



**InterEpoch**

**Wireless Access Point IWE-  
1000A**

***Quick Installation Guide***

Version: 1.0 Draft 1

**InterEpoch Technology, Inc.**



### ***FCC Radiation Exposure Statement***

*This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.*

## **Introduction**

### **The instant Wireless Network Access Point :**

Don't be bound by cabling restrictions any longer! The Instant Wireless Network Computers in a Access Point from InterEpoch delivers the freedom to configure your network your way. Utilization of state-of-the-art wireless technology gives you the ability to set up workstations in ways you never thought possible; no cables to install means fewer expenses and fewer hassles.

The Instant Wireless Network Access Point's high-powered antennas , providing seamless roaming throughout your LAN infrastructure. Advanced user authentication ensures a high level of security for wireless networking, while easy-to-use Windows-based diagnostics and statistic tools ensure that you'll always be in control. Best of all, the Instant Wireless Network Access Point features easy installation—just plug it in and you're ready to go!

### **Features :**

- Highly Efficient Dipole Antennas Provide Extensive Range of Operation
- Enjoy Your Wireless Office Beyond the Range of Ethernet Networking
- Auto Fall-Back Data Rate for Long-Distance Communication and Noisy Environments
- High-Speed Data Transfer Rate Up to 11 Mbps
- Interoperable with IEEE 802.11b (DSSS) 2.4GHz-Compliant Equipment
- Features Roaming, Best Access Point Selection, Load Balancing, and Network Traffic Filtering
- 40-Bit Wired Equivalent Privacy
- Free Software Driver Upgrades
- Compatible with Virtually All Major Operating Systems
- Auto Fallback Data Rate for Long-Distance Communication and Noisy Environments

### **System Requirement :**

- A PC with USB Support or Ethernet Connection
- Windows 95, 98, Millennium, 2000 Professional

# Connecting the Wireless Network Access Point to Your Network

## 1. Locate an optimum location for the Wireless Network Access Point.

The best place for your Wireless Network Access Point is usually at the center of your wireless network, with line of sight to all of your mobile stations.

## 2. Fix the direction of the antenna.

Try to place it in a position which can best cover your wireless network. Normally, the higher you place the antenna, the better the performance will be.

The antenna's position enhances the receiving sensitivity.

## 3. Connect an RJ-45 connector to the Wireless Network Access Point.

Then, connect the other end of the Ethernet cable to a switch or hub. The Wireless Network Access Point will then be connected to your 10/100 Network.

## 4. Connect the AC Power Adapter to the Wireless Network Access Point's Power Socket.

Only use the power adapter supplied with the Wireless Network Access Point. Use of a different adapter may result in product damage.

**The Hardware Installation is complete.**

# Configuring the Wireless Network Access Point

The Wireless Network Access Point can be configured one of two ways, through the AP Utility or the Access Point SNMP Manager.

### **AP Utility**

The AP Utility can be used when configuring the Wireless Network Access Point through a USB connection and is compatible with Windows 98, Millennium, and 2000.

### **Access Point SNMP Manager**

The Access Point SNMP Manager can be used when configuring the Wireless Network Access Point through an Ethernet connection and is compatible with all Windows Operating Systems.

# Installing the USB Drivers for the Wireless Network Access Point

## Installing the Driver Software for Windows 98

1. Windows 98 will automatically identify the Wireless Network Access Point, once it is connected to the PC, and prompt you to install the necessary driver. Make sure that the **Setup CD** is inserted into your CD-ROM drive and click the **Next** button on the **Add New Hardware Wizard** screen to proceed.



2. Select **Search for the best driver for your device. (Recommended)** and click the **Next** button. This will search for the Windows 98 driver.



3. Windows will now ask you where to search for the driver software. Select **Specify a location** and type in the blank field **D:\Driver** (where “D” specifies your CD-ROM). Then, click the **Next** button.



4. Windows will now search for the driver. After Windows has acknowledged finding the driver, click the **Next** button.



5. Windows will now install the driver files. Click the **Finish** button when completed.



#### Installing the Driver Software for Windows Millennium

1. Windows Millennium will automatically identify the Wireless Network Access Point, once it is connected to the PC, and prompt you to install the necessary driver.

Make sure that the **Setup CD** is inserted into your CD-ROM drive.

2. Select **Specify the location of the driver (Advanced)** and click the **Next** button.

This will search for the Windows Millennium driver.



3. Windows will now ask you where to search for the driver software. Select **Specify a location** and type in the blank field **D:\Driver** (where “D” specifies your CD-ROM). Then, click the **Next** button.



4. Windows will now search for the driver. After Windows has acknowledged finding the driver, click the **Next** button.





5. Windows will now install the driver files. Click the **Finish** button when completed.



#### Installing the Driver Software for Windows 2000

1. Windows 2000 will automatically identify the Wireless Network Access Point, once it is connected to the PC, and prompt you to install the necessary driver. Make sure that the **Setup CD** is inserted into your CD-ROM drive and click the **Next** button on the **Found New Hardware Wizard** screen to proceed.





2. Select **Search for a suitable driver for my device (recommended)** and click the **Next** button.

This will search for the Windows 2000 driver.



3. Under "Optional Search Locations", select **Specify a location** and click the **Next** button.



4. Windows will now ask you where to search for the driver software. Type in the blank field **D:\Driver** (where “D” specifies your CD-ROM). Then, click the **OK** button.



5. Windows will now search for the driver. After Windows has acknowledged finding the driver, click the **Next** button.



5. Windows will now install the driver files. Click the **Finish** button when completed.



# Installation Access Point Utility

1. To install the **Access Point Utility**, first put the **Setup CD** into your CD-ROM drive.

Then, click the Windows Start button and select Run from the Start Menu.

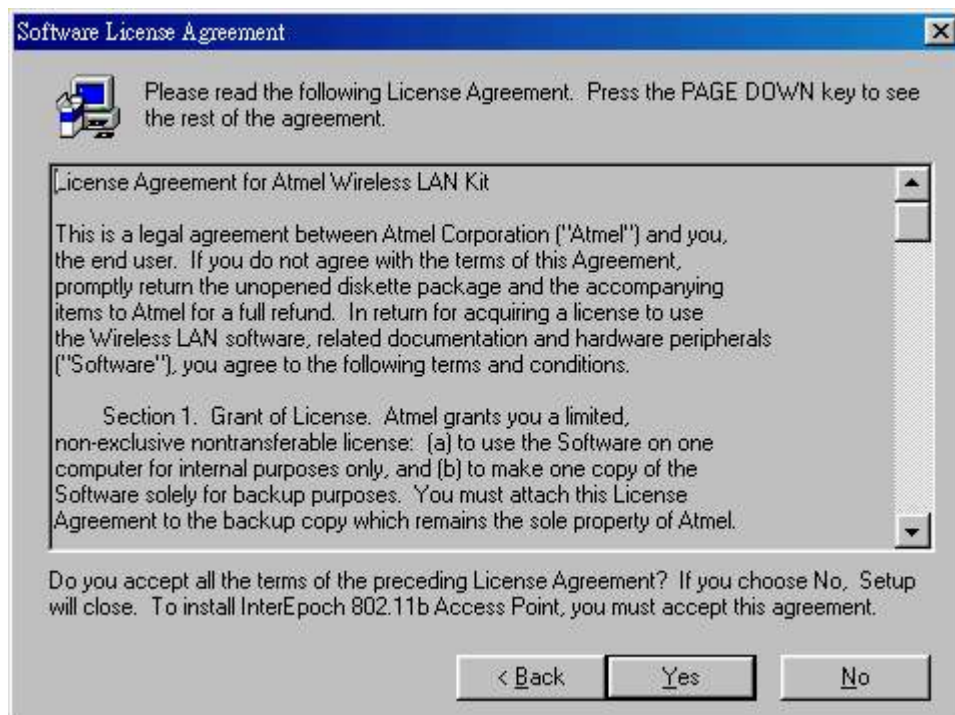
In the “Open” field, type **D:\Utility\SETUP.EXE**. (where “D” specifies your CD-ROM)



2. This will bring up the **Welcome** screen. After reading this screen, click the **Next** button to continue.



3. This will bring up the **Software License Agreement** screen, After reading this screen, click the **Yes** button to continue.



