

Wireless—Bridge

In this next screen, you can select which mode you want the router to be in, either access point or wireless bridge. If you enable bridge restrict, then enter the MAC addresses of the remote bridges. If you disable the bridge restrict function, then there are no MAC addresses to enter. Click on **Save / Apply** to save and continue.

The screenshot shows a web interface with a navigation bar at the top containing 'Home', 'Advanced' (highlighted), 'Tools', and 'Status'. Below the navigation bar is the title 'Wireless -- Bridge'. The main content area contains a paragraph of explanatory text, followed by a 'Refresh' button and a 'Save/Apply' button. The configuration fields are as follows:

- AP Mode: A dropdown menu with 'Access Point' selected.
- Bridge Restrict: A dropdown menu with 'Enabled' selected.
- Remote Bridges MAC Address: Four empty text input boxes arranged in a 2x2 grid.

Refresh Save/Apply

Wireless—QoS

WMM (Wi-Fi Multimedia) technology is available on the wireless router, allowing you to give multimedia applications a higher quality of service and priority in a wireless network so applications such as videos will be of higher quality. Enabling WMM may delay the network traffic of other lower assigned quality applications.

WMM No Acknowledgement can be enabled if you enable WMM which refers to the acknowledgement policy used at the MAC level.

To create a QoS entry, click the **Add QoS Entry** button to proceed to add or remove traffic class rules for your network. Click on **Save/Apply WME Settings**.

Home **Advanced** Tools Status

WMM(Wi-Fi Multimedia) Settings

WMM(Wi-Fi Multimedia): Enabled

WMM No Acknowledgement: Disabled

Wireless QoS Classes
Choose Add or Remove to configure network traffic classes.

Class Name	Priority	TRAFFIC CLASSIFICATION RULES				
		Protocol	Source Addr.Mask	Source Port	Dest. Addr.Mask	Dest. Port

Add QoS Entry Save/Apply WME Settings

Tools

The tools section contains various administrator functions to maintain your router. Sections include the following—Admin, Time, Remote Log, System, Firmware, and Test.

- **Admin:** Allows you to change the password for the various user names available
- **Time:** Allows you to set the router's time
- **Remote Log:** Allows you to view logs of the router's activities
- **System:** Allows you to perform functions such as save / reboot, backup, update settings, and restore default settings
- **Firmware:** Allows you to upgrade your router with new available firmware versions
- **Test:** Allows you to view test information for your Internet connection

Access Control

You can enable or disable some services of your router by LAN or WAN. If no WAN connection is defined, only the LAN side can be configured.



Access Control—Admin

Three user names and passwords—**admin**, **support**, and **user**—can be used to control your router. The passwords for these user names can be changed on the following screen. Enter the user name followed by the old password and the new password that you wish to change to.

Home | **Advanced** | **Tools** | **Status**

Administrator Settings

Access to your DSL router is controlled through three user accounts: admin, support, and user.

The user name "admin" has unrestricted access to change and view configuration of your DSL Router.

The user name "support" is used to allow an ISP technician to access your DSL Router for maintenance and to run diagnostics.

The user name "user" can access the DSL Router, view configuration settings and statistics, as well as, update the router's software.


Use the fields below to enter up to 16 characters and click "Apply" to change or create passwords.
Note: Password cannot contain a space.

Username:

Old Password:

New Password:


Confirm Password:

 **Apply**

Access Control—Services

Services that can be enabled / disabled on the LAN / WAN are FTP, HTTP, ICMP, SNMP, Telnet, and TFTP.

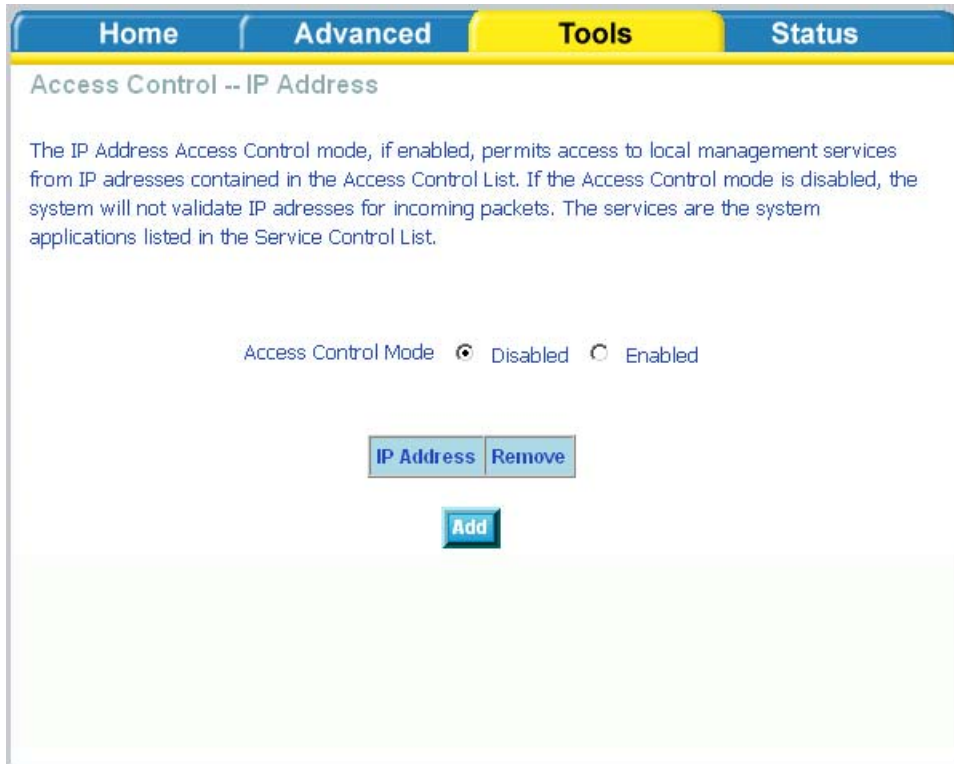
Service	LAN	WAN
FTP	<input type="checkbox"/> Enabled	<input type="checkbox"/> Enabled
HTTP	<input checked="" type="checkbox"/> Enabled	<input type="checkbox"/> Enabled
ICMP	<input checked="" type="checkbox"/> Enabled	<input type="checkbox"/> Enabled
SNMP	<input checked="" type="checkbox"/> Enabled	<input type="checkbox"/> Enabled
TELNET	<input checked="" type="checkbox"/> Enabled	<input type="checkbox"/> Enabled
TFTP	<input checked="" type="checkbox"/> Enabled	<input type="checkbox"/> Enabled


