USER MANUAL
DPH-C160S

VERSION 1.01 AUS

D-Link®

BROADBAND

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Package Details

Contents of Package

- D-Link DPH-C160S DECT Cordless VoIP Phone Handset + Base Station
- 3 x AAA NiMH Rechargeable Batteries
- Ethernet Cable (the DPH-C160S's Ethernet port is Auto-MDIX)
- Telephone Cable (RJ-11)
- Power Adapter - 9VAC, 1A
- Manual and Warranty on CD
- Quick Installation Guide

Note:

Using a power supply with a different voltage rating than the one included with the DPH-C160S will cause damage and void the warranty for this product.

If any of the above items are missing, please contact your reseller.

System Requirements for Configuration

- Ethernet-Based Cable or DSL Modem
- A multi-port Ethernet router (may be included in the same box as the Cable or DSL Modem mentioned above)
- Computer with Windows, Macintosh, or Linux-based operating system and an installed Ethernet adapter
- Internet Explorer Version 6.0 or Netscape Navigator Version 6.0 and Above

Product Features

- Dialling via PSTN to standard telephone numbers
- Dialling via Ethernet port for VoIP calls
- 1 NWay 10/100BASE-TX Fast Ethernet port for network connection
- Voice Activity Detection (VAD) / Comfort Noise Generation (CNG)
- Configurable comfort noise insertion and handset echo cancellation
- Audio Compression: G.711a-law, G.711u-law, G.726, G.729a, iLBC
- Static IP, DHCP Client support
- Support TCP/IP, UDP, RTP and RTCP
- Lost packet recovery ability for improved voice quality
- Adjustable speaker / ringer volume control
- Dialling by last 10 calls
- Call Log (Missed, Received, Dialled)

DECT Features

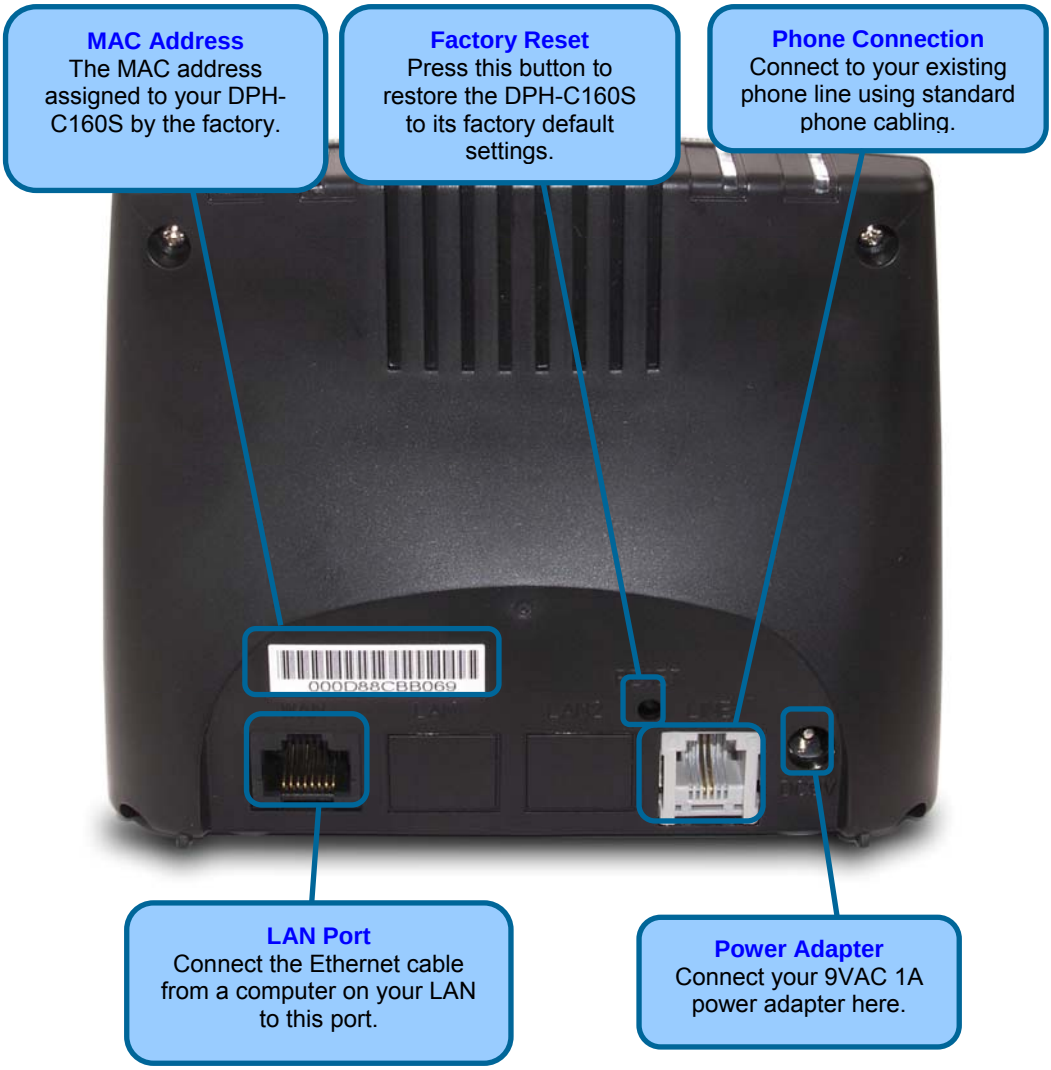
- Frequency: 1880~1900 MHZ
- GAP Compatible
- Range: Outdoors – 300 Metres; Indoors – 50 Metres
- Handset: 150 Hours Standby Time & 10 Hours Talk Time
- Handset: Caller ID Function (FSK & DTMF)
- Handset: Phonebook Memory - 50 Locations
- Intercom
- Call transfer of external calls
- Ringer melody selection – 9 different melodies
- Ringer volume adjustment – 9 levels
- Handset earpiece volume setting – 9 levels
- Delete single or all records in phonebook
- Redialling and preparation dialling functions
- Handset Locator
- Clicking key tone on or off
- Speakerphone
- Hands-free dialling

Introduction

The D-Link DPH-C160S DECT Cordless VoIP Phone links traditional telephony networks to IP networks with a built in DECT Cordless Phone. It can reduce long distance phone charges and deliver toll-quality voice communication over the IP network. This device provides one loop start Foreign Exchange Subscriber (FXS) port, one PSTN failover port and one Ethernet port.

Base Unit Connections

The Ethernet Port (LAN) is auto MDI/MDIX, meaning you can use either connect a straight-through or crossover Ethernet cable.



Base Unit LEDs

VoIP/PSTN

An active LED indicates a VoIP session has been established.

LAN LED

A solid LED indicates an Ethernet link has been established. The LED will blink when there is activity on this link

Power/Status LED

A blinking LED indicates the DPH-C160S is functioning properly, but has not yet registered with a SIP server.

A solid LED indicates the DPH-C160S has registered with a SIP server and ready for a VoIP call.

Handset Buttons and Functions

Ear Speaker

High quality speaker for privately hearing telephone calls. Another, larger speaker is on the rear of the handset for use as a speakerphone

On Hook

Use this button to hang up the Handset after you have finished a VoIP/PSTN call.

IP

Use this button to initiate a VoIP call.

PSTN Dial Tone

Use this button to initiate a PSTN call (over your existing phone line). It is also used to switch the Handset to speakerphone mode by holding the button down for several seconds until the speaker icon appears in the display

Power / Clear

Use this button to switch the Handset off by holding the button until **Good Bye** appears in the display. Also, this button is used to clear an input.

Microphone

Sensitive microphone for making your voice clearly heard.

Up Arrow

Use this button to open the *Contact List* when the Handset is idle. Pressing this button during a call will increase the volume.

Menu/OK

Use this button to open the Handset's setup and information menus.

Down Arrow

Use the button to open the *Phone Book* numbers stored for your use. Pressing this button during a telephone call will decrease the volume.

0 / +

Use this button to input a zero or hold the button down for a few seconds to input a + sign.

Pound Key

Use this button for various input functions such as to enter a static IP address, as described to the left.

Star/Asterisk

Pressing the following, followed by the **IP** button:

****1** – will play your DPH-C160S's IP address

****2** – will play your DPH-C160S's phone number

****3** – to set the Internet connection type.

Press **1** for DHCP mode

Press **2** for Static IP mode, followed by the IP address separated by *'s and then the # key (for example, 1**92*168*1*110#)**

Installing Batteries into the Handset

You must install three AAA NiMN batteries (included in the package) into the DPH-C160S handset and charge them in the base for about 12 hours before you can use your new DPH-C160S DECT Cordless VoIP Phone.

1. Slide the battery cover in the direction of the arrow.
2. Insert the new batteries, as indicated, matching the correct polarity (+,-).
3. Replace the battery cover and slide it up until it snaps shut.
4. Put the Handset into the Base.
5. Connect the Base to the AC mains using the supplied AC adapter.
6. Allow the batteries to charge for about 12 hours before using the Handset to insure a proper first time charge.

Charging the Handset

Please Note:
Before you use the Handset for the first time, you should full charge the new batteries for about 12 hours.

After the initial charging, the Handset will recharge much more quickly typically in less than 30 minutes.

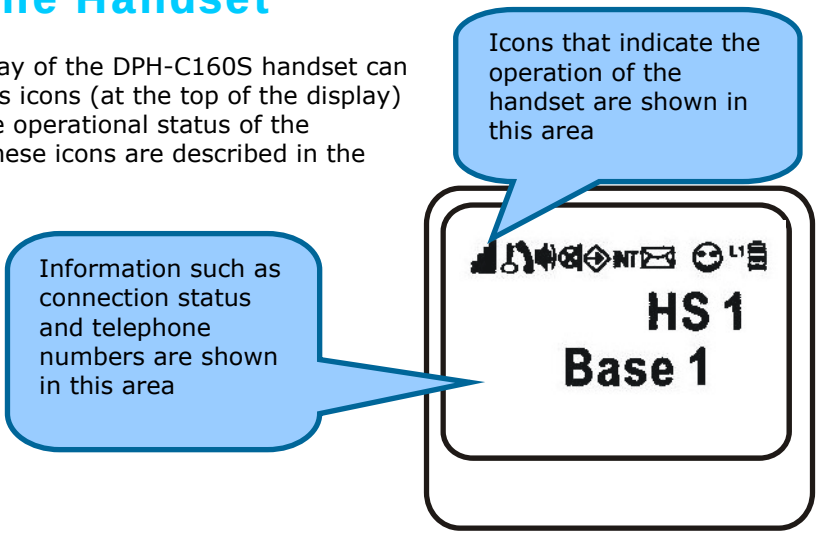
To charge the Handset, simply place it on the charger base, as shown. When the Handset is recharging, the battery icon on the LCD display is turned on.

Please Note:

- Reversing the orientation of the batteries (their polarity (+,-) may damage the Handset
- The batteries need to be replaced when they do not recover their full capacity after recharging
- When replacing the batteries, use good quality NiMH, rechargeable, AAA size batteries.
- Never use conventional alkaline batteries in the Handset.

Using the Handset

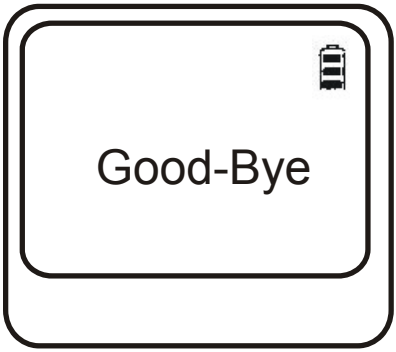
The LCD display of the DPH-C160S handset can display various icons (at the top of the display) to indicate the operational status of the telephone. These icons are described in the table below.



Icon	Description
	Signal Strength Indicates the current signal strength between the handset and the base˜ more bars indicate higher signal strength. This icon is always displayed when the telephone is on.
	In Use Displayed when the telephone is in use (i.e., a telephone call is in progress).
	Speakerphone Indicates the handset is in speakerphone mode.
L1	**Line** Indicates the line is engaged.
	Operation Mode Displayed when the handset is in operation mode.
	Caller ID Indicates a new call. To view the caller, access the Caller ID menu.
	Battery Status Indicates the relative charge state of the handset's batteries˜ more bars indicates a higher level of battery charge. During the charging cycle, this icon will flash. This icon is always displayed when the telephone is on.

Turning the Handset On and Off

When you place the handset in the charger to charge, it is automatically turned on. The handset is now ready for use. To turn the handset off, press the Mute button until "**Good-Bye**" appears in the handset's LCD display, as shown below.



The handset will then turn off and the display will become blank.

Please note: nothing will appear in the handset's LCD display when the battery power is very low.

When you first turn on the handset, the initial screen displays the handset number and the base number or base name (if you have a name saved for the base).

In the case shown above, the display indicates that this is handset 1 (HS 1) and base 1 (**Base 1**). When the DPH-C160S has contacted the SIP server and becomes registered, the name of the SIP service provider will be displayed, as shown below. In addition, the **Power/Status LED** on the top edge of the DPH-C160S's Charging Base will stop blinking and glow a constant green when the telephone has registered with the SIP server and is ready to make and receive VoIP telephone calls.

Making a Call to the PSTN (regular telephone network)

If you have connected your PSTN telephone line to the DPH-C160S's Base, you can make a telephone call to any regular telephone using the PSTN normal telephone usage charges will apply by following these steps:
Pick up the handset and press the PSTN Dial Tone button. You will hear the familiar PSTN dial tone, the handset and L1 icon will appear in the handset's LCD display.
Dial the number you want to call. The handset's LCD will display the phone number as you enter it. This number is also dialled as you enter it.
To end the call, either press the On-hook button or replace the handset on the charger.

PSTN Dial Tone

Press this button to initiate a call over the regular telephone line (PSTN). You will hear the familiar dial tone – and then dial the telephone number as you would on a normal telephone.

On-hook

Press this button to end the call. You can also simply place the handset in the charger base to end any call.

This will end both a PSTN and a VoIP call.

Making a Call to the PSTN in Standby Mode

If you have connected your PSTN telephone line to the DPH-C160S's Base, you can make a telephone call to any regular telephone using the PSTN normal telephone usage charges will apply˜ by following these steps:
Pick up the handset and dial the number as you normally would. You can clear any or all of the numbers you have entered by pressing the Clear button. You will hear the familiar PSTN dial tone, the handset and L1 icon will appear on the handset's LCD display.
This number will be dialled as you entered it.
To end the call, either press the On-hook button or replace the handset on the charger.

PSTN Dial Tone

Press this button to dial a telephone number (over the regular telephone line (PSTN)). You will hear the familiar dial tone – and then the handset will dial the telephone number as you entered it.

On-hook

Press this button to end a telephone call. You can also simply place the handset in the charger base to end any telephone call.

This will end both a PSTN and a VoIP telephone call.

Clear

Press this button to erase a single digit of a telephone number you have entered while the handset is in Standby Mode. Holding this button for a couple of seconds will erase all of the digits of the telephone number.

Keypad

You can just dial a regular telephone number and then press the PSTN Dial Tone button. The number will be displayed in the LCD.

Receiving a Call

When an incoming PSTN or VoIP telephone call is detected, the handset will ring and the L1 icon will be displayed in the LCD. If the caller can be identified, the caller's number or Buddy List entry will be displayed. If the caller's telephone number is currently stored in the handset's phone book, the caller's name will be displayed along with the telephone number.
To answer the call, simply pick the handset up from the charger base or press the PSTN Dial Tone button, if the handset is not in the charger.
To end the call, either press the On-hook button or replace the handset on the charger.

