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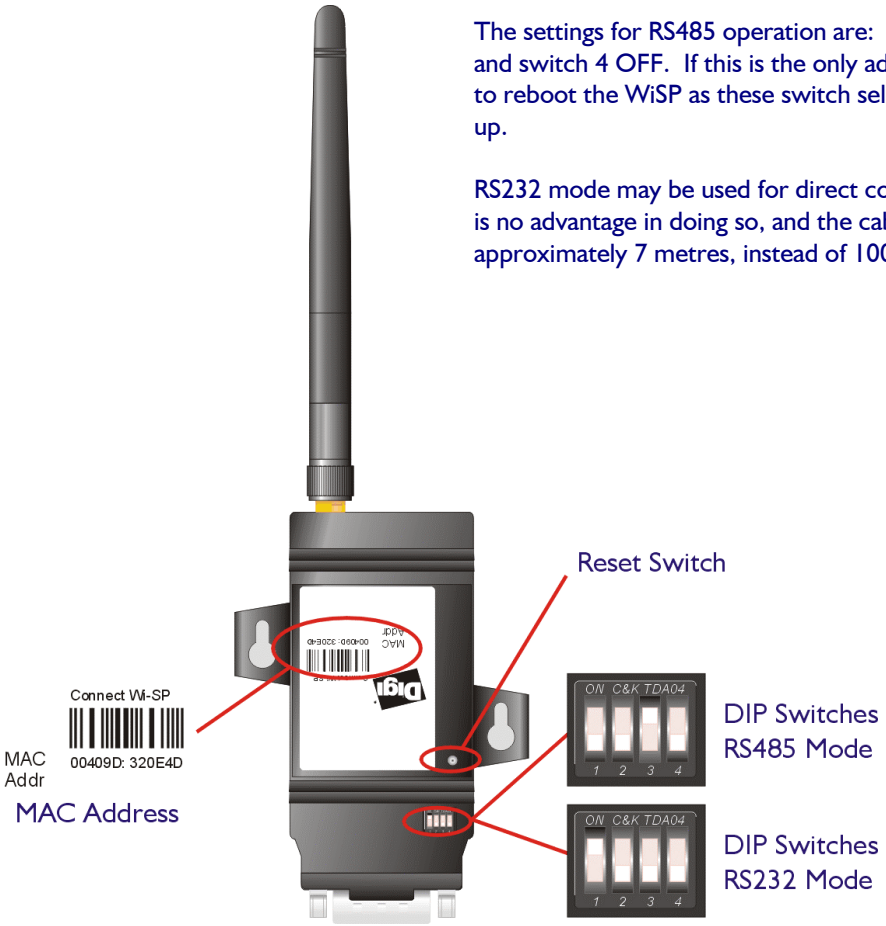
...reset and reconfigure a WiSP

To reset the Digi WiSP wi-fi to serial interface, please follow the steps explained in detail below. All configuration is performed via a live wireless link, and it is assumed that a Edimax USB WiFi adapter, as supplied by XTA, has already been installed on the laptop/PC and is working correctly.

Select the serial interface type

It is recommended that the interface is chosen to be RS485. The supplied adapter cable converts the 9-pin D-type on the WiSP to a balanced XLR, suitable for plugging directly into a network of units. Set the DIP switches on the bottom of the WiSP as shown below.

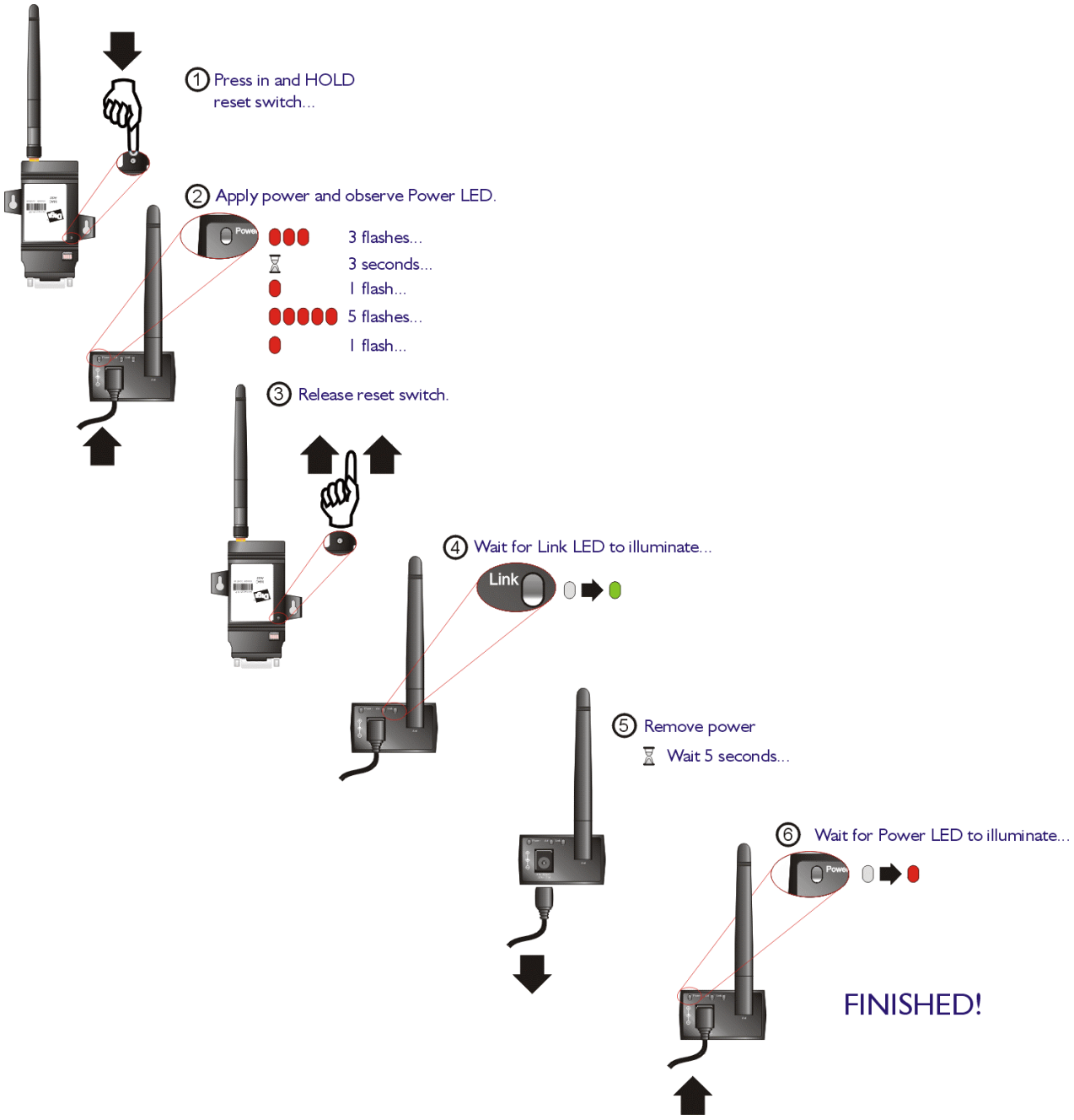


The settings for RS485 operation are: Switches 1&2 OFF, switch 3 ON and switch 4 OFF. If this is the only adjustment being made, remember to reboot the WiSP as these switch selections are only checked on start-up.

RS232 mode may be used for direct connection to a single unit, but there is no advantage in doing so, and the cable length becomes restricted to approximately 7 metres, instead of 100 metres using RS485.

