

11Mbps Wireless Access Point



networks@work

# USER'S MANUAL



COMPEX NETPASSAGE SERIES

**WP11A+**

WP11A+

WP11A+

WP11A+

WP11A+

Manual number : U-0356-V1.1C

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Manual Revision by Ong

Manual Number: U-0356-V1.1C      Version 1.1, October 2002

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## FCC NOTICE

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

- Reorient or relocate the receiving antenna.
- Connect the computer into an outlet on a circuit different from that to which the receiver is connected.
- Increase the separation between the computer and receiver.
- Consult the dealer or an experienced radio/TV technician for help.

### **Caution:** Exposure to Radio Frequency Radiation.

To comply with the FCC RF exposure compliance requirements, the following antenna installation and device operating configurations must be satisfied:

1. For configurations using the integral antenna, the separation distance between the antenna(s) and any person's body (including hands, wrists, feet and ankles) must be at least 2.5cm (1 inch).
2. For configurations using an approved external antenna, the separation distance between the antenna and any person's body (including hands, wrists, feet and ankles) must be at least 20cm (8 inch).

The transmitter shall not be collocated with other transmitters or antennas.

**Caution:** Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

**FCC Compliance Statement:** This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

---

## Declaration of Conformity

Compex, Inc. declares the following:

Product Name: Compex 11Mbps Wireless LAN Access Point

Model No.: WP11A+ conforms to the following Product Standards:

This device complies with the Electromagnetic Compatibility Directive (89/336/EEC) issued by the Commission of the European Community.

**Electromagnetic Interference (Conduction and Radiation):** EN 55022 (CISPR 22)

**Electromagnetic Immunity:** EN 55024 (IEC61000-4-2,3,4,5,6,8,11)

**Power Line Harmonics:** EN 61000-3-2 (IEC610000-3-2)

**Power Line Flicker:** EN 61000-3-3 (IEC610000-3-3)

Therefore, this product is in conformity with the following regional standards: FCC Class B — following the provisions of FCC Part 15 directive; CE Mark — following the provisions of the EC directive.

This Class B digital apparatus complies with Canadian ICES-003.

## Declaration of Conformity

Compex, Inc. declares the following:

Product Name: Compex 11Mbps Wireless LAN Access Point

Model No.: WP11A+ conforms to the following Product Standards:

This device complies with the R&TTE Directive (1999/5/EC) issued by the Commission of the European Community. Compliance with this directive implies conformity to the following European Norms (in brackets are the equivalent international standards.)

**Product Safety:** EN 60950 (IEC60950)

**Technical requirements for radio equipment:** EN 300 328-1/2

**General EMC requirements for radio equipment:** ETS 300 826 or ETSI EN 301 489-1/17

Therefore, this product is in conformity with the following regional standards: **FCC Class B** — following the provisions of FCC Part 15 directive; CE Mark — following the provisions of the EC directive.

This Class B digital apparatus complies with Canadian ICES-003.

31<sup>st</sup> October 2002










  
\_\_\_\_\_  
Shi Jia Xiang  
R & D Manager

## Technical Support Information

The warranty information and registration form are found in the Quick Install Guide.

For technical support, you may contact Compex or its subsidiaries. For your convenience, you may also seek technical assistance from the local distributor, or from the authorized dealer/reseller that you have purchased this product from. For technical support by email, write to support@compex.com.sg.

Refer to the table below for the nearest Technical Support Centers:

<b>Technical Support Centers</b>	
Contact the technical support center that services your location.	
<b>U.S.A., Canada, Latin America and South America</b>	
 Write	<b>Compex, Inc.</b> 4051 E. La Palma, Unit A Anaheim, CA 92807, USA
 Call	Tel: +1 (714) 630-7302 (8 a.m.-5 p.m. Pacific time) Tel: +1 (800) 279-8891 (Ext.122 Technical Support)
 Fax	Fax: +1 (714) 630-6521 BBS: +1 (714) 630-2570 (24-hour access)
<b>Europe</b>	
 Write	<b>ReadyLINK Networktechnology Gmbh</b> Albert Einstein Straße 34/M21 63322 Rödermark, Germany
 Call	Tel: +49 (0) 6074 - 98017 (8 a.m.-5 p.m. local time)
 Fax	Fax: +49 (0) 6074 - 90668 BBS: +49 (0) 6074 - 93974 (24-hour access) Support Email: readylink@compex.com.sg
<b>Asia, Australia, New Zealand, Middle East and the rest of the World</b>	
 Write	<b>Compex Systems Pte Ltd</b> 135, Joo Seng Road #08-01, PM Industrial Building Singapore 368363
 Call	Tel: (65) 6286-1805 (8 a.m.-5 p.m. local time) Tel: (65) 6286-2086 (Ext.199 Technical Support)
 Fax	Fax: (65) 6283-8337 BBS: (65) 6282-8854 (24-hour access)
<b>Internet access/Website:</b>	E-mail: <b>support@compex.com.sg</b> FTPsite: <b>ftp.compex.com.sg</b> <b>http://www.cpx.com</b> or <b>http://www.compex.com.sg</b>

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## About This Document

The product described in this document, Compex NetPassage Series, Compex WP11A+ is a licensed product of Compex Systems Pte Ltd. This document contains instructions for installing, configuring and using Compex WP11A+. It also gives an overview of the key applications and the networking concepts with respect to the product.

This documentation is for both Network Administrators and end users who possess some basic knowledge of networking structures and protocols.

This document makes the assumptions that a host computer is installed with TCP/IP and is already up & running with Internet access. Procedures for Windows 98/2000/XP operating systems are included in this document. However, for other operating systems, you may need to refer to your operating system's documentation for networking.

## How to Use this Document

The document is written in such a way that you as a user will find it convenient to find specific information pertaining to the product. It comprises of chapters that explain in details the installation and configuration of Compex WP11A+.

## Firmware

This manual is written based on Firmware version 2.86 Build 0919.

## Conventions

In this document, special conventions are used to help and present the information clearly. The Compex 11Mbps PCMCIA Wireless LAN Access Point is often referred to as Compex WP11A+ in this document. Below is a list of conventions used throughout.



### NOTE

This section will consist of important features or instructions

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### CAUTION

This section concerns risk of injury, system damage or loss of data

---



### WARNING

This section concerns risk of severe injury

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References on Menu Command, Push Button, Radio Button, LED and Label appear in **Bold**. For example, "Click on the "Ok" button"

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### 1.1 Introduction

A wireless network is a convenient way of setting up a network both at home and in the office. The lack of a physical infrastructure, such as LAN cables, reduces the cost of implementing a network environment.

As a home user, you can enjoy the freedom to roam around your house and still maintain connection to your network. Surfing the web, sending e-mail or downloading a program while in the garden, near your swimming pool or anywhere in your house, is now a reality.

With the many benefits that a wireless network environment brings, many users are contemplating of expanding their network environment with wireless devices.

### 1.2 Overview

Compex WP11A+ is an easy-to-use 11Mbps Wireless LAN Access Point configurable for four operating modes, namely

- **Access Point Bridge**
- **Access Point Client**
- **Gateway**
- **Wireless Routing Client**

It supports up to 11Mbps wireless communication on 2.4GHz ISM band using DSSS (Direct Sequence Spread Spectrum)

# Chapter 1 Product Overview

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## 1.3 Features and Benefits

Complex WP11A+ is designed to give you a complete solution of a wireless network by establishing connection with a wireless client. The list below identifies some of the features and benefits of Complex WP11A+.

### 1.3.1 IEEE 802.11 Compliant

Complex WP11A+ is fully compliant with IEEE 802.11 standard. It divides the 2.4GHz license-free ISM (Industrial, Scientific & Medical) band into 14 sub channels, where the number of usable channels is subjected to local regulations of the respective country/region.

### 1.3.2 11Mbps High Rate Communication

Complex WP11A+ supports IEEE 802.11b high rate communication of up to 11Mbps, and it is backward compatible with the older 2Mbps and 1Mbps standard.

### 1.3.3 Wire Equivalent Privacy (WEP)

Complex WP11A+ uses a private encryption key to ensure data security. This is commonly referred to as Wire Equivalent Privacy (WEP). Complex WP11A+ supports 64-bit and 128-bit WEP selectable via its web-based configuration interface.

### 1.3.4 Wireless/Ethernet Transparent Bridging

Complex WP11A+ can be used as a Wireless Access Point functioning as a transparent Bridge between the Wireless and Ethernet segments. It shares resources for Microsoft and Novell Networks by using TCP/IP & IPX respectively as the protocol for communication.

### 1.3.5 Broadband Internet Sharing

Complex WP11A+ may be configured to **Gateway Mode**. This allows sharing of your broadband Internet access with your wireless clients. In addition, it supports advanced features such as Virtual servers, Time-based Access Management, IP Packet Filtering & Remote Management.

# Chapter 1 Product Overview

## 1.3.6 LAN-to-LAN Bridging

Comex WP11A+ may also be configured as an Extended Service Set (ESS) Client, working in conjunction with another ESS Access Point (AP) to function as a LAN-to-LAN Wireless Bridge.

## 1.3.7 Upgradeable Firmware

Comex WP11A+ is specially designed with a flash ROM that allows you to update the Comex WP11A+ with the latest firmware release via a web-based configuration interface.

## 1.3.8 Web-Based Interface

Comex WP11A+ is integrated with an embedded HTTP server facilitating a multi-platform web-based configuration interface that requires only a JAVA-enabled web browser.

## 1.4 Panel Views

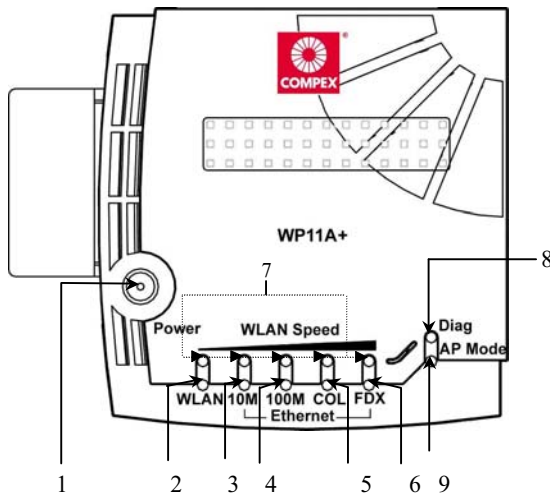


Figure 1.4a Front view of Comex WP11A+

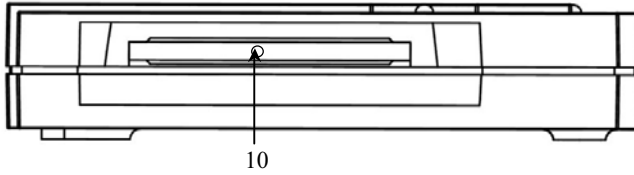


Figure 1.4b Side view of Complex WP11A+ (Section #1)

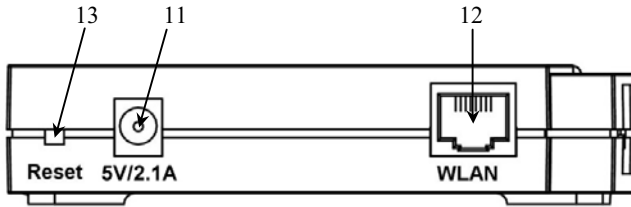


Figure 1.4c Side view of Complex WP11A+ (Section #2)

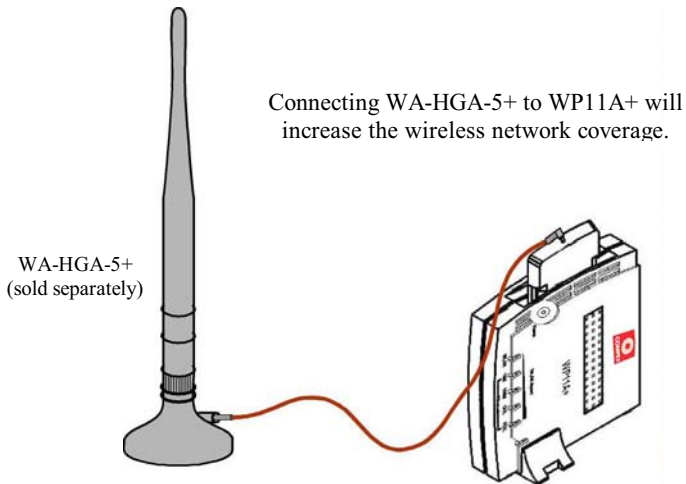


Figure 1.4d Connection to indoor antenna

# Chapter 1 Product Overview

## 1.5 Panel Description

	<b>Indicator</b>	<b>Description</b>
1	Power LED	<u>Steady Green Light</u> Power is supplied to Compex WP11A+.
2	WLAN LED	<u>Steady Green Light</u> A link is connected.  <u>Flashing Green Light</u> An activity is going on.
3	10M LED	<u>Steady Green Light</u> LAN connecting at 10Mbps.
4	100M LED	<u>Steady Green Light</u> LAN connecting at 100Mbps.
5	COL LED	<u>Steady Green Light</u> Collision occurs at the network segment.
6	FDX LED	<u>Steady Green Light</u> Network is in Full Duplex Mode.  <u>No Light</u> Network is in Half Duplex Mode.
7	WLAN Speed LED Total 5 LEDs	<u>Steady Green Light</u> More LEDs lighting up indicate a higher speed of data transmission.
8	DIAG LED	<u>Steady Green Light</u> Compex WP11A+ is booting and loading firmware.  <u>Flashing Green Light</u> Firmware is corrupted.  <u>No Light</u> Firmware has been completely downloaded onto the Compex WP11A+. The device is connected to the network.

## Chapter 1 Product Overview

	Indicator	Description
9	AP Mode LED	<u>Steady Green Light</u> The device is in AP Bridge Mode or AP Client Mode.  <u>No Light</u> The device is in Gateway mode.
10	Wireless Interface	Built-in 11Mbps Wireless LAN PCMCIA Card to support wireless client.
11	5V DC/2.1A	Accepts 5V DC/2.1A input.
12	RJ45 Ethernet Port	10Base-T or 100-Base-TX Port connects to cable modem or xDSL modem.
13	Reset Button	Compex WP11A+ will reboot the device, set to default setting or switch between the selections of work mode. For more details please refer to “ <b>Hardware Reset of Compex WP11A+</b> ” on <b>Page 78</b> .



### CAUTION

Do not remove the wireless Interface Card from Compex WP11A+.



# Chapter 1 Product Overview

## 1.6 Technical Specifications

Items	Specifications
Industry Standards	<ul style="list-style-type: none"><li>• IEEE 802.3 10Base-T;</li><li>• IEEE 802.3u 100Base-TX;</li><li>• IEEE 802.11 DSSS;</li><li>• IEEE 802.11b High Rate;</li><li>• IEEE 802.1d LAN Bridging</li></ul>
Safety Certifications	CE Mark, FCC Class B, Gost, C-Tick, UL
Radio Technology	Direct Sequence Spread Spectrum (DSSS)
Frequency Band	<ul style="list-style-type: none"><li>• 2400 ~ 2483.5MHz (USA, Canada)</li><li>• 2400 ~ 2497MHz (Europe, Asia)</li></ul>
Data Rate	<ul style="list-style-type: none"><li>• CCK - 11Mbps, 5.5Mbps</li><li>• DQPSK - 2Mbps</li><li>• DBPSK - 1Mbps</li></ul>
Private Encryption	64-bit or 128-bit WEP (selectable)
Operating Mode	AP Mode, AP Client Mode, Gateway Mode and Wireless Routing Client (selectable)
AP Mode WAN Interface Supported Protocol Wireless Pseudo VLAN Function	RJ45 10/100Mbps port IP, IPX, NetBEUI Per Node & Per Group Wireless to Ethernet Bridging
Client Mode WAN Interface Supported Protocol Function	RJ45 10/100Mbps port IP, IPX Ethernet to Ethernet Wireless Bridging
Firmware Upgrade	Yes
Antenna	Diversity PCB Micro Strip Antenna
Roaming	Unrestricted client roaming across multiple access points

## Chapter 1 Product Overview

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Items	Specifications
Media Access Method	Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA)
Gateway Mode (Selectable) Wired Interface Wireless Pseudo VLAN Private Subnet Built-In DHCP Server Virtual Server Time-based Access Control IP Packet Filtering Router's Clock Configuration Interface Remote Router Management	RJ45 10/100Mbps port Per Node & Per Group All Classful/Classless subnet Yes (with DHCP reservation) Port Forwarding and IP Forwarding Yes Yes Yes Web-based & TELNET Command Console Via HTTP or TELNET session
Operating Channels	11 channels
Dimension (L x W x H)	122mm x 119mm x 22mm (L x W x H)
Environmental Requirement Temperature Humidity	Operating: 0°C to 40°C Storage: -20°C to 70°C Operating: 10%RH to 80%RH Storage: 5%RH to 90%RH

### Chapter 2 Getting Started

This chapter outlines the basic requirements before you begin any installation and configuration of Complex WP11A+.

