



KT101

Broadband IP Phone User Manual

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1 Product Overview

1.1 Introduction to IP Telephony

Internet Protocol (IP) has its implementations in voice field. An example of this is the IP phone system, which carries voice via IP packets and can be implemented in IP networks, such as Intranets, WANs, and the Internet. Because the voice data is transmitted over the IP network, IP telephony features lower cost and respectable quality, especially for long distance calls. The KT101 is a SIP-based phone newly launched by Technologies. Each KT101 has two Ethernet interfaces: the LAN interface for access to a LAN or the Internet and the PC interface for connection to a PC. The built-in network address translation (NAT) and dynamic host configuration protocol (DHCP) functions enable a KT101 and the PCs connect to it to share the same connection to a LAN or the Internet.

The comprehensive software features and superior voice coding performance enable KT101 to provide you with cost-effective voice communication solutions. The LCD-and Web-based configuration allows you to configure KT101 easily and conveniently.

1.2 Features

- Dual-Mode Phones (Optional)
 - ♦ IP phone mode and PSTN phone mode
 - ♦ Working mode can be switched
 - ♦ Select default calling mode
- Networks
 - ♦ Multiple ways to access the Internet, such as asymmetric digital subscriber line (ADSL), digital data network (DDN), cable Modem, LAN, and WAN
 - ♦ Two Ethernet interfaces (RJ-45), which are 10/100 Mbps autosensing and support MDI/MDIX
 - ♦ NAT and Bridge route forwarding
 - ♦ DHCP client/ server
 - ♦ DMZ and static port mapping
 - ♦ Supports QoS via 802.1p/Q ensuring the reliable VoIP service in multi-service environment
- VoIP Services
 - ♦ Compatible with domestic and foreign common softswitch platforms, including ZTE, Huawei, SONUS, Cisco, Lucent, Nortel, Siemens, UT Starcom, etc.
 - ♦ Multi-Users registration with SIP, MGCP or H.323

- ♦ Supplementary Services-Call transfer(Blind transfer and Attended transfer), Call forward (Unconditional, When busy, When no answer),Call wait, Call hold, Call pickup, Multi-way conference, DnD, Call block, etc
- ♦ Primary and backup server connection switching
- ♦ Firmware upgrading automatically
- Basic Functions
 - ♦ functions such as redial, and mute
 - ♦ Automatic vocal answering
 - ♦ Caller ID
 - ♦ Hands-free mode, adjustable volume, and multiple ringing tones
 - ♦ Simple and flexible configuration through LCD, web and ManageCenter
 - ♦ Plug and play (PnP), identical to legacy phones on placing and answering a call
 - ♦ Voice quality almost the same as that of a legacy phone
 - ♦ Ring files select and upload
 - ♦ Phone book
 - ♦ Call history

1.3 Intended Users and Situations

IP telephony is an idea choice for enterprises and individuals that place lots of long distance calls. It has wide varieties of users, such as:

- Carriers and Internet telephony service providers (ITSP)
- Large companies, for placing long distance calls and interior communications
- Small-and medium-sized enterprises involved in international businesses, such as travel agencies
- Foreign/joint ventures, foreign offices, and agents
- Hotels (in guest rooms, business centers, or for renting)
- Governmental agencies that deal with foreign affairs, international trade and exchanges
- Colleges and science research organizations that have international collaborations.
- IP phone supermarkets, bars
- Individuals and households that need to keep close contact with friends or family members that are traveling or living in other cities or abroad
- Businessmen that travel a lot
- Other broadband subscribers

1.4 Top View and Button Description

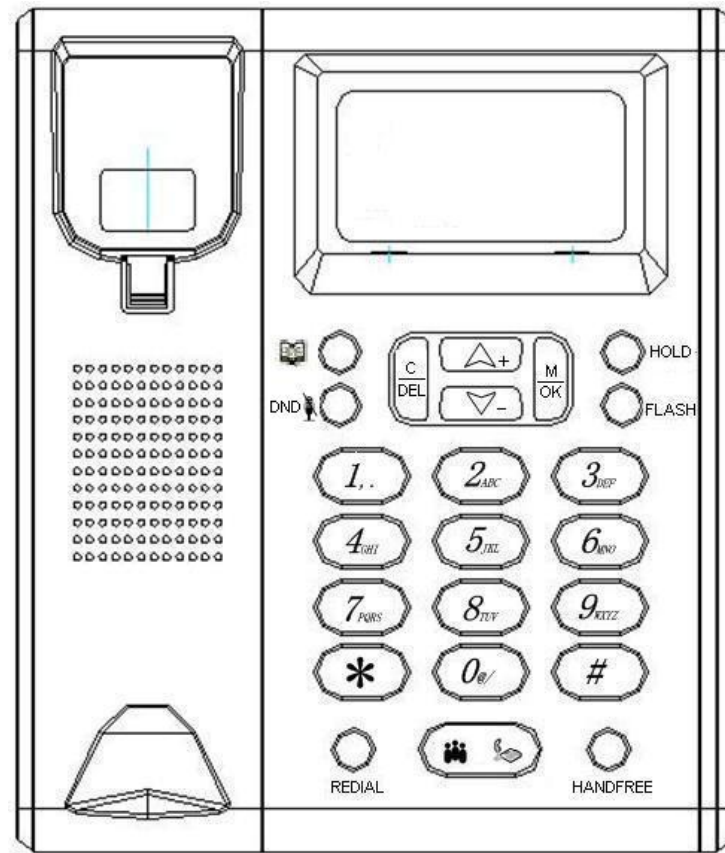


Figure 1-1 Top view of KT101

Table 1-1 and Table 1-2 describe the buttons of KT101.

Table 1-1 Button Description —function buttons

Press...	To...
M OK	Enter the main menu for the LCD-based configuration in standby mode.
	Enter the submenu of the current selected menu item. Confirm and save the changes when editing parameters.
△+	Increase the volume of the speaker (or the ring) in standby mode. Increase the output volume of your KT101 during a call. Move one line up when in LCD-based configuration. Move the cursor left one character when editing a parameter.
▽-	Decrease the volume of the speaker (or the ring) in standby mode. Decrease the output volume of your KT101 during a call. Move one line down when in LCD-based configuration. Move the cursor right one character when editing a parameter.
C DEL	Return to the upper level menu. Cancel changes just made when editing a parameter.
	Delete a character when editing a parameter.

















	Enter the phone book menu when the handset is on-hook, where you can view and set contact entries.
DND 	Do not Disturb button in standby mode. The coming call will be refused after enable the DND. Mute the call during the call conversation.
	The conference button, operation detail refer to “5.7.7 3-Way Conference”
	Enable microphone connection (Please refer to the real phone specification). Switch to make a PSTN call when pickup the phone.(only used for dual-mode phone ,please refer to the real phone specification)
FLASH	Enable line toggling during call waiting between 2 concurrent calls or other service.
HOLD	Toggle Hold mode when during a call.
REDIAL	Call a dialed number. Call the last dialed number after picking up the handset.
HANDFREE	Toggle between hands-free and normal modes.
Standby mode means that the telephone is ready for use and no call is active.	

Table 1-2 Button Description —character buttons

Button	Corresponding character	Button	Corresponding character
	1 . , [] < > ? and space		6 m n o M N O
	2 a b c A B C		7 p q r s P Q R S
	3 d e f D E F		8 t u v T U V
	4 g h i G H I		9 w x y z W X Y Z
	5 j k l J K L		0 @ / _ - + \$ %
	*		#

Note:

- Pressing a character button repeatedly can display its corresponding characters one after another at the cursor. For example, by pressing <5> twice, you can display the character j at the cursor, which will be selected after two seconds of pause.
- The function of IP/PSTN and Message button is not available.

2 Installation

2.1 Packing List

- Unpack the package carefully and check the following items:
- One IP phone set kit (a phone base, a handset, and a handset cord)
- One dedicated power adapter
- One Ethernet cable
- One CD containing the user manual
- If anything is broken or missing, contact your agent for help.

2.2 Interfaces of Your KT101

Your KT101 uses standard autosensing 10/100 Mbps Ethernet interfaces (RJ-45) for connecting PCs through LANs, broadband Ethernet, ADSL or cable Modem.

2.3 Installation and Connection

Follow these steps to connect your KT101:

- 1) Connect the handset to the base: Plug one end of the handset cord to the port on the left side (top view) of the base and the other end to the corresponding port on the handset.
- 2) Connect your KT101 to a network device: Connect one end of an Ethernet cable to the LAN interface on the rear of the base, and the other end to an Ethernet switch or other Ethernet access device.
- 3) Connect your KT101 to a PC: Connect one end of another network cable to the network adapter on the PC, the other end to the PC interface on the rear of the base.
- 4) Power your KT101 on: Insert the output end of the power adapter to the power socket on the rear of the base, and the other end to the wall jack.