4. The **Destination** screen will show you the default destination chosen by the utility. If you should want to install this in another location, click the **Browse** button and select an alternate destination. When you are ready to continue, click the **Next** button

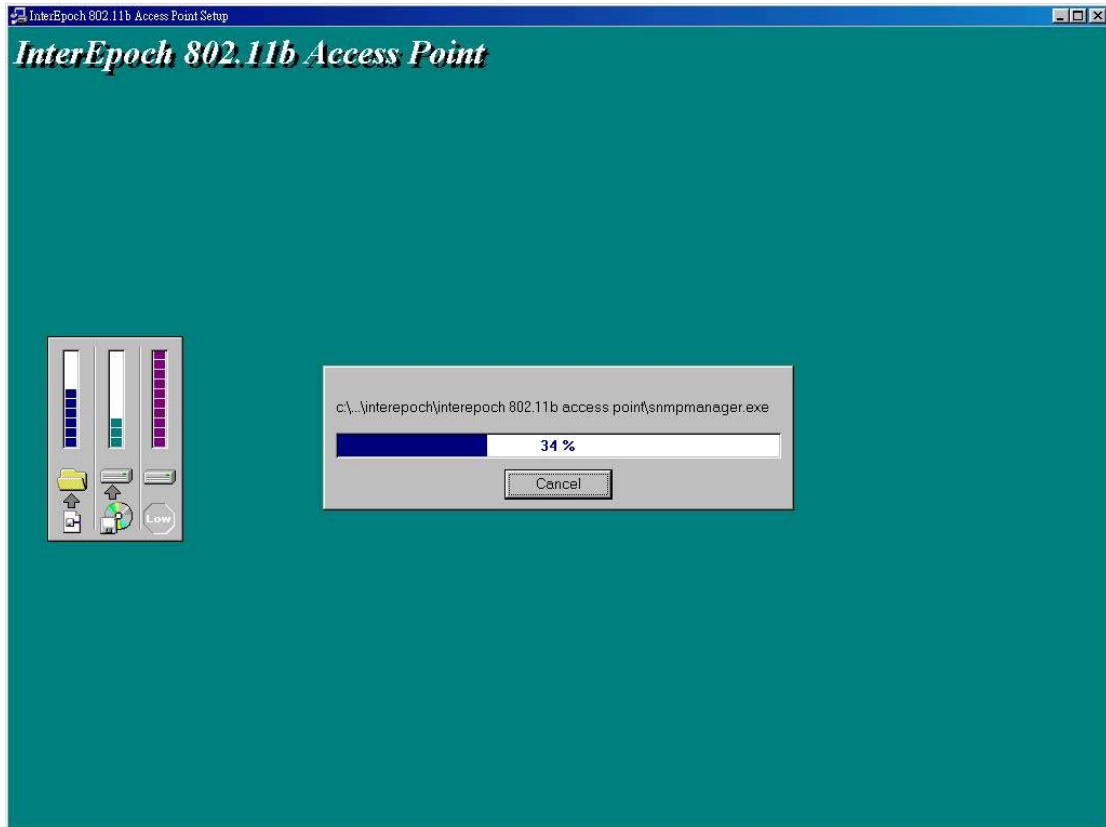


5. The next screen will show the **Program Folder** that the utility will use. If you should want to put the utility in another Program Folder, double-click an Existing Folder or, if you don't want to run this out of a Program Folder, delete the Program Folder name. Then, click the **Next** button to continue.



6. The **Utility** has now been installed. Click the **Finish** button to complete installation.

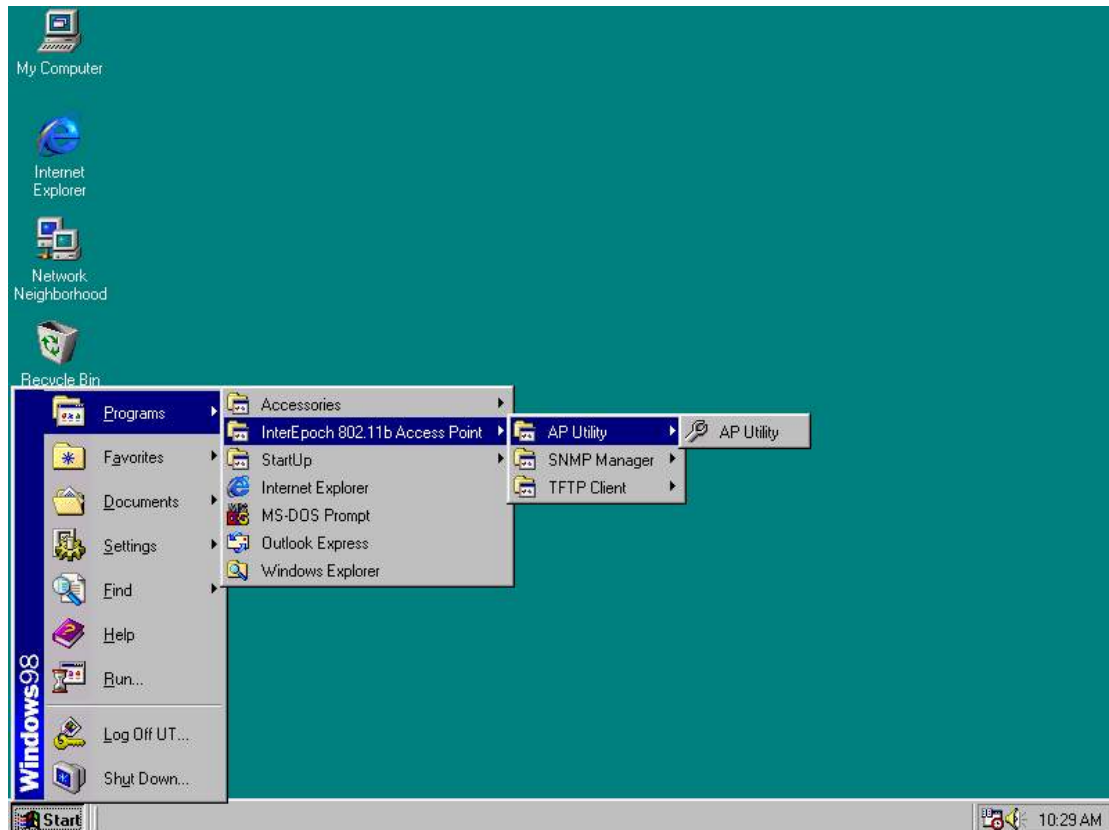




## Configuring the Wireless Network Access Point with USB Port / AP Utility

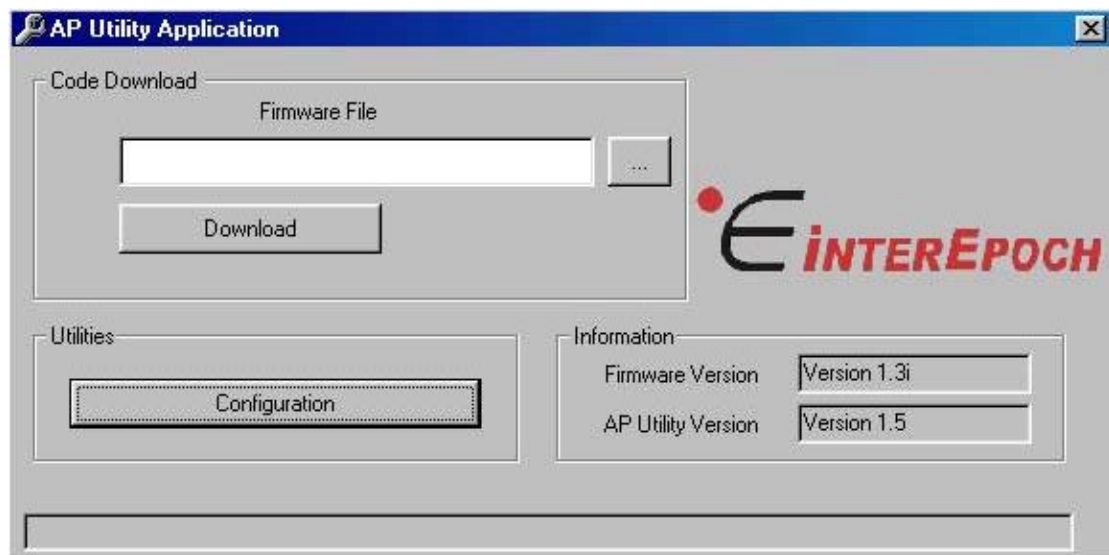
AP Utility location :