#### 2.1 Package Content

Thank you for purchasing Complex WP11A+. The package should contain the following:

- Complex WP11A+ unit
- Complex WP11A+ switching Power Adapter
- Quick Install Guide with warranty registration
- CD User's Manual with Utility Configuration Software
- Clip holder stand

#### 2.2 Setup Considerations

The following are the setup considerations you need to take note of before connecting the Complex WP11A+ to your network:

##### 2.2.1 Software requirements

- Windows 95/98/98SE/ME/NT/2000/XP
- Web Browser – Microsoft IE V4.0 or higher, Netscape Communicator V4.06 or higher
- 2 MB of hard disk space
- Check your LAN configurations and IP addresses. Confirm whether they are Dynamic or Static IP addressing

##### 2.2.2 Hardware requirements

- PCs attached with wireless devices
- Ethernet-ready PC with TCP/IP protocol installed & configured for Internet access
- RJ-45 cable

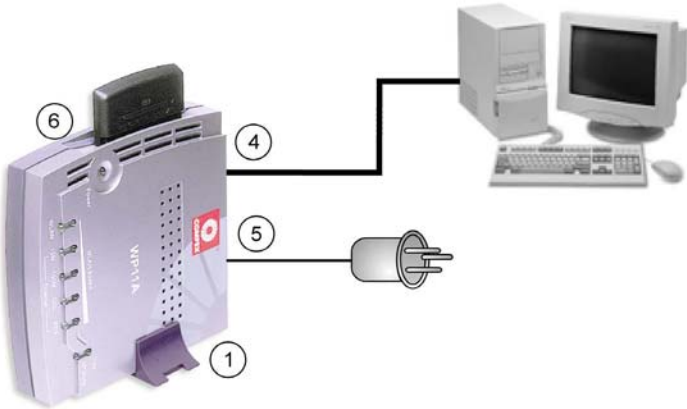
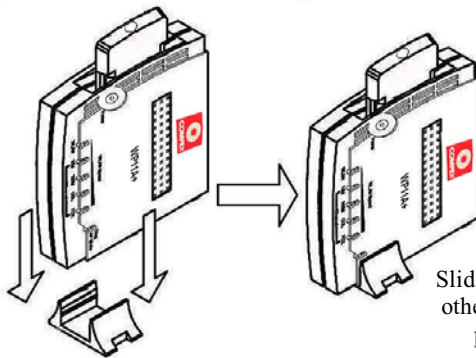


Figure 3a Compex WP11A+ Connections

To begin setting up the Compex WP11A+, please follow the steps listed below:

1. Snap the Compex WP11A+ onto the clip holder stand as shown in Figure 3b.



Slide it into the slot of the other clip holder stand to place side by side.

Clip it directly onto the ventilation hole located at the back of the device.

Figure 3b Illustration on using Clip holder Stand

## Chapter 3 Hardware Installation

---

2. Place the Compex WP11A+ in a well ventilated area.
3. Place the device in a standing position.
4. Connect your PC to the Ethernet port of Compex WP11A+ using an MDIX UTP RJ45 cable. Please note that before your PC can access to the Internet, the NIC adapter and TCP/IP protocol have to be installed and configured first.
5. Plug the AC power adapter. Please use only the correct power adapter supplied by Compex.
6. Check if the power LED is lighted up.

After setting up the hardware, install a browser on the PC or workstation. Make sure that the TCP/IP protocol is installed and configured for Internet access. Please refer to Appendix II.

#### 4.1 Login into Web-based Interface

Compex has developed an utility configuration software, **uConfig**, that provides hassle-free access to the web-based configuration interface. The uniqueness of this program is that it does not require any alteration to the TCP/IP configuration on your computer.

Connect the WP11A+ to your computer via a crossover UTP cable.

As pre-configuration of TCP/IP is not required, you just simply activate the program to get to the configuration page.

To login into Compex WP11A+'s web-based interface,

1. Insert the Product CD provided into your CD-ROM. This will automatically open up the Welcome Page.
2. Click on the **Drivers** and **Utilities** option and select **uConfig** program.



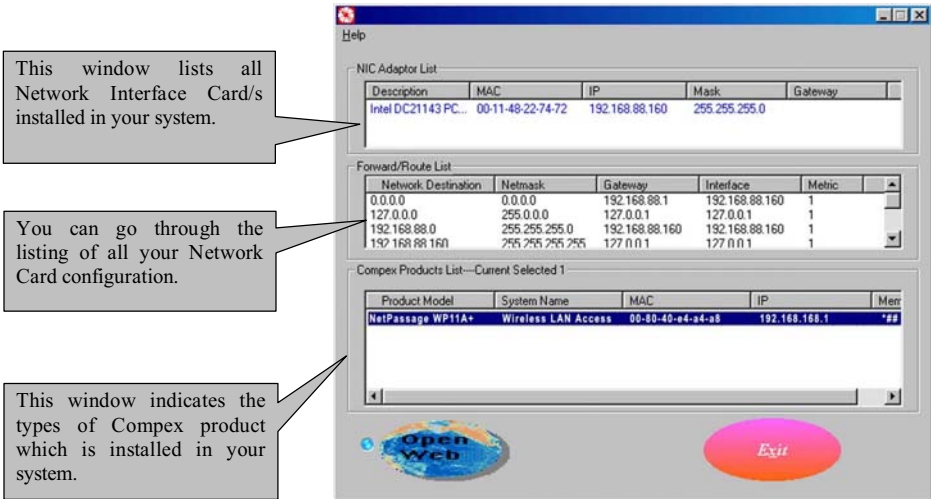
#### NOTE

In the event that the program cannot be found, please explore this directory path, **X:\utility\** (where **X** is the CD-ROM drive) to access the program.

---

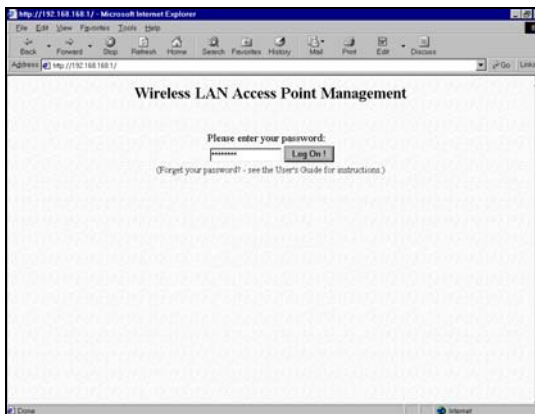
## Chapter 4 Software Configuration

This will automatically launch the program and you will be greeted with the **uConfig** application page as shown in Figure 4.1a.



**Figure 4.1a Utility Configuration GUI**

3. Click on the “OpenWeb” button and the system will automatically link you to Complex WP11A+’s authentication page as shown in Figure 4.1b.



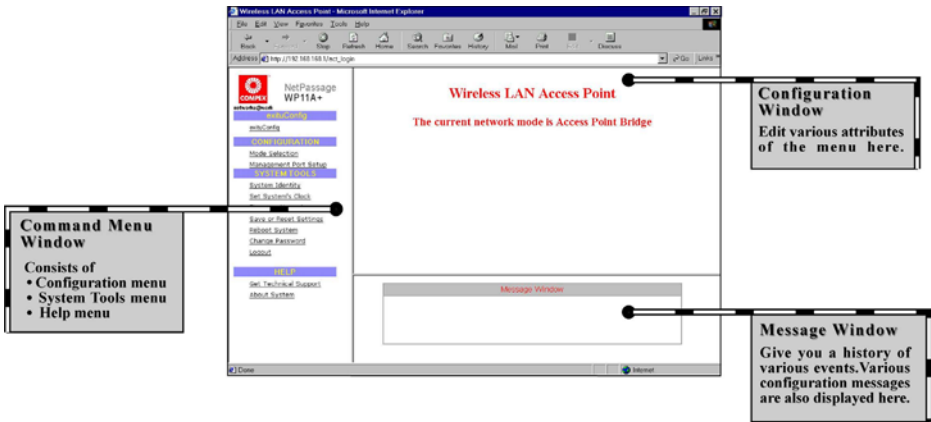
**Figure 4.1b Log in to Complex WP11A+**

## Chapter 4 Software Configuration

4. Click on the “Log ON!” button to access the web based configuration interface of the Complex WP11A+.

The default password for the login configuration interface is *password*. You will be able to change the login password which will be elaborated in “**Change Password**” section on **Page 73**.

The main menu screen will be displayed as shown in Figure 4.1c.



**Figure 4.1c Complex WP11A+ Configuration Interface**

From here, you will be able to see three different window frames on the screen, namely **Command Menu Window**, **Configuration Window** and **Message Window**.

You will see a listing of the functions stated in the Command Menu Window. The functions will vary according to the mode which you have selected. Different modes will provide different functions in the Command Menu Window.



## Chapter 4 Software Configuration

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### 4.1.1 AP Bridge and AP Client Mode

**Exit uConfig Mode menu** – End the Utility Configuration Program

- ExituConfig

**CONFIGURATION menu** – Basic Ethernet and Wireless setup

- Mode Selection
- Management Port Setup

**SYSTEM TOOLS menu** –Edit various internal settings of Compex WP11A+

- System Identity
- Set System's Clock
- Firmware Update
- Save or Reset Settings
- Reboot System
- Change Password
- Logout

**HELP menu** – Contact information of a technical support engineer

- Get Technical Support
- About System
- Gateway Mode

### 4.1.2 Gateway and Wireless Routing Client Mode

**Exit uConfig Mode menu**

- ExituConfig

**CONFIGURATION menu**

- Mode Selection
- uConfig IP Setup
- Management Port Setup
- WAN Setup
- NAT
- Static Address Translation
- Routing
- Filtering
- Remote Management

**SYSTEM TOOLS menu**

- System Identity
- Set System's Clock
- Firmware Update
- Save or Reset Settings

## Chapter 4    Software Configuration

---

- Reboot System
- Change Password
- Logout

### **HELP menu**

- Get Technical Support
- About System

With this user-friendly web based configuration interface, all configurations on the Complex WP11A+ can now easily be achieved, allowing you to configure your network promptly.

# Chapter 5 Configure Complex WP11A Using Web Interface

## Chapter 5 Configure Complex WP11A+ Using Web Interface

This chapter explains the Configuration Menu tool of Complex WP11A+ the web-based configuration interface. To communicate with the network, DHCP Gateway IP Address should be common to the AP Client. Settings for network parameters depend on the configuration of your individual network.

### Network Mask

Network Mask identifies the class of the Gateway's IP address. The users may configure the network with Class A (255.0.0.0) and Class B (255.255.0.0) Network Mask as well. In addition, Complex WP11A can be configured for Classless Subnet to support certain application.

### DHCP Start/End IP Address

These parameters specify the range of the IP address of which the DHCP Server will assign. For example, if the DHCP Start IP Address and DHCP End IP Address are 192.168.168.100 and 192.168.168.200 respectively, the first IP address that the DHCP Server releases will be 192.168.168.100 while the last IP address that it will release is 192.168.168.200.

### DHCP Gateway IP Address

The DHCP Server will automatically assigned a Gateway IP Address when the PC is connected in the same network.

### Primary/Secondary DNS IP Address

Domain Name Service is an Internet service that translates domain names into IP addresses. If your WAN connection is using Static IP, you should configure the primary and secondary DNS IP addresses with the DNS information provided by your Broadband Internet Service Provider. For other WAN connection types, the DNS IP addresses are obtained automatically from ISP. The **Always use these DNS servers** checkbox can be used to disable the automatic process, and your preferred DNS IP addresses can be used.

### IP Address

IP address uniquely identifies the Gateway in the network, whereby the users should point their Internet gateway to, if fixed IP addresses are configured on the computers in the network.

**Management Port Setup**

IP Address	192	168	168	1
Network Mask	255	255	255	0
DHCP Start IP Address	192	168	168	100
DHCP End IP Address	192	168	168	254
DHCP Gateway IP Address	0	0	0	0

Always use these DNS servers:

Primary DNS IP Address	0	0	0	0
Secondary DNS IP Address	0	0	0	0

DHCP Server  Enable  Disable

*Note: Changes made will only take effect after rebooting.*

Save Reboot Help

**Advanced DHCP Server Options**

Show Active Dhcp Leases    Dhcp Server Reservations

### DHCP Server

Dynamic Host Configuration Protocol Server dynamically assigns IP addresses to the computers connected in the same network. If a computer has been configured to dynamically obtain IP address, the DHCP Server will release an available IP address beginning from the DHCP Start IP Address to the computer. If you have set the TCP/IP protocol of your PC to dynamic IP address, the built-in DHCP server will assign the **DHCP Start IP Address** and **DHCP End IP Address** automatically to the PCs connected in the same network. For dynamic WAN IP, the **DNS IP address** is obtained automatically from the ISP.

Figure 5.1a Management Port Setup Interface

## Chapter 5    Configure Compex WP11A Using Web Interface

### 5.1    Changing the IP Address of Compex WP11A+

You can also assign a specific IP address to the Compex WP11A+. To change the IP address,

1. Enter the new IP address in **IP Address** entry.
2. Click “Save” button and reboot the device to update the configurations.
3. Logon again using your new IP Address to avoid connection with an incorrect profile.

### 5.2    Configuring DHCP Server

You may configure the built-in DHCP Server of the Compex WP11A+ to release a specific IP address to a specific computer via the web-based configuration interface. You may also view the IP releases online.

The DHCP Server can also be configured to reserve specific IP address for specific host or Mac address.

IP Address	Host Name	Hardware Address
192.168.168.2	PC1	00:80:48:E4:00:AE

Buttons: Delete, Apply

Form fields: IP Address: 192.168.168., Host Name: [ ], Hardware Address: [ ][ ][ ][ ][ ][ ]

Buttons: Add, Help

Figure 5.2a    DHCP Reservations of IP Address



#### CAUTION

The reserved IP address to be assigned should NOT have the same Dynamic IP address range as the DHCP Start and End IP address.

## Chapter 5    Configure Compex WP11A Using Web Interface

---

### To reserve a certain IP address for a specific workstation

1. Click on “DHCP Server Reservations” button in the Management Port Setup Menu.
2. Enter the specific IP address to be assigned to your designated PC.
3. Assign a name for the Host of the designated PC.
4. Fill in the MAC address of the designated PC in the **Hardware Address** entry.



#### **NOTE**

The DHCP server will ignore the Host Name if it finds a match in the Hardware Address. It checks the Hardware Address first, so you need only to enter either the Host Name or Hardware Address.

---

### To add an entry

1. Click “Add” button to create an entry into the **DHCP Server Reservations**.
2. After the address is entered, click “Apply” button to make the updates effective.

You need to **reboot** and **logon WP11A+** again to activate the changes.



#### **NOTE**

The reserved IP address must not be within the range of DHCP start and end IP addresses.

---

### To view the IP released by the DHCP Server

1. Press the **Show Active DHCP Leases** button in the LAN Setup window shown in Figure 5.1a. The list of released IP addresses will be displayed, as shown in Figure 5.2b.

IP Address	Host Name	Hardware Address	Expires time
192.168.168.100	Compex	00-10-D7-E1-17-A1	2002/04/10 16:15

**Figure 5.2b    Show DHCP Leases**



#### **NOTE**

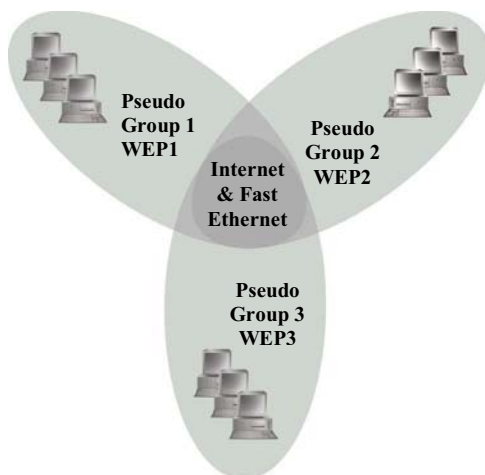
Invalid date and time shown under **Expires** column indicates that the router’s clock of your Compex WP11A+ has not been set. Refer to “**Set System Time**” on **Page 69** to set the system’s clock.

---

### 5.3    Setting up Wireless Per Group Pseudo LAN using AP Bridge Mode

With more wireless networks being deployed in public premises, privacy protection against unknown users has been an increasingly grave concern. The Wireless Pseudo VLAN segregates each wireless client or group of wireless clients into its own Pseudo VLAN. This restricts communication between wireless clients of different Pseudo VLAN while retaining wireless accessibility to the network resources.

The subnet view illustrates Pseudo Group 1, Group 2 and Group 3 not only can surf the Net freely, but they also can access the server easily. The PCs within its own group will be able to communicate with one another. However, communications between Group 1, Group 2 and Group 3 are not permissible.



**Figure 5.3a    Per Group Pseudo VLAN Subnet View**

## Chapter 5 Configure Complex WP11A Using Web Interface

The physical setup of Per Group Pseudo VLAN is illustrated as shown.

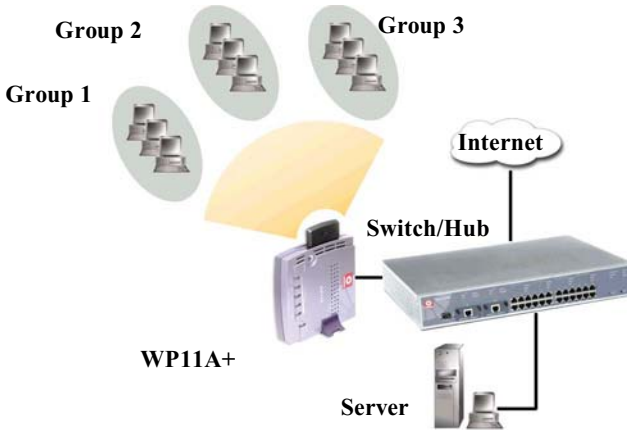
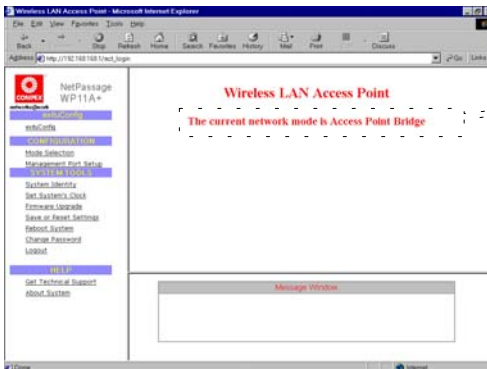


Figure 5.3b Physical Setup for Wireless to Ethernet Bridging

### Starting Point

The default mode for Complex WP11A+ is in AP Bridge, therefore no further configuration is required.