Apply

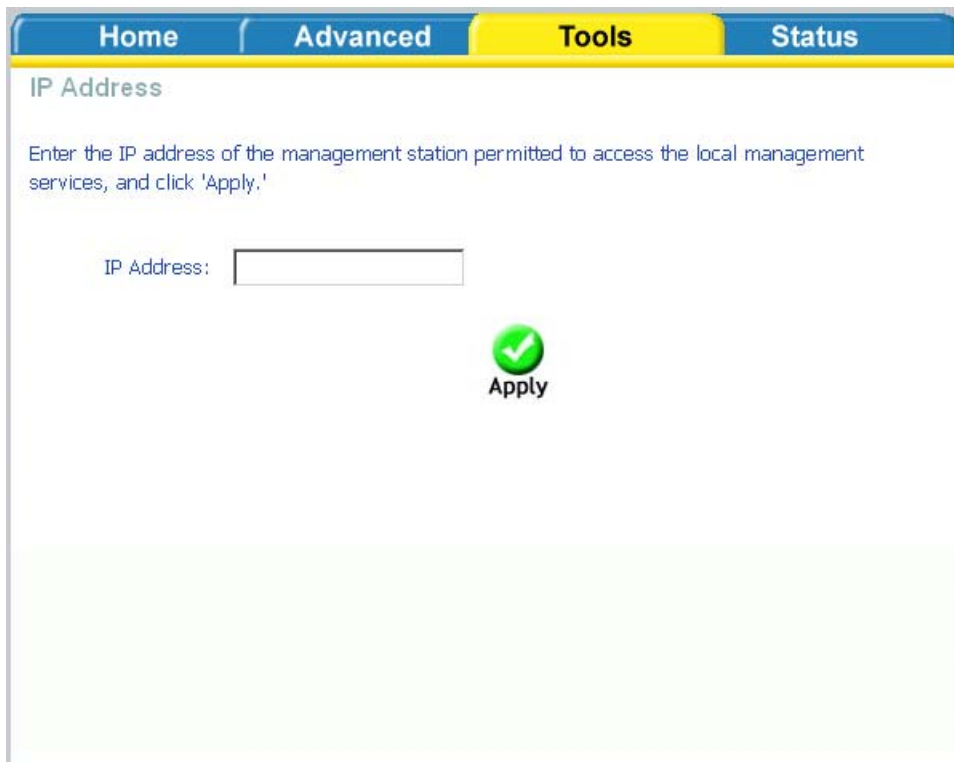
Access Control—IP Address

Web access to the router can be limited when Access Control Mode is enabled. The IP addresses of allowed hosts can be added using Access Control→IP Address.

Add the IP address to the IP address list by clicking on the **Add** button, then select **Enabled** to enable Access Control Mode.

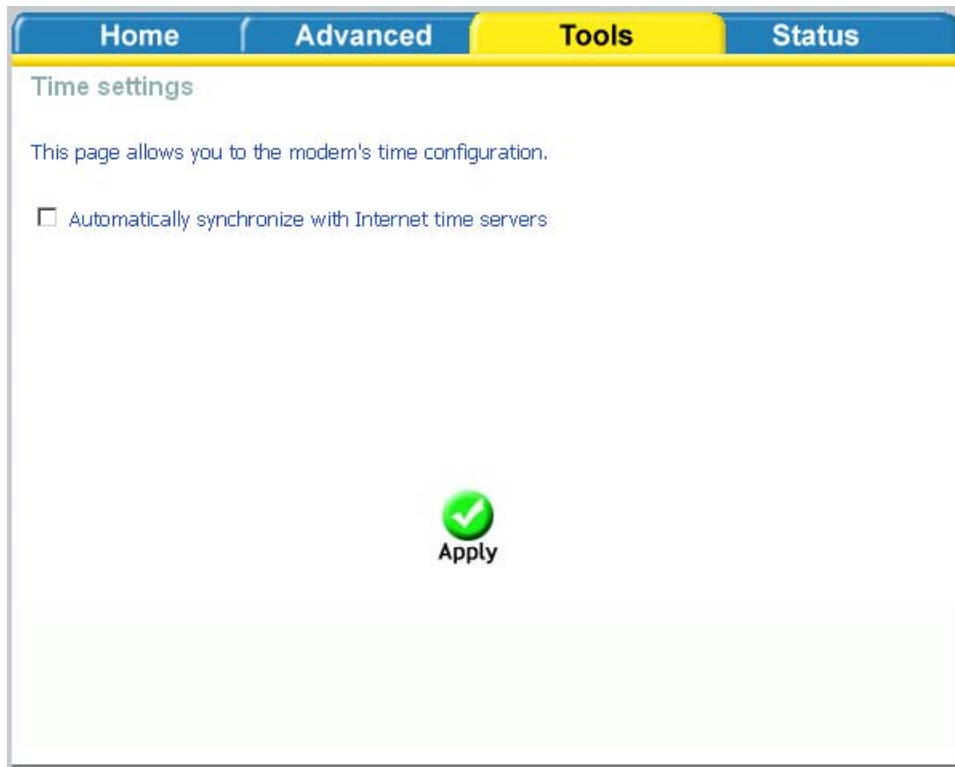


To assign the IP address of the management station that is permitted to access the local management services, enter the IP address in the box and click on the **Apply** button.