**The AP Utility consist of two function :**

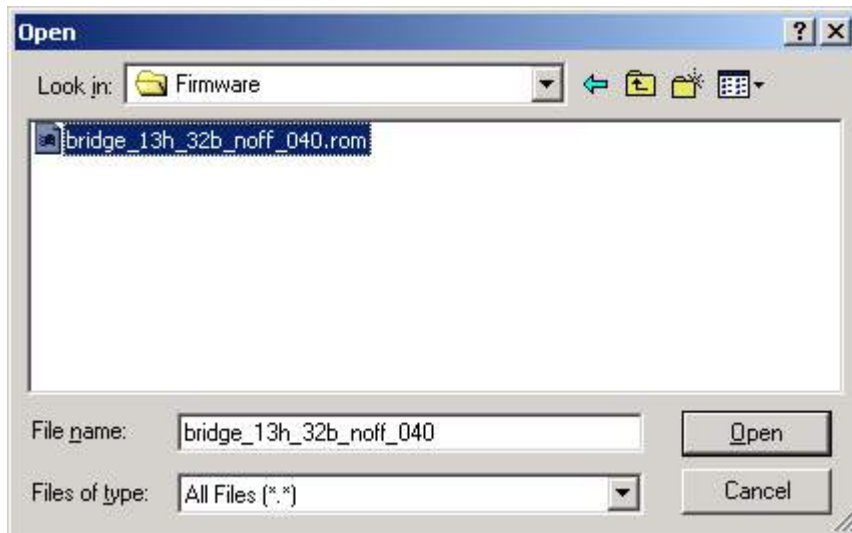
1. Code Download (Firmware update) :
2. Utilities (Configuring Access Point) :



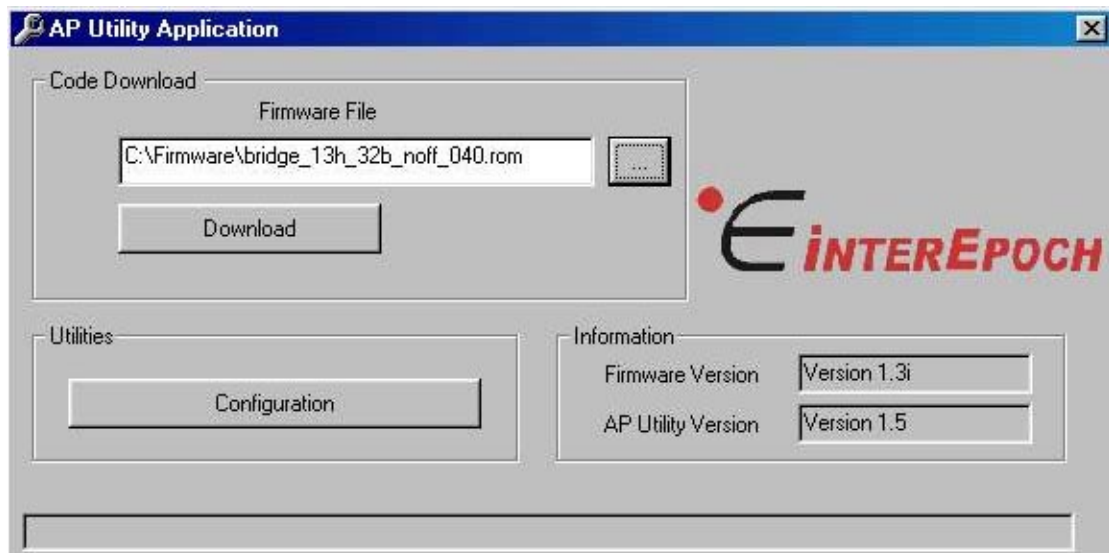
**Code Download (Firmware update) :**

The InterEpoch Access Point firmware upgrade can be done through the USB port by using AP Utility.

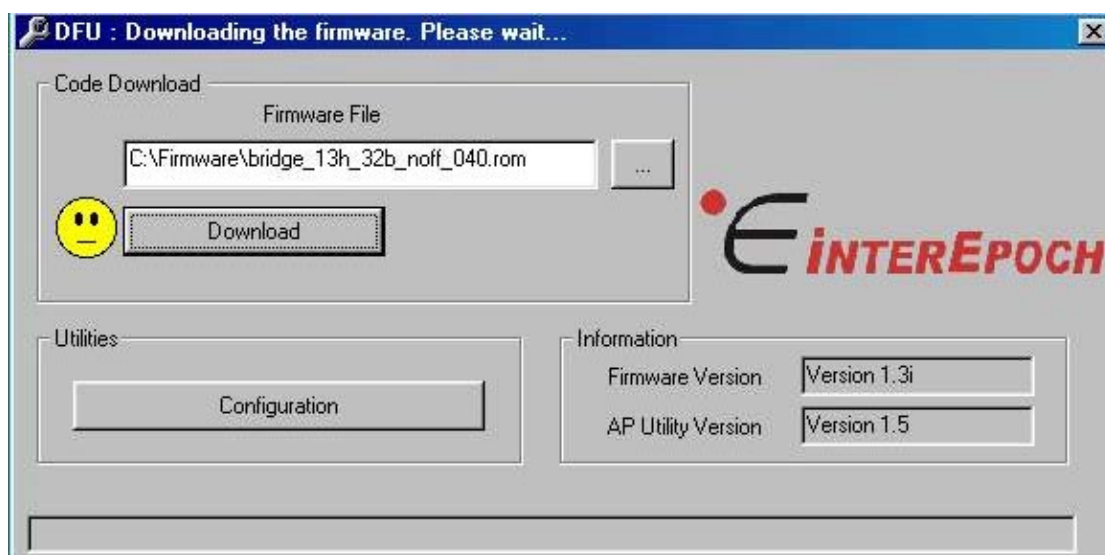
1. Click “...” button and a dialog box appeared. Select the firmware file which you want to upgrade your Access Point. Then click “Open” button



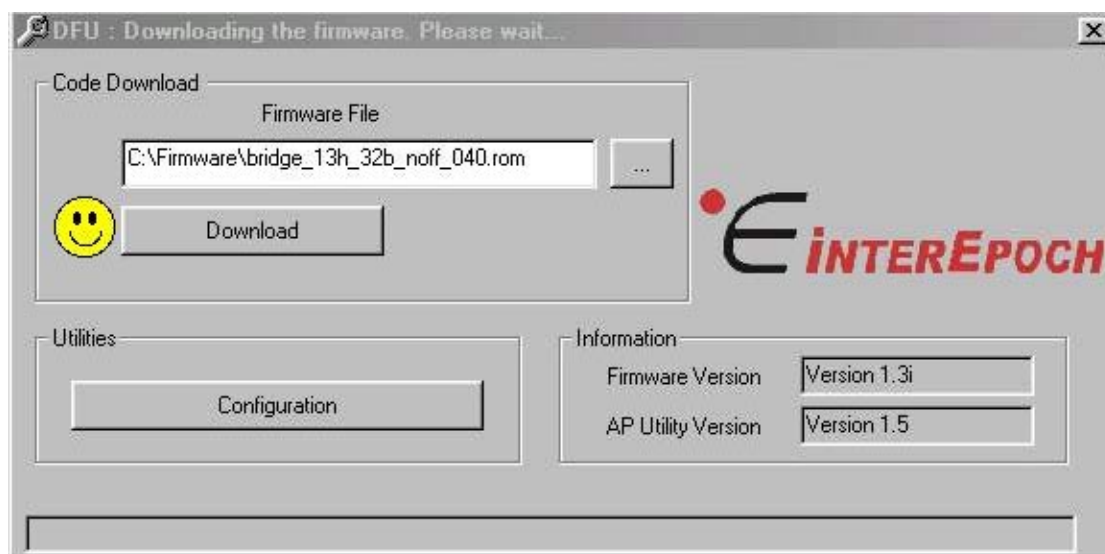
2. Click “Download” button to process firmware upgrade



