

TR-7W Configuration Guide

Before You Start

Take a few moments before you start to make the following simple checks. A few moments spent before you start installing your system can save a lot of time later by avoiding some of the most common problems that users can encounter.

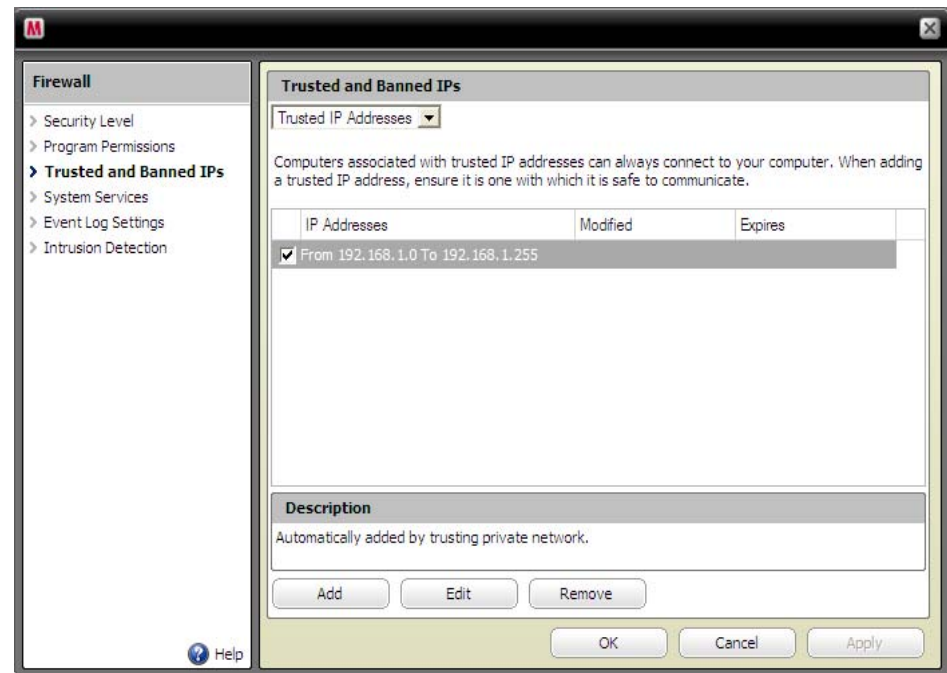
I) Administrator Rights

For installation of TandD software and drivers it is **ABSOLUTELY NECESSARY** that you have complete administrator rights.

Go to Control Panel > User Accounts and confirm that this is the case. If it is not, then stop right here and correct it.

I) Firewall Settings

Make sure that your firewall settings allow communication with both the default IP address that the product ships with (192.168.1.200) and the permanent IP address that you intend to use. If necessary add these to your Trusted Addresses list. Also, check the settings for Windows Firewall, even if you are using a subscription firewall from Norton, McAfee or the like. Windows update can turn on the Windows Firewall without your knowing about it.



These are the most common causes of problems encountered by users when setting up their systems.