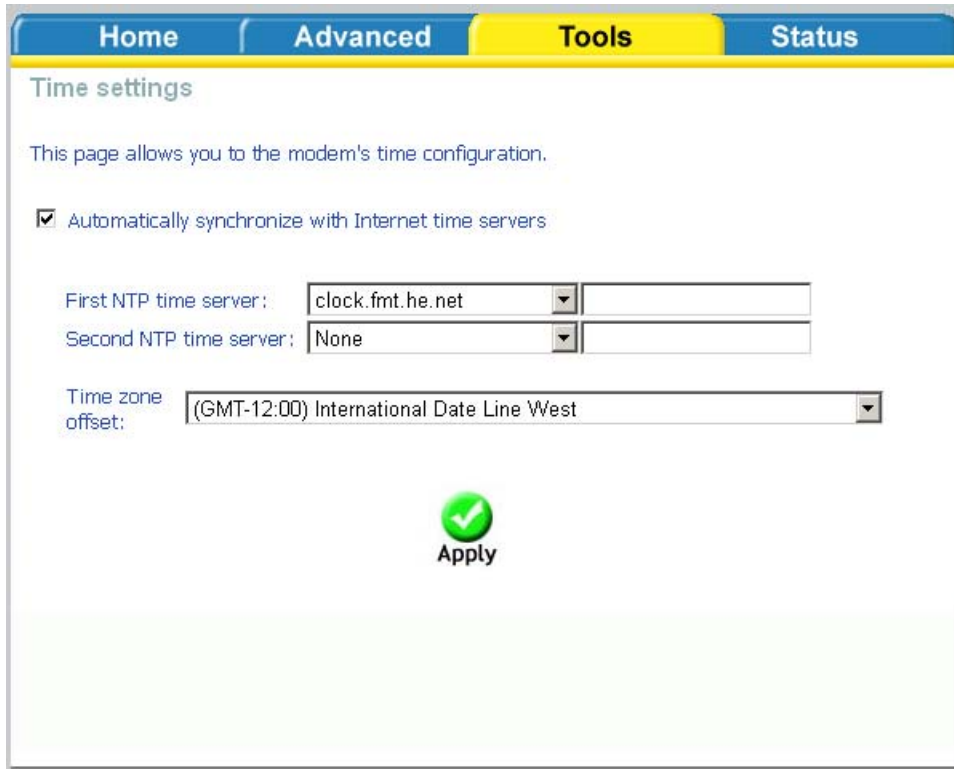


Time

The Time Settings page allows you to automatically synchronize your time with a time server on the Internet.



If you choose to set the router's time, click on the "automatically synchronize with Internet time servers" checkbox and the below fields appear.



Select from the list of NTP (Network Time Protocol) time servers. Then select the time zone that you are in and click on **Apply** to save.

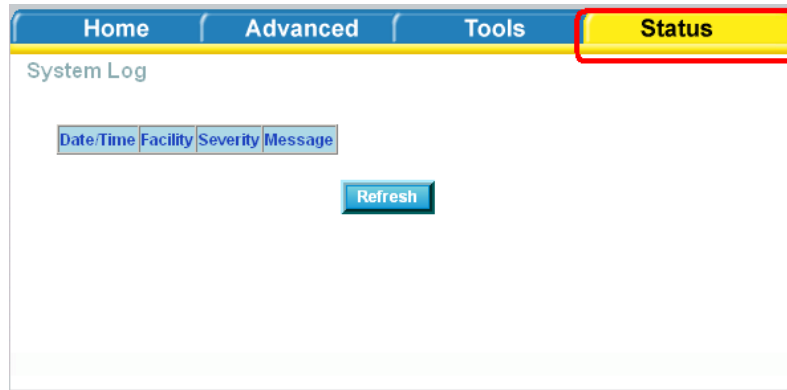
Remote Log

The Log dialog allows you to view and configure the log. To view the log, click on the **View System Log** button.



Below is the **System Log** screen which shows the date/time of the log, the facility that was logged, the severity level and the log message. Click on **Refresh** to view any new information that is logged.

System Log when log mode is DISABLED →

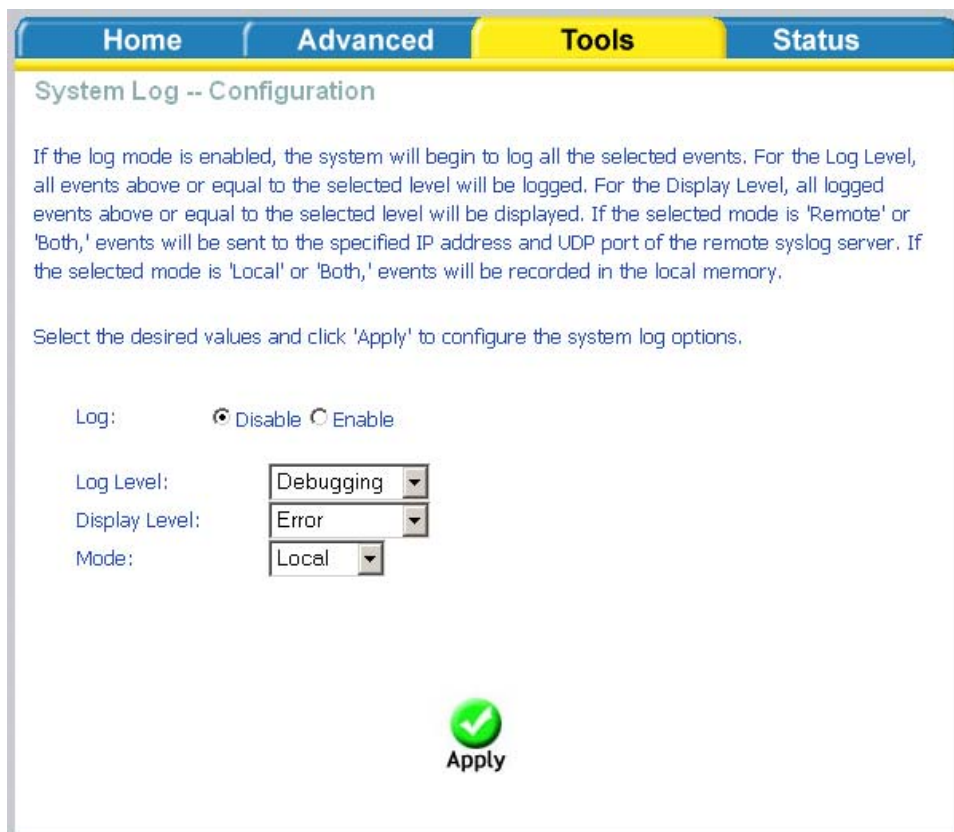


NOTE: When you click on the **View System Log** button, the **System Log** screen that you access will be located under the **Status** section (see screen on left). To return to the previous screen to configure system log, remember to click on the **Tools** tab (located on top row) first and then click on **Remotelog**.

System Log when log mode is ENABLED →



To configure the system log settings, click on the **Configure System Log** button to view the following screen.



If the log is enabled, the system will log selected events including *Emergency*, *Alert*, *Critical*, *Error*, *Warning*, *Notice*, *Informational*, and *Debugging*. All events above or equal to the selected log level will be logged and displayed.

If the selected mode is "Remote" or "Both", events will be sent to the specified IP address and UDP port of a remote system log server. If the selected mode is "Local" or "Both", events will be recorded in the local memory. Select the desired values and click on **Apply** to configure the system log options.

TR-069 Client

The router includes a TR-069 client, a WAN management protocol. All the values are already filled in. If you wish to enable this protocol, then select *enable*. You must click on the **Apply** button for the setting to take place.