1. Activate **uConfig** program. Click on “OpenWeb” button. You are now in the default web page of Complex WP11A+.

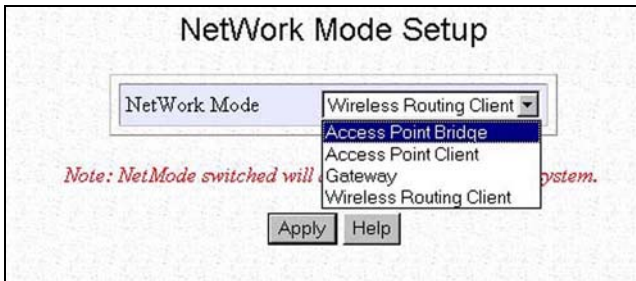


The device is in AP Bridge Mode.

Figure 5.3c Device in AP Bridge Mode

## Chapter 5 Configure Compex WP11A Using Web Interface

2. Click “Apply” button from the **Network Mode Setup** GUI and the web page for Access Point Setup as shown in Figure 5.3d will appear.



**Figure 5.3d Selection of Network Mode**

3. Enter the **Access Point Setup** parameters for your network. An example is shown in Figure 5.4e with these parameters entered.

Example:

**Access Point Name:** wlan

**ESSID:** Any

**Channel:** 3

**TX Rate:** Fully Auto

**RTS Threshold:** 2432

**Frag Threshold:** 2346

**Pseudo VLAN:** Disable

**WEP encryption method:** Disable



## Chapter 5 Configure Compex WP11A Using Web Interface

**ESSID**  
This is an identifier that the devices use to associate with the access point. It helps to distinguish between multiple wireless networks in the same vicinity.

**Channel**  
The DSSS technology divides the 2.4GHz band into 14 frequency channels. As mentioned earlier, this is dependent on the country's regulation.

**Tx Rate**  
When fully auto is selected, Compex WP11A+ will automatically adjust the transfer rate to the link strength. If the link is weak, the transfer rate will be adjusted from 11 to 5.5 to 2 to 1 Mbps. You can also fix the transfer rate at 11, 5.5, 2 or 1 Mbps. For fixed rate, once the transfer rate cannot be reached, the link will be disconnected.

**RTS Threshold**  
The RTS Threshold limits the length of the RTS frame that is used to initiate a transmission. Please do not change this field unless you are familiar with IEEE 802.11 standard.

**Frag Threshold**  
Fragment Threshold limits the maximum frame to be transmitted. Please do not change this field unless you are familiar with IEEE 802.11 standard.

**Pseudo VLAN**  
Disabling the Pseudo VLAN allows the wireless clients to have the capability to communicate with one another, reducing the privacy among users. However, if Per Node (maximum 10 nodes) or Per Group (maximum 4 groups) Pseudo VLAN is activated, access to other wireless clients is not permitted.

**Access Point Name**  
If you have a few wireless access points in your LAN, it will be good that you give a name so that it will be easier to identify the various access points.

**WEP Encryption Method**  
If the WEP encryption is enabled, only devices with the same encryption key can communicate with each other.

**Access Point Setup**

Access Point Name: wlan  
ESSID: Any  
Channel: 3  
Tx Rate: Fully Auto  
RTS Threshold: 2432  
Frag Threshold: 2346

Note: Changes made will only take effect after rebooting.

Save Reboot Help

**Access Control**

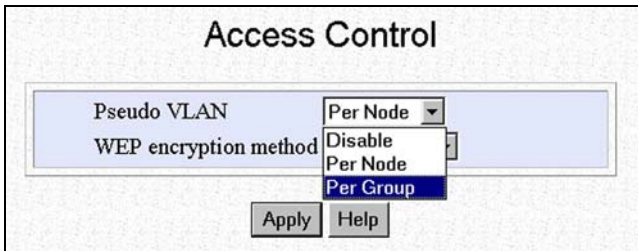
Pseudo VLAN: Disable  
WEP encryption method: Disable

Apply Help

Figure 5.3e Access Point Setup Elaboration of Compex WP11A+

## Chapter 5 Configure Compex WP11A Using Web Interface

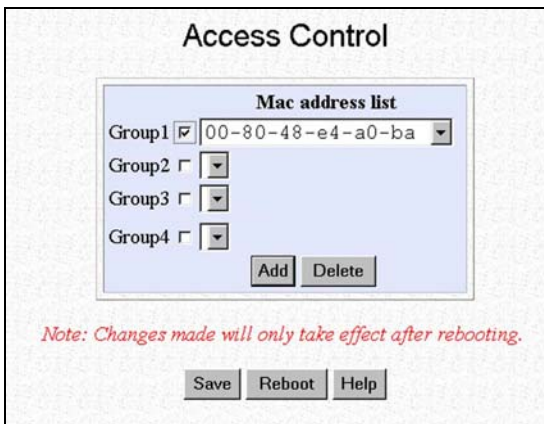
4. Select **Per Group** in the Pseudo VLAN pull-down menu as shown below and click the “Apply” button.



The screenshot shows a web interface titled "Access Control". It features a form with two main sections: "Pseudo VLAN" and "WEP encryption method". The "Pseudo VLAN" dropdown menu is open, showing three options: "Per Node", "Disable", and "Per Group". The "Per Group" option is highlighted in blue. Below the form are two buttons: "Apply" and "Help".

**Figure 5.3f** Defining Access Control

5. Add in the MAC Address of those wireless clients into the various groups. For the example illustrated in Figure 5.3b, you need to add in the MAC Addresses for the three groups of wireless clients.



The screenshot shows a web interface titled "Access Control". It features a form with a section titled "Mac address list". This section contains four rows, each representing a group: "Group1", "Group2", "Group3", and "Group4". Each row has a checkbox and a dropdown menu. The "Group1" checkbox is checked, and its dropdown menu shows the MAC address "00-80-48-e4-a0-ba". Below the "Mac address list" section are two buttons: "Add" and "Delete". At the bottom of the form are three buttons: "Save", "Reboot", and "Help". A red note at the bottom of the form reads: "Note: Changes made will only take effect after rebooting."

**Figure 5.3g** Defining Pseudo VLAN using MAC address

## Chapter 5 Configure Compex WP11A Using Web Interface

- Click “Add” button. Choose your GroupID and key in the client’s MAC address as shown below. Click on “Apply” button as shown in Figure 5.4h.



Figure 5.3h Adding MAC address

- Next, you have the option to choose either 64-bits or 128-bits WEP Encryption. Select your option and click the “Apply” button.



Figure 5.3i Selecting WEP encryption method

- For **64-bit WEP encryption**, you may enter 10 hexadecimal into the individual Key.



Figure 5.3j Defining the key for 64-bit WEP

## Chapter 5 Configure Complex WP11A Using Web Interface



### NOTE

You can store up to 4 Encryption keys in Complex WP11A+. However, only one key can be used at anytime.

For **128-bit WEP encryption**, enter your 26 hexadecimal encryption key and click on the “Save” button. Reboot the device.

A screenshot of a web interface titled "WEP setup". It features a "Key" input field divided into 13 segments, each containing a hexadecimal digit: 11, 22, 33, 44, 55, 66, 77, 88, 99, AA, BB, CC, DD. Below the key field is a red italicized note: "Note: Changes made will only take effect after rebooting." At the bottom of the form are three buttons: "Save", "Reboot", and "Help".

**Figure 5.3k Defining the key for 128 bit WEP**

9. Click on the “Save” button and then reboot Complex WP11A+ for the changes to take effect.

### **To delete a client from the Pseudo Group**

If you want to delete any of the unnecessary MAC Addresses,

1. Select the GroupID and click on the “Apply” button.
2. Highlight the MAC address of the client which you want to delete and click on the “Delete” button.

A screenshot of a web interface titled "Delete MAC address". It contains a "GroupID" dropdown menu with the value "1" selected, an "Apply" button, a "Mac Addr" dropdown menu with the value "00-80-e1-00-ab-00" selected, and a "Delete" button.

**Figure 5.3l Delete MAC Address of a client**

## Chapter 5    Configure Complex WP11A Using Web Interface

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You can also have a combination of encryption settings in each Pseudo VLAN setting. The combinations can be summarized in the table below:

No.	Pseudo VLAN	WEP encryption method
1	Disable	Disable
2	Disable	64 bit
3	Disable	128 bit
4	Per node	Disable
5	Per node	64 bit
6	Per node	128 bit
7	Per group	Disable
8	Per group	64 bit
9	Per group	128 bit

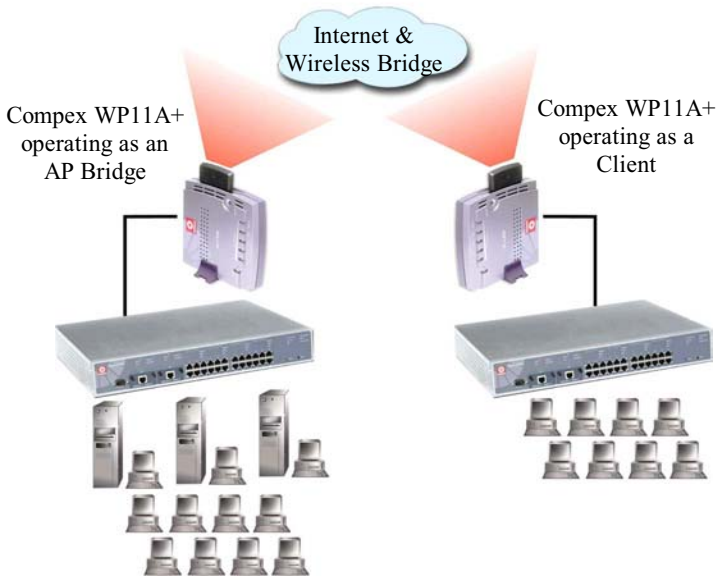
For combination settings, the methods to key in the fields are the same.

## Chapter 5    Configure Compex WP11A Using Web Interface

### 5.4    Setting up Wireless LAN-to-LAN Bridge Network using AP Client Mode

Compex WP11A+ may be configured as a wireless client, functioning in conjunction with another IEEE 802.11b-compliant Access Point to perform transparent Bridging between two Fast Ethernet networks.

The following physical layout of a Wireless LAN-to-LAN Bridge shows Compex WP11A+ functioning as an ESS Client, performing Fast Ethernet LAN-to-LAN Bridging by accessing an ESS Access Point.



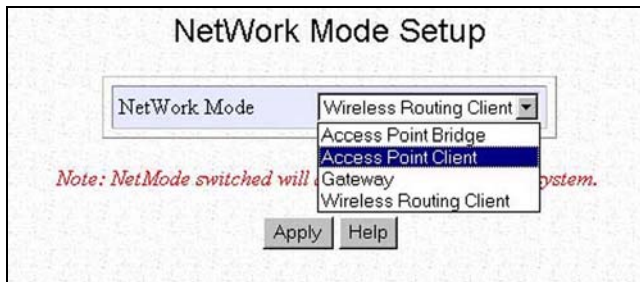
**Figure 5.4a    Physical setup of Wireless LAN-to-LAN Bridge**

## Chapter 5 Configure Compex WP11A Using Web Interface

### Starting Point

With Compex WP11A+ in its default setting,

1. Activate **uConfig** program, click on the “OpenWeb” button.
2. Go to the **CONFIGURATION** menu and click on **Mode Selection**. In the **Network Mode Setup**, select **Access Point Client** as shown in Figure 5.4b.



**Figure 5.4b Selection of Network Mode**

3. Click on the “Apply” button. The system will prompt you to reboot your system.
4. Go to **uConfig** program and wait for the system to refresh the screen. Click on the “OpenWeb” button to proceed. The system will lead you to the authentication page again. Logon again and Compex WP11A+ will be in AP Client Mode.
5. Go to “Mode Selection”. Click on the “Apply” button again. This time, the web page for **AP Client Setup** will appear.
6. Enter the parameters as shown in Figure 5.5c.

## Chapter 5 Configure Complex WP11A Using Web Interface

**State**  
3 kinds of status: Associated: BSS Mac Address, Authentication or Association failed and Not connected.

**Channel**  
The Direct Spread Sequence Spectrum (DSSS) technology divides the 2.4GHz band into 14 frequency channels, where the number of free channels is subjected to the local regulations of individual country/region, namely 14 channels for Japan; 13 channels for European, except France (ETSI); 11 channels for United States & Canada (FCC) and 4 channels for France.

**Tx Rate**  
There are 4 types of transmission rate, namely, 1Mbps; 2Mbps; 5.5Mbps and 11Mbps.

The screenshot shows the 'AP Client Setup' web interface. It has three main sections: 'AP Client Setup', 'WEP Setup', and 'Link Information'.  
1. **AP Client Setup**: Contains fields for Station Name (wlan), SSID (ANY), Tx Rate (Fully Auto), PS Mode (Disable), RTS Threshold (2432), and Frag Threshold (2346). There are 'Save', 'Reset', and 'Help' buttons.  
2. **WEP Setup**: Contains a dropdown for 'WEP encryption method' set to 'WEP 64bit' and 'Apply' and 'Help' buttons.  
3. **Link Information**: Shows 'State' as 'Disconnected', 'Current Channel' as an empty field, and 'Current TxRate' as an empty field. A 'Show Link Information' button is at the bottom.  
Callouts from text boxes point to the 'State' field, the 'Current Channel' field, and the 'Current TxRate' field.

Figure 5.4c Access Point Client Setup

7. Next, you have the option to choose either 64-bit or 128-bit for WEP Encryption from the **WEP Setup** as shown below. Select your option and click on the “Apply” button.

The screenshot shows the 'WEP Setup' web interface. It features a dropdown menu for 'WEP encryption method' currently set to 'WEP 64bit'. Below the dropdown are 'Apply' and 'Help' buttons.

Figure 5.4d Selecting WEP encryption method



## Chapter 5 Configure Compex WP11A Using Web Interface

8. Enter your encryption key. The parameters take in hexadecimal.

**WEP setup**

Key0	00	00	00	00	00
Key1	**	**	**	**	**
Key2	**	**	**	**	**
Key3	**	**	**	**	**

*Note: Changes made will only take effect after rebooting.*

**Figure 5.4e** Encryption entries for 64-bit

**WEP setup**

Key	11	22	33	44	55	66	77	88	99	AA	BB	CC	DD
-----	----	----	----	----	----	----	----	----	----	----	----	----	----

*Note: Changes made will only take effect after rebooting.*

**Figure 5.4f** Encryption entries for 128-bit

9. Click on the “Save” button and then reboot to take effect.

### Chapter 6 Setting up Wide Area Network using Gateway Mode

This chapter will elaborate on how the Compex WP11A+ can be set as a Broadband Internet Gateway. As the Compex WP11A+ supports different types of broadband connections, it is important that you choose the right connection type.

#### 6.1 Selecting the Right connection for your Broadband Internet Service

The following summarizes the type of connection suitable for your broadband Internet subscription.

##### Static IP

This type of connection should only be used if and only if you have subscribed to a fixed IP address or a range of fixed IP addresses from your service provider for your Internet connection.

##### Dynamic IP

This type of connection should be used if you are configuring the Compex WP11A+ for your Internet service. Once powered on, the Compex WP11A+ will request for an IP address, which will be automatically assigned by your service provider. Certain Internet Service Providers require DHCP Client ID before an IP address is released. For such cases, you must configure the **System Identity** with a **System Name** and this is equivalent to the DHCP Client ID. The configuration of **System Identity** may be found in the section on “**System Identity**” on Page 68.

##### PPP Over Ethernet (PPPoE)

This type of connection should be chosen for ADSL services in countries that use standard PPP over Ethernet (PPPoE) for authentication. This includes Germany which uses T-1 connection.



##### NOTE

If you are using SingTel Magix SuperSurf in Singapore, you should select **Singapore ADSL (Ethernet 512K)**. Subscribers of SingNet Broadband and Pacific Internet Broadband should select **PPPoE** as their WAN types.

---

##### Australia BPA Cable

This type of connection is specially customized for BPA Cable Internet subscribers in Australia.



##### NOTE

If you are using Big Pond Cable Internet in Australia, you should select Australia BPA Cable as the WAN type for your Compex WP11A+.

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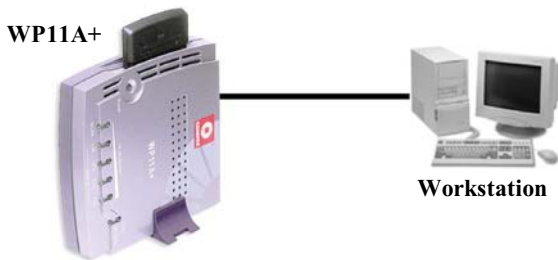
### NOTE

If you are subscribers of OPTUS in Australia, please select **Dynamic IP** as your WAN type and configure the router's System Name with the DHCP Client ID, refer to section on **System Identity** of this User Manual on Page 68.

## 6.2 Setup on Compex WP11A+ for Broadband Internet Access

For such service, you should have the IP address provided by your ISP ready before proceeding.

1. Connect a crossover cable from the Ethernet port of the Compex WP11A+ to your workstation.



**Figure 6.2a Connect Compex WP11A+ to PC**

2. As there are many different brands of broadband modems, some broadband modems may provide a straight-connect (MDI) Ethernet cable while some may use a cross-connect (MDIX) Ethernet cable.