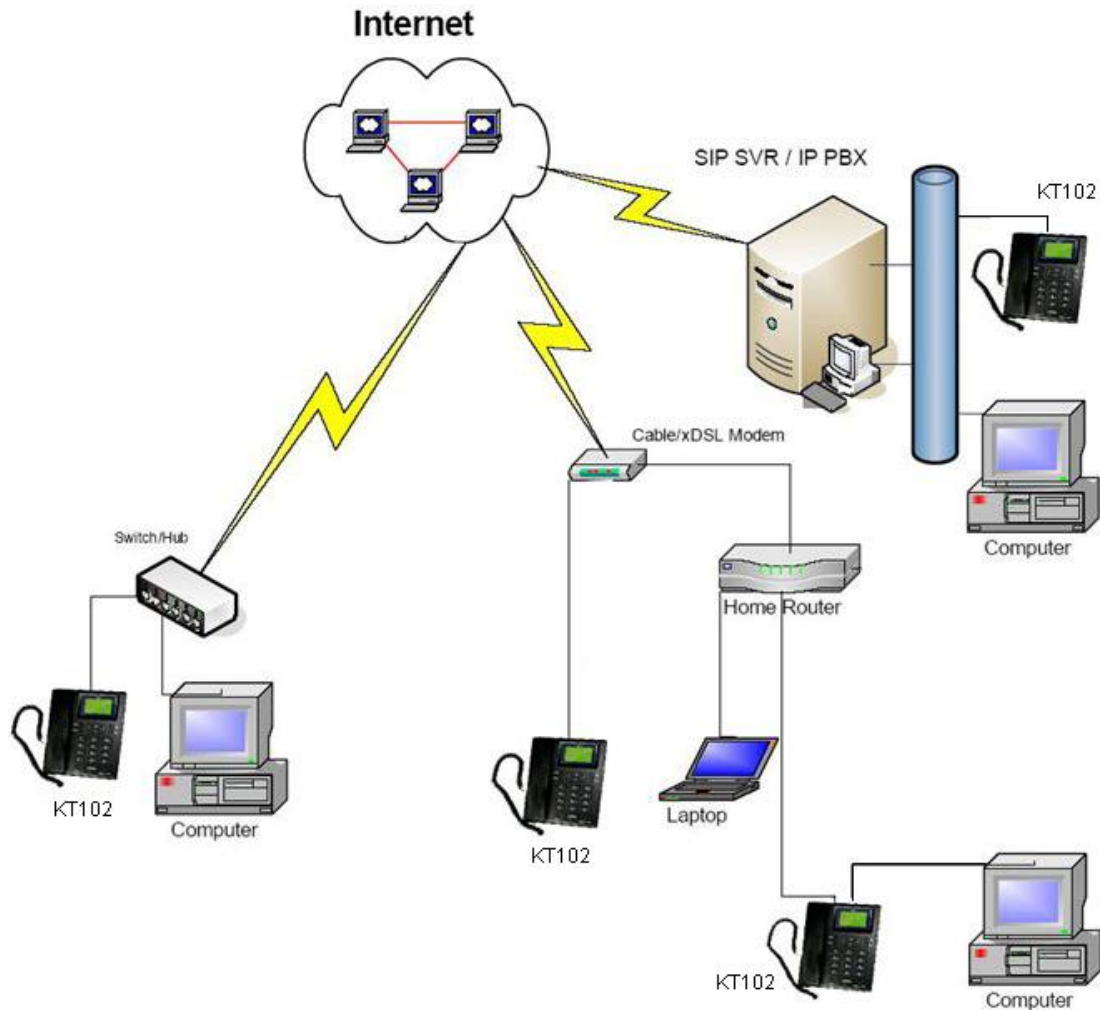


Figure 2-1 Connect your KT101

The following table describes the connections in the figure. Table 2-1
Description of the connections

No.	Connect...	To...	With...
1	LAN interface	The Ethernet interface of an ADSL Modem or a switch	Straight-through cable
2	PC interface	The network interface on a PC	Straight-through cable
3	Power socket	Wall jack	Power adapter
4	LINE interface	PSTN PBX or PABX	PSTN line
5	Microphone	Microphone handset	Microphone line

**Note:**

When powered on, your KT101 initializes the settings automatically and displays information such as “Decompressing...”, “Init Network...”, and “Current version”.

After installing your KT101, you must perform network and protocol configurations to make it register with the carrier’s server. Otherwise, the LCD displays “Connecting...” and no dial tone can be heard when you pick up the handset.

LINE interface is used only for the phone which has PSTN function.

Microphone is used only the phone which has microphone connection port.



Caution:

Make sure that you plug the connectors of the handset cord in their ports completely and securely.

3 Configuration

3.1 Introduction

Before you can use your KT101, you must configure its network connection type and protocol parameters. To do so, you can use one of the following two ways: LCD-based configuration and Web-based configuration.

LCD-based configuration: Configure parameters at prompts on the LCD by using the buttons on your KT101. Web-based configuration: Configure on Web pages after logging into the Web server built in your KT101 through a Web browser running on the PC connected to your KT101.

You can select the one that best suits you.



Note:

Unless otherwise noted, the following configurations are only for demonstration purpose, other than recommended settings. You can configure your KT101 by using the settings provided by your carrier or administrator to suit your actual requirements.

3.2 LCD-based Configuration

The parameters of your KT101 are grouped by type in hierarchical menus displayed in the LCD. You can use the buttons on your KT101 to perform menu operations and input characters.

This section describes how to set by the LCD the network and protocol parameters required for your KT101 to operate properly. Table 3-1 lists the basic button operations for accomplishing all kinds of configurations.

Table 3-1 Basic button operations for LCD-based configuration

To...	Do the following...
Enter the main menu	Press <MENU>
Select an item from the menu	Press <UP> or <DOWN> to move the prompting arrow to the desired item Press the button for the digit corresponding to the item
Enter a submenu	Press <OK>
Confirm your selection or input	Press <OK>
Change a setting	<p>Do the following to change the value of a parameter:</p> <ol style="list-style-type: none"> 1) Press <OK> to enter the editing mode of the currently selected parameter. 2) Press buttons as needed to enter a new value for the parameter, or press <UP>/<DOWN> to select one from the available values. 3) Press <OK> to confirm your changes, or press <C> to discard them. <p>Note that:</p> <ol style="list-style-type: none"> 1) For some parameters with optional values, you can simply press <OK> to select one without entering the editing mode. 2) When editing the value of a parameter, you can move the cursor by pressing <UP>/<DOWN>, or delete a character by pressing .
Return to the upper level menu	Press <C>
Exit the configuration interface	Press <C> repeatedly until the LCD displays "IP Phone..."

3.2.1 Configuring Network Parameters

From the [Networks] menu, you can configure the network connection type, the forwarding mode, DMZ, static port mapping, and so on. This section describes the hierarchy of the [Networks] menu and the procedures for you to set the network connection type and forwarding mode in different scenarios. These configurations are required for your KT101 and the PC to access the LAN or Internet. ADSL network mode means PPPoE here.

I. Hierarchy of the network configuration menu

Table 3-2 Hierarchy of the network configuration menu

Menu/item/value			Description	
External NIC	IP Mode	User Specify	Static address mode	Use the [IP Mode] menu to specify the way for your KT101 to obtain the IP address of the LAN interface.
		DHCP	DHCP mode	
		PPPoE	PPPoE mode	
	IP Address:		IP address of the LAN interface	These items are available only when you set the IP Mode argument to User Specify.

	Subnet Mask:		Subnet mask of the LAN interface		These items are available only when you set the IP Mode argument to PPPoE.		
	Gateway		Default gateway				
	PPPoE Name		PPPoE user name				
	PPPoE Password		PPPoE password				
	MAC Address			MAC address burned into the LAN interface, which you cannot change.			
Forward Mode	Disable			Use the [Forward Mode] menu to set the forwarding mode.			
	NAT						
	Bridge						
Internal NIC	IP Address			IP address of the PC interface, which defaults to 192.168.254.1.			
	Subnet Mask			Subnet mask of the PC interface, which defaults to 255.255.255.0.			
	MAC Address			MAC address burned into the PC interface, which you cannot change.			
Default DNS					Use this item to set the IP address of the default DNS server.		
VLAN	VLAN ID			Use the [VLAN] menu to enable or disable the VLAN tagging function. Refer to Table 3-1 for instructions of basic button operations and section 3.3.2.III. “Configuring VLAN” or the meanings of the settings.			
	Priority						
	Tag Enable	Yes					
		No					
Access PWD					Use this item to set a password for your KT101.		
DMZ					Use the [DMZ] and [Static Portmap] menus to set DMZ and static port mapping. Refer to Table 3-1 for instructions of basic button operations and section 3.3.2.IV. “Configuring DMZ and static port mapping” for the meanings of the settings.		
Static Portmap							

II. Configuring the network connection type

Your KT101 supports three network connection types: DHCP, PPPoE, and static address, which correspond to the DHCP, PPPoE, and User Specify settings in the [IP Mode] menu respectively. The IP Mode argument defaults to DHCP, which means that your KT101 obtains an IP address from a DHCP server by default.

Before configuring the network connection type, consult your carrier or administrator for related information such as:

- The PPPoE user name and password (for the PPPoE mode)
- The IP address, subnet mask of your KT101, and the IP address of the default gateway (for the User Specify mode)
- As DHCP is the default network connection type for your KT101, no configuration is

needed for your KT101 to operate in DHCP mode.

Follow these steps to configure the network connection type (refer to Table 3-1 for basic button operations):

- 1) Enter the main menu.
- 2) Select [Networks] and confirm to enter its submenu.
- 3) At the prompt of "Type Password:", enter the password "**285#**" and confirm it.
- 4) Select [External NIC] and confirm, and then navigate to the IP Mode argument.
- 5) Set the IP Mode argument to PPPoE or User Specify.
- 6) Set other related parameters:
 - For static address mode: navigate to IP Address, Subnet Mask, and Gateway to specify the IP address and subnet mask of the LAN interface and the IP address of the default gateway.
 - For PPPoE mode: navigate to PPPoE Name and PPPoE Password to specify the PPPoE user name and password.
- 7) Exit the configuration interface. When you exit the configuration interface, your KT101 will restart to have the new settings take effect.

III. Configuring the forwarding mode

For a PC to access the LAN or Internet through your KT101, you must also configure the forwarding mode of your KT101. The forwarding mode dictates how data is forwarded between the LAN interface and the PC interface of your KT101, that is, the way for the PC connected to your KT101 to obtain its IP address.