Reset the device to factory defaults

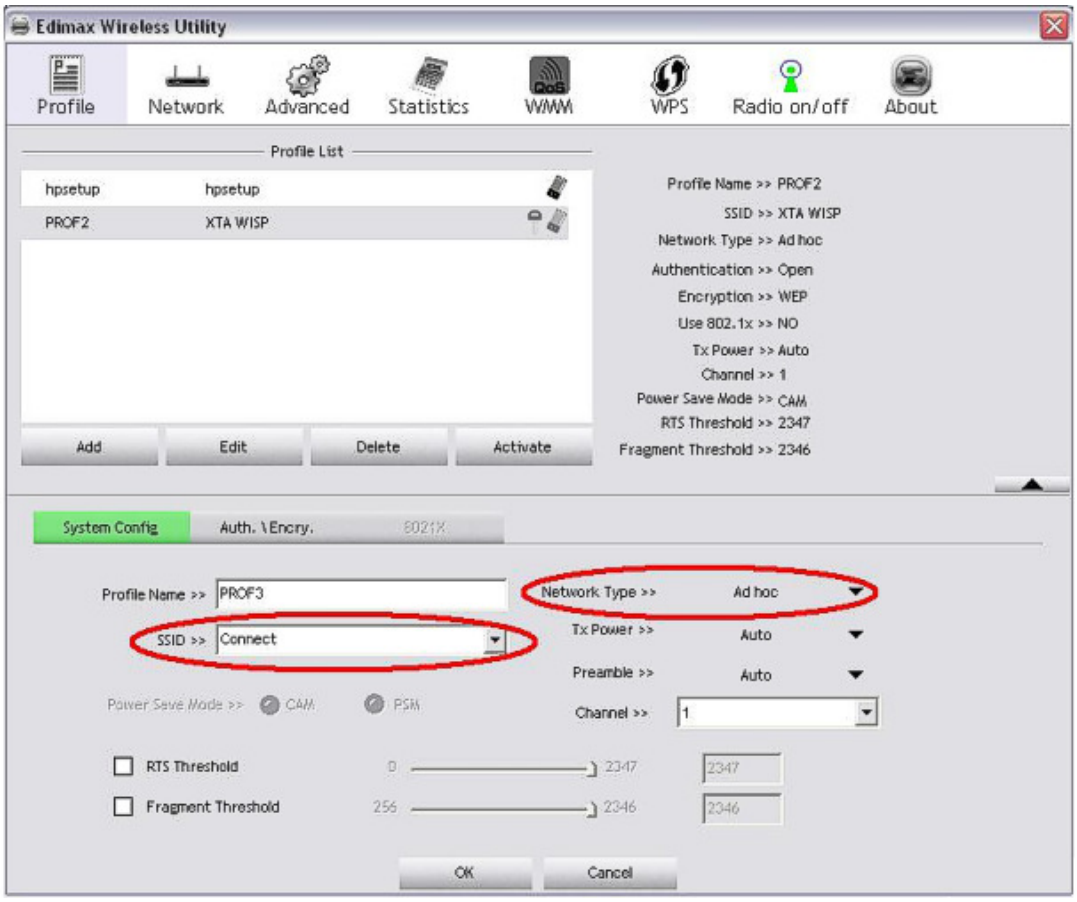
The diagram on the previous page highlights the reset switch. It is not as simple as pressing this switch to reset the devices configuration. A single press will simply reboot the WiSP. Follow the steps explained below, EXACTLY to achieve a full factory reset.



The device will now have to be configured in two stages. First, it will require the setting of a valid IP address, achieved through the use of Digi's own discovery software application. Following this, the configuration interface for the WiSP may be opened in a web browser and adjusted.

Discovery of the device on the wireless network

With the WISP switched on and the Edimax adapter plugged into the computer, launch the Edimax utility.



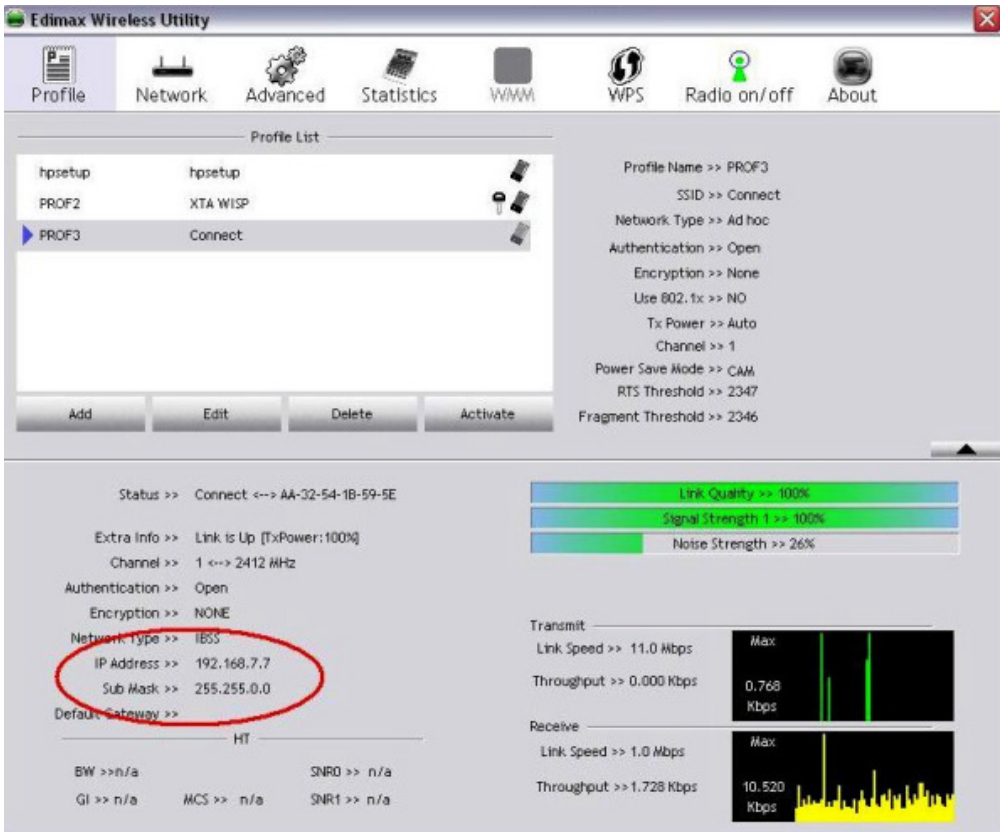
Click on the "Profile" button at the top (make sure the "Radio on/off" is on (GREEN) too!) and press the "Add" button below the profile list to set up a new profile. This will speed things up on the future as it enables you to set up all the parameters relating to the connection to your WiSP so you can quickly connect to it in subsequent sessions.

In this initial set-up we are connecting to the WiSP using the default settings just to establish a link, and then we will reconfigure it properly to our requirements and finally save this as our real profile.

Pressing the "Add" button displays the link configuration settings – change the SSID to "Connect" (the default for a WiSP), and set the Network type to "Ad hoc".

Next, press the "Auth.\Encry." Tab and make sure the Authentication is set to "Open" and the Encryption is set to "None" (again these are temporary defaults - we will adjust these later).

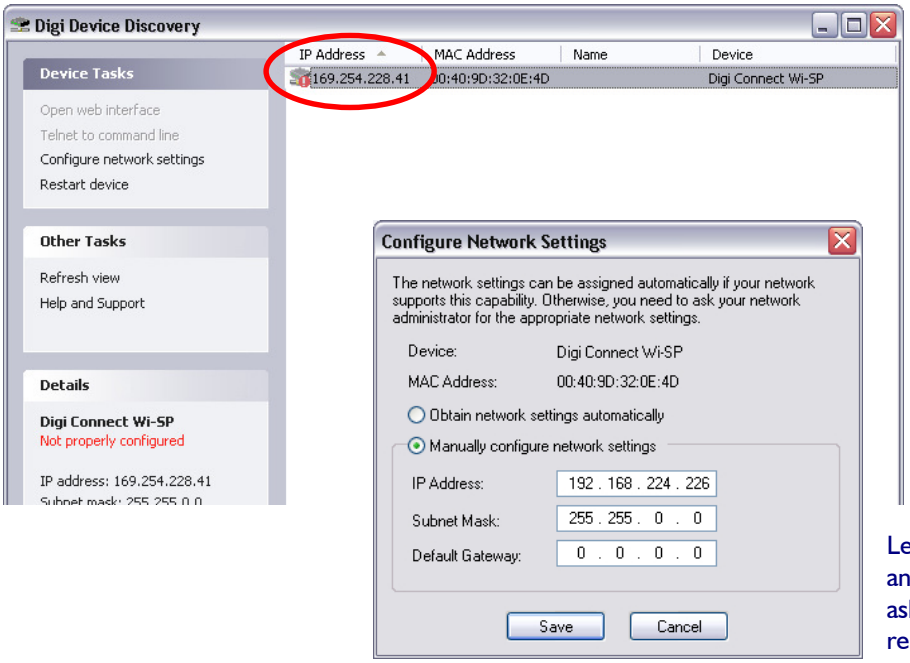
Press “OK” at the bottom of the window and this profile should be added to the list. Highlight this profile in the list by clicking on it and then press the Activate button to use this connection. After a few seconds the connection should establish and the IP address of the Edimax adapter and sub(net) mask settings should appear.