3. The AP Utility process firmware upgrade now . Please wait for a moment.



4. Firmware upgrade succeeded .

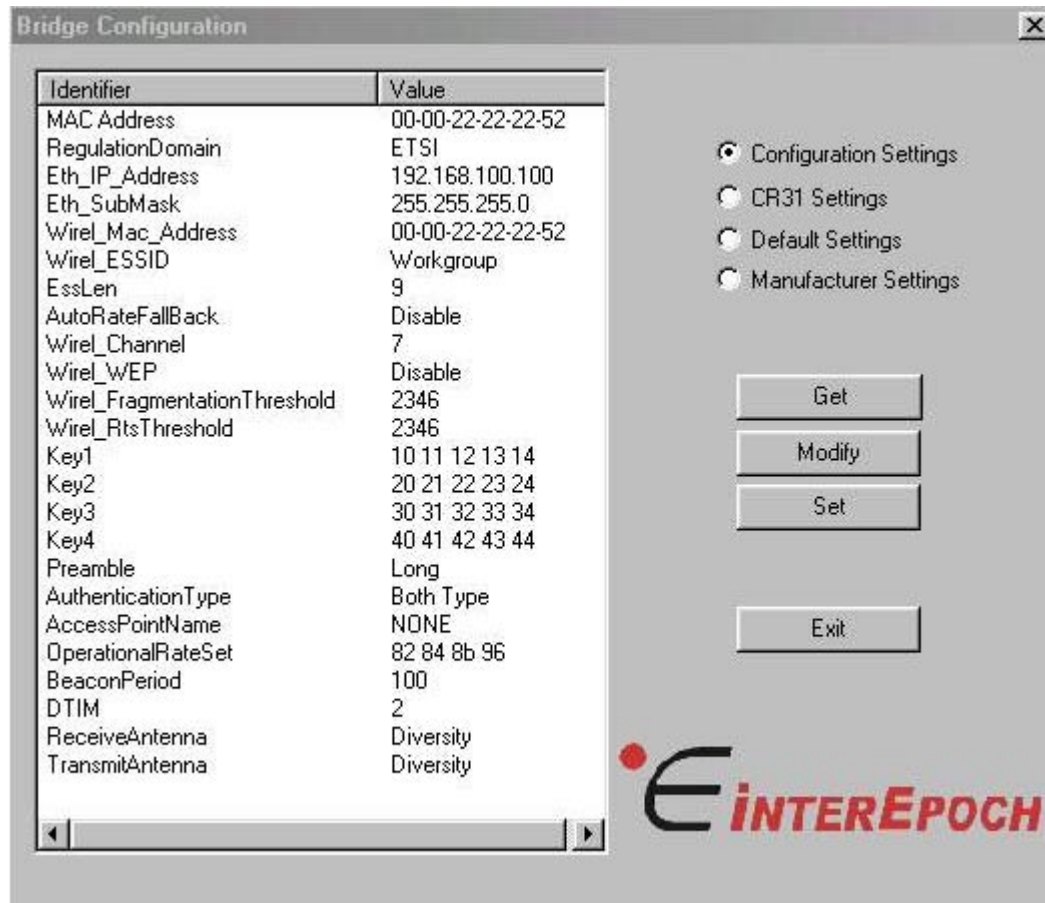




### Utilities (Configuring Access Point) :

**1. Configuration Settings :** Select “Configuration Settings” then click “Get” button.

A Dialog Box display the Wireless Network Access Point’s current status. From this screen, you can view the status information and modify the Wireless Network Access Point status.



- **MAC Address.** Ethernet MAC address of Access Point
- **Regulation Domain.** Different region
- **Eth\_IP\_Address.** The IP address of Access Point, your Eth\_IP\_address must be set to a different IP Address than other Ethernet Network cards.To modify it :

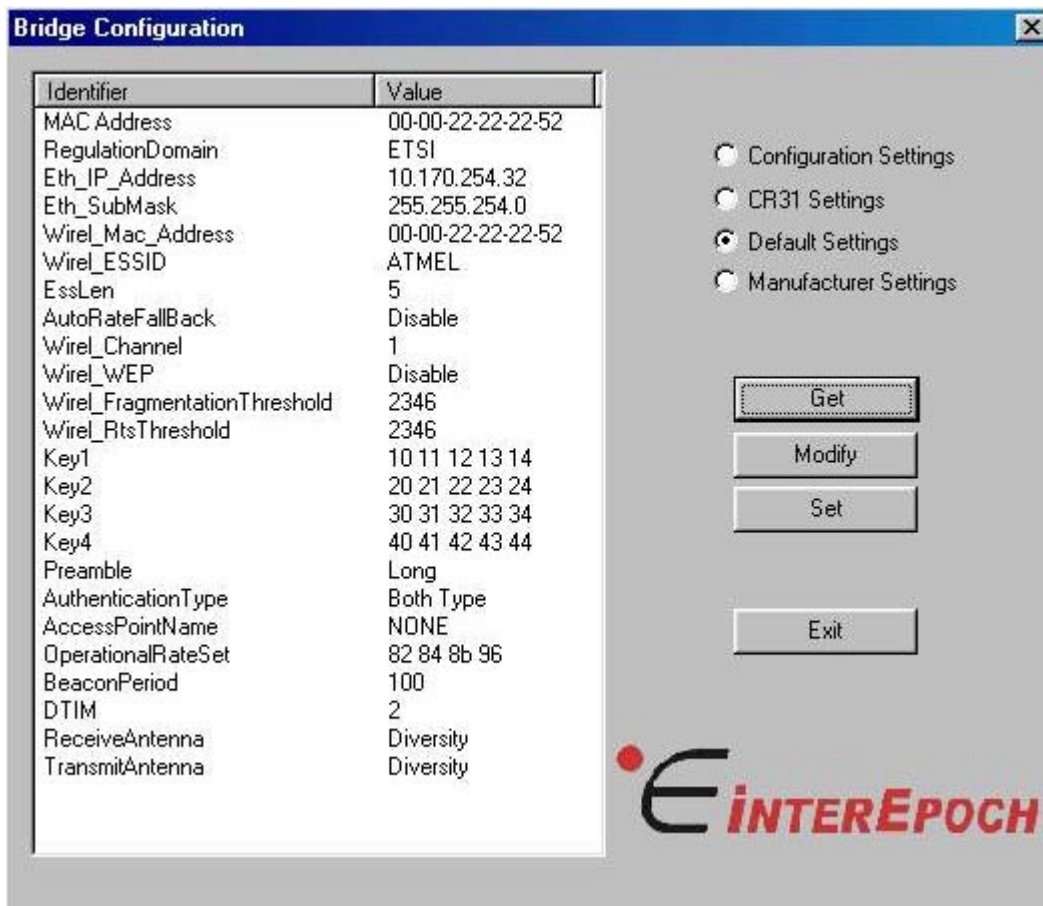
1. Select “Eth\_IP\_Address” item , then press “Modify” button
  2. A “New IP” dialog box appear, fill in the blank with appropriate value then click “OK” button.
  3. Click “Set” button to save it.
- **Eth\_SubMask.** The Ethernet Station and the Access Point must be on the same subnet. IP address for the Access Point must correspond to the Subnet Mask. To modify it :
    1. Select “Eth\_SubMask” item , then press “Modify” button
    2. A “New IP” dialog box appear, fill in the blank with appropriate value then click “OK” button.
    3. Click “Set” button to save it.
  - **Wirel\_MAC Address.** Wireless MAC address of Access Point
  - **Wirel\_ESSID.** The ESSID is the unique name shared among all points in a wireless network. The ESSID must be identical for all points in the network. It is case sensitive and must not exceed 30 characters. Make sure that all points in the network are the same. To modify it :
    1. Select “Wirel\_ESSID” item , then press “Modify” button
    2. A “New String” dialog box appear, fill in the blank with appropriate string then click “OK” button
    3. Click “Set” button to save it.
  - **AutoRateFallback.** AutoRateFallback setting should be checked to make your wireless network flexible to roaming wireless devices. As wireless devices move away from the Wireless Network Access Point, the transfer rate will automatically fall back to the most optimum rate allowed. To modify it :
    1. Select “AutoRateFallback” item , then press “Modify” button
    2. A “New Value” dialog box appear, select “Enable/Disable” then click “OK” button
    3. Click “Set” button to save it.
  - **Wirel\_Channel.** Select the appropriate channel from the list provided to correspond with your network settings. All points in your wireless network must use the same channel in order to function correctly. To modify it :
    1. Select “Wirel\_Channel” item , then press “Modify” button
    2. A “New Value” dialog box appear, select appropriate Channel then click “OK” button
    3. Click “Set” button to save it.
  - **Wirel\_WEP.** If you have not enabled the WEP encryption protocol, this will read Disabled. It will read Enabled when the WEP encryption protocol is in use. To modify it :
    1. Select “Wirel\_WEP” item , then press “Modify” button
    2. A “New Value” dialog box appear, select “Disable/Key1/Key2/Key3/Key4” then click “OK” button
    3. Click “Set” button to save it.
  - **Wirel\_Fragmentation\_Threshold.** This is option for the Fragmentation Threshold activation.

