

RTR-5W 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.

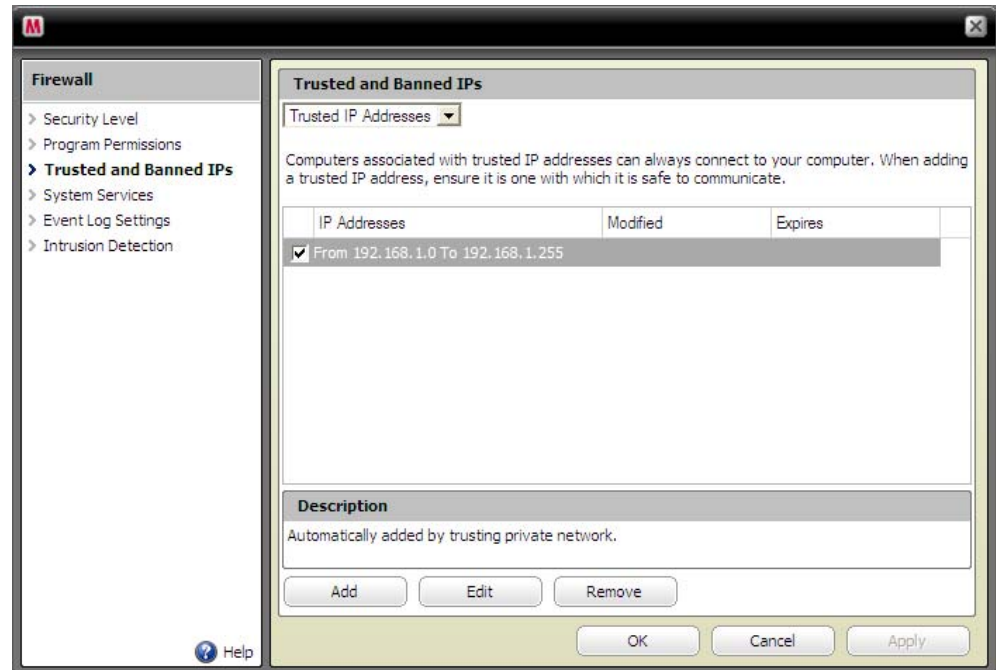
I) Administrator Rights

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 RTR-5W IP Address

I) Initialization

1. Load the RTR-5W Settings Utility software on your PC.

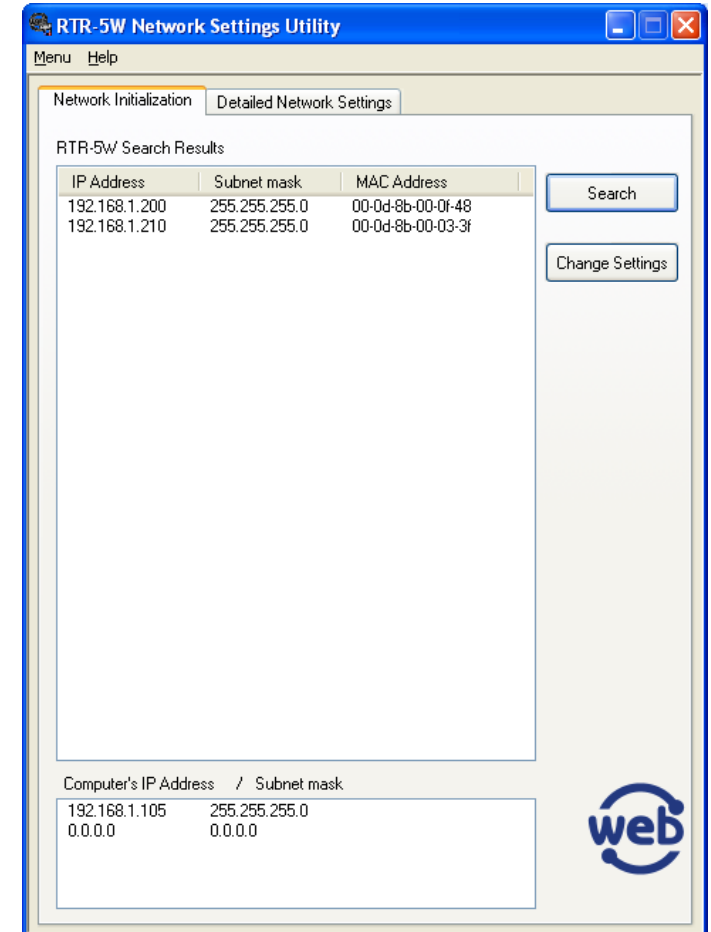
RTR-5W Network Initialization Window

A) LAN Method

2. Connect the RTR-5W to your LAN.
3. Open the RTR-5W 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 RTR-5W to the PC with a “cross connect” cable.
3. Open the RTR-5W 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 RTR-5W. This is usually set to obtain an IP address automatically through DHCP.)