If not, then reselect the profile and press “Activate” again. We can now discover the WiSP and get it reconfigured properly to work with AudioCore…

Having established a default link with the WiSP, it will now be necessary to correctly set its IP address and all other communication parameters, to enable AudioCore to connect using TCP/IP.

Run the Digi Device Discovery utility, as supplied on the XTA Walkabout CD. The program should be able to find a WiSP at this stage, but its IP address will either be 0.0.0.0, or just a random number.



Double clicking on the table entry at this stage will allow the IP address to be set, along with the sub-net mask. Set the IP address to match that used in AudioCore by default, that is

192.168.224.226

and the subnet mask to

255.255.0.0

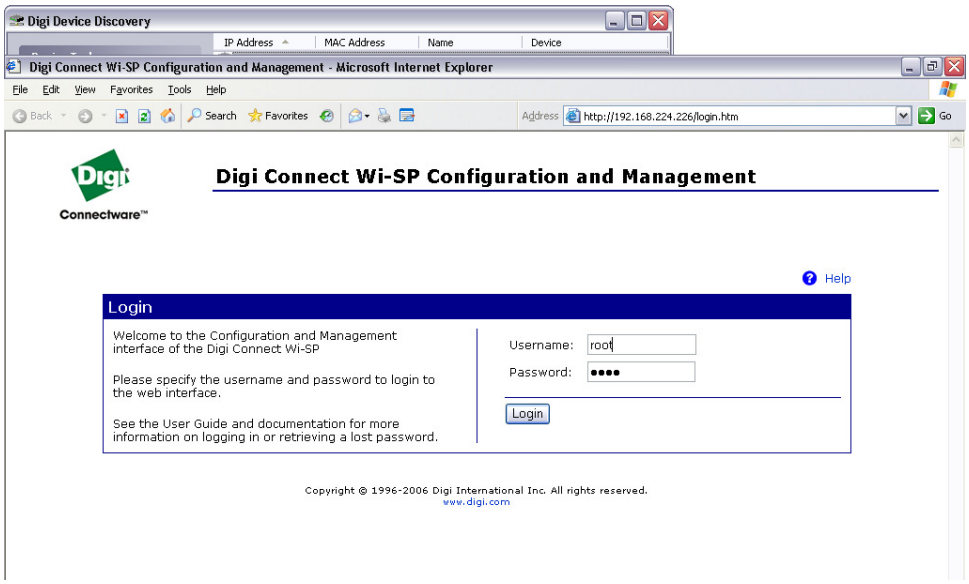
Leave the default gateway at zero and press "Save". You will be asked to confirm that it's OK to reboot the device.

There will be a delay whilst the WiSP reboots, at which point the table entry should refresh with the correct IP address. It will now be possible to open the configuration interface, which is achieved through a web interface in Internet Explorer.

This time, a double click on the device's details will now open Internet Explorer, and load the home page of the WiSP's configuration interface. Just to explain further – the web pages seen form this point on are actually sent directly from the WiSP itself, over the wireless network, and all adjustments to the parameters shown will update the device accordingly – clever eh?!

Each section will be explained in turn – please assume that if any section is skipped, then the settings within that section do not need adjustment. This does not mean they do not matter, so…

Please do not change anything unless it has been expressly mentioned in the following pages!

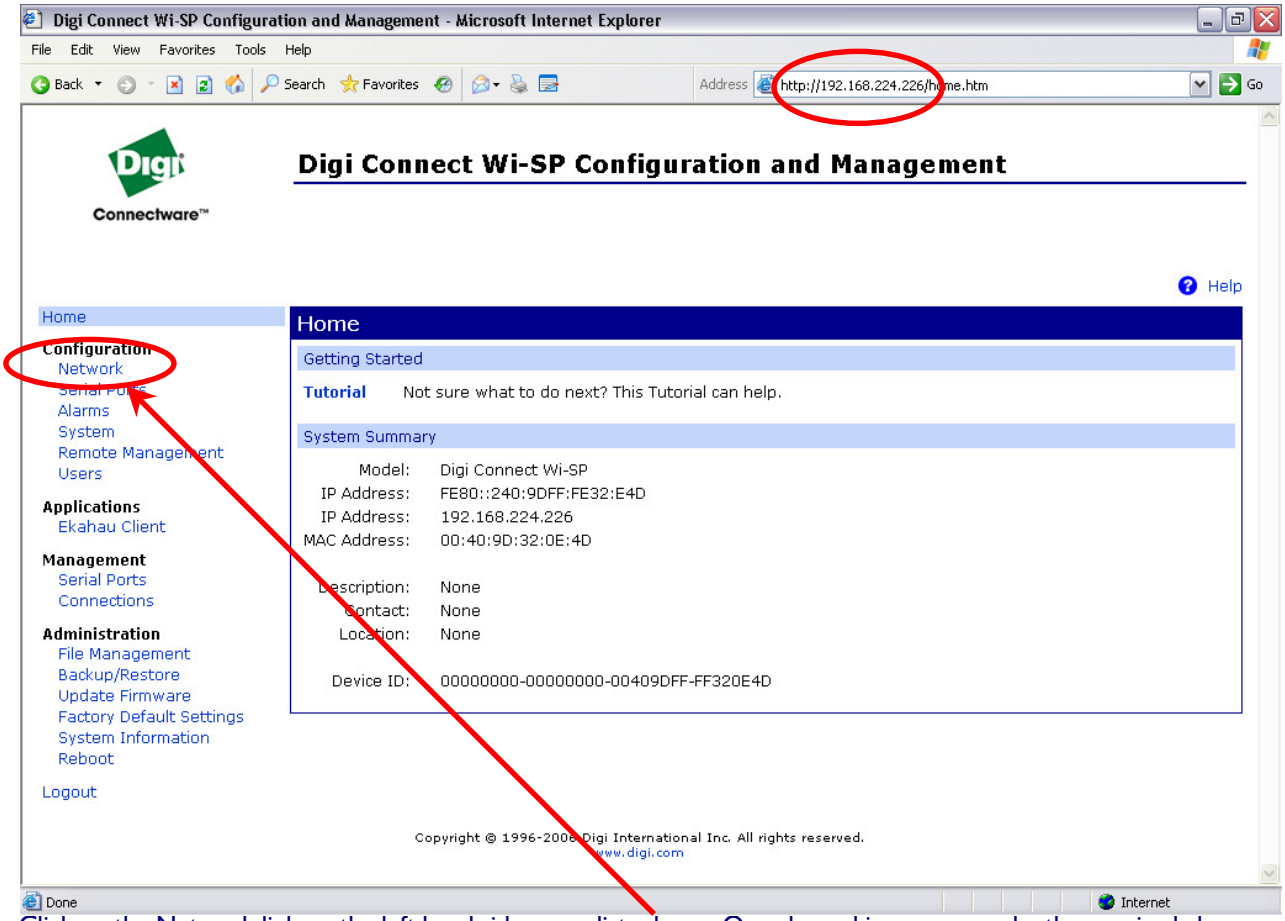


A username and password are required to view or change any of the WiSP's configuration parameters. A login screen will now appear - the default settings are:

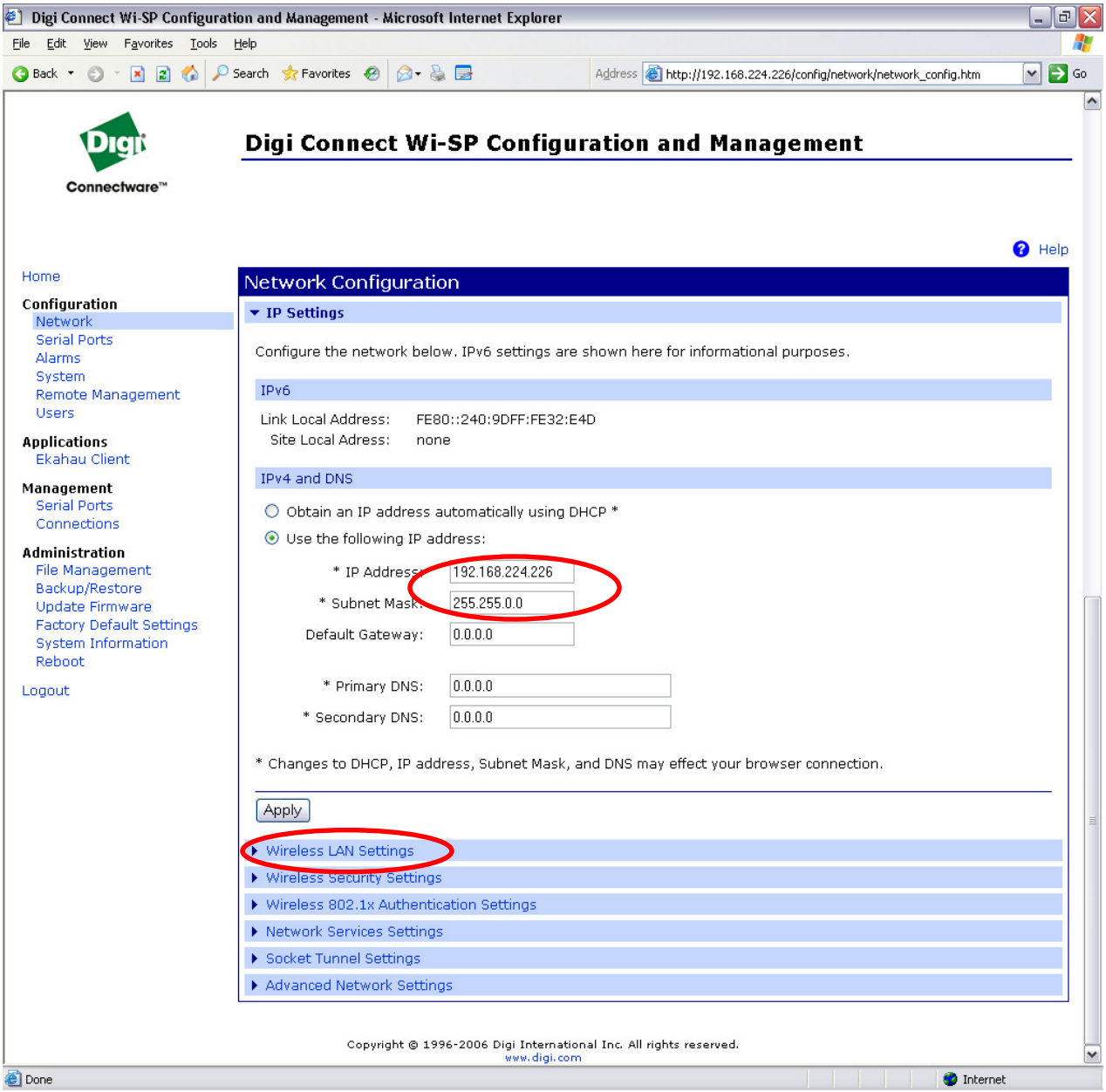
Username: root
Password: dbps

The settings are case sensitive, so make sure CAPS LOCK is off when you type them in.

Below is the home page of the WiSP's device configuration. Note the IP address in the address window is the one that's just been set.



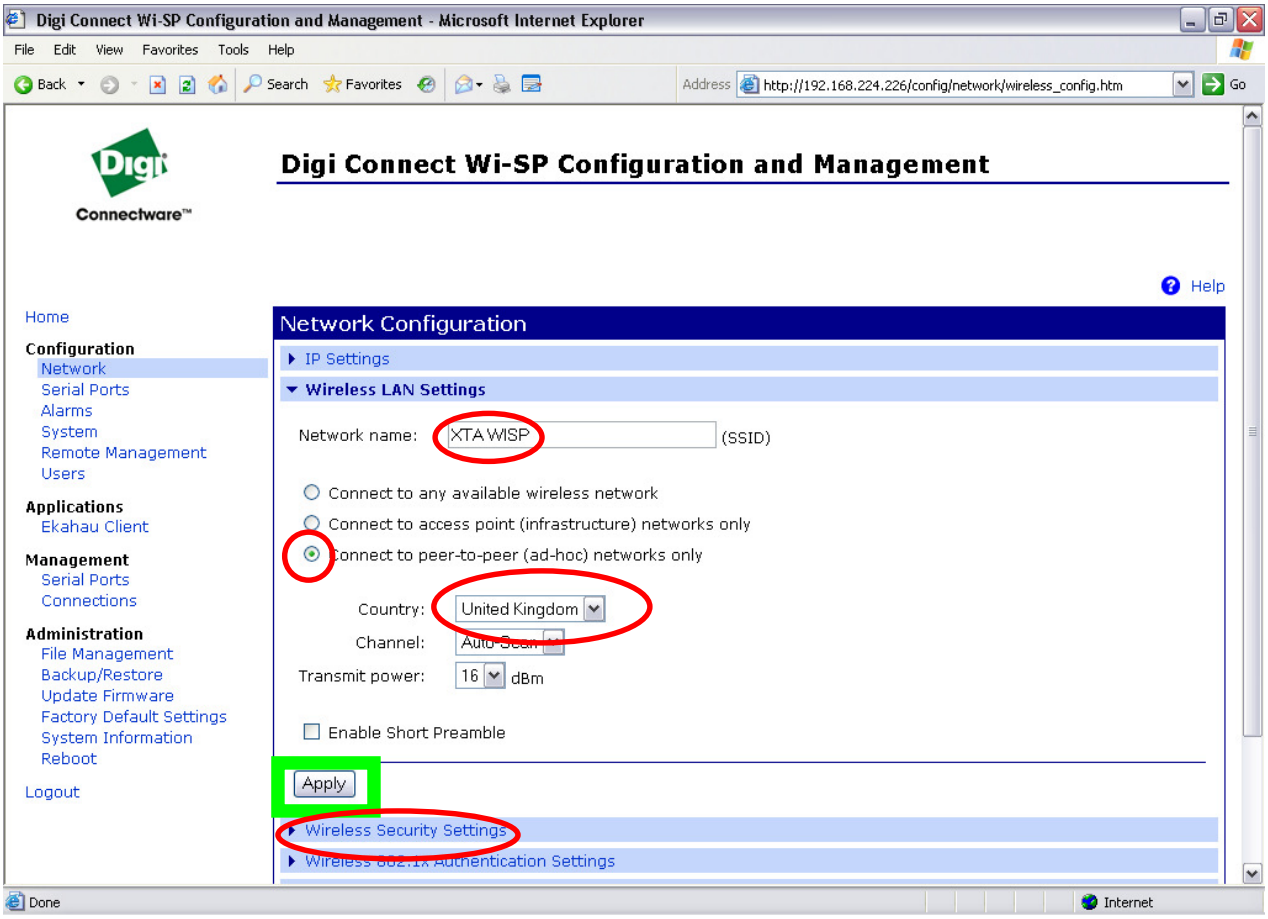
Click on the Network link on the left hand side menu list – here. Once logged in, we can make the required changes to the default settings.



The IP address and Subnet mask have already been set, so this is just to double-check the settings.

Always press Apply when any changes have been made, at each stage, as only the currently displayed settings will be applied along the way!