1. Select “Wirel\_Fragmentation\_Threshold” item , then press “Modify” button
  2. A “New Value” dialog box appear, fill in the blank with appropriate value  
then click “OK” button
  3. Click “Set” button to save it.
- **Wirel\_Rts Threshold.** This is option for the RTS Threshold activation.
    1. Select “Wirel\_Rts Threshold” item , then press “Modify” button
    2. A “New Value” dialog box appear, fill in the blank with appropriate value  
then click “OK” button
    3. Click “Set” button to save it.
  - **Key1/ Key2/ Key3/ Key4.** This setting will be the configuration key used in accessing the wireless network via WEP encryption. To generate an encryption key:
    1. Click “Key1” or “Key2” or “Key3” or “Key4” item , then press “Modify” button
    2. A “New Key” dialog box appear, fill in the blank with appropriate value  
then click “OK” button
    3. Click “Set” button to save it.
  - **Preamble.** The preamble defines the length of the CRC block for communication between the Wireless Network Access Point and the roaming Network Card.
    1. Select “Preamble” item , then press “Modify” button
    2. A “New Value” dialog box appear, select “Short/ Long” then click “OK” button
    3. Click “Set” button to save it.
  - **Authentication Type.** The authentication type defines configuration options for the sharing of wireless networks to verify identity and access privileges of roaming Network Cards.
    1. Select “Authentication Type” item , then press “Modify” button
    2. A “New Value” dialog box appear, select “Open System/ Shared Key/ Both”  
then click “OK” button
    3. Click “Set” button to save it.
  - **OperationalRateSet.** Set the Rate of Access Point. To modify it :
    1. Select “OperationalRateSet” item , then press “Modify” button
    2. A “New Value” dialog box appear, select “82 84 8b 96/ 82 84 0b 16”  
then click “OK” button
    3. Click “Set” button to save it.
  - **ReceiveAntenna.** Select the receive antenna or type of Access Point. To modify it :
    1. Select “ReceiveAntenna” item , then press “Modify” button
    2. A “New Value” dialog box appear, select “Left/ Right/ Diversity”  
then click “OK” button
    3. Click “Set” button to save it.
  - **TransmitAntenna.** Select the transmit antenna or type of Access Point. To modify it :

1. Select “TransmitAntenna” item , then press “Modify” button
2. A “New Value” dialog box appear, select “Left/ Right/ Diversity”  
then click “OK” button
3. Click “Set” button to save it.


## 2. Default Settings : Select “Default Settings” then click “Get” button.

A Dialog Box display the Wireless Network Access Point’s default status.



Identifier	Value
MAC Address	00-00-22-22-22-52
RegulationDomain	ETSI
Eth_IP_Address	10.170.254.32
Eth_SubMask	255.255.254.0
Wirel_Mac_Address	00-00-22-22-22-52
Wirel_ESSID	ATEL
EssLen	5
AutoRateFallBack	Disable
Wirel_Channel	1
Wirel_WEP	Disable
Wirel_FragmentationThreshold	2346
Wirel_RtsThreshold	2346
Key1	10 11 12 13 14
Key2	20 21 22 23 24
Key3	30 31 32 33 34
Key4	40 41 42 43 44
Preamble	Long
AuthenticationType	Both Type
AccessPointName	NONE
OperationalRateSet	82 84 8b 96
BeaconPeriod	100
DTIM	2
ReceiveAntenna	Diversity
TransmitAntenna	Diversity

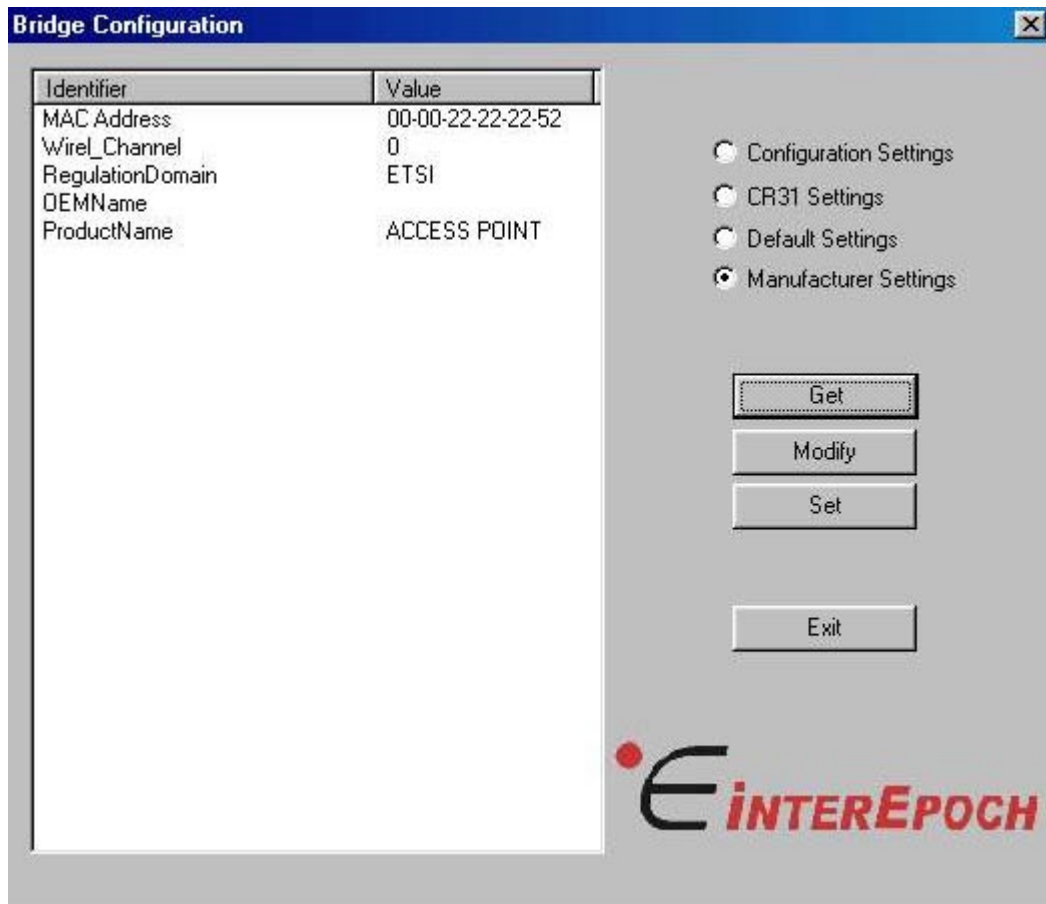
☐ Configuration Settings  
☐ CR31 Settings  
☒ Default Settings  
☐ Manufacturer Settings





**3. Manufacturer Settings :** Select “Manufacturer Settings” then click “Get” button.

A Dialog Box display the Wireless Network Access Point’s manufacturer settings status.



The dialog box titled "Bridge Configuration" displays the manufacturer settings status. It features a table with two columns: "Identifier" and "Value". The table contains the following data:

Identifier	Value
MAC Address	00-00-22-22-22-52
Wirel_Channel	0
RegulationDomain	ETSI
OEMName	
ProductName	ACCESS POINT

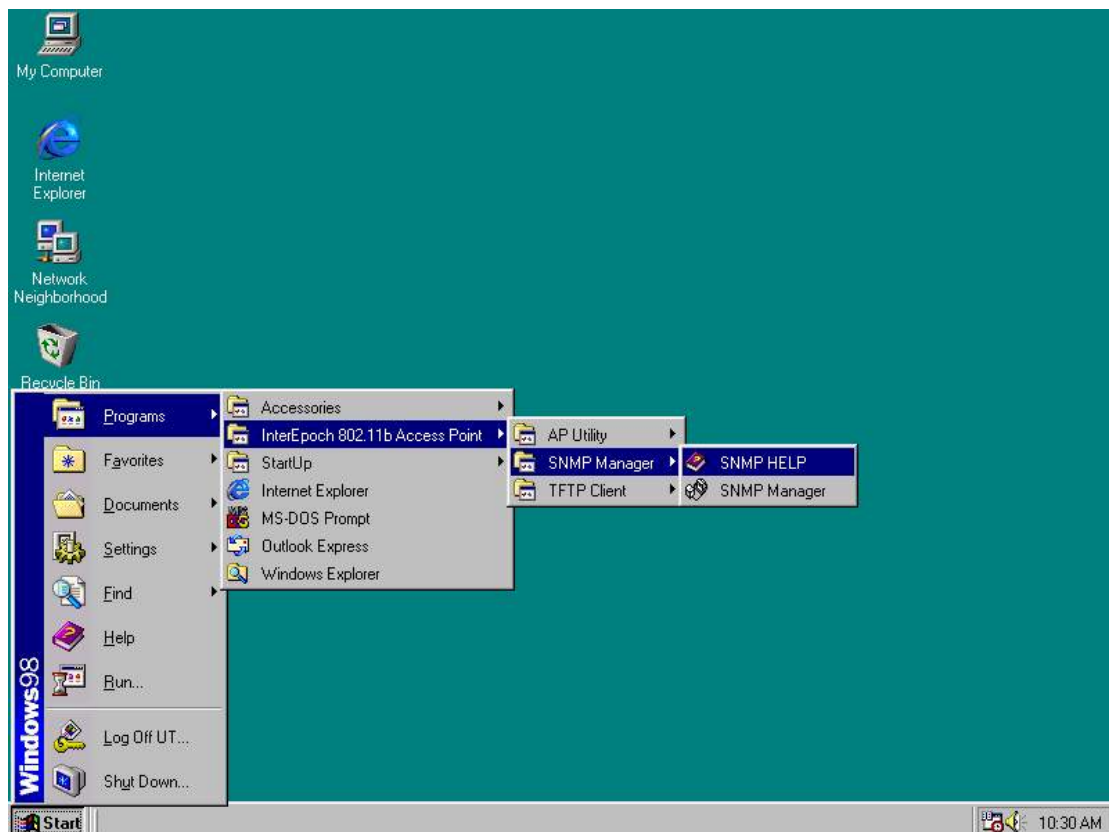
To the right of the table, there are four radio buttons for selecting different settings categories:

- ☐ Configuration Settings
- ☐ CR31 Settings
- ☐ Default Settings
- ☒ Manufacturer Settings

Below the radio buttons are four buttons: "Get", "Modify", "Set", and "Exit". The "Get" button is highlighted with a dashed border. The INTEREPOCH logo is visible in the bottom right corner of the dialog box.

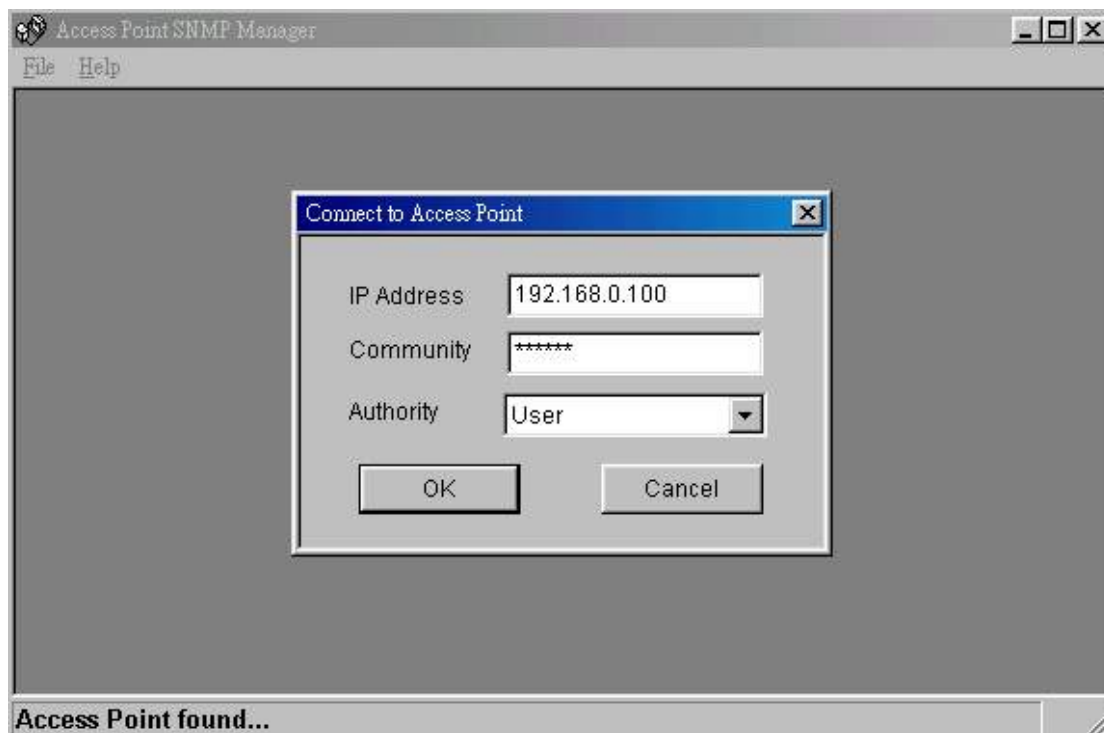
# Configuring the Wireless Network Access Point with Ethernet Port / SNMP Utility

SNMP Utility location :

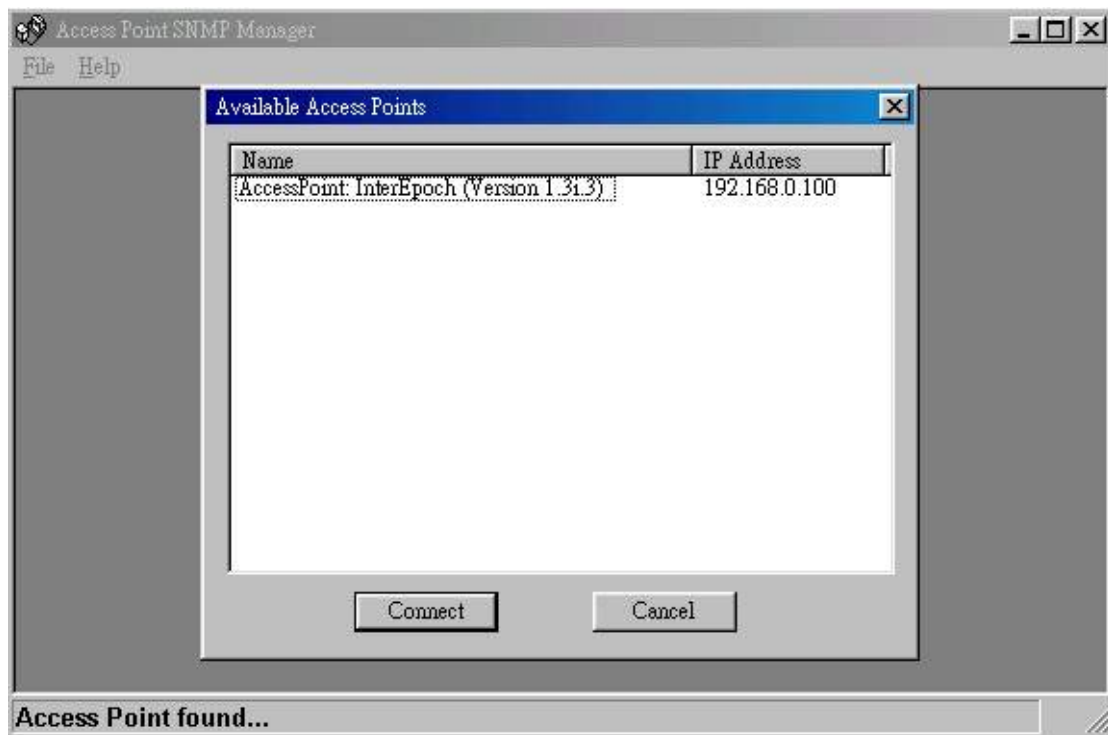


**Start SNMP Manager function :**

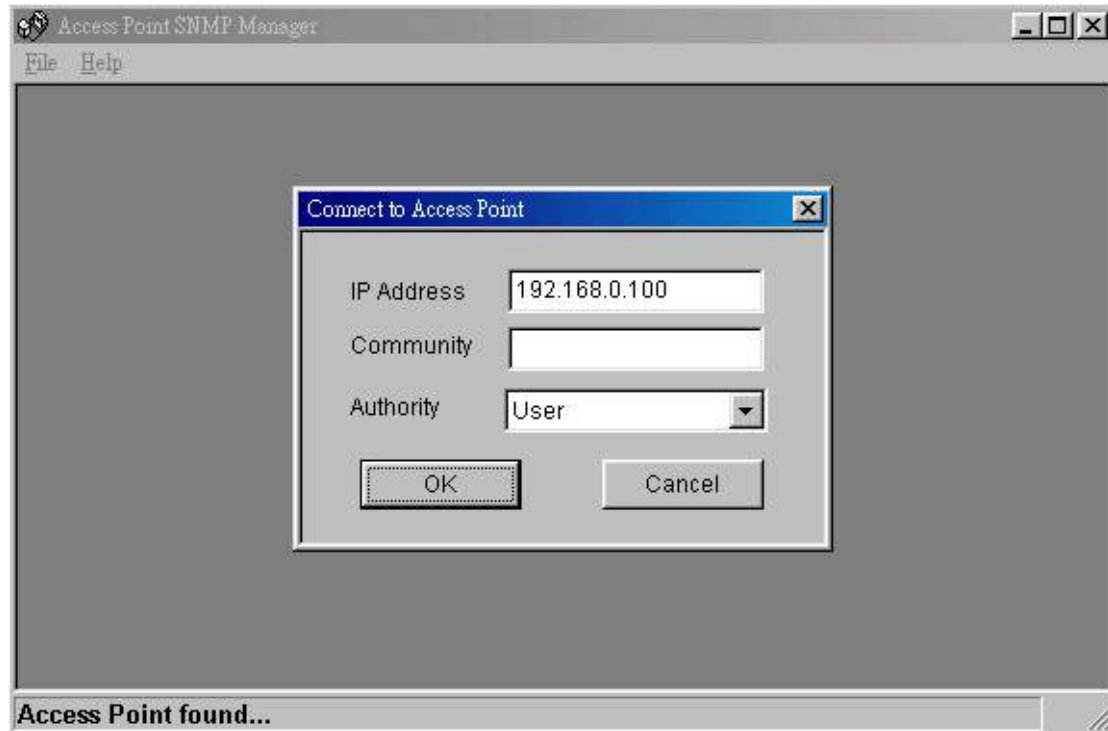
1. Connect an Ethernet station and the Access Point on the same subnet. The simplest way to accomplish that is to connect the Access Point and the Ethernet station to the same hub.  
You need to check if the station IP address and the Subnet mask are configured properly.  
Also the new IP address for the Access Point must correspond to the Subnet mask.
2. Execute SNMP manager application , under “ File ” menu :
  - **Connect to Access Point :** Try to connect to Access Point
    - Typing its IP address in “IP Address ” field
    - Typing “public” in “Community” field
    - Select “User/ Administrator” in “Authority” field
    - Press “OK” button