Setting the TR-7W IP Address

I) Initialization

1. Load the TR-7W Settings Utility software on your PC.

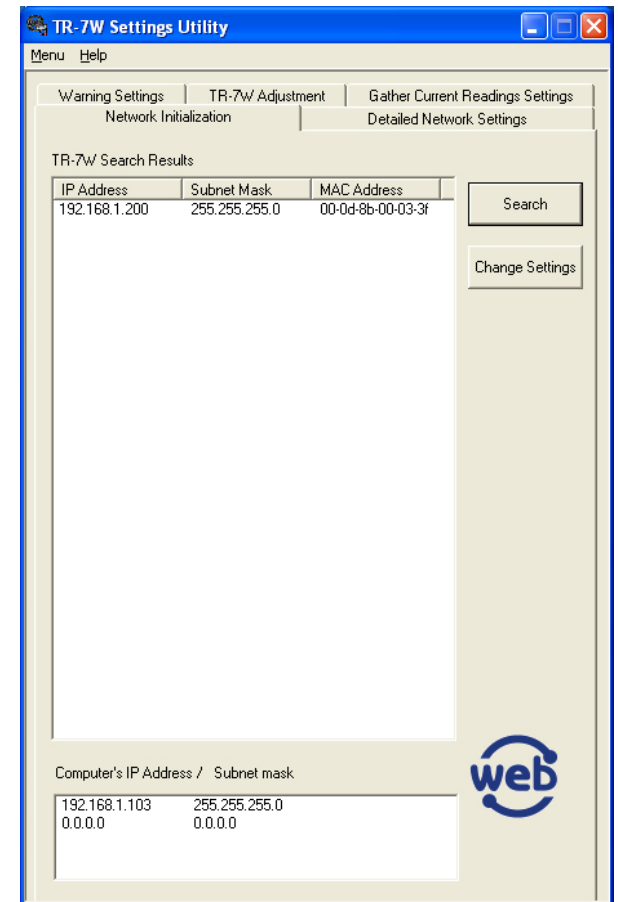
A) LAN Method

2. Connect the TR-7W to your LAN.
3. Open the TR-7W Settings Utility software.
4. Select the “Network Initialization” tab.
5. Click on the “Search” button.
6. The search results should show the connected unit.
7. If so, proceed to Detailed Network Settings.
8. If not, the factory preconfigured IP address may not be within the Scope settings of your router; go to PC Direct Method.

B) PC Direct Method

1. Configure your PC's for a fixed IP address for direct connection. Go to:
Control Panel> Network Connections>LAN Connections>Properties
Select: TCP/IP> Properties> IP Address> Enter: 192.168.1.100
2. Connect the TR-7W to the PC with a “cross connect” cable.
3. Open the TR-7W Settings Utility software.
4. Click on the “Search” button.
5. Proceed to Detailed Network Settings. (Make sure to reset the IP address of your PC to the normal setting when finished configuring the TR-7W. This is usually set to obtain an IP address automatically through DHCP.)

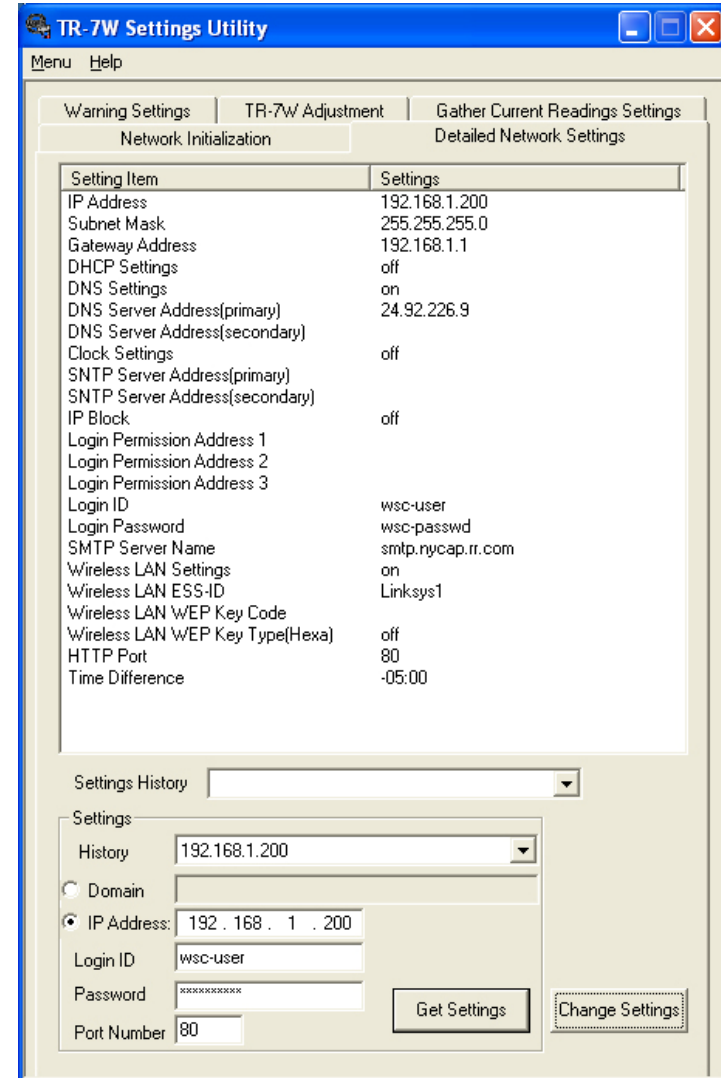
TR-7W Network Initialization Window



II) Detailed Network Settings.