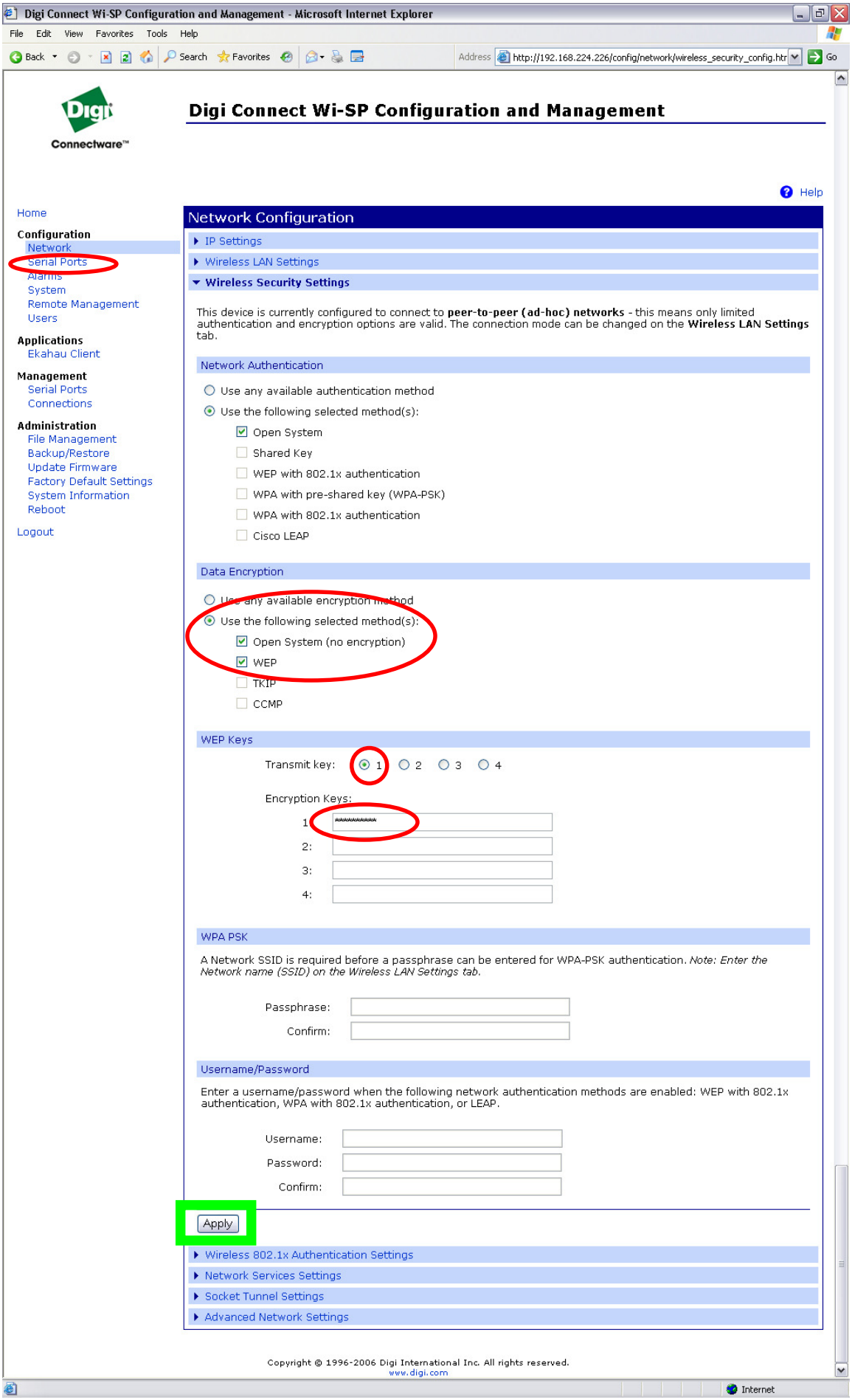
Click on the Wireless LAN Settings to move to the next section, displayed below.



Type in the network name – XTA WISP (all in capitals, with a space between the words). Change the connection type to ad-hoc networks only, and the country to United Kingdom.

PRESS APPLY!

Next, click on the "Wireless Security Settings" link. It's a long page so it's shown overleaf in full…


Digi Connect Wi-SP Configuration and Management - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://192.168.224.226/config/network/wireless_security_config.htr
Go
Digi Connect Wi-SP Configuration and Management
Connectware™
Help
Home
Configuration
Network
Serial Ports
Alarms
System
Remote Management
Users
Applications
Ekahau Client
Management
Serial Ports
Connections
Administration
File Management
Backup/Restore
Update Firmware
Factory Default Settings
System Information
Reboot
Logout
Network Configuration
IP Settings
Wireless LAN Settings
Wireless Security Settings
This device is currently configured to connect to peer-to-peer (ad-hoc) networks - this means only limited authentication and encryption options are valid. The connection mode can be changed on the Wireless LAN Settings tab.
Network Authentication
Use any available authentication method
Use the following selected method(s):
Open System
Shared Key
WEP with 802.1x authentication
WPA with pre-shared key (WPA-PSK)
WPA with 802.1x authentication
Cisco LEAP
Data Encryption
Use any available encryption method
Use the following selected method(s):
Open System (no encryption)
WEP
TKIP
CCMP
WEP Keys
Transmit key: 1 2 3 4
Encryption Keys:
1:
2:
3:
4:
WPA PSK
A Network SSID is required before a passphrase can be entered for WPA-PSK authentication. Note: Enter the Network name (SSID) on the Wireless LAN Settings tab.
Passphrase:
Confirm:
Username/Password
Enter a username/password when the following network authentication methods are enabled: WEP with 802.1x authentication, WPA with 802.1x authentication, or LEAP.
Username:
Password:
Confirm:
Apply
Wireless 802.1x Authentication Settings
Network Services Settings
Socket Tunnel Settings
Advanced Network Settings
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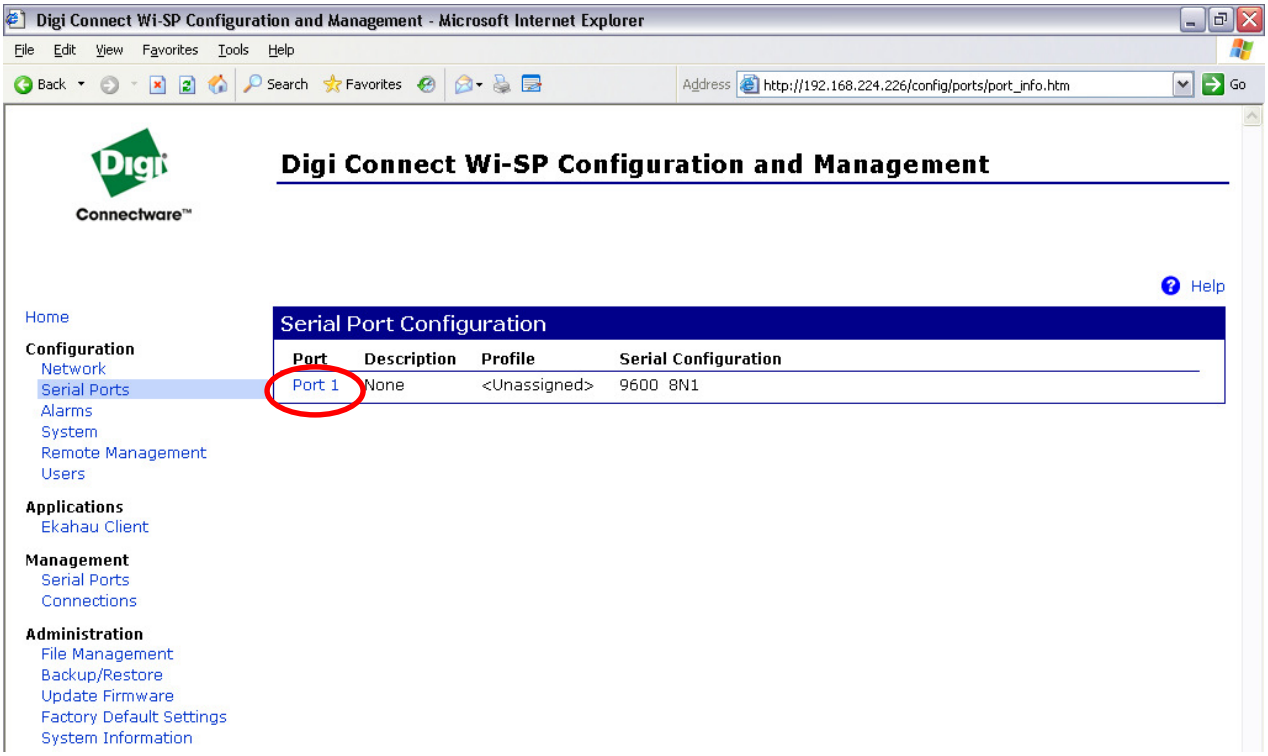
Internet