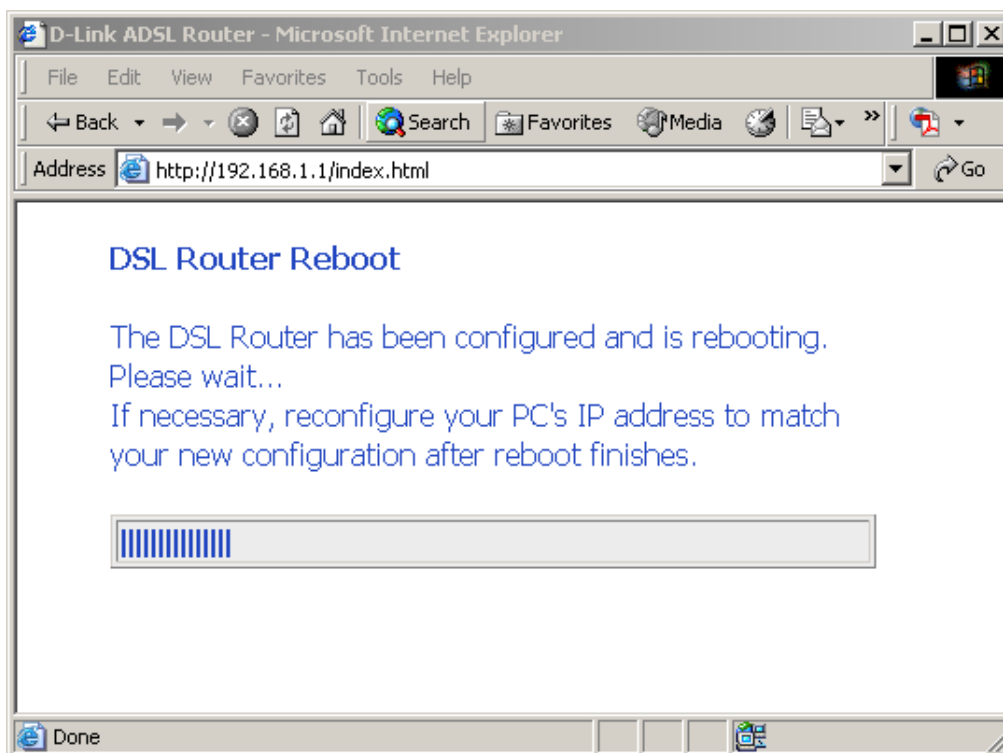
The screenshot shows a web interface with a navigation bar at the top containing 'Home', 'Advanced', 'Tools' (highlighted in yellow), and 'Status'. Below the navigation bar is the title 'TR-069 client - Configuration'. A descriptive paragraph explains that the WAN Management Protocol (TR-069) allows an Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics. Below this is an instruction: 'Select the desired values and click "Apply" to configure the TR-069 client options.' There are two radio buttons for 'Inform': 'Disable' (selected) and 'Enable'. Below are several input fields: 'Inform Interval' (300), 'ACS URL' (empty), 'ACS User Name' (admin), 'ACS Password' (*****), 'Connection Request User Name' (admin), and 'Connection Request Password' (*****). At the bottom, there is a green checkmark icon with the text 'Apply' and a blue button labeled 'GetRPCMethods'.

System

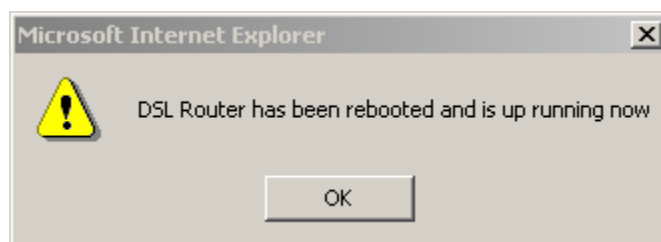
The system section includes several tools on one page, including save and reboot, backup settings, update settings, and restore default settings.

Save and Reboot

To save all configurations made, click on the **Save/Reboot** button. This will save all your settings and restart the router for the settings to take effect.

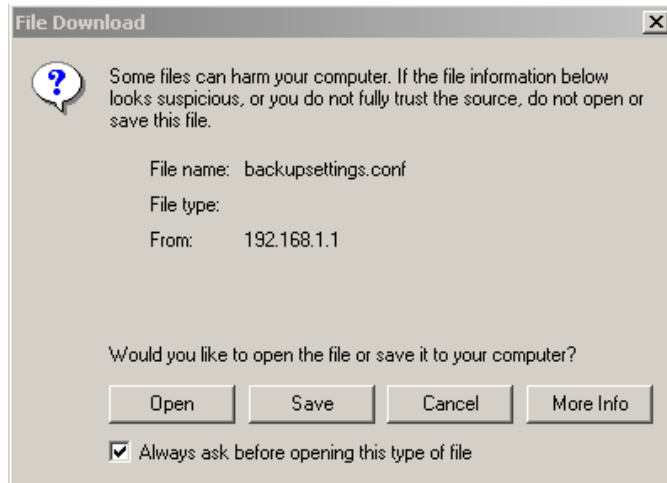


When completed, the below pop-up window will appear confirmation that the router has been rebooted.