As shown in Table 3-2, the value of the Forward Mode argument can be Bridge (the default), NAT, and Disable, which are described as follows:

- Bridge: Transparent bridge mode. In this mode, the PC interface of your KT101 functions as a Layer 2 switching port, and the LAN interface functions as a upstream port. The PC connected to your KT101 accesses the LAN or the Internet in the same way as your KT101. This mode is recommended for users who employ DHCP to access a network.
- NAT: Network address translation (NAT) mode: In this mode, NAT and the built-in DHCP server are enabled on your KT101. Your KT101 functions as a gateway with the PC interface connected to the local network and the LAN interface connected to the external network. For the PC connected to your KT101 to share the same connection as your KT101 to access the LAN or the Internet, you only need to specify the PC to obtain an IP address automatically. This mode is recommended for users who employ PPPoE to access a network.
- Disable: In this mode, the PC interface of your KT101 is disabled, and the PC cannot access the LAN or the Internet through your KT101, neither can it access the built-in Web configuration pages of your KT101.

Follow these steps to configure the forwarding mode (refer to Table 3-1 for basic button operations):

- 1) Enter the main menu.
- 2) Select [Networks] and confirm to enter its submenu.
- 3) When the LCD displays "Type Password:", enter the password "**285#**".

- 4) Navigate to the [Forward Mode] item.
- 5) Set the Forward Mode argument to NAT, Bridge, or Disable, and confirm the setting.
- 6) Exit the configuration interface.

3.2.2 Configuring Protocol Parameters

Protocol configuration refers to settings of VoIP, which enable your KT101 to register with the servers of your carrier. Before performing protocol configuration, consult your carrier for the required protocol parameters.

Follow these steps to perform protocol configuration (Refer to Table 3-1 for basic button operations.)

- 1) Enter the main menu.
- 2) Enter **# by pressing the corresponding buttons. At the prompt of "Type Password:", enter the password **"582#"** and confirm it.
- 3) Scroll up or down, you can see the items described in Table 3-3.

Table 3-3 Protocol configuration menu

Item	Description
User ID	Phone number of your KT101
Auth ID	Authentication ID
Password	Authentication Password
Domain Name	Domain name or IP address of the SIP server
Default Proxy	Proxy Server Address for SIP register

- 4) Set these parameters by using the settings provided by your carrier.
- 5) Exit the configuration interface. After you exit the configuration interface, your KT101 initiates again for the new settings to take effect. The initiating process finishes when "IP Phone..." appears in the LCD. If your KT101 succeeds in registering with the server, the signal tone can be heard when you pick up the handset.

Now, you have completed the network and protocol configurations and can use your KT101 as you do with a legacy phone set.

3.3 Web-based Configuration

In addition to LCD-based configuration, you can also perform Web-based configuration through the Web server built in your KT101. This section describes how to set network and protocol parameters, and upgrade the software via Web pages.

• **Note:**

You can log into the Web configuration interface through the PC interface or the LAN interface of your KT101. The former applies to any network connection type, and the latter

applies to the DHCP and static address modes. It is recommended that you use the PC interface to log into the Web configuration interface.

To perform Web-based configuration, you need a PC with a browser (IE 6.0 or later recommended) and TCP/IP installed. You also need to do the following to log into the Web configuration interface via the PC.

- Connect the PC to your KT101 (refer to section 2.3 “Installation and Connection” for details).
- Set the forwarding mode of your KT101 to NAT (refer to section 3.2.1 III. “Configuring the forwarding mode” for details).
- Specify the PC to obtain an IP address automatically (refer to the online help documentation of the operating system running on the PC) and restart the PC.

3.3.1 Logging into the Web Configuration Interface

Launch the browser on the PC and enter the IP address of the PC interface of your KT101 (192.168.23.188 by default) in the address bar. The login page appears, as shown in Figure 3-1.

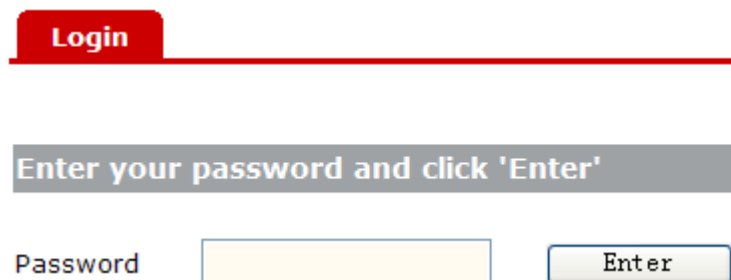


Figure 3-1 Web configuration – the login page

Enter the password “**admin**” of your KT101 in the [Password] text box and click <Enter>. Click **Networks**, the main Web configuration page appears, as shown in Figure 3-2.

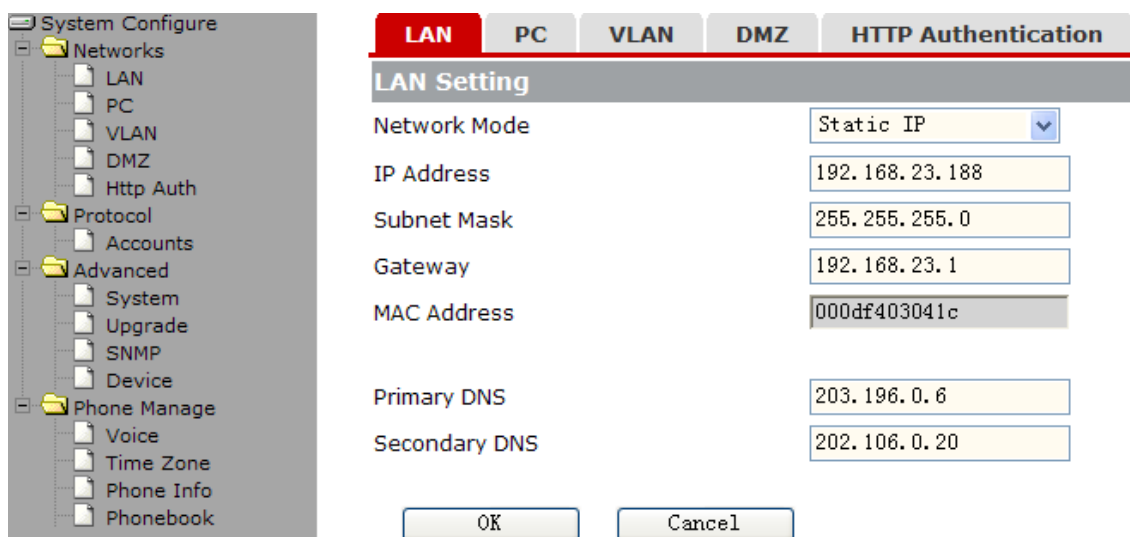


Figure 3-2 Web configuration – the main page

The left part of the main page is the navigation list, where links to configuration pages are located. Clicking on a link in the navigation list can have the corresponding configuration page appear on the right part of the main page.

3.3.2 Configuring Network Parameters

On the [Networks] page, you can configure the network related parameters for your KT101. Click <Networks> in the navigation list to bring up the network configuration page, as shown in Figure 3-3. You can select the [LAN], [PC], [VLAN], or [DMZ] tab to perform the corresponding configurations, which are described as follows:

I. Configuring the LAN interface

When you click <Networks> in the navigation list, the [LAN] tab (as shown in Figure 3-3) is brought up by default. The items in this tab are used to specify the way for your KT101 to obtain an IP address for the LAN interface.

LAN	PC	VLAN	DMZ	HTTP Authentication
LAN Setting				
Network Mode	Static IP			
IP Address	192.168.23.188			
Subnet Mask	255.255.255.0			
Gateway	192.168.23.1			
MAC Address	000ef4f00002			
Primary DNS	203.196.0.6			
Secondary DNS	202.106.0.20			

Figure 3-3 Web configuration – LAN setting

- **Connection Type:** Network connection type of your KT101. The three options in the drop-down list, Static, DHCP, and PPPoE, stand for the following three network connection type respectively: static address mode, DHCP mode, and PPPoE mode. DHCP is selected by default. You can select an option as needed.
- **Primary DNS:** IP address of the default DNS server in the network where your KT101 resides.
- **Secondary DNS:** IP address of the secondary DNS server in the network where your KT101 resides. If you select the Static option from the [Connection Type] drop-down list, the items corresponding to the static address mode appear, as shown in Figure 3-4.

LAN	PC	VLAN	DMZ	HTTP Authentication
LAN Setting				
Network Mode	Static IP ▼			
IP Address	192.168.23.188			
Subnet Mask	255.255.255.0			
Gateway	192.168.23.1			
MAC Address	000df403041c			
Primary DNS	203.196.0.6			
Secondary DNS	202.106.0.20			

Figure 3-4 Web configuration – LAN setting - Static

For this mode, you must specify the IP address and subnet mask of the LAN interface, and the default gateway manually.

- IP Address: IP address of the LAN interface on your KT101.
- Subnet Mask: Subnet mask of the LAN interface on your KT101.
- Gateway: IP address of the default gateway.

If you select the PPPoE option from the [Connection Type] drop-down list, the items corresponding to the PPPoE mode appear, as shown in Figure 3-5.

LAN	PC	VLAN	DMZ	HTTP Authentication
LAN Setting				
Network Mode	ADSL ▼			
ADSL User	as12345			
ADSL Password	●●●●●●●●			
Auto Dwon Interval	disable ▼			
DNS Working Mode	Use the following ▼			
Primary DNS	203.196.0.6			
Secondary DNS	202.106.0.20			

Figure 3-5 Web configuration – LAN setting - PPPoE

For this mode, you must specify the PPPoE user name and password.

- PPPoE Name: PPPoE user name.
- PPPoE Password: PPPoE password.

Auto Down Time: Idle period of the LAN interface (the period during which no data passes through the LAN interface), after which the PPPoE connection is terminated. Figure 3-5 shows the available options, among which the disable option is selected by default, which means the PPPoE connection will never be terminated regardless of the period for which the LAN interface is idle. Other three settings, 1 minute, 4 minutes,

and 10 minutes, mean the PPPoE connection will be terminated after the LAN interface is idle for 1, 4, or 10 minutes respectively.

Remember to click <OK> to save your changes upon completion. You can also click <Cancel> to discard your changes.

After the changes are successfully saved, the [Result] page appears, as shown in Figure 3-6.