If the AnyKey Answer function is activated, you can press any button on the keypad to answer an incoming telephone call.

Last Number Redial

The handset stores the last three telephone numbers you have dialled. To view and retrieve the last three numbers you have dialled, press the Scroll Up button. To scroll through the list, press the Scroll Up button repeatedly. To end the call, either press the On-hook button or replace the handset on the charger.

Scroll Up

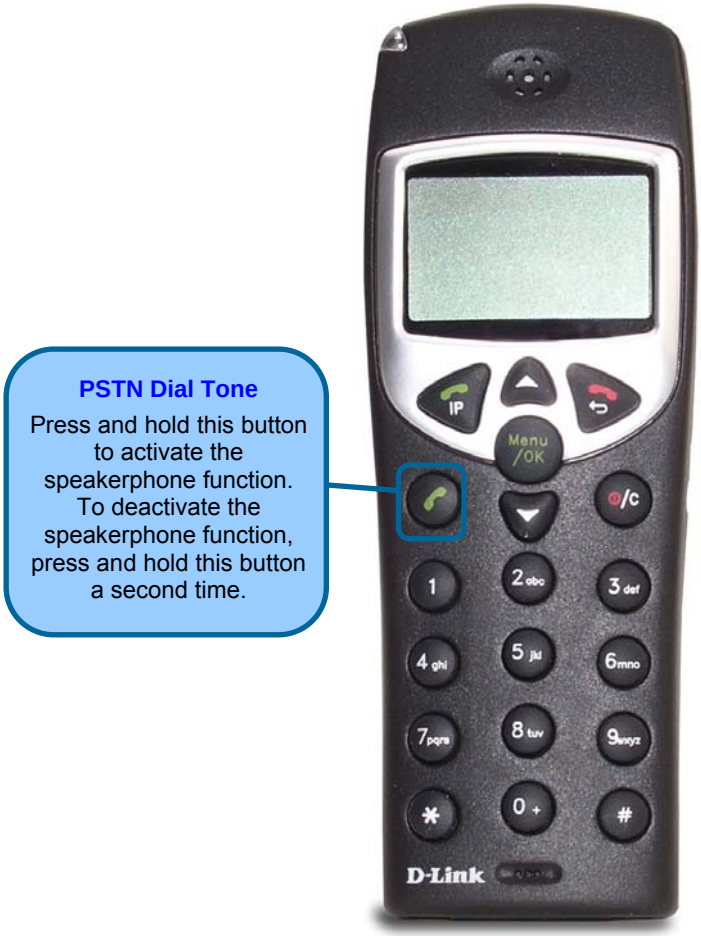
Press this button to view the last number dialed. To scroll through the last three numbers dialed, press this button repeatedly.

PSTN Dial Tone

Press this button to redial the displayed previously dialed telephone number.

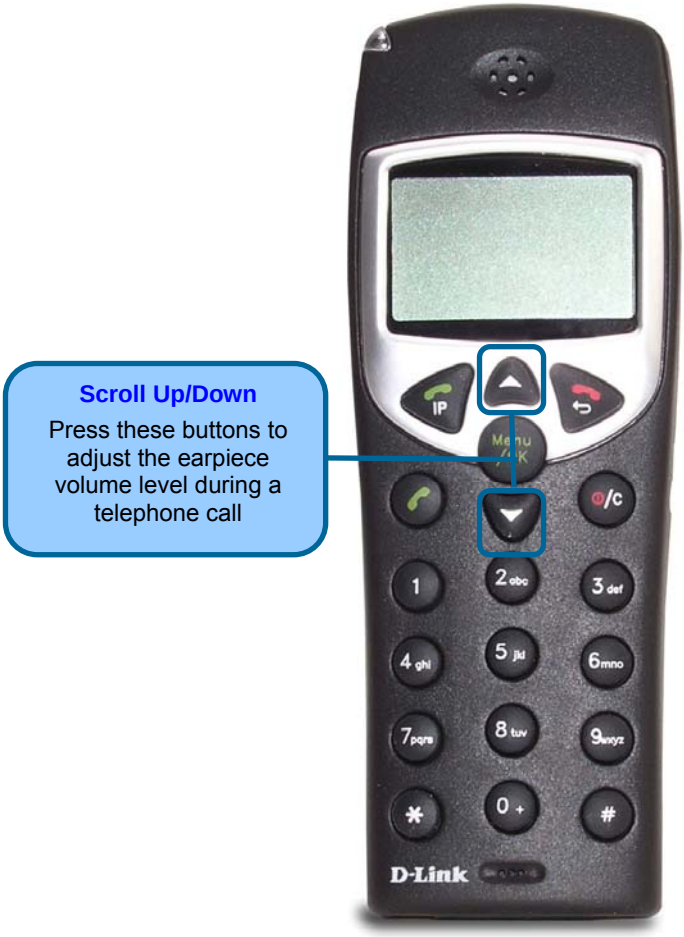
Using the Speakerphone

While making a call, you can engage the handset's built in speaker to make both ends of the conversation audible to several people on your end of the line. To activate the speakerphone press and hold the PSTN Dial Tone button until the speakerphone icon is displayed and you can hear the activity on the line from the speaker built in to the back of the handset. To deactivate the speakerphone, press the PSTN Dial Tone button until the speakerphone icon disappears. The handset can then be used normally.



Adjusting the Volume Level

While making a call, you can adjust the earpiece volume level from 1 to 9. A higher number indicates a higher volume level.
To adjust the volume level, press the Scroll Up or Scroll Down button during a telephone call.



Connecting the DPH-C160S to your Network

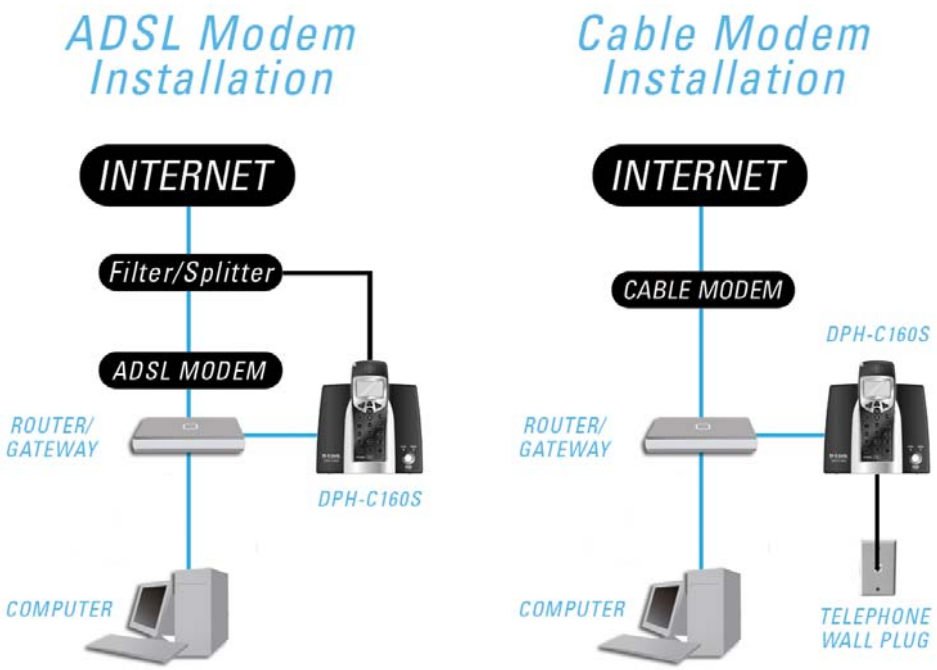


Figure 1: Possible Network Configurations

How to Obtain the DPH-C160S's IP Address:

You can determine the IP address of your DPH-C160S at any time by pressing the **IP/OK** button followed by ****1** (that is '**star star one**' on the cordless handset). A prerecorded voice message will read the IP address currently assigned to the DPH-C160S over the handset's speaker.

Please write down the IP address of your DPH-C160S below for your future reference, please note that this IP may change if your router or DPH-C160S is powered off for a period of time.

IP Address of DPH-C160S: ___ . ___ . ___ . ___

Figure 2: IP Address of DPH-C160S

Connecting / Activating your VoIP Service

The first step in connecting your new DPH-C160S DECT Cordless VoIP Phone to your VoIP Service Provider is to open your web browser and navigate to the VoIP Service Providers website (you may even find a detailed leaflet inside the box with this product with more details on the activation of your account if it is not already activated). Please follow the instructions on the VoIP Service Providers website to activate / setup your account your so you can start making calls.

An example of this is shown below:

HOW TO REGISTER

Register for your VoIP Account and take advantage of this offer:

$xx Free Call Credit / xxx Free Minutes

Register in 3 easy steps:

1. visit this <website address> to activate your account.
2. pick your plan.
3. plug in your equipment and you ready to make calls.

Figure 3: Activation Leaflet

We recommend that you fill in Figure 4 with all of your details for future reference.

VoIP Account Number: _____

VoIP Username / Phone Number: _____

VoIP Password: _____

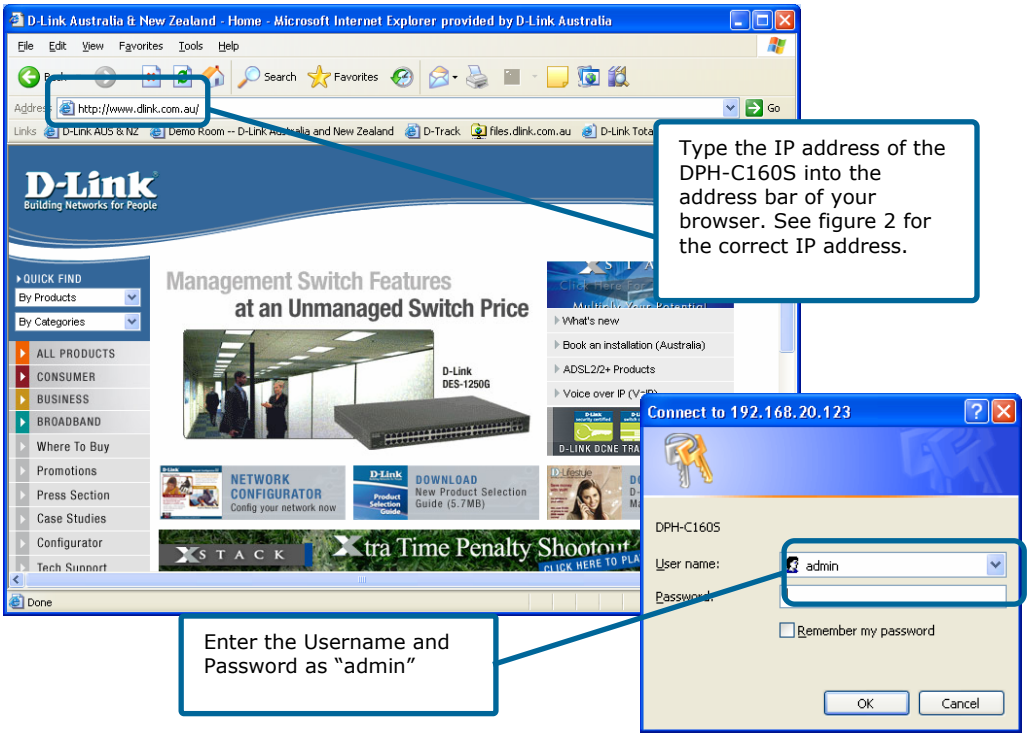
Figure 4: VoIP Service Provider Account Details

Configuring the DPH-C160S for use with your VoIP Service Provider

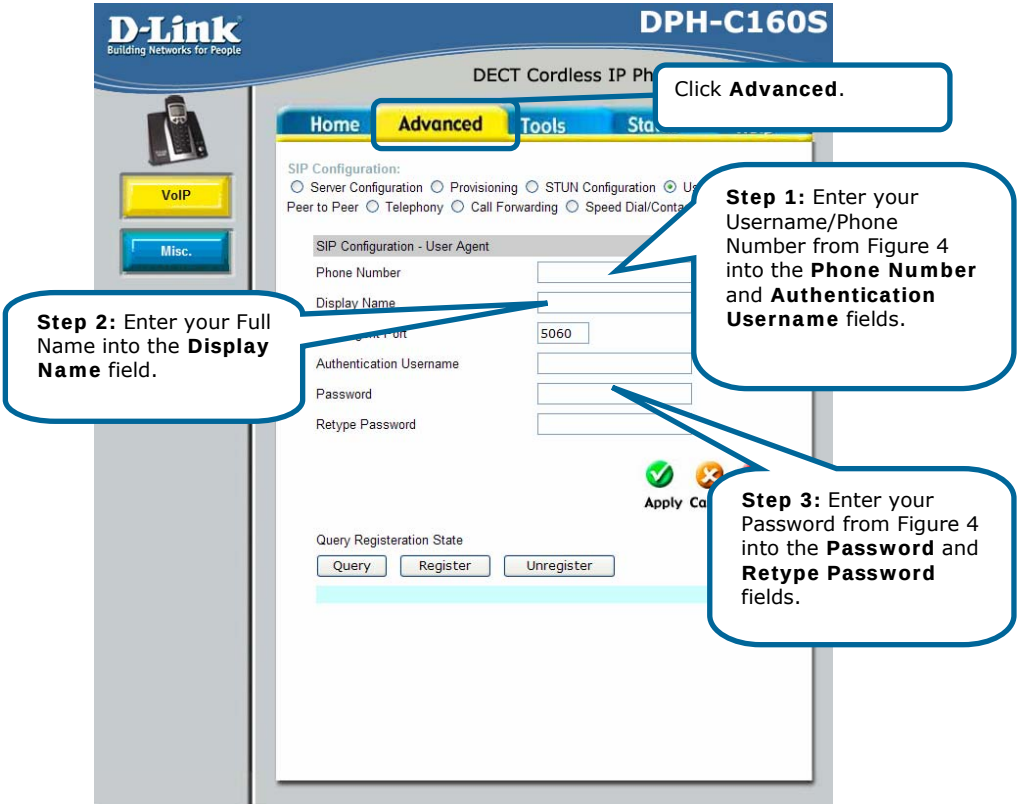
Once you have an VoIP Service Provider account established and activated, you can configure your DPH-C160S DECT Cordless VoIP Phone to use the VoIP Service Provider VoIP service. Open your web browser and enter the IP address assigned to your DPH-C160S by your multi-port Ethernet router in the Address field.

How to Obtain the DPH-C160S's IP Address:

You can determine the IP address of your DPH-C160S at any time by pressing the **IP/OK** button followed by ****1** (that is '**star star one**' on the cordless handset). A prerecorded voice message will read the IP address currently assigned to the DPH-C160S over the handset's speaker.



This will now open the DPH-C160S's web-based configuration menu.
The first step is to configure the DPH-C160S to use the VoIP Service. Click the **Advanced** tab and then click the **VoIP** button in the left hand menu.



You should leave all of the other default settings unless instructed to change them by VoIP Service Provider.