For example:

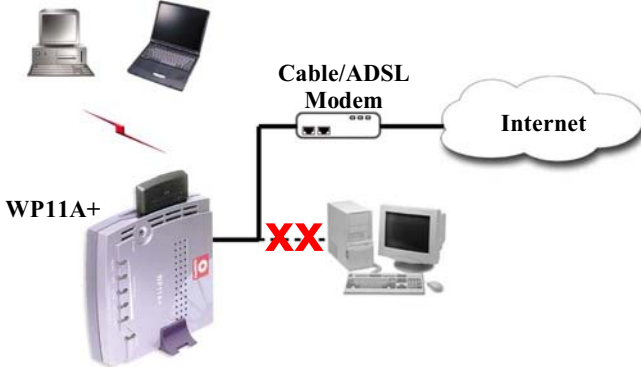
Aztech Turbo 900 provides cross-connect (MDIX) cable while Alcatel 1000 ADSL modem provides straight-connect (MDI) cable.

3. Power on both your workstation and the Compex WP11A+. The WLAN LED should light up, indicating the connection has been established.
4. You may start to configure the Compex WP11A+ before connecting to the Internet. Please refer to “Configure Compex WP11A+ Using Web Interface” section on Page 17.
5. After configuration, switch off both your workstation and Compex WP11A+.

## Chapter 6 Setting up Wide Area Network using Gateway Mode

- Next, remove cable from your workstation and insert it into your modem's Ethernet port.

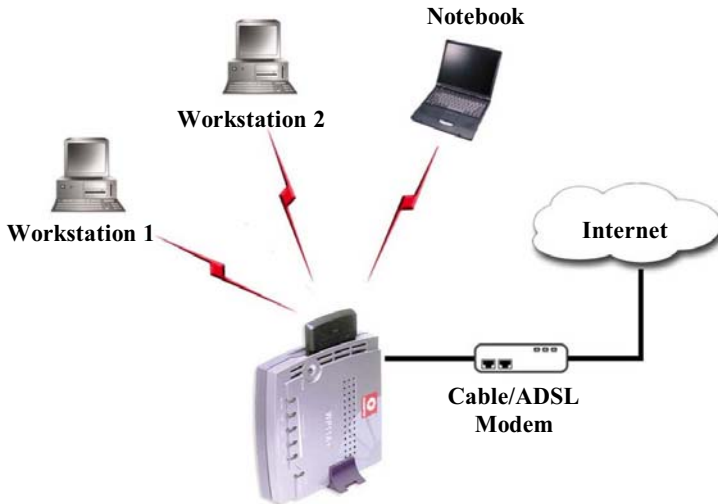
Either PC or notebook



**Figure 6.2b** Connect Compex WP11A+ to modem

- Power on your broadband modem and wait for it to complete the initialization process which may take a minute or more.
- Next, power ON the Compex WP11A+. When either of the 10M or 100M Ethernet LED lights up, this shows that there is a cable connection between the ADSL modem and the Compex WP11A+.
- Power ON the PC/notebook and the WLAN port LED should light up after entering the Windows environment. This indicates good cable connection between the PC and the Compex WP11A+.
- Once everything is checked, you can now access to the Internet.

### 6.3 Configure Comex WP11A+ using Web Interface



**Figure 6.3a** Physical layout for Wireless Broadband Internet Gateway WP11A

Assuming that Comex WP11A+ is in the default setting.

1. Activate the **uConfig** program, click on the “OpenWeb” button.
2. Go to the **CONFIGURATION** menu and click on **Mode Selection**. Select **Gateway** mode and click on the “Apply” button. Next, click on the “Yes” button to reboot the device.

## Chapter 6 Setting up Wide Area Network using Gateway Mode

3. Go to **uConfig** program and click on the “OpenWeb” button. Logon again and now Compex WP11A+ is in **Gateway Mode**.

NetWork Mode Setup

NetWork Mode: Wireless Routing Client

Access Point Bridge

Access Point Client

Gateway

Wireless Routing Client

Note: NetMode switched will ... system.

Apply Help

Figure 6.3b Selection of Network Mode – Gateway

4. Next, click on the “Apply” button to proceed to the Access Point Setup.

Access Point Setup

Access Point Name: wlan

ESSID: Any

Channel: 3

Tx Rate: Fully Auto

RTS Threshold: 2432

Frag Threshold: 2346

Note: Changes made will only take effect after rebooting.

Save Reboot Help

Access Control

Pseudo VLAN: Disable

WEP encryption method: Disable

Apply Help

Figure 6.3c Access Point Setup in Gateway Mode

## Chapter 6 Setting up Wide Area Network using Gateway Mode

5. For details in configuring Pseudo VLAN and WEP encryption method, please refer to the “**Setting up Wireless Per Group Pseudo LAN using AP Bridge Mode**” section, Step 4 on Page 20.
6. If you want to configure WAN setup, proceed to **WAN Setup** and the following GUI will appear. By default, Comex WP11A+ is pre-configured with Dynamic IP, which is suitable for most Cable Internet service providers.

The screenshot displays the WAN Setup and MAC Cloning configuration interface. The WAN Setup section is at the top, showing a table of configuration parameters with a 'Change' button. Below it is a 'Help' button. The MAC Cloning section is at the bottom, showing the Ethernet Adapter's MAC Address and the Current Router's MAC Address, with 'Clone Mac' and 'Restore Mac' buttons.

WAN Setup		
Wan Type	Dynamic IP	<input type="button" value="Change"/>
IP Address	0.0.0.0	
Network Mask	0.0.0.0	
Gateway IP Address	0.0.0.0	
Primary DNS	0.0.0.0	
Secondary DNS	0.0.0.0	

**MAC Cloning**

Ethernet Adapter's MAC Address: 00-80-48-e8-85-12
Current Router's MAC Address: 54-8a-10-00-00-00

**Figure 6.3d WAN setup**

Alternatively, you may also choose the different WAN type by clicking on the “Change” button. For more details, please refer to the next chapter.

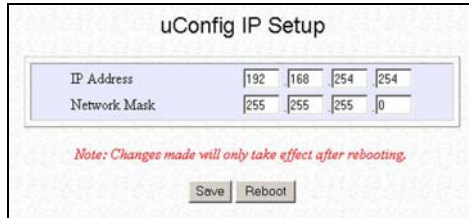
## Chapter 6 Setting up Wide Area Network using Gateway Mode

---

### 6.3.1 Advanced configuration in Gateway Mode

#### uConfig IP Setup

By selecting **uConfig IP Setup** function from the Command window, you can change the IP address which the **uConfig** program will trace.



The screenshot shows a window titled "uConfig IP Setup". Inside the window, there are two rows of input fields. The first row is labeled "IP Address" and contains four input boxes with the values "192", "168", "254", and "254". The second row is labeled "Network Mask" and contains four input boxes with the values "255", "255", "255", and "0". Below the input fields, there is a red italicized note: "Note: Changes made will only take effect after rebooting." At the bottom of the window, there are two buttons: "Save" and "Reboot".

**Figure 6.3e** uConfig IP Setup

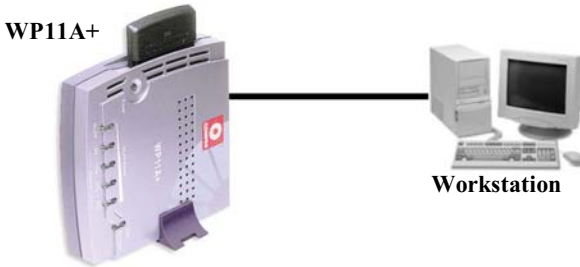
More advanced features can also be configured to Compex WP11A+ for you to manage the LAN usage of Internet access better, such as installing the filter rule. Details on how to create rules for filtering can be found in "**Packet Filtering**" on **Page 64**.



Setting Compex WP11A+ as a wireless routing client enables you to access to the internet through wireless method. The PCMCIA LAN card will act as a WAN port. It will communicate with an Access Point and then from there, we can access to Internet through the ADSL/Cable modem which is connected to the Access Point. In this way, the Ethernet port of Compex WP11A+ can be used to connect to other networking devices, such as switches to cater for more PCs.

#### 7.1 Setting up Compex WP11A+ as Wireless Routing Client

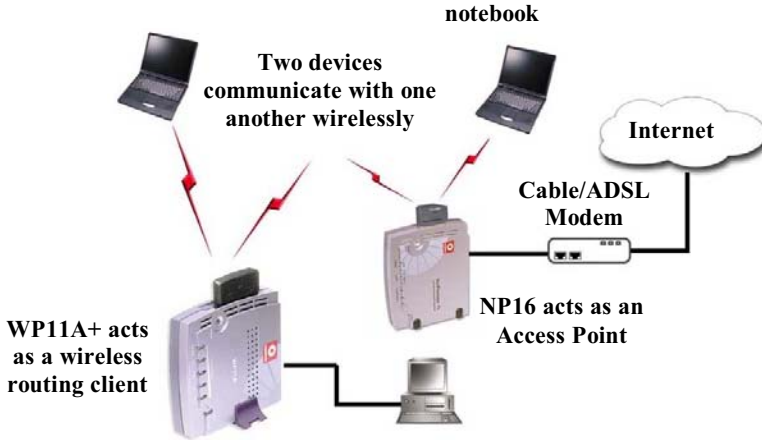
1. Connect a crossover cable from the Ethernet port of the Compex WP11A+ to your workstation.



**Figure 7.1a** Connect Compex WP11A+ to PC

2. Power on both your workstation and the Compex WP11A+. The WLAN LED should light up, indicating the connection has been established.
3. You may start to configure the Compex WP11A+ before connecting to the Internet. Please refer to **“Configuring Compex WP11A+ as Wireless Routing Client through Web Interface”** on Page 41.

## Chapter 7 Setting up WAN using Wireless Routing Client



**Figure 7.1b Physical layout for setting Compex WP11A+ as Wireless Routing Client**

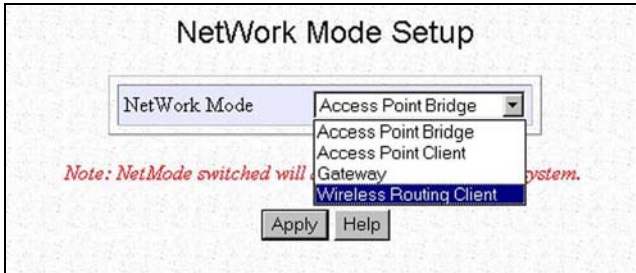
4. Power on the broadband modem and wait for it to complete the initialization process which may take a minute or more, depending on the brand and design of individual modem.
5. Next, power ON the Compex WP11A+ and Compex NP16. When either of the 10M or 100M Ethernet LED lights up, this shows that there is a good cable connection between the ADSL modem, Compex WP11A+ and Compex NP16.
6. Power ON the PC/notebook and the WLAN port LED should light up after entering the Windows environment. This indicates good cable connection between the switch/notebook and the Compex WP11A+.
7. Assume that Compex NP16 has been configured as an Access Point, you can now access to the Internet.

## Chapter 7 Setting up WAN using Wireless Routing Client

### 7.2 Configuring Compex WP11A+ as Wireless Routing Client through Web Interface

Assuming that Compex WP11A+ is in the default setting.

1. Activate the **uConfig** program, click on the “OpenWeb” button.
2. Go to the **CONFIGURATION** menu and click on **Network Mode Selection**. Select **Wireless Routing Client** mode and click on the “Apply” button. Next, click on the “Yes” button to reboot the device.



**Figure 7.2a Selection of Network Mode – Wireless Routing Client**



#### **NOTE**

Do not hit the “Logon” button. This will not lead you to the authentication page!!

3. Go to **uConfig** program and click on the “OpenWeb” button. Logon again and now Compex WP11A+ is in **Wireless Routing Client** Mode.

## Chapter 7 Setting up WAN using Wireless Routing Client

- Next, click on the “Apply” button to proceed to the **Wireless Routing Client Setup**.

The screenshot shows the 'Wireless Routing Client Setup' page. It includes fields for Station Name (WP11A), SSID (ANY), Tx Rate (Fully Auto), PS Mode (Disable), RTS Threshold (2432), Frag Threshold (2346), and Tx Power (8). Below these are 'Save', 'Reboot', and 'Help' buttons. A note states: 'Note: Changes made will only take effect after rebooting.' The 'WEP Setup' section has a 'WEP encryption method' dropdown set to 'Disable' and 'Apply' and 'Help' buttons. The 'Link Information' section has a 'Show Link Information' button. A callout box for 'Tx Power' explains that it indicates power transmit to the wireless broadcast, with higher numbers (15db) being more powerful. Another callout box for 'Signal Strength' explains that it indicates the strength of the signal, with 100% being full strength. A third callout box for 'Link Information' shows a table with the following data:

Link Information	
State	Not connected
Current Channel	
Current TxRate	
Signal Strength	

**Figure 7.2b** Wireless Routing Client Setup

- Next, you have the option to choose either 64-bit or 128-bit for WEP Encryption from the **WEP Setup** as shown below. Select your option and click on the “Apply” button.

The screenshot shows the 'WEP Setup' page. The 'WEP encryption method' dropdown is set to 'WEP 64bit'. Below it are 'Apply' and 'Help' buttons.

**Figure 7.2c** Selecting WEP encryption method

## Chapter 7 Setting up WAN using Wireless Routing Client

6. Enter your encryption key. The parameters take in hexadecimals.

**WEP setup**

Key0	00	00	00	00
Key1	**	**	**	**
Key2	**	**	**	**
Key3	**	**	**	**

*Note: Changes made will only take effect after rebooting.*

**Figure 7.2d** Encryption entries for 64-bit

**WEP setup**

Key	11	22	33	44	55	66	77	88	99	AA	BB	CC	DD
-----	----	----	----	----	----	----	----	----	----	----	----	----	----

*Note: Changes made will only take effect after rebooting.*

**Figure 7.2e** Encryption entries for 128-bit

7. Click on the “Save” button and then reboot to take effect.
8. If you want to configure WAN setup, proceed to **WAN Setup** and the following GUI will appear. By default, Comexp WP11A+ is pre-configured with Dynamic IP, which is suitable for most Cable Internet service providers.

## Chapter 8 Configuration on Various WAN Type

### Chapter 8 Configuration on Various WAN Type

This section explains how to configure the Compex WP11A+ as a Wireless Broadband Internet Gateway to distribute Broadband Internet Access to a wireless network.

Besides Dynamic IP connection, Compex WP11A+ also supports Static IP, PPP over Ethernet, Singapore ADSL (Ethernet 512K) and Australia BPA Cable.

If you have chosen self-installation when you register for your broadband service, you should first test the ADSL modem together with the logon account on your PC or notebook. Ensure that it can connect successfully before attempting to run it with Compex WP11A+.

For simplicity and illustration purposes, it is assumed that the following LAN environment uses the IP address 192.168.168.xxx and Compex WP11A+ is using the default settings.

However, if you have assigned a different IP address for Compex WP11A+, then use the new settings in the setup procedures.

### 8.1 Configuring Static IP Connection

1. Go to WAN setting at Command Window, click on the “Change” button and check the radio button next to the Static IP Address.
2. Click on “Save” button to update the data.

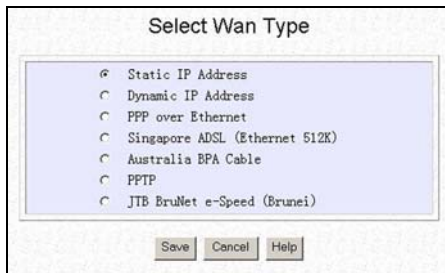
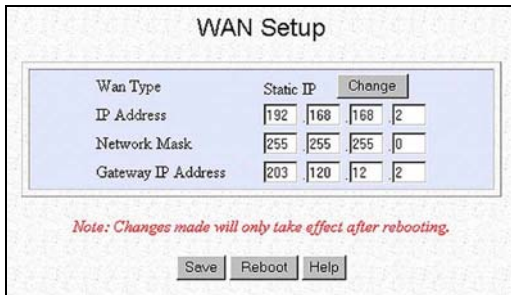


Figure 8.1a Select WAN Type - Static IP Address

## Chapter 8 Configuration on Various WAN Type

3. The **WAN Setup** screen shows a **Static IP Configuration** that allows you to configure your Static IP connection to your ISP.



The screenshot shows a web-based configuration interface titled "WAN Setup". It features a "Static IP" configuration section with a "Change" button. The fields are as follows:

Wan Type	Static IP				Change
IP Address	192	.168	.168	2	
Network Mask	255	.255	.255	0	
Gateway IP Address	203	.120	.12	2	

Below the form, a red note states: *Note: Changes made will only take effect after rebooting.* At the bottom, there are three buttons: "Save", "Reboot", and "Help".

**Figure 8.1b WAN Static IP Address Configuration**

4. Fill in the required field for the IP address, Network Mask and Gateway.
5. All these information can be obtained from your ISP/Network Administrator.
6. After you have entered every field, click on the "Save" button to save the configuration and reboot the Compex WP11A+.

Now you can surf the Internet freely.

## Chapter 8 Configuration on Various WAN Type

### 8.2 Configuring Dynamic IP Connection

The Compex WP11A+ is pre-configured with WAN connection using Dynamic IP. Hence, if you are using Cable Internet access, you do not need to configure the WAN connection.

However, if your account requires a **DHCP Client ID** in order to release an IP address, you may need to configure the name of Compex WP11A+ with that of the DHCP Client ID issued by your ISP.

See the section on “**System Identity**” on **Page 68**, and remember to enter the DHCP Client ID issued by the ISP into the **System Name** field in the System Identity.