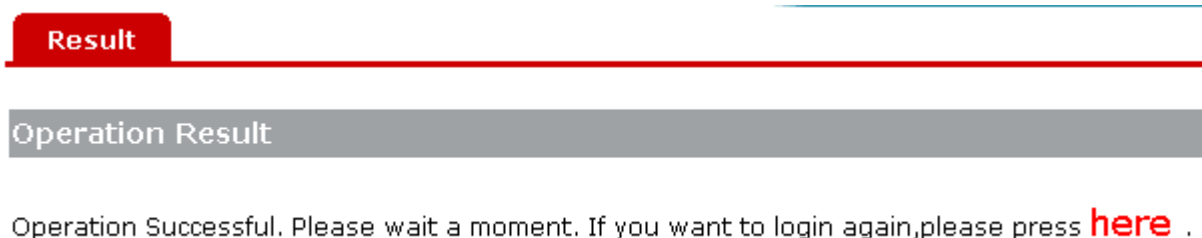


Figure 3-6 Web configuration – Result

Click <here> to bring up the login page (as shown in Figure 3-1) again. You can proceed with other configurations after logging in.

Note:

If the login page does not appear after you click <here>, click <Refresh> in the browser to login to the Web server.

II. Configuring the PC interface

Click the [PC] tab. The [PC Setting] page appears (as shown in Figure 3-7), displaying the items for specifying the parameters of the PC interface.

Figure 3-7 Web configuration – PC Setting

- Forward Mode: Forwarding mode of your KT101. For details about the forwarding modes, refer to section 3.2.1 III. "Configuring the forwarding mode". Available options include NAT, Bridge, and Disable, among which Bridge is selected by default.
- IP Address: IP address of the PC interface, which defaults to 192.168.254.1.

- Subnet mask: Subnet mask of the PC interface, which defaults to 255.255.255.0.
- MAC Address: MAC address burned into the PC interface, which you cannot change.

Remember to click <OK> to save your changes upon completion. You can also click <Cancel> to discard your changes.

 **Note:**

Settings of IP address, subnet mask, and MAC address for the PC interface take effect only when the forwarding mode is set to NAT.

III. Configuring VLAN

Click the [VLAN] tab. The [VLAN Setting] page appears (as shown in Figure 3-8), displaying the items for specifying the VLAN parameters.

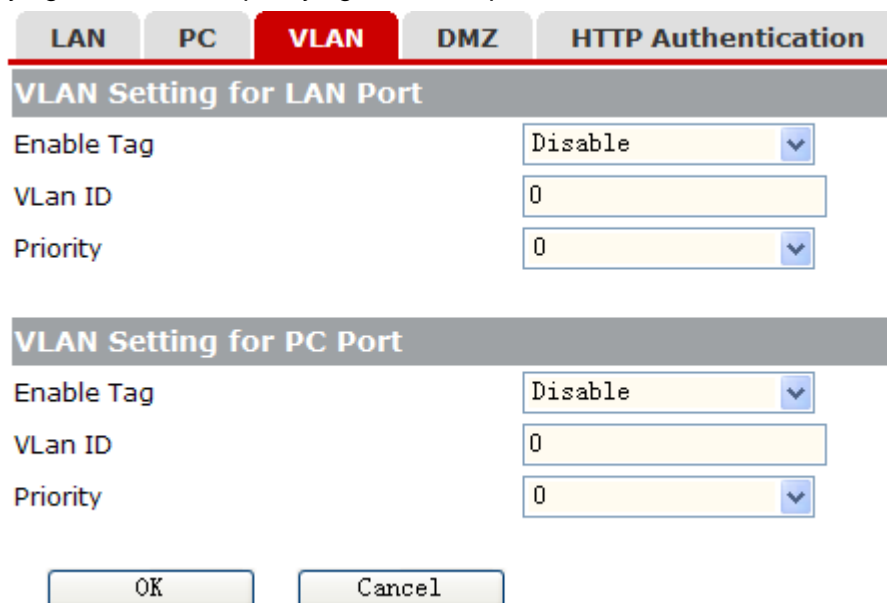


Figure 3-8 Web configuration – VLAN Setting

Your KT101 supports the use of VLAN tag, which can increase the transmission rate of RTP voice packets. Supports from the network are required for this function to take effect. Consult your carrier or administrator for related information.

Items in this page are described as follows:

- Enable Tag: Specifies whether to enable the VLAN tagging function. The default setting is Disable, that is, the VLAN tagging function is disabled by default.
- VLAN ID: VLAN ID, which can be obtained from your carrier or administrator.
- Priority: Priority of the VLAN tags.

Remember to click <OK> to save your changes upon completion. You can also click <Cancel> to discard your changes.



Caution:

Enable the VLAN tagging function only when you are sure that the network to which your

KT101 is connected supports this function. Otherwise, your KT101 may be unable to obtain a network address, or you cannot place calls.

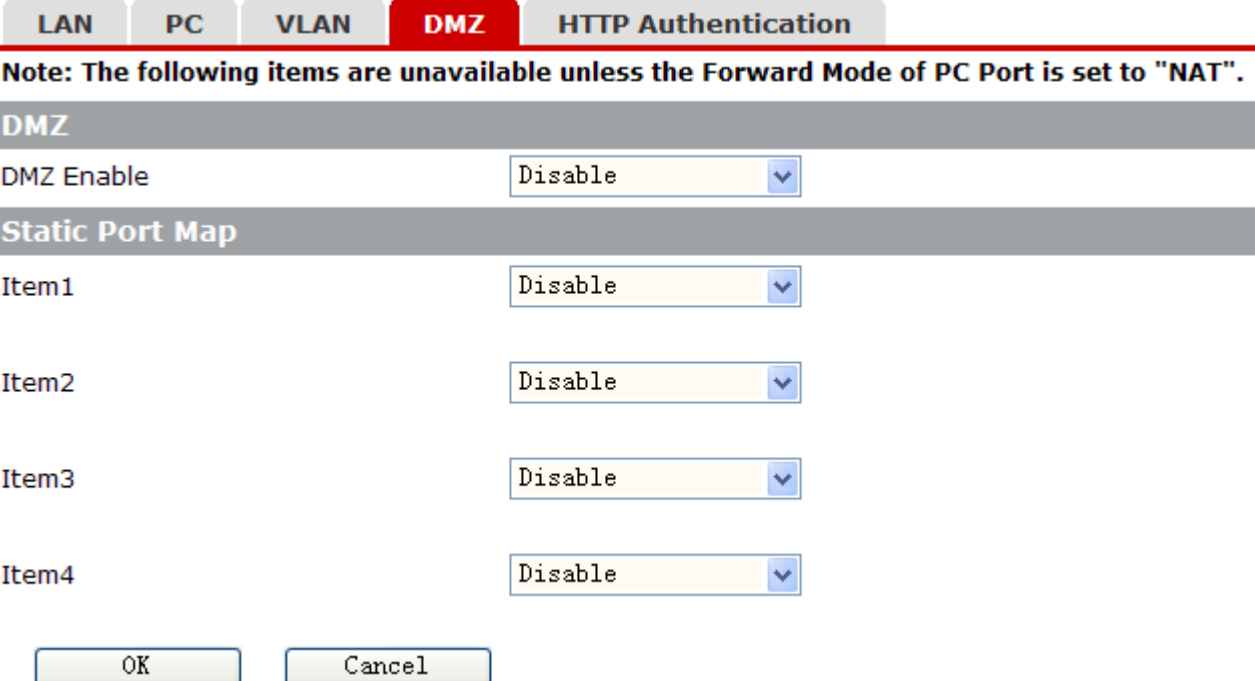
IV. Configuring DMZ and static port mapping

When operating in NAT mode, your KT101 denies requests initiated from external IP networks. But some implementations require accessing the PC connected to the PC interface of your KT101 from external networks to utilize the services provided by the PC. In this case, you can satisfy the requirement by enabling static port mapping or DMZ function.

Click the [DMZ] tab. The DMZ and static port map page appears (as shown in Figure 3-9), displaying items for setting the DMZ and static port mapping functions.

Note:

The configurations described below about DMZ and static port mapping are necessary only when the forwarding mode is set to NAT.



LAN PC VLAN **DMZ** HTTP Authentication

Note: The following items are unavailable unless the Forward Mode of PC Port is set to "NAT".

DMZ

DMZ Enable Disable ▼

Static Port Map

Item1 Disable ▼

Item2 Disable ▼

Item3 Disable ▼

Item4 Disable ▼

OK Cancel

Figure 3-9 Web configuration – DMZ and Static Port Map

1) Configuring DMZ

With the DMZ function enabled, you can specify a port number range. Packets destined for the LAN interface of your KT101 with destination port numbers within this range are forwarded to the corresponding ports of the host that is connected to the PC interface of your KT101. (The host herein is referred to as a DMZ host.) When you select Enable from the [DMZ Enable] drop-down list to enable the DMZ function, the related configuration items appear, as shown in Figure 3-10.

DMZ	
DMZ Enable	Enable
IP Address	192.168.254.2
Port Begin	20
Port End	1023

Figure 3-10 Web configuration – DMZ

- IP Address: IP address of the DMZ host.
- Port Begin/Port End: Beginning port number and end port number. Packets destined for the LAN interface of your KT101 with destination port numbers within this range are forwarded to the corresponding ports of the DMZ host.

For example, the settings in Figure 3-10 specify to forward packets with destination port numbers ranging from 20 to 1023 to the corresponding ports of the DMZ host, whose IP address is 192.168.254.2.

Note:

For a port that is within the range specified by the Port Begin and Port End parameters and is used by a local service of your KT101, the received packets are not forwarded to the DMZ host. Your KT101 usually uses port 23, 67, 80, 123, and 161. In addition, the VoIP protocol stack uses some other ports. Consult your carrier or administrator for details.

**Caution:**

Make sure the DMZ host uses a static IP address that is in the same network segment as that of the PC interface on your KT101.