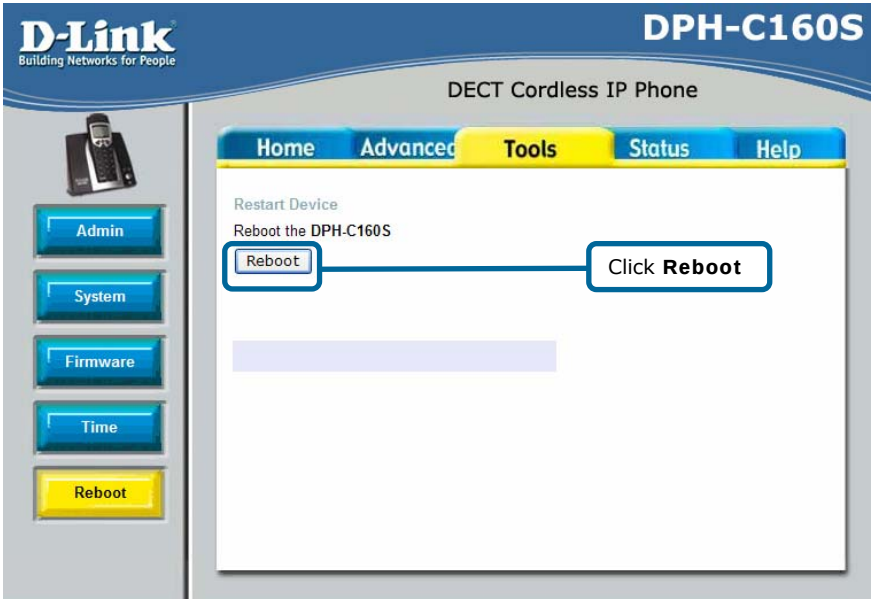
To save the changes click the **Apply** button.

The following dialog box will open to prompt you to restart the DPH-C160S DECT Cordless VoIP Phone to make your new settings take effect.

To reboot the DPH-C160S and make the settings you entered become permanent and active, click on the Tools tab and the click the Reboot button.

This will open the following screen.

Click the Reboot button to restart the DPH-C160S and activate the new settings.



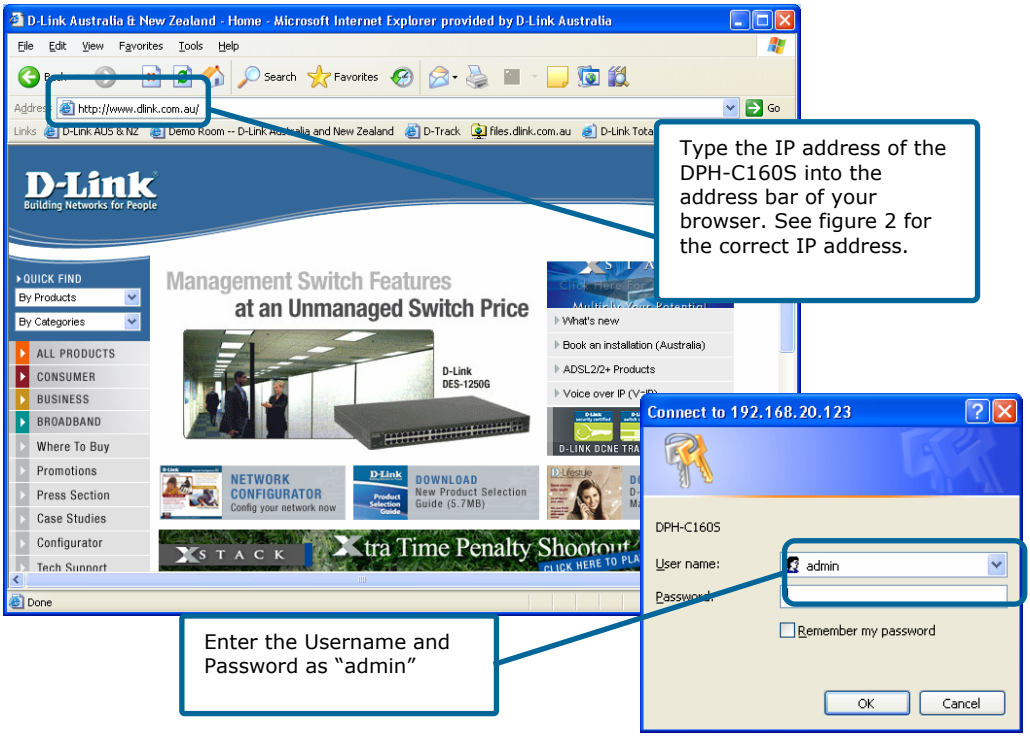
You will hear a short tone on the telephone and also see the words "VOIP Ready" written on the LCD after the DPH-C160S has successfully connected to the VoIP Service Provider. This means that the DPH-C160S DECT Cordless VoIP Phone has now been registered with the VoIP Service Provider. You should see this image (right) on the LCD when the DPH-C160S is registered with the VoIP Service Provider.

Using the Web Interface

Open your web browser and enter the IP address assigned to your DPH-C160S by your multi-port Ethernet router in the Address field.

How to Obtain the DPH-C160S's IP Address:

You can determine the IP address of your DPH-C160S at any time by pressing the **IP/OK** button followed by ****1** (that is '**star star one**' on the cordless handset). A prerecorded voice message will read the IP address currently assigned to the DPH-C160S over the handset's speaker.

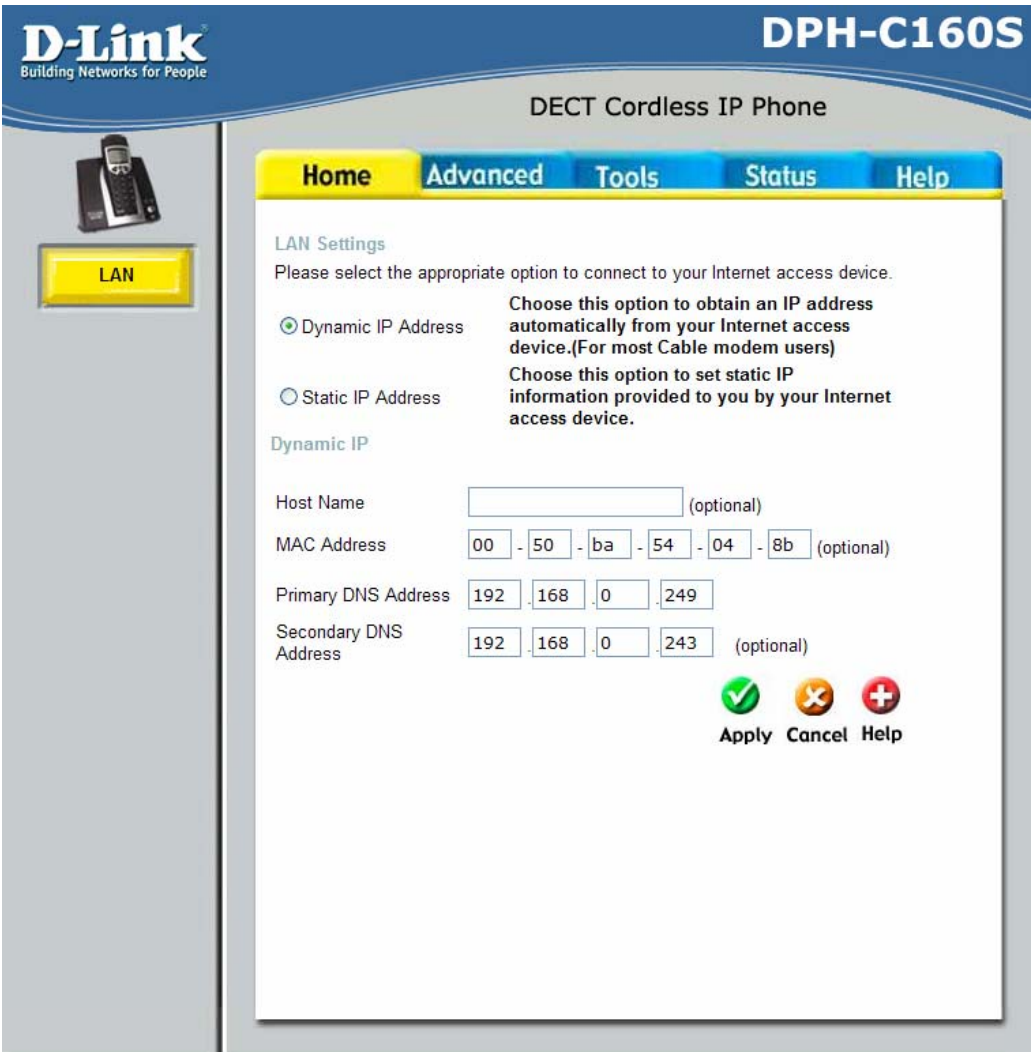


This will now open the DPH-C160S's web-based configuration menu.

Web Interface Menu Items

Below we will cover all of the possible features under each menu item within the Web Interface.

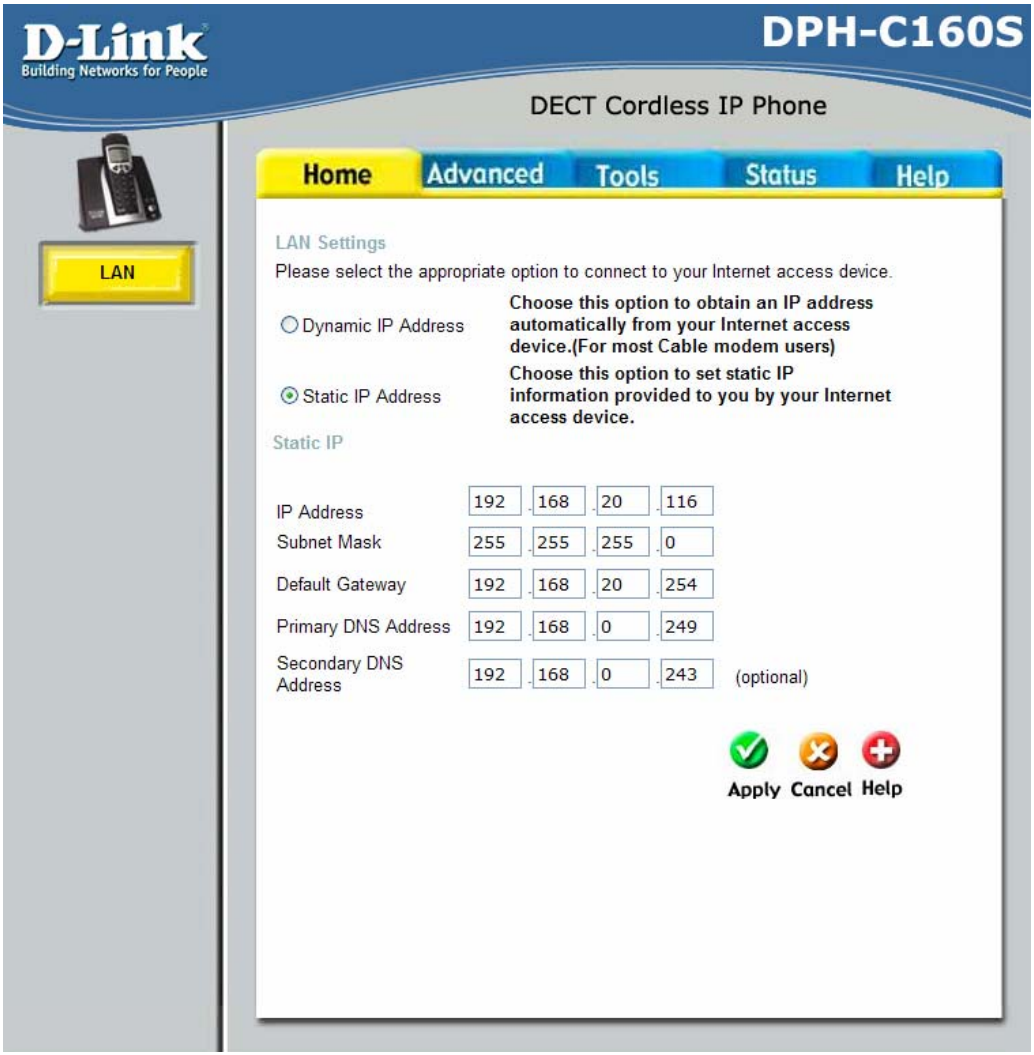
Home > LAN > Dynamic IP Address



Dynamic IP Address — Choose Dynamic IP Address to obtain IP Address information automatically from your router/gateway. This option should be

	selected if your router/gateway has not supplied you with an IP address.
Host Name	The Host Name is optional but may be required by some routers/gateways. The default host name is the device name of the DPH-C160S and may be changed.
MAC Address	The default MAC Address is set to the LAN's physical interface MAC address on the DPH-C160S. It is not recommended that you change the default MAC address unless required by your network administrator.
Primary DNS Address	Input the primary DNS (Domain Name Server) IP address provided by your ISP.
Secondary DNS Address	This is an optional DNS Address entry to be used if the primary DNS Fails. Enter a DNS Address if you wish not to use the address provided by your ISP.

Home > LAN > Static IP Address

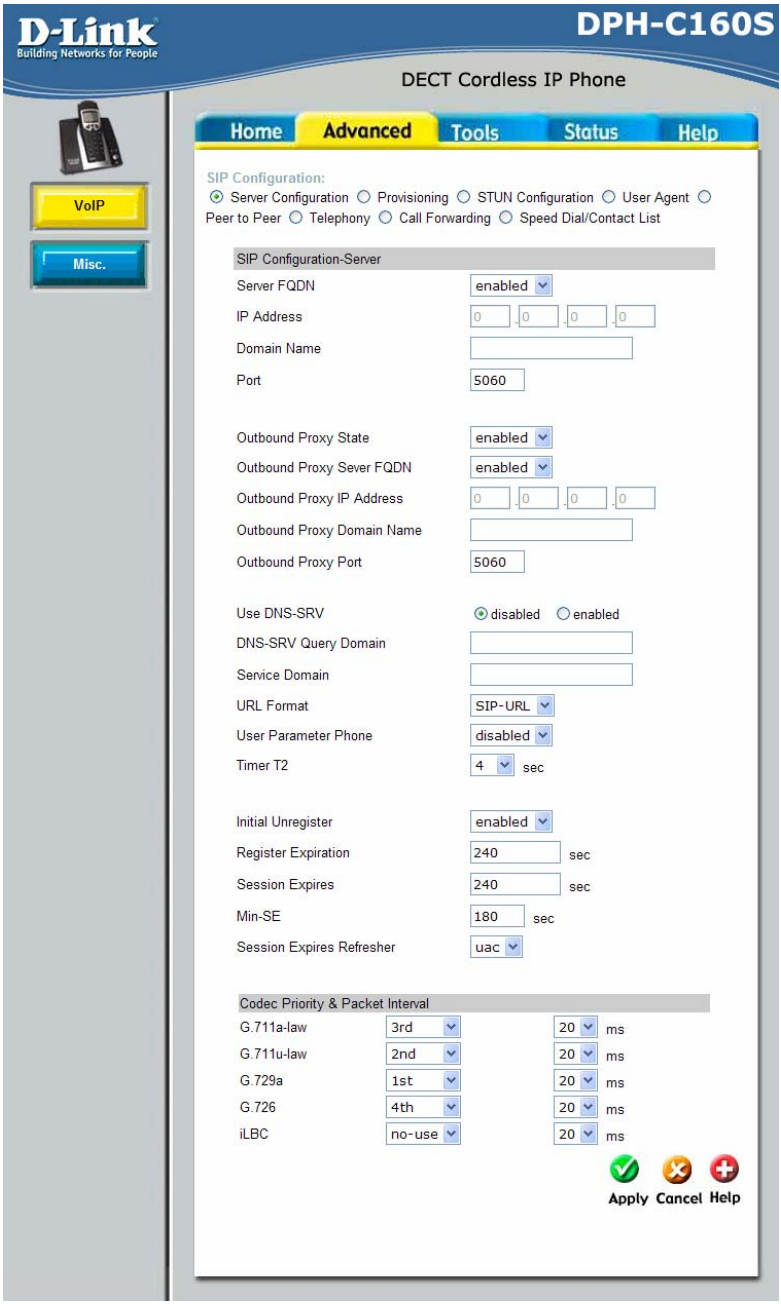


Static IP Address	Choose Static IP Address if all LAN IP information is provided to you by your network administrator. You will need to enter in the IP address, subnet mask, gateway address, and DNS address(es) provided to you by your network administrator. Each IP address entered in the fields must be in the appropriate IP form, which are four octets separated by a dot (x.x.x.x). The Router will not accept the IP address if it is not in this format.
IP Address	Input the public IP Address provided by your network administrator.
Subnet Mask	Input your Subnet mask. (All devices in the network must have

	the same subnet mask.)
Default Gateway	Input the IP address of the router/gateway to which you are connecting.
Primary DNS Address	Input the primary DNS (Domain Name Server) IP address provided by your ISP.
Secondary DNS Address	This is an optional DNS Address entry to be used if the primary DNS Fails.