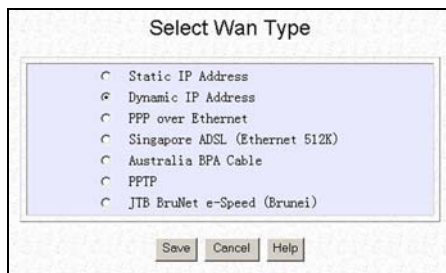
#### NOTE

If your computer is not able to resolve any web site, please verify that your DNS entry of the computer has been defined correctly.

#### 8.2.1 How to configure Singapore Cable Vision (SCV) Service

SCV provides a Dynamic IP address connection service. Assuming that your WP11A+ is not in the Dynamic IP setting, please follow the procedures to change to the appropriate WAN type.

1. Go to **WAN Setup**. Click on the “Change” button for list of other WAN types Selection.
2. On the list of other WAN types selection, check the radio button next to the **Dynamic IP Address** and click on the “Save” button.



**Figure 8.2a Dynamic IP Address – for SCV broadband provider**

Now, you can start surfing the Internet. You might want to manage the Internet access by setting Filtering rules etc. For details, please refer to “**Packet Filtering**” on **Page 64**.



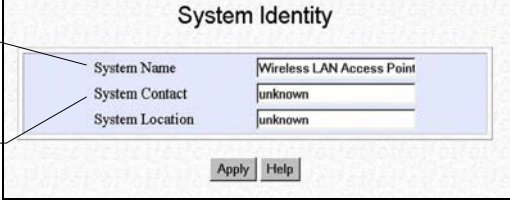
## Chapter 8 Configuration on Various WAN Type

### 8.2.2 How to Configure @HOME Cable Service

Many broadband services require a simple DHCP request for connection. Two such cable services are Optus@Home and Roger@Home.

To configure the @HOME Cable Service,

1. Follow the steps stated in the previous “**Configuring for Singapore Cable Vision (SCV) Service**” section.
2. Next, click on **System Identity** at the Command window under the **SYSTEM TOOLS** menu and enter the required field as shown.

<b>System Name</b> You can obtain this information from your ISP.	
<b>System Contact and Location</b> You may leave it as it is or fill in your ISP contact and location information. They are for your future reference only.	

**Figure 8.2b System Identity**

3. Click on the “Apply” button to set the System Identity.
4. Reboot your device.
5. Now, you can start surfing the Internet. If you want to have advanced configuration on your device, please refer to the “**Packet Filtering**” section on **Page 64** or the “**Configuring Network Address Translation**” section on **Page 57**.

## Chapter 8 Configuration on Various WAN Type

### 8.3 Configuring PPP over Ethernet Session (PPPoE)

For Broadband service providers such as Pacific Internet Broadband and SingNet Broadband, you have to select the PPPoE WAN configuration. This includes users in Germany who use T-1 connection.



#### NOTE

Certain ADSL Internet subscriptions require **Service Name** to be specified in order to establish a PPPoE connection.

---

#### 8.3.1 How to Configure SingNet, PacNet and QALA DSL Broadband

This procedure assumes you have a login account from SingNet, Pacific Internet or QALA DSL broadband service, and also all the necessary hardware installation is in place.

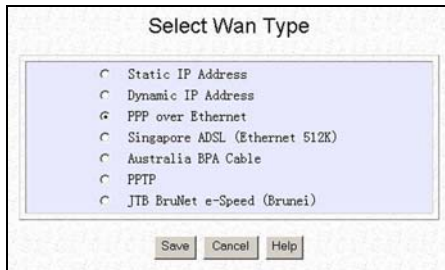


#### NOTE

If you have opted for self-installation when you register for the broadband service, you should first test out the ADSL modem by logging in from your PC. Make sure it can connect successfully before attempting to run it with the Complx WP11A+

---

1. Click on the **WAN Type** option on the Command window. The default Dynamic IP setup page will display.
2. Click on the “Change” button and check the radio button next to the **PPP over Ethernet**.
3. Click on the “Save” button.



**Figure 8.3a PPP Over Ethernet –WAN Type**

## Chapter 8 Configuration on Various WAN Type

The **WAN Setup** screen below displays the **PPPoE** configuration that allows you to configure your ADSL access.

**Username**  
Enter your ADSL login username in this field.

**Password**  
Enter your ADSL login password in this field.

**Service Name**  
Certain ADSL Internet subscriptions require the user to key in the service name. You may do so in this field.

**Non-Standard PPPoE Ethernet Type**  
If you are using a Non-Standard PPPoE ADSL connection like that of Pacific Internet Broadband using a 3COM ADSL modem, you will need to check the box next to **Use non-standard PPPoE Ethernet type**. If you are unsure about the PPPoE type, leave the box unchecked.

**Idle Timeout**  
Idle Timeout is the duration of non-activity at the WAN port for disconnection.

### WAN Setup

Wan Type	PPPoE	<a href="#">Change</a>
Username	<input type="text" value="Username"/>	
Password	<input type="password" value="*****"/>	
Service Name	<input type="text"/>	
<input checked="" type="radio"/> On-Demand	Idle Timeout (0:Disable)	<input type="text" value="0"/> seconds
<input type="radio"/> Always-On	Reconnect Time Factor	<input type="text" value="30"/> seconds
<input type="checkbox"/> Use non-standard PPPoE ethernet type		
Status	Disconnected	<a href="#">Connect</a>
IP Address	0.0.0.0	
Network Mask	0.0.0.0	
Gateway IP Address	0.0.0.0	
Primary DNS	0.0.0.0	
Secondary DNS	0.0.0.0	

*Note: Changes made will only take effect after rebooting.*

[Save](#) [Reboot](#) [Help](#)

**Figure 8.3b WAN PPPoE Configuration**



### NOTE

Singapore users should follow the format below to enter their usernames:

Pacific Internet Broadband: username@pacific.net.sg

SingNet Broadband: username@singnet.com.sg

QALA DSL: username@qala.com.sg

4. After you have entered the required field, click on the “Save” button to update the configuration. Reboot the CompeX WP11A+.

Now, you may activate the Internet Explorer and start surfing the Internet. Once the CompeX WP11A+ is up and running, you might want to add advanced configurations such as Filtering to better manage your LAN. For details, refer to the “**Packet Filtering**” section on **Page 64**.

## Chapter 8 Configuration on Various WAN Type

### 8.4 Configuring for SingTel Magix SuperSurf

With your ADSL modem and PC, you can configure your WAN using the login account from SingTel Magix broadband service.

1. Select **WAN Type** and click on the “Change” button.
2. Check the radio button next to the **Singapore ADSL** and click on the “Save” button.

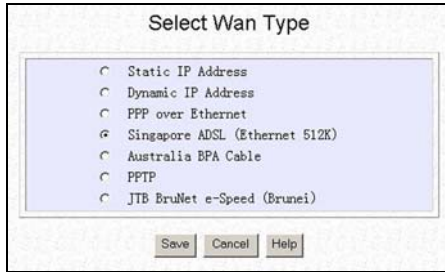


Figure 8.4a WAN Type - Singapore ADSL

3. The **WAN Setup** screen displays the configuration for Singapore ADSL which allows users in Singapore to configure their connection for Magix SuperSurf (512K) ADSL Broadband Internet.

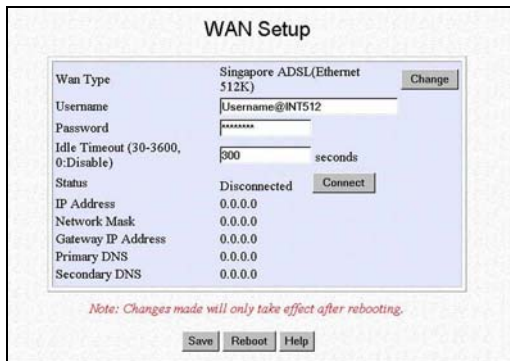


Figure 8.4b Singapore ADSL for SingTel Magix

## Chapter 8 Configuration on Various WAN Type

4. Enter **Username, Password, Service Name** (optional) and **Idle Timeout** (disabled at default).
5. Click first the “Save” and then on the “Reboot” button to complete the WAN configuration.

If all connections are properly established an Internet request, the Compex WP11A+ will detect and automatically establish the connection with Magix SuperSurf.

Next, activate the Netscape/Microsoft Internet Explorer browser to start surfing the Net.

In addition, you can implement advanced features such as Filtering (“**Packet Filtering**” on **Page 64**) to control over your LAN users’ Internet access.

### 8.5 Configuring for BigPond Australia (BPA)

This type of connection is specially customized for BPA Cable Internet subscribers in Australia.



#### NOTE

For OPTUS subscribers in Australia, you have to select **Dynamic IP** as your **WAN type** and configure the Compex WP11A+’s **System Name** with the DHCP Client ID. Please refer to “**Configuring Dynamic IP Connection**”.

1. Click on **WAN Setup** and click on the “Change” to select WAN type as **Australia BPA Cable**.

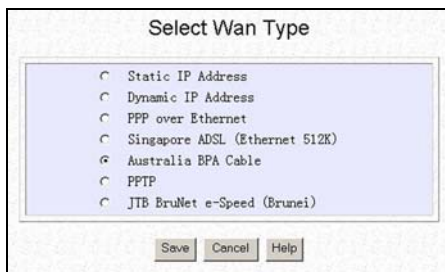
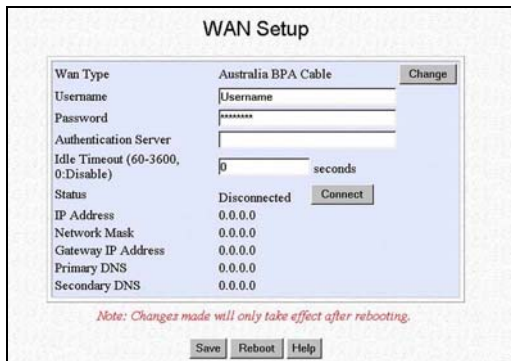


Figure 8.5a Australia BPA Cable –WAN Type

## Chapter 8 Configuration on Various WAN Type

2. Click on “Save” and the **Australia BPA Cable WAN Setup** screen will appear for you to set the configuration.



**WAN Setup**

Wan Type	Australia BPA Cable	<input type="button" value="Change"/>
Username	<input type="text" value="Username"/>	
Password	<input type="password" value="*****"/>	
Authentication Server	<input type="text"/>	
Idle Timeout (60-3600, 0:Disable)	<input type="text" value="0"/>	seconds
Status	Disconnected	<input type="button" value="Connect"/>
IP Address	0.0.0.0	
Network Mask	0.0.0.0	
Gateway IP Address	0.0.0.0	
Primary DNS	0.0.0.0	
Secondary DNS	0.0.0.0	

*Note: Changes made will only take effect after rebooting.*

**Figure 8.5b Australia BigPond Cable**

**Australia BPA Cable** configuration allows Australian users to configure the connection for BigPond Cable Internet. If you have subscribed to Optus@Home in Australia, please configure your connection profile using Dynamic IP.

3. Fill in the required fields for **Username**, **Password** and **Idle Timeout**.
4. After you have entered every field, click on the “Save” button to save the configuration.
5. Reboot Compex WP11A+.

Now, you can start surfing the Internet. To configure the Compex WP11A+ with advanced functions such as NAT, filtering please refer to the “**Configuring Network Address Translation**” section on **Page 57** and “**Packet Filtering**” section on **Page 64**.

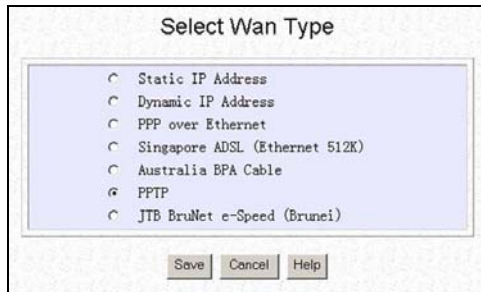
## Chapter 8 Configuration on Various WAN Type

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### 8.6 Point to Point Tunneling Protocol (PPTP)

PPTP enables implementation of secure, multi-protocol Virtual Private Networks (VPNs) through public data networks, such as Internet.

1. Click on **WAN Setup** and click on the “Change” to select WAN type as **PPTP**.
2. Press the **Change** button and the list of supported WAN type will be displayed as shown below.



**Figure 8.6a WAN Type – PPTP**

## Chapter 8 Configuration on Various WAN Type

3. Check the **PPTP** radio button and press the **Save** button. The configuration page for **PPTP** will be displayed.

The screenshot shows the 'WAN Setup' configuration page for PPTP. The 'Wan Type' is set to 'PPTP'. The 'Connect IP' is 203.120.12.240. The 'Username' and 'Password' fields are empty. The 'VPN Server' field is empty, with a note: 'Pls input IP of the server. e.g. 100.100.100.100'. The 'Idle Timeout (60-3600, 0:Disable)' is set to 0 seconds. The 'Status' is 'Connected', with a 'Disconnect' button. The 'IP Address' is 192.168.77.100, 'Network Mask' is 255.255.255.0, 'Gateway IP Address' is 192.168.77.2, 'Primary DNS' is 203.120.90.90, and 'Secondary DNS' is 0.0.0.0. At the bottom, there is a note: 'Note: Changes made will only take effect after rebooting.' and buttons for 'Save', 'Reboot', and 'Help'.

**Figure 8.6b Configuration on PPTP**

4. Fill in the parameters for your PPTP service:

- Connect IP** Key in the IP Address of your Service Provider.
- Username** Enter the username of your PPTP subscription.
- Password** Enter the password of the username.
- VPN Server** Enter the IP Address for VPN server.
- Idle Timeout** This field allows you to specify the idling timeout value for Complx WP11A+ to disconnect from the ISP. "0" value in this field disables idling timeout function. When set to "0", Complx WP11A+ remains connected unless disconnected by the ISP. Once disconnected, Complx WP11A+ will stay offline until the next Internet request is detected in the network.



## Chapter 8 Configuration on Various WAN Type

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5. Press the **Save** button followed by the **Reboot** button to complete the configuration process.
6. Enter all necessary information in the individual fields and press the **Save** button.
7. Press the **Reboot** button to complete the configuration process.

### 8.7 JTB BruNet e-Speed

JTB BruNet e-Speed is one of the ADSL technology which delivers high speed data communication to home or business without interfering normal telephone service. E-speed will connect BruNet users at a higher speed of 128 kbps, 256 kbps, 384 kbps or even 512 kbps, depending on the availability of the bandwidth to the web site being access.

1. Click on **WAN Setup** and click on the “Change” to select WAN type as **JTB BruNet e-Speed (Brunei)**.
2. Press the **Change** button and the list of supported WAN type will be displayed as shown below.

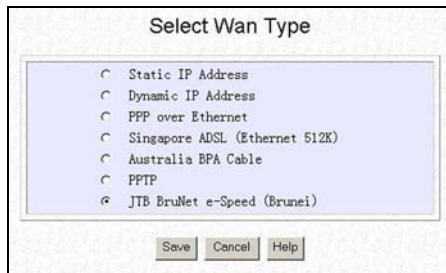


Figure 8.7a WAN Type – JTB Brunei e-Speed

## Chapter 8 Configuration on Various WAN Type

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3. Check the **JTB BruNet e-Speed (Brunei)** radio button and press the **Save** button. The configuration page for **e-Speed** will be displayed as follows.

E-Speed serves both business and residential customers.



The image shows a dialog box titled "Service Type". Inside the dialog, there are two radio button options: "Residential Service (DHCP)" and "Business Service (Static)". Below these options are two buttons: "Save" and "Cancel".

**Figure 8.7b** Types of Service for JTB BruNet e-Speed

4. Select the type of services by clicking on the radio button.
5. Hit on the Save button and you can now surf the net comfortably.

## Chapter 9 Configuring Network Address Translation

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### Chapter 9 Configuring Network Address Translation

In this chapter, we will illustrate on how you can host some Internet Servers on your LAN via the use of Compex WP11A+ configuration interface.

Before you attempt any NAT or Filtering configurations, you should ensure the Compex WP11A+ is ready for basic Internet access on LAN.

#### 9.1 NAT and Virtual Server

Compex WP11A+ comes with a simple Network Address Translation (NAT) Firewall protection for your LAN. It uses a mechanism that substitutes a Private IP address with a Public IP address when a packet leaves the Private network; and restore the destination Public IP address with the Private IP address when the packet enters the Private network. With NAT firewall, you can protect your LAN from unauthorized access from the WAN.

One feature of the NAT is that any unauthorized requests from the Internet will not be allowed to pass through Compex WP11A+. Hence, with NAT, you can host a Virtual Server on the LAN. NAT works by translating packets of Private IP addresses to appear as originating from a single Public IP address; thus allowing multiple PCs in the LAN to appear as one PC to the WAN interface.

The implementation of a Virtual Server allows Internet servers such as Web Server, FTP Server and Mail Server to be hosted on your network. It is able to support both Port Forwarding and IP-Forwarding Servers.



#### **NOTE**

Note that static IP supports IP Forwarding only.

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## Chapter 9 Configuring Network Address Translation

### 9.2 Defining Port-Forwarding Virtual Server

Port Forwarding redirects any incoming Public IP Internet request to another computer on a Private IP based on its TCP/UDP Port number.

Hence, when a WAN user sends a request to your network, the Compex WP11A+ (based on the Port-Forwarding configurations) will forward these requests to the assigned PC.

#### 9.2.1 When to use Port-Forwarding Virtual Server

When your ISP assign you with only one fixed Public IP address, and you want to define the various servers (such as, FTP, HTTP, Netmeeting, Mail server etc ) to specific Private IP address in your LAN; you can choose to host the servers by using the port-Forwarding Virtual server.