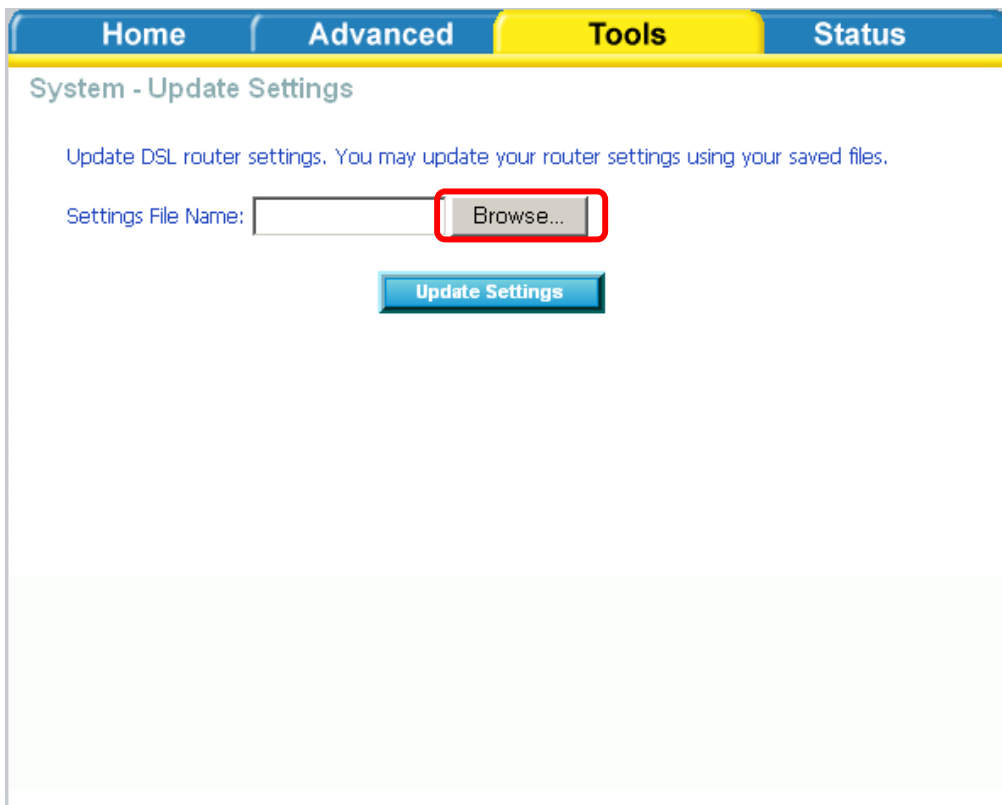
Backup Settings

To save your configurations in a file on your computer so that it may be accessed again later if your current settings are changed, click on the **Backup Settings** button. The below pop-up screen will appear with a prompt to open or save the file to your computer.



Update Settings

To load a previously saved configuration file onto your router, click **Browse** and select the file on your computer and then click on **Update Settings**.

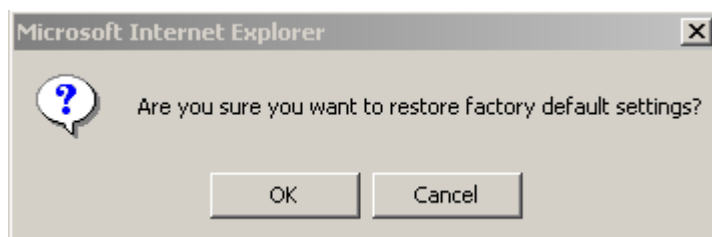


The router will restore settings and reboot to activate the restored settings.

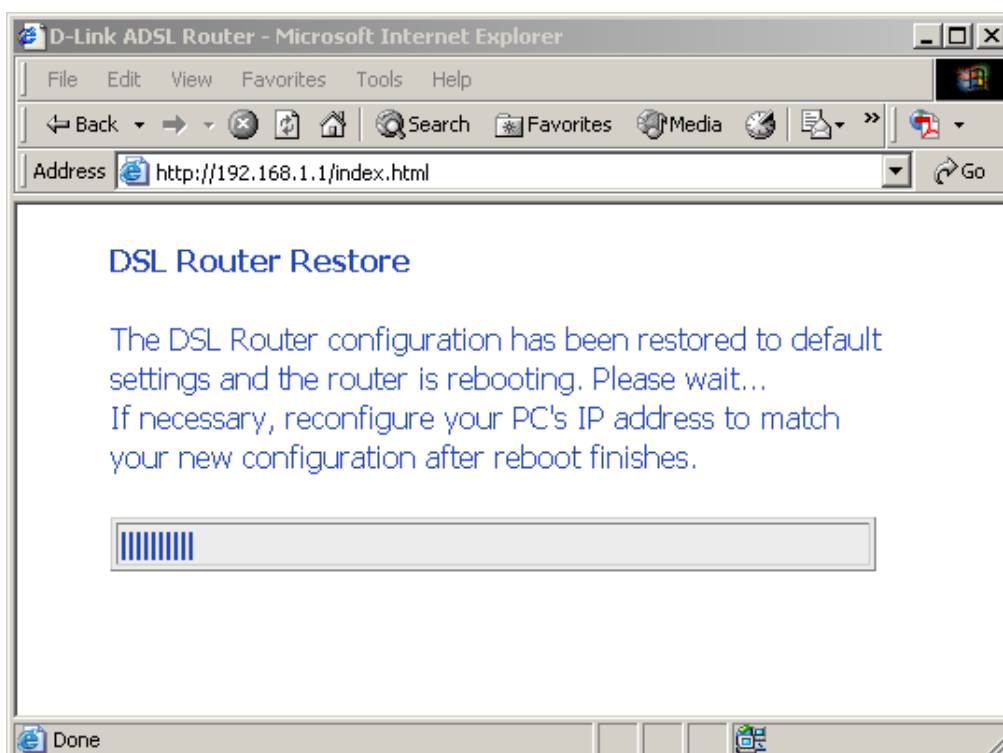
Restore Default Settings

Restore Default will delete all current settings and restore the router to factory default settings. Click on the **Restore Default Settings** button to proceed. The

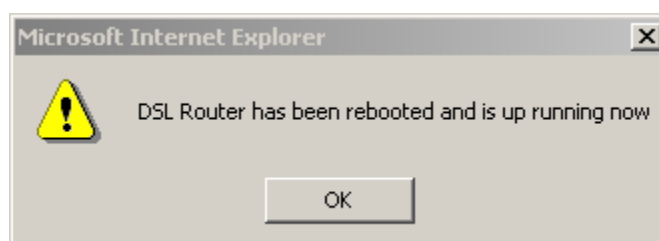
following confirmation dialog will appear confirming your decision to restore default settings. Click on **OK** to continue.



Click on the **OK** button to start. The below screen will appear with the progress of restoring the default settings.



