User's Guide

CW-1100AP Access Point

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INFORMATION

Congratulations on your CREWAVE Wireless LAN Access Point purchase!
If you want to install a networking system that is not only fast and powerful, but also easy to set up and simple to maintain, it is natural that you should choose a CREWAVE 11Mbps Wireless LAN Access Point.
The CREWAVE 11Mbps Wireless LAN Access Point(this "AP") is the wireless Access Point for the 802.11b compliant. This AP extends the range of your cabled Ethernet network(a wired Local Area Network), providing easy network access to mobile users and difficult to wire locations. So the AP can serve mobile wireless stations, roaming between various locations within a network area.
Moreover, this AP provides excellent levels of security, robustness and roaming features required for your business.

What is a Wireless LAN?

A Wireless LAN provides the same functionality of a Wired LAN, but it eliminates the need to install networking cables and other networking equipment. Not only is a Wireless LAN easier to deploy, but it also allows for "roaming." For example, an employee using a portable computer with a Wireless LAN PC Card, can roam from a conference room to an office without being disconnected from the network.

What is IEEE 802.11?

The IEEE 802.11 specification is a Wireless LAN standard developed by the IEEE(Institute of Electrical and Electronic Engineering) committee in order to specify an over an air interface between a wireless client and a base station or Access Point(AP), as well as among wireless clients. Like other IEEE 802 families, IEEE 802.11 specification addresses both Physical(PHY) layer and Media Access Control(MAC) layer.

- IEEE 802.11 Physical(PHY) Layer

At the PHY Layer, IEEE 802.11 defines three physical characteristics for WLAN :

diffused infrared, direct sequence spread spectrum(DSSS), and frequency hopping spread spectrum(FHSS). While the infrared PHY operates at the baseband, the other two PHYs operate at the 2.4GHz ISM(Industrial, Scientific, and Medical)band, which can be used for operating Wireless LAN devices without the need of end-user licenses. In order for wireless devices to be interoperable, they have to be conforming to the same PHY standard.

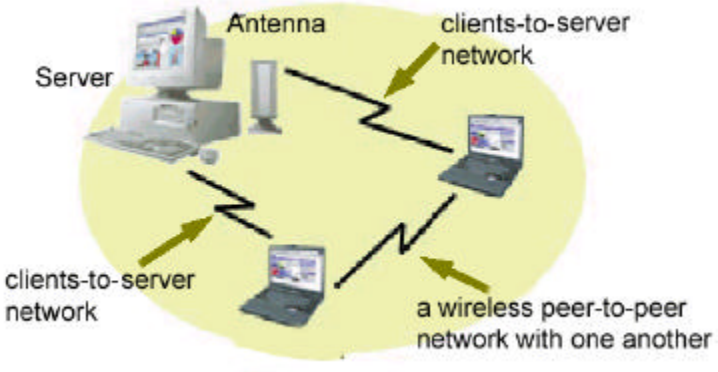
- Media Access Control(MAC) Layer

The IEEE 802.11 MAC Layer is mainly concerned with the rules for accessing the wireless medium. There are two network architectures defined : Ad-hoc Network and Infrastructure Network.

Which one should I use?

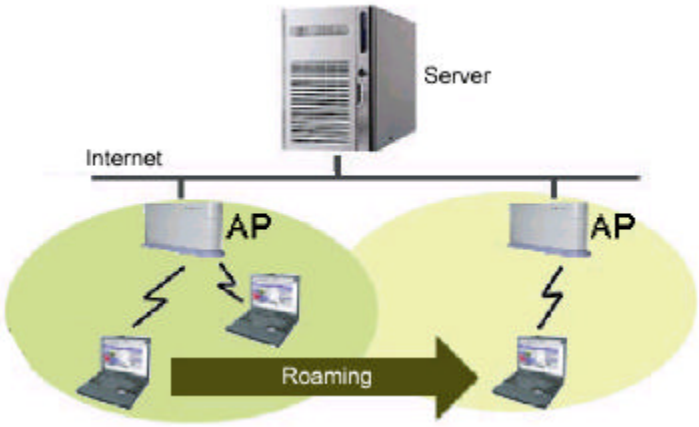
- Ad-hoc Networking

Also called “Peer-to-Peer” networking, this model is the easiest to deploy and is ideal for small offices. As a user on this type of network, you are able to share files with other employees, print to a shared office printer, and access the Internet via a shared modem. However, with Ad-hoc networking your computer is only able to communicate with other wireless computers that are within range and in your wireless workgroup.