Enabling DMZ function increases possibility of being infected by viruses.

2) Configuring static port mapping

You can map a port of the LAN interface to a port of the host connected to the PC interface, so that all packets destined for the specified port of the LAN interface are forwarded to the specified port of the host that is connected to the PC interface. (The host herein is referred to as an internal host.) Up to four pairs of ports can be mapped on your KT101 by selecting Enable from the drop-down lists on the Static Port Map section shown in Figure 3-9. Figure 3-11 is the page displayed when you select Enable from the [Item1 Enable] drop-down list.

Static Port Map	
Item1 Enable	Enable ▼
Public Port	81
Internal Port	80
Internal IP	192.168.200.20
Protocol Type	TCP ▼

Figure 3-11 Web configuration – Static Port Map

- Public Port: Number of the port on the LAN interface.
- Internal Port: Number of the port on the internal host.
- Internal IP: IP address of the internal host.
- Protocol Type: Protocol type of the packets to be forwarded, which can be TCP or UDP. For example, the settings in Figure 3-11 specify to map port 8080 of the LAN interface to the same port of the internal host, and to forward all TCP packets received by the 8080 port of the LAN interface to the same port of the internal host, making the internal host provide HTTP services to external networks.

Remember to click <OK> to save your changes upon completion of DMZ and static port mapping configuration. You can also click <Cancel> to discard your changes.



Caution:

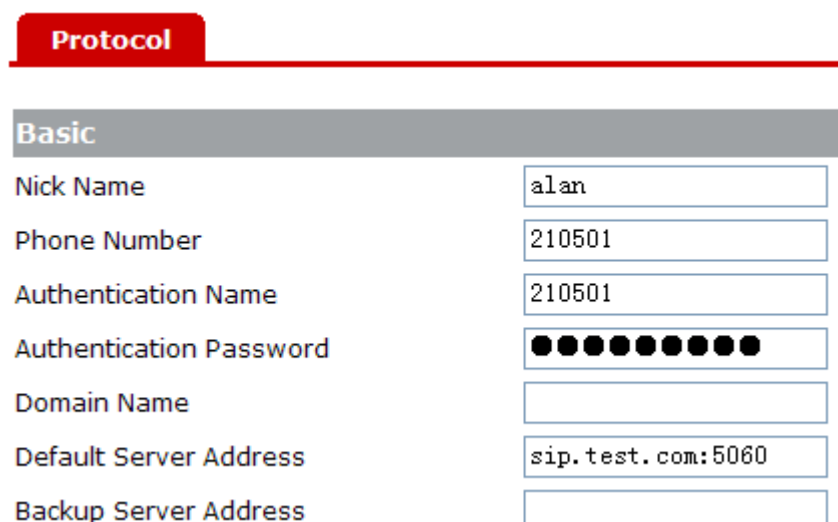
Make sure the internal host uses a static IP address that is in the same network segment as that of the PC interface of your KT101.

For a port of the LAN interface, static port mapping takes precedence over the local service of your KT101. Therefore, when establishing static port mappings, exclude the ports of the LAN interface for local services to ensure the normal operation of your KT101. For example, your KT101 registers with the SIP server through port 5060 by default. If you map the port to port 5060 of the internal host, your KT101 will be unable to register with the SIP server.

3.3.3 Configuring Protocol Parameters

From the [Protocol] page, you can configure the protocol parameters for VoIP so that your KT101 can register with the servers of your carrier successfully. Before configuration, consult your carrier for the parameters required for registration.

After logging into the Web configuration interface, click <Protocol> in the navigation list to bring up the [Protocol] page, as shown in Figure 3-12.



Protocol	
Basic	
Nick Name	alan
Phone Number	210501
Authentication Name	210501
Authentication Password	●●●●●●●●●●
Domain Name	
Default Server Address	sip.test.com:5060
Backup Server Address	

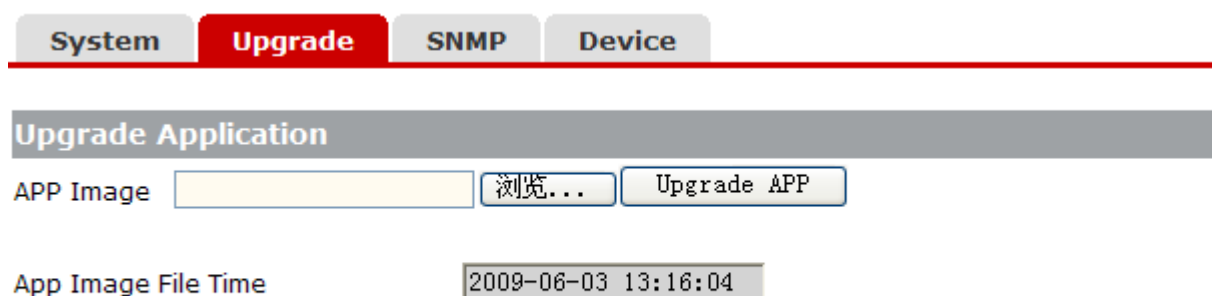
Figure 3-12 Web configuration – Protocol

- Nick Name: Display nick name of your KT101.
- Phone Number: Phone number of your KT101.
- Authentication Name: Authentication ID of your KT101.
- Authentication Password: Authentication password of your KT101.
- Domain Name: Domain name of the SIP user.
- Default Server Address: IP address of the SIP server with which your KT101 registers.
- Backup Server Address: IP address of the backup SIP server.

Remember to click <OK> to save your changes upon completion. You can also click <Cancel> to discard your changes.

3.3.4 Administering Your KT101

Click <Device Admin> in the navigation list to bring up the device administration page, as shown in Figure 3-13. From the [Device Admin] page, you can upgrade the firmware of your KT101 and configure the time parameters.



System Upgrade SNMP Device	
Upgrade Application	
APP Image	<input type="text"/> 浏览... Upgrade APP
App Image File Time	2009-06-03 13:16:04

Note: Upgrading firmware may take a few minutes, please don't turn off the power.

Figure 3-13 Web configuration – Upgrade firmware

As shown in Figure 3-13, the device administration page contains two tabs: the [Upgrade Firmware] tab and the [Time Setting] tab.

I. Upgrading the firmware

The [Upgrade Firmware] page is shown in Figure 3-13. The [Upgrade Firmware] section is used to upgrade the firmware, while the [Version Info] section displays the current software version and hardware version of your KT101.

Follow these steps to upgrade the firmware:

- 1) Consult your vendor or carrier for the recent upgrading file and save it to the PC used to upgrade the firmware.
- 2) Enter the path of the upgrading file in the [Upgrade Firmware Name] text box, or click <Browse...> and navigate to the folder where the upgrading file is located and select it.
- 3) Click <Upgrade> to launch firmware upgrading.
- 4) The LCD on your KT101 displays the upgrading process. When it displays “IP Phone...” showing that your KT101 is idle and ready for use, the upgrading completes. After logging into the Web configuration interface again, you can find that the software version is updated.



Caution:

Any power failure during the upgrading may cause your KT101 to operate improperly.

II. Configuring time parameters

Click the [Time Setting] tab in the page shown in Figure 3-13. The [Time Setting] page appears, as shown in Figure 3-14.

Figure 3-14 Web configuration-Time Setting

- NTP Server Address: IP address or domain name of the NTP Server.
- Time Zone: Time zone where your KT101 is located.

Note:

Your KT101 comes with a factory-set NTP server network address, through which it can automatically acquire the correct time once it is set up and connected to the Internet. So do not change the default NTP server address unless absolutely needed.

4 Configuration Example

4.1 Accessing Networks through PPPoE

4.1.1 Scenario

Intended users: Families or enterprises that access the Internet through ADSL or any other PPPoE connections. Number of the available broadband connections: One.

Devices required: one KT101 and one PC. Objective: The KT101 can be used to place calls while the PC can access the Internet through the KT101.

4.1.2 Installing Hardware

Set up the KT101 and connect the PC to it. Refer to Chapter 2 “Installation” for details.

4.1.3 Configuring Software

I. Configuring network parameters

Before configuring the network parameters, consult your carrier for the PPPoE user name and password required for the following configurations.

- 1) Configuring the network connection type As DHCP is the default network connection type, you must set the connection type to PPPoE and specify the PPPoE user name and password. Refer to section 3.2.1 II. “Configuring the network connection type” for details.
- 2) Configuring the forwarding mode For PPPoE access method, the forwarding mode of NAT is recommended. With your KT101 operating in this forwarding mode, the built-in DHCP service is automatically enabled, and your KT101 functions as a gateway, while the PC can access the Internet through your KT101. As the default forwarding mode is Bridge, you need to change the setting to NAT manually. Refer to section 3.2.1 III. “Configuring the forwarding mode” for details.

II. Configuring protocol parameters

After configuring the network parameters, you must also configure the protocol parameters for your KT101 to register with the server of your carrier. Refer to section 3.2.2 “Configuring Protocol Parameters”(for LCD-based configuration) or section 3.3.3 “Configuring Protocol Parameters”(for Web-based configuration) for details.

4.2 Accessing Networks Using DHCP

4.2.1 Scenario

Intended users: Enterprises that access LANs or the Internet using DHCP.

Number of the available DHCP connections: One.

Devices required: One KT101 and one PC.

Objective: The KT101 can be used to place calls while the PC can access the LAN or the Internet through the KT101.

4.2.2 Installing Hardware

Set up the KT101 and connect the PC to it. Refer to Chapter 2 “Installation” for details.

4.2.3 Configuring Software

I. Configuring network parameters

By default, KT101 uses the network connection type of DHCP and the forwarding mode of Bridge (refer to section 3.2.1 III. “Configuring the forwarding mode” for details about the forwarding modes). Therefore, to use DHCP, you do not need to configure the network parameters. However, you must specify the PC to obtain an IP address automatically (refer to the online help documentation of the operating system running on the PC for detailed operations).