Advanced > VOIP > Server Configuration

The DPH-C160S must be configured with your VoIP Service Providers server details in order to establish a connection and make calls.



Server FQDN	Use this drop-down menu to Enable or Disable the Server Fully Qualified Domain Name (FQDN) function. This is disabled when the SIP URL domain name is different from the SIP proxy server domain name. The phone will then use the domain name in **Domain Name** field as part of SIP URL but send and receive SIP messages through the SIP proxy server defined in the **Service Domain** field.
IP Address	Enter the IP address of the SIP Server in this field.
Domain Name	Enter the domain name corresponding to the IP address entered above in this field.
Port	Enter the SIP server's listening port for the SIP Server in this field. Leave this field set to the default if your VoIP service provider did not give you a server port number for the SIP server.
Outbound Proxy State	Allows you to Enable or Disable the use of an Outbound Proxy for all VoIP traffic. Basically acts as a relay or backup for the main SIP server.
Outbound Proxy Server FQDN	See Server FQDN for more information.
Outbound Proxy IP Address	See IP Address for more information.
Outbound Proxy Domain Name	See Port for more information.
Outbound Proxy Port	See Domain Name for more information.
Use DNS-SRV	Enables you to Enable or Disable the DNS-SRV function.
DNS-SRV Query Domain	The Domain Name of DNS-SRV server.
Service Domain	Enter the SIP service domain name in this field.
URL Format	Select **SIP-URL** to have the router include the domain name with the SIP number in the SIP messages that it sends. Select **TEL-URL** to have the router use the SIP number without a domain name in the SIP messages that it sends.
User Parameter Phone	You can set this to Enabled or Disabled. This determines whether or not the phone number is appended to the information forwarded to your SIP server. Your VoIP service provider will instruct you on which setting to use.
Timer T2	Use the drop-down menu provided to select the desired time increment.
Initial Unregister	You can set this to **Enabled** or **Disabled**. The default is **Enabled**.
Register Expiration	Use this field to set how long the router will wait before sending a repeat registration request if a registration attempt fails or there is no response from the registration server.
Session Expires	This field will set the longest time that the router will allow a SIP session to remain idle (without traffic) before dropping it.
Min-SE	When two SIP devices negotiate a SIP session, they must negotiate a common expiration time for idle SIP sessions. This field sets the shortest expiration time that the router will accept. The router checks the session expiration values of incoming SIP INVITE requests against the minimum session expiration value that you enter here. If the session expiration of an incoming INVITE request is less than this value, the router negotiates with the other SIP device to increase the session expiration value to match the minimum session expiration value.
Session Expires	This determines which side of an expired call session will initiate

Refresher	the session refresh. **uac** – specifies the Caller side will initiate the session refresh. **uas** – specifies the Call receiver (the "Callee") will initiate the session refresh.
Codec Priority & Packet Interval	Allows you to configure the order in which the codec's will be used to establish and maintain a call. It is recommended to leave these in their default state unless required to change via VoIP Service Provider. The Packet Interval is used to specify the size of the packet used for the VoIP traffic while used in conjunction with the specific codec. It is not recommended that you change this unless specified via your VoIP Service Provider.

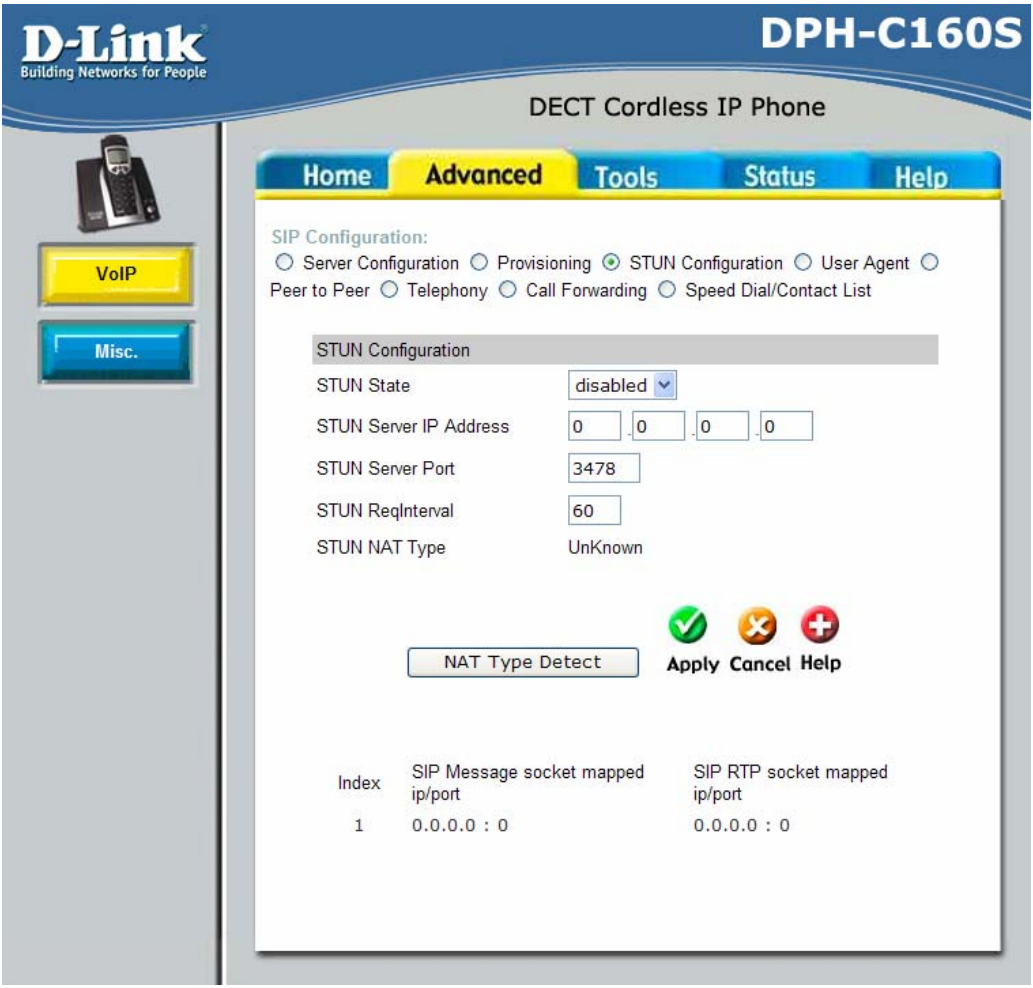
Advanced > VOIP > Provisioning

Provisioning is a function that automatically updates your DPH-C160S's VoIP configuration by using a TFTP server located on the Internet. If you have accesses to such a service, you will need to know the URL and Proxy Address of the Provisioning Server.

Provisioning Function	Use this drop-down menu to enable or disable the Provisioning Function on the DPH-C160S.
SSL	Use the drop-down menu to enable Secure Shell (SSL).
Server URL	Enter the URL of the Provisioning Server in this field.
Proxy Address	Enter the IP address of the Proxy Server in this field.
Proxy Port Number	Enter the port number the Proxy Server will use to make the connection in this field.
Authentication Key	This shows the Authentication key used for a secure connection to the Provisioning Server.

Advanced > VOIP > STUN Configuration

Simple Traversal of UDP over NAT (STUN) – is a protocol that enables a VoIP device, such as this router or an IP phone, to detect the presence and type of NAT behind which the phone is placed. This router supports STUN and can intelligently modify the private IP address and port in its SIP/SDP message by using the NAT mapped public IP address and port through a series of STUN queries against a STUN server located on the public Internet. This will allow SIP signalling and RTP media to successfully traverse a NAT without requiring any configuration changes on the NAT.



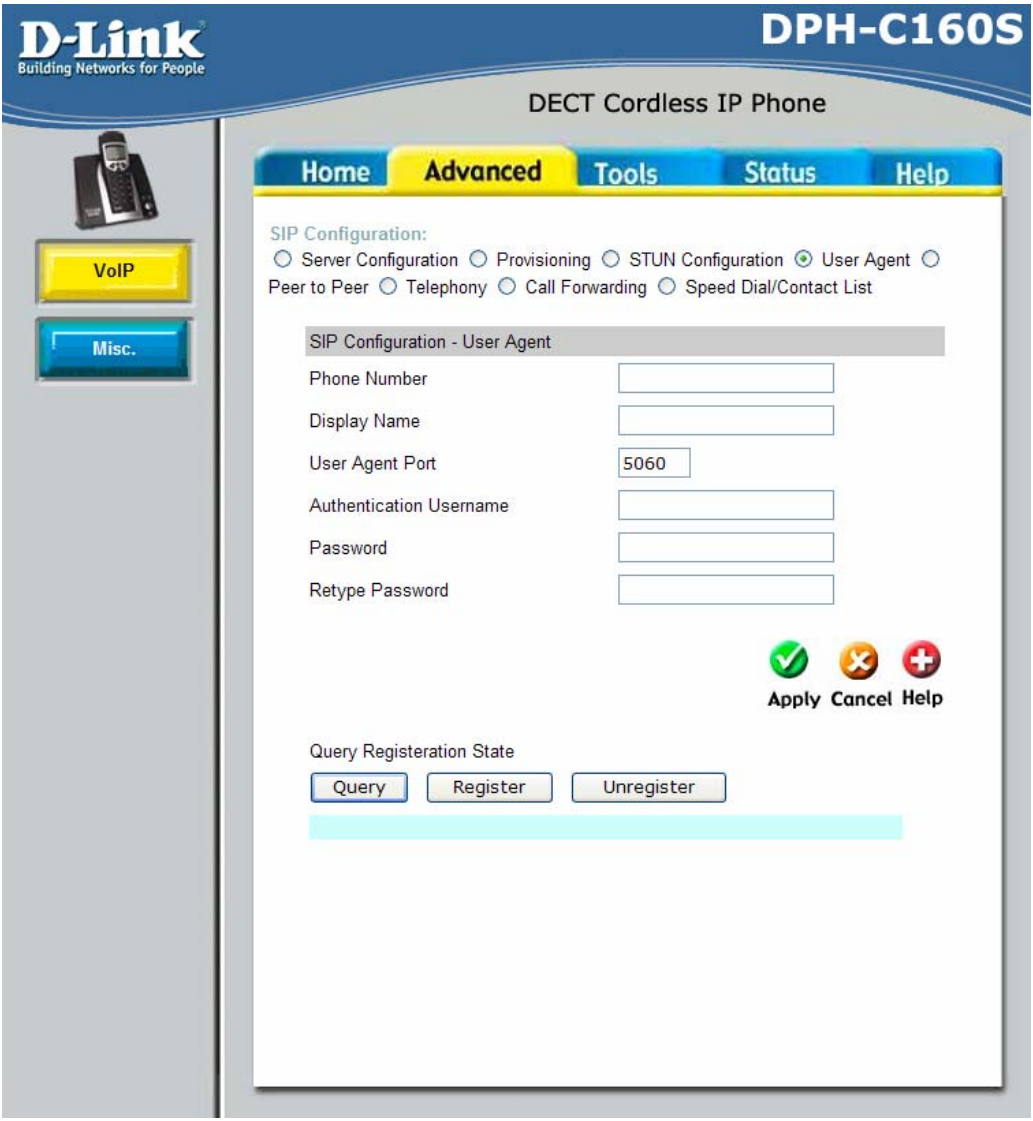
STUN is useful if you need to use the DPH-C160S behind a modem or router that provides the connection to your ISP and then to the Internet and does not

support symmetric NAT. You will need access to a STUN server on the Internet and its IP address to use STUN on the DPH-C160S.

STUN State	Use this drop-down menu to Enable or Disable STUN on the router.
STUN Server IP Address	Enter the IP address of a STUN server in this field.
STUN Server Port	Enter the port number the STUN server will use in this field. If you do not have any information as to the proper port number, leave the default setting here.
STUN ReqInterval	This determines the amount of time, in seconds, between STUN requests. If you do not have any information as to the proper interval, leave the default setting here.
STUN NAT Type	Displays the result of the STUN NAT examination.