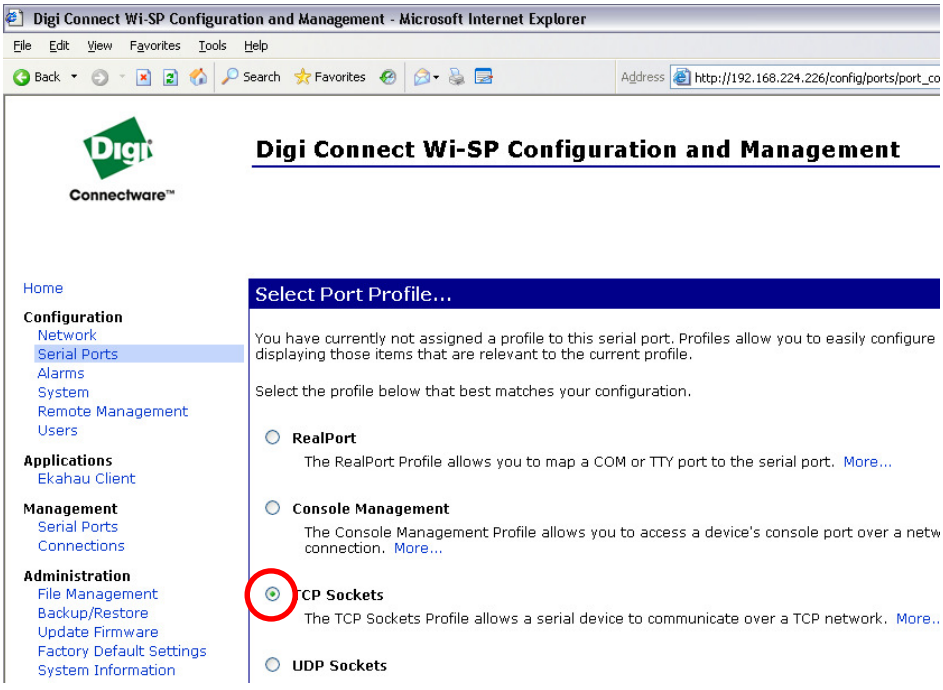
Under the "Data Encryption" section, select to use "Open System" and "WEP", and under "WEP Keys" type in a key for the WiSP to use. The chosen default is "1234567890". **Be careful not to get this wrong as it will appear as a line of asterisks as entered.**

PRESS APPLY!

Next, click on the "Serial Ports" link back up at the top of the page on the left as highlighted.



There is only one serial port on the WiSP, and as can be seen above, it's not yet been set up to our requirements, being both unassigned to any particular profile, and the actual serial settings being rather slow for AudioCore.

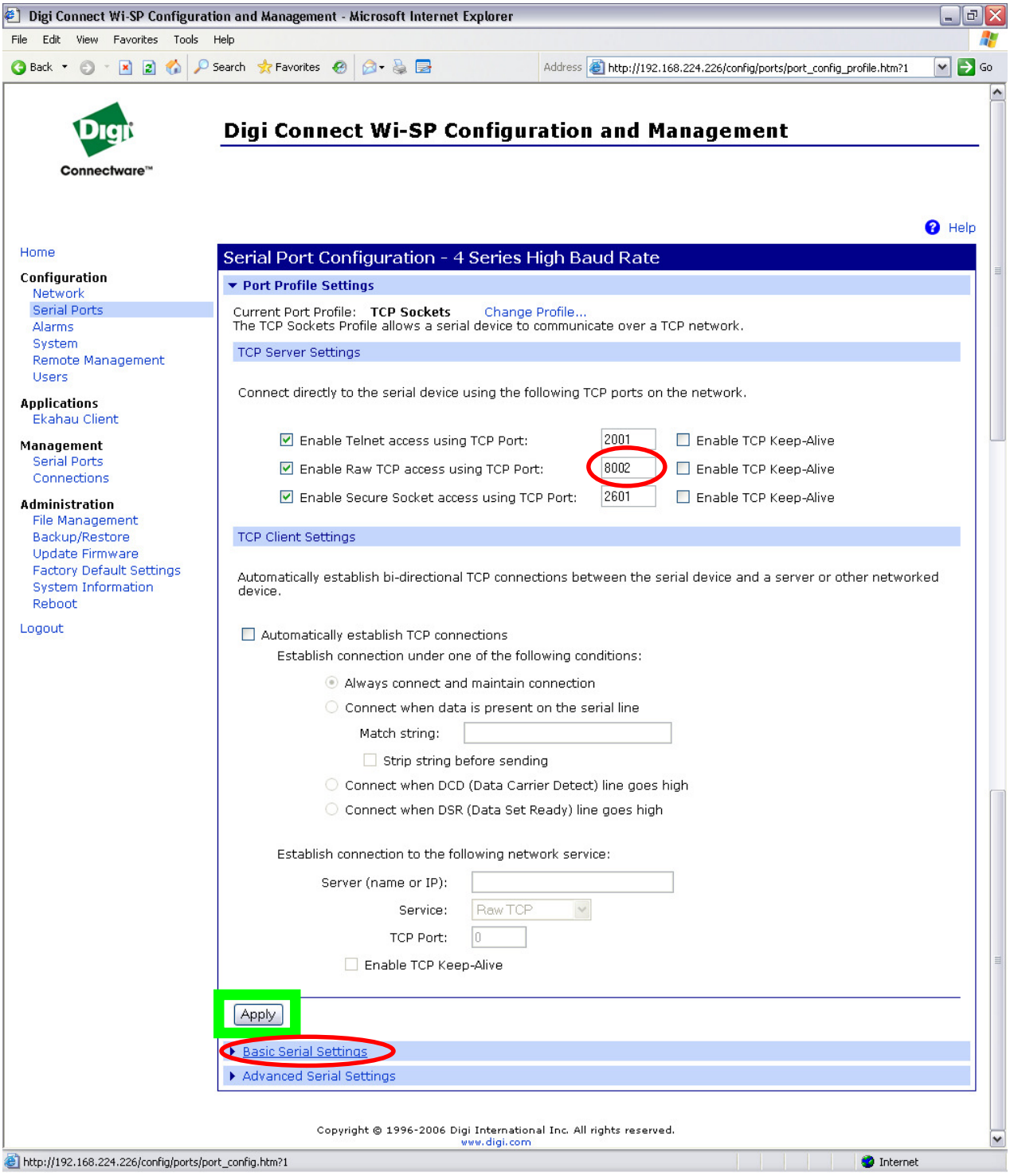


Click on the "Port 1" highlighted above, to begin the configuration. This will display the page shown here.

Select "TCP Sockets" as the profile type and…

PRESS APPLY!