1. Click on the Detailed Network Settings tab.
2. Ensure that the IP address reflects the unit to be configured.
3. Enter the default Login ID and Password, and set the Port to 80.
4. Click on the “Get Settings” button.
5. The unit’s pre-configured settings will populate the window.
6. Click the “Change Settings” button.
7. Enter the new IP address, subnet mask and gateway*.
8. Enter the new Login ID and Password
9. Click the “Send Settings” button.

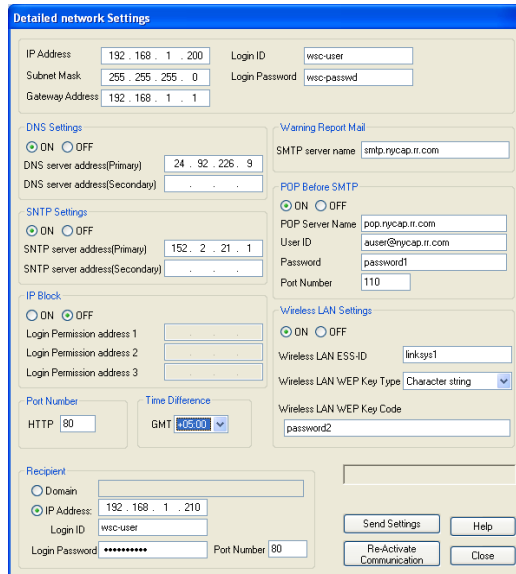
TR-7W Detailed Settings Window



III) Confirm Settings

1. Click “Get Settings” button.
2. Confirm data retrieved from unit is correct as entered.

Change Settings Window



Time Settings

Use of an SNTP server is a very important aspect of your system design. It will reset your clock to the correct time at midnight each night and immediately after a power failure.

I) Set the Time Difference

1. Click on the Detailed Network Settings tab.
2. Click on the “Get Settings” button.
3. Click the “Change Settings” button.
4. Select the offset from GMT for your time zone.
5. Click the Send Settings button

NOTE: This step is necessary for the time of logged data to be indicated correctly when downloaded.

II) Setting the SNTP Server

1. Click the On radio button under SNTP Settings.
2. Enter the IP address of the SNTP server you wish to use.
3. Enter a secondary server address if desired.
4. Click the Send Settings button.

HOW TO FIND AN SNTP SERVER: A list of free, public SNTP servers can be found at:

<http://tf.nist.gov/service/time-servers.html>

The screenshot displays the 'Detailed network Settings' window. It contains several sections for configuring network parameters:

- Basic Settings:** IP Address (192.168.1.200), Subnet Mask (255.255.255.0), Gateway Address (192.168.1.1), Login ID (wsc-user), and Login Password (wsc-passwd).
- DNS Settings:** Radio buttons for ON (selected) and OFF. DNS server address(Primary) is 24.92.226.9. DNS server address(Secondary) is empty.
- SNTP Settings:** Radio buttons for ON (selected) and OFF. SNTP server address(Primary) is 152.2.21.1. SNTP server address(Secondary) is empty.
- IP Block:** Radio buttons for ON and OFF (selected). Login Permission address 1, 2, and 3 are empty.
- Port Number:** HTTP is set to 80.
- Time Difference:** A dropdown menu is set to GMT +05:00.
- Warning Report Mail:** SMTP server name is smtp.nycap.rr.com.
- POP Before SMTP:** Radio buttons for ON (selected) and OFF. POP Server Name is pop.nycap.rr.com, User ID is auser@nycap.rr.com, Password is password1, and Port Number is 110.
- Wireless LAN Settings:** Radio buttons for ON (selected) and OFF. Wireless LAN ESS-ID is linksys1, Wireless LAN WEP Key Type is Character string, and Wireless LAN WEP Key Code is password2.
- Recipient:** Radio buttons for Domain and IP Address (selected). IP Address is 192.168.1.210, Login ID is wsc-user, Login Password is masked with asterisks, and Port Number is 80.