Advanced > VOIP > User Agent

The User Agent page allows you to configure your VoIP Account Information to connect to the VoIP Service Provider

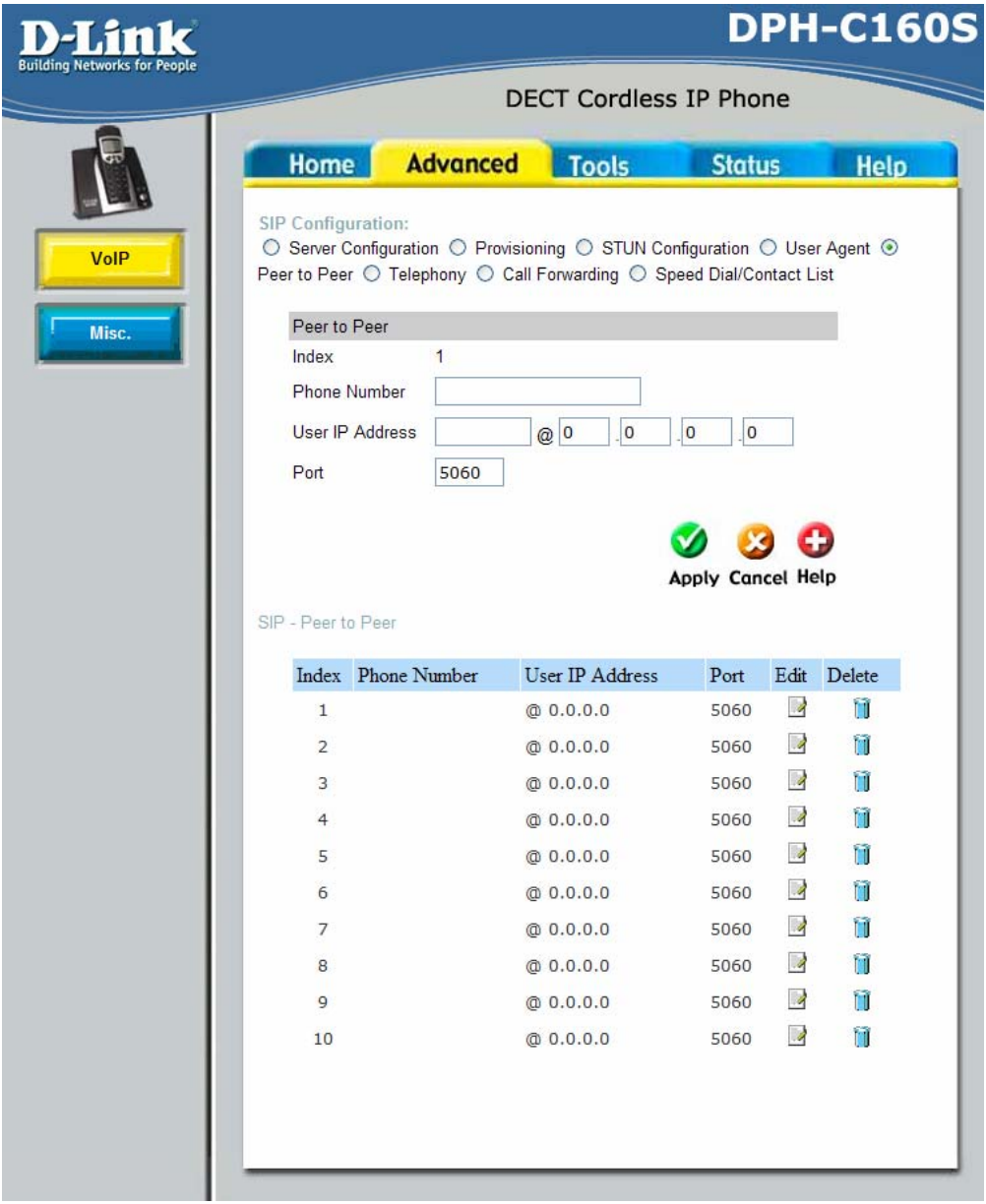


Phone Number	The telephone number assigned to your account.
Display Name	The name that will be displayed when the account is in use.
User Agent Port	This selects the port number the router will listen to when determining when calls are being made. (Do not alter unless informed to by VoIP Service Provider or Support Department)

Authentication Username	The Username used to access the VoIP Service Provider service
Password	The Password used to access the VoIP Service Provider service.
Retype Password	Retype your password to confirm.

Advanced > VOIP > Peer to Peer

This page allows you to configure your device to make direct calls to another VoIP device via an IP address.



Index — This field specifies the settings to the information entered in the

	User Agent.
Phone Number	The telephone number assigned to this entry.
User IP Address	Enter the IP address of the remote peer in this field.
Port	Enter the UDP port number the remote peer will use to make the connection in this field. If you do not have any information as to the proper port number, leave the default setting here.

Advanced > VOIP > Telephony

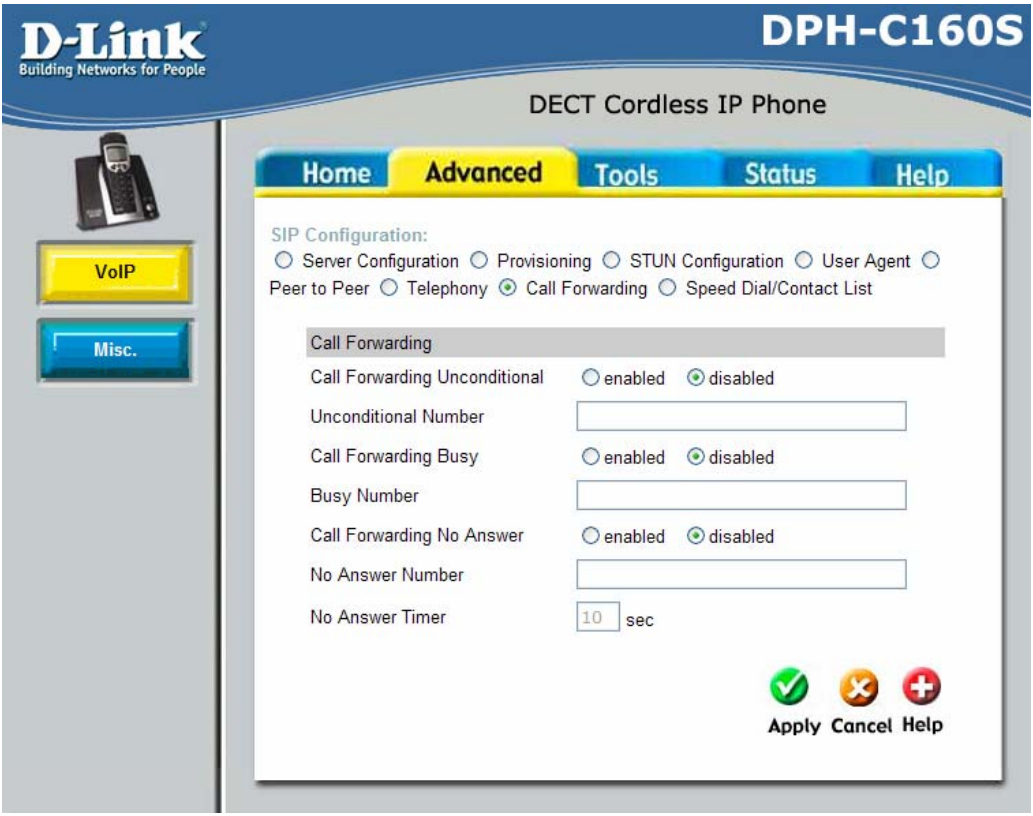
This page allows configuring some of the more advanced features for your VoIP connection.

DTMF Method	Out-of band Dual Tone Multi-frequency – The Dual Tone Multi-frequency (DTMF) mode sets how the router will handle the tones that your telephone makes when you push its buttons. It is recommended that you use the same mode that your VoIP service provider uses. Select Enabled (RFC 2833) to send the DTMF tones in RTP packets. Select Disabled (G.711) to include the DTMF tones in the voice date stream. This method works best when you are using a codec that does not use compression (like G.711).
Payload Type	The payload type (PT) field identifies the format of the RTP payload and determines its interpretation by the receiving application
VAD	Voice Activity Detection (VAD) – Detects whether or not speech is present. This lets the VoIP Terminal Adapter reduce the bandwidth that a call uses by not transmitting "silent Packets"

	when you are not speaking.
Country Code	Allows you to set the country code settings – default setting is for Australian tones.
Block Outgoing Caller ID	When Enabled this will block your Outgoing Caller ID so that when you make a call it will make you appear to be an anonymous caller.
Incoming Caller ID	Allows you to see the Callers ID when they make a call to you.
Do Not Disturb	This will stop all calls from coming through and either relay them to a Voice Mail if the VoIP Service Provider uses this feature or it just drop the call.

Advanced > VOIP > Call Forwarding

This page will allow you to configure methods for which you can relay calls to a different number. See below for more details.

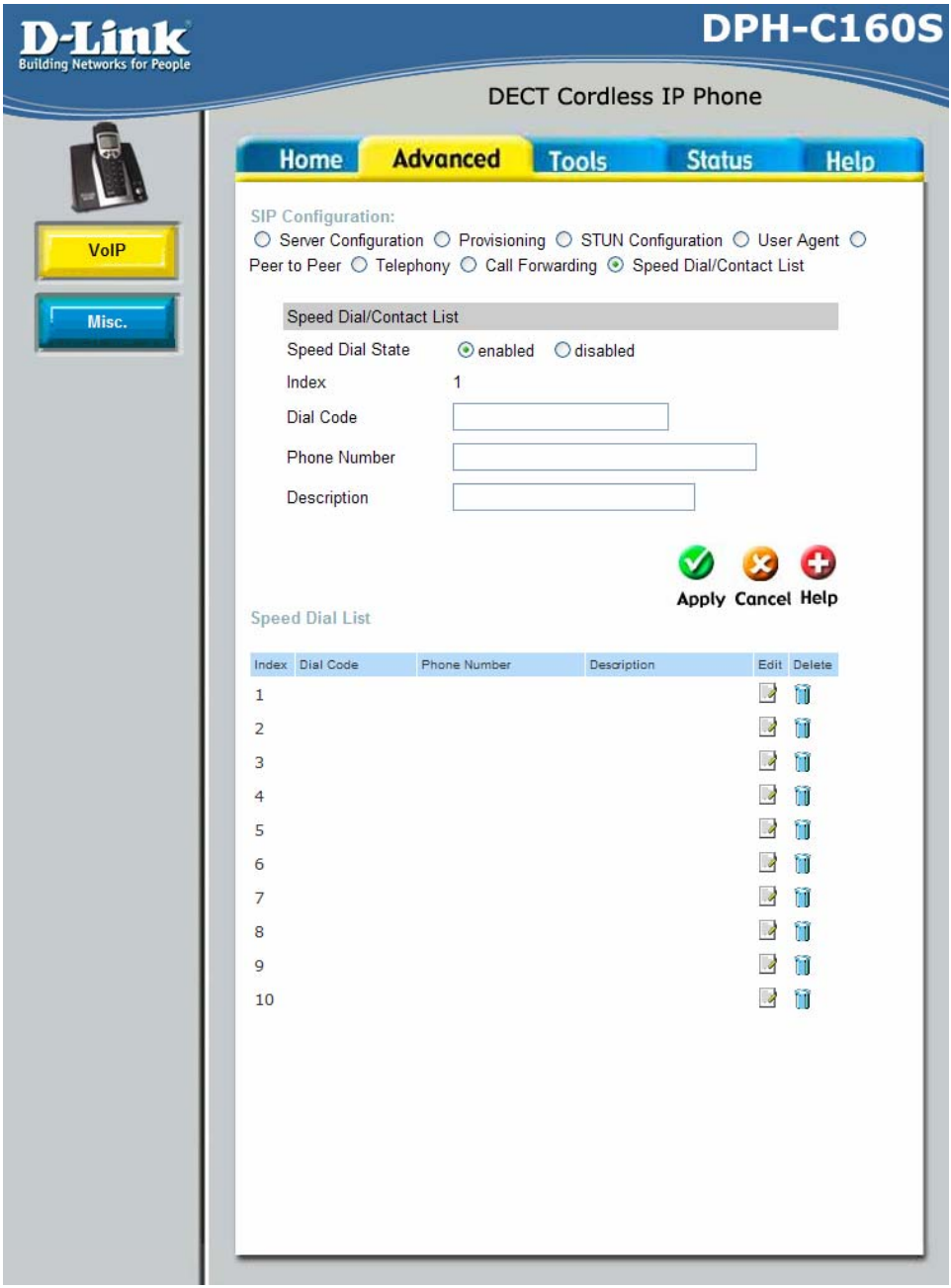


Call Forwarding Unconditional	Allows you to Enable or Disable the Call Forwarding Unconditional feature. When Enabled it will relay all calls to a different number specified below.
Unconditional Number	This will be the number that all calls are to be forwarded to when Unconditional is Enabled.
Call Forwarding Busy	Allows you to Enable or Disable the Call Forwarding Busy feature. When Enabled it will relay all calls when you are already on another call to a different number specified below.
Busy Number	This will be the number that calls when you are busy are to be forwarded to when Busy is Enabled.
Call Forwarding No Answer	Allows you to Enable or Disable the Call Forwarding No Answer feature. When Enabled it will relay all calls when you are already on another call to a different number specified below.
No Answer Number	This will be the number that calls when you do not answer the phone are to be forwarded to when No Answer is Enabled.

No Answer Timer	This is the delay for the No Answer feature before calls are relayed to the No Answer Number.

Advanced > VOIP > Speed Dial/Contact List

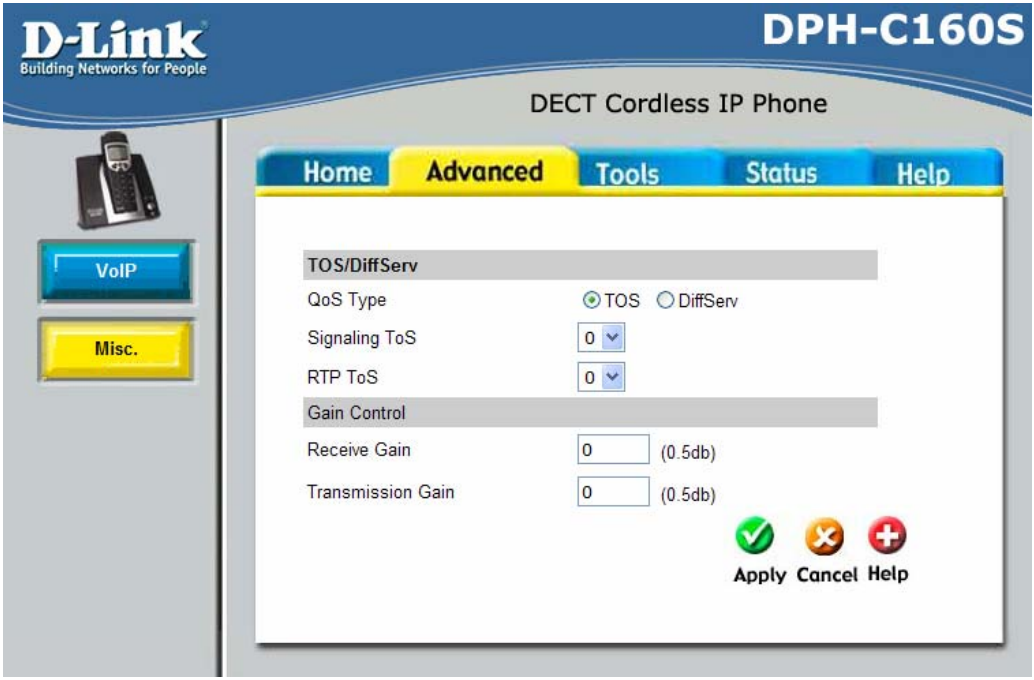
This page allows you to configured a Speed Dial and Contact List for making calls quickly from your handset.



Speed Dial State	This will enable the Speed Dial function on the DPH-C160S.
Index	This field specifies the settings to the information entered in the below table.
Dial Code	The Dial Code will be the number that you use for the Speed Dial feature to engage the required Index.
Phone Number	Basically the number that you wish the unit to dial when you enter the Dial Code.
Description	A Brief Description to Identify the Index.

Advanced > Misc.