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.

III) Confirm Settings

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

Change
Settings
Window

Detailed Network Settings

IP Address: 192 . 168 . 1 . 200 Login ID: wsc-user
 Subnet Mask: 255 . 255 . 255 . 0 Login Password: wsc-passwd
 Gateway Address: 192 . 168 . 1 . 1

DNS Settings
 ON OFF
 DNS server address (Primary): 24 . 92 . 226 . 9
 DNS server address (Secondary):

SNTP Settings
 ON OFF
 SNTP server address (Primary): 192 . 43 . 244 . 18
 SNTP server address (Secondary): 132 . 163 . 4 . 101

IP Block
 ON OFF
 Login permission address 1: []
 Login permission address 2: []
 Login permission address 3: []

Warning Report Mail
 SMTP server name: smtp.nycap.rr.com

Wireless LAN Settings
 ON OFF
 Wireless LAN ESS-ID: []
 Wireless LAN WEP Key Type: character string
 Wireless LAN WEP Key Code: []

Port Number
 HTTP: 80 FTP server: 21 Time Difference: GMT -04:00
 DTP server: 20

Recipient
 Domain: []
 IP Address: 192 . 168 . 1 . 200
 Login ID: wsc-user HTTP Port Number: 80
 Login Password: []

Buttons: POP before SMTP Settings, Send Settings, Help, Re-Activate Communication, Close

RTR-5W Detailed Settings Window

RTR-5W Network Settings Utility

Menu Help

Network Initialization **Detailed Network Settings**

Setting Item	Settings
IP Address	192.168.1.200
Subnet Mask	255.255.255.0
Gateway address	192.168.1.1
DHCP Settings	off
DNS Settings	on
DNS server address (primary)	24.92.226.9
DNS server address (secondary)	
Clock Setting	on
SNTP server address (primary)	192.43.244.18
SNTP server address (secondary)	132.163.4.101
IP Block	off
Login permission address1	
Login permission address2	
Login permission address3	
Login ID	wsc-user
Login Password	wsc-passwd
SMTP server name	smtp.nycap.rr.com
Wireless LAN Settings	off
Wireless LAN ESS-ID	
Wireless LAN WEP Key Code	
Wireless LAN WEP Key Type (hexadecimal)	off
FTP server port	21
DTP server port	20

Settings History: []

Settings

History: 192.168.1.200
 Domain
 IP Address: 192 . 168 . 1 . 200
 Login ID: wsc-user
 Password: []
 Port Number: 80

Buttons: Get Settings, Change Settings

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.

The screenshot shows the 'Detailed Network Settings' window. The 'SNTP Settings' section is active, with the 'ON' radio button selected. The primary SNTP server address is set to 192.43.244.18, and the secondary is 132.163.4.101. The 'Time Difference' is set to GMT -04:00. The 'Send Settings' button is highlighted.

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>

Configuring Warning E-Mails

Open the RTR-5W Settings Utility Software

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. If this is the case for your service click the “POP before SMTP Settings” button.

Please note that the RTR-5W 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.

(Warning Settings are made in RTR-5W for Windows software.)

RTR-5W Detailed Settings Window

Detailed Network Settings

IP Address: 192 . 168 . 1 . 200 Login ID: wsc-user
Subnet Mask: 255 . 255 . 255 . 0 Login Password: wsc-passwd
Gateway Address: 192 . 168 . 1 . 1

DNS Settings: ON OFF
DNS server address (Primary): 24 . 92 . 226 . 9
DNS server address (Secondary):

SNTP Settings: ON OFF
SNTP server address (Primary): 192 . 43 . 244 . 18
SNTP server address (Secondary): 132 . 163 . 4 . 101

IP Block: ON OFF
Login permission address 1:
Login permission address 2:
Login permission address 3:

Warning Report Mail: SMTP server name: smtp.nyccap.rr.com

Wireless LAN Settings: ON OFF
Wireless LAN ESS-ID:
Wireless LAN WEP Key Type: character string
Wireless LAN WEP Key Code:

Port Number: HTTP: 80 FTP server: 21 Time Difference: GMT -04:00
DTP server: 20

Recipient: Domain IP Address: 192 . 168 . 1 . 200
Login ID: wsc-user HTTP Port Number: 80
Login Password:

POP before SMTP Settings
Send Settings Help
Re-Activate Communication Close

POP before SMTP Settings

ON OFF

POP server name: pop.earthlink.net
POP account: user@earthlink.net
POP Password: password
POP Port Number: 110 (default is 110)

OK Cancel Help

Connecting to a Wireless LAN

Connect the RTR-5W to a LAN or PC via a wired Ethernet connection.

I) Configure Settings

1. Open the RTR-5W 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.
 (“Space” characters are not allowed 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.