At the bottom right, there are buttons for 'Send Settings', 'Help', 'Re-Activate Communication', and 'Close'.

Configuring Warning E-Mails

Open the TR-7W Settings Utility Software

TR-7W Detailed Settings Window

I) Detailed Settings Window

1. Click on the “Detailed Network Settings” tab.
2. Enter the IP address, Login ID and Password for the unit to be configured.
3. Click on the “Get Settings” button.
4. Click on the “Change Settings” button.
5. Turn “DNS Settings” On.
6. Enter the IP address of your ISP’s DNS server*.
7. Enter the name of the SMTP (outgoing mail) server you will be using.

II) POP Before SMTP Settings

Some e-mail service providers require that you log onto your POP server with a User ID and Password prior to sending e-mail. This is usually the case if your outgoing mail server you are using is not maintained by your local ISP.

Please note that the TR-7xW does NOT support SMTP Authentication.

1. Click the “On” radio button in the POP Before SMTP menu box.
2. Enter the name of your POP Server.
3. Enter your User ID and Password.
4. Set the Port Number to 110.

The screenshot displays the 'Detailed network Settings' window. At the top, there are fields for IP Address (192.168.1.200), Subnet Mask (255.255.255.0), Gateway Address (192.168.1.1), Login ID (wsc-user), and Login Password (wsc-passwd). Below this, there are several sections: 'DNS Settings' with radio buttons for ON (selected) and OFF, and fields for primary and secondary DNS server addresses; 'SMTP Settings' with radio buttons for ON (selected) and OFF, and fields for primary and secondary SMTP server addresses; 'IP Block' with radio buttons for ON and OFF (selected), and three fields for login permission addresses; 'Port Number' with a field for HTTP (80) and 'Time Difference' with a dropdown for GMT (+05:00); 'Warning Report Mail' with a field for SMTP server name (smtp.nycap.rr.com); 'POP Before SMTP' with radio buttons for ON (selected) and OFF, and fields for POP Server Name (pop.nycap.rr.com), User ID (auser@nycap.rr.com), Password (password1), and Port Number (110); 'Wireless LAN Settings' with radio buttons for ON and OFF (selected), and fields for Wireless LAN ESS-ID (linksys1), Wireless LAN WEP Key Type (Character string), and Wireless LAN WEP Key Code (password2); and 'Recipient' with radio buttons for Domain and IP Address (selected), and fields for IP Address (192.168.1.210), Login ID (wsc-user), Login Password (masked with dots), and Port Number (80). At the bottom right, there are buttons for 'Send Settings', 'Help', 'Re-Activate Communication', and 'Close'.

TR-7W Warning Settings Window

III) Warning Settings Window

1. Click on the “Warning Settings” tab.
2. Enter the IP address, Login ID and Password for the unit to be configured.
3. Click the “Get Settings” button.
4. Select the Type of Unit and Degrees C or F.
5. Enter the upper and / or lower limits to trigger warnings.
6. Enter the e-mail addresses (up to 5) for receipt of warning messages.
7. Enter senders e-mail address.
8. Enter subject of warning message.
9. Enter name of sender (unit originating message).
10. Enter text to be appended to message (if any).
11. Click “Warning Start” button.