II. Configuring protocol parameters

Same as that for PPPoE described in section 4.1.3 II. “Configuring protocol parameters”.

5 Operation


5.1 Basic Operation

5.1.1 Placing/Answering a Call

Place an IP CALL:

You can place/answer a call using your KT101 as a legacy telephone.

Place a PSTN CALL:

For KT101D dual-mode phone to make a PSTN call, pick up the handset and press the PSTN switch button  and then dial the number.

Note:

Press <Send/Redial> to place a call after dialing the number.

When dialing/answering a call, press <Speaker> to toggle the speaker on.

If the phone has a plugging microphone, press the microphone switch button to use it.

5.1.2 Redialing

Pick up the handset (or press <Speaker> to toggle the speaker on) and press <Send/Redial> to call the last number dialed.

5.1.3 Holding On

Press <Hold> to place an active call on hold. In this case, you can hear the peer while you cannot be heard. Press <Hold> again to resume the held call.

5.1.4 Speed dialing

Speed dialing is available to the first nine phone numbers (known as a speed dial list) in the telephone book of your KT101 (refer to section 5.2 "Phone Book" for details on the phone book). The numbers listed in the speed dial list and corresponding contacts can be quickly located and called.

Follow these steps to perform speed dialing:

- In standby mode press <Speed Dial> (or enter the [Speed Dial] menu) to display the speed dial list.

Press <UP> or <DOWN> to locate the number you want to dial. Press <OK> to place the call.

Note:

In addition to speed dialing, you can also place a call through the [Phone Book] menu or the [Recent calls] menu, which will be covered in the section 5.2 "Phone Book" and section 5.3 "Recent Calls".

When you perform a speed dial, your KT101 operates in hands-free mode by default. If you then pick up the handset (if it is not picked up previously), your KT101 exits the hands-free mode. If you have picked up the handset before the speed dial, press <Speaker> to toggle the speaker off.

5.2 Phone Book

Your KT101 provides a phone book for you to store the contacts' names and numbers for

lookup and dialing. A contact name and the phone number are grouped in an entry in the phone book. Each entry contains three parts: The entry number, contact name, and phone number, as illustrated in the following figure.

1	TOM
12345678	

This section illustrates how to make use of the phone book menu in detail.

5.2.1 Operating with Phone Book

In standby mode perform either of the following to access the [Phone Book] menu:

- Press <MENU>, select the [Phone Book] item, and press <OK>.
- Press <Phone Book> directly.

The menu items, item functions and related instructions of the [Phone Book] menu are described in Table 5-1.

Table 5-1 Description of the Phone Book menu

Item	Function	Instruction	
Add Contact	Add a phone book entry	1) Select the [Add Contact] item and press <OK>. 2) When the LCD displays "Edit Name", enter the contact's name and press <OK>. 3) The LCD then displays "Edit Number". Enter the phone number and press <OK>. When "Added OK!" appears, it indicates that the entry is successfully added.	
Search Name	Search an entry by a contact's name	1) Select the [Search Name] item and press <OK>. 2) When the LCD displays "Input Name", enter the desired contact's name and press <OK>. <ul style="list-style-type: none"> • If the entry exists, the LCD displays it. • If the entry does not exist, the LCD displays the first entry in the phone book. 	When the desired entry is found, press <OK> to display the following four items. <ul style="list-style-type: none"> • Dial: Place a call to the contact. • Modify: Modify the entry. • Delete: Delete the entry.
Search Pos	Search an entry by entry number	1) Select the [Search Pos] item and press <OK>. 2) When the LCD displays "Input Position", enter the desired entry number and press <OK>. <ul style="list-style-type: none"> • If the entry exists, the LCD displays it. • If the entry does not exist, the LCD displays the first entry in the phone book. 	Continue: Return to the upper level. Press <UP> or <DOWN> to select one. Then press <OK> to perform the corresponding operation.
View All	View all the entries	Select the [View All] item and press <OK>. You can then press <UP> or <DOWN> to view all the entries one by one.	
Check Useful	Check	Select the [Check Useful] item and press <OK>. The LCD	

	the memory of the phone book	displays memory information about the phone book, such as "Total:256 Useful:216", among which: <ul style="list-style-type: none"> • Total: Total number of the entries the phone book can hold. • Useful: Number of the entries available for new ones.
--	------------------------------	---

 **Note:**

- The phone book can hold up to 256 entries, ranging from 0 to 255.
 - The entries in the phone book are numbered in the ascending order by the time they are added.
 - You can store the most frequently used phone numbers in the speed dial list for speed dialing (refer to section 5.1.4 "Speed dialing" for details).
-
-

5.2.2 Operation Examples

I. Adding a contact

Assume that the contact name to be added is Tom and his phone number is 12345678. In standby mode follow these steps to add TOM with his phone number in the phone number:

- 1) Press <Phone Book> and <DOWN> to select the [Add Contact] item, and then press <OK>.
- 2) When the LCD displays "Edit Name", enter the name Tom, and press <OK>.
- 3) When the LCD displays "Edit Number", enter the phone number 12345678 and press <OK>.
- 4) When the LCD displays "Added OK! Tom", the entry about Tom is successfully added.

II. Placing a call with the phone book

To perform a speed dial, you need to locate the desired entry in the phone book first.

Refer to Table 5-1 for details on how to search a specific entry. If you have found the desired phone book entry, follow these steps to call it by speed dialing (assume Tom is the man you want to call, whose entry is already added in the previous section):

- 1) In standby mode press <Phone Book> and then <DOWN> to select the [Search Name] item.
- 2) Press <OK> and then the LCD displays "Input Name".
- 3) Enter Tom as the contact name and press <OK>. The LCD displays "1 Tom 12345678".
- 4) Press <OK>. When the LCD displays "Dial", press <OK> again and your KT101 calls 12345678 automatically.

5.3 Recent Calls

Your KT101 registers the answered, missed, and dialed calls and their related information. The call register enables you call these numbers or save them in the phone book.

In standby mode you can access the [Recent Calls] menu by either of the following:

Press <MENU> and then press <DOWN> to select the [Recent Calls] item. Then press <OK>.

Press <Recent Calls> directly.

The menu items, their functions, and related instructions of the [Recent Calls] menu are listed in Table 5-2.

Table 5-2 Description of the Recent Calls menu

Item	Function	Instruction	
Recved Calls	View the answered calls	1) Select the [Recved Calls] item and press <OK>. 2) Press <UP> or <DOWN> to view the answered calls.	When an answered, dialed, or missed call is displayed on the LCD, press <OK> to display the following three items: <ul style="list-style-type: none"> • Redial: Redial the phone number. • Add to Book: Save the phone number in the phone book. • Delete: Delete the call record. Press <UP> or <DOWN> to select one of them. Then press <OK> to perform the corresponding operation.
Dialed Calls	View the dialed calls	1) Select the [Dialed Calls] item and press <OK>. 2) Press <UP> or <DOWN> to view the dialed numbers.	
Missed Calls	View the missed calls	1) Select the [Missed Calls] item and press <OK>. 2) Press <UP> or <DOWN> to view the missed calls.	
Delete All	Delete all the information about recent calls.	1) Select the [Delete All] item and press <OK>. 2) At the prompt of "Delete All?", press <OK> to confirm or <C> to cancel.	

 **Note:**

Your KT101 can registers 64 missed, answered, and dialed calls respectively.

When your KT101 is powered off or restarts, all the call records get lost.

5.4 Recorder

The recorder enables KT101 to answer the calls and record the callers' messages automatically and to record an active call manually.

Auto answering and recording: Enable this function to answer the incoming calls automatically and record the callers' messages.

In standby mode follow these steps to access the [Recorder] menu:

- 1) Press <MENU> and then <DOWN> to select the [Recorder] item.
- 2) Press <OK> to enter the [Recorder] menu.

The menu items, item functions, and related instructions of the [Recorder] menu are listed

in Table 5-3.

Table 5-3 Description of the Recorder menu

Item	Description	Instruction
Enable Recorder	Enable/disable the recorder function. <ul style="list-style-type: none"> • Yes: Enables this function. • No: Disables this function. 	Select the [Enable Recorder] item and press <OK> to toggle it on and off.
Accept After	Specify the ringing period before auto-answering. It ranges from 1 to 60 in seconds.	Select the [Accept After] item and press <OK>. When the LCD displays "Accept After", enter the desired value and press <OK>.
Enable Speaker	Enable/disable the speaker for auto answering and recording. <ul style="list-style-type: none"> • Yes: Enables the speaker.. • No: Disables the speaker. 	Select the [Enable Speaker] item and press <OK> to toggle it on and off.
Make Reply	Record the voice prompt message for auto answering. You can record a prompt message of up to eight seconds.	When you select the [Make Reply Entering...] item and press <OK>, your KT101 begins to record. You can then have the voice prompt recorded. Press <OK> to terminate the recording.
Listen Reply	Replay the recorded prompt message.	When you select the [Listen Reply Entering...] item and press <OK>, your KT101 begins to replay the recorded voice prompt. Press any button to terminate the playing.
Buddy Words	Enter the [Buddy Words] menu for the recorded callers' messages.	Select the [Buddy Words Entering...] item and press <OK> to access the [Buddy Words] menu. Then press <UP> or <DOWN> to select a desired message and press <OK> to display the following four items: <ul style="list-style-type: none"> • Play: Play the selected message. • Add to Book: Save the number of the caller to the phone book. • Reply: Call back the one who leave the message. • Delete: Delete the selected message.

Press <C> multiple repeatedly until your KT101 restarts for the new settings to take effect.

 **Note:**

You can press <Recorder> to enter the [Buddy Words] menu.

Each message can be up to 30 seconds. Each manually recorded conversation can be up to two minutes. The recorder can hold up to 60 voice messages.