For example, suppose that you have a FTP Server with an IP address of 192.168.168.41 and your broadband ISP has assigned a Public IP address of 203.120.12.100 to the gateway. To support a Web Server in your Private Network, you need to define an **NAT Static Port-based Entry** to forward **TCP port 21** (used by FTP) to 192.168.168.41. Every `http://203.120.12.100` requests will then be forwarded to the FTP Server.

### 9.3 Configuring Port-Forwarding virtual server with Compex WP11A+

Follow the steps shown below to configure the Port Forwarding function.

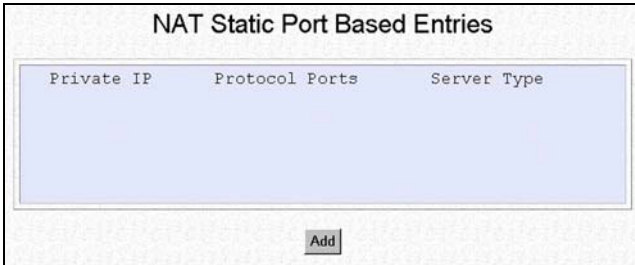
1. Go to NAT function at the Command Window. Select **Enable** for the status.



Figure 9.3a Configuring Network Address Translation

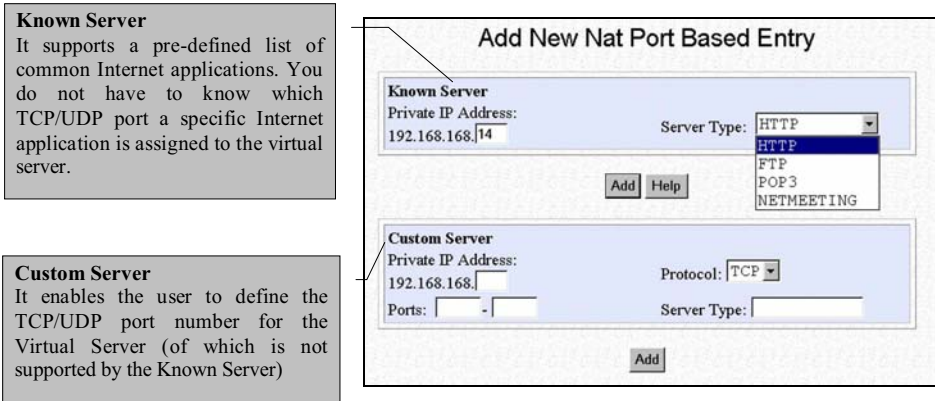
## Chapter 9 Configuring Network Address Translation

2. Click on the “Port Forwarding” button to display the **NAT Static Port Based Entries GUI**.



**Figure 9.3b NAT Static Port Based Entries**

3. Click on the “Add” button.



**Figure 9.3c Add in new Port Based Entry**

4. Enter the information, for example:  
Private IP Address:192.168.168.14  
Server Type: HTTP
5. Click on the “Add” button to add the address into the Port-based mapping table.

## Chapter 9 Configuring Network Address Translation

If you require assigning more PCs in your LAN as servers, use the “Add” button to define the port-forwarding virtual server.

To utilize NAT, you have to enter the Private IP Address of the Virtual Server and the Server Type (e.g. HTTP).

For those Internet applications not defined in the Known Server, you will have to enter Port in the Custom Server (the port number for TCP/UDP port used by this Virtual Server). You can also assign a name to this Virtual Server in the Server Type field. Choose a Protocol for this Virtual Server ports. (e.g. TCP or UDP).

By clicking on the “Add” button at the Add New Port Based Entry, you have added a new Virtual port.

If you wish to delete any of the entry, just select that particular entry and hit the “Delete” key on the keyboard.

### 9.4 Configuring IP-Forwarding virtual server with Compex WP11A+

1. Click **NAT** at the Command window.
2. Select **Enable NAT**. Click “Apply” button and then click “Static IP Address Entries” button.

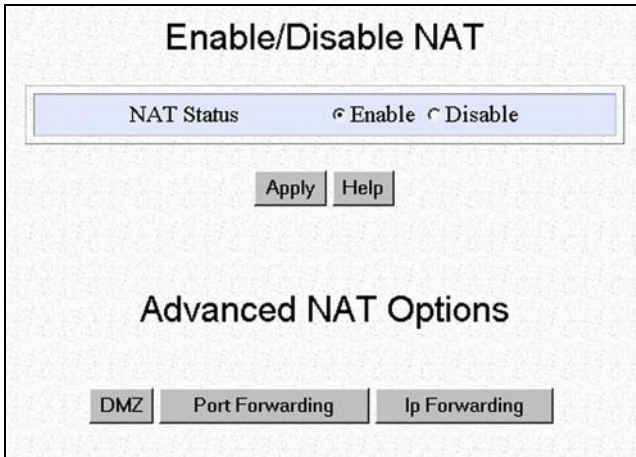
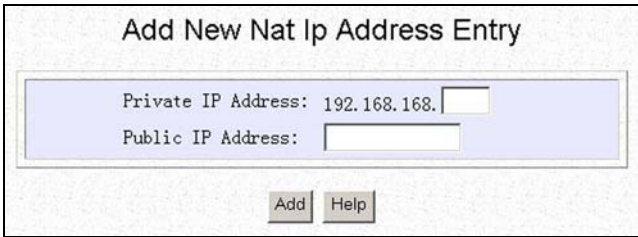


Figure 9.4a IP Forwarding Option

## Chapter 9 Configuring Network Address Translation

---

3. Click on “IP Forwarding” button.



Add New Nat Ip Address Entry

Private IP Address: 192.168.168.

Public IP Address:

**Figure 9.4b Adding New NAT IP address Entry**

Enter the information in the respective parameter fields, for example:

Private IP Address: 192.168.168.40

Public IP Address: 203.100.10.99

4. Click **add button** to add the address into the IP address-mapping table.

Please note that you must enable the **NAT** function in the Configuration window if you are using a single IP address account (fixed static IP) and want to share this connection on your LAN.

By default, NAT status is set to **Enable**. Disabling NAT function is to be set only when you want to a block public IP address from ISP.

To disable NAT, select **Disable** and press **Apply**.

### 10.1 Configuring Routing Protocol

You can configure Complex WP11A+ to either Dynamic or Static Routing Protocol.

In dynamic routing, RIP1 and RIP2 will be chosen when there are multiple routes on your network. The broadband Internet Gateway will keep on updating its IP routing table with the latest routing information by automatically adjusting to any physical changes in the network connection.

The routing table contains the network path and status information, which is used for forwarding the information. The Routing Information Protocol (RIP) will receive the routing information from other routers on the network.

### 10.2 Adding Static Routes

If you already have existing multiple routers in your network and have multiple kinds of networks in your LAN, you may need to set up a static route between them to avoid the hassle of reconfiguring to the network. In this way, you can also have better control over the routes of your Complex WP11A+. For such cases, you can add a Static Routing to the router.

1. Click on **Routing**. Click on the “Add” button to add the Static Route in the **IP Routing Table** configuration shown.

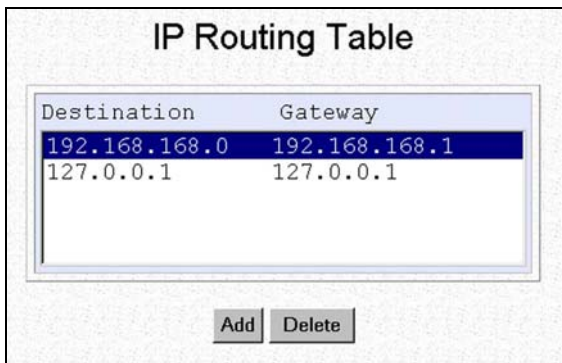


Figure 10.2a IP Routing Table



## Chapter 10 Routing

You will set the desired Destination IP Address and the Gateway IP Address.

2. Click “Apply” button to save your changes. You need to save and reboot your gateway.

### Destination IP Address

A remote network IP address to which you want to assign the static route. For example, if you want to route your WP11A to your entire LAN, you may enter the IP address as 192.168.168.0.

### Gateway IP

The IP address that provides the gateway between Comex WP11A and the remote network.

**Add IP Route**

Destination IP Address

Gateway IP Address

**Figure 10.2b Adding Static IP Routing**

### 11.1 Filtering

Compex WP11A+ allows Packet Filtering rules to be defined based on three factors, Source IP Address, TCP Port and Time. IP Packet Filtering examines the outgoing packets and decides whether to bypass or to block them. After the Packet Filtering rules have been defined, the users may select to bypass or to block the outgoing packets that do not match the rules.

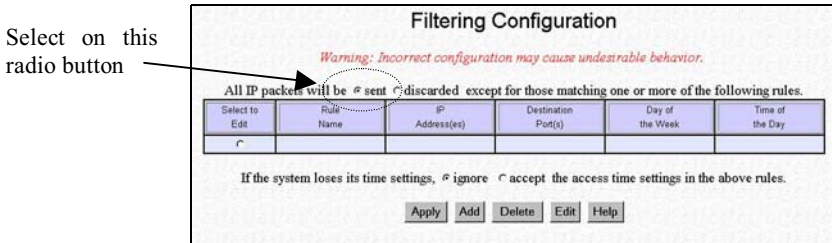


Figure 11.1a Adding Filtering Configuration

For example, assume that a rule has been defined as "TCP Port 23 (used by TELNET) from any IP on any day at any time". If the "sent" radio button is selected, all outgoing packets will be sent except TELNET session. If the discarded radio button is selected, all outgoing packets will be blocked except TELNET session.

Click on **Filtering** function at the Command window.

# Chapter 11 Packet Filtering

## To add a new rule

1. Press “Add” button.

The screen facilitates the users to add rules for IP Packet Filtering.

The screenshot shows the 'IP Filter Configuration' dialog box with the title 'Add a new rule'. It contains several fields: 'Rule Name' (text input), 'IP Address' (dropdown menu set to 'Any'), '(From)' and '(To)' (text inputs for IP range, both containing '192.168.168.'). 'Destination Port' (dropdown menu set to 'Any'), '(From)' and '(To)' (text inputs). 'Day of the Week' (dropdown menu set to 'Any'), '(From)' (dropdown menu set to 'Sun'), '(To)' (dropdown menu set to 'Sun'). 'Time of the Day' (dropdown menu set to 'Any'), '(From)' and '(To)' (text inputs for time range, both containing '(hh:mm)'). At the bottom are 'Apply', 'Cancel', and 'Help' buttons. Four callout boxes provide instructions for the 'IP Address', 'Destination Port', 'Day of the Week', and 'Time of the Day' fields.

**IP Address**  
Three values are possible for this field: **Any**, **Range** or **Single**. If you have selected **Any**, you may leave the next two fields blank. If you have selected **Range**, enter the range of IP addresses in (From) and (To) fields. If you have selected **Single**, you only need to enter the specific source IP address in the (From) field

**Destination Port**  
Three values are possible for this field, **Any**, **Range** or **Single**. If you have selected **Any**, you may leave the next two fields blank. If you have selected **Range**, enter the range of TCP port in (From) and (To) fields. If you have selected **Single**, you only need to enter the specific TCP port in the (From) field.

**Day of the Week**  
Two values are possible for this field, **Any** or **Range**. If you have selected **Any**, you may leave the next two fields blank. If you have selected **Range**, enter the duration of the weekdays in (From) and (To) fields.

**Time of the Day**  
Two values are possible for this field, **Any** or **Range**. If you have selected **Any**, you may leave the next two fields blank. If you have selected **Range**, enter the time in (From) and (To) fields.

Figure 11.1b IP Filtering Configuration

2. Enter the appropriate data in the respective entries for **Rule Name**, **IP Address**, **Destination Port**, **Day of the Week** and **Time of the Day**.
3. Press the “Apply” button to add the new rule or “Cancel” button to discard the rule.
4. To save the rules, click the **Save or Reset Settings** at the Command window under the **SYSTEM TOOLS** Menu.

## Chapter 11 Packet Filtering

---

### To delete a rule

1. Select the required rule on the **Select to Edit** column.
2. Click on **Delete** to activate the action.

### To edit a rule

1. Select the required rule on the **Select to Edit** column.
2. Click on “Edit” button to activate the action,
3. Click “Apply” button to accept the rule or “cancel” button to discard the rule.
4. To save the rules, click the **Save or Reset Settings** at the Command window on **SYSTEM TOOLS** menu.



### **CAUTION**

You must synchronize the clock of Complex WP11A+ to your PC's time for the rules to execute accurately.

Refer to “Set System Time” on **Page 69** to utilize the timing based function of Complex WP11A+.

---

#### 12.1 Remote Management

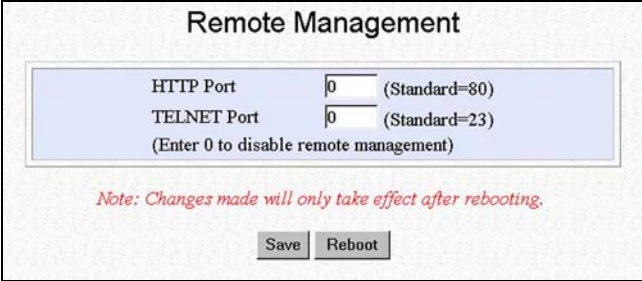
The Remote Management feature is a useful function for those people who work from home or sales personnel who are mostly away from the office. As long you have Internet access at your Remote site, you can still manage your network.

To enable remote management,

1. Select **Remote management** at the Command window.
2. Enter the information, for example:

**HTTP Port:** 80

**TELNET Port:** 23



Remote Management

HTTP Port	<input type="text" value="0"/>	(Standard=80)
TELNET Port	<input type="text" value="0"/>	(Standard=23)

(Enter 0 to disable remote management)

*Note: Changes made will only take effect after rebooting.*

**Figure 12.1a Remote management**

3. Click on the “Save” and reboot the Compex WP11A+.

#### 13.1 System Identity

If you have multiple Comex WP11A+s in your network, it will be useful if you define the respective Comex WP11A+ identities for ease of identification.

In some cases, your ISP may require you to define a **System Name** before you can access the Internet. The **System Name** is also used as a DHCP Client ID in negotiation with a DHCP Server for IP release. All these can be defined in the **System Identity**.

System Identity	
System Name	Wireless LAN Access Point
System Contact	unknown
System Location	unknown

Apply Help

**System Name**  
This parameter is used as a DHCP Client ID in negotiation with a DHCP Server for IP leased. Certain Cable ISPs, such as Optus@Home in Australia and Excite@Home in the United States, require DHCP Client ID to be authenticated first before leasing out an IP address

**Figure 13.1a System Identity Description**

To do so,

1. Go to **System Identity** at the Command window.
2. Description on the **System Name**, **System Contact** (You may enter the contact person for the Gateway in this field) and **System Location** (If there are multiple Gateways in the network or building, you may enter a location to identify the Gateway.)
3. Press “Apply” button to effect the changes.

## Chapter 13 Using SYSTEM TOOLS menu

### 13.2 Set System Time

It is recommended that you configure the Compex WP11A+'s timer to synchronize with your PC so that you can utilize the time-based functions.



#### NOTE

To manage and utilize the time-based functions provided in the Compex WP11A+, (such as the Filtering functions), you **MUST** set its clock to synchronize with your managing workstation.

1. Access the **SYSTEM TOOLS** menu and click on the **Set System's Clock**.
2. Select the appropriate time zone from the pull down menu. Next, click on the "Apply" button.

**System Time Setting**

Current System Time:   
and Time Zone:

Proposed system Time   Daylight Saving Time

Select to Change the Time Zone for the system Location:

Auto Time Setting (SNTP)  Enable  Disable

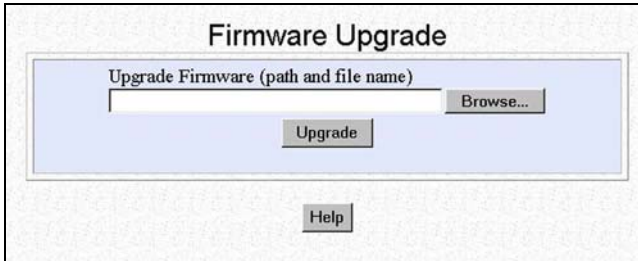
Time Servers   
e.g. time.nist.gov;ns.arc.nasa.gov

**Figure 13.2a** Synchronizing Compex WP11A+'s timer

## Chapter 13 Using SYSTEM TOOLS menu

### 13.3 Firmware Upgrade

You can download the new Firmware upgrade from <http://www.compex.com.sg> for the latest firmware revision. Here, you can download all future release of updated Firmware by simply clicking on the links..



**Figure 13.3a To upgrade Firmware**

To perform the upgrade,

1. Click on Firmware Upgrade.
2. Click on the “Browse” button to locate the filename. Next, click on the “Upgrade” button to begin the upgrading to the latest firmware revision.

Follow through the instructions during the upgrading process. Once completed, remember to reboot Compex WP11A+ and login again to proceed with any configurations.

---

#### NOTE



The firmware image file that you install from the CD-ROM may not be the latest version. To get the most updated version, please go to [www.compex.com.sg](http://www.compex.com.sg) to download the firmware.

To check your current firmware revision, click on the **About System** in the **HELP** menu.