The screenshot shows the TR-7W Settings Utility window with the Warning Settings tab selected. The window is divided into several sections:

- Network Initialization** and **Detailed Network Settings** tabs are visible at the top.
- Warning Settings** tab is active, showing options for **Type of Unit** (TR71W or TR72W) and **Monitoring Status**.
- Upper and Lower Limits** section includes input fields for Ch1 and Ch2 Upper and Lower Limits, with units of °F or %.
- Recipient Address** section includes input fields for up to 5 email addresses.
- Sender Address** section includes an input field for the sender's email address.
- Subject (OK to Omit)** and **Sender Name (Abbreviation OK)** sections include input fields for the warning message subject and sender name.
- Body** section includes a text area for the warning message body, with a note that battery warnings will not have attached lines.
- Settings History** section includes a dropdown menu for the settings history.
- Settings Reception** section includes a dropdown menu for the history, radio buttons for **Domain** and **IP Address**, and input fields for **Login ID**, **Password**, and **Port Number**.
- Buttons** for **Warning Start**, **Warning Stop**, and **Get Settings** are located at the bottom right.

Connecting to a Wireless LAN

Connect the TR-7W to a LAN or PC via a wired Ethernet connection.

I) Configure Settings

1. Open the TR-7W Settings Utility software.
2. Click in the “Detailed Network Settings” tab.
3. Enter the IP address, Login ID and Password for the unit to be configured.
4. Click on the “Get Settings” button.
5. Click on the “Change Settings” button.
6. Turn “Wireless LAN Settings” On.
7. Enter the SSID for your wireless LAN router**.
**Note: The TR-7W will not recognize ‘Space’ Characters in the SSID
8. If WEP encryption is used enter the Key Type.
9. Enter the Key Code (leave blank if no encryption is in use).
10. Click the “Send Settings” button.

Make sure that your wireless router is set for ‘Shared Key’ authentication. The TR-7W does not support ‘Open’ authentication.

II) Confirm Settings

1. Click “Get Settings” button.
2. Confirm data retrieved from unit is correct as entered.

Disconnect the TR-7W from the wired LAN and remove power. Insert the Wireless 802.11b LAN adapter card in the CF option slot along the top edge of the unit. Reconnect the A/C adapter to the TR-7W. The LED on the CF adapter card will stop blinking when the wireless connection with the router has been established.

TR-7W Change Settings Window

The screenshot shows the 'Detailed network Settings' window for the TR-7W. The window has a blue title bar and a light beige background. It contains several sections of settings:

- IP Settings:** IP Address (192.168.1.200), Subnet Mask (255.255.255.0), Gateway Address (192.168.1.1), Login ID (wsc-user), and Login Password (wsc-passwd).
- DNS Settings:** DNS server address(Primary) (24.92.226.9) and DNS server address(Secondary) (empty).
- SNTP Settings:** SNTP server address(Primary) and SNTP server address(Secondary) (both empty).
- IP Block:** Login Permission address 1, 2, and 3 (all empty).
- Warning Report Mail:** SMTP server name (smtp.nycap.rr.com).
- Wireless LAN Settings:** Wireless LAN Settings (ON), Wireless LAN ESS-ID (Linksys1), Wireless LAN WEP Key Type (Character string), and Wireless LAN WEP Key Code (empty).
- Port Number and Time Difference:** Port Number (HTTP: 80) and Time Difference (GMT: -05:00).
- Recipient:** Recipient type (IP Address: 192.168.1.200), Login ID (wsc-user), Login Password (masked with asterisks), and Port Number (80).

At the bottom right, there are four buttons: 'Send Settings', 'Help', 'Re-Activate Communication', and 'Close'.

Configuring the TR-7W as an Internet Server

To accomplish access from the Internet, the individual TR-7W IP addresses must be made known to the outside world, and access must be made available through the router's firewall. The problem with IP addressing is that most ISP's allocate IP addresses to clients on a temporary basis and change them from time to time. (If you have a static IP address from your ISP you may skip this section.) In order to overcome this problem, organizations such as Dynamic Network Services (www.dyndns.org) or TZO DNS (www.tzo.com) have established services that work in conjunction with suitably equipped routers. Working together, the service and the DDNS equipped router provide a seamless domain name access to the TR-7W, even when the ISP changes the IP address of the router. Following is the procedure for setting up your TR-7W for access through the internet.