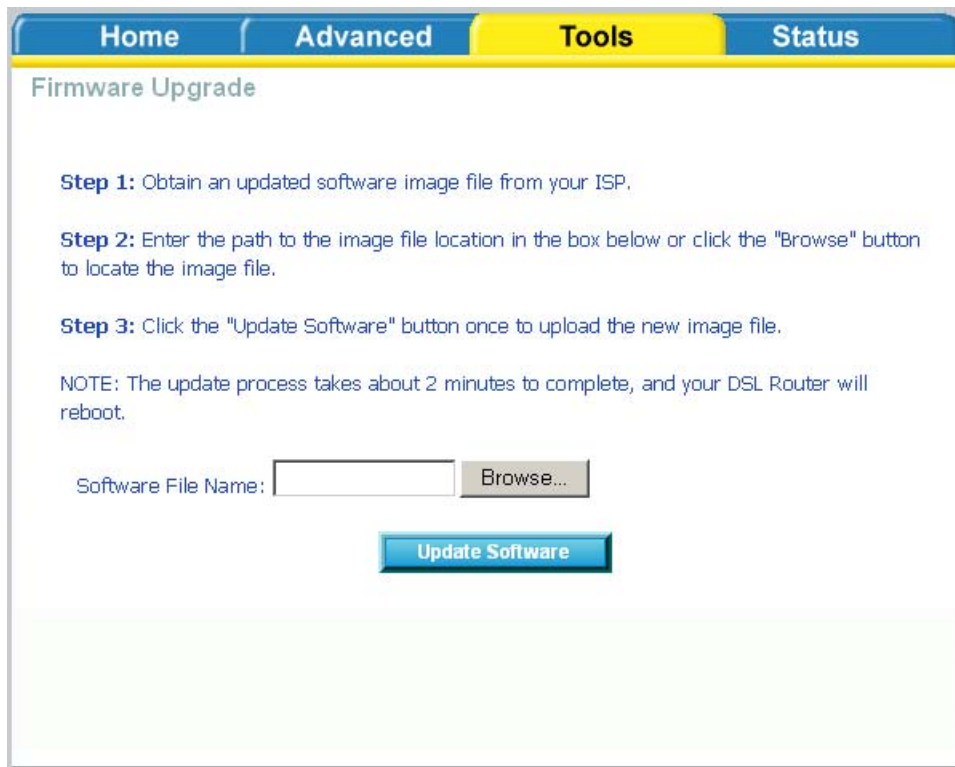
When completed, the below pop-up window will appear confirmation that the router has been rebooted.



Firmware

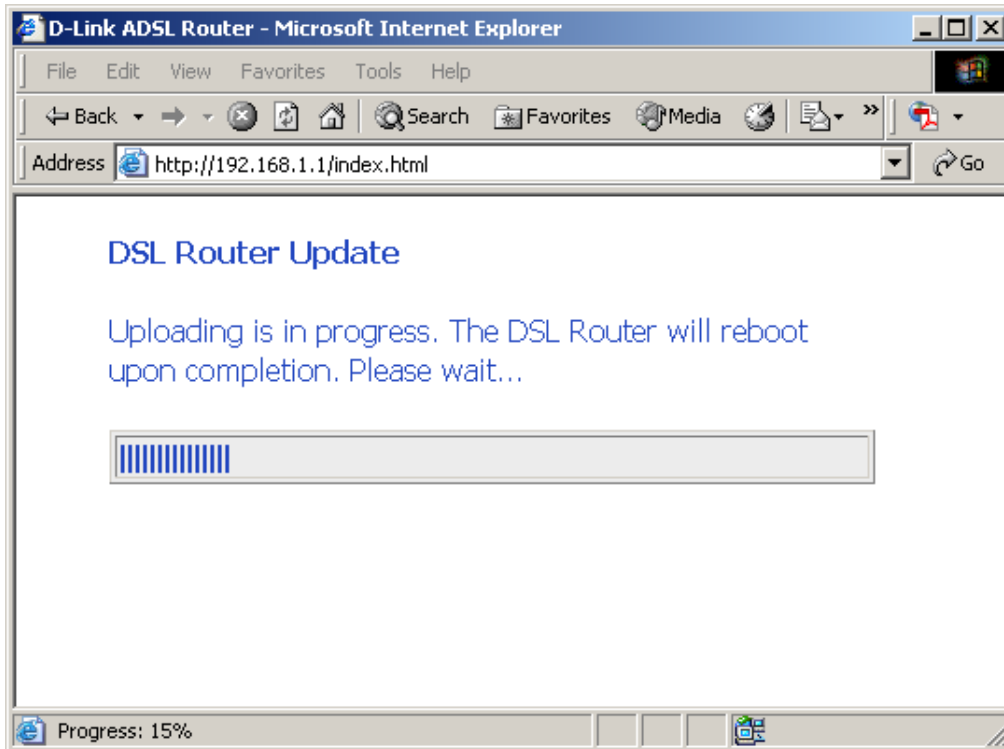
If your ISP releases new software for this router, follow these steps to perform an upgrade.

1. Obtain an updated software image file from your ISP.
2. Enter the path to the image file location or click on the **Browse** button to locate the image file.
3. Click the **Update Software** button once to upload the new image file.

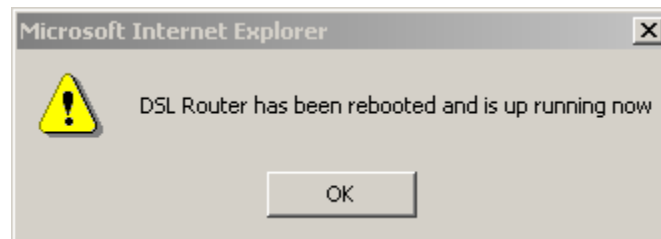


The screenshot shows a web interface with a navigation bar at the top containing 'Home', 'Advanced', 'Tools' (highlighted in yellow), and 'Status'. Below the navigation bar is a section titled 'Firmware Upgrade'. It contains three numbered steps: Step 1: Obtain an updated software image file from your ISP. Step 2: Enter the path to the image file location in the box below or click the "Browse" button to locate the image file. Step 3: Click the "Update Software" button once to upload the new image file. Below the steps is a note: NOTE: The update process takes about 2 minutes to complete, and your DSL Router will reboot. At the bottom of the form, there is a text input field labeled 'Software File Name:' followed by a 'Browse...' button and a large blue 'Update Software' button.

The below page will appear when you click on the **Update Software** button.



When completed, the below pop-up window will appear confirmation that the router has been rebooted.



Test

The diagnostics screen allows you to run diagnostic tests to check your DSL connection. The results will show test results of three connections—

- Connection to your local network
- Connection to your DSL service provider
- Connection to your Internet service provider

There are three buttons at the bottom of the page—**Next Connection** (appears only if you have created more than one connection), **Test** and **Test with OAM F4**—which will allow you to retest if necessary.

pppoe_0_35_1 Diagnostics

Your modem is capable of testing your DSL connection. The individual tests are listed below. If a test displays a fail status, click "Rerun Diagnostic Tests" at the bottom of this page to make sure the fail status is consistent. If the test continues to fail, click "Help" and follow the troubleshooting procedures.