II) Confirm Settings

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

RTR-5W Change Settings Window

The screenshot displays the 'Detailed Network Settings' window for the RTR-5W. The window is titled 'Detailed Network Settings' and contains several sections for configuration:

- 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, and DNS server address (Secondary) is blank.
- SNTP Settings:** Radio buttons for ON (selected) and OFF. SNTP server address (Primary) is 192.43.244.18, and SNTP server address (Secondary) is 132.163.4.101.
- IP Block:** Radio buttons for ON and OFF (selected). Three login permission address fields are present, all currently blank.
- Warning Report Mail:** SMTP server name is smtp.nycap.rr.com.
- Wireless LAN Settings:** Radio buttons for ON (selected) and OFF. Wireless LAN ESS-ID is linksys. Wireless LAN WEP Key Type is character string. Wireless LAN WEP Key Code is password.
- Port Number:** HTTP is 80, FTP server is 21, and DTP server is 20.
- Time Difference:** GMT is -04:00.
- Recipient:** Radio buttons for Domain and IP Address (selected). IP Address is 192.168.1.200. Login ID is wsc-user and Login Password is masked with dots. HTTP Port Number is 80.

Buttons at the bottom include 'POP before SMTP Settings', 'Send Settings', 'Help', 'Re-Activate Communication', and 'Close'.

Disconnect the RTR-5W 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 RTR-5W. The LED on the CF adapter card will stop blinking when the wireless connection with the router has been established.

Please note that the wireless router must be set for “shared key” authentication. The RTR-5W is not compatible with “open” authentication networks.

Configuring the RTR-5W as an Internet Server

To accomplish access from the Internet, the individual RTR-5W 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 RTR-5W, even when the ISP changes the IP address of the router. Following is the procedure for setting up your RTR-5W 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 RTR-5W.

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 RTR-5W.

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 DDNS configuration page shows the following fields and values:

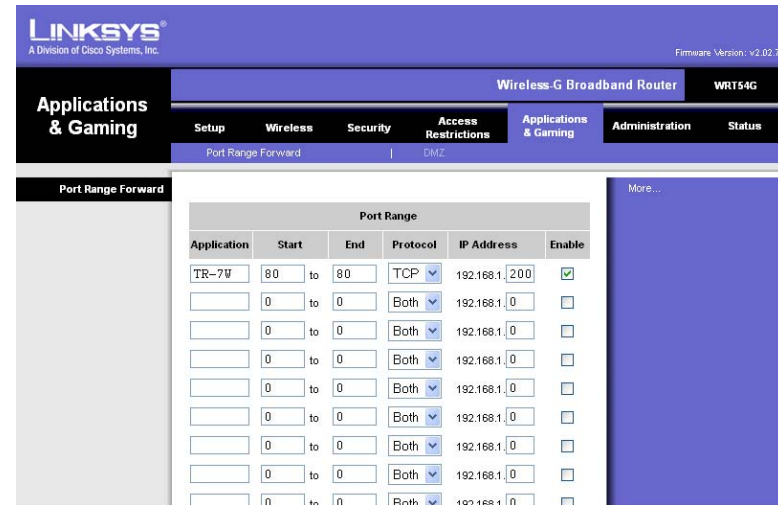
- DDNS Service: DynDNS.org
- User Name: TR-7W Customer
- Password: [Redacted]
- Host Name: myunitdyndns.org
- Internet IP Address: 24.194.56.99
- Status: DDNS is updated successfully

At the bottom of the page, 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 RTR-5W

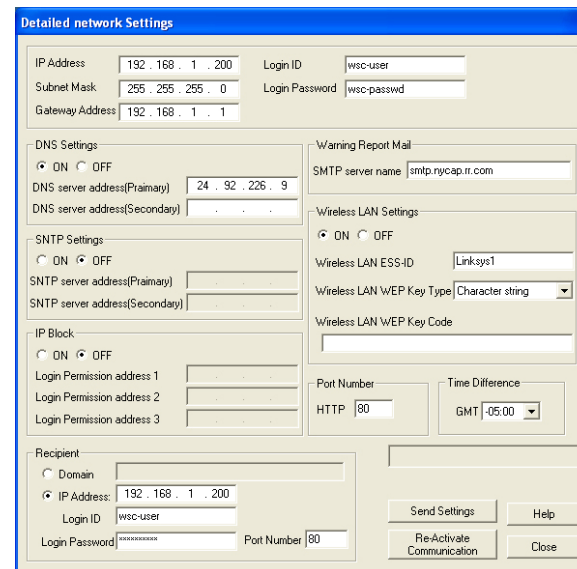
1. With the Router's setup utility software still open, go to the "Port Forwarding" tab.
2. Enter the logical name of the RTR-5W.
3. Set "Port 80" as the range (for an http server).
4. Set the protocol as TCP (/IP).
5. Set the IP address of the RTR-5W.
6. Check the Enable box.

Port Range Forwarding Window



V) Configure the RTR-5W 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 that the RTR-5W will reside on.
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
controller
    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