- **Find Access Point :** Try to find Access Point automatic  
Find any Access Point and a “Available Access Points” dialog appear.



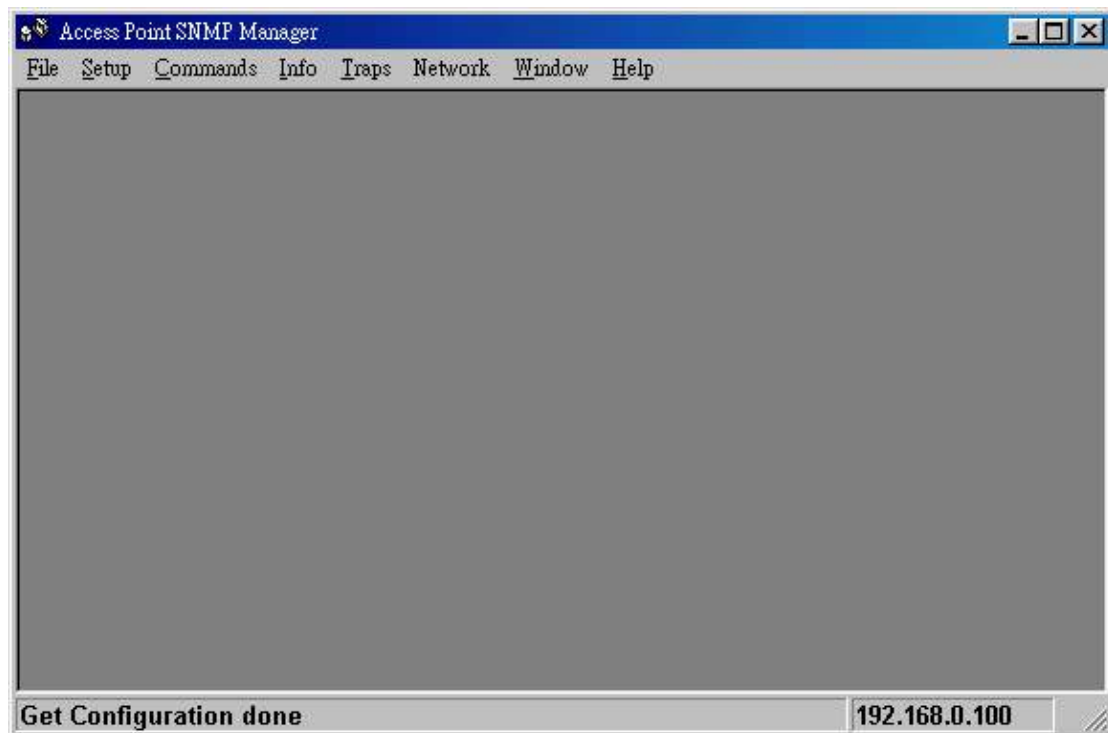
Select any Access Point you want to access then press “Connect” button



Typing “public” in “Community” field

Select “User/ Administrator” in “Authority” field then press “OK” button

3. Now, you can use SNMP manager to configure the Access Point

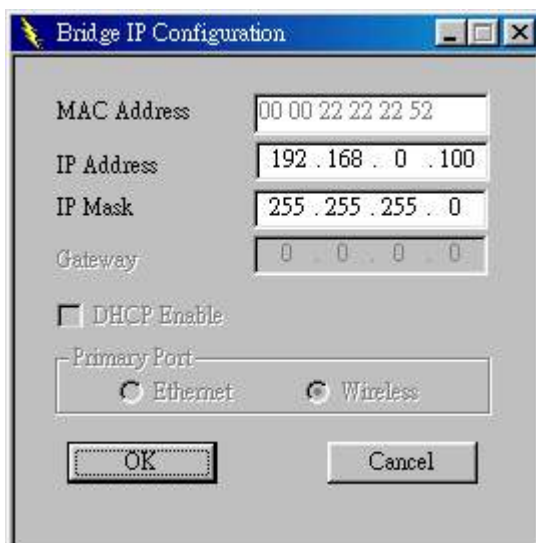


**File menu :**

- **Close Connection AP.** Close Access Point SNMP manager without saving change..
- **Download Changes.** Save change status to Access Point.

**Setup menu :**

- **Bridge ... IP Configuration.**



The image shows a Windows-style dialog box titled "Bridge IP Configuration". It contains several input fields for network configuration: "MAC Address" with the value "00 00 22 22 22 52", "IP Address" with "192 . 168 . 0 . 100", "IP Mask" with "255 . 255 . 255 . 0", and "Gateway" with "0 . 0 . 0 . 0". Below these fields is a checkbox labeled "DHCP Enable" which is currently unchecked. At the bottom, there is a "Primary Port" section with two radio buttons: "Ethernet" and "Wireless", with "Wireless" being selected. "OK" and "Cancel" buttons are at the very bottom.

MAC Address	00 00 22 22 22 52
IP Address	192 . 168 . 0 . 100
IP Mask	255 . 255 . 255 . 0
Gateway	0 . 0 . 0 . 0
<input type="checkbox"/> DHCP Enable	
Primary Port	
<input type="radio"/> Ethernet <input checked="" type="radio"/> Wireless	
OK Cancel	

1. **IP Address:** The IP address of Access Point, your Eth\_IP\_address must be set to

a different IP Address than other Ethernet Network cards. To modify it :

- Fill in the “IP Address” field with appropriate value then click “OK” button.
- Under “ File ” menu, click “Download Changes” button to save it.

**2. IP Mask:** The Ethernet Station and the Access Point must be on the same subnet.

IP address for the Access Point must correspond to the Subnet Mask. To modify it :

- Fill in the “IP Mask” field with appropriate value then click “OK” button.
- Under “ File ” menu, click “Download Changes” button to save it.

• **Wireless Lan ... Privacy Options**



**1. WEP :** Enabled the WEP use encryption protocol, disabled it when the WEP encryption protocol is in use. To modify it :

- In “WEP” field, select “Enable 64/ Enable 128/ Disable”, then click “OK” button.
- Under “ File ” menu, click “Download Changes” button to save it.

**2. Key1/ Key2/ Key3/ Key4 :** This setting will be the configuration key used in accessing the wireless network via WEP encryption. To generate an encryption key:



- In “ Default key ” field, select “None/ Key1/Key2/Key3/Key4”
- Fill in the “Key” field with appropriate value then click “OK” button.
- Under “ File ” menu, click “Download Changes” button to save it
- **Wireless Lan ... Privacy Options**



The image shows a Windows-style dialog box titled "Wireless Operational Settings". It contains several configuration fields and buttons. At the top is an "Access Point Name" field. Below it are "ESSID" (set to "InterEpoch") and "Channel" (set to "Channel 1"). There are two spinners for "Fragmentation Threshold" and "RTS Threshold", both set to "2346". A "Regulatory Domain" dropdown is set to "ETSI". An "Auto Rate Fall Back" checkbox is unchecked. Below these are three sections: "Authentication Type" with radio buttons for "Open System", "Shared Key", and "Both" (selected); "Preamble Type" with radio buttons for "Short Preamble" and "Long Preamble" (selected); and "Rates (Mbps)" with a table of supported and basic rates. At the bottom are "OK", "Cancel", and "Advanced..." buttons.