Test the connection to your local network

Test your ENET Connection:	PASS	Help
Test your Wireless Connection:	PASS	Help

Test the connection to your DSL service provider

Test ADSL Synchronization:	FAIL	Help
Test ATM OAM F5 segment ping:	FAIL	Help
Test ATM OAM F5 end-to-end ping:	FAIL	Help

Test the connection to your Internet service provider

Test PPP server session:	FAIL	Help
Test authentication with ISP:	N/A	Help
Test the assigned IP address:	FAIL	Help
Ping default gateway:	FAIL	Help
Ping primary Domain Name Server:	FAIL	Help

Status

The status section allows you to view general and status information for your router's connection.

Device Info

It shows details of the router such as the version of the software, bootloader, LAN IP address, etc. It also displays the current status of your DSL connection as shown below—

D-Link
Building Networks for People

DSL-2640U

Home | Advanced | Tools | **Status**

Device Info

Board ID:	D-4P-W
Software Version:	RU_DSL-2640U_3-06-04-1C00.A2pB021c.d19b
Bootloader (CFE) Version:	1.0.37-6.5
Wireless Driver Version:	3.131.35.0.cpe2.3

This information reflects the current status of your DSL connection.

Line Rate - Upstream (Kbps):	
Line Rate - Downstream (Kbps):	
LAN IP Address:	192.168.1.1
Default Gateway:	
Primary DNS Server:	192.168.1.1
Secondary DNS Server:	192.168.1.1

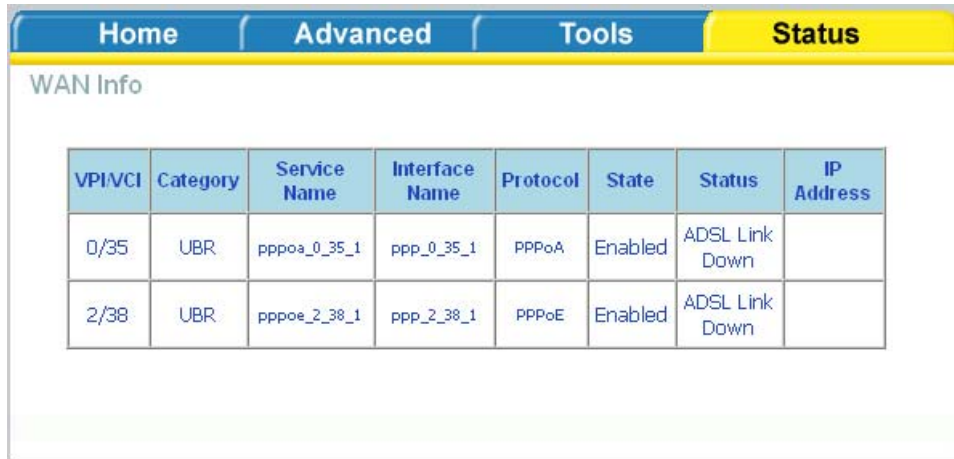
DHCP Clients

Access the DHCP Leases screen by clicking “DHCP” under “Statistics”. This shows the computers, identified by the hostname and MAC address that have acquired IP addresses by the DHCP server with the time that the lease for the IP address is up.

Home	Advanced	Tools	Status
Device Info -- DHCP Leases			
Hostname	MAC Address	IP Address	Expires In

WAN Info

The WAN Info screen displays WAN connections previously set up in the Home section. The information added in the status section is the extra column for connection status information, displaying either *ADSL Link Down* or *ADSL Link Up*.

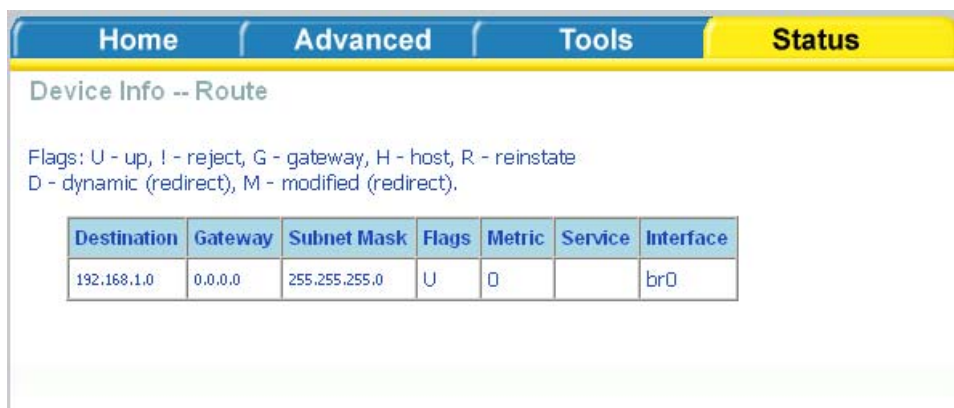


The screenshot shows the WAN Info screen with a navigation bar at the top containing 'Home', 'Advanced', 'Tools', and 'Status' (highlighted in yellow). Below the navigation bar is the title 'WAN Info' and a table with the following data:

VPI/VCI	Category	Service Name	Interface Name	Protocol	State	Status	IP Address
0/35	UBR	pppoa_0_35_1	ppp_0_35_1	PPPoA	Enabled	ADSL Link Down	
2/38	UBR	pppoe_2_38_1	ppp_2_38_1	PPPoE	Enabled	ADSL Link Down	

Route Info

The Route Info section displays route information showing the IP addresses of the destination, gateway, and subnet mask as well as other route information.



The screenshot shows the Route Info screen with a navigation bar at the top containing 'Home', 'Advanced', 'Tools', and 'Status' (highlighted in yellow). Below the navigation bar is the title 'Device Info -- Route' and a legend for flags: 'Flags: U - up, I - reject, G - gateway, H - host, R - reinstate, D - dynamic (redirect), M - modified (redirect)'. Below the legend is a table with the following data:

Destination	Gateway	Subnet Mask	Flags	Metric	Service	Interface
192.168.1.0	0.0.0.0	255.255.255.0	U	0		br0

Log

This is the same screen as seen in the Remotelog section under tools.

System Log

Date/Time	Facility	Severity	Message
Jan 1 00:12:36	syslog	emerg	BCM96345 started: BusyBox v1.00 (2005.04.12-19:11+0000)
Jan 1 00:12:36	user	crit	kernel: eth0 Link UP.

[Refresh](#)

LAN

The LAN section shows received and transmitted packet information for the Ethernet interfaces. Click on **Reset Statistics** to renew the information.

Home | Advanced | Tools | **Status**

LAN Statistics

Interface	Received				Transmitted			
	Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
Ethernet	556932	5018	0	0	2885411	5366	0	0
Wireless	0	0	0	0	11030	91	0	0

[Reset Statistics](#)

WAN

The WAN section shows received and transmitted packet information for the WAN connections that you have set up. Click on **Reset Statistics** to renew the information.