Note: The Linksys WRT54G is the router used in this example, however other DDNS equipped routers, such as those offered by SMC or Netgear can also be used.

I) Determine that your router is DDNS capable
(Though the router's user guide or web page.)

II) Establish an account with a DDNS service

1. Obtain a User ID & Password.
2. Register a domain name for your TR-7W.

III) Configure your Router to Enable DDNS

1. Open the Router's setup utility software.
2. Go to the DDNS page.
3. Enter your DDNS service account information.
4. Enter the domain name you registered for your TR-7W.

Router Setup Window

The screenshot displays the Linksys WRT54G Router Setup Window. The interface is titled "LINKSYS A Division of Cisco Systems, Inc." and "Wireless-G Broadband Router WRT54G". The "Setup" menu is active, and the "DDNS" sub-menu is selected. The configuration fields are as follows:

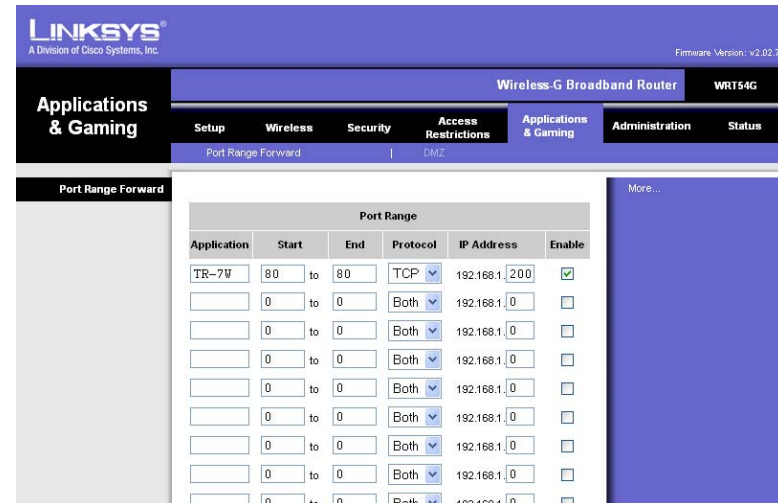
DDNS Service:	DynDNS.org
User Name:	TR-7W Customer
Password:
Host Name:	myuni.dyndns.org
Internet IP Address:	24.194.56.99
Status:	DDNS is updated successfully

At the bottom of the window, there are "Save Settings" and "Cancel Changes" buttons. The Cisco Systems logo is visible in the bottom right corner.

IV) Set the Router to Allow External Access to the TR-7W

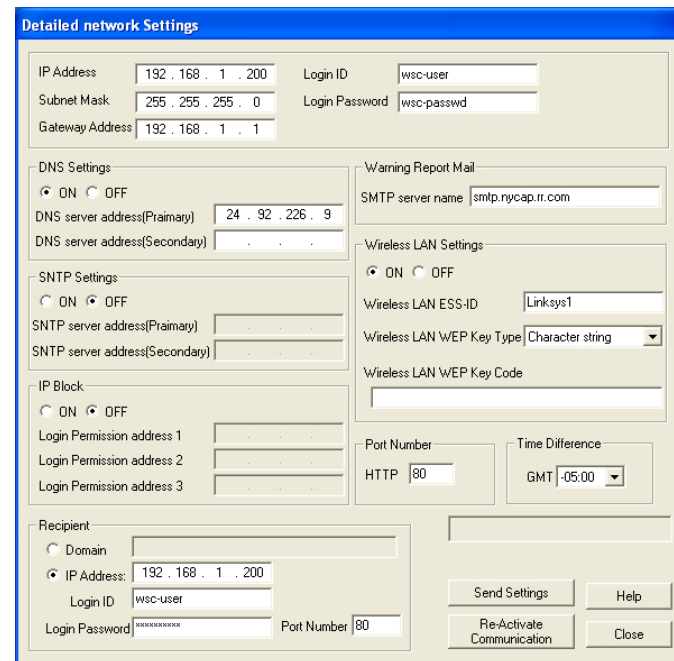
1. With the Router's setup utility software still open, go to the "Port Forwarding" tab.
2. Enter the logical name of the TR-7W.
3. Set "Port 80" as the range (for an http server).
4. Set the protocol as TCP (/IP).
5. Set the IP address of the TR-7W.
6. Check the Enable box.