- Infrastructure Networking

The key difference between a structured wireless network and an Ad-hoc wireless network is the addition of one extra element – an Access Point. Unlike “Peer-to-Peer” networking, where networked computers send data directly to each other, structured networked computers communicate with each other through a dedicated Access Point. All data transmitted between two computers, (clients) on the wireless network passes through the Access Point. Additionally, the Access Point on the wireless infrastructure network can provide access to an existing wired network. This link allows computers on the wireless network to access the wired network’s resources and tools, including Internet access, email delivery, file transfer, and printer sharing.



*** Roaming**

In an infrastructure network, this is when a wireless PC moves out of range of the previously connected Access Point and connects to a different Access Point. By physically spreading Access Points throughout the network environment, clients can always be connected regardless of where they are located or roam.

INTRODUCTION

CREWAVE Wireless LAN

1. Development & Manufacturer : **CREWAVE Co., Ltd**.

2. Product: 11Mbps Wireless LAN Products(PCMCIA Card): **CW-1100**

Access Point : **CW-1100AP**

2.1 PCMCIA Features:

- IEEE 802.11b Fully compliant
- High-Speed Data Rate up to 11Mbps
- Low Power Consumption
- Seamless & real time connection

2.2 Access Point(AP) Features

- Wired Network : Ethernet 10BaseT and 100BaseT
- Configuration : SNMP / USB
- Filtering : Ethernet Frame type filtering
- Antenna Type : Reverse F-Type Antenna
- Radio(Wireless) : Onboard IEEE802.11b Compliant Wireless LAN
- LED Indicator : **. Power (Red Color)**

. Wired Link Tx, Rx (Green Color)

. Wireless Tx, Rx (Green Color)

PREPARATION

To achieve optimum performance of your CREWAVE Wireless LAN:

Evaluate the area in which the network will be arranged and plan the layout

accordingly. The key factors in the layout of your CREWAVE Wireless LANs are the evaluated area in which the network will be deployed and plan the layout accordingly. The key factors in the layout of your LANs are the distance between the Access Points and the spatial and structural design of the network area. Test the performance of your infrastructure network by moving the positions of the Access Points. In most buildings, wireless LAN cards maintain a range of 100 to 300 feet. This distance varies depending on the thickness and composition of the walls.

In some situations, you may need to move a computer or add an Access Point in the networked area to achieve optimum performance or range. Consider the following factors when choosing locations for the Access Points:

- Radio waves pass through walls and glass but not through metal. You may find that reinforcing metal in the structure of some concrete walls blocks the signal.
- Open spaces generally provide the best range, but surrounding large metal walls may cause reflections that reduce the data rate.
- Floors typically have steel girders and other metal material that may block radio waves from traveling between floors.

Notice

1. Connect the CREWAVE 11Mbps Wireless LAN Access Point(this “AP”) to a grounding type AC wall outlet(100~240 VAC) using the standard power cord as supplied with the unit.
2. Placement must allow for easily disconnecting the AP from the AC wall-outlet.
3. Do not cover the AP, or block the airflow to the AP with any other objects.
4. Keep the AP away from excessive heat and humidity and keep the AP free from vibration and dust.

INSTALLATION

1. Choose the place with the consideration of power supply and network connection to install the Access Point on a flat surface such as a table or cabinet.

2. Plug in the power cord to the power outlet and adapter. Plug in the DC output to “DC in”. Make it sure that the Power LED is on. If the Power LED is not on, please check the connections of the power cord.

Use the supplied power adapter and the standard power supply.

