bridge Loop: Bridge Connected to Wired LAN To prevent bridge loops, ensure that your ZyXEL Device is not set to bridge mode while connected to both wired and wireless segments of the same LAN. Select Bridge as the Operation Mode to have the device act as a wireless bridge only.

Figure 33 Wireless Settings: Bridge ZyXEL G-570S User's Guide 67 Chapter 7 Wireless Screens The following table describes the labels in this screen. Table 17 Wireless Settings: Bridge LABEL Basic Settings Operation Mode Select the operating mode from the drop-down list. The options are Access Point, Wireless Client, Bridge and AP+Repeater. DESCRIPTION Note: If you are configuring the device from a computer connected to the wireless LAN and you change the device to use bridge mode, you will lose your wireless connection when you click Apply to save your settings. You must then connect to the device through the wired network.

Channel Set the operating frequency/channel depending on your particular region. Select a channel from the drop-down list box. Refer to the chapter on wizard setup for more information about channels. Select 802.11b only to allow only IEEE 802.11b compliant WLAN devices to associate with the device. Select 802.11g only to allow only IEEE 802.11g compliant WLAN devices to associate with the device.



[You're reading an excerpt. Click here to read official ZYXEL G-570S user guide](http://yourpdfguides.com/dref/3685506)
<http://yourpdfguides.com/dref/3685506>