5.5 Voice Settings

Voice settings are used to set the volume and rings of your KT101. The volume refers to

the input/output volume of the handset, microphone, and speaker. The ring setting specifies the ring that indicates a incoming call. There are three factory-set rings in your KT101. You can add new rings by uploading ringing files to your KT101. Refer to section 5.5.2 “Voice Setting—Web-based Configuration” for details.

The following sections describe two methods to perform the voice settings: LCD-and Web-based configuration.

5.5.1 Voice Setting—LCD-based Configuration

In standby mode follow these steps to access the [Voice Setting] menu:

- 1) Press <MENU> and then <DOWN> to select the [Voice Setting] item.
- 2) Press <OK>. The menu items, item functions, and related instructions of the [Voice Setting] menu are listed in Table 5-4.

Table 5-4 Description of the Voice Setting menu

Item		Function	Instruction
Ring Setting	Type	Select a ring.	<ol style="list-style-type: none"> 1) Select the [Type item] and press <OK> to open the list of rings. 2) Press <DOWN> to select the desired ring. 3) Press <OK> to confirm.
	Volume	Set the ring volume.	<ol style="list-style-type: none"> 1) Select the [Volume] item and press <OK>. 2) Press <UP> to increase the volume or press <DOWN> button to decrease the volume. 3) Press <OK> to confirm.
	Test	Play to test the current ring.	<ol style="list-style-type: none"> 1) Select the [Test] item. 2) Press <OK> to play the selected ring. You can press any button to terminate it.
	Delete	Delete the current ring.	<ol style="list-style-type: none"> 1) Select the [Delete] item and press <OK> to open the ring list. 2) Press <DOWN> to select the ring to be deleted. 3) Press <OK> to confirm.
On Handfree	Microphone	Set the input volume of the microphone, which is used in hands-free mode.	<ol style="list-style-type: none"> 1) Select the Microphone item and press <OK>. 2) Press <UP> to increase the volume or press <DOWN> to decrease the volume. 3) Press <OK> to confirm.
	Speaker	Set the output volume of the speaker.	<ol style="list-style-type: none"> 1) Select the Speaker item and press <OK>. 2) Press <UP> to increase the volume or press <DOWN> to decrease the volume. 3) Press <OK> to confirm.

On Handset	Microphone	Set the input volume of the handset.	1) Select the [Microphone] item and press <OK>. 2) Press <UP> to increase the volume or 3) press <DOWN> to decrease the volume. Press <OK> to confirm.
	Speaker	Set the output volume of the handset.	1) Select the [Speaker] item and press <OK>. 2) Press <UP> to increase the volume or press <DOWN> to decrease the volume. 3) Press <OK> to confirm.

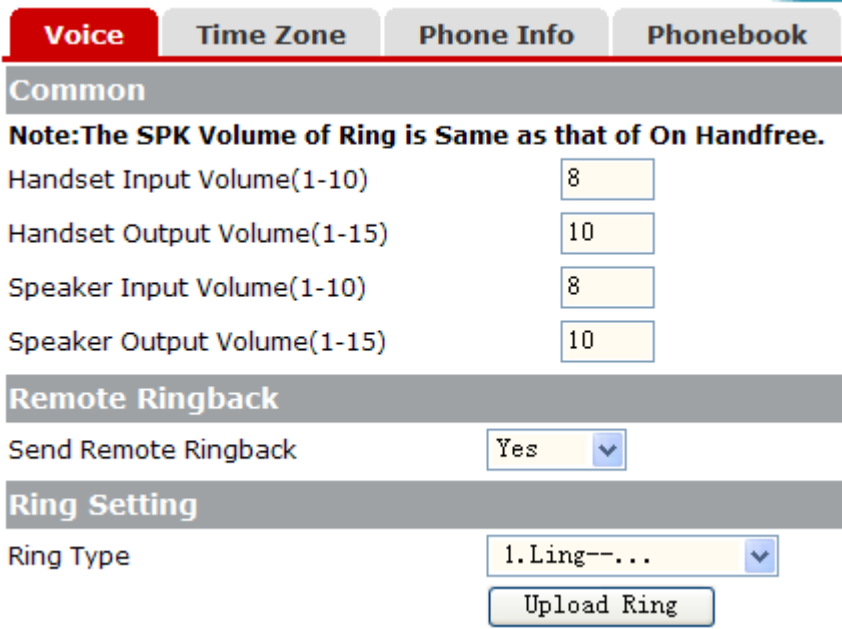
Press <C> multiple repeatedly until the phone restarts for the new settings to take effect.

Note:

- As your KT101 rings through the speaker., the volume of the ring and the speaker change with each other.
- During a call, you can press <UP> or <DOWN> to increase or decrease the output volume. Whereas in standby mode you can press <UP> or <DOWN> to increase or decrease the ring volume.

5.5.2 Voice Setting —Web-based Configuration

You can also perform the voice configuration on Web pages. To perform voice settings on Web pages, log into the Web configuration interface (refer to section 3.3.1 “Logging into the Web Configuration Interface” for details) and then click <Voice> in the navigation list to bring up the [Voice] page, as shown in Figure 5-1.



Voice Time Zone Phone Info Phonebook

Common

Note: The SPK Volume of Ring is Same as that of On Handfree.


Handset Input Volume(1-10)

Handset Output Volume(1-15)

Speaker Input Volume(1-10)

Speaker Output Volume(1-15)

Remote Ringback

Send Remote Ringback 

Ring Setting


Ring Type 

Figure 5-1 Web configuration-Voice Setting

Handset Input Volume (1 - 8): Input volume of the handset, ranging from 1 to 8. A bigger number corresponds to a higher volume.

- Handset Output Volume (0 -15): Output volume of the handset, ranging from 1 to 15. A bigger number corresponds to a higher volume.

- Speaker Input Volume (0 -15): Input volume of the microphone, ranging. A bigger number corresponds to a higher volume.
- Speaker Output Volume (1 -15): Output volume of the speaker, ranging from 1 to 15 . A bigger number corresponds to a higher volume.
- Ring Type: Type of the ring to be used.

Click <Delete Current> to delete the current selected ring.

Click <Upload another> to bring up the [Upload Ring] page, as shown in Figure 5-2.



Figure 5-2 Web configuration-the Upload ring page

Besides the preset three factory-set rings, you can upload new rings to your KT101.

Follow these steps to upload a ring:

- 1) Copy the ring file to the PC to upload the ring.
- 2) Enter the path of the ring file in the [Ring File Name] text box or click <Browse...> and navigate to the folder where the upgrading file is located and select it.
- 3) Click <Upload> to upload.

Note:

Your KT101 can hold a total of seven rings, including the three factory-set rings.

The newly uploaded ring file overwrites the latest uploaded one if your KT101 already has seven ring files.

5.6 Alarm Clock

Your KT101 provides the alarm clock for you to set eight clock alarms on it. When the set time expires, it rings and displays the corresponding prompt on the LCD. Press <OK> to terminate the alarm ring, and the alarm record is then deleted.

Follow these steps to access the [Alarm Clock] menu:

- 1) In standby mode press <MENU> and then <DOWN> to select the [Alarm Clock] item.
- 2) Press <OK>.

The menu items, item functions, and related instructions of [Alarm Clock] menu are listed in Table 5-5.

Table 5-5 Description of the Alarm Clock menu

Item	Function	Instruction
------	----------	-------------

Add Alarm	Set an alarm	<ol style="list-style-type: none"> 1) Select the [Add Alarm] item and press<OK> to display the prompts of “Set Month to”, “Set Date to”, “Set Hour to”, “Set Minute to”, “Set Second to”, and “Alarm Message” displayed successively. 2) Set the month, date, hour, minute, second, and the prompt message accordingly. 3) When prompted with a success fully message, press <OK> to return to the upper menu level.
View All	View all the alarms Modify an alarm setting Delete an alarm	<p>Select the [View All] item and press <OK> to open the list of alarms.</p> <ul style="list-style-type: none"> • View alarms: Press <DOWN> or <UP> to view all the alarms. The first line of an alarm is the alarm number, alarm date and time; the second line is the prompt message. • Modify an alarm setting: Press <UP> or <DOWN> to select the desired alarm, press <OK> to enter edit mode and make changes, and then press <C> to confirm your changes and return. • Delete an alarm: Press <UP> or <DOWN> to select the desired alarm and press <OK>. At the prompt of “Delete Alarm Clock?”, press <OK> to confirm or <C> to cancel.
Delete All	Delete all alarms	<p>Select the [Delete All] item and press <OK>. At the prompt of “Delete All Alarm-Clock?”, press <OK> to confirm or <C> to cancel.</p>

 **Note:**

To make the alarm clock function properly, make sure your KT101 is set with correct date and time.

5.7 Supplementary Service

This section is only used for SIP and H.323 protocol.

5.7.1 Call Hold on Music

Call Hold feature is used to hold on your call conversation and it's available by default. During call conversation , you can press “Hold” button to hold your call and press “Hold” again to enable your voice.

5.7.2 Call Wait

Call Wait feature is available by default. The process of Call Wait is as following:

If A and B are in the conversation, now C is calling A and there is “Calling in” info displayed

on A's LCD and also A can hear a prompt sound. If A doesn't want to accept C, just press **【C】** button; if A wants accept C, press "FLASH" button and B will be hold on then.

5.7.3 Unattended/Attended Call Transfer

Call Transfer feature is available by default. The process of Call Transfer is as following:

- **Unattended Transfer:**

If A and B are in the conversation, now A wants to transfer the call to C. A presses "FLASH" button to dials C number, and then A hangs up at once. C will ring and get the call from B.

- **Attended Transfer:**

If A and B are in the conversation, now A wants to transfer the call to C. A presses "FLASH" button and hear dial tone , then dials C number and presses "#" or "Send" button to send C number. When C answers the call , and then A hangs up, it works as Attended Call Transfer mode.