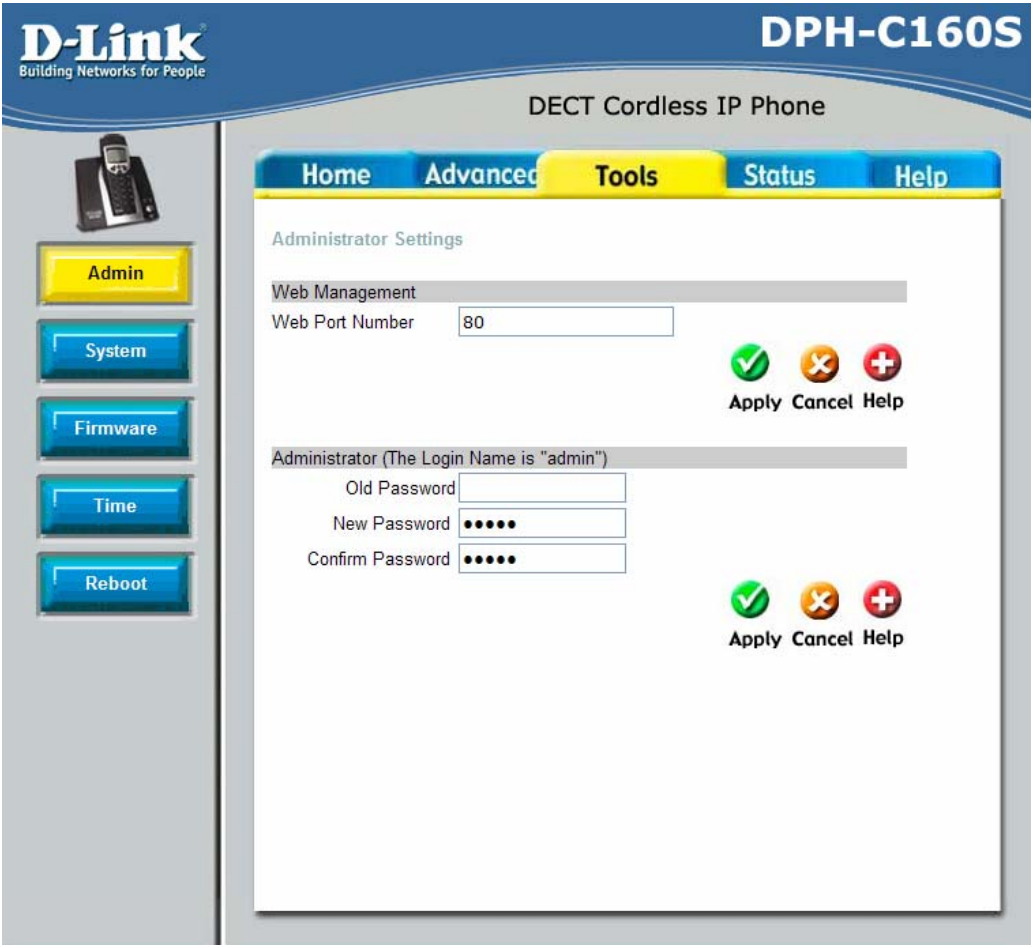
This page allows you to configure the ToS / Diffserv settings for your network.



QoS Type	This allows you to select to use Type of Service (ToS) or Diffserv for the QoS feature.
Signalling ToS	Signalling ToS - ToS field value in UDP IP Packets carrying a SIP Message.
RTP ToS	RTP ToS - ToS field value in UDP IP Packets carrying a RTP data.
Receive Gain	Used to raise or lower the gain (volume) of signals that come in from the IP and are sent to the line-side or trunk-side interface. The Rx Gain dB level may be set in 0.5 db increments from –20 dBm to 20 dBm.
Transmission Gain	Used to raise or lower the gain (volume) of signals that go out to the IP from the line-side or trunk-side interface. The Tx Gain dB level may be set in 0.5 db increments from –20 dBm to 20 dBm.

Tools > Admin

This page allows you to change the password used to access the web interface, type the New Password and Confirm Password to be certain you have typed it correctly. Click the Apply button to activate the new password. The System User Name remains "admin", this cannot be changed using the web manager interface. Be sure to save the new setting.



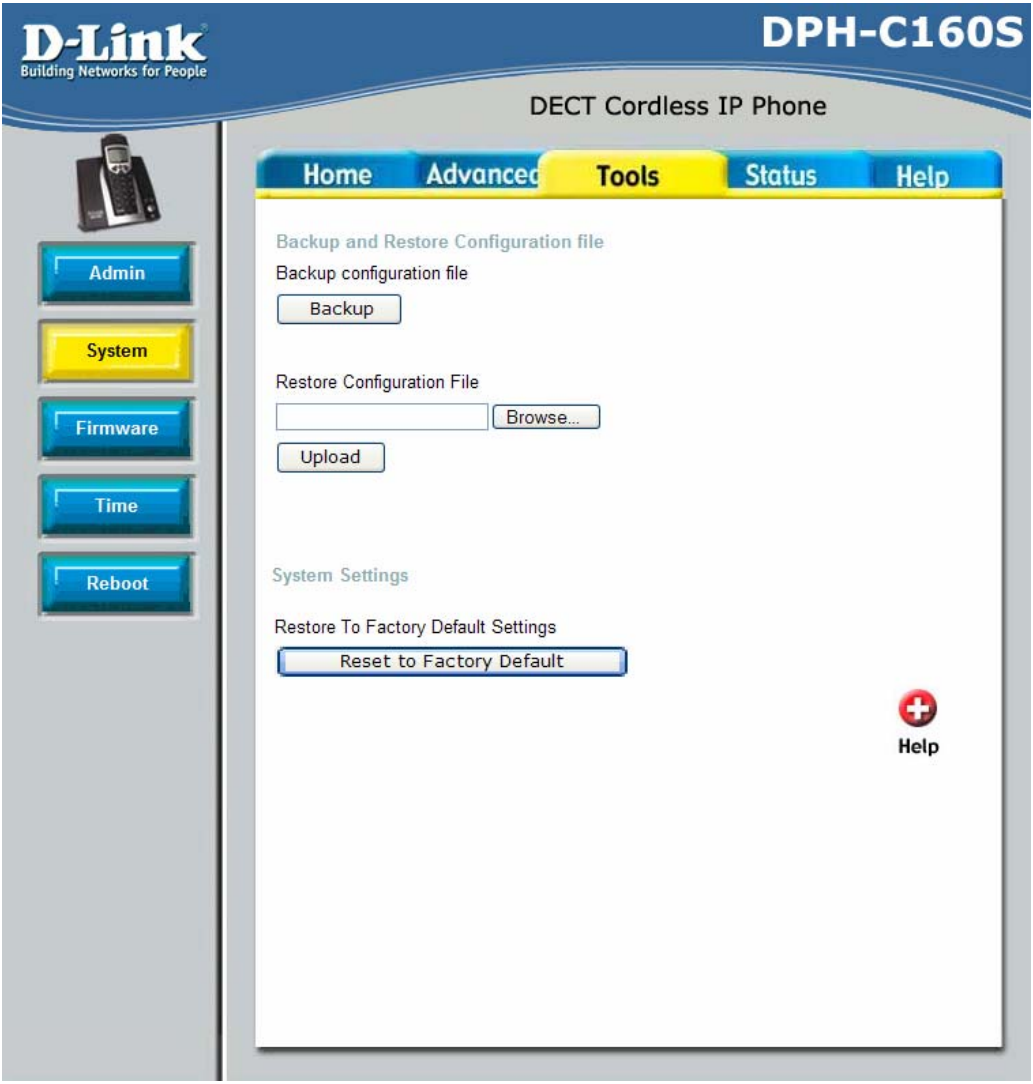
Web Management	Web Management allows the DECT Cordless VoIP Phone to be configured from the Internet by a web browser. A username and password is required to access the Web-Management interface. In general, only a member of your network can browse the built-in web pages to perform Administrator tasks.
Web Port Number	The port number used to access the VoIP Terminal Adapter. The default port number for web management is 80.
Administrator	**admin** is the Administrator login name.

Old Password	Enter the old password in order to confirm that you are an Administrator.
New Password	Enter the password here and the same password in the Confirm Password field. This will be the password that the administrator will use to gain access to the configuration menu of the device. The default password is "admin."
Confirm Password	See above.

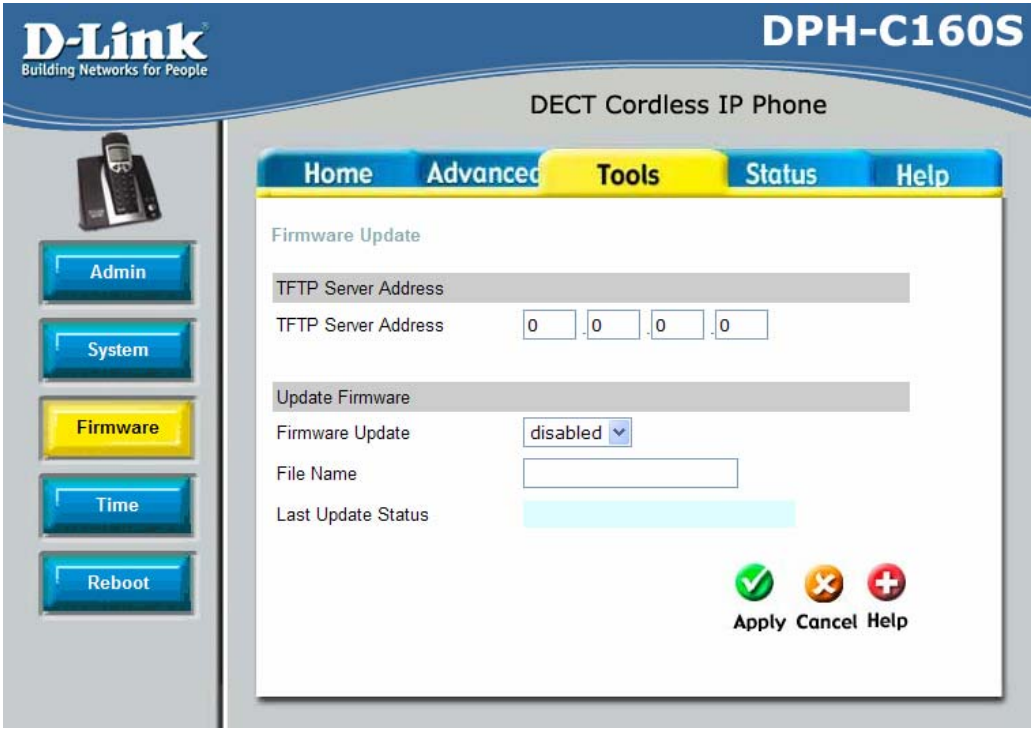
Tools > System

This screen allows you to backup and restore configuration files. Click Backup to initiate the backing up of a configuration file. Click Upload to initiate the uploading of the configuration file once you have located it by using the Browse button.

You can also reset the unit to **Factory Default Settings**. This will restore all configurations to the default value for the firmware and restart the unit.



Tools > Firmware



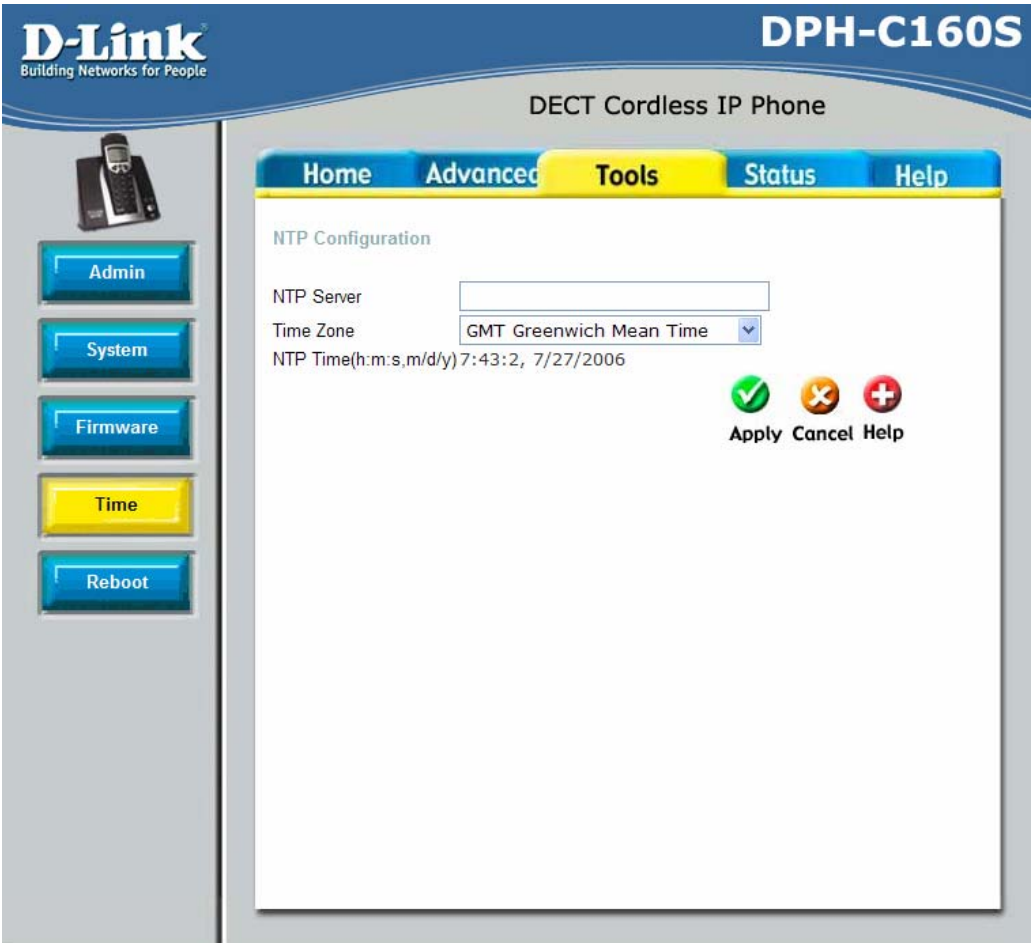
You can upgrade the firmware of the DPH-C160S here. Make sure the firmware you want to use is on the local hard drive of the computer. Please check the D-Link Support site for firmware updates at http://www.dlink.com.au/tech. You can download firmware upgrades to your hard drive from the D-Link support site.

TFTP Server Address	Type in the IP address of the computer you are loading the firmware from / running the TFTP server application on.
Firmware Update	Gives you the option to enable / disable the firmware update feature.
File Name	Enter the firmware file name in this field. For example: "dph_c160s-100003DPH-AUS-20060718.tfp"

Click **Apply** to complete the firmware upgrade.

Tools > Time

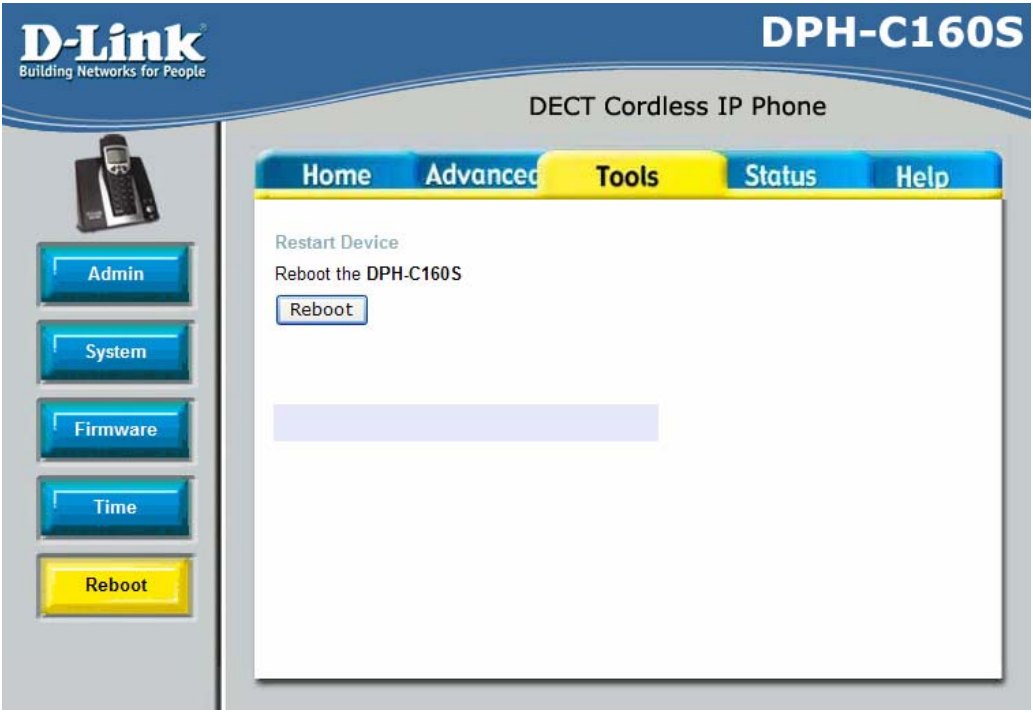
The Router provides a number of options to maintain current date and time including SNTP.