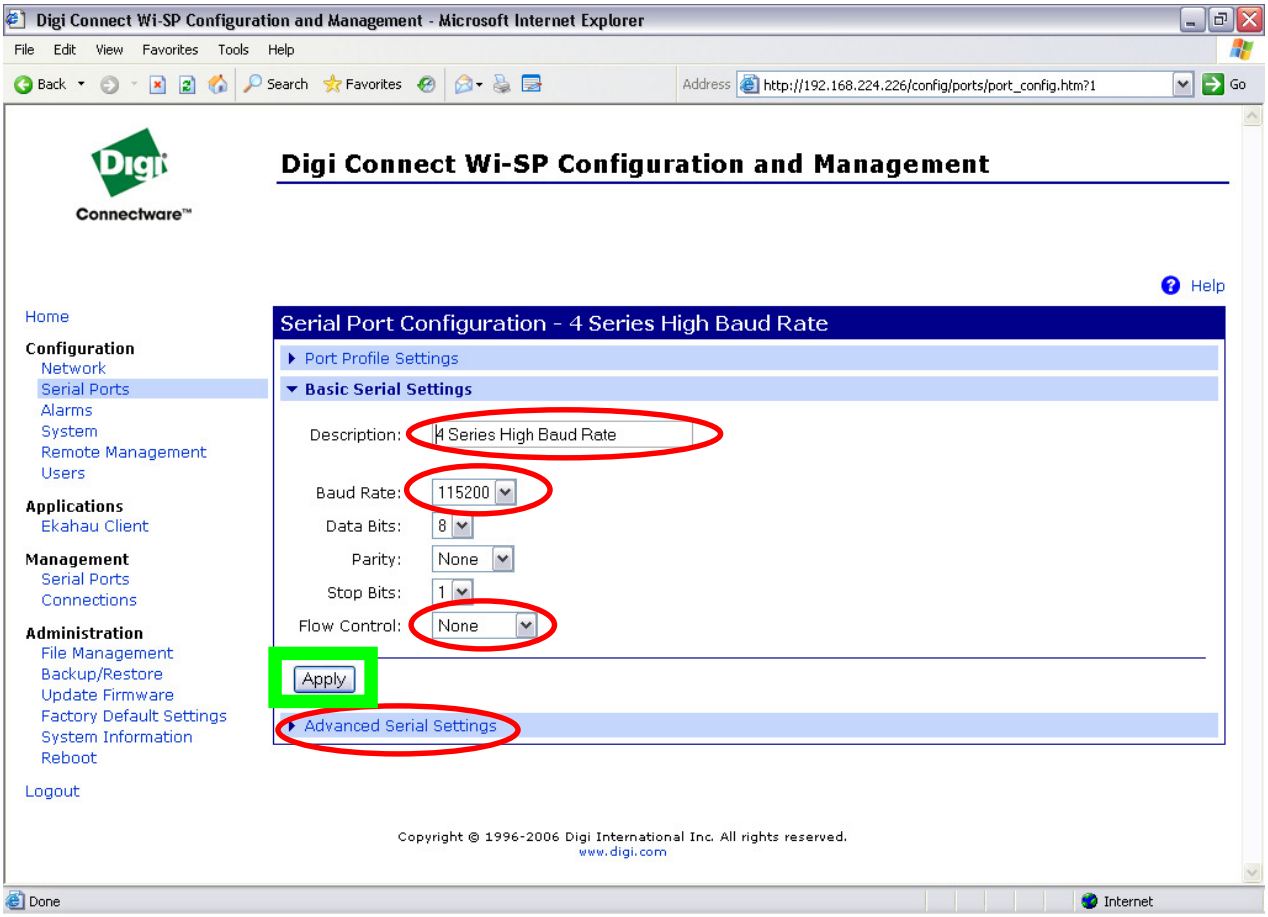
The page overleaf will load next…



Under the TCP Server Settings, change the TCP port number to 8002, and…

PRESS APPLY!

Next, click on the "Basic Serial Settings" link to load the page overleaf, where the baud rate is set.

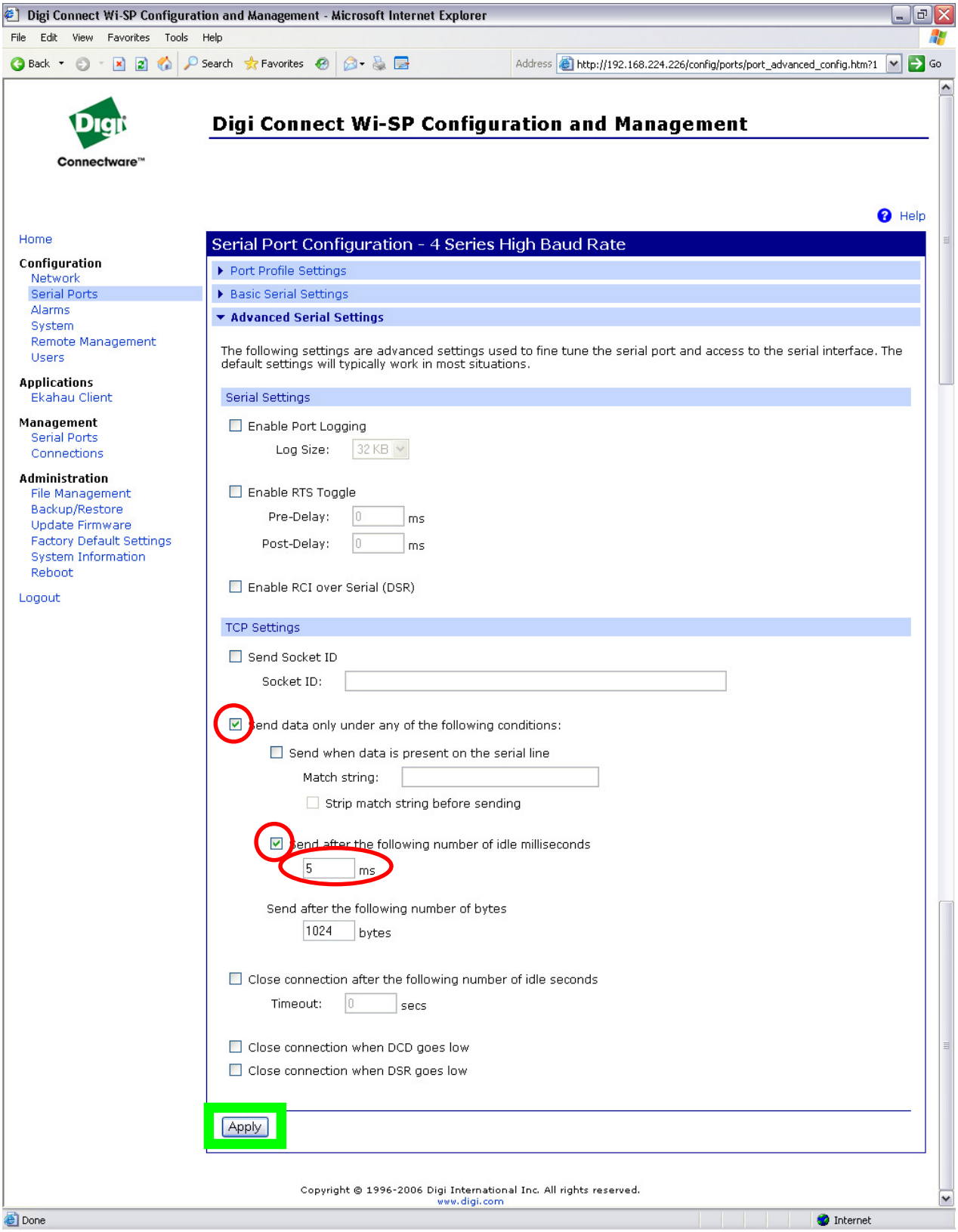


Change the description to one appropriate to the settings used – it's not crucial what this says – it is for identification only. IN the example above the port is being set for an exclusive 4-Series system, so can run at 115k. If the system to be connected contained both 4-Series and older DP224/6/6i unit, or was only the older units, the baud rate would have to be set to 38400.

In either case, change the Flow Control to be "None" and…

PRESS APPLY!

Finally, click on the "Advanced Serial Settings" link to load the page overleaf, for the final stage in the configuration.