5.7.4 Call Forward

For the Call Forward supplementary service, it support there kinds of forwarding features , Unconditional Forwarding , No Answer Forwarding, When Busy Forwarding. If the three features are available at the same time, the Unconditional Forwarding has highest priority. The following is how to enable and set the Call Forward:

- **Through the LCD of IP phone**

Entering the Call Forward menu: Press MENU-> "8. Others " -> "7. Call Setting"-> "4. Call Forward".

- **Through the web page of IP phone**

Log into the Web configuration interface (refer to section 3.3.1 "Logging into the Web Configuration Interface" for details) and then click <Protocol> in the navigation list to bring up the [Call Setting] page, as shown in Figure 5-3.

Call Setting	
Hotline Number	<input type="text"/>
Hotline Delay(s)	<input type="text" value="5"/>
Prefix	<input type="text"/>
Call Waiting	<input type="button" value="Enable"/>
Call Forwarding	<input type="button" value="Disable All"/> <input type="button" value="Disable All"/> <input type="button" value="Unconditional"/> <input type="button" value="When Busy"/> <input type="button" value="No Answer"/>
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

Figure 5-3 Web configuration- Call forwarding page setting

The Call Forward menu includes:

- 1) Unconditional: The Call Forward Unconditional feature

- 2) When busy: The Call Forwarding Busy feature
- 3) No answer: The Call Forward No Answer feature
- 4) Disable: Cancel all Call Forward features

You can select any call forward feature, but you should enable the selected feature and make sure to set the forwarding phone number in the "Forward to " item.

5.7.5 Prefix Number

Prefix number is provided by phone. If set prefix number, the number will be always add to ahead of your dialed number automatically. For example, if Prefix number is 008610, when you dial number 12345678, the calling number sent by the phone will be 00861012345678.

Entering the Hotline Calling menu: Press MENU-> "8. Others " -> "7. Call Setting"-> "3. Prefix Number".

5.7.6 Hotline Calling

The Hotline Calling is used to dial the phone numbers directly when you pick up the phone. If you enable this service, you can call the same number after delay time. Be sure to delete the hotline number, when you don't want to use this service or set the delay time.

Entering the Hotline Calling menu: Press MENU-> "8. Others " -> "7. Call Setting"-> "1. Hotline Number ".

Set Hotline Calling delay time: Press MENU-> "8. Others " -> "7. Call Setting"-> "2. Hotline Delay". The default delay time is 5s.

5.7.7 3-Way Conference

3-Way conference feature is available by default. The process of 3-Way conference is as following:

After pick up the phone , you press[Conference]button or dial "###" and the "Conference to " info will be displayed on LCD, then make the first call

Then press "FLASH" to make the second call, and till now the 3-Way conference is ready.

The inviter can press "FLASH" and dial "#phone-number" to let this phone exit the conference.

5.7.8 Do Not Disturb

Do Not Disturb (DND) feature is available by default. The process of DND is as following:

Press the button "DND" in standby mode, the DND feature is available and the any incoming call will be refused. Press "DND" button again, the DND feature is disable.

5.7.9 Call Mute

Mute feature is available by default. The process of Mute is as following:

During call conversation, you can press “Mute” button to mute your call and press “Mute” again to enable your voice.

5.8 Others

This section describes settings in the [Others] menu of your KT101. In standby mode press <MENU> and <DOWN> to select the [Others] item. Press <OK> to access the [Others] menu, as shown in Table 5-6.

Table 5-6 Description of the Other menu

Item		Function	Instruction
Date & Time	Manual Set	Manually set the year/month/date and hour/minute/second according to prompts.	1) Select the [Date & Time] item and press <OK>. 2) Select the [Manual Set] item and press <OK> button. 3) Set year/month/date and hour/minute/second accordingly. 4) Press <OK> to confirm.
	Time Zone	Select the time zone your KT101 resides in.	1) Select the [Date & Time] item and press <OK>. 2) Select the [Time Zone] item and press <OK>. 3) Press <DOWN> or <UP> to select time zone. 4) Press <OK> to confirm.
	NTP Server	Set the IP address or domain name of the NTP server for your KT101 to acquire current time automatically.	1) Select the [Date & Time] item and press <OK>. 2) Select the [NTP Server] item and press <OK>. 3) Enter the IP address or domain name of the NTP server. 4) Press <OK> to confirm.
Hardware Ver		Check the hardware version.	Select the [Hardware Ver] item and press <OK> button.
Software Ver		Check the software version.	Select the [Software Ver] item and press <OK> button.
Current IP		Check the IP address of your KT101 and DNS server.	1) Select the [Current IP] item and press <OK>. The LCD displays the IP address of your KT101. 2) Press <UP> repeatedly to move the cursor to the left, till the IP address of the DNS server your KT101 use appears.

Ping	Test the connectivity between your KT101 and a specified network device.	<p>1) Select the [Ping] item and press <OK>.</p> <p>2) Enter the IP address of the destination and press <OK> to begin testing.</p> <p>The LCD displays information in the format of Success/Total */#, among which:</p> <ul style="list-style-type: none"> • *: A number indicating the number of successfully received packets. • #: A number indicating the total number of the sent packets.
My Number	Check the phone number of your KT101.	Select the [My Number] item and press <OK>. The LCD displays the phone number of your KT101.
DHCP Again/Redial PPPoE	Obtain an IP address again or redial to establish a PPPoE connection when your KT101 operates in DHCP or PPPoE mode.)	Select the [DHCP Again/PPPoE] item and press <OK>.
AutoDown NET	Set the criterion for the PPPoE connection to be automatically terminated. This item is visible only when your KT101 access the network using PPPoE.	<p>Select the [AutoDown NET] item and press <OK>. At the prompt of "AutoDown Timeout". press <UP> or <DOWN> to select one of the following items:</p> <ul style="list-style-type: none"> • Disable: Specifies not to terminate the PPPoE connection automatically. • Right now: Specifies to terminate the PPPoE connection at once. • After 10 min: Specifies to terminate the PPPoE connection automatically after your KT101 is idle for 10 minutes. • After 4 min: Specifies to terminate the PPPoE connection automatically after your KT101 is idle for 4 minutes. • After 1 min: Specifies to terminate the PPPoE connection automatically after your KT101 is idle for 1 minute. Press <OK> to confirm your changes.

Note:

Your KT101 comes up with a factory-set NTP server network address, through which your KT101 can automatically acquire correct time once it is set up and connected to the Internet. So do not change the NTP server address unless absolutely needed.

6 Appendix A - Troubleshooting

Symptom 1: My KT101 is not in the normal standby state (that is, the LCD never displays IP Phone...), and the dial tone cannot be heard when I pick up the handset.

Solution:

- 1) Check to see if the LAN indicator on the rear of the base lights. If it does not, check that:
 - The two ends of the network cable are completely and securely plugged into the LAN interface of your KT101 and the corresponding port of the access device.
 - The network connection type is properly set (refer to section 3.2.1 II. “Configuring the network connection type” or section 3.3.2 I. “Configuring the LAN interface” for details).
 - You are experiencing other network problems if the above two are OK. Consult your carrier or the administrator for help.
- 2) Check to see if the protocol settings are configured according to the protocol parameters your carrier or the administrator provides. Before using your KT101, you must configure the protocol parameters correctly to make it register with the carrier’s server. Refer to section 3.2.2 “Configuring Protocol Parameters” or section 3.3.3 “Configuring Protocol Parameters” for details.
- 3) Check to see if the two ends of the handset cord are completely and securely plugged into the handset and the base.

Symptom 2: Loud noise can be heard during a call.

Solution: Check to see if the volume is too high. Refer to section 5.5 “Voice Settings” for details on setting the volume.

Symptom 3: The voice is too tiny to be heard.

Solution: Increase the output volume by pressing <UP> during a call. Refer to section 5.5 “Voice Settings” for details on setting the volume.

Symptom 4: With DMZ enabled, external hosts cannot access the DMZ host. **Solution:** Check to see if port conflicts occur. This is caused that the port range set in the DMZ configuration contains the port used by the services your KT101 provides. If yes, set the range to exclude these ports.

Symptom 5: After I enable static port mapping, my KT101 operates improperly.

Solution: Check to see if port conflicts occur. This is caused by that the mapped port are used by the services your KT101 provides. If yes, select an unused port.

7 Appendix B - Technical Specifications

7.1 Software Specifications

Table 7-1 Software specifications of KT101

Item	Description
Protocol	SIP v2: RFC3261~RFC3266 MGCP: RFC3435 (Compatible RFC2705), H.323: H.225,H.235,H.245,Q.931 RTP/RTCP: RFC3550(Compatible RFC1889/RFC1990) SDP: RFC2327 TCP/IP, PPPoE, DHCP, NAT SNMP G.711A/U, G.729 A, G.723.1
Service	Caller ID 3-way Voice meeting Call transfer Call forward (Unconditional, When busy, When no answer) Call wait Call hold Do Not Disturb Adjustable volume of the handset and speaker Phone book: Up to 256 entries are available Call history: Call register of 64 missed, answered, and dialed calls respectively Alarm clock DMZ and static port mapping
Enhanced voice function	Automatic echo cancellation (AEC) Voice activity detection (VAD) Comfort noise generation (CNG)
Configuration method	LCD-based configuration Web-based configuration
Software upgrading	Web-based upgrading.

7.2 Hardware Specifications

Table 7-2 Hardware specifications of KT101

Item	Description
Display	128 x 64 Dot Matrix LCD
Memory	2 MB Flash 8 MB SDRAM

Ethernet interface	Two RJ-45 interfaces 10/100M autosensing MDI/MDIX autocrossover
Power adapter	Input: 220 VAC Output: 12 VDC, 0.6 A
Weight (net)	0.67 kg (1.5 lb)
Physical dimensions (H xW x D)	60 x 220 x 172 mm (2.4 x 8.7 x 6.8 in.)
Operating temperature	0°C to 45°C
Storage temperature	-10°C to 70°C
Operating humidity (noncondensing)	20% to 85%
Storage humidity (noncondensing)	10% to 90%