NTP Server	This will be the IP Address of either an Internet or LAN based SNTP Server.
Time Zone	The GMT Time Zone that you are currently in to ensure the correct time is on the unit.
NTP Time	Shows the current time on the unit.

If you opt to use SNTP, you must enter the SNTP server URL or IP address. Click the **Apply** button to set the system time.

Tools > Reboot

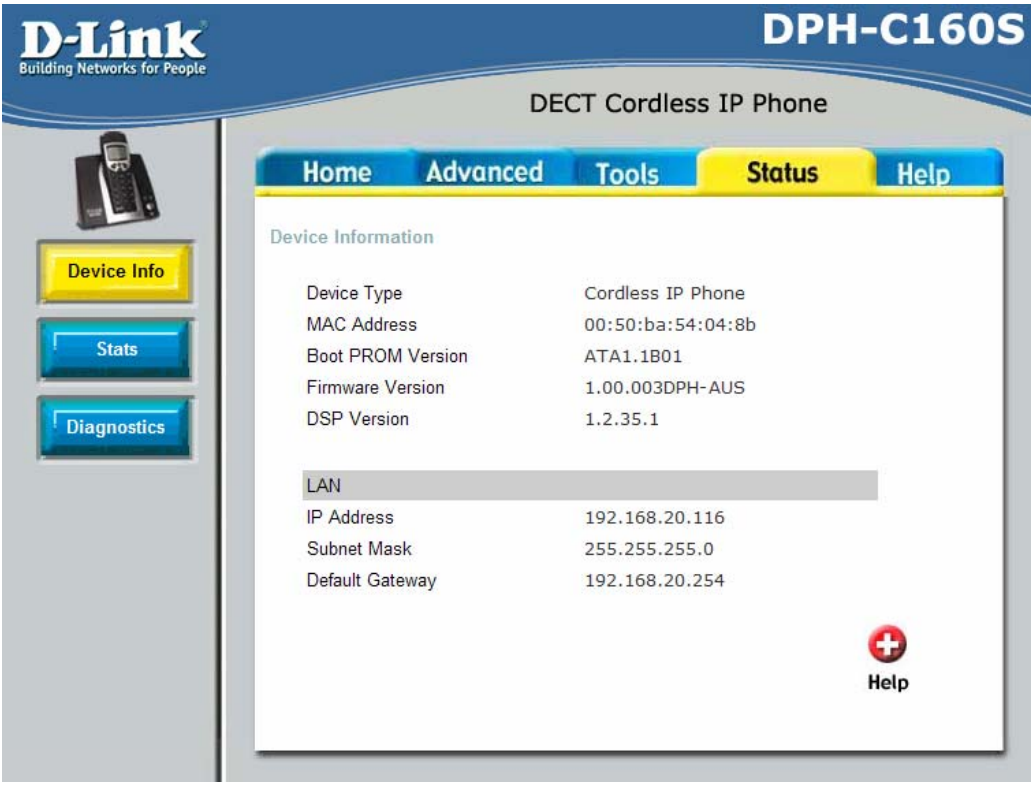


Restart Device	Click the **Reboot** button to restart the DPH-C160S with the latest changes made to the configuration.

Status > Device Info

This page displays the current information for the DPH-C160S. It will display the LAN Information statistics.

This window will show the DPH-C160S's working status:

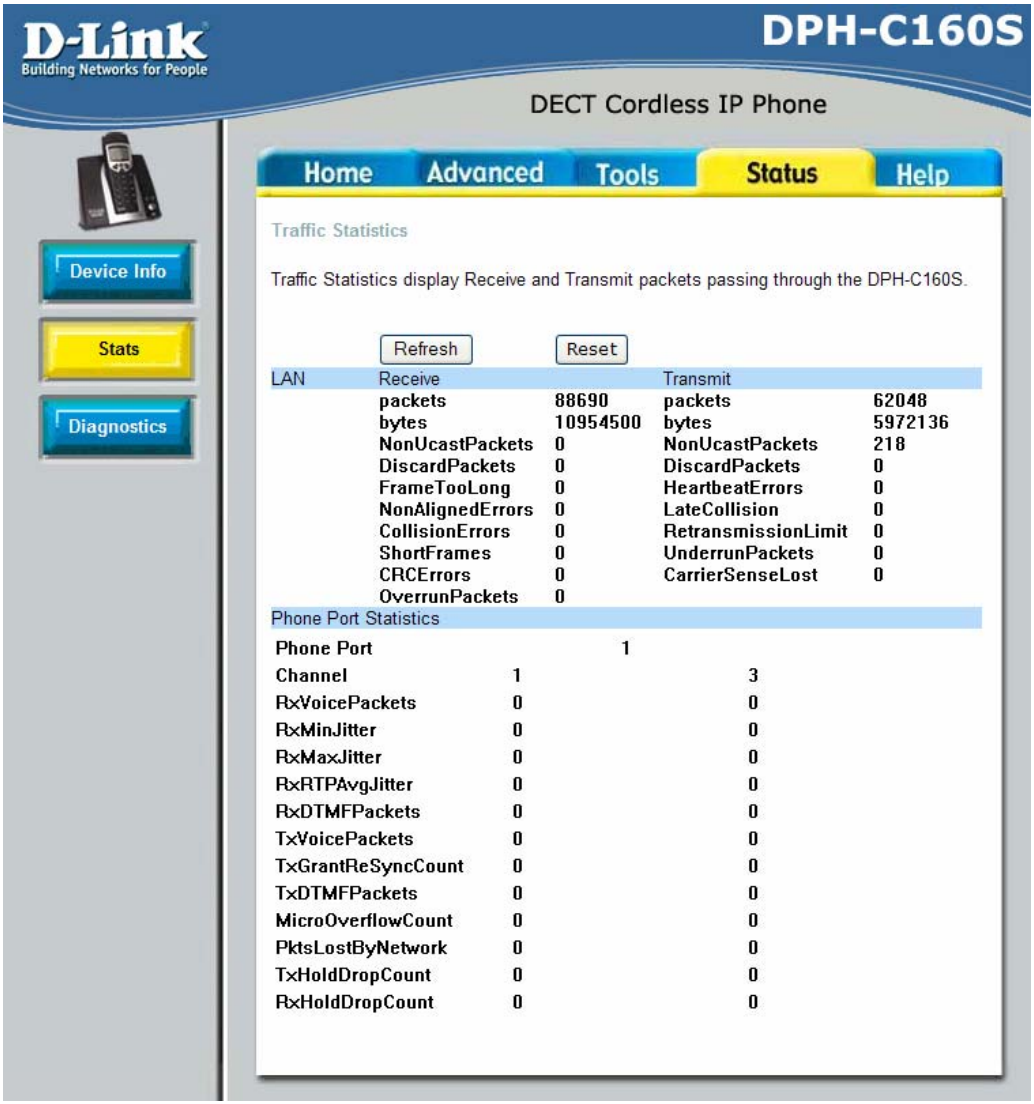


LAN

LAN MAC Address: MAC address of the DPH-C160S.
IP Address: LAN/Private IP Address of the DPH-C160S.
Subnet Mask: LAN/Private Subnet Mask of the DPH-C160S.

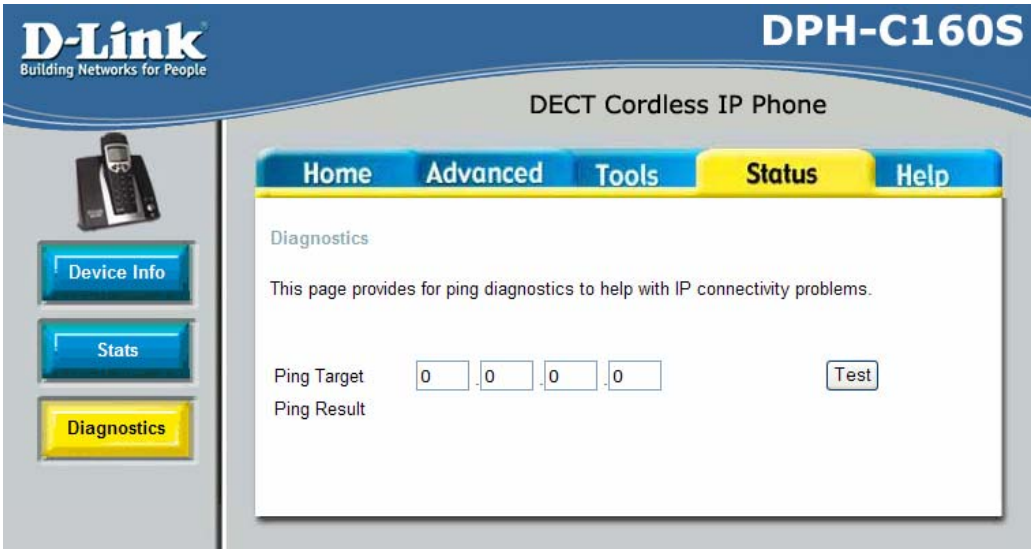
Status > Stats

The DPH-C160S keeps a running log of statistics and activities occurring on the DECT Cordless VoIP Phone. If the device is rebooted, the statistics are automatically cleared.



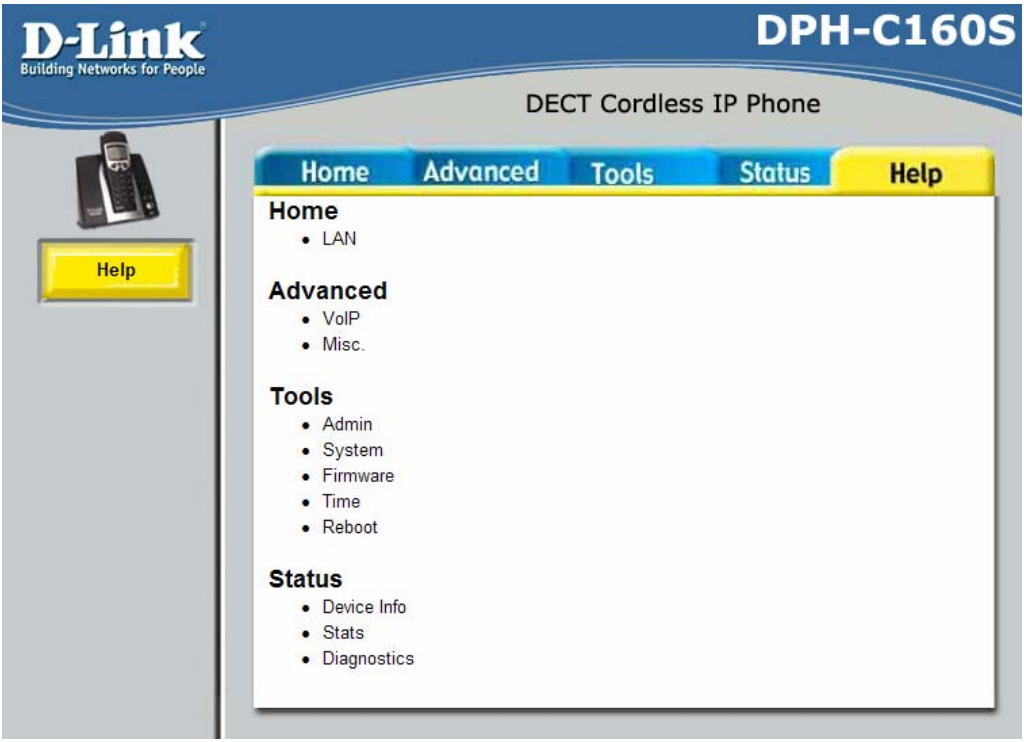
Status > Diagnostics

The DPH-C160S allows you to run a basic network diagnostic PING to determine if there is a network connection. The best check that can be done is to enter your router/gateway's IP address to see if there is a connection between the two devices.



Help > Help

The **Help** tab will give basic information referring to various screens located in the DPH-C160S interface. To view a specific section, click on its hyperlinked name. A new window will appear with the required information.



How to Factory Reset Base Station

In order to reset the unit you will need to follow the below steps:

Step 1: Unplug power from the Base Station.
Step 2: Locate the factory reset button at the back of the Base Station.
Step 3: Insert a paper clip in to the reset pinhole. Press and hold the reset button with light pressure (you should feel the button click in).
Step 4: Power the device back on by plugging the power in. Continue to hold the reset button for 8-10 seconds then release.

The phone is now reset to factory defaults.

Technical Specifications

Ethernet Ports			
One Port for Fast Ethernet Connections	RJ-45, Auto MDI/MDI-X, 10/100 Mbps		
Standard Compliance	IEEE 802.3 for 10 Mbps Ethernet IEEE 802.3u for 100 Mbps Ethernet		
Rate Adaptation	10/100 Mbps, Auto-Negotiation		
Cordless Phone Interface			
Standard Compliance	DECT (Digital Europe Cordless Telecommunication) GAP (Generic Access Profile)		
Frequency	1880-1900 MHz		
RF Channels	10 Channels		
Modulation	GFSK		
Voice Coding	ADPCM< 32K bit/s t.		
	Condition	**Colour**	**Activity**
LED Indicators			
Power/Status	Power ON	Green	Blinking
	Power Off	N/A	N/A
	System ready but not yet registered	Green	Blinking
	System ready and registered	Green	Solid
Ethernet Link/Act	Ethernet Port Link	Green	Solid
	Ethernet Port Tx/Rx Activity	Green	Blinking
VoIP/PSTN	VoIP	Green	Solid
	PSTN	Dark	N/A
On/Off Hook	On Hook	Dark	N/A
	Off Hook	Green	Solid
	Ringing	Green	Blinking
Charger	On	Green	Solid
	Off	N/A	N/A
CHASSIS REQUIREMENTS:			
Material	ABS+PC		
Width	60.5mm		
Depth	128mm		

Height	110mm
Weight	312g
Regulatory	EMC, Safety, Model No, Serial No, Ver.
MAC Address Label	On rear of Base Unit
POWER REQUIREMENT:	
External Power Adapter	AC Power Adapter, AC 9V, 1A
Embedded Factory Reset Switch	On rear of Base Unit
TELEPHONY SUPPORT:	
Call Control Protocol	SIP (RFC3261)
CODEC	G.711 (A-law and U-law) G.726 G.729A iLBC
Echo Cancellation	G.168
CONFIGURATION/MANAGEMENT:	
DHCP (Dynamic Host Configuration Protocol)	DHCP Client (RFC2131)
Embedded Web Server	
Configuration Restore/Backup	
TELNET	
TFTP Client	For firmware upgrade and configuration file download
Performance Monitor	
SECURITY:	
User Authentication Administration	Username/Password control for TELNET and WEB configuration
SIP Authentication	SIP Authentication with MD5 password encryption
VoIP NAT Traversal	SIP/STUN

SAFETY/EMI REQUIREMENTS:	
UL/CUL	

EMI CERTIFICATION:	
FCC Class B	
BSMI Class B	
CE Class B	
ENVIRONMENTAL SPECIFICATIONS:	
Operating Temperature	0° to 40°C
Storage Temperature	-10° to 55°C
Operating Humidity Range	5 to 95%, Non-condensing

Appendix

Configuring your PC's IP Address

In order to configure your system to receive IP settings from the Router it must first have the TCP/IP protocol installed. If you have an Ethernet port on your computer, it probably already has TCP/IP protocol installed. If you are using Windows XP the TCP/IP is enabled by default for standard installations. Below is an illustrated example of how to configure a Windows XP system to automatically obtain IP settings from the Router. Following this example is a step-by-step description of the procedures used on the other Windows operating systems to first check if the TCP/IP protocol has been installed; if it is not, instructions are provided for installing it. Once the protocol has been installed you can configure the system to receive IP settings from the Router. For computers running non-Windows operating systems, follow the instructions for your OS that configure the system to receive an IP address from the Router, that is, configure the system to be a DHCP client.