Rates (Mbps)	
Supported	Basic
1	<input checked="" type="checkbox"/>
2	<input checked="" type="checkbox"/>
5.5	<input checked="" type="checkbox"/>
11	<input checked="" type="checkbox"/>

- 1. ESSID :** The ESSID is the unique name shared among all points in a wireless network.  
The ESSID must be identical for all points in the network. It is case sensitive and must not exceed 30 characters. Make sure that all points in the network are the same. To modify it :
  - Fill in “ESSID” field with appropriate string, then click “OK” button.
  - Under “ File ” menu, click “Download Changes” button to save it
- 2. Channel :** Select the appropriate channel from the list provided to correspond with your network settings. All points in your wireless network must use the same channel in order to function correctly. To modify it :
  - In “Channel” field , select appropriate channel, then click “OK” button.
  - Under “ File ” menu, click “Download Changes” button to save it
- 3. Fragmentation Threshold :** This is option for the Fragmentation Threshold activation
  - In “Fragmentation Threshold” field , select appropriate value, then click “OK” button.
  - Under “ File ” menu, click “Download Changes” button to save it
- 4. RTS Threshold :** This is option for the RTS Threshold activation
  - In “RTS Threshold” field , select appropriate value, then click “OK” button.
  - Under “ File ” menu, click “Download Changes” button to save it
- 5. Authentication Type :** The authentication type defines configuration options for the sharing of wireless networks to verify identity and access privileges of roaming

Network Cards. To modify it :

- In “Authentication Type” field , select appropriate item, then click “OK” button.
- Under “ File ” menu, click “Download Changes” button to save it

**6. Preamble :** The preamble defines the length of the CRC block for communication between the Wireless Network Access Point and the roaming Network Card. To modify it :

- In “Preamble Type” field , select appropriate item, then click “OK” button.
- Under “ File ” menu, click “Download Changes” button to save it

**7. Auto Rate Fall Back :** AutoRateFallBack setting should be checked to make your wireless network flexible to roaming wireless devices. As wireless devices move away from the Wireless Network Access Point, the transfer rate will automatically fall back to the most optimum rate allowed.

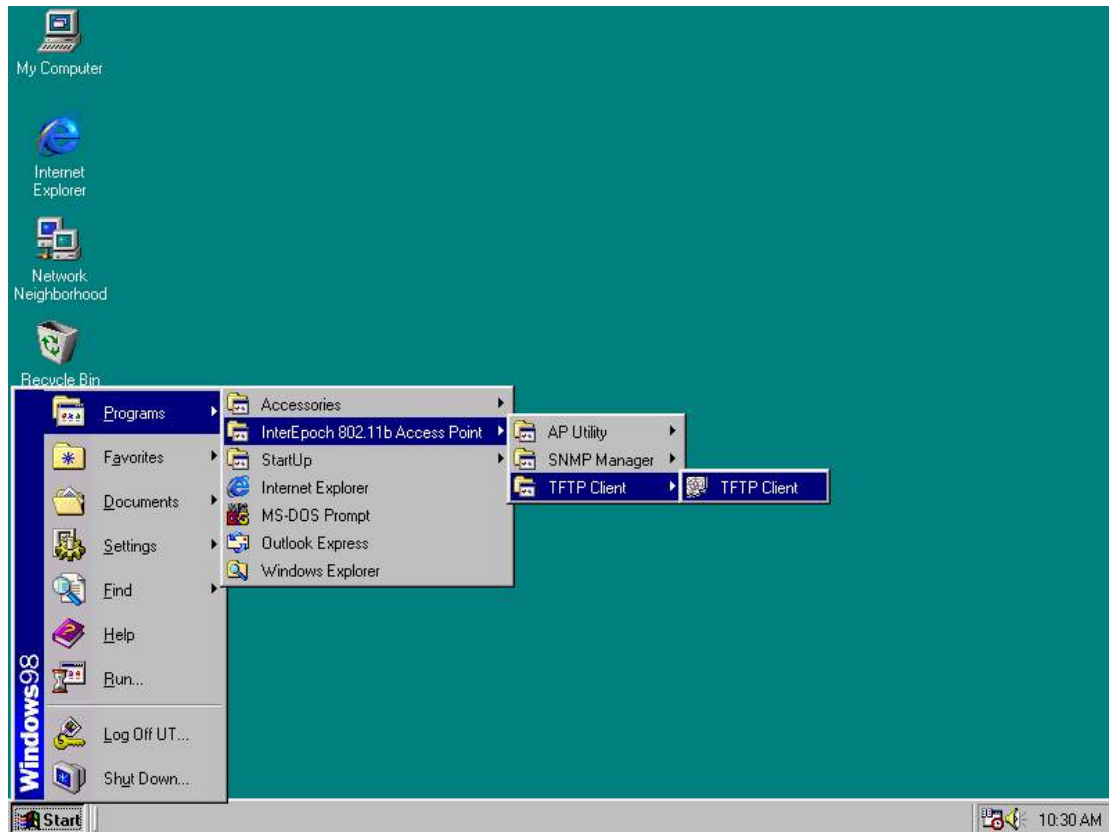
- Select / un-select “Auto Rate Fall Back” field , select appropriate item, then click “OK” button.
- Under “ File ” menu, click “Download Changes” button to save it

#### **Commands menu :**

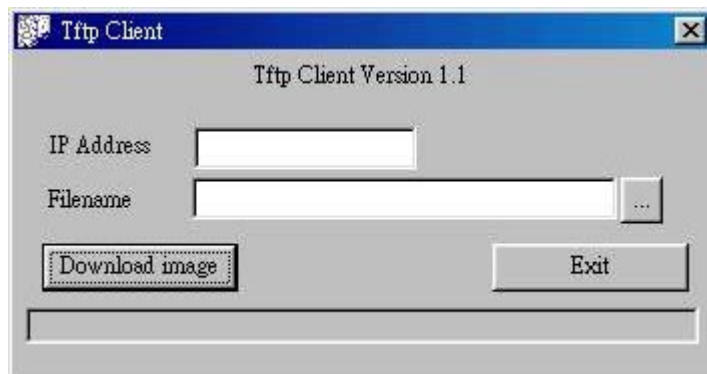
- **Restore Defaults.** Click this button to restore the Wireless Network Access Point’s default settings. Any setting you may have made through the Access Point SNMP Manager will be lost if this button is clicked.

# Wireless Network Access Point Firmware Upgrade with Ethernet Port / TFTP Client Utility

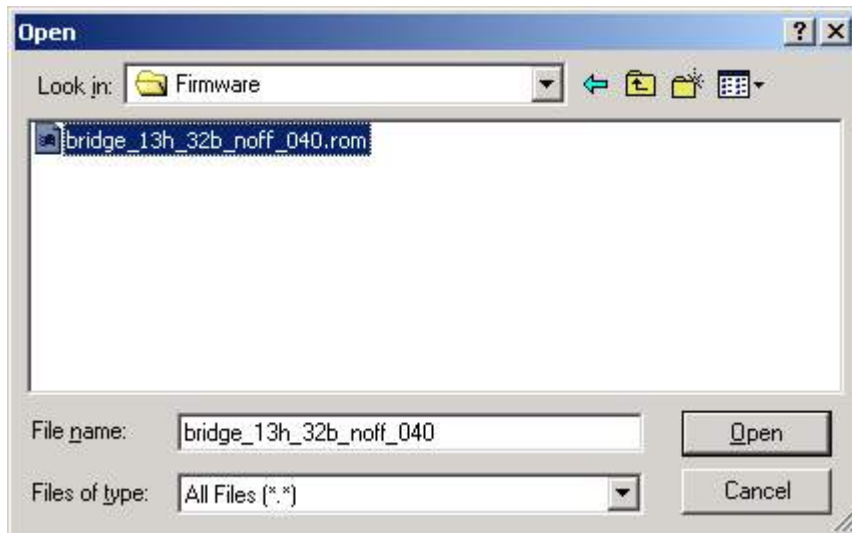
**TFTP Client Utility location :**



The InterEpoch Access Point firmware upgrade can be done through the Ethernet port by using TFTP Client Utility



1. Type the IP address of the Access Point in the "IP Address" field
2. Click "... " button and a open file dialog box will appeared. Select the firmware file which you want to upgrade your Access Point. Then click "Open" button



3. Click “Download Image” button to process firmware upgrade