3. Attach Ethernet cable to the RJ-45 Connector. Make it sure that the Ethernet LED is on. If the Ethernet LED is on, you can use the existing network with the Access Point ; otherwise check the cable connections.

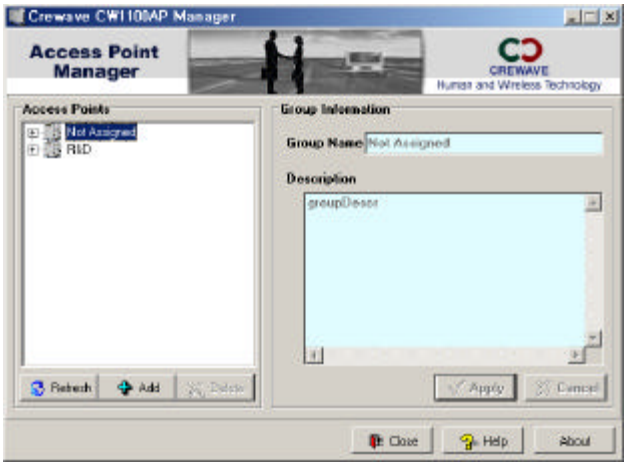
4. You can place the AP on a flat surface as a table or cabinet by the fixed Stand.

AP Manager Utility

Verify that all CREWAVE 11Mbps Wireless LAN Access Point (this “AP”) have been properly installed, and have been powered-on.

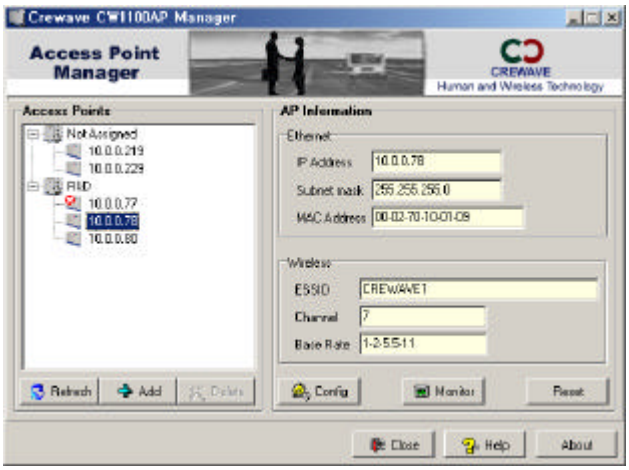
Composition of a screen

1. Run the CREWAVE CW-1100AP Manager (this “AP Manager”) under Windows ME/2000/98/95/NT (v4.0)/MS-DOS operating system.
2. You will show the following screen after running the AP Manager.



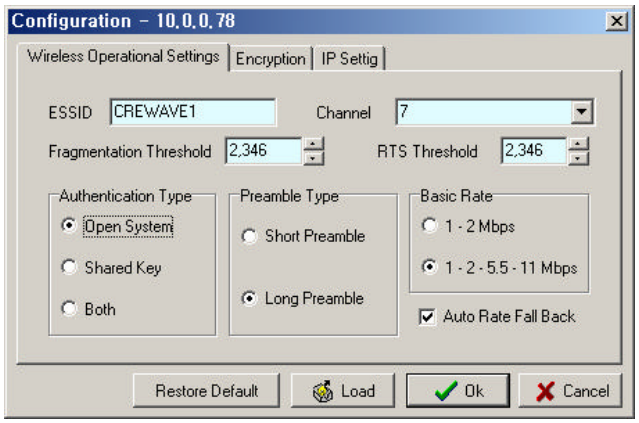
On the left side of the AP Manager screen (”A”), it shows the list of Access Points using the same network segment. If you select the Item in “A” part, you can see information related to the Item (AP or Group) in “B”.

Configuration Utility



1. Click the AP in a Tree View, the properties of the selected AP appear in the “AP Information” box.

2. Click the “Config” button in the selected AP’s Information box and then select the “Wireless Operational Settings” Item.