Service	VPI/VCI	Protocol	Interface	Received				Transmitted			
				Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
pppoe_0_35_1	0/35	PPPoA	ppp_0_35_1	0	0	0	0	0	0	0	0
pppoe_2_38_1	2/38	PPPoE	ppp_2_38_1	0	0	0	0	0	0	0	0

[Reset Statistics](#)

ATM

The ATM section displays statistical values for your ATM interface as well as for AAL5 and AAL5 VCC. Click on **Reset Statistics** to renew the values.

Statistics -- ATM

ATM Interface Statistics

In Octets	2451
Out Octets	1412
In Errors	0
In Unknown	0
In Hec Errors	0
In Invalid Vpi Vci Errors	0
In Port Not Enable Errors	0
In PTI Errors	0
In Idle Cells	0
In Circuit Type Errors	0
In OAM RM CRC Errors	0
In GFC Errors	0

AAL5 Interface Statistics

In Octets	5195
Out Octets	1762
In Ucast Pkts	69
Out Ucast Pkts	19
In Errors	0
Out Errors	0
In Discards	0
Out Discards	0

AAL5 VCC Statistics

VPI/VCI	CRC Errors	SAR Timeouts	Oversized SDUs	Short Packet Errors	Length Errors
14/40	0	0	0	0	0

Reset Statistics

ADSL

Information contained in the ADSL screen is useful for troubleshooting and diagnostics of connection problems.

Home | Advanced | Tools | **Status**

ADSL Statistics

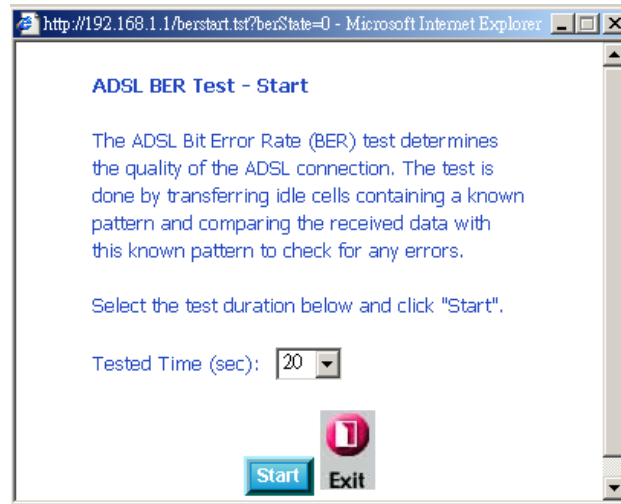
Mode:	G.DMT	
Type:	Fast	
Line Coding:	Trellis On	
Status:	No Defect	
Link Power State:	LO	
	Downstream	Upstream
SNR Margin (dB):	11.9	12.0
Attenuation (dB):	0.0	1.0
Output Power (dBm):	7.8	12.5
Attainable Rate (Kbps):	9568	1056
Rate (Kbps):	8000	800
K (number of bytes in DMT frame):	251	26
R (number of check bytes in RS code word):	0	0
S (RS code word size in DMT frame):	1	1
D (interleaver depth):	1	1
Delay (msec):	0	0
Super Frames:	18171	18169
Super Frame Errors:	1	200
RS Words:	0	0
RS Correctable Errors:	0	0
RS Uncorrectable Errors:	0	N/A
HEC Errors:	1	86
OCD Errors:	0	0
LCD Errors:	0	0
Total Cells:	5829071	0
Data Cells:	1040	0
Bit Errors:	0	0
Total ES:	2	0
Total SES:	1	0
Total UAS:	205	0

ADSL BER Test | Reset Statistics

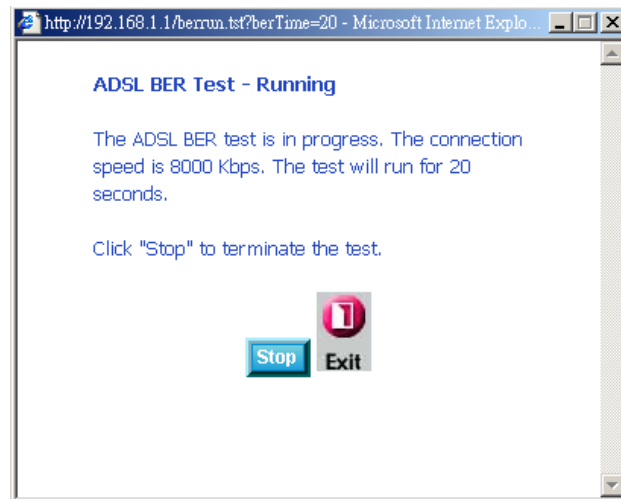
ADSL BER Test

A **Bit Error Rate Test (BER Test)** is a test that reflects the ratio of error bits to the total number transmitted.

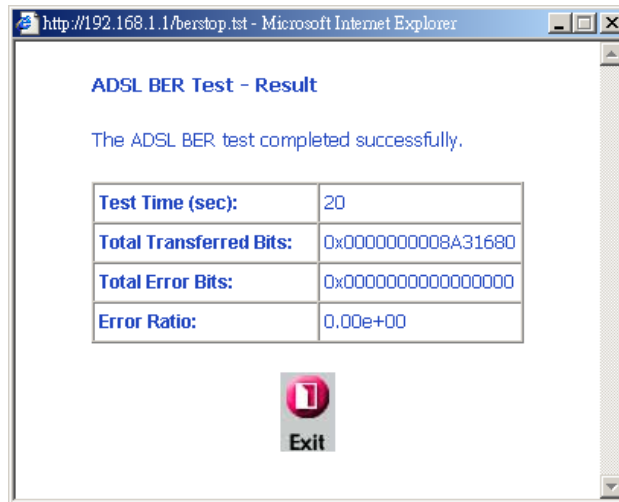
If you click on the **ADSL BER Test** button at the bottom of the ADSL Statistics page, the following pop-up screen will appear allowing you to set the tested time and to begin the test.



When you start the ADSL BER Test, the following progress window will display the connection speed as well as the length of time that the test will run for. At any time during the test, click on the **Stop** button to terminate the test.



When the test is complete, the following window will display the test results showing the test time, total transferred bits, total error bits and error ratio.



Wireless Station Info

This page displays the stations (identified by their BSSID) that are associated with your wireless router. Click on **Refresh** to renew the page for new wireless stations.