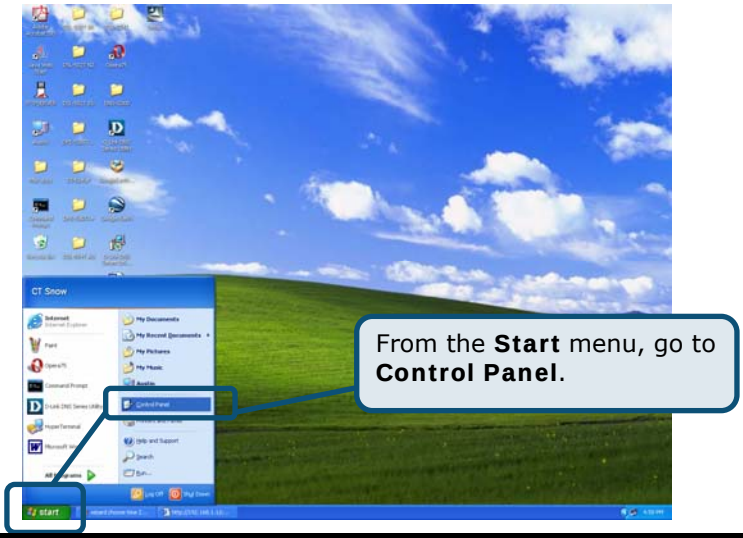
NOTE

If you are using a Router to provide Internet access for more than one computer, you can use these instructions later to change the IP settings for the other computers. However, you cannot use the same IP address since every computer must have its own IP address that is unique on the local network.

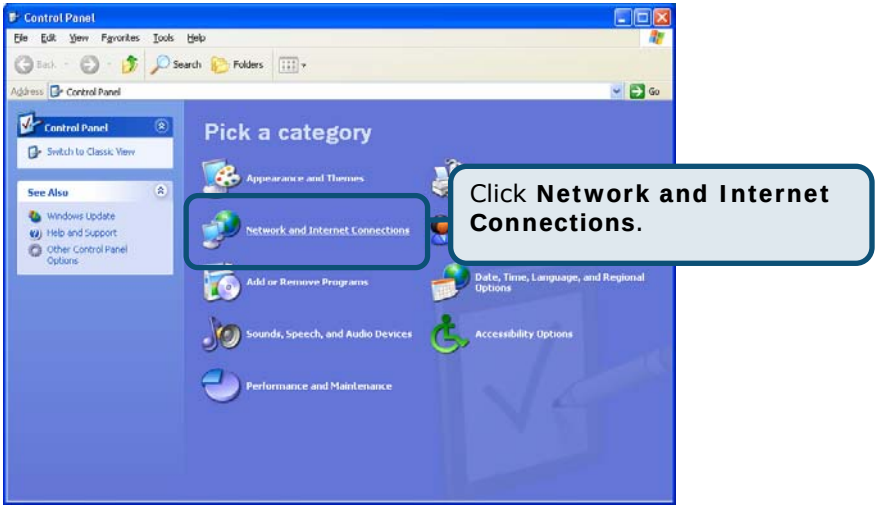
Configure Windows XP for DHCP

Use the following steps to configure a computer running Windows XP to be a DHCP client.

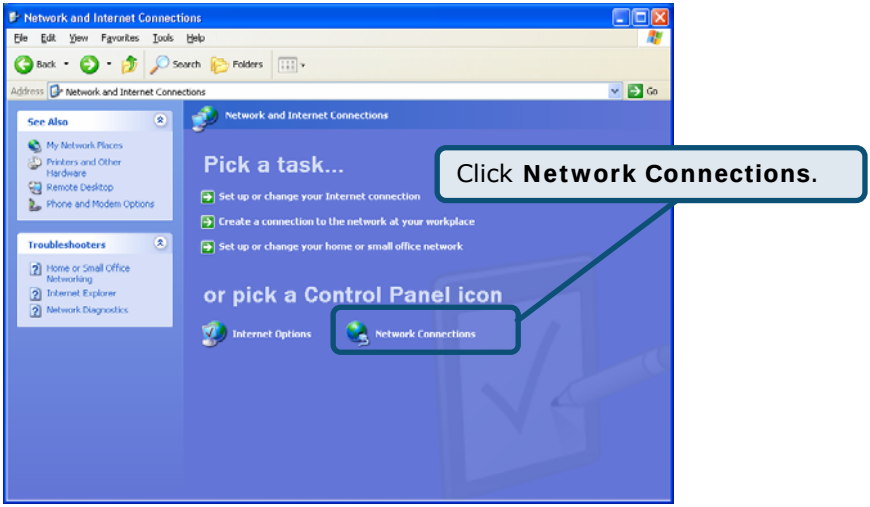
1. From the Start menu on your desktop, go to Control Panel.



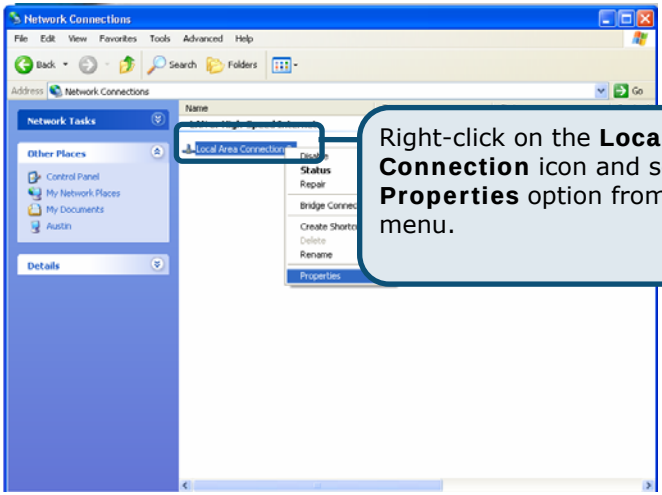
2. In the Control Panel window, click Network and Internet Connections.



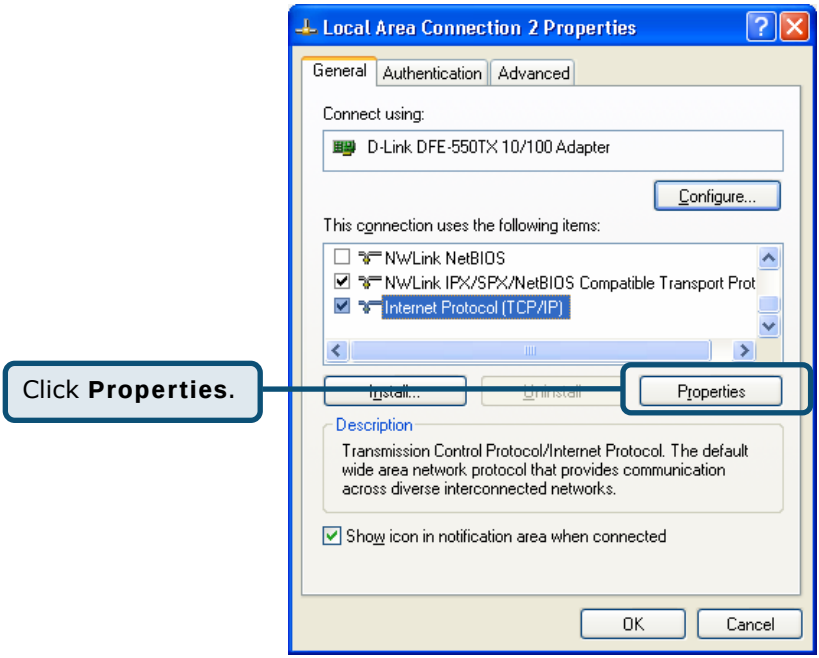
3. In the Network and Internet Connections window, click **Network Connections**.



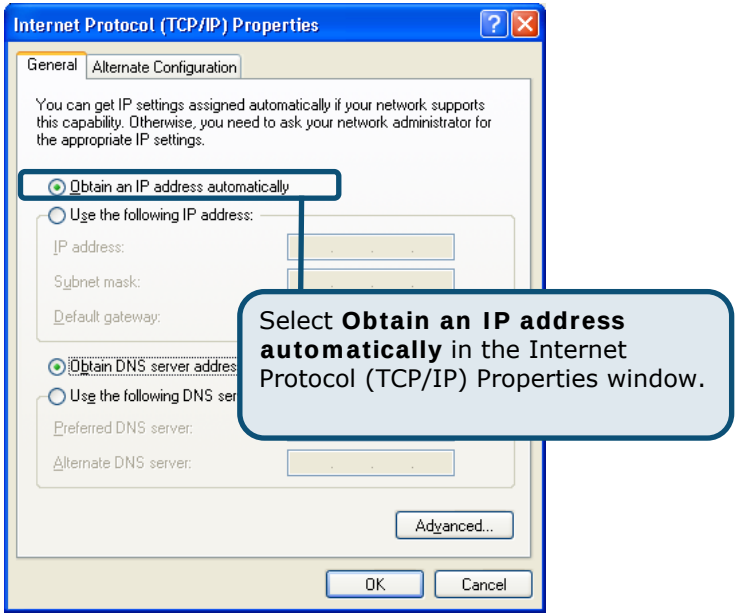
4. In the Network Connections window, right-click on **Local Area Connection**, then click **Properties**.



5. In the **General** tab of the **Local Area Connection Properties** window, highlight **Internet Protocol (TCP/IP)** under "This connection uses the following items:" by clicking on it once. Click on the **Properties** button.



6. Select "Obtain an IP address automatically" by clicking once in the circle. Click the **OK** button.



Your computer is now ready to use the Router's DHCP server.
Please Note: if you need to assign a specific IP address to your PC, you can select **Use the following IP address:** and enter the **IP address**, **Subnet mask**, and **Default gateway** addresses in the corresponding fields.

Windows 2000 IP Protocol

First, check for the IP protocol and, if necessary, install it:

1. In the **Windows** task bar, click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Double-click the **Network and Dial-up Connections** icon.
3. In the **Network and Dial-up Connections** window, right-click the **Local Area Connection** icon, and then select **Properties**.
4. The **Local Area Connection Properties** dialog box displays with a list of currently installed network components. If the list includes Internet Protocol (TCP/IP), then the protocol has already been enabled, skip ahead to Configure Windows 2000 for DHCP.
5. If Internet Protocol (TCP/IP) does not display as an installed component, click **Install**.
6. In the **Select Network Component Type** dialog box, select **Protocol**, and then click **Add**.

7. Select **Internet Protocol (TCP/IP)** in the Network Protocols list, and then click **OK**.
8. You may be prompted to install files from your Windows 2000 installation CD or other media. Follow the instructions to install the files.
9. If prompted, click **OK** to restart your computer with the new settings.

Configure Windows 2000 for DHCP

1. In the Control Panel, double-click the **Network and Dial-up Connections** icon.
2. In **Network and Dial-up Connections** window, right-click the **Local Area Connection** icon, and then select **Properties**.
3. In the **Local Area Connection Properties** dialog box, select **Internet Protocol (TCP/IP)**, and then click **Properties**.
4. In the **Internet Protocol (TCP/IP) Properties** dialog box, click the button labelled **Obtain an IP address automatically**.
5. Double-click **OK** to confirm and save your changes, and then close the Control Panel.

Your computer is now ready to use the Router's DHCP server.

Windows ME IP Protocol

First, check for the IP protocol and, if necessary, install it:

1. In the **Windows** task bar, click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Double-click the **Network and Dial-up Connections** icon.
3. In the **Network and Dial-up Connections** window, right-click the **Network** icon, and then select **Properties**.
4. The **Network Properties** dialog box displays with a list of currently installed network components. If the list includes Internet Protocol (TCP/IP), then the protocol has already been enabled. Skip ahead to Configure Windows ME for DHCP.
5. If Internet Protocol (TCP/IP) does not display as an installed component, click **Add**.
6. In the Select **Network Component Type** dialog box, select Protocol, and then click **Add**.
7. Select **Microsoft** in the Manufacturers box.
8. Select **Internet Protocol (TCP/IP)** in the Network Protocols list, and then click **OK**.
9. You may be prompted to install files from your Windows Me installation CD or other media. Follow the instructions to install the files.
10. If prompted, click **OK** to restart your computer with the new settings.

Configure Windows ME for DHCP

1. In the **Control Panel** window, double-click the **Network and Dial-up Connections** icon.
2. In the **Network and Dial-up Connections window**, right-click the Network icon, and then select Properties.
3. In the **Network Properties** dialog box, select **TCP/IP**, and then click **Properties**.
4. In the **TCP/IP Settings** dialog box, click the **Obtain and IP address automatically** option.
5. Double-click **OK** twice to confirm and save your changes, and then close the Control Panel.

Your computer is now ready to use the Router's DHCP server.

Windows 95 and Windows 98 IP Protocol

First, check for the IP protocol and, if necessary, install it:

1. In the **Windows** task bar, click the **Start** button, point to **Settings**, and then click **Control Panel**. Double-click the **Network** icon.
2. The **Network** dialog box displays with a list of currently installed network components. If the list includes TCP/IP, and then the protocol has already been enabled, skip to Configure IP Information Windows 95, 98.
3. If TCP/IP does not display as an installed component, click **Add**. The **Select Network Component Type** dialog box displays.
4. Select **Protocol**, and then click **Add**. The Select **Network Protocol** dialog box displays.
5. Click on **Microsoft** in the Manufacturers list box, and then click **TCP/IP** in the Network Protocols list box.
6. Click **OK** to return to the Network dialog box, and then click **OK** again. You may be prompted to install files from your Windows 95/98 installation CD. Follow the instructions to install the files.
7. Click **OK** to restart the PC and complete the TCP/IP installation.

Configure Windows 95 and Windows 98 for DHCP

1. Open the **Control Panel** window, and then click the **Network** icon.
2. Select the network component labelled **TCP/IP**, and then click **Properties**.
3. If you have multiple TCP/IP listings, select the listing associated with your network card or adapter.
4. In the **TCP/IP Properties** dialog box, click the **IP Address** tab.
5. Click the **Obtain an IP address automatically** option.

6. Double-click **OK** to confirm and save your changes. You will be prompted to restart Windows.
7. Click **Yes**.

When it has restarted, your computer is ready to use the Router's DHCP server.

Technical Support

You can find software updates and user documentation on the D-Link website.

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