---

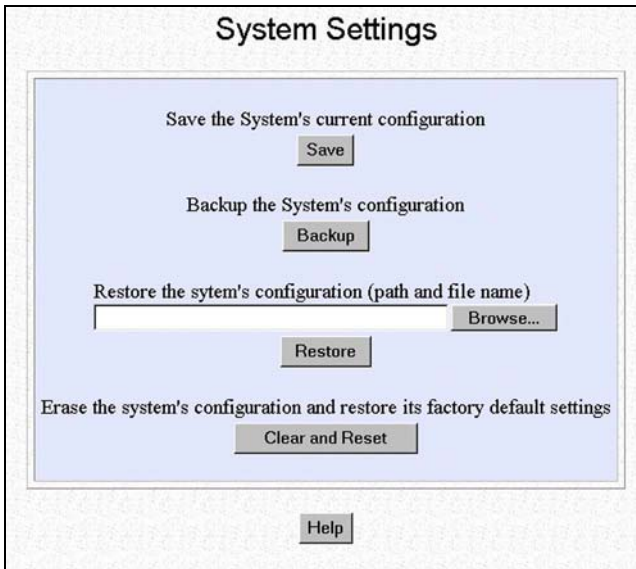


## Chapter 13 Using SYSTEM TOOLS menu

### 13.4 Save or Reset Settings

This function allows the users to perform tasks on the configuration settings. You may save the configuration that you have made to the Compex WP11A+, backup the configuration on a file, restore the configuration from a file and reset the configuration back to factory default.

The **Save and Reset Settings** allows you to execute the changes or reset the Compex WP11A+ back to the default configuration.



**Figure 13.4a Save and Reset Settings options**

#### **To Save**

1. Click on the “Save” button to update all changes you have made previously.
2. Reboot Compex WP11A+ to ensure that it points to the right profile and logon again.

## Chapter 13 Using SYSTEM TOOLS menu

---

### To Backup

To backup Compex WP11A+'s configuration into a file, click on the “Backup” button.

### To Restore

Click on the “Restore” button to restore the old configuration from your backup file.

### To Clear and Reset your setting

By clicking on this button, you will restore Compex WP11A+ back to the default settings. This includes disabling the DHCP Server. You will have to re-enter all the configuration information for your network.

## 13.5 Reboot System

You can reboot the device by clicking on the **Reboot System** menu. Most of the changes require you to reboot your Compex WP11A+ in order for the new settings to take effect.

Click “Reboot System” button and then the “Yes” button.

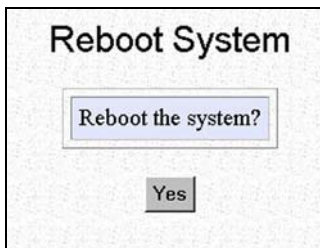


Figure 13.5a Reboot System

## Chapter 13 Using SYSTEM TOOLS menu

---

### 13.6 Change Password

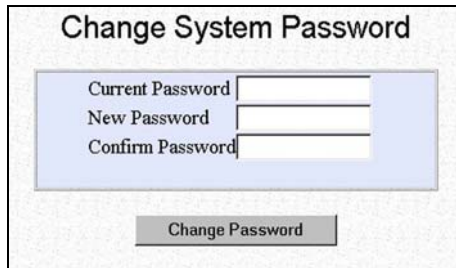
This option allows the System Administrator to amend the current password. The default password is **password**. This password is being used for the web-based configuration interface as well as in the Telnet session.



#### NOTE

Administrative password is case sensitive and only ONE password is Needed for all the interfaces.

---



**Figure 13.6a Changing of Password**

1. Click on **Change Password** at the Command window and key in the entries accordingly.
2. Click on the “Change Password” button to confirm changes.
3. Then click on the “Save & Reboot” button to activate the changes.

If you forget your password, simply reset Compex WP11A+. The password will reset back to default, which is *password*. Please note that upon resetting the device, all configurations will be back at the default settings.

## Chapter 13 Using SYSTEM TOOLS menu

---

### 13.7 Logout

With the web browser, logging out has never been easier. Simply click on the “Logout” button and you will exit the web-based environment. The system will prompt you to log in again as shown in Figure 13.7a. If you need access to the Complex WP11A+ Configuration again, please activate **uConfig** program again, regardless which mode you may have previously worked in.

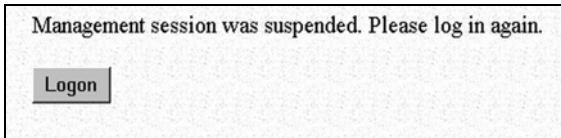


Figure 13.7a System prompt to log in again



#### NOTE

Do not use the Logon button, use **uConfig** program instead, to prevent any conflict in IP Address.

---

### 13.8 Exit uConfig

Upon completion of the Complex WP11A+ configuration, go to Command window and select **Exit uConfig** function. This will close the **uConfig** program. Notice the icon located at the taskbar (bottom of your screen) has vanished! This shows that you have successfully exited from **uConfig** program.

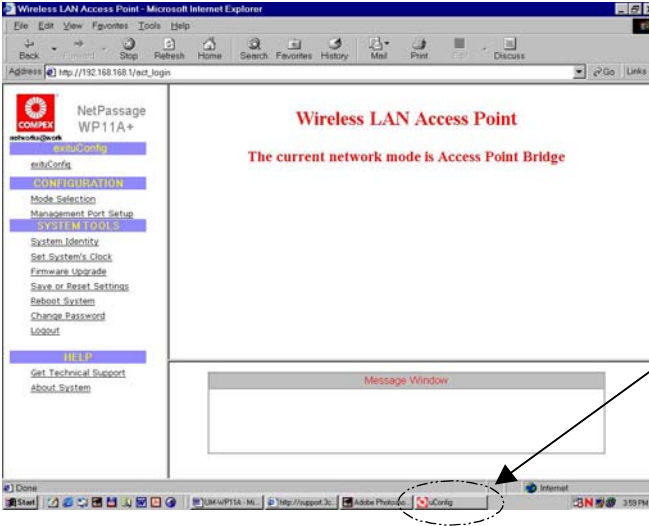


#### NOTE

If you need to configure Complex WP11A+ again, it is strongly recommended you activate the **uConfig** program to access the web-based interface to reduce any complication.

---

## Chapter 13 Using SYSTEM TOOLS menu



uConfig icon will disappear after clicking on the exituConfig bar.

Figure 13.8a uConfig icon at the taskbar

#### 14.1 Get Technical Help

For more information on Compex's technical support around the world, click on the **Get Technical Support** in the **HELP** Menu.

A rectangular box with a light blue background and a thin black border. The title "Support Information" is centered at the top in a bold, black font. Below the title, there are three sections of text. The first section provides contact information for technical support email and two web sites. The second section is titled "Regional Technical Support Centers" and lists contact details for the U.S.A., Canada, Latin America and South America, Europe, and Asia, Australia, New Zealand, Middle East and the rest of the world. Each section is indented from the left.

**Support Information**

For technical support email to: [support@compex.com.sg](mailto:support@compex.com.sg)  
For updates connect to the following Web Sites:  
<http://www.cpx.com>  
<http://www.compex.com.sg>

**Regional Technical Support Centers**  
U.S.A., Canada, Latin America and South America :  
Compex, Inc.  
4051 E. La Palma, Unit A  
Anaheim, CA 92807, USA  
HotLine : (714) 630-7302  
Fax : (714) 630-6521

Europe :  
ReadyLINK Networktechnology GmbH  
Albert Einstein Straße 34 /M21  
63322 Rodermark, Germany  
HotLine : ++49 (0) 6074-98017  
Fax : ++49 (0) 6074-90668

Asia, Australia, NewZeland, Middle East and the rest of the world :  
Compex Systems Pte. Ltd.  
135, Joo Seng Road, #08-01,  
PM Industrial Building  
Singapore 368363  
HotLine : (65) 6286-1805  
Fax : (65) 6283-8337

**Figure 14.1a** Technical Support Information

## Chapter 14 Using HELP menu

### 14.2 About System

You can check the various configuration of the Compex WP11A+ by clicking on the **About System** menu. After you have upgraded your firmware in the Compex WP11A+, you can check for the version.

#### 14.2.1 AP Bridge/AP Client Mode

<b>Device</b>	System Up Time	0 months 0 days 00:04:22
	Firmware Version	2.86 Build 0919, Sept 19 2002
	Loader Version	2.02
	NetWork Mode	Inherent Bridge
<b>Management Port</b>	MAC Address	00-80-48-c1-18-11
	IP Address	192.168.168.1
	Network Mask	255.255.255.0
	DHCP Server	Enabled
<b>Wireless Card</b>	MAC Address	00-06-f4-00-05-c9

Figure 14.2a Bridge/Client Mode System Information

#### 14.2.2 Gateway Mode

<b>Device</b>	System Up Time	0 months 0 days 00:13:52
	Firmware Version	2.86 Build 0919, Sept 19 2002
	Loader Version	2.02
	Network Address Translation	Enabled
<b>Management Port</b>	MAC Address	00-80-48-c1-18-11
	IP Address	192.168.168.1
	Network Mask	255.255.255.0
	DHCP Server	Enabled
<b>WAN Port</b>	MAC Address	00-80-48-c1-18-11
	Wan Type	Dynamic
	IP Address	0.0.0.0
	Network Mask	0.0.0.0
<b>uConfig Information</b>	Default Gateway	0.0.0.0
	MAC Address	00-06-f4-00-05-c9

Figure 14.2b System Information

# Chapter 15 Hardware Reset of Complex WP11A

## Chapter 15 Hardware Reset of Complex WP11A+

The Complex WP11A+ is designed with a reset button located at the back of the cover. This facilitates the resetting of the Complex WP11A+ to factory default settings, or to switch between the work modes of Complex WP11A+. The reset push button functions in the three ways:

	Functions of reset button	Procedures
◆	Recycle Power (Reboot)	Hold and immediately release the reset button. The DIAG LED will blink once and then lighted up for a while.
◆	Set to factory default	Hold the reset button until the DIAG LED flashes at the rate of 1 flash/sec. Release the button and the DIAG LED will light up shortly. The AP Mode LED will then light up steadily, indicates that Complex WP11A+ has set to its factory default setting as shown below: <ul style="list-style-type: none"><li>• Operating Mode: <b>AP Bridge mode</b></li><li>• IP address: <b>192.168.168.1</b></li><li>• Password: <b>password</b></li><li>• DHCP Server mode: <b>Disabled</b></li></ul>
◆	Toggling between the operating modes	Hold the reset button until the DIAG LED blinks at the rate of 2 flashes/sec. Release the button and Complex WP11A+ will start toggling between the following operating modes: <ul style="list-style-type: none"><li>◆ If you are in <b>Access Point Bridge</b> mode, the WP11A+ will change to <b>Gateway</b> mode. The AP Mode LED will be turned off and the DHCP server mode will be enabled.</li><li>◆ If you are in <b>Gateway/Wireless Routing Client</b> mode, the device will switch to <b>Access Point Bridge</b> mode. The AP Mode LED will be turned on and the DHCP server mode will be disabled.</li><li>◆ If you are in <b>Access Point Client</b> mode, the device will be switched back to <b>Access Point Bridge</b> mode.</li></ul>



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## Appendix I Login to Web-based Interface manually

---

### Appendix I Login to Web-based Interface manually

#### AI-1 Configuration of CompeX WP11A+ using Web-based Interface

Another method of logging to web-based interface is to key in the IP Address manually. This is quite tedious as the default IP Address for AP Bridge/Client Mode is different from Gateway You need to configure your PC's IP Address whenever you switch the working mode. The IP Address of your PC must be configured as the same subnet as CompeX WP11A+.

To install a browser on the PC or workstation, make sure that TCP/IP protocol is installed and configured. Configuration will be much simpler. If you decided to obtain the IP address dynamically and use default IP addresses. CompeX WP11A+ comes with a built-in DHCP server that automatically assigns IP addresses, DNS and Gateway information to the computers connected in the same network. It has been pre-configured with IP address and Subnet Mask of 192.168.168.1 (for AP Bridge and AP Client mode) and 255.255.255.0 respectively.

An Internet browser can be used to configure the CompeX WP11A+. The most commonly used browsers include the latest Netscape Navigator, Netscape Communicator and Microsoft Internet Explorer browsers as they support frames and Java. We recommend you use Netscape Communicator V4.06 and higher, or Microsoft Internet Explorer 4.0 and higher.

Assuming that CompeX WP11A+ is in its default setting, which is in the AP Bridge mode, start running your browser on a workstation connected onto the same network as the CompeX WP11A+ by entering the URL address, **http://192.168.168.1**.

#### Login to Web Browser Interface

The following is a list of the various ways for different browsers to access a website. Follow the instructions for the browser that you use.

#### In Netscape Navigator

1. Select the **File** menu, then select **Open Location**.
2. In the **Open Location** dialog box, key in the IP address of the CompeX WP11A+. This address is set at the factory to: http://192.168.168.1.
3. Click on the "Open" button.

## Appendix I Login to Web-based Interface manually

---

### In Netscape Communicator

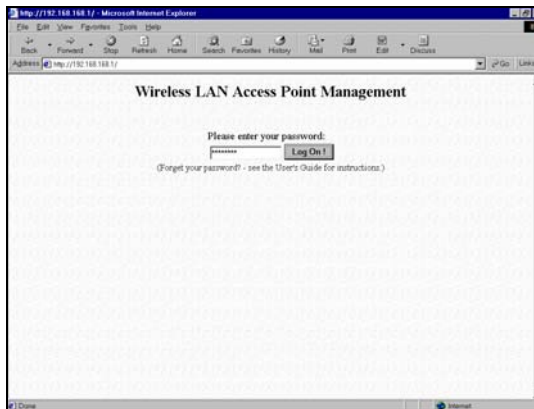
1. Select the **File** menu, and then click on the **Open Page**.
2. In the **Open Page** dialog box, key in the IP address of the Compex WP11A+. This address is set at the factory to: **http://192.168.168.1**.
3. Make sure the Navigator radio button is selected. Then click the “Open” button.

### In Internet Explorer

1. Select the **File** menu, then select **Open**.
2. In the **Open Page** dialog box, key in the IP address of the Compex WP11A+. This address is set at the factory to: **http://192.168.168.1**.
3. Click on the “OK” button.

The following screen is displayed next in the Web browser program (Figure A1-1):

4. Type in the password and click on the “Log On!”. The default password is “*password*”.



**A1-1 Login to Wireless LAN Access Point Management**

Now you can start configuring Compex WP11A+.

## Appendix II TCP/IP Configuration

### Appendix II TCP/IP Configuration

This section discusses the configuration of your TCP/IP connection of your Compex WP11A+.

Upon the successful installation of the Compex WP11A+, the network adapter will be added to your network folder. To configure your TCP/IP connection for Compex WP11A+, please follow the steps listed below. If you are using Windows 2000/XP, please go to section AII-2

#### AII-1 Adding TCP/IP network protocol for Windows 98/98SE/ME

1. From the Windows 98/98SE/ME, go to **Start**, select **Settings**, and then **Control Panel**.
2. Double-click on the **Network** icon and a Network screen will appear as shown:

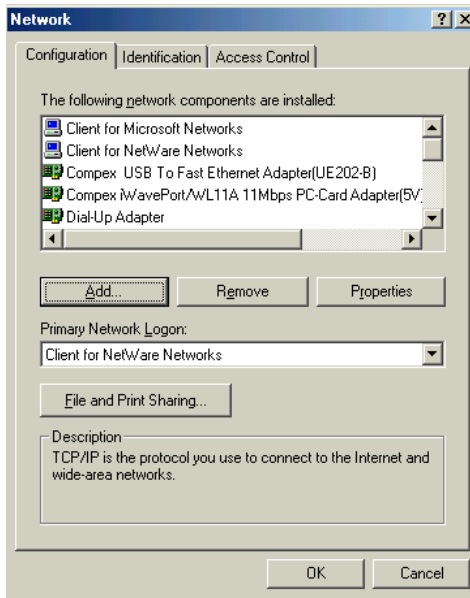
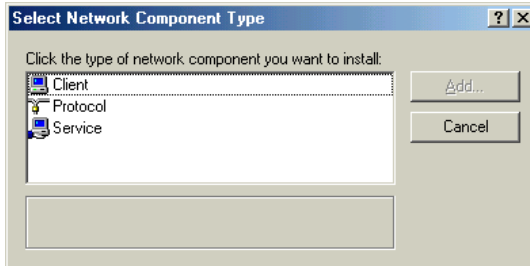


Figure AII-1 Network Configuration

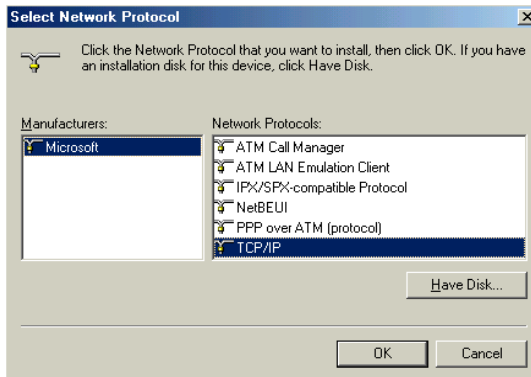
## Appendix II TCP/IP Configuration

3. Check your list of Network Components in the Network window Configuration tab. If TCP/IP is not installed, click on the “Add” button to start the installation.
4. Select **Protocol** and click on the “Add” button.



**Figure A11-2 Select Network Component Type**

5. Select **Microsoft** and **TCP/IP** in Manufacturers and Network Protocols columns respectively. Click on the “OK” button.



**Figure A11-3 Select Network Protocol**

## Appendix II TCP/IP Configuration

6. After TCP/IP is installed, go back to the Network screen and select TCP/IP in the list of Network Components.
7. Click on the “Properties’ button, and configure the settings in each of the TCP/IP Properties window.