Port Range Forwarding Window



V) Configure the TR-7W for Internet Access

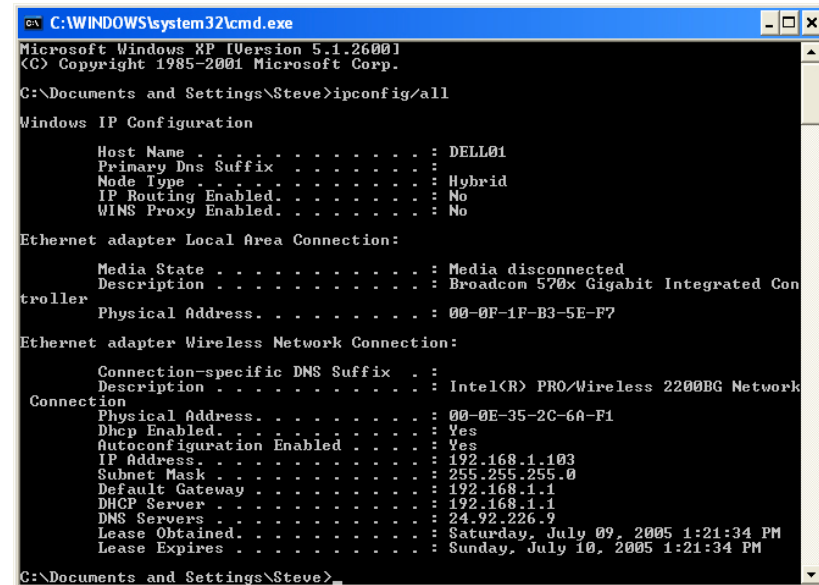
1. Click on the "Detailed Network Settings" tab.
2. Enter the IP address, Login ID and Password for the unit to be configured.
3. Click on the "Get Settings" button.
4. Click on the "Change Settings" button.
5. Enter the Default Gateway Address of your router*
6. Turn "DNS Settings" On.
7. Enter the IP address of your ISP's DNS server*.



*Determining Router & Server IP Addresses

Key addresses for your router and ISP server can be obtained from your computer. In order to display this information use the following procedure:

1. Connect your PC to the LAN to which your TR-7xW will be attached.
2. Go to the Start menu and click on Run.
3. Enter "Cmd".
4. In the DOS prompt window enter "ipconfig/all".
5. In the "Connection" Section find:
 - The IP address of the PC
(as assigned by the router)
 - The assigned subnet mask
 - The router's default gateway address
 - The IP address of your ISP's DNS server



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Steve>ipconfig/all

Windows IP Configuration

    Host Name . . . . . : DELL01
    Primary Dns Suffix . . . . . :
    Node Type . . . . . : Hybrid
    IP Routing Enabled. . . . . : No
    WINS Proxy Enabled. . . . . : No

Ethernet adapter Local Area Connection:

    Media State . . . . . : Media disconnected
    Description . . . . . : Broadcom 570x Gigabit Integrated Con
troller
    Physical Address. . . . . : 00-0F-1F-B3-5E-F7

Ethernet adapter Wireless Network Connection:

    Connection-specific DNS Suffix . :
    Description . . . . . : Intel(R) PRO/Wireless 2200BG Network
Connection
    Physical Address. . . . . : 00-0E-35-2C-6A-F1
    Dhcp Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    IP Address. . . . . : 192.168.1.103
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1
    DHCP Server . . . . . : 192.168.1.1
    DNS Servers . . . . . : 24.92.226.9
    Lease Obtained. . . . . : Saturday, July 09, 2005 1:21:34 PM
    Lease Expires . . . . . : Sunday, July 10, 2005 1:21:34 PM

C:\Documents and Settings\Steve>
```

DOS Prompt Window