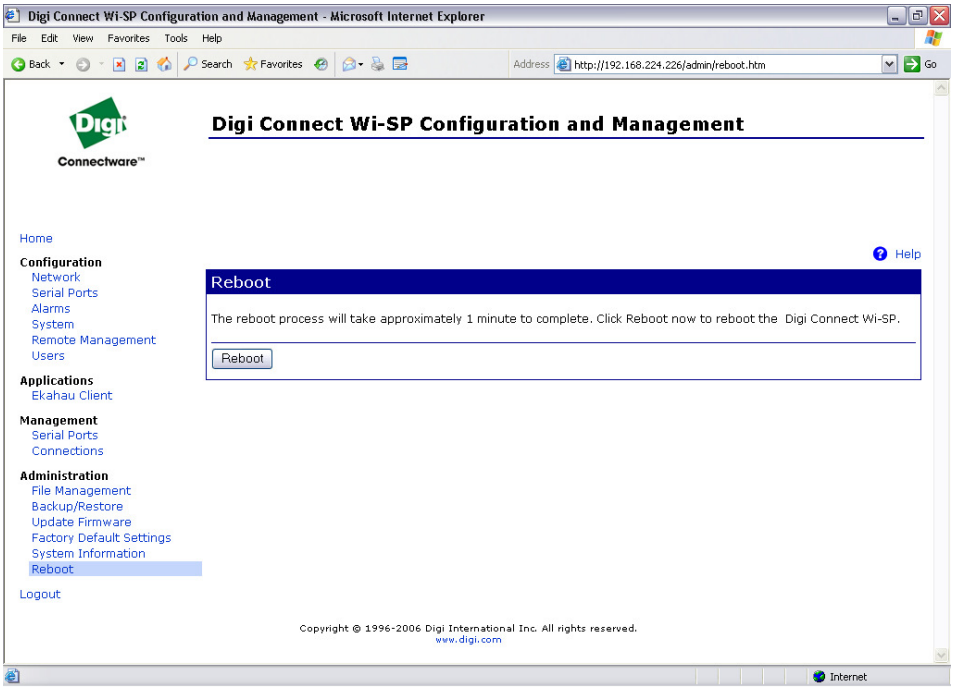
Under the TCP Settings section, check the box to enable "Send data under any of the following conditions:" and then choose the condition of "Send after the following number of idle milliseconds" and type in "5" (default was 1000).

And for the last time(!)

PRESS APPLY!

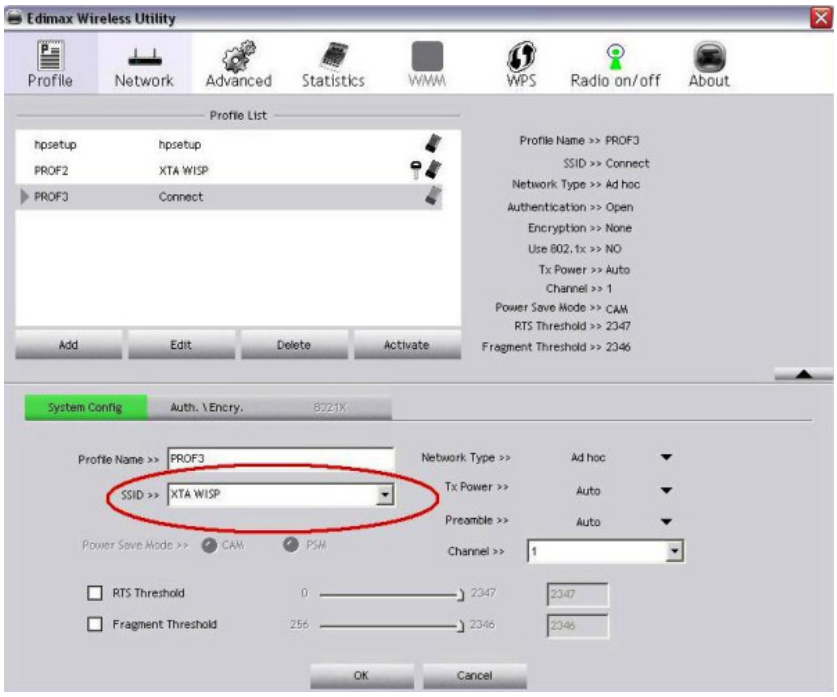
That's the end of the configuration setup. All that remains is to reboot the WiSP, re-establish a connection with the Netgear card, and confirm that AudioCore is happy with the TCP/IP settings.

Reboot the WiSP by clicking on the "Reboot" link on the left hand side. The window below will appear - press the "Reboot" button to begin the process.

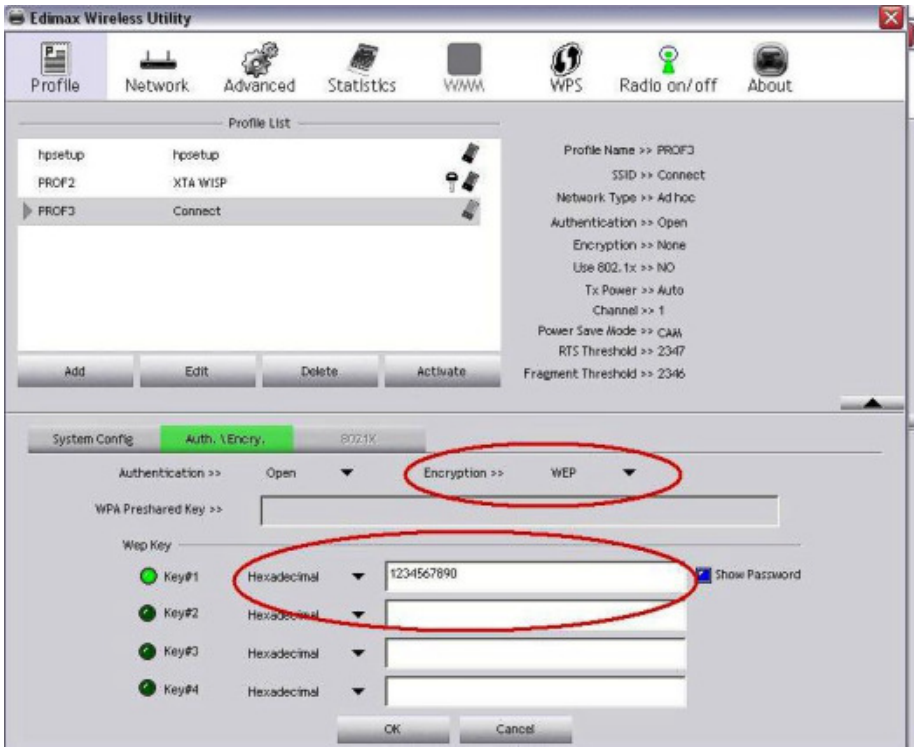


It is now safe to close the Explorer window and let the WiSP reboot. This will take about 1 minute. In the intervening period, the Netgear wizard can be reconfigured to work with the new settings of the WiSP.

The SSID, and WEP encryption setting need to be changed using the Edimax utility again, as shown below. In the profile list – highlight the profile with "Connect" as the SSID and press the "Edit" button. Change the SSID to "XTA WISP" – make sure there's a single space between "XTA" and "WISP"and that both words are in CAPITAL LETTERS.



On the "Auth. \Encryp." Tab, set the Authentatication to "Open" and the Encryption to "WEP". This should now enable a WEP Key to be entered - type in "1234567890" in the box beside Key#1 – it might help to tick the "Show password" box to the right of this so you can see what you are typing in as *getting this wrong won't stop a connection being made to the WiSP, but it will stop any data being sent which can be very confusing!*



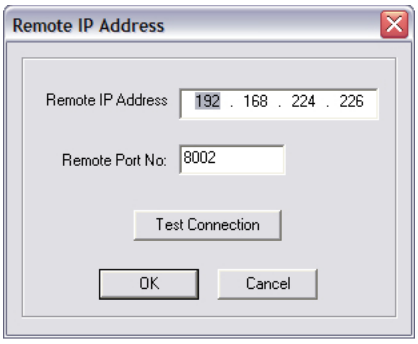
Press OK and the edited profile should now appear in the list – highlight it as before and press "Activate".

Checking (or setting) the TCP/IP parameters in AudioCore

We can now open AudioCore and confirm that a TCP/IP socket has been established correctly.

You will need to install AudioCore version 8.00 or greater on the PC to be used with the wireless system.

Start AudioCore as normal and then choose the menu Remote -> TCP/IP. The window below will be displayed.



Pressing the "Test Connection" button should display a message saying "Connected to TCP/IP!" and the address/port number.

Assuming this works, you should now be able to go on-line, and use AudioCore as normal. Nothing concerned with the operation of AudioCore has changed – you will be able to upload and download as normal, and the real-time metering and status monitor will be working as before.