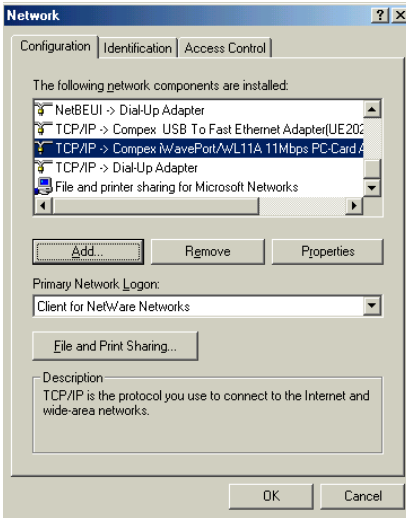


Figure AII-4 Select TCP/IP protocol

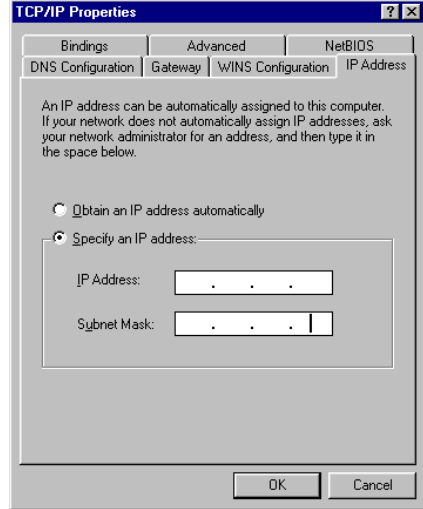


Figure AII-5 IP Address Configuration



### NOTE

Please check with your system administrator or Internet Service Provider for more information on the TCP/IP parameters.

## Appendix II TCP/IP Configuration

### AII-2 TCP/IP network protocol configuration for Windows XP/2000

For Windows XP/2000 users, you do not need to install the TCP/IP protocol as it is already installed when you first install a network card. As such, only the configuration for TCP/IP is shown.

1. From the **Start** menu - click **Control Panel**, then click **Network and Internet Connections**. Then click **Network Connections** and your computer screen will change to a similar figure shown below.

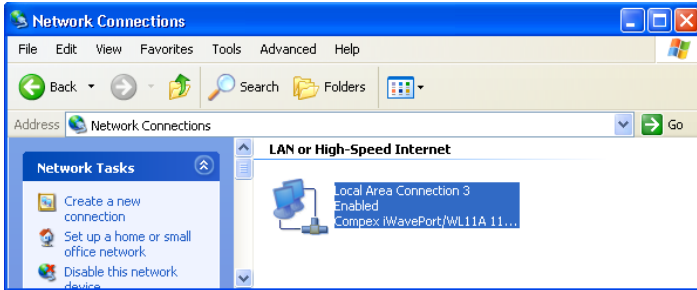


Figure AII-6 Network Connections

2. Right click the network connections you want to edit and click on the "Properties" button.

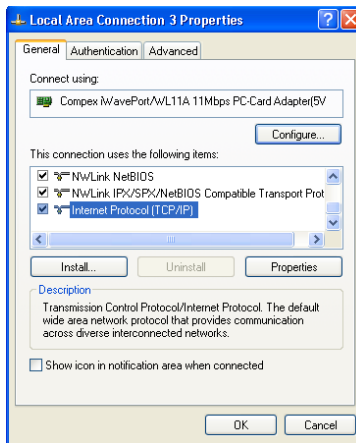
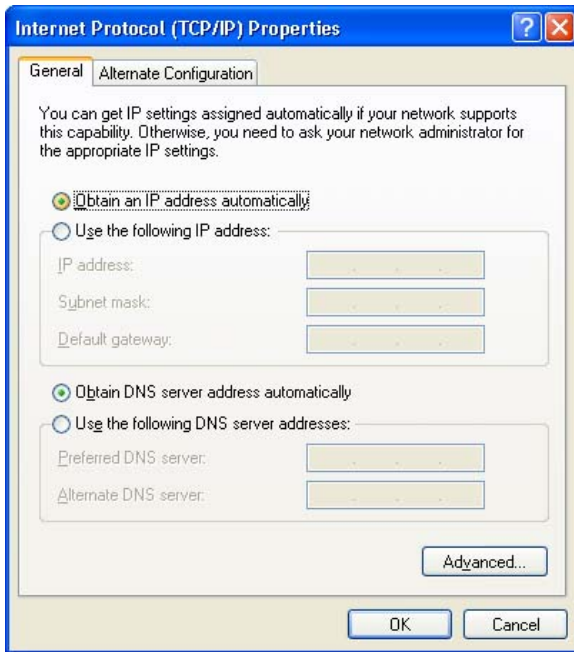


Figure AII-7 Complex WP11A+ Network Connection

## Appendix II TCP/IP Configuration

3. Select the Internet Protocol (TCP/IP) item and click on the “Properties” button.



**Figure AII-8 IP Address Configuration**

4. Configure your IP address and the rest of the parameters so that you can connect to the network.



### NOTE

Please check with your system administrator or Internet Service Provider for more information on the TCP/IP parameters.

## Appendix III Configuration and Commands on Telnet Interface

### Appendix III Configuration and Commands on Telnet Interface

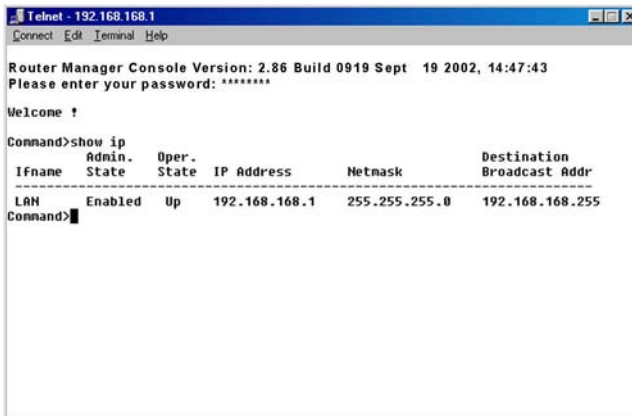
#### AIII-1 Telnet Interface Configuration

This feature connects the Compex WP11A+ Gateway Local LAN port to your network. You can directly connect your PC to Gateway Local LAN port, or Gateway to any hub/switch on your network.

From any PC on your network, type “Telnet 192.168.168.1”. The IP address “192.168.168.1” is the default IP address. If your network is using other IP address other than default IP address, please change the IP address in the above command.

You will see a prompt asking you for the password. Type in the password which by default is *password*. The password is case-sensitive and it is the same as the one in the Web browser interface.

Now you should see the following command prompt “Command>”



```
Telnet - 192.168.168.1
Connect Edit Terminal Help

Router Manager Console Version: 2.86 Build 0919 Sept 19 2002, 14:47:43
Please enter your password: *****

Welcome !

Command>show ip
-----
Ifname      Admin.  Oper.   IP Address      Netmask        Destination
State      State   State  IP Address      Netmask        Broadcast Addr
-----
LAN         Enabled Up       192.168.168.1  255.255.255.0  192.168.168.255
Command>
```

Figure AIII-1 Telnet Environment

The **Telnet Interface Command** is the same as Command Line Interface. We suggest using the **Help** command at the command prompt to guide you through these commands.



# Appendix III Configuration and Commands on Telnet Interface

## AIII-2 Command Line Interface Commands List

Command	Examples												
ping <d.d.d.d>	<pre>repeating times = 1, data length = 56 Ping packets -- total: 1 sent: 1 received: 1</pre>												
show ip	<table border="1"> <thead> <tr> <th>Ifname</th> <th>Admin. State</th> <th>Oper. State</th> <th>IP Address</th> <th>Netmask</th> <th>Destination Broadcast Addr</th> </tr> </thead> <tbody> <tr> <td>LAN</td> <td>Enabled</td> <td>Up</td> <td>192.168.168.1</td> <td>255.255.255.0</td> <td>192.168.168.255</td> </tr> </tbody> </table>	Ifname	Admin. State	Oper. State	IP Address	Netmask	Destination Broadcast Addr	LAN	Enabled	Up	192.168.168.1	255.255.255.0	192.168.168.255
Ifname	Admin. State	Oper. State	IP Address	Netmask	Destination Broadcast Addr								
LAN	Enabled	Up	192.168.168.1	255.255.255.0	192.168.168.255								
show ip stat	<pre>Command&gt;show ip stat       total 255       badsum 0       tooshort 0       toosmall 0       badhlen 0       badlen 0       infragrams 0       fragdropped 0       fragtimeout 0       forward 0       cantforward 27       redirectsent 0       unknowprotocol 1       nobuffers 0       reassembled 0       outfragments 0       noroute 2</pre>												
show ip routing table	<pre>ROUTE NET TABLE destination  gateway          flags  Refcnt  Use      Interface ----- 192.168.168.0  192.168.168.1    101    0      0      brg0  ROUTE HOST TABLE destination  gateway          flags  Refcnt  Use      Interface ----- 127.0.0.1    127.0.0.1        5      0      0      lo0</pre>												
show arp table	<pre>LINK LEVEL ARP TABLE destination  gateway          flags  Refcnt  Use      Interface ----- 192.168.168.100  00:11:48:22:74:72  405    1      383     brg0</pre>												
show icmp stat	<pre>ICMP: ^I7 calls to icmp error ^I0 error not generated because old message was icmp ^I0 output histogram: ^I1 destination unreachable: 7 ^I0 message with bad code fields ^I0 message &lt; minimum length ^I0 bad checksum ^I0 message with bad length ^I1 input histogram: ^I1 echo reply: 1 ^I0 message response generated</pre>												
show udp stat	<pre>^I111 total packets ^I111 input packets ^I0 output packets ^I0 incomplete header ^I0 bad data length field ^I0 bad checksum ^I80 broadcasts received with no ports ^I0 full socket ^I27 pcb cache lookups failed ^I0 pcb hash lookup failed</pre>												

## Appendix III Configuration and Commands on Telnet Interface

Command	Examples
show tcp stat	<pre>^I111 total packets ^I111 input packets ^I0 output packets ^I0 incomplete header ^I0 bad data length field ^I0 bad checksum ^I80 broadcasts received with no ports ^I0 full socket ^I27 pcb cache lookups failed ^I0 pcb hash lookup failed</pre>
show ethernet address	<pre>LAN Port Ethernet address : 00-80-48-e4-c0-a2 WAN Port Ethernet address : c8-f8-2e-00-28-c4</pre>
show gateway	<pre>Command&gt;show gateway Gateway ip address : 192.168.168.10</pre>
set gateway <d.d.d.d	<pre>Command&gt;set gateway 192.168.168.10 Gateway was set successfully.</pre>

There are also some other commands such as:

```
set ip private <d.d.d.d> <d.d.d.d>
set ip lan <d.d.d.d> <d.d.d.d>
add ip routing <d.d.d.d> <d.d.d.d>
delete ip routing <d.d.d.d> <d.d.d.d>
```

### AIII-3 How to recover Compex WP11A+ from failed firmware

This procedure details the upgrading of firmware to Compex WP11A+.

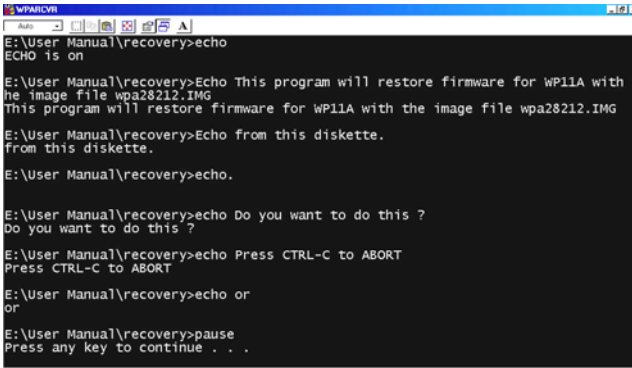
Compex WP11A+ will automatically switch to loader mode if the main code is corrupted. Code can be corrupted due to power surges or it could be uploading newer firmware results in router failing to startup.

1. Disconnect Compex WP11A+ from the network.
2. Connect one end of a MDIX cross-connect (MDIX) Ethernet cable on the WAN port of Compex WP11A+ and the other end to your PC/notebook LAN adapter.
3. Power ON the device and the PC/notebook. You will notice that the DIAG LED blinking rapidly. This indicates that the loader mode has discovered firmware error and is awaiting uploading.
4. Insert the Product CD to your CD-ROM Drive.

## Appendix III Configuration and Commands on Telnet Interface

5. Go to Recovery folder and activate **wp11arcv.bat**.

The system will go to DOS Prompt automatically. Press any key to restore the firmware. It will run the command from the batch file: *TFTP -i 192.168.168.1 PUT Wp11a286.img* as shown below.



```
WP11A+
E:\User Manual\recovery>echo
ECHO is on

E:\User Manual\recovery>Echo This program will restore firmware for WP11A with t
he image file wpa28212.IMG
This program will restore firmware for WP11A with the image file wpa28212.IMG

E:\User Manual\recovery>Echo from this diskette.
from this diskette.

E:\User Manual\recovery>echo.

E:\User Manual\recovery>echo Do you want to do this ?
Do you want to do this ?

E:\User Manual\recovery>echo Press CTRL-C to ABORT
Press CTRL-C to ABORT

E:\User Manual\recovery>echo or
or

E:\User Manual\recovery>pause
Press any key to continue . . .
```

**Figure AIII-2** DOS Prompt Environment

When done, the system will prompt you a message “*Transfer successful: 505807 bytes in 1 seconds, 505887 bytes/s*”.

When the firmware image file is uploaded, it will copy it to the flashrom. During uploading the firmware image file to Compex WP11A+, the DIAG LED will light up.



### NOTE

The firmware image file, which you upload from the CD-ROM may not be the latest version. To get the most updated version, please go to [www.compex.com.sg](http://www.compex.com.sg) to download the firmware. Do not power down the device as data is being transferred.

Please note that your firmware image file might be different. Please enter the name of that image file.

Please ensure that there is constant power supply to Compex WP11A+ while performing the recovery process.

## Appendix III Configuration and Commands on Telnet Interface

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Wait until the DIAG LED starts blinking slowly which may take about 10 seconds. This indicates that the firmware has been loaded successfully. Power off and on to reboot CompeX WP11A+.

The DIAG LED should be switched off if the main code is running well after you have powered up. Notice that the AP Mode LED will light up, indicating that CompeX WP11A+ is in the default setting (AP Bridge mode).

### AIII-4 If you have any problem to accessing to the Internet

Should you have any other problem accessing to the Internet we suggest you check through the following list of common solutions.

1. Make sure the Cable or ADSL modem is powered ON first followed by CompeX WP11A+. The PC should be powered ON after the devices are ready.
2. Always use the cable provided with the modem.
3. For any reason that you may want to change cables note that there are many different brands of broadband modems. Depending on the model approved by your ISP, some modems use a MDI (straight-through) while others use MDIX (cross-connect) cable. Use the right cable.
4. Check PC has TCP/IP protocol installed. Check also that the TCP/IP properties are set to the following:
  - obtain IP automatically
  - Gateway has no entry
  - DNS is check on Disable DNS

Check whether your PC has obtained an IP address and other TCP/IP properties like DNS address from the router.

5. Click START | RUN | and type the command, **WINIPCFG** and press the “Enter” key. From the IP Configuration box, select the LAN adapter and view the IP address. It should be 192.168.168.xxx.

Generally, the first PC to startup and connect to the gateway will have an IP address 192.168.168.100 and the next one 192.168.168.101 and so on. Obtaining an IP address indicates the PC has successfully connected to the CompeX WP11A+.

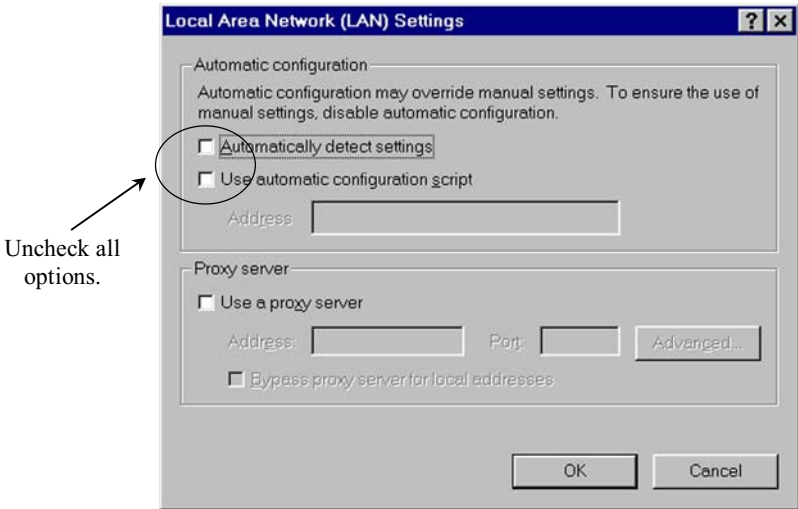
But if you have a different number like 169.xxx.xxx.xxx (xxx can be any number) it means the PC is not talking to the gateway. You should check the cable connection with CompeX WP11A+ again.

## Appendix III Configuration and Commands on Telnet Interface

If you have the correct IP address but is still unable to connect to a Web site, then click on **More Info** button. Check the DNS Servers box. Make sure they are the correct DNS IP address from your ISP.

From your PC to open a DOS environment and run, *PING 165.21.100.88*, or for example *PING www.cnn.com*. If you can receive replies from the PING command, it indicates the router has successfully connected to the ISP. But if you still have problems connecting with a browser, this is more likely your Internet browser configuration issue.

Check and remove any proxy setting in the Web browser application as shown:



**Figure AIII-3 Remove Proxy server setting**