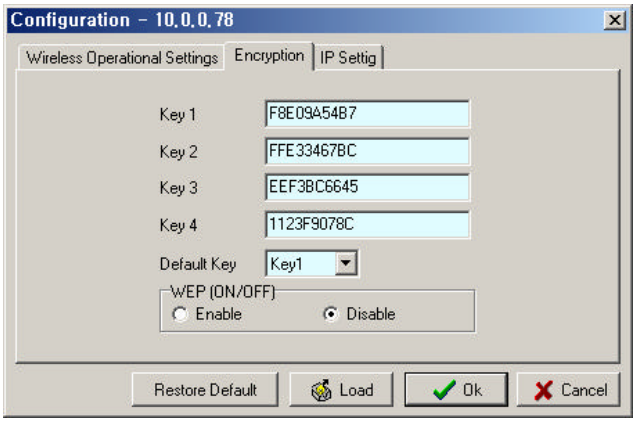
3. Enter a unique ESSID name to be used for the Access Point. ESSID must consist of alphanumeric characters (Max. 32 characters), including ‘_’ except blank and the special characters.

4. Setting the channel. Channel index should be between 1 and 14(differs from country to country). If you have nothing more to set after consulting with Network Administrator, click the “OK” button.

Notice

If you are operating two or more Access Point in the adjoining cells, keep the appropriate channel distance to avoid the interference. We recommend you to keep the distance of at least 3 channels in the adjoining cell.

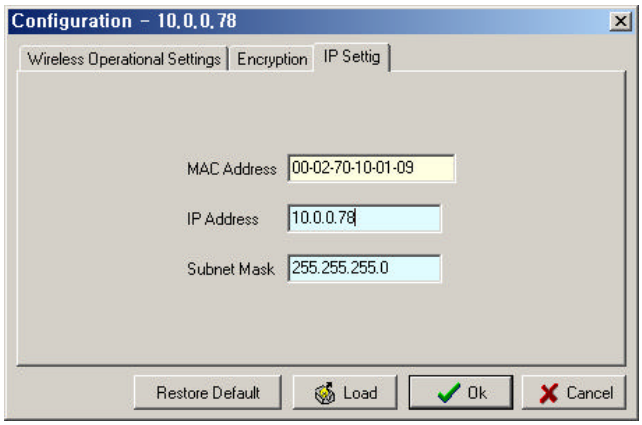
5. (Optional) Click the “Encryption” button. Encryption uses a 40bits key to control the network access.
   WEP (Wired Equivalent Privacy) is an Encryption scheme that provides the secure wireless data communications to the users.



Please keep the password at a safe place or keep it where it may not get lost.

6. Click the “OK” button after setting “Encryption”.

7. In the “IP Setting” Item, set a IP Address and Subnet Mask after consulting with Network Administrator for normal Network. Click on “OK”.



Limited Warranty

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CREWAVE warrants that the CREWAVE Wireless LAN, if properly used and installed, will be free from defects in material and workmanship and will substantially conform to CREWAVE's publicly available specifications for a period of one years after it was purchased.

CREWAVE Wireless LAN is covered by a One(1) Year Limited Warranty.

Warranty remedies, at CREWAVE's option, to repair, replacement, or refund.

EXTENT OF LIMITED WARRANTY

This Limited Warranty entitles you, the original purchaser, to the benefits listed in the CREWAVE Limited Warranty Statements from the date of purchase from a CREWAVE Authorized Reseller.

This limited warranty does not cover damages due to external causes, including accident, problems with electrical power, usage not in accordance with product instructions, misuse, neglect, alteration, repair, improper installation, or improper testing. CREWAVE is not responsible for incidental or consequential damages resulting from any breach of warranty, including but not limited to lost profits, downtime, damage to or replacement of equipment or property.

All CREWAVE products are covered only by the CREWAVE Limited Warranty in the country in which they were purchased. Service for your CREWAVE product in a country other than the one in which it was purchased is available from any CREWAVE Authorized Service Provider in the country concerned, and the full cost of any service obtained(including parts) must be borne by you.

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To obtain warranty service for your CREWAVE products, you may contact CREWAVE Authorized Service Provider, or you may contact